

**MINUTES OF  
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST  
COASTAL ADVISORY COMMITTEE MEETING  
HELD ON APRIL 7, 2010**

**PRESENT: Carlton Dufrechou  
Mark Schexnayder  
John Lopez  
Steve Mathies**

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The Coastal Advisory Committee met on April 7, 2010, in the in the Second Floor Hall of the Lake Vista Community Center, 6500 Spanish Fort Blvd., New Orleans, Louisiana. The meeting was called to order at 10:45 a.m.

**Opening Comments:**

Timothy Doody, President of the Southeast Louisiana Flood Protection Authority-East (SLFPA-E), thanked everyone for participating in the meeting and for providing an overview of the coastal projects in the Pontchartrain Basin. He explained that today's meeting is the first of two meetings that are anticipated to culminate in a coordinated inventory of all projects by all sponsors in the Pontchartrain Basin. The majority of the 100 year protection projects are under construction by the U.S. Army Corps of Engineers (USACE). He stated that the level of protection that will be provided by these projects far exceeds past protection; however, it is not the level of protection that we should strive to achieve. The coasts have suffered for too long in the name of commercial advancement and development, which has benefitted the entire country. The needs of the coasts and the lack of available resources to advance projects from the drawing board to construction are well known. Mr. Doody stated that he hoped that everyone would work together to focus energy, attention and resources on projects that can be built quickly with the greatest benefit to the Pontchartrain Basin. It has become clear to the SLFPA-E that as the completion of the 100 year protection systems approaches in 2011, efforts must be refocused on a higher level of protection that can be achieved through coastal restoration.

Mr. Doody advised that the SLFPA-E recently established a Coastal Advisory Committee (CAC) and named the following individuals to the CAC: Carlton Dufrechou, Mark Schexnayder, John Lopez, Steve Mathies and Colonel Robert Sinkler. He commented on the dedication of these individuals to coastal restoration.

Mr. Dufrechou thanked everyone for their attendance. He stated that levees alone will not provide the level of protection that is needed. The coasts are the first line of defense. It has taken 7,000 years to build coastal Louisiana and about 70 years to destroy it. The purpose of this meeting is to try to jump start some coastal projects. The SLFPA-E requested the CAC to identify projects that are ready to go. In subsequent meetings the CAC will take a look at other coastal projects in this area. The CAC will focus on projects that have a storm protection benefit, as well as

environmental and habitat benefits. After the first two initial meetings (April 7 and April 20), committee meetings will be held on a quarterly basis. One of the purposes of the CAC is to advocate for projects and assist sponsors with getting beyond roadblocks.

Dr. Steve Mathies, Executive Director of the Governor's Office of Coastal Protection and Restoration (OCPR), commented that the CAC needs to think beyond the currently authorized projects. It is recognized that there is not enough money to save everything; therefore, hard choices will need to be made. Thought must be given to what is wanted from the Pontchartrain Basin and how the completed footprint will look.

Mark Schexnayder with the LSU AgCenter concurred with Dr. Mathies and stated that he looked forward to helping projects move forward.

Dr. John Lopez, Director of the Lake Pontchartrain Basin Foundation's (LPBF) Coastal Sustainability Program, commented on the natural alliance between the LPBF and the SLFPA-E through the CAC. The LPBF has promoted longer term projects and is trying to become more involved with short term projects. Through this alliance the LPBF will be afforded an opportunity to re-engage with State and Federal entities and other sponsors. Many of the projects that will be reviewed at the CAC's initial meetings came from the inventory of almost 100 projects maintained by the LPBF for the Pontchartrain Basin. He asked that the individuals present today provide input on projects that should be discussed and on improving the process.

Mr. Doody recognized Steve Wilson, President of the Pontchartrain Levee Board (PLB). Mr. Wilson expressed his appreciation for being invited to the meeting. He explained that the PLB's jurisdiction includes the area from the Kenner line to Baton Rouge, which includes the LaBranche Wetlands and Maurepas Swamp. He commented on past efforts by the PLB and offered the PLB's assistance in furthering restoration efforts.

## **PRESENTATIONS ON PONTCHARTRAIN BASIN COASTAL PROJECTS:**

### **LaBranche East Marsh Creation (CWPPRA)**

The presentation on the project was given by Michael Nichols, Wildlife Biologist on the Water Resources Staff at Alexandria, LA.

The project boundary goes around the fringe of the marsh. The project (PO 75) includes 730 acres of created marsh and 212 acres in the fringe. The borrow area for sediments will be located in Lake Pontchartrain. A potential project feature is the construction of tidal channels possibility after the sediments are placed.

In the original LaBranche project approximately 450 acres of vegetative marsh was created about 16 years ago. The target for the original project was 70% vegetative marsh and 30% open water. Lessons learned from the original project concerning elevation, vegetation and tidal channels will be used in the East Marsh Creation Project.

The project is in the planning and design stage. Permission for access is being obtained. The 30% design review under the Coastal Wetlands Planning, Protection and

Restoration Act (CWPPRA) process is scheduled to be completed by June, 2011. The 95% design review is scheduled to be completed by October, 2011. The estimated construction cost is \$19.9 million (\$25 million with the 25% contingency). The construction schedule is dependent upon the receipt of CWPPRA funds. The cost of project planning and design is \$2.5 million. The fully funded project cost is estimated at \$32 million.

There was a brief discussion about whether the height to which the original LaBranche project was pumped was correct. Mr. Nichols advised that the issue was discussed with OCPR. Elevations will be taken of the original site and the existing marsh to assist with this determination. He also advised that he did not foresee any real estate issues and that he has been working with representatives of the land owners.

Dr. Lopez noted that a new bathymetric survey for at least the southern half of Lake Pontchartrain will be released within the next several months. The survey was done in 2009 by the University of New Orleans (UNO) under the Pontchartrain Restoration Program.

### **East LaBranche Shoreline Protection (St. Charles) and West LaBranche Shoreline Protection (St. Charles)**

The presentation on the project was given by Jonathan Hird with Moffatt & Nichol.

The subject projects are PO 42 and PO 43. Approximately 12,000 feet of shoreline protection was put in place in the late 1980's or early 1990's. No maintenance has been done on this shoreline protection. Moffatt & Nichol was requested to go beyond shoreline protection and include enhancements. The east shoreline project includes a 12,000 linear foot gap between the end of the Wetlands Watchers' Park and the existing shoreline protection. The west shoreline project includes 18,600 linear feet of shoreline. The St. Charles Hurricane Protection Levee is to the north of Hwy. 61. The shoreline protection will provide an additional line of defense. The shoreline has eroded at a rate of 12-15 feet per year, except in the area of the current shoreline protection. The proposal includes toe protection and a discontinuous perch sill. Segments will allow access and tidal exchange. The use of deconstructed floodwall debris is being considered as an option for fill. An access channel will be dredged for the project. A feasibility study has been completed. A numerical model of the entire LaBranche Wetlands is being developed to examine restoration alternatives. The two projects will be treated as a single project for design, engineering and construction in order to achieve efficiencies. Coastal Impact Assistance Program (CIAP) funding of \$1.8 million is available for the construction of the high profile and more highly visible Wetlands Watchers' Park component in late 2010. This segment will be constructed first for use as an educational tool. The total cost of toe protection and the offshore perch sill is approximately \$20 million. Construction of the project (18,000 linear feet) could commence in early 2011.

### **Bonnet Carre Diversion to LaBranche Wetlands**

The presentation on the project was given by John Lopez with the LPBF.

Bayou Trepagnier has been contaminated by discharge from nearby refineries. Lead is the main contaminant of concern. The worst part of the contamination is in the spoil banks adjacent to the channel. The State, DEQ and the responsible party have been working a number of years to address this issue. A record of decision was issued last year for Operating Unit 1 which is located in a section of the Bayou and would create an 800-foot wide clean zone anticipated to be completed in December, 2011. An opportunity would be provided for the discharge of water from the spillway into the LaBranche Wetlands through the clean zone. A structure and new guide levee can be constructed to force water eastward into the more open area of the LaBranche Wetlands and to make sure that the contaminants are not remobilized. A simple paneled mechanical structure about 500-feet in length would be built within the guide levee. The comparative cost of the project per thousand cubic feet per second (cfs) is \$6 million.

The option of modifying the proposed project structure, as well as other diversions and potential projects, to operate in the spillway on a continuous basis was discussed.

### **Lake Pontchartrain Shoreline Protection (Tangipahoa)**

The presentation on the project was given by Maurice Jordan with Tangipahoa Parish.

CIAP funds in the amount of \$700,000 have been received for Task Order No. 2 (data collection, investigation and review, engineering and design, preparation and coordination of permit documents and development of detailed plans and specifications). The work under Task Order No. 2 is estimated to cost \$618,000. The consultant is currently proceeding with the preliminary investigations. The shoreline protection system consists of 18,000 linear feet of segmented breakwaters made of quarry stone or a similar material. The distance that the breakwater will be constructed from the existing shore must still be decided. Information was received that the mouth of the Tangipahoa River will be dredged by the USACE. The beneficial use of this dredged material behind the breakwater is being explored. Funding has been set up over a four year period (2007-2010). The project is anticipated to be completed in early 2012. Construction is estimated to last 10 months. The total project cost is \$6.4 million. A commitment has been received on funding (100% CIAP); however, an award of only \$700,000 has been received to date.

### **Lake Pontchartrain Causeway Marsh Creation (RPC)**

The presentation on the project was given by Rebecca Otte.

The project is under the Lake Pontchartrain Restoration Program, which is an EPA program through the University of New Orleans Research and Technology Foundation for municipalities in the Pontchartrain Basin. At this time the program only funds feasibility studies, plans and specifications. The proposed pilot project is for the construction of a breakwater into the lake and the development of wetlands in the area where the Causeway intersects with the south shore. Plans and specifications, cost estimates, examination of permits and applicable regulations and additional preparatory

work will be completed by August. Potential funding sources for the next phase and construction are being sought. The project sponsor is Jefferson Parish. The pilot project would serve as a demonstration area to evaluate the potential for constructing successive breakwaters and creating additional marsh areas along the Lake Pontchartrain shoreline to provide additional flood protection.

Dr. Lopez asked whether the project timeline or footprint will be affected by the flood protection work at the Causeway. Ms. Otte advised that according to recent information the flood improvements will not affect the project; however, the project consultant, Burk-Kleinpeter is looking into this matter. Dr. Lopez commented on the high public visibility of this restoration project.

### **Orleans Land Bridge Project (CWPPRA) (Alligator Bend PO-34 Orleans Parish Marsh Restoration and Shoreline Protection)**

The presentation on the project was given by Dexter Sapp with National Resource Conservation Service (NRCS).

Phase one funding for the project was approved under the 16<sup>th</sup> year priority list. The project is located on the east side of the Orleans Land Bridge (northwest shoreline of Lake Borgne). The original intent of the project included 410 acres of marsh creation and nourishment and 38,000 feet of vegetative plantings along the Lake Borgne shoreline. However, information was received that the land owner (Marsh Holdings, LLC) was proceeding with the establishment of a mitigation bank in the proposed area. A field trip was conducted and the project was reassessed. A change in the project scope to focus on the shoreline protection feature was requested from the task force. Geotechnical work was performed. The proposal is for the construction of a rock dike with an elevation of +2.5-ft. and a 4-ft. crest and the construction of terraces with a top elevation of +2.0 ft., 20-ft. crest and 5 to 1 side slopes. A series of alternatives were considered and the preferred alternative based on cost versus benefit is Alternative No. 11 for a foreshore rock dike north and south and 50% vegetative plantings with terraces. The project team concluded that the measures should extend from Unknown Pass and end at the Lake Borgne CIAP project. The revised project will protect approximately 26,000-ft. of shoreline using rock and will include approximately 21,000-ft. of vegetative plantings. Two rows of vegetation will be planted in areas that will not be protected by the rock dike. The first row of the 4.5 miles of proposed terraces will begin about 50 feet from the shoreline. The terraces will be 1,000-ft. in length and constructed about 500 feet apart. The proposed schedule includes completion of geotechnical investigations by June, the 30% design review meeting to be held about August, and completion of the NEPA and permitting process in about October, 2010.

The estimated construction cost of the project is a little over \$16 million. Phase two approval and funding will be sought in December, 2010 and may be difficult to obtain. The construction is anticipated to be completed in September, 2012; however, this is dependent on funding.

## **Marsh Land Mitigation Bank Orleans Land Bridge (New Orleans East Bank Bridge Mitigation Bank)**

The presentation on the project was given by Jason Shackelford with John Chance Land Surveys.

The project consists of three separately permitted mitigation banks currently set to go to construction. The project is number eight in the Pontchartrain Coastal Lines of Defense Program. The goals are to reestablish, enhance and protect brackish marsh and wetland communities within the land bridge between Lake Borgne and Lake Pontchartrain and to restore natural hydrology, surface topography and floral communities. Credits for mitigation banks are sold and used to offset potential damages to other brackish marsh habitats within the basin. The project will restore or enhance 1,085 acres of brackish marsh. The project is broken into three phases: Phase 1 - 68 acres (permitted in 2004 and re-permitted in 2007), Phase 2 - 448 acres (permitted in 2005) and Phase 3 - 569 acres (permitted in 2010). The entire area will be planted and maintained for the life of the project (20 years) with a five-year operations and maintenance (O&M) cycle. Monies are placed in an escrow account for future maintenance. Phases 1 and 2 (approx. 500 acres) are set to go to construction by December 30, 2010. The borrow areas for the project are predominately in and along the Lake Borgne shoreline. An attempt was made whenever possible to reestablish natural channels and restore the pre-Katrina hydrology. Although the project is a private effort, it takes Federal, State and local restoration efforts into consideration. Approximately 3,000 additional acres have been identified and are available for restoration or enhancement to create a more contiguous and healthy marsh.

Dr. Lopez commented that the land bridge is identified by the USACE LaCPR as a critical landscape feature because it reduces storm surge coming into Lake Pontchartrain.

## **Unknown Pass to Rigolets Shoreline Protection; New Orleans Land Bride Shoreline Stabilization and Marsh Creation Project and Bayou Bonfouca Marsh Creation Project**

A presentation was given by Travis Creel on three projects that are among the 20 nominees in the statewide competition for authorization for planning and design in the CWPPRA program.

**1. Unknown Pass to Rigolets Shoreline Protection** – The project is located to the north of the Alligator Bend project and is sponsored by the NRCS. Approximately 21,000 linear ft. of foreshore dike will be constructed. Material dredged for access to the foreshore dike will be used to create approximately 65 acres of marsh. Vegetation will be planted for a brackish marsh. At the end of 20 years approximately 58 acres of the marsh creation site should remain protecting about 126 acres along the shoreline.

**2. New Orleans Land Bride Shoreline Stabilization and Marsh Creation Project (Hospital Wall Area)** – The project is located on the western portion of the land bridge adjacent to Lake Catherine. This area has lost about 110 acres of wetlands since 1956

and the shoreline has retreated almost 450-ft. back towards Hwy. 90. The shoreline erosion rate has varied from 7 to 15 feet per year. The project proposal is for 7,000 linear feet of foreshore dike and a containment dike with marsh creation and nourishment on the backside. Sixty-three acres of marsh will be created. After 20 years about 50 acres of wetlands should remain. The project will stop shoreline erosion, create marsh and protect the land bridge and the Hwy. 90 evacuation route. The project cost is approximately \$10 million to \$15 million.

3. **Bayou Bonfouca Marsh Creation Project** – The project is located on the north shore of Lake Pontchartrain just southwest of Slidell. Marsh will be created in three areas. Ring levees will be constructed around ponds. The project will create a total of 418 acres and provide 42 acres of marsh nourishment.

### **Caernarvon Outfall Management/Lake Lery Shoreline Restoration (CWPPRA)**

The presentation on the project was given by Robert Dubois with the U.S. Fish and Wildlife Service.

The project is broken into two phases (southern unit and northern unit).

The proposal for the southern unit is to restore approximately 32,000-ft. of shoreline. The width of the shoreline is 50-100 ft. Approximately 400 acres of marsh will be created to a target elevation of +1.5-ft from material hydraulically dredged from Lake Lery. The 30% design review is scheduled to be completed in June and 95% design review is scheduled to be completed in November. Funding for Phase 2 (construction) will be requested in December, 2010.

The proposal for the northern unit is to re-divert 200 to 500 cfs of water from the diversion to the east to stimulate growth and expansion of the marsh. A canal will be dredged and a gated structure constructed. The project was broken into two phases so that the southern unit would not be delayed because of the modeling to be done on the northern unit. The project can be viewed as a pilot project to demonstrate benefits that can be achieved.

The USACE is evaluating the use of the \$10 million that was dedicated in the 4<sup>th</sup> Supplemental Appropriation for work at Caernarvon. Information is being shared with the USACE and the USACE is contemplating taking over both phases of the project for construction.

### **Cypress Planting in Big Mar (Caernarvon Delta)**

The presentation on the project was given by John Lopez with the LPBF.

The sediment discharge plume from Caernarvon initially goes through Big Mar. The central most inner-part of the discharge has the maximum sediment and provides the potential for building land. Significant spikes were discovered in sampling the turbidity of the Caernarvon Diversion that would provide opportunities to capture more sediment. A small emerging delta is being created in Big Mar.

The proposal is to identify and evaluate an area in Big Mar for planting cypress trees. The placement of trees in front of the levee will enhance flood protection. The LPBF anticipates working with the Coalition to Restore Coastal Louisiana, which has a source of trees at no cost. Volunteer labor can be used for planting the trees. Area land owners are amenable to the project. The project costs are estimated in the range of thousands of dollars to cover logistics and would be cost effective for a modest project of several hundred acres.

### **Black Bay Reef Demo**

The presentation on the project was given by John Lopez with the LPBF.

Several small rapidly eroding marsh islands are located on the edges of Black Bay. The objective of this proposal is to build a live free standing oyster reef around one of these islands. The reef shell will accumulate over time and produce a combination of fossil shell and live reef. Shell will also accumulate on top of the island and as the island sinks over time it will be converted from a marsh island to a shell island consisting of fossil shell and live reef. Potentially enough shell could be generated for a lateral expansion. The use of reef balls is being contemplated around the perimeter of the island to create the artificial reef. The reef balls each weigh 1,400 pounds and are designed to be stable. Posts and cables will be used to connect the reef balls. A “red line” would be requested around the project area to prohibit the oysters from being harvested. A presentation was provided to the Oyster Task Force. The next step is to meet with OCPR to work out the administrative challenges since the project is considered a restoration project. The LPBF has a \$100,000 grant from Entergy and has partnered with the Coalition to Restore Coastal Louisiana, which has additional available funds of \$70,000. Construction costs are estimated to be at least \$100,000 and monitoring costs for this demonstration project are estimated at \$40,000.

### **Athanasia Bay Reef and Lake Machies Reef Project (TNC project)**

The presentation on the project was given by Cindy Brown.

The project is being funded by a National Oceanic and Atmospheric Agency (NOAA) award of \$4.2 million from funding received through the American Recovery and Reinvestment Act for shoreline protection projects. Project partners include Coastal Environments, Inc. and the LSU AgCenter. The proposal is to use an interlocking cage-type system filled with oyster shells. The system will be anchored. The two potential project locations of vulnerable shoreline are in Grand Isle (Jefferson Parish) and St. Bernard. Marsh grasses will be used to supplement the sites. The permit is expected to be awarded within the next few days. Cage units are under construction. Deployment is anticipated to begin at the Grand Isle location on April 17<sup>th</sup>. A start date of June 1<sup>st</sup> is anticipated for deployment at the St. Bernard location. About 2.15 miles of living reef will be built in the St. Bernard marshes and 2.5 miles of living reef will be built at the Jefferson Parish (Grand Isle) site. Construction of the system is estimated to take six months. The project will be monitored a minimum of two years to evaluate shoreline changes and accretion, reef viability and the various ecosystem services provided by



artificial reefs. The success of the reef will be monitored four years out. Funding is required for longer term monitoring.

### **Medium Diversion at White Ditch (LCA)**

The presentation on the project was given by Andy MacInnes with the USACE Planning Department.

The project is being developed by the USACE with the State of Louisiana as the cost share partner. The USACE is looking at a broad range of diversion sizes and the follow-up feasibility-level analysis will determine the ultimate size of the diversion. The project area is 98,000 acres and located in LCA Sub-province 1. Public comments and concerns include the restoration of sediment and the maintenance of an estuary within Breton Sound. The minimum threshold for success of the project is maintaining no net loss. A broad range of measures were evaluated to achieve the project objectives. A number of the alternatives were screened out and a core group of measures were left for implementation. Five locations and various sized diversions were evaluated. A 35,000 cfs diversion would allow operation without having to be constrained by the Bonnet Carre Spillway operation and would not put water over the top of the Oak River ridge. The benefits of the 35,000 cfs structure almost double the benefits of the 15,000 cfs structure. The same goals achievable at White Ditch can be achieved at Phoenix, but at a lesser cost. Therefore, Phoenix was selected as the location to build the 35,000 cfs structure. The 35,000 cfs option allows a more efficient operation during a shorter duration and for flexibility in operation. The consensus seems to be that a balance can be achieved by narrowing the operational scheme to a March-April pulse at full capacity, with a 1,000 cfs maintenance flow the rest of the year. Materials from the excavated channel will be beneficially used to create marsh creation sites along the path of the channel.

The USACE review process will be completed and a Chief's Report will be submitted by the end of 2010. The PED process could take from one to one-and-a-half years. Construction is anticipated to take 900 days. The diversion structure could be operational in 2015. The project cost including contingencies is in the high \$300 million range. The authorized project cost cap is \$123 million. A reauthorization of the project may be needed or annual LCA appropriations may be available.

There was no further business; therefore, the meeting was adjourned at 3:15 p.m.