



Public Meeting Summary

Coastal Restoration in Louisiana Thursday, Feb. 25, 2010

Location	Westbank Jefferson Parish Council Chambers 200 Derbigny St. Gretna, LA 70053
Time	Open House 6:00 p.m. Presentation 6:30 p.m., followed by a discussion
Attendees	Approx 78
Format	Open House Presentation
Handouts	<ul style="list-style-type: none"> • Presentation • Approval Process Brochure • 2009 Status map
Facilitator	Rachel Rodi



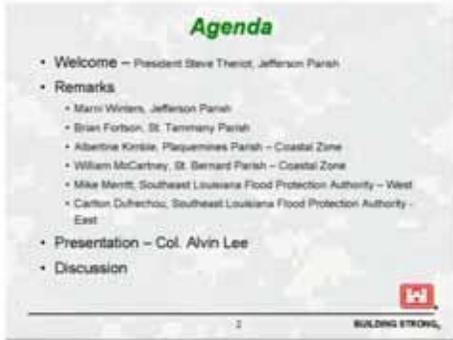
Steve Theriot: First of all I'm not Ronnie Harris. I'm Steve Theriot the new parish president for Jefferson Parish, six weeks old as of yesterday, still minted. I wanted to offer the invitation to congratulate all of you for being here this evening. I think the effort itself is a learning process for me these last six weeks on many fronts and this is just another front that is really an important front [Inaudible] and it's good to have other local communities band together for one common purpose and that's for the

coastal restoration and other areas within our estuaries. It's always for me, when I served for the Legislature and I did serve there from some eight years dealing with some major issues with the estuaries and no [Inaudible] I tell people now, especially before Katrina, we used to have some of these meetings on what would happen to some of our communities in the event of a catastrophic event. I really thought it was just hogwash until Katrina came along. In my formal office as being a legislative auditor for the state, I got to participate in the areas of recovery which gave me a new found appreciation for the efforts of all the many men and women and organizations banding together for one common purpose which has kind of changed. Not only did the Saints change us in a way of being together, but I know Katrina did and Rita did and also Gustav. All I can say is I appreciate those who are participating and dealing with the major issues we have and looking at them. I'm going to sit back and learn what I can this evening. Again, welcome and hopefully the next time I'll be much more apprised on the direct issues that are effecting, not only the state, but our local communities here. Thank you.

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Rachel Rodi: Thank you very much. We are going to start with remarks from our esteemed panel back here. First, is Marnie Winter from Jefferson Parish and then Brian Fortson from St. Tammany, Albertine Kimble from Plaquemines, William McCartney from St. Bernard, Mike Merritt, SLFPA-West and Carlton Dufrechou with Southeast Louisiana Flood Protection Authority East and then Col. Lee will come up and give his brief on coastal restoration.

Marnie Winter: My name is Marnie Winter and I'm director of Jefferson's Environmental Affairs. I've been involved in coastal restoration for 28-30 years. I've been with the parish for 28 years. When President Theriot spoke of the parish and coming together it reminded me of the group that we formed, PACE, Parishes Against Coastal Erosion and it was formed by Jefferson, Orleans, St. Bernard and Plaquemines in 2003 to get the parishes united to speak with one voice to educate our local community and the nation of the importance of our wetlands. I think the PACE group was instrumental in working with our congressional delegation to get funds for coastal restoration. There is still a lot more that we need, a lot more federal funding. Jefferson Parish did its own coastal restoration plan in 1993 and we updated it 2003. The majority of the projects in those plans have been funded by CWPPRA or CIAP or LCA or state funding various funding sources, but we still have a lot more projects in the plan that we need to construct. We have a local group of coastal stakeholders who would give us input into the projects where the areas of need are. What I would like to end with is four areas of interest that we would like the Corps to take note of that we think need immediate action. One of those is the restoration of the Barrier Island from the Mississippi River to the [Inaudible] Island. Another one is the restoration of the Barataria Land Bridge from Plaquemines Parish to Lafourche. We've already started doing a lot of projects across the Land Bridge, but again, there's still more that needs to be done. I would also like to see sediment delivery from the Mississippi River to somewhere around the Myrtle Grove area, which is an area that is having a lot of erosion and is opening up to open water. And lastly we support the GIWW alignment of the Donaldsonville to the Gulf Hurricane Protection plan so we would hope that the Corps will take note of these and we look forward to working with them to accomplish these things.

Brian Fortson: My name is Brian Fortson. I'm an environmental specialist for St. Tammany Parish on the North Shore of Lake Pontchartrain. We really appreciate being invited here tonight to participate in these kinds of events. However, our situation on the North Shore is we are fortunate in comparison to a lot of parishes. We have 80 to 90 percent of the parish on high ground and our coastal restoration issues are more or less confined to the southern fringe of our parish. We have problems, we have [Inaudible], we have need for federal and state and local spending for local restoration, but I'm sitting here with a bunch of people who really have problems. It's nice to be able to participate in something like this so....

Carlton Dufrechou: Yea, but if we go, you are going to get it



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Brian Fortson: Well, we are hoping that you guys are able to hold the line and we are here to help you out. We've been involved in coastal restoration in St. Tammany Parish from at least since I've been there in 1988. CWPPRA, we have good CF projects, one we are fixing to start in the Slidell area. We do a few local projects. We always participate in things like the Christmas tree project, so we definitely have the interest and have as good as a participation in this arena as we can muster. It's nice to be able to get a bunch of people together like this and really talk about this thing in an open forum and just appreciate being able to participate.

William McCartney: Good evening, I'm William McCartney from St. Bernard Parish. I guess first I would like to thank new president Theriot for hosting us tonight and Col. Lee for putting this together. My parish president couldn't be here today, but he did want to thank all federal agencies and Governor Jindal for the commitment that he's seen in his two years of his presidency or his new role, for showing us tremendous cooperation between all these agencies. Marnie spoke earlier about PACE and we are active in that group in the parish against coastal erosion and we are proud of that. We have five issues that we still want to push along. We first would like to thank Col. Lee for [Inaudible] MRGO closure. Mr. Miller from the Corps is working on a MRGO ecosystem restoration project and the paraphernalia in the back of the room talks about over 300 projects possibly implemented there and that goes along in making our residents comfortable and proud to be back. The Central Wetlands is a big project for us. It's the area between MRGO and [Inaudible]. We have some pretty unique [Inaudible] we are trying to see what we can do to implement [Inaudible] project with and kind of thinking out of the box on that. Sheriff Shutley, the president's environmental chair, she's very interested in that project so we filed that. There is the Caernarvon Diversion Modification that is going through, the Corps is pushing that and we are excited about that. I think [Inaudible] and we will see what she says. There is the new Violet Diversion being [Inaudible] and we also excited about that. Last [Inaudible] Chandeleur Island and as Mr. Dufrechou says if we don't stop it out there we may [Inaudible] not be able to stop it on the inside so [Inaudible]. We are very proud to be here. Thank you.

Albertine Kimble: My name is Albertine Kimble and I'm the Local Coastal Program Manager for Plaquemines Parish. I'm very blessed and honored to be here tonight with all the other surrounding parishes. I'm very grateful to be a resident and lifelong resident of Plaquemines Parish and to be blessed to have the Mississippi River as the heartbeat of my parish and I want to thank you sir from me and also the parish president as the new parish president of Jefferson Parish. I want to thank my parish too for actually giving me the opportunity to speak here tonight. We have so much happening in Plaquemines Parish, it excites me that I have a dredging and [Inaudible] now, beneficial use of dredging material, I have East Crane [Inaudible] Island being built also and also the Bayou [Inaudible] project, which is the first of its kind for the Mississippi River, which will be the future of saving all parishes. This sediment is like gold to us and it's very important to actually share with all our neighboring parishes. Our diversions are important to sustain the life of what we build with the sediment delivery. We have a regional coastal plan that we are working on now and it's really an honor to have CWPPRA, CIAP, LCA, everyone working together and that's what it's going to take to save coastal Louisiana is the unity of all the surrounding parishes north, south, east, west, and just communicating and being together and solving the problems that we have. Knowing that the mighty Mississippi is the salvation of it all is a blessing is a part of it and I just want to thank you very much.

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Mike Merritt: I'm Mike Merritt and I'm here tonight with the president of the Southeast Louisiana Flood Protection Authority West president Commissioner Maclay and our Regional Director Giuseppe Miserendino. I'm a Baton Rouge geologist and I was appointed by the governor as an out-of-jurisdiction commissioner for SLFPA and on behalf of president Maclay and the other commissioners working to protect your homes and businesses, she would like you to know that our authorities main goal is to survive the next big storm while our partners at CPRA and Army Corps of Engineer strive for an ultimate and permanent solution, the completion of a West Bank vicinity hurricane project. The illustration that you are looking at is a slide taken Tuesday showing the work preceding the pace on the GIWW project. After inspection that closure gate and pump station last Tuesday a meeting with experts from the Netherlands earlier today, President Maclay remains convinced that a hasty completion of the West Bank and vicinity projects by June 2011 or any other date should not be obtained at the expense of doing it right. Now, President Maclay has her eye on the future and looks forward to the day when those projects are complete. Her next goal is to seek increases in protection, to shelter our coast from category five storms. She believes approving and construction of the Donaldsonville to the Gulf project along the GIWW alignment will go a long way toward achieving this goal. Then, after all the flood defenses are constructed, they should and could be supplemented through robust efforts to restore the coast with these priorities. First, restoration projects on this dynamic must be designed to be assisted or replenished instead of harmed by relentlessly active geological processes. Second, as a geologist, I'm suggesting that coastal swamps must be given a higher priority than marshes and restored first. Our commissioners, Commissioner Wilkinson, Commissioner Morgan, Mr. [Inaudible] are very supportive of President Maclay when she says she does not believe the authorities mandate to assist with coastal restoration should be distracted by federal responsibilities being cast upon it such as operating a maritime navigation [Inaudible] that the GIWW pump station now under construction. She will continue in the future, as she has in the past, to travel to Washington, D.C. and eloquently speak out on your behalf to the Congress and the Administration to convince them to take out and meet their responsibilities of interstate commerce instead of passing these federal issues to local agencies to resolve at local expense. Many coastal restoration projects currently under construction or planned will provide additional protection and will also have President Maclay's support. Unfortunately, those benefits are for the long-term and won't be helpful as she prepares the authority for the next task at hand now and into being ready for the next big storm. Until all the flood control projects are in place, President Maclay urges you, all of you, not to allow funding to be diverted away from building flood defenses in favor of coastal restoration if that choice ever comes. Best of luck to all of us and please join us in working together to make more good luck and thanks for inviting me here tonight and especially thank you Colonel, you and your staff and that [Inaudible] and we appreciate being invited to the project. Please everyone call us anytime you see water rushing where it should not be or if we can be of any assistance.

Carlton Dufrechou: I think President Theriot started us off exactly correct to Katrina and how it was a horrific disaster and probably the most positive aspect is that we are here today. This region has unified. If it were not for Katrina we would have not have a chance to make it for the long term and the levee system around the metropolitan region is tremendously better than it was five years ago because of the Corps of Engineers, the levee districts, many in this room.



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However, as good as the levees are, and mayor I applaud what you said about the new standards and thank goodness we go them and [Inaudible]...we can't compromise those new levee standards at all as that will put us back to where we were after Betsy. Lord knows we can't do that, but ladies and gentlemen the bottom line is no matter how good our levees and flood walls are if the coast continues to go the levees are going to be toast, we are going to be toast and with out that coast, it is our first line of defense, it is what will make this region sustainable, my associates to my right [Inaudible] the barrier islands, the bridges, the marsh land bridges, those are what historically has protected this region for hundreds and thousands of years. The only way for us to make it for the long term is to re-establish a self sustaining coast. It won't be the coast I knew 50 years ago as a kid and lord know we can't bring it all back, but we can preserve most of what is there today, which I think going to be one of the toughest decisions for us as community in the future, is that we can't have it all, we are going to have to make some tough decisions on what can we save strategically and there will be changes. We will have to reconnect the river to the coast in certain areas and that's going to cause some fish are going to be further out in some places, oysters are going to be in different situations, salinity will changes, habitats will change. However, without those hard decisions we as a region will not be here in, Brian I'm looking over at you, I said that a little lightly ago, but the biggest concern I've got for us is that this won't happen in my lifetime and it won't happen in my daughter's lifetime, but what I'm seeing in my opinion is nature is trying to recreate a self-sustaining system and that self-sustaining it's trying to recreate is of several thousand years ago when the Gulf Coast was on the North Shore of Lake Pontchartrain and went down toward Morgan City. If that happens, there will always be a New Orleans, a sliver on the river, but we know what we know and this region will not be here and that will be the biggest tragedy that not only we face but that United States has ever faced. We are at a guerilla war and we have to make hard decisions and we've got to push and the good news is that I think we are going in the right direction. Colonel Lee, are you ready to take this?

Col. Alvin Lee: Absolutely.

Carlton Dufrechou: Oh, Mr. Doody, the president of the Flood Protection Authority of the East did ask me to say to keep pushing, pushing, pushing, so we need a result.



Col. Lee: Good evening it's my pleasure to be here tonight to talk about something that's near and dear to my heart too and that's coastal restoration. When we started talking about this and that's about six months ago it was very apparent that we had a lot of desperate things going on throughout the district that we didn't have connected, that we had not communicated effectively all the things that are going on. I spent this week throughout the state, I started out in Lake Charles on Monday night meeting stakeholder in Cameron Parish where we talked about

some of their challenges from Hurricane Rita. The next night we had a town hall meeting in Lake Charles to talk about some of their challenges with coastal restoration in Chenier Plains. Of course their challenges are different than they are here because the hydrology is different, the intensity of the storms are typically different there than they are in this area particularly what we noticed after the aftermaths of Hurricanes Katrina and Rita. Last night we were in Morgan City

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to talk about some of their challenges. And the focus there, they are in an accreting delta so their challenges are a little different. Their major focus right now is on the river, that's the Mississippi River and for them the Atchafalya River and you know we are having some kind of unusual times in the Mississippi River right now with the current conditions of the river and what's happening throughout the lower Mississippi Valley, we are getting a lot of rain and all the rivers are swollen, we've got a lot of saturated soils. We are seeing things that we haven't seen in a long time. As a matter of fact, our hydrograph right now is trending ahead the 1927 flood so that gives some perspectives of some of the challenges of living in Southeast Louisiana. Typically if you live somewhere you have to deal with one major flood risk, and I've got some slides and I'll talk about some of the risks that people living in Southeast Louisiana have to deal with. It takes a team to tackle these challenges. What Carlton says is very true, some people think you can do everything and do it all and have it all and that's sounds good until you try and implement that. I think we all understand the challenge is funding and then you have to focus your efforts on what is the most important priority to get accomplished. That requires trade offs and those are hard decisions that have to be made and those decision are not decision the Corps of Engineers will make in isolation. That's part of the reason we are here tonight to hear from you also. I want to give you an update on where we are with coastal restoration. I view 2010 as a pivotal year in coastal restoration for the state of Louisiana. We have sight studies, and you hear that word in a negative connotation, and I've heard a lot of comments from the panel behind me that said that they need federal resources. The mechanism to get federal resources is feasibility studies and those feasibility studies determine the federal interest, they validate the federal interest from a technical standpoint and from an environmental standpoint, and then it gives the green light for Congress and the Administration to appropriate resources. I think what we've seen in the past year is a greater willingness from the Administration and the other federal agencies to work together to accomplish some great things in this coastal zone. So that's what I want to talk to you about tonight.



Many of you know what our missions are. I won't spend a lot of time on this but public safety is our key focus in everything we do. It is above most important to me and our team. Our team lives in these communities, they've lived here their entire lives, we have a lot of new employees who moved here and live in these communities and they value not only living in the communities but also working to sustain these communities. Flood risk management is one of my key missions. Our team takes that very seriously and we are

focused on getting that done. We are doing it the right way. I can promise you the amount of effort we spend in engaging, collaborating with our non-federal sponsors, with their engineers with the non-governmental organizations, with CPRA and their engineers and different teammates that we work with levee authorities and the levee districts to make sure we get this right is unprecedented, completed unprecedented. We are here to deliver the Greater New Orleans Hurricane Storm Damage Risk Reduction System by one June 2011. That is our driver

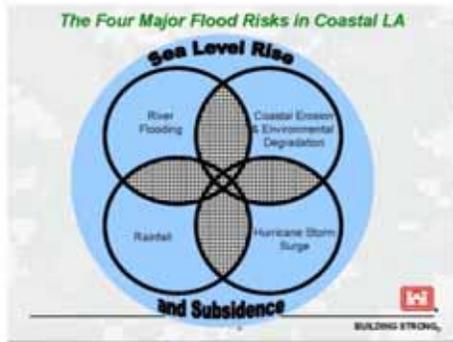
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and we plan on having that surge protection in place by one June. Now that doesn't mean that projects won't continue beyond one June, but we want to have the basis of that structure in place so that before hurricane season of 2011. Just a couple of other things, I know the navigation mission is very critical to the state. We have 26 ports in the state of Louisiana. We have four on the Mississippi River and we have one out in Calcasieu and those five port complexes make up 431 million tons of cargo transported along those waterways. The focus of that is not just on the local economy, but it's also for the regional and national economy. It is the lifeblood to mid-America. If you look at the inland navigation waterways, the Mississippi River and tributary project feeds those waterways and they are critical and instrumental in not only building our economy but sustaining it so it's important for us to do that. It's also important as it's our ecosystem restoration mission and I think after Hurricanes Katrina and Rita people saw that up close and personal what had happened over the past 100 years to the coastal area and Southeast Louisiana to the barrier islands and even close in to the natural ridges to the different...one of the things that the Lake Pontchartrain Foundation has is their slide of multiple lines of defense. There is a clear separation between barrier islands and salt water estuaries, the saline estuaries, the brackish estuaries and then the transition to the natural ridges and then the fresh water estuaries and then the levees and all the other protections. So what happens over time is those deteriorate and they cause some serious problems that take a different approach in addressing. What we are seeing is the unprecedented effort in trying to address some of those issues.



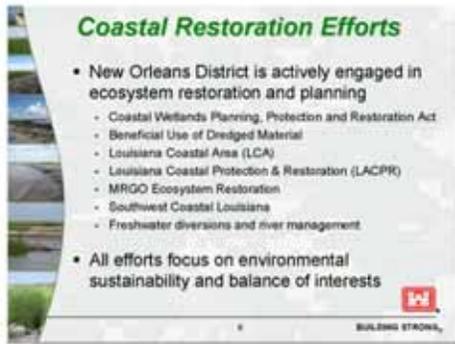
I talked to you about this a little bit. If you live in Southeast Louisiana there is more than one hazard that you have to deal with. There are four key ones and that's river rain flooding from the Mississippi River and the Atchafalya River and then we have the coastal erosion and then we have environmental degradation and that is what I just talked about with the eroding coast. We also have to deal with rainfall in the Greater New Orleans area. I was up today flying about 20 of the state joint committee on Homeland Security for the state of

Louisiana, our state representatives that we flew over the system today to show them to places like they respond, Caernarvon, MRGO closure and the hurricane system to show them what a healthy marsh looks like that is getting feed with fresh water and fresh sediments and then showing them a marsh that gets feed with a little bit of fresh water and the difference between those two and then showing them a marsh that is isolated that has saltwater intrusion and the effects of that are to the ecosystem. These congressmen and senators and legislators where from all over the state of Louisiana. It's important for them to understand this because they are the ones who help fund these efforts because federal government doesn't fund these type of major ecosystems without state cost share. Typically it is a 65-35 cost share with the state supporting that 35 percent. Two other factors we have to deal with are sea level rising and subsidence and those are key issues in Southeast Louisiana. I know for the people who live here you know that, but when we design our projects we have to count for sea level rising and subsidence in the future of our projects. So when we design a project for a 50 year life, we account for sea level rising and subsidence in both our levees and our concrete structures so we build those to the right design.

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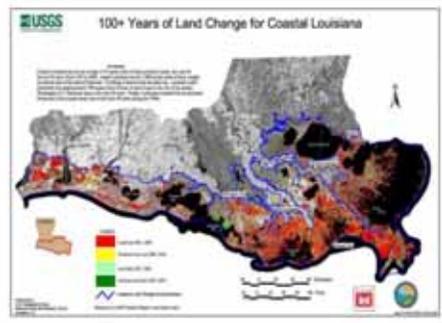
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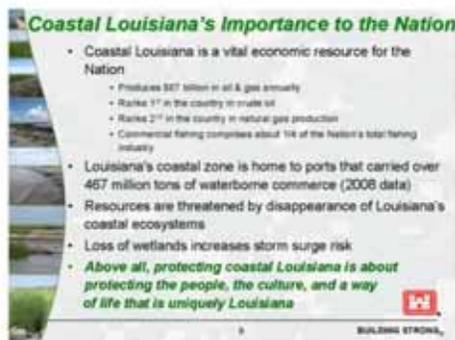
This next slide is a highlight of many things that we are going to get in. I am the task force chairman for CWPPRA, and CWPPRA is this year celebrating its 20th anniversary and I think it's a very successful program. The focus of CWPPRA is really on small scale projects because they are important for the communities and some of the panel members talked about those tonight and the importance in their parishes and their communities. Another one we are very supportive of is Beneficial Use of Dredged Material. We dredge about 65 million yards of

material every year throughout the coast of Louisiana, not just on the Mississippi and that's where the majority of it comes from, but throughout the coast. I'll talk some more about this a little later. We have the LCA and I'll give you an update on the LCA and I think it's very positive news on what's happening in LCA completing eight feasibility studies this year and the president's commitment for funding LCA in 2011 and that is a new start, which is a rare thing these days for the Corps of Engineers. Also I'll give you an update on LACPR and where we are on this technical report and you've heard a little about the MRGO Ecosystem Restoration project and that's going very well. We have done phase one and that's to close MRGO. The phase two piece is to move forward with the ecosystem restoration project to restore the effected areas from the Mississippi River Gulf Outlet project. We also have some studies going on out west, the Southwest Coastal study that's under way. There's another study that's being contemplated for the central part of the state right next to the three coastal areas out by Texas and that's not been funded yet but we plan on moving forward with that as soon as we get funding. We also have our focus on freshwater diversion and sediment diversions in managing the Mississippi River. I think everybody recognizes the resources of the Mississippi River are critical in us restoring and

sustaining the coast. All these efforts have to be balanced and some hard decisions do have to be made and we are willing to make those decisions as a team and with the state of Louisiana and the stakeholders, the public and your engagement is critical in helping us not only understand the conditions, but make the right decisions.



The next slide is something you are very familiar with and what it shows is the southeastern part of the Louisiana is losing the most coastal landscape so the focus for that side of the state is critical for this side of the state and Southeastern Louisiana because that's also where the largest storm surge risk is as evidenced in what happened in Hurricane Katrina.

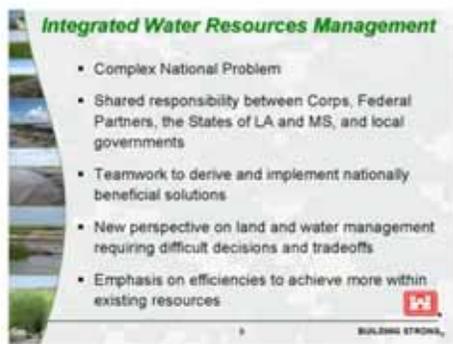


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Some of other things about Louisiana that I've already hit on from an economic standpoint, but there are many aspects of Louisiana and this is the message that I take when I go outside the state because I talk to a lot of folks who are interested in what is going on here and I try to give them the context of why coastal restoration is important in Louisiana. Not only for the people who live here, but to the region and to the nation and I think some of these statistics that you see on the oil and gas production everybody is pretty familiar with that, but also in crude oil and getting the natural gas production to the rest of the country with the pipeline system. About 50 percent of the refining capacity is transported through pipelines that originate here in Louisiana. We also have a large commercial fishing industry. I was up in Baltimore last week and I was eating some crab and the manager of the restaurant came by and I heard him talking about where the crab came from. Guess where the crab came from? Louisiana and they were great so your crabs have made it all the way up to Baltimore. They do have good recipes up there I have to tell you that. It is important for people to understand the importance of the coastal landscape and what's going on. And then as you are well aware the loss of wetlands increases the storm surge risk and that was very apparent in Hurricane Katrina based on what was there 100 years before that and the effects of how that storm interfaced and reacted with the coastal landscape. And then probably the last thing that I will talk about is how Louisiana is different from most places. I lived in Charleston, SC and they dealt with a major hurricane in 1989 and they have some challenges with some of their coastline eroding, but not to the way it is happening here because their coast is not a working coast like Louisiana's coast. They have a lot of people who live on the coast, they have water recreation, beach, those type things on the South Carolina coast, but if you look throughout the state, it's not just hear in Southeast Louisiana, it's throughout the state, Louisiana is a working coast and the people and the culture is very important. I meet with a gentleman out in Cameron Parish and he was a seventh generation who just graduated from LSU, went back to Cameron Parish to work there with the port authority so it's important for families that live in these areas, they've lived there their entire lives, and many generations to be able to sustain these coasts so that they can have that for the next generation that comes.



The next slide is something that I want to talk about because I believe it's critical in how we approach these water resource development projects. I think everybody understands their very complex in nature, if they were very simple they if they were cheap people would have already done it and we wouldn't be here tonight. But these things are very completed. They are complex. They cross boundaries, political boundaries, they cross hydrologic boundaries, the impacts are not only felt when you do one thing in one area, but they even cross state

boundaries. Some of the things that we've done in the New Orleans district with some of the studies we have underway, we've had to have public meetings in Mississippi to talk about their concerns about what we are doing with the hurricane system in New Orleans, other plans that we have on the books and how that will effect their livelihoods in the state of Mississippi. Those are some of the balancing things we have to do and make sure that we effectively communicate those with the right people. The second bullet really focuses on what I want to talk about –



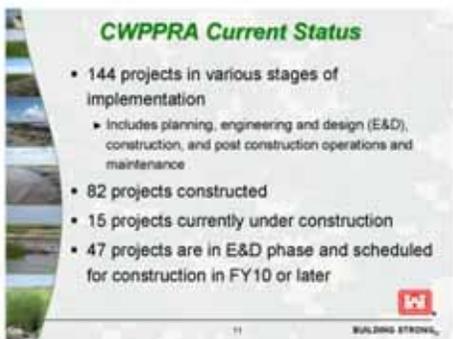
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shared responsibility. It is a shared responsibility between the Corps and our other federal partners. We work very closely with U.S. EPA, U.S. Fish and Wildlife, NOAA Fisheries, USGS, and NRCS to deliver water resource projects in the state of Louisiana. The state also has an essential role in that as well as local governments. It's not just one person or one agency that has only responsibility to deliver this it has to be an integrated effort and that team work has to focus on what is beneficial to the nation because those solutions to the nation are also going to be beneficial to the local people that live here. One of the things that we all understand is that there are some limitations on funding. That's been very apparent over the past couple of years and what you've seen in the last year is President Obama's Administration has committed themselves in August 2009, they stood up the Louisiana-Mississippi Gulf Coast Ecosystem Restoration Working Group and the focus of that is to ensure that the administration was working smarter, faster and more aggressively the ecosystem challenges throughout the region's coast. This working group had their first meeting down here this summer. They had engagements in Mississippi and throughout Louisiana. What they are trying to is integrate the water resource efforts for the federal agencies. Each federal agency is typically lined up under a different cabinet position and the integration of those, they all have different policies, and so there is a move a foot to make those policies more consistent so when we are doing water resource development project we can do those more effectively and efficiently and you don't have five or six federal agencies doing their own thing and then when you try to pull everything together you then have a lot of friction points. There has been a lot of effort that's underway now and they have some new planning and guidance guidelines. They have been out for public comment for the past 30 days or so and the goal of those is to help implement these water resource development projects better.



CWPPRA, you've probably seen this slide, I show this slide every where I go. Just to give people perspective, these green areas are not necessarily one project, but those are the influence of one or multiple projects in those areas and those are the ones that have been completed. The red ones are the ones that are planned and so there is a lot planned under the CWPPRA act. Just to look at CWPPRA in isolation that's only one piece of the puzzle.



We have about 144 projects in various stages of implementation and when those active projects are completed, they should protect or restore about 110 thousand net acres of coastal wetlands. That's only a small portion of what needs to be done. Eighty-two of those projects have been completed or in operation or maintenance, 15 projects are currently underway and 47

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projects are scheduled for construction in FY 10 or later. We are right now in PPL 19 the task force committees just voted on 20 this week and we will be moving that forward this year and again, I told you about the 20 years celebration and that will be on April 8th and that's going to be in the Greater New Orleans area to celebrate the fact that CWPPRA has been in place approximately 20 years. One thing I do want to let you know is the CWPPRA program as good as it is, is coming to an end unless it's re-authorized. In 2019 CWPPRA is scheduled to end unless it is reauthorized by Congress. That's why it is important for you the public for you to engage and let your elected officials know the importance of these type of restoration programs.



The next program is Beneficial Use of Dredge Material and I talked about that. We do throughout the state. The main focus is what we remove from the Mississippi River, but we do maintain 11 navigational channels in Louisiana about 2800 miles of water ways. I think I said this earlier, we dredge an average of about 67-68 million cubic yards of material and of that material, there's some material that's suitable, there's some that's unsuitable, we typically refer to that as fluff and then there's some that's not available. What that means is that if you look up on the Mississippi River and see some of the shallow

draft crossings and the deep draft crossings so that are so far upstream that it's no economically feasible to bring that material down and use it for coastal restoration. If you take our available material and look at what we beneficially use, we reuse about 48 percent of that material that is dredged throughout the state of Louisiana. That is a great benefit to the state. To date, the Corps has dredged enough material to create about 39 square miles of ecosystem and that's about 25 thousand acres of coastal habitat. We continue to look at opportunities and that's all with full federal funding. We do have opportunities in a cost-share manner with the state of Louisiana and we did that this year out in the Calcasieu River. One of the key highlights this year for the CWPPRA Task Force is that we completed the first permanent sediment pipeline in the state of Louisiana and that's out on the Calcasieu River and it goes into the Sabine Refuge and the purpose of that is to create about 200 acres per year for a 20 year life cycle. That will all be done within the federal standard as soon as the Federal Dredge Disposal Plan for the Calcasieu River gets approved. So these are very positive things and I think that same type of sediment delivery systems can be done in other places in Louisiana to leverage the sediment that we dredge in the river.



The next thing I want to talk about is LCA. I think I highlighted this briefly, but this is the year for delivery for LCA. We have eight projects, or feasibility-type studies and other construction reports that will be completed this year and they will be forwarded for approval and then they will be ready for funding from Congress. So you've heard a lot about studies, studies and more studies, what I can tell you now that our type has focused on the state of Louisiana in getting those eight studies delivered. Those eight studies are part of 15

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total studies authorized and awarded in 2007 under LCA. So the next stage is the engagement with the state and the other non-federal sponsors in moving from the study phase to the funding and construction phase. I'm telling you this because the funding and construction phase are critical in moving the LCA program forward.



I'm just going to go real quickly through these. We have five LCA Near-Term Projects. MRGO Environmental Restoration; you've heard about that. There is a separate study that is underway by our team that's going very well and progressing very well. The second one is a Small Diversion of Hope Canal and the purpose of that is to divert Mississippi River water for wetland creation. The third project is Barataria Basin Shoreline Restoration Project; that report will be completed by December of this year. We also have the Small Bayou Lafourche reintroduction that would use Mississippi River water for wetlands creation. The fifth project is the Medium diversion with dedication dredging at Myrtle Grove and that's to diver Mississippi River water for wetlands creation.



The next slide shows six contingent projects and those projects will be completed prior to 31st of December of this year. The state of Louisiana is working very closely with us as well as other federal resource agencies in helping us drive these projects home. The first one is the Multipurpose operation on Houma Navigation Lock. The second one is the Terrebonne Basin Shoreline Restoration Project. The third one is Small Diversion at Convent/Blind River. The fourth one Convey at Atchafalya River to the northern Terrebonne Marshes. The fifth one is the Amite River Diversion Canal Modification. And the sixth one is the Medium Diversion at White Ditch so that project would focus on diverting Mississippi River water into wetlands creation.



Then we have four other related project investigations that are underway. These are scheduled for report completions in December 2011, so the following year. We would submit those reports to Congressional Committees and that would trigger construction authorization and appropriations requests. So there's a lot in the pipeline that's coming quickly this year and next



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year that are going to need Congressional funding from both the federal side and the state side. The four projects we are going to complete in 2011 are the Gulf Shore at Point Au Fer Island, the land bridge at Caillou Lake and the Gulf of Mexico and the modification of Caernarvon Diversion that was talked about earlier today and also the modification of Davis Pond. What we will be doing is looking at those diversions, they are typically freshwater diversion that was their intended purpose, to look at them and see if they can be modified to see if they can create more ecosystem, more sediment diversions. That's what we will be looking at to see if we can change the function of those to make them work more effectively as far as ecosystem restoration.



The last thing, and this one is very important, the administration is very focused on the LCA kick started so this beneficial use of dredging material program, referred to as BUDMAT, the president's budget for 2011 identifies 19 million dollars that is funding the LCA program for 2011 and that's what I was referring to earlier, that's a new start. We see some opportunities because BUDMAT, this project right now that is being reviewed, is being passed up our chain of command right now for review and approval. We believe by Oct. 1st of this year, we will be poised to move forward and implement some beneficial

use projects in the state of Louisiana with that funding that's been allocated. That's only been identified in the president's budget, it has to remain through the house and senate budget as it goes forward and then it's past into law. We are pretty excited to see that in the president's budget and we are focused on getting that done. We are working very closely with the state to identify potential projects and that's probably about 10 million dollars in 2011 and then there's another 9 million dollars from that 19 million dollar president's budget request and that would be focused on demonstration projects and again we are working very closely with the state to determine what those should be so we can move them forward.



There are also other opportunities through Section 204 and we have some candidate projects we are looking at. Some of those are Atchafalaya River at Shell Island Pass; the Calcasieu River, mile marker 5-14; Houma Navigation Canal, Wine Island; Houma Navigation Canal, Cat Island Pass; Barataria Bay, Bar Channel. So those are just some of the projects and there are several opportunities we will look at with the state of Louisiana.

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The next slide I'll talk about is our technical report for the Louisiana Coastal Protection & Restoration, that's what some people refer to as the Cat 5 study. We finished that study back in June 2009. It was available for 45 day public comment period. In September that report was signed by the chief of engineer and sent over to the Assistant Secretary of the Army for Civil Works and right now we are getting ready, the state has provided their information regarding that report, and our recommendation is going to be to our chain of command is to move that report to Congress.



What I would like to do now is highlight a few projects that are in the Greater New Orleans area and just show you some of the things that are going on. Some of these are talked about already so I'm not going to spend a lot of time on them.



Many of you probably have already been engaged in this, but the Mississippi River Gulf Outlet Ecosystem Restoration. This shows the study area, thinking there have been a potential of 300 projects that have been identified in this study area. That doesn't mean all of them will make it to the end, but that's part of the process.



You have to kind of twiddle down and determine which projects are the most effected and then work through those and then come up with a final array of alternatives and that's what we are doing as we go through this project. Again, I want to give a lot of thanks to the stakeholders that have been engaged in the process and to the other federal agencies who have been helping us



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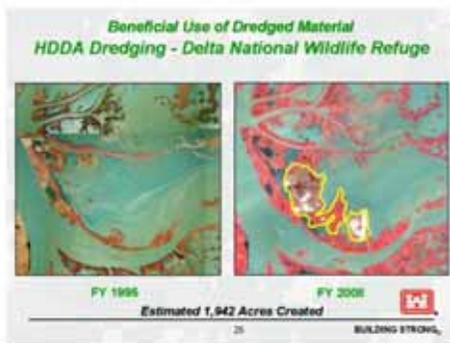
drive this and your engagement in helping us understand what's important for this project.

This is the comprehensive ecosystem restoration plan affected by the MRGO Channel. I think I told you a little earlier about the MRGO closure and that was completed in June 2008.

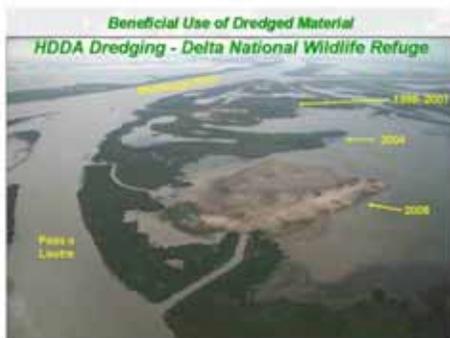


Congress deauthorized the channel and in about a year later from that deauthorization we were actually able to complete closure of the MRGO and the effects of that closure were pretty significant. We've seen salinity levels change approximately 54% above that closure and that's not completely solving issues but it is an

indicator and base start of where we want to go from. The project highlights from that is if you fly over it or you ride a boat out to see it, it doesn't look very big, but it is 350 tons of stone and the base of it is about 400 feet wide. The good thing about this project is that we were able to reuse a lot of the stone out of the jetties and then we had some additional stone brought in to complete that closure. But again, we've seen over a 50 percent salinity reduction from that project. The non-federal sponsor on that is the Coastal Restoration Protection Authority.



This is just a highlight to show you some of the effects of the beneficial use of dredged materials. This is down below HDDA Pass at the Delta National Wildlife Refuge. If you look at that in 1995 and you look at that now, we've created approximately 2000 acres of beneficial use of dredge material at full federal expense. This is what we do when we keep the main channel open for navigation. We have a hyper-dredge disposal area near Castle Loop and then we mind that and put it into these areas and this is some of the results of some of our efforts down there.



The next slide will show you from the sequence scene what that looks like over time. So it's pretty much open in that area. In 2008 and you see what it looks like. It only takes a year or two and that become vegetated and it looks like it did...you can see those areas where dredged in 1998 and 2007. It responds pretty quickly down there and

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this is just some of the efforts that we are doing. These are small efforts in the big picture, but they are all essential in solving this issue.



These are some of the other beneficial use areas on Southwest Pass that we've worked in. From 2009 we've created an estimated 8500 acres in that area with beneficial use of dredge material.



The next slide just shows some additional areas for South Pass and we've created about 2400 acres and we have additional acres proposed for 2010 and 2011 for South Pass.



I talked about these already, but these are some of the things that LCA is going to focus on and modify and review these under LCA and the whole focus is to help reverse the degradation of the ecosystem. These diversions have had some favorable results. There are some people that are not satisfied with the results and some of the things that have happened with these diversions so we are going back to look at these as that is part of adaptive management. It is to make these the most effective that you can.



I think if you look at the next one, which is Davis Pond. You know CWPPRA, and we've worked with the Task Force and the Corps, working very closely to make modifications on Davis Pond to make it more effective and to get it to handle the full flow of 10,000 cubic feet per second. It actually worked so well that it actually stopped up the channels and the conveyance means so we've had to go back in and dig some cuts through the levees. Right now, I flew over today, we are pulling up some of the sheet pile on the western guide wall and we are putting in deeper sheet piles so it can handle the

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additional flows that we plan on putting into that diversion. Again, those diversions are really created to enhance oyster production so that was done for salinity, for reasons for that. They weren't to create sediment, they weren't to create sediment diversions so what we are going to do is reassess those diversions and see what additional benefits can be gained by using those diversions.



We've also got some additional some additional projects, the Bayou LaBranche Wetland Creation. This is a CWPPRA project and that is bounded by U.S. Interstate 10 from the south and Lake Pontchartrain to the north. It's approximately three miles northeast of Norco in St. Charles Parish and the project's goal was to create an area of about 70% land and 30 % water within five years of construction. The land and water analysis in 1997 showed about 300 acres of open water had been converted into land three years after construction was completed in 1994. The project has created about 80 % land and 20 % water in three years, which is well within the target schedule. I flew over that project today and saw it and showed it to some of the legislators from the state of Louisiana.



This next slide, this is another project that we've worked on with CWPPRA. It was completed in 2001 and the project design to protect the shoreline and the marsh area that suffered significant loss due to subsidence and erosions from wave energy in Lake Pontchartrain and Chef Menteur Pass. Again, this ties into several projects, existing and planned for additional areas in this.

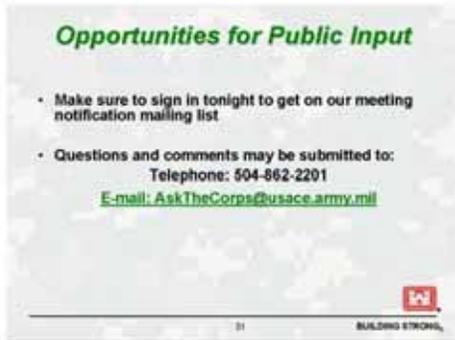


With that, that's the presentation I have for you and I am going to sit down for a moment and allow you to come up and share your thoughts about coastal restoration. I really appreciate your engagement and your attendance here tonight. Thank you for coming.

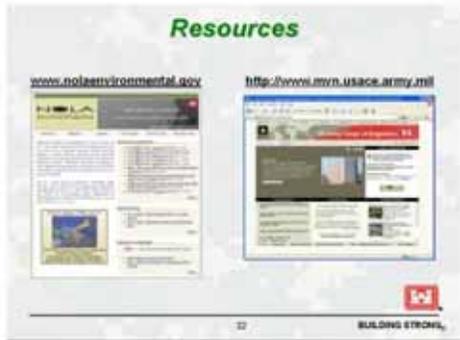


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Rachel Rodi: We can't do it alone, we need everyone's help, all agencies working together because it's nation-wide issue. I can probably say it's a landmark year for coastal restoration as far as we are concerned with LCA and BUDMAT has an outline in President Obama's budget.



If you don't want to talk tonight or if you think of something else when you leave the meeting you can always email us at Askthecorps@usace.army.mil. Or you can call our Public Affairs at 504-862-2201 and we will make sure we get you the right person to answer your questions.



Also, if you would like to print out this presentation tonight you can go to www.nolaenvironmental.gov and we'll get that up first thing tomorrow. Our regular army corps website is www.mvn.usace.army.mil, I know it's kind of long, but it's all on the materials on the back table. With that we are going to open it up to discussion and if you have a question for Colonel Lee or any of our panelists, we are going to do a talk show style so we'll have our microphones and come around to you. When you get the microphone please say your name and your affiliation. Try to keep your comments at three to five

minutes. If you have something in-depth that you would like to talk about we have our project management up front here and they can speak to you after the meeting. Just raise your hand and I'll bring the mic to you.

Jack Bertel: I just want to introduce a plant to the powers that be, which is you all. This is a plant called, this is a tiny little top of a plant called Vetivier and it grows and gets this big around when it's fully mature. This one was only growing for two months and it's already got roots down to here. It grows a 12 foot deep root and when planted in a hedge it's like putting sheet piles or it's also called nails for the sword. This is just a very small example, but it needs to be, needs to be a part of our coastal restoration and erosion control system. This plant is used in 160 different countries in the world. The world has discovered vetivier even little countries like Coast Rica are planting millions of these plants a year because they realized how valuable it is. It's a non-invasive plant, it has to be divided and multiplied because it does not produce fertile seeds so all fears of invasiveness or foreign plants are unfounded. As a matter of fact, it's been in New Orleans for 200 years, the Creoles brought this over because its roots are actually insecticidal and they use it, where we use moth balls, they use the dry roots for their linens and so forth in storage. It's been here for a long time and it's a naturalized plant, not a native but a naturalized, just like our [Inaudible]. The world has discovered this and it needs to be put to work here just like we put our government to work. It grows, you know we talked about fresh water and salt



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water and so forth, it grows in fresh water, it grows in salt water or brackish water I should say. It stays underwater as a matter of fact. We have a nursery in St. Bernard that was under way for a couple of weeks and everything died except the vetivier, it was alive in Louisiana. As a matter of fact LSU has got a thousand plants that are experimental plants, so it's here and we know about it but we've got to get some use of it. I say that we can do a lot, pump a lot of sediment into the marsh and so forth but we are not going to be very successful unless we use something that God gave us this plant to accelerate and to hold that soil together so that the next storm comes around this doesn't wash away. That's about all I can during this time. This has got to be part of our solution. Thank you.

Carlton Dufrechou: May I ask one question, Jack, Dr. Matthews out there, how old is that stalk that you have?

Jack Bertel: Well it was planted or put in this tube at the end of the summer so it had about two months to grow and then of course, in the winter time it doesn't grow

Carlton Dufrechou: Didn't you guys ending up testing in Plaquemine or....

Jack Bertel: We have planted some in Plaquemine and Point Celeste on some private levee down there as a demonstration for Mr. Nungesser and of, but we have not gotten the kind of enthusiasm that I think the plant deserves for more test sites. We would like to do more and I think...it's not like...I mean the plant has to be studied here because people want to study it, but the world has studied this plant. It's used voluminously all over the world; I mean the studies have been done. I have studies by the Dutch that show how valuable it is. Yes, we want to do [Inaudible]...it doesn't need extensive study if you realize what's being done all over the world.

Carlton Dufrechou: Two other quick questions here, it does have a range of salinities that it's tolerant too?

Jack Bertel: Ah, yes, I would say it drops off as it gets more saline, but it will certainly handle brackish [Inaudible]

Carlton Dufrechou: Last questions. The root system goes horizontal?

Jack Bertel: No, the root system goes vertical kind of unlike every other plant that puts root horizontally, this plant puts them straight down, straight vertically down.

Susan Mcclay: I'm the president of the [Inaudible] that Commissioner Merritt kept referring to and I just wanted to clarify something. We are 100 percent behind coastal restoration and Carlton I appreciated your comments. The reason that we are a little touchier about it than the East authorities because after 40 plus years our system still isn't complete while the East Bank had levees to fail we had gaping holes so that's why we are a little touchier but I did want to let you all know we are 100% behind coastal restoration. We applaud Col. Lee's efforts and we will do all that we can. I have also heard of vetivier and I too hope that we can explore this a



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little bit more because I heard it's wonder. Also, I was talking to [Inaudible] just a couple of days ago about it and she didn't seem to know about it so Col. Lee I hope you will look into this.

Col. Lee: Thank you. I heard about it over dinner out west and I heard about the same thing.

John Tesvich: Hi, my name is John Tesvich and I'm an oysterman in Parish and Chairman of the Louisiana Oyster Task Force and I want to thank Col. Lee and the panel for hosting this forum. As a lifelong resident of Plaquemine Parish, I grew up in the bayous and I cut my teeth on an oyster boat and I saw the destruction first hand. I spent my youth out in the bayous in Lake Washington and I saw the destruction first hand and I can cry about my job that's it's lost and I can't share it with my own grandson. So we've felt the pain the Plaquemine Parish like a lot of other parishes along the coast. My business also is also on the coast, on the estuary that surrounds this coast and what I call the treasures that make Louisiana special. It is my concern that we have to preserve our treasured assets we have to preserve as much as we can as we move forward. In seeing your presentation Col. Lee, there are a lot of things going on, but what I see most of the success when you talk about acres created it's about the sediment that's been dredged, the beneficial use of sediment or these new sediment pipelines that are going into effect. When it comes to the other side, when we talk about fresh water diversions and creating land is a big gap in what is being put out there to the public as this being something to save our coast in actual land creation. This is my concern and what I would like to find out is when are we going to get real here? You're talking about making that major sacrifice. We're talking about limited resources. We need to watch what we are doing and what we are spending money on so when we look at fresh water diversions, how much land has that created? Will it create land in my grandson's or his son's life time? I don't see it. As an engineer and a fisherman I've seen fresh water running for decades and I haven't seen land come out or fresh water...go to Tiger Pass, Tiger Pass is a major diversion that run years round. I don't know how many hundreds of csf or more, it runs year round. Where's the land? The land is all gone. The land was wasted by the large crew boats that use to come out of Venice going south to Tiger Pass the wake destroyed the land. The land never came back. We can't depend on these kind of ideas that they are good ideas, [Inaudible]...the geologist are right, in the thousand years, yes those diversions will create land, but are they practical and what is the cost? As somebody who is in the fisheries, I would just like you all to consider what the cost of this is, is it worth it? If we are to talk about more and more diversions and salinity, first of all is a major factor in the productivity of our fish, oysters as well as shrimp and other fish and shellfish along our coast. So when you talk about adding more and more fresh water diversions especially the larger diversion, you are talking about displacement, displacement of our people in our coastal communities. We are being asked...well this is going to happen. Well guess what? We are going to have to suffer, ok. We'll we've suffered accepting all this loss and now we are being asked to suffer again and what is the payback? I don't see it and when is somebody going to step up and say well enough is enough. We understand fresh water is important, it's important for sustaining marsh that's created or sustaining what we have, but the fallacy that the fresh water is going bring it all back should be exposed as a fallacy and I think the public has not really heard this from the high level official to say we have to use fresh water smart, we have to use it wisely and we do not want to hurt the people of our coastal parishes in this wild idea that fresh water is going to bring it back or even if, for an experiment. We don't want that kind of experiment if it will be that costly and displace

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people. I just want to add that we consider this and believe me, the oyster industry, myself included, where the first proponents of fresh water, we need fresh water to help enhance our fisheries, but now it's getting the point where we just want to over fresh our estuaries and that will hurt our fisheries. Is that a smart thing to do? Can we be realist about this? Thank you.

Col. Lee: I would like to address a couple of things. One thing is the LCA under the modification of the fresh water diversions, is that these aren't us going out experimenting. We have to look at them, we have to do the feasibility piece, the public engagement and the [Inaudible] analysis is what has to occur in order to modify the structures. There isn't authority to go modify the structure and figure out what the effects are to the public and the communities that live below those diversions. I think we had some pretty clear indications if you look at the Atchafalya Basin that diversions can work. At Wax Lake Outlet it's definitely a diversion. It might not have been created that way, but that's what it is. I went duck hunting down there and the guy I went duck hunting with told me that the place you are standing right now 30 years ago was open water. There is sediment in the river and the sediment is a resource that we believe, and I think there are a lot of folks who believe, can create and beneficially nourish marshes. There are some things that have to be looked at very closely. It would have an impact on fisheries. It would have an impact on oyster production and part of our job is to do the modeling so we can show what those potential impacts are before we make decisions about modifying structures and what would be the benefit of modified structures. There's not just a trade off of what the negative impacts are with what the benefits are and so that is what we will be doing as we look at the modifications of Caernarvon and Davis Pond and then there are other diversions planned and those same diversions, Violet, Myrtle Grove, Hook Canal all those diversions, White Ditch, all those that are planned go under scrutiny, public input and involvement are essential in helping us create and develop those diversions so they are beneficial. We don't know what the perfect sizing is. We have had West Gate open for a number of years and it has not worked as it should. CWPPRA Task Force in a recent CWPPRA Task Force meeting voted to close that diversion so I think we all understand that adaptive management is part of the equation. We have to be able to build it and see the effects of it and put the best science and engineering in how to build it, but then we have to be willing to make decisions on what the future looks like to. We are pretty focused on trying to do that.

John Tesvich: Can I follow up on that? As far as Wax Lake has been dry what about 40 or 50 years? It's about cost benefit in all do respect. I understand Wax Lake created land, it created land over 40 or 50 years time. Do we have that and what is the cost of the benefit? If Wax Lake, if that same outlet was put into Barataria Bay it will create about that much land in about 40 or 50 years. Will that save us? I personally don't think so and what will be the cost of that? If you look at the cost-benefit, that's what I'm asking, about the cost of that. Yes, it will create land and over geologic time, it will create a lot of land, but what will we waste of our cultural and natural resources in order to allow that kind of project to create that...

Carlton Dufrechou: Colonel can I answer that? The challenge is that diversions are not the silver bullet, nothing is, but I also think you noted that diversions are and that it will sustain the cost. We've got to reconnect the rivers to some degree. Is there any one solution? Dredging all the material on the planet or knocking down all the levees, no. It's going to take a combination of both. We all now know that we need to start. I would hope that we all agree, yes.

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Unfortunately there will be changes and all of us are going to be impacted to some degree whether it's fishing industry with change in the habitats or some of our communities. I understand what you are saying very much and I agree with you diversions aren't a silver bullet but I hope you recognize, and you said it, they are part of the overall sustainability.

Mike Merritt: Can I say a word about [Inaudible]. I think Col. Lee was absolutely right about the Atchafalya Basin because [Inaudible] commissioned a map made by the Louisiana Geological Survey and you can buy a copy for ten bucks and you will be captured by that [Inaudible] spot that shows land being created in the Atchafalya Basin like the Colonel said. And since I would guess in less than 40 years because it only began to be created when water was diverted that way and the map that [Inaudible] commissioned was since 1937 to 2000 so, yes, it does work that way, but it can also work overnight if it works in harmony with geological processes. There are places on the coast that would have been destroyed immediately by a hurricane surge that showed the backup [Inaudible] where it was built in the marsh. So I think the key is to work in harmony with the geological processes.

Lee Richardson: Thank you, my name is Lee Richardson and I'm here as the Executive Director of the [Inaudible] Civic Association. I would like to join in with everyone else in kudos for the Corps for organizing this discussion. It's long overdue and extremely valuable to everyone who is participating. I certainly have to admit I find it very difficult to grasp the complexity of all the issues that have to be considered in trying to remedy something that over the last 200 years has become a vexing problem on a national level. Col. Lee mentioned, and quite rightly so, that funding is a real issue. We have a lot of serious and painful trade offs and we have to think in both long and short-term horizons. I would like to point out the short-term horizon that I hope gets some very special focus. If you look at a map of Southeast Louisiana and focus on New Orleans and the shoreline communities that share Lake Pontchartrain, it's immediately obvious that there is one barrier between the Gulf of Mexico and Lake Pontchartrain. It's called the East New Orleans Land Bridge, which is referred to as the Orleans Land Bridge. I see my friend Carlton Dufrechou smiling and nodding up there and I know my friend Dr. John Lopez here, who originated the idea that everyone has now internalized of multiple layers of defense and I would like to direct your attention to the short-term consideration that within a very small budgetary terms and very low tech engineering, hydrological and environmental terms, we need to make sure that the largest single concentration of people, wealth, and industry productive capacity in the state of Louisiana is protected as a very high priority preserving and enhancing, strengthening that natural feature. It appears on this map to be a solid geological feature. It's not. It's swiss cheese of bayous and open water and eroding portions of this its water way margins. Its integrity is in tact not only from the south or eastern side, but from the north or Lake Pontchartrain side. The grade of erosion of that land mass is greater on the north than on the south. We propose a project not long ago in coordination Southeastern Louisiana Flood Protection Program East as our agency sponsor to use the debris from the I-10 span to create a jetty if you will about a thousand feet offshore and parallel to the eastern section of the land mass because we have been watching over the last couple of years a wake is marching toward Highway 90. Anyone can take a ride out there and throw a rock now into Lake Pontchartrain to the north. Five years ago we couldn't, five years ago you couldn't proceed from the lake to Highway 90. The Corps of Engineers, RCS, and the state of Louisiana have participated along with the sponsorship of Orleans Parish, and I see our good friend, Renee

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Fisher, back there, in getting federal attention to south shore of that land mass. To the west you have a CF project about 10 miles called Orleans Land Bridge Project or something like that, it's moving along very fast. To the east of Chef Pass from Alligator Point on seven miles to the east you have a CWPPRA project, Alligator Bend, I think it's called, that's is going on a snails pace. I certainly encourage that to be accelerated. The last go around of PPL 19, I think it was, one project was to extend that shoreline stabilization all the way to the Rigolettes made it into the short list. We hope that CWPPRA partners will see the need to continue that protection and also please focus Col. Lee on the stabilization of that entire mass as an integral part of your levee system for the 100 year protection because without it your 100 year protection design along the south coast of Lake Pontchartrain, I submit, and I am not an engineer, far from it, but I submit that you are so far off of your design standards that you would have to raise those levees probably double the height that you have planned right now. Thank you.

Barry Kohl: My name is Barry Kohl and I'm representing Louisiana Audubon Council and the Sierra Club and I have an observation that I would like to share with Col. Lee. I attended a public meeting several weeks ago on 14a, which was the widening of the base of the levee just north of Lafitte National Park from 150 to 320...325 feet wide, which caused me [Inaudible]. When I asked some of the people there, an engineer in particular, about the design of the levee and why they actually expanded it to 325 feet, they said they had new levee standards they were following from 2008 and I felt that I wanted some more information and I asked them and I said have you built into the modeling of that levee the fact that there are tens of miles of wetlands, marshes, forested wetlands in front of that levee system? The engineer said no, we do not use wetlands as buffer in front of our levee system for modeling the levees. We model the levees as though the gulf is sitting right at the toe of the levee next to the [Inaudible]. What concerns me is that if you are not looking at the wetlands as a nature buffer zone to protect the levee system then why is there any economic incentive for the Corps of Engineers to want to protect any wetlands at all if they are building levees as if there are no wetlands in front of them. The next part of the, and I would like you to respond, but the second part of the question is what is the value the Corps places in dollars per acre on an acre of wetland, forested and marsh? What is the replacement value? Does the use of the replacement value prevent the [Inaudible] to put up a project for coastal restoration?

Col. Lee: Dr. Kohl, I think you are aware that after [Inaudible] we do have concerns [Inaudible] and we have discussions about this all the time. If we build a levee in St. Bernard Parish where the MRGO is, that levee base would be about 900 feet wide, maybe even a thousand feet wide in some places so it would take probably about 15 years to build that levee and so that's one of the reasons why we are not building a levee in St. Bernard Parish or building a flood wall on top of the existing levee that's in place now. What I think you are referring to in talking about us considering wetlands, it's not a thing of whether we value wetlands or not value wetlands, it's a fact that there's not a lot of hard evidence on what marsh does as far as mitigating storm surge that we can bank on when we do our designs. It's just like a [Inaudible] and subsidence. We have pretty good indications of what those are and we plug them into our algorithm and our joint probability model that does the analysis for us to determine our design elevation for our levees. So when you have a, pre-Katrina, and this is not just here in Southeast Louisiana or into the Gulf or all the other projects we are doing throughout the state, there is a big difference in our levee profiles. So what was true pre-Katrina is not true post-Katrina. So you



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ask why there is a levee shift from 100 and something feet to 300 and something feet, well now there's a wave [Inaudible] on the front of that, in front of that levee. If you look at that base, I mean my engineer showed me the difference, they had a cross-section of the levee and they had a little red triangle that showed me what an old levee looked like pre-Katrina, then they showed me what it looked like post-Katrina and that's also why this system costs 14 billion dollars to build and a lot of people consider that unaffordable, but when you look at the effects of Hurricane Katrina and the storm surges that came in, the wave energy that came in and what it did to the levees along the MRGO, those were all the determinations and lessons learned that we incorporated into the new post-Katrina design criteria so those levees are more robust and they are designed to perform throughout a 50 year life cycle. Now that doesn't mean we don't have to put another lift on the levee because of subsidence over the time, but we do believe those levees are designed to perform under the new criteria that we designed those levees. As far as your other question about wetlands, I don't know that, and I will look around as far as my staff, as far as value for wetlands.....Greg do you know? I know we have different ratios for that and I know there are different values based on that type and what all that [Inaudible]...

Greg Miller: The straight answer for you is that we could give you a cost for replacing an acre of wetlands. It's a, for a forested acre we could come up with a value of what it would take to replant trees in another location. We can use value by using CWPPRA program, which is an excellent source of hands-on building knowledge that based on dredging for marsh and planting of wetland. I don't want to quote you a dollar figure for now because it depends on where you are, depth of water, type of

Barry Kohl: Why don't you give a range?

Greg Miller: Let's say in the neighborhood depending on what you are dealing with. If it's just plain vegetation it may be as low as ten to \$20,000 an acre depending on the intensity that you are planting. If you are dredging and your installing shore protection and you're planting, it could be as high as \$100,000 or more.

Benny Rousselle: Thank you, Benny Rousselle. I would like to follow up on a question that we just discussed. In Plaquemines Parish and value that you put on wetlands there is 80 or 90 thousand dollars per acre and for forested and hardwood it's almost like 200 thousand per acre. I guess I go back to your original question of a, is there a value to the marsh for knocking down storm surge and if there is not a value of the marsh knocking down storm surge, then are we doing this for ecosystem restoration for the environment, for the habitat or, because in my area I'm hearing now that we're going to do a levee behind a levee project where we are going to knock down storm surge by planning a ridge, build a ridge behind the levee and plant trees on that levee. My concern is that if we do not stop the storm surge at the Gulf and the Barrier Islands that the salt will be so heavy when it gets to that ridge behind the levee, on the levee behind the levee that trees won't grow. So I'm trying to figure out in my mind which direction we are going as well and do we look at marsh as a value to knock down storm surge?

Carlton Dufrechou: May I throw out a quick answer and Dr. Lopez maybe you can help me. Col. Lee I do believe that [Inaudible] did some analysis early on after Katrina and I'm sorry I don't remember at the cost to whom, but one of the presentations I seem to recall was the



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land mass that we have south and east of the river, the existing land mass which were not there when we had a similar Katrina that the storm surge levels would be 15 may 20 percent higher, John Lopez, can you help me, was I dreaming?

John Lopez: In the LACPR report back much more subsequent to that initial work, I think there has been a lot of work evaluating the value of wetlands. One of the things I think was very candidly came out of the LACPR is they identified what they call critical land [Inaudible]...in fact Lee was describing the East Orleans Land Bridge, they identified each little landscape which [Inaudible] entirely marsh which they identified as critical landscape features that knocked down storm surge, the surge stacked up on the north side and the storm surge was reduced on the [Inaudible] side and those are a lot of areas you are familiar with. You know the Biloxi Marsh, East Orleans Land Bridge, Maurepas Land Bridge and other along the whole coast so I think that certainly on landscape feature there's recognition of this in the LACPR report. I think where it gets challenging is that we always want to plug in a very specific number. You know we've got different types of plants, you've got different types of particular landscape and so [Inaudible] is very uncomfortable with trying to plug in something very specific. But I think on a regional basis, I don't think there is any question that the wetlands and our landscape and as Benny was describing knocking the surge down further out is extremely important.

Male Engineer: Let me clarify something in regards to modeling. The [Inaudible] model that is the basic storm surge modeling tool does take it without landscape, not just the part of the [Inaudible] but even with the modification we estimate but we have to do a better job of identifying even shallow water because that has implications on how surge comes to shore. The effect of the marsh is captured in that model. Where it doesn't get applied to the Hydro [Inaudible] calculations is when we start taking that surge and wave calculation and running up against the levee and what does that leave you with [Inaudible]. One of the reasons that's not in there is because it's a function of reliability. If we start to modify it design the height of the levee for the vegetation immediately adjacent to it then that becomes a functional part of the levee. You absolutely make sure that's there or your system doesn't

Male speaker: That's [Inaudible] to protect that...wetlands and.....

Male Engineer: The other thing...the state of the art in hydro [Inaudible] competitive modeling really doesn't have capacity to model the effect of trees or [Inaudible] that there's not [Inaudible]...there's a lot of research going on to look at that, but right now the numeric modeling doesn't have a function that allows it to put something in it that's 20 feet tall but the water can pass through. You can put something 20 feet tall in there the model things it's a [Inaudible] in the model so that's an area where a lot more work is needed to be done before we effectively show the value of something like tree screen. Intuitively, we know it knocks down the waves but it's not functionally capable of

Male Speaker: USGS put out a census down in Southwest Louisiana and they actually monitored the wave height, the storm surge height as it came into the Lake Charles area for all of Southwestern Louisiana. They have quantified and so has FEMA the amount of reduction of buffering of the marsh and the swamp so they know, it's been quantified so it could be used. You're not looking at trees that are 50 feet high and saying [Inaudible] wall, you factor



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that in ...surely the engineers, a lot of the engineers in the Corps are smart enough to calculate that and build it into their process.

Male Engineer:data is going to change with every storm and every angle. We don't want to start reducing the design criteria for the structural protection measures as a result of what we expect would happen for vegetation there because we don't [Inaudible]. That could vary with any type of storm event that function can vary. Now what we do say is that reliability of that structural system is going to be enhanced by the presence of that so it's actually going to perform maybe a little bit better than the design has it.

Male speaker: How much better?

Male Engineer: Well...

Male speaker: Is it 15-20 percent protection of a levee if you have a certain number of miles [Inaudible]?

Male Engineer: It's not even a function of miles, that rule of thumb has no legitimate application because it varies so dramatically. We can say, and it's Ty Walmsley, Carlton, did that sensitivity. What he looked at was a really broad range of what if we raised the entire Biloxi Marsh a foot and a half or what if we just make it [Inaudible] with water and he was seeing even there variable impacts. In a place like the [Inaudible] surge barrier, where you are seeing dramatic [Inaudible], it might be seven feet. Other areas where you might have a leaner shoreline might be a foot or less, so it varied greatly, but overall, in LACPR we looked at current conditions post-Katrina, wet land condition versus 50 year future where we didn't do any restoration, we just let it [Inaudible]. We looked at what that did to the surge and saw some incremental changes in the surge, nothing dramatic like seven feet, because that would wipe out everybody, but we went one step further. We said ok, what's the relative change in damage by allowing that to happen and on that side of the basin, we were seeing potentially 33 percent increases in that damage risk if you did nothing over the next 50 years. So, we can't quantify that grossly. It's a little more difficult to say just this restoration for you, how does that affect the expansive system.

Male Speaker: It seems to me that ...

Rachel Rodi: [Inaudible], I'm sure Mr. [Inaudible] and Mr. Miller will be happy to talk to you afterwards and reach out. I'll call the hand over here.

Urban Mathew: My name is Urban Mathew and I live in Metairie and I see John Tesvich has left and he had asked a question to how much land thosecan you hear better now? The question was fresh water diversion and how much land does it build. I have been following the marsh around Delacroix where the northern diversion first drew a big diversion since '91 was actually salvaged and this is a map of a Delacroix Marsh pre-Katrina, this is '98. The dominant species in this marsh is [Inaudible] as you go further to the southeast it becomes spartina alterniflora and that is brackish water type of vegetation. It grows peripherally and it anchors the ground and this is what prevents erosion and also knocks down tidal surge. The



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Corps did a study and they determined that for every 2.7 miles of healthy marsh with this type of grass in it, it knocked down the tidal surge by one foot. They restudied that we really don't know what the real answer is. This is the same area post-Katrina, post-Gustav and it's frightening. As you notice, this area right here is almost diluted of its natural vegetation and as you get further to the southeast the normal marsh is still healthy. If you look at a photograph of this area, it looks like this. It was taken from an airplane from Wildlife Fisheries and the marsh to the southeast looks like this. This was on the same day, December 8th one year ago. So we've been studying this area to try and determine exactly what the cause of it is. Here's the fresh water diversion at Caernarvon and as the Colonel says, it doesn't move any sediment it just moves fresh water. When it's done is, it has replaced the normal brackish [Inaudible] annual green stuff that dies in the winter and has no root system and as a consequence whenever you have tidal surge, what happens is any vital mass that's grown over the summer is killed. You get hydrosulfide reduced which kills the [Inaudible] system to the rest of the healthy plants and so you have a big diluted area like this. The question was how much land was built? In the area of the White Ditch which is sheltered by Oak River, since '91 there was a 12% loss of land and this area the outflow from the Caernarvon Diversion it was a 37% loss of land. So a total gain of land as a result of fresh water diversion is a negative 300 percent. We were talking about vetivier and we were talking about levees, vetivier if you forget about the trees on top, you know the trees have to be in place long enough to establish themselves in the root system and this had [Inaudible]. This stuff grew over the summer, over the summer. If you put this on all the levees, the whole levee, forget about the trees, it knocks down storm surge of 55% plus it adds to the top of this goes up another four feet so mechanically, it adds four feet to the ground it's sitting on. If we don't do this we are going to loose the ballgame. This is the key. Fresh water diversions have to be modified if you are not moving sediment. There's more sediment in the tiers of the [Inaudible] fisherman than there is coming across the Caernarvon Diversion. The [Inaudible] 200 feet and gates go down 12 feet and what's been done by the DNR is when the river is high and there's more sediment they pulse and so what happens then is that you have [Inaudible] water it comes from the northwest and when it hits the usual high water that comes from southeast, the vegetation has no recourse but to die of asphyxiation. So what happens is, desalination has caused aggressive, invasive fresh water species to overtop everything that is healthy and kill it. This is [Inaudible] and this overlying [Inaudible] corner grass. It's going to kill the whole thing. This is a levee, we went with Billy Nungesser to take a look at this levee [Inaudible], on the right side there is [Inaudible], on the left side there is none. The salinity on the left side is 3.5. The salinity on the right side is 2.1, so the minimum of concentration salinity is about 3.5 and we have to keep our marshes above 3.5. When they opened the diversion, it was zero. Thank you for your time. Any questions?

Male Speaker: How does this grass reproduce if it doesn't have seeds?

Urban Mathew: It has planted vegetatively. So what you do is take plugs and then place every six inches a plug is at least an inch in diameter. If you plant just three rows in six [Inaudible], you'll have a hedge and what happens is if you get storm surge, the sediment that's still the only thing that's delivering sediment right now is storm surge. So what happens is that sediment comes over and gets trapped and actually starts building terraces. It grows on sand dunes so it grows in the salinity of the Gulf and it grows from fresh water to the normal salt



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water it prefers, like most things, fresh water, subtle angle, dry ground, but can be inundated for nine months without dying and can survive in ph's from three to 11. Your body survives between 7.35 and 7.5.

Male Speaker: I have a question. Will that work on our Barrier Islands?

Urban Mathew: Absolutely, it's used globally. I don't know why Louisiana hasn't picked it up, but if you go down to the Port Sulphur ----- LSU AG Center, it is all over. It was planted there to study and

Male Speaker: If there any funding at all?

Urban Mathew: No. The big problem is that people are afraid of the basins so....the USDA did a study it's called [Inaudible] Pacific Island study and what they did was, they looked at all the different vegetation that was used to stabilize the levees and right now they use Bermuda grass. Bermuda grassone of the things about vetivier it's not native but where do you think Bermuda grass came from?

Male Speaker: I would like Carlton's opinion on this.....

Carlton Dufrechou: We talked about it a lot. I think it has potential. I think it has a low cost, year term potential to have some success to do some test blocks. In different parishes it has [Inaudible] salinity and

Urban Mathew: The result of that study is what we use is Bermuda grass. The base of this is positive five, vetivier is a negative eight, it's not even on the scale.

Jesse St. Amant: A couple of quick points. I'm Jesse St. Amant, I'm the former chair of the Southeast Hurricane Task Force [Inaudible] 40-something years. I've seen a lot of, I was raised in Southeast Louisiana and I've seen a lot of my ecology disappear. There have been several things that we've talking about here tonight that needs to be addressed. Colonel your group, the Corps of Engineer were part of our task force and represents 15 parishes in Southeast Louisiana, Southwest Louisiana also used to have one on their side. But in 1990 Carlton, when I was wearing that uniform as Deputy Director of Operations for the National Guard, we had a study of what if the debris from a cat 3 or more hurricane striking New Orleans would cause us to deal with. Corps of Engineers inherited some of that problem from Southeast Louisiana after Katrina. But in that year, we decided because of the oak trees and other things that generation of debris from direct hit storm, we could no save the lake but pave the lake and eliminate a lot of the problems of crossing Lake Pontchartrain and no more flooding. We didn't do that. Instead, we invested in diversions and when I became chair and I was vice chair, we recommended elevation was the key to the salvation in Southeast Louisiana. Diversions are good and everything the Corps of Engineers has done is wonderful, it beats doing nothing. We have to look at what has been effective and what is effective, you've heard people here today, [Inaudible] sat on his committee two months before Katrina hit and I saw what a storm surge would and could do to Louisiana. You don't hear about that in the media. When I testified before the Congress, I mentioned elevation and I said let me tell you, it's not finished. We need to take

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aggressive steps, they weren't listening, and they were looking for blame. Well sir, let me tell you this, elevation can be created by one thing, take what we have and let's use it. Sediment from the Mississippi River, when we did high resolution photography we could see from Baton Rouge to the mouth of the River, a small narrow channel that as we speak, somebody is dreading to keep it from the [Inaudible]. You've already stated the value of Southeast Louisiana. There are people in Washington who don't realize that as most of us know. Turn a few switches and it's starve to death in the cold, but beside that, let's take all that fertilization, all the nutrients that have been deposited, why we only use 25% of the Mississippi River as navigable waterways and all the rest is guess what? Fill. Pump it as quickly as possible. Let's start reclaiming Barrier Islands because the first thing that happens when you put that fluff. I'm going to find out. I think you called it fluff. When that hits air two things happen. You might not be familiar with something we call dead zones around here, don't laugh Carlton. Dead zone is caused by oxygen depletion of water. Well what happened there? Fertilized Mississippi River, boom. It eats the oxygen out of the water, things die. You take and throw it on land as sediment. Two things happen. It hit air and when it rains, all that fertilizer is activated. You could grow rocks for along Southeast Louisiana. Anybody ever heard of Dubai? They took the sand, which doesn't have any nutrients over there, and built islands and put hotels on them. And what are we doing? Loosing a football field and a half a day. When I told some visitors from the International Studies Group back in 90 how much land loss, they questioned me. Expediential land loss, who said it? Let's talk about this some more, let's try to find funding. In another 20 years I told my parish president, when I worked for him as a director, we will be holding the Grand Isle International Tarpon Rodeo in Baton Rouge. As funny as that concept sounds, sir if that happens then Congress is going to hold somebody accountable. We are talking...you want to know where your funding is? You talk about Congress and millions and billions of royalty monies that we are not going to get for another ten years, divert some of that to coastal restoration and then let them eat our blue crabs in Baltimore. I disagree with you. I've been there too, they don't know how to cook crabs because they [Inaudible] sauce. You should taste my grandmothers crab salad. Ladies and gentlemen, I don't mean to make light of a serious subject, but I want to tell you right now, I appreciate Carlton what you've been doing and remember elevation is our salvation. Thanks.

Male Speaker: ...as the amount that would be saved or restored through his two Corps restoration programs that he talked about. Ten thousand acres is an impressive amount of turf. I took the liberty of looking at the Corps New Orleans District site today, and if you looked at it there is a running tally of a number of Corps permits that have been issued over the years. I think some of you may know where I'm going with this. In 2009 there 2,154 [Inaudible] Corps permits issued. Of course a [Inaudible] Corps permits are those for activities that dredge or fill [Inaudible]...2,154 permits in 2009. Of those less than four percent were cease and desist orders. If we are going to assume that the vast majority of these 2,154 permits were for activities which were constructed for alternate of wetlands, I think that's a fair assumption. If we were to assume that most of these permits destroyed at least two acres, I think that's a fair assumption. If we were to extrapolate these 2,154 permits per year, out over 30 years, what we would we come up with? Given that most of these permits would conservatively destroy at least two acres, fairly conservatively, we would come up with a total of over 120 thousand acres of wetlands that have been destroyed through man-made activities that the Corps itself has permitted over the 30 years...120,000 acres conservatively, that sees the 110,000 that is projected to be restored or

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saved through these vaudeville Corps projects. So what's the point of all of this? Mother Nature of course is not our only enemy. You know as the cartoonist [Inaudible] said, look in the mirror and who is the enemy? The enemy is us when it comes to wetland destruction. As an activist of the Sierra Club said many decades ago and it rings into my ears when I come to these hearing, when it comes to wetland destruction and wetland construction, the Corps give it and the Corps take it away through it [Inaudible] Corps programs. For acre that is preserved through your model of activities, through the [Inaudible] program, which is supposed to regulate activities that are not weather dependent, most of the activities, a majority of those I would say, that are still permitted through the [Inaudible] program are non-weather dependent. This is the continuing problem. We are continuing to destroy much of our wetlands through activities that are not wetland dependent the first place. Yes, the Corps did not ask for this [Inaudible] program but you got it and you are stuck with it and unfortunately it's not being implemented the way it should be because looking at over those 30 years, do the math, at least as many acres have been destroyed through man-made activities, most of which are not wetland dependent, as been created through Corps projects. I know I'm preaching to the converted of at least two of you up there, Brian you know how many acres of land have been destroyed in St. Tammany Parish from all kinds of activities that are not wetland dependent. That goes for Jefferson Parish that goes for probably every parish up there. I think everybody up there is aware of it. So let's put things in perspective. Until we get ahead of this [Inaudible] program, and get and really do it right and really start looking at alternative location for non-wetland dependent project, you know, Mother Nature is not [Inaudible] as we are.

Wayne Keller: Wayne Keller from Grand Isle Corps Commission. We had quite a few references to first lines of defense, be it the marsh land ahead of levees. To further that thought, and everybody that spoke, pretty much said something about first lines of defense or barrier islands. A question I have is, what portion of monies are going towards projects such as diversions, real high dollar projects, that are kind of towards the rear of the problem versus how much funding is going toward first lines of defense? I would like an answer on that and I know there's a lot more going toward these diversions projects. I'm not saying I'm entirely against diversion projects. Grand Isle I don't think will ever see sediment from any of these diverting projects. I think our only hope in these situations is if something much quicker such as pipeline slurry and that sort of thing, but it always gets me and I always hear everyone talk about Barrier Islands and our first line of defense and then they all talk about spending millions and millions of dollars way toward the back. Let's catch it in the front, but let's do that now, that will give you some time to work on other things like wetland creation and building up walls closer to you. I really do want an answer that says what percentage of that money is going toward the Barrier Island and doing it now to slow things up.

Col. Lee: I can give you a pretty clear answer. We've got 14.4 billion dollars on the hurricane system and that's a pretty significant amount of federal funding that's being put right here in the Greater New Orleans area. Grand Isle is the beneficiary of some of the funding that happened from Hurricane Gustav and Ike and that project was [Inaudible] just as you referred to and that project is being completed right now. [Inaudible] established on the south bank of Grand Isle that has been put in from slurry, from the sand that was mined out in the Gulf of Mexico so I think we are pretty focused on that aspect. Is it enough? I think the discussion here is really about funding and priorities and so I think what we are trying to do is to understand



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what that is and we have some authorities and some appropriations and we are trying to coordinate that with the state and their master plan. The state does have a master plan that sets forth the priorities of the state and we work closely with the state to try and implement components of that master plan. There are a lot of varying opinions on what the right answer is and I don't think there is one right answer, it's not a silver bullet, but there are multiple approaches to this and I think we are focused on this. We have expended a lot of money on diversions. There's been a lot more money we've spent it on hurricane protection on other aspect of coastal restoration. There are only two diversions, actually three diversions that [Inaudible] later this year and that's Caernarvon and Davis Pond. That's really what's going on as far authorized funding diversion that we are working on. There are efforts to modify these diversions and we are looking at future diversions. But those are again, just feasibility efforts of looking at those for the future. I think a major majority of the funding that has been spent in Coastal Louisiana is CWPPRA program, about 80 million dollars a year and that's what's being spend there and the efforts in funding through our federal agency, the state has spend quite a bit of money on the CIAP program and I heard people reference the OCS reference that will come again in 2017 and those are future funding sources.

Carlton Dufrechou: Colonel, may I jump in. Mr. Keller, I think you nailed it when it gets down to it, the grand scheme of things, you certainly said a tremendous amount of money has been invested in hurricane protection in levees and floodwalls, where it should be. We've got to have that. Without it we are all gone. In reality, as far as real dollars that have gone to the coast it's been a drop in the bucket and I think that's where Col. Lee, when he prefaced to me this evening, when he talked about where there are dedicated funds, when you put it in the grand scheme of 14 billion for a regional storm protection compared to actual coastal restoration projects I would, and this is off the top of my head, but I would liberally say less than five percent of that 14 billion is really authorized funding for our real coastal projects. A majority of those have yet to be built so we have a long way to go and funding will be a real big challenge. John, do you want to correct me because you've got real numbers back there that are better than me.

Male speaker: I have something [Inaudible]

Carlton Dufrechou: I'm sorry....

Col. Lee: CWPPRA to date [Inaudible], that's one simple program and that's probably [Inaudible]

John Driscoll: Col. I'm going to give you a quote from the comprehensive master plan from Louisiana. My name is John Driscoll and I live in Metairie and I'm not affiliated with any group, I just got involved with wetland issues for over 30 years. The quote is, "We are looking at a storm noted [Inaudible] that will preserve our state's future or claim to the status quo and allow Coastal Louisiana and it's communities to wash away before our eyes." Late on in that document in chapter one says, "Implementing this comprehensive solution will require one of the largest public works programs our nation has ever undertaken." Do you agree with those statements?



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Col. Lee: I think that's pretty clear.

John Driscoll: Do you think that the current scope of work under that master plan is sufficient to actually accomplish the goal of saving our coast?

Col. Lee: I think one of the things we did in the LACPR at the National Academies of Science, questioning the reliability of our report and the main question was is this sustainable and I think it's what you are asking. That is the ultimate challenge of coastal restoration of Louisiana. Is it sustainable? Are there enough resources, sediments in the river, is there enough effort, is there enough funding to pull all that together to sustain the coast. That is the challenge; that's what's before us.

John Driscoll: It is the scope of what, forget about the funding for a moment, is the scope of what is outlined in that plan sufficient to accomplish the task of saving our coast?

Col. Lee: I think if you look at the master plan, it's kind of a menu of everything across the entire coast. What funding is an essential part of that because we have to look at the priorities that you are willing to fund or which ones that are essential to saving the coast.

John Driscoll: It is just the scope of work sufficient to saving the coast?

Col. Lee: I'm not sure.

John Driscoll: Is the pace of the work that's being done under the master plan that you said you worked with the state on, sort of endorsed that plan, is the pace of that work sufficient to save our coast in 10, 20, 40 years?

Col. Lee: I think it's been pretty clear even in the documents that you read that the coastal landscape, you've heard some of the speakers come up tonight, says the coast is disappearing faster than it's being rebuilt. So I think that's ah.....

John Driscoll: So the answer is pretty clear that this is not....

Col. Lee: When you see a hurricane like Hurricane Katrina wipe out hundreds of square miles of coast that's pretty substantial. It doesn't matter if you are doing the coastal restoration when you have a storm ...what you are doing with a storm like Hurricane Katrina it reverses some of those aspects coastal restoration over night. Now it doesn't mean that it's pointless to do coastal restoration, its' quit the opposite. It's essential, but you can't have it all. There isn't a silver bullet. There are tradeoffs required and there are hard decisions to be made and you know LCA is only one component, CWPPRA is only one component, beneficial use of dredge material is only one component, diversions are one component. It takes all of those things working together to try and sustain the coast.

John Driscoll: What would you say is the largest impediment to working the projects in a pace that is sufficient to accomplish the goal?



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Col. Lee: Money.

John Driscoll: What I do for a living is create business plans for people and in every business plan there's a standard form that's in every business plan. It's called the uses of funds and a source of funds. At the end of the day those two things have to match. I think what we just described here is that we have a business plan for the coast that's missing a source of funds. So in my opinion, this is all great feel good talk, but until we find a comprehensive funding source to actually accomplish what we need to accomplish in a timely fashion, we throwing [Inaudible] away. It's like trying to fix a roof that's got a thousand holes in it and all we [Inaudible].

Col. Lee: So I guess my question back to you is what is your solution?

John Driscoll: I don't have a solution to the funding problem, but one has got to be found because I can listen to this for 30 years and it's the same feel good talk about what we could do, what we can do, but it never happens and we both know why it doesn't...one of the reasons why it doesn't happen is a funding plan. So rather than concentrating on talking and meetings about what we could do, what we ought to do, what we need to do is focus some efforts in making the dream a reality and that is only going to happen with the funding. Without the funding and you just said it, you make my case for me, we are all hat and no cap.

Carlton Dufrechou: And John, I think most of us would agree with you. We strongly see and suggest...we can't ask the Corps of Engineers to get the funding for us.

John Driscoll: I'm saying somebody has got to do it.

Carlton Dufrechou: Yes, and I would say that somebody is ultimately is going to be us, that we figure out ways to do it. We demand that our elected officials help us get it and if we don't we are toast.

John Driscoll: What I am suggesting and I'm sort of pointing my comments at the Colonel perhaps incorrectly, is ...this is all feel good stuff and I've been to feel good meeting for 30 years, but until we find the comprehensive funding source that actually will fund the projects in a pace which will meet the needs of the objectives, we are up a creek without a paddle. Somebody needs to concentrate on where that money is going to come from and quick talking about what we could do what we want to do and get it done.

Dr. John Lopez: There was a question about the, you know we've had a long discussion about diversions and the use sediment and recognize a [Inaudible] and a lot of that centers around the river. Col. Lee you had mentioned that there was a Delta Management Study a [Inaudible], I just want to see if you can share any of what that is in terms of looking at the river and how high you can manage and when that might be completed?

Col. Lee: Right now we are in discussions with the state of Louisiana and this is kind of a Delta Hydro Study and what that is, is an effort to look at the river and the uses of the river, what the current [Inaudible] symmetry. Of the river is, what the sediment flow is in the river and all the other aspects to determine what the best uses of the river are as far as diversions.



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We are doing that. We started some of that effort already with the LCA. CWPPRA actually did some of this with the west [Inaudible] diversions and so it is a dynamic system. What we are trying to do is take some of the lesson learned from the [Inaudible] we did with CWPPRA, feed that into LCA and the hydro study. The state has indicated they are very supportive of that and the focus of that is to determine how we best use the sources in the river. You can have 25 diversions identified up and down the river, but which ones are really the right ones to put in? That needs to be based off the best science we can come up with and analyze and determine. Because we look at some areas where [Inaudible] professes naturally occur. Some are at locations near the Bonnet Carre Spillway is and you open up that spillway you don't get a lot of that negative impacts down the river as far as the new shoaling in the areas surround that diversion. So there are right ways to do things. One of the things we are going to do is underpin those decisions with this hydro study that we are going to move forward on with the state of Louisiana. Tom do you have any time lines on that?

Tom Holden: Yes, actually what we are doing is working closely with the state in the Hydro Delta Management. We have had a couple of meetings with the state. I am simply hopeful as well as the state that we are going to be executing that feasibility cost share agreement probably within about a three to four month time frame. This is going to be a very comprehensive study. We will be setting up some very detailed hydrologic models along the entire Mississippi River, from Old River small structure down to the mouth and that's just the beginning. What we want to look at is some very large projects off the West Bank of the Mississippi River, off the East Bank and look at restoring the entire Barataria to the south. The state is very supportive of it as well as we are and we look forward to starting that effort.

Rachel Rodi: Ok, we can have one more question for someone who hasn't spoken yet.

Albert Bordes: Hi, my name is Albert Bordes and Carlton I have a questions for you as I hear you on WWL all the time. I hate to ask you this question, but give me an example of a tough decision that is going to have to be made when you are talking about what can be saved and what can't be saved in regards to the coast.

Carlton Dufrechou: Specifically. Specific area?

Albert Bordes: Anything

Carlton Dufrechou: There are portions of any parish along the coast, the areas that are closest to the Gulf will be much more difficult to [Inaudible]. The best we can do, the land masses that we have today and hopefully we can preserve...I would still like to think the majority of what is out there...the reality is thought the coast, that again that I knew and I think I'm a bit older than you, it's not going to come back and I believe that some of the decisions politically are going to get some in hot water. Not so much in fisheries issues but there are some communities that are going to be more and more at risk and I think several times, we've heard elevate, whether you are from the North Shore of Lake Pontchartrain or Slidell or Mandeville or down in Terrebonne Parish, you are outside a levee system, or even if you are inside a levee system, you can elevate as an instantaneous degree of protection so that is.... The biggest



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concern I have in the future is that we will not because we are not going to be able to, let me back up. What I hope is that we have the recognition is that the only way to save this place is to make the hard decisions that Col. Lee has alluded to that there will be limited funding. There is...funding has been spent from Coastal Wetlands Planning Protection Restoration Program from the [Inaudible] systems program we don't have enough money to save the coast. We have limited funds and we have to use it strategically and tactically in the near term and strategically in that whatever projects that we build, it can't be a CWPPRA project anymore and I don't mean this negative to CWPPRA, it's been good, but the project has been a little bit here and little there and a little bit there, basically its shifting in everybody's pocket. That can't cut it any more. If we are going to make this place sustainable we've got to make a decisions, select those projects that we can and will provide most bang for the buck that will provide the surge protection that will keep the levees in tact on the West Bank or along the MRGO or the New Orleans East Land Bridge so St. Tammany Parish doesn't wash away or the same thing for Houma and Terrebonne. That's a long way around to saying that if you want to talk specifics, I would be happy to do that with you. I think we do need personally I would welcome a public forum to do that. I'm afraid there's been too many people [Inaudible]. You want to talk to me afterwards, I would be more than happy to talk to you about specifics and if you want to talk about a forum about specific areas it probably will not make it. You know, one of the best things that some of the science that came out last summer from LSU in the USGS, just look at the coastal land projections for the next 20 to 50 years.

Lee Richardson: Again, I want to make one very brief comment kind of in response to the gentleman from Metairie where I'm also a property owner in far east of New Orleans. I don't have the luxury of looking back on the same 30 years that he has involving this issue, I've only been involved about eight years. But I remember when I did get involved with some leadership in Orleans Parish in its first effort ever to be involved in the CWPPRA program, I discovered that most of the focus on this problem was by a very small fringe group of intense, convinced, almost messianic scientist who found very little audience for their concerns in the public or in Washington. They were basically confined to talking among themselves. They had done so much work like the LCA studies early on and other efforts to identify these program, there's an old gentleman named Wade Gagliano whose literature I've read going back 25 years he started pointing out that we have a serious problem and nobody listened. Then along comes Katrina and I would like to point out that since Katrina, Louisiana has formed the Coastal Restoration Authority and given it some teeth to transfer some assets and personnel to the Governor's Office of Coastal Affairs, which now has 140 engineers assigned and planners and implementers, project managers to do the kind of things that we want them to do. Since that time, and believe me I don't want to act like I'm a spokesman for the Corps, but I do defend the fact that they are not the solution they are the implementer of the solution we have to find for ourselves. They are our major toolbox to get this thing done. Do I wish they would do more? Do I wish they had speedier ways of doing things? My [Inaudible] like anybody else including the people who live there in the Corps. In addition we have formed the two levee protection authorities on each side of the river who now consolidate some focus and energy and funding and capability executive authority to do things. We have straightened out tremendous failure that we have been living with since Betsy and our local levee protection. What an incredible job that has been. We have found a voice in Washington. Is it loud enough? Do they listen enough? Absolutely not, we all live with that. Are they beginning to listen? Yes. The Water Resources

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Development Act, which finally after seven years, brought back to life with authorization and some funds for project in Louisiana. Col. Lee pointed out that what was it, 14 billion dollars, has been authorized. Is it funded? No. do we have some money to get started? Yes. It's funded or isn't. Since Katrina, I know a small issue is the offshore continental shelf funding that is not going to start soon enough for all of us. So yes, things are happening. Our problem is we are trying to solve a 200 year accumulation of difficulties overnight and that's our problem and that's what's going to cause all these hard decisions that Col. Lee and others have alluded to. Thank you for giving me another moment.

Rachel Rodi: We are going to wrap it up with the beautiful lady in the blue in the back.

Marietta Greene: Thank you, I'm Marietta Greene and I represent Madison Land Company with my husband Skip, we manage the properties. It spans Jefferson Parish almost from one side to the other. Shame on you landowners who have not gotten involved in the money that is available and thank you Corps for sponsoring the CWPPRA program and they have the task force. We've been involved in these meetings since its inception and have been to hundreds of meetings and begged for money and thanks to Marnie and her efforts with Jefferson Parish and working together, I think this is the best parish to get the money because we've all worked together, we have banded together, we've been to the meetings, we've begged for the money and we've had wonderful implementation and it's amazing. You've heard of the Barataria Landbridge? That's one of our project, that's our property and the last part of it that is going to be concluded is south [Inaudible] and going over to Bayou Dupont. I can't tell you how excited I am to be a part of coastal restoration and having found CWPPRA when it first started. I talked to John Breaux after I ran into him accidentally and I said I would have known about it and he said as long as I'm in Congress Louisiana will have this money. I told him what we needed to do with our property and he said go for it. We have and we've gotten an awful lot done. Most of our property now has been rocked and that's the main thing that has saved it up and down Barataria Waterway and all over. It's just an amazing process, but you have to get involved. You can't sit back and wait for somebody to give you the money, you have to get there and ask for it and we did and it's happened. Shame on you if you haven't gotten involved because it happens.

Carlton Dufrechou: Mrs. Green I think all of us here applaud you, that's exactly what is needed. It's critical mass. If the Saints can win the Super Bowl, we can save our coast and it just takes all of us focusing and staying behind it day in and day out.

Col. Lee: I guess I have to close out on a positive note too. One of the things that I think we have learned since Hurricane Katrina is that we got \$14.4 billion dollars. We have two billion dollar projects that are being constructed in the system right now, one on the East Bank and one on the West. Congress gave us that funding, the administration provided to us to fully fund the Hurricane Storm Damage and Risk Reduction System so what are the results of that? The results of that are that five years ago we didn't even have a concept of what that Surge Barrier was going to be. We didn't even have a concept of what a West Closure was going to be. As a matter of fact we had many people telling us that neither project would be built and less than five years, both of those projects went from concept to completion. So how did that happen? It didn't happen by incremental funding. It happened because there was a focused effort from

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environmental side for alternative arrangements and also from the funding side, they took the handcuffs off the Corps of Engineers and allowed us to bring the best and brightest innovative ideas to the table to solve complex water resource development projects and we did. We are doing it, not just we, everybody is doing it. It took the input from the public. It took the federal resource agencies cooperation, the NGOs cooperation and the engagement and the state of Louisiana's effort in working very closely with us to do that. What we are hopeful for is that when we have these projects like the West Closure Complex on the West Bank and that agency [Inaudible] that these are looked at as a model for future water resource development projects. That when you fully-fund a project you can get different results than if you incrementally fund a project. I mean I was telling a Town Hall last night that we had in Morgan City, this lady was asking about that, and I told her that what if you had to build your home over a ten year period. You start out with a foundation and then the next year you get enough money to build the walls and then the next year you build a roof. Then you're in the house year five and ten years later your home is built, but parts of what you built to start with are already falling apart because you didn't get the full funding upfront. That's really what the challenge is. Water Resource Developmental Projects incremental funding causes that. I had a discussion on the Port of Iberia on the navigational project. We had a project that was about a \$100 million dollar project now it's looking to be a \$300 million dollar project and people can't understand why did that happen? Well because that project that was built was being built in a couple of years for a \$100 million dollars, it's going to take nine years to build a project that's going to cost \$300 million dollars. So, from a resource stand point as tax payers, we should want fully funded projects up front and priorities of projects done so we can build those projects from an effectiveness stand point and also from a value to the tax payer. I think what you see us doing in the hurricane system there are some lessons learned that can transcend this hurricane protection if you're building coastal restoration. I really appreciate everyone coming out tonight and your input and some of your hard questions and I get those everyday. I'm not afraid of them because this is a tough business, but it takes the engagement of everybody working together to make this successful. Our effort to come out tonight was to give you an update on where we are. We see some real good things unfolding this year and next year in coastal restoration so I just encourage you to stay engaged with local representatives and Congress and let them know what your priorities are so that we can work together to accomplish this. Thank you very much.