

# Public Meeting Summary

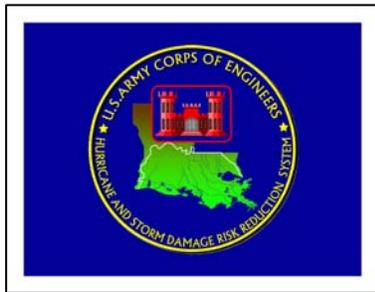
**Individual Environmental Reports 12, 13 and borrow  
Thursday, May 22, 2008**

<b>Location</b>	Our Lady of Holy Cross
<b>Time</b>	Open House 6:00 p.m. Presentation 7:00 p.m.
<b>Attendees</b>	39 attendees and 10 staff
<b>Format</b>	Presentation then Discussion
<b>Handouts</b>	PowerPoint Presentation Borrow handout 5.13.08 Corps approval process brochure Hurricane system location map
<b>Facilitation</b>	Maj. Tim Kurgan, Public Affairs, Chief
<b>Presenter(s)</b>	Julie Vignes, senior project manager, Westbank and Vicinity Projects

## Welcome

**Maj. Kurgan**, public affairs, Chief

I'd like to welcome Jackie Clarkson from the New Orleans City Council.



Good evening everyone, this is an US Army Corps of Engineers public meeting on Individual Environmental Report 12 and 13. I have just a few ground rules for this evening. We will have a presentation by our senior project manager, Julie Vignes and I ask that you let her get through her presentation because she may answer your questions somewhere in her presentation. After Julie is done with her presentation then we will have a question and answer session where everyone will have the opportunity to speak. I ask that you raise your hand and we will identify you before you state your questions. Try to keep your questions to about 3 minutes so everyone can talk and has a chance to be heard. I'll facilitate to make sure all questions are answered. I would like to thank councilmen A.J. Planche and P.J. Han from Plaquemines Parish who are here tonight.

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**Mrs. Jackie Clarkson**, New Orleans City Council

Good evening and thank you for being here. We have a lot of people interested in what is going on because it is, critically, important; and, what good timing by the Corps. Today the US Senate voted on the Emergency Supplemental Spending bill that includes domestic spending. The bill states that domestic spending is \$160 or \$165 billion and it was passed by the Senate of Appropriations Committee. The bill includes our \$7.3 billion dollars for our 100-year flood control. So today is a very historic day, however, that was just the Senate. It was taken out of the House vote and now it will go to conference and we have to reconcile. As near as I can find out [Ms. Clarkson was calling contacts in Washington D.C.] I know the bill will hold \$100 to \$160 billion and a budget for domestic spending was in there, but I can not find out specifically if any of our \$7.3 billion was cut. I don't think it was, but we still have to reconcile this with the House. The point being that, I just got back last night from my trip to Washington D.C., to ensure we will keep alive the 100-year flood plan and get the \$7.3 billion it is going to take to do it. This is only the beginning because in June we have to pay a pro-rated share. The president said 35-percent was passed on the floor and when [the bill is] revived we're going to get it down to 20 percent amortized over 30-years. As hard as it will be for New Orleans [to pay for this], think of Plaquemines and St. Bernard parishes. They would have to shut their doors. So, when we go to Washington, D.C. we go as five parishes to fight for each other, we stick together. We are in this together, our levees connect, our roads connect, and the regional planning commission is going up there to get funds for us all. We have fought for funding for combined roads for evacuation routes so we can make contra flow work. We have been at the helm and putting all this in the hands, primarily, of the Corps of Engineers to do the 100-year flood plan which FEMA mandated. That's what will make or break us in terms of future flood control. Our job as local government, specifically the Council, will be defining the money that is appropriated and to finding money that will ensure this 100-year flood plan [is built] for you. Of course our job: the mayor's and council's, is to hold the Corps accountable. We need you to stay in the process and to pay attention to what they tell you tonight. We need you to watch everything on all the levees to keep us informed and to keep them informed. We had a levee breach in Algiers two years before Katrina. It breached in the duck of hurricane season. **(Note there was not a breach on the Algiers Canal, the water was generated by seepage at Pump Station 13, the Donner Canal.)** The Mayor and the council were all on planes from Chicago. We packed sand bags all night and we lived through the second hurricane without the levee breaking. We had the National Guard on trucks with bullhorns to help evacuate. We had the Coast Guard giving advance warning if necessary, so we were on the job. Immediately after Col. Roland was in charge, he said we need to fix the levee and I said, "No we need to rebuild the levee." The Corps built it the way they should have been done in the first place with sheet pile going further out and further down. It receded down to 4 ½ feet and was built back to 9 feet. If the Corps had not done that 2-years pre-Katrina the surge that came up the Industrial Canal would have broken the levee during

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**Westbank and Vicinity Project Update**

IERs 12, 13 and borrow  
Greater New Orleans Hurricane and Storm Damage Risk Reduction System

Ms. Julie Vignes, Senior Project Manager  
May 22, 2008  
Our Lady of Holy Cross College  
Algiers, LA

Our Team: Relevant, Ready, Responsive and Reliable

Hurricane Katrina. Levees are very important to learn about. Where we have launched and called into action we have been able to make a difference. That is why we need you in the game and why we put total accountability and support behind the Corps. We welcome the Corps and thank you for your 100-year plan.

**Why we are here tonight**

To discuss the status of in-progress projects and alternatives under consideration in the Westbank and Vicinity portion of the Greater New Orleans Hurricane and Storm Damage Risk Reduction System. Improvements will reduce impacts of a storm event that has a 1 percent chance of occurring in any given year.

Our Team: Relevant, Ready, Responsive and Reliable

**Julie Vignes**, senior project manager

I want to reintroduce myself, I am Julie Vignes and I am the senior project manager at the New Orleans district working on the Westbank and Vicinity portion of the hurricane project.

**National Environmental Policy Act: NEPA**

- Required for all major Federal actions
- Analyze potential impacts to the human and natural environment and investigate reasonable alternatives
- Public Involvement is KEY! We want to hear from you!
- Goal: more informed decision making through public involvement
- Analyses documented in Individual Environmental Reports (IER)

Our Team: Relevant, Ready, Responsive and Reliable

While we are here tonight, we would like to accomplish two goals. First we would like to give you an update on what have going on with the system today. We have ongoing construction work that was authorized to be completed before the 100-year system is put in place. So, I am going to give you an update on the status of that work. I'm also going to talk to you about the 100-year alternatives we are looking at to provide protection in this area. We will want to get some feedback on all the alternatives we are looking at currently.

**Individual Environmental Report Project Areas**



Our Team: Relevant, Ready, Responsive and Reliable

The National Environmental Protection Act is a federal regulation that dictates that the federal government must consider the impacts to the natural and human environment and solicit

**NEPA Process and Path Ahead**

- The NEPA process began with public scoping meetings for IERs 12 and 13 in Mar. 2007
- From Mar. 2007 through today, current project alternatives were developed, impacts were analyzed, and public input was solicited
- Tentative dates of draft IER 30-Day public review period:
  - IER 12: Sept. 2, 2008 – Oct. 3, 2008
  - IER 13: Sept. 20, 2008 – Oct. 20, 2008

Our Team: Relevant, Ready, Responsive and Reliable

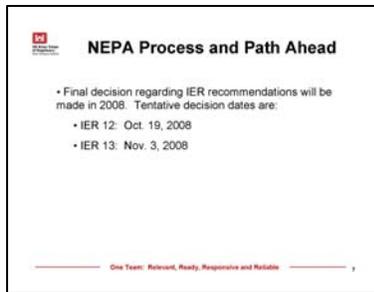
feedback from the public to make our decision.

We captured the NEPA process by dividing the hurricane protection system into different project areas. We identify the areas and their impacts in Individual Environmental Reports. Each report identified is shown in different colors on this slide. Tonight we will talk about the Belle Chasse polder and the alternatives for the Hero to Oakville section, all of the Algiers

Canal and Harvey Canal over to this area [pointing]. This information is covered in two different IER's: IER 12 and IER 13 for Hero to Oakville.

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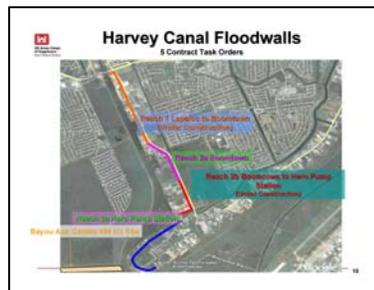
Part of the IER process is that we continue to do public meetings; then we publish a report for a formal public review. The tentative review dates are here. The IER 12 and 13 reviews will be between the September and October timeframe.

At the end of the evaluation we will take all your comments and our reports to make a determination. Then we will see if we need to go back to the public. But these are the dates we expect to have a determination.



Most of you are familiar with the Harvey Canal just below the Lapalco Bridge. It was under construction before Katrina hit. We continued that construction and we have it operable now.

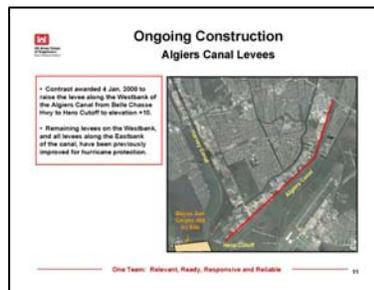
Currently, we are working on permanent structures but the gate is operable and provides protection to elevation 11. That contract also included work at the Cousins complex discharge walls. The second picture shows the east bank of Harvey on Peters Rd. four miles from the Lapalco Blvd where we are constructing floodwalls. Two out of five contracts are currently under construction. The first contract is almost complete. About 4000 feet of floodwalls are complete from Boomtown Casino south toward the Hero pump station. The second contract was awarded for an additional 8000 feet of floodwall starting at Lapalco Blvd.



and ending at Boomtown Casino. There are three more contracts expected to be awarded in June and July.

## James Carter, New Orleans City Council, District D

I cannot stay at the meeting tonight but, I have received a presentation from this group before and I want to let you know I am tracking them closely. Councilwoman Clarkson is backing me up in making sure everything is ok. My son is graduating tonight, but I wanted to come to make sure residents of the district know I am taking this very seriously and we are going to do everything we can to make sure Algiers is protected.



## Julie Vignes, senior project manager

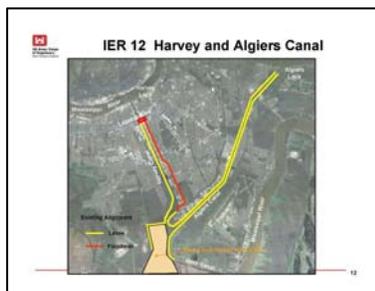
Another contract going on now is the levee work along the Algiers Canal on the west end, below Belle Chasse highway. A contract was awarded in January to raise that levee to elevation 10. This should be complete in October this year.

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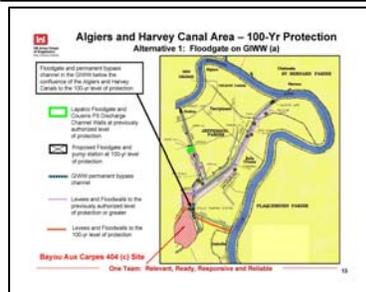
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**Question 1.** Unidentified person from audience: When you say elevation 10 or 11 what specifically does that mean?

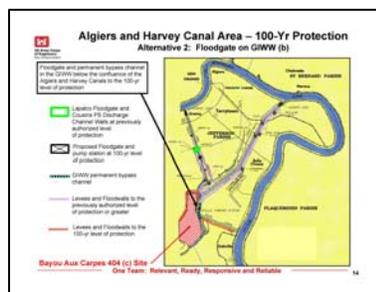
**Response 1.** Vignes: It is the elevation, roughly how many feet above sea level the levee would be.



This map shows what is included in IER 12. This is protection for the Algiers and Harvey canals.



Alternative 1 is to construct a floodgate at the Gulf Intracoastal Waterway (GIWW). This is the Mississippi River [pointing] here is the Algiers Canal and the Algiers lock and Harvey Canal. This is the existing floodgate we operate at Lapalco. This alternative would be to construct a floodgate in the GIWW to tie into the

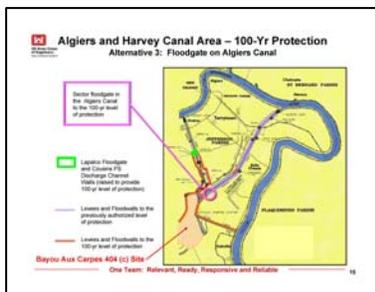


levee then cross over and to tie into the system over here [pointing]. The purple is the Bayou Aux Carpes 404(c) area; it's an environmentally sensitive area, so there are some additional impacts to consider if we chose to put the surge barrier in this location.

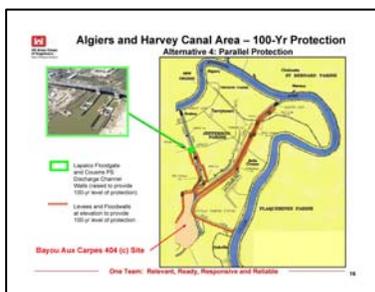
Alternative 2 is another alignment and is similar to Alternative 1 but it came about as we were working with the environmental stakeholders. We've adjusted the alignment a bit but we are still building a gate across the GIWW here [pointing] but instead of crossing the 404(c) area we have skirted around the perimeter of the area and have tied into the system here [pointing]. Both alignments would have a navigable floodgate across the canal to block the storm surge, and it would include a pump station. There are as many as ten pump stations in the two canals and the pump station discharged into the canals. During a tropical event, to block the surge, we would close those gates to trap the water and have a second pump station to pump the water over a wall.

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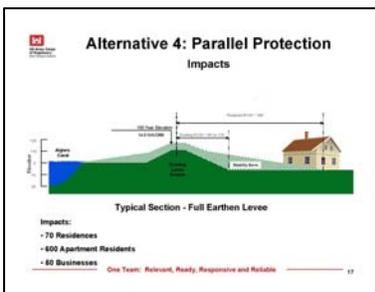
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Alternative 3 is to put a floodgate in the Algiers Canal at this location here [pointing]. This alignment eliminates the need to raise the levees along the Algiers Canal. They will be maintained to the elevation that they are now and, it would be improved to elevation 10. We would not have to go to a higher elevation for 100-year protection which would be approximately fourteen feet. We would put a gate across the Algiers Canal. The floodgates being constructed on Peters Rd. are a sufficient height at elevation 14 but we would have to improve the elevation at the gate. Then there would be higher levels along the Harvey Canal which would have a pump station component to it as well but the pump complex would be smaller because there are fewer pumps on the two canals total.



Alternative 4 would be to build parallel protection along the canals by raising the levees on both ends of the Algiers Canals and improving the elevation at the floodgate and building levees at the west end of the Harvey Canal.



In addition, to raising the canal's levees from elevation ten to fourteen, as you build the levee higher you have to extend the base of the levee. We have increased our criteria for building levees. We are building levees with a higher factor of safety, they are more robust. They include a stability berm on the protected side of the levee. So when we do the engineering of those levees on the Algiers Canal to an elevation of 14 feet it will impact some of the residents, apartment complexes and businesses adjacent to the levees.

**Question 2.** Unidentified person from audience: What do you mean by “impact”?

**Response 2.** Vignes: The levees would actually sit in the properties or yards and the house would have to be moved to build the levee.

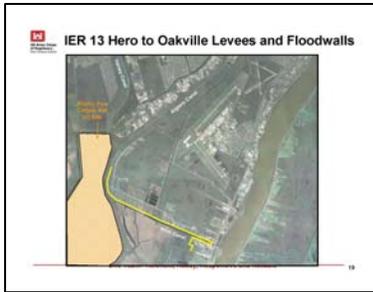


There are other impacts to the west end of the Harvey Canal. It would be the same situation; the levees have to be higher and significantly wider. At this location there is open land because there are no homes and businesses, but the wide project footprint would have impacts on the bottomland wetlands.

So there are some environmental issues associated with raising

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the levees in the Harvey Canal.

IER 13 is Hero to Oakville Levees and Floodwalls: We call this the Eastern Tie In and we close this area in by connecting it to the Mississippi River Levee.



It's a little difficult to see but this levee is a problem at elevation 8-9. This will be raised to the 100-year protection level. The selected alternative will be an eastern section for the Hero Canal.

This the Hero Canal and it ends just before the Belle Chasse Highway and the Mississippi River. This levee ends so we have drawn up alternatives on how to get around the canal by working with these businesses. There is a landfill, residences, and wetlands to consider. We have seven different plans to tie the levee into the Mississippi River system.



Alternative 1 includes a gated closure across the canal and then a gated levee along this base of the line here [pointing] with either a gate, a ramp or a bridge section across the highway to tie it into the Mississippi River Levee.



Alternative 2 is a little different alignment and it has some environmental impacts here. You would have a direct impact from the levee if it would be built on the wetlands area but it also would enclose the wetland area.

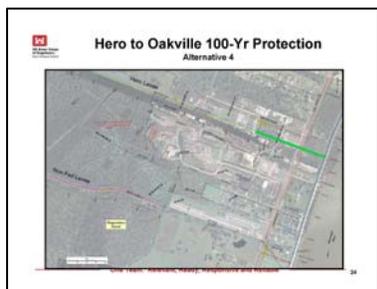


Alternative 3 is a similar alternative to bring the levee back here [pointing] to the gates and follow this alignment. And that is all the levee section.

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Alternative 4 is an alignment we're considering because of the complexities with building around the businesses and residences. It looks at tying into the Hero Levee, crossing Hwy 23 and tying into the Mississippi River Levee. Obviously, the disadvantage of this alignment is this area then becomes outside and will not be protected for a 100-year storm event. This alternative is the least likely to be selected.



Alternative 5 ties into the existing levee. The advantage of this alignment is that we are now around the canal so we eliminate the need to have a gated structure there. A gated structure would be more costly for the state, which would operate that structure. So we eliminated that structure and came around the canal and through the area. This particular alignment would reduce the



project footprint because the width would accommodate a floodwall but it would still be placed where there are existing residents. It would displace some residents in the Oakville community. All alternatives cross the highway at this location [pointing] and we are still looking at how the crossing would be constructed. It could take the form of a gate, ramp or bridge. We are still moving the crossing locations around and are doing additional engineering work. We're working with environmental agencies and the community. We have changed the alignment here [pointing] just a little bit to stay away from some of the residences. We're trying to reduce impacts to people and property in this area.



Alternative 6 would be a floodwall along the highway that comes back around the Oakville community to provide protection. Floodwall sections are typically more expensive than levee sections. We could fit a levee there but we're more likely to select a floodwall. We are still looking at the structures.

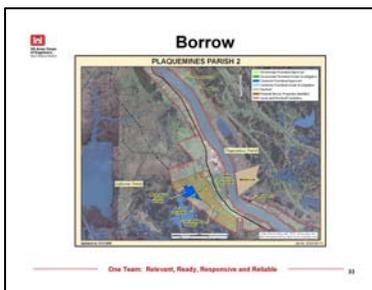
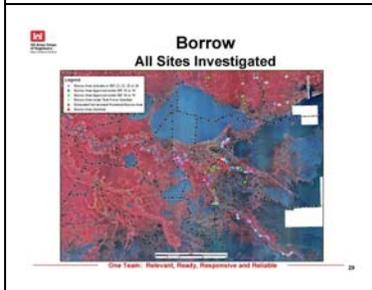


Alternative 7 has some levee but a lot of floodwall and we know it concerns some of the businesses and residences because there would be a wall in front of them.

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This slide summarizes all seven of the alignments that we are looking at currently.



This is an update on the borrow areas we're investigating. Borrow is clay material that is excavated and used in levee construction. It has to possess strong characteristics to make firm levees. This map shows all the areas that are potential borrow sites. Some sites have been investigated, some discredited, and some are under investigation.

This is in West Jefferson, further west, which shows the potential borrow locations.

This is the Harvey Canal and the Algiers Canal polder and as you can see there are some borrow sites in this area.



This is in the Belle Chasse area and some other potential borrow sites.

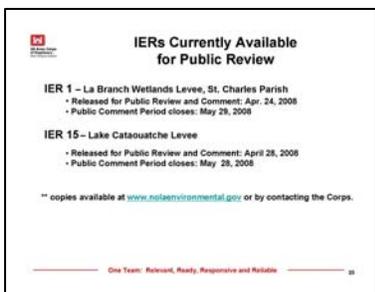
These are some of the potential borrow sites in lower Plaquemines Parish.

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There are several ways that you can provide input into development of the hurricane system. We will take questions tonight, then take your question and the answers and post them on the NOLA Environmental Web site. If you go there you can see presentations and any reports that support the alternatives selection. The environmental reports are featured, along with contact information. We also maintain a large e-mail and mailing list. If you would like to get on it, please stop by the table on your way out.



There are currently two IER's available for public comment. IER 1 which is for the 100-year work on the east bank and the other is IER 15 for the Lake Cataouatche Levee area which is a Westbank project near the Jefferson, Saint Charles line. Their comment periods close on May 28 and 29<sup>th</sup>.



## Mrs. Jackie Clarkson, New Orleans City Council

I do not have any questions but I just got a call from Washington and we have the \$7.3 billion requested in the Emergency Supplemental Spending bill and it looks like it will go to conference with the House within the next two weeks. So it looks like we will have the money and put the Corps' feet to the fire for meeting a 2011 deadline, right? We know that this 100-year flood plan is not the ultimate plan but, it is the best money can buy right now. It's still not going to protect us from a level 5 hurricane. We still have to build the coastal wetlands and we have to get back out to restore the wetlands, hopefully some of the offshore oil money to help give us get the level 5 protection but we have to stay on top of it.

## Discussion: Facilitated by Maj. Kurgan

**Comment 3.** Jay Vincent, Harvey: I have my own property in Jefferson and I have been involved in trying to save the wetlands. I am a member of the Sierra Club State Conservation Council and many other environmental groups. The Councilwoman talked about restoring the

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wetlands, but I do not think I have to tell you that we will oppose any plan to destroy the wetlands like alternative one in IER 12. The area in question on Alternative 1 is also declared a special protection area; it is 404(c) and will soon be part of the Jean Lafitte National Reserve. I can promise you if that alternative is selected we will sue to stop it.

**Question 4.** Bruce {not signed in}: I have a couple of questions about the lower part of Algiers. Is there a threat from the Algiers Outfall Canal? Can you discuss the current state of those levees that run from the Mississippi River south toward Belle Chasse? What are the conditions of that levee now as hurricane season approaches? What level of protection does it offer us? With the presence of the Lapalco lock does it divert the storm surge, coming from the south? Does it push more water into the Algiers Canal?

**Response 4.** Vignes: The conditions of the levees are at elevation 9, at lowest elevation 8. That from Belle Chase north to the lock, that section was completed about a year ago. There was a contract under way when Katrina hit, then that contract continued and completed a year ago. There was a contract previously awarded for the lower half of the Westbank. Levees on the east bank of Algiers are elevation 8-9.

**Question 5.** Man: The levee on the west bank of the Algiers Outfall Canal is at what level?

**Response 5.** Vignes: On the west bank from Belle Chasse highway to the lock it is at elevation 9. Belle Chasse Highway south, near Hero Canal, which is under construction now, it was awarded in January, and that levee is at elevation 7. The contract it is under now will raise it to elevation 10.

**Question 6.** Man: Can I ask you about the levees, how high have they been raised?

**Response 6.** Vignes: They were built to an elevation 9 ½.

**Question 7.** Man: But they sank, at some point they sank. So this was a lift?

**Response 7.** Vignes: Yes, that is correct. The contract required that they were built to elevation 9 ½ there has been some settlement and that is why in some spots it is as low as elevation 8.

**Question 8.** Man: When the levee was rehabilitated it was lifted. How much was that lifted and how much extra protection have we gotten in the last years?

**Response 8.** Vignes: When it was lifted it was at elevation 6 or 7 and it was raised to elevation 9 ½ and in the course of years it settled.

**Question 9.** Man: If I am following you, over the last couple of years we gained about 2-2 ½ feet?

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**Response 9a.** Vignes: Yes

**Response 9b.** Kurgan: I think I understand your question. Prior to Katrina they were at about elevation 7 and after they were around elevation 9. We did the contract and you are looking at about 2 feet higher.

**Response 9c.** Vignes: Not only did they raise the elevation but, to the levees along the Algiers Canal, at the time of Hurricane Isadora there was material at the bank of the canal placed when the canal was done. The Corps did work to raise the levees to elevation 7. Then the last couple years, it went up to elevation 9 but there has been some settlement.

**Comment 10.** Councilwoman Clarkson: The one we rebuilt was down to 4 to 4 ½. It was not that one that reseeded at that time. There was only one that receded and breached, that I knew about, but as far as up the whole west bank to Plaquemine or Jefferson. I don't know how many there were, but others at that time reseeded to 4 ½ and that was checked. Supposedly they were checked and that they all are attempting to go to 9.

**Question 11.** Man: On September 26, 2002 or 03 I was standing on the western levee at the Algiers Outfall Canal and the pump station. I was standing on the top and my shoes were wet. I was standing 4 ft above the ground. I could see people in their houses. My shoes were wet, so have they been raised and you are saying, yes?

**Response 11.** Vignes: Yes.

**Question 12.** Man: But that is not the 100-year protection.

**Response 12.** Vignes: That is right, the 100-year elevation is 14 feet and when the four plans come into play and then we have to ask if we want to raise the levee or build a gated structure.

**Question 13.** Man: When the Lapalco gate shuts, is the water diverted into the Algiers Outfall Canal?

**Response 13.** Vignes: We have done a drainage hydraulic study of that particular situation. When Lapalco's closed, it blocked water from going north of it. The water can essentially go, not only, in the Harvey or Algiers canals but that water has an entire basin to fill. The water is stopped here [pointing]. So in addition to being stored in Harvey or Algiers canals it gets stored in the Gulf Intracoastal Waterway and all this low lying marsh area. All of our studies show that an increase in water elevation in the canal is negligible; it is an inch if that.

**Question 14.** Valarie Hisen: I walk the levee every day and there are a number of areas where streets are wet for a month; it appears to be seepage from the levee area. What are the plans to

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cement the wall and holes from barges that hit during Katrina? They are filled with rock right now, not just a few.

**Response 14.** Vignes: The slope pavement, concrete slab on the Mississippi River levee was damaged during the storm. The repair is to place rip rap in that area. The intent of the slope paving is to prevent erosion of the levee slope. In some area of levee, we don't put slab we put rip rap which is concrete blocks. The intent is to harden that area to resist water, to preserve soil and prevent erosion. That is the repair for that area and the rocks are serving the same purpose as the concrete slab.

**Question 15.** Valerie Hisen: But, the water is leaking through the blocks?

**Response 15.** Maj. Kurgan: With the elevated levels in the Mississippi River all that hydraulic pressure is pushing on the soil and there are natural seepage passages that are going to find a way through the soil.

**Question 16.** Valerie Hisen: What level should the river be for that to dry up?

**Response 16.** Maj. Kurgan: Typically, when the river gets below 11 feet or so you won't see that seepage. We are still at elevated stages right now. When we hit 17.6 in New Orleans at our max and we opened the Bonnet Carre Spillway, we made sure that water gets out. So you would not get an increase flow here. Seepage is a natural occurrence of the river all the way to the north down to our part of the river. We have engineers and our geotechnical guys going down and looking at all that seepage to make sure that there is no material going through there. Seepage can happen up to 1,000 feet from the levee and water will find its way through the ground and come out. As long as you don't see sand or anything coming out that means that there is no sediment, it is just a natural process. We are concerned about it and watch it. If you go back to our emergency operation center they have grid coordinates for every single one of these seepage points, and we go out to see if there is any sediment. Then we catalog them and when we get another high level river event we go out to that spot because they tend to occur in the same location, because geology does not change. I guess what I am trying to tell you is that when we get down below 11 feet a lot of the spots will dry up and you won't see that anymore.

**Question 17.** Valerie Hisen: I have walked the levee for years and it is not like that just now. I have seen the water like this before, it is not a new event.

**Response 17.** Kurgan: We have a lot of seepage and sand walls in 1997 when we had high water. Prior to that, we went 11 years without having to open the Bonnet Carre Spillway. So when you open the Bonnet Carre Spillway, since it has only been opened eight times since 1937, that kind of puts in magnitude the level and amount of water we have had in the Mississippi River this year. Our hydrologist has said that this is the 9<sup>th</sup> greatest flood that we have had in the

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Mississippi River since 1937. It was a significant water event this year which we passed safely and we will continue to pass. But there is still a lot of water in the ground and it will take a little bit for it to work out of the ground.

**Question 18.** Valarie Hisen: So if the river is at 11 feet, now, it should dry up?

**Response 18.** Kurgan: If it does not then you can call us and we will go look at it.

**Question 18.** Lady: There is a marker on the levee, it is 11 feet.

**Response18.** Kurgan: When I say numbers, we go off the Carrollton gauge at the end of Carrollton on the Corps property. That gauge read 13.5 feet today. We are still at an elevated river stage. Further down the river it will be lower and further north it will be higher. We are still two feet above that, so there is a little water that we still need to get out.

**Question 19.** Blair Rittiner: My concern is on the other side of the river. Right now your plans show 100-year protection in St. Bernard Parish would be a 27 foot levee. We know from Katrina that water came from east to west. My concern is, I live in Algiers, if that levee is constructed and if we get a storm like Katrina to push water from east to west, you are generating a funnel to come over the top of the river and come down into Algiers. Are there any plans to raise the levees in Algiers to stop that event? The levee, was over topped at Braithwaite. If we stick the levee in Braithwaite, now the funnel that is going to come down will increase the water over the levee. We're building a disaster with that levee in St. Bernard.

**Response 19.** Vignes: The Mississippi River levee in Algiers is at elevation 20 or greater 20-24. 100-year only requires the levee to be elevation 14 it is higher because the threat of flood from the Mississippi River dictates that it be higher.

**Question 20.** Blaire Rittiner: But it is not the levee at the Mississippi River that topped.

**Response 20.** Councilwoman Clarkson: There were during Katrina times it was at the top of our levee. I know the Corps calculates and measures; however, I was at ground zero. I came to Algiers and it was that far from the top. So it is not too tall.

**Response 20a.** Vignes: There is evidence that larger off shore vessels barges were sitting on top of the Algiers lock. But Katrina was greater than a 100-year event; it was approximately a 400-year event.

**Comment 21.** Clarkson: We need to go back to Congress for a 500-year plan.

**Response 21.** Vignes: We are authorized and funded to reduce risk from a 100-year storm event. Katrina was a water event and would generate a surge higher than 13 foot.

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**Question 22.** Blair Rittiner: That would flood us?

**Response 22.** Vignes: The Mississippi River levees on the east bank are not being raised to elevation 27. It is the hurricane protection levees along the Mississippi River Gulf Outlet; those will be raised to elevation 27 but not the river levees.

**Comment 23.** Blair Rittiner: So in other words you are sending the water down that levee and you follow the levee, then water could get into the area.

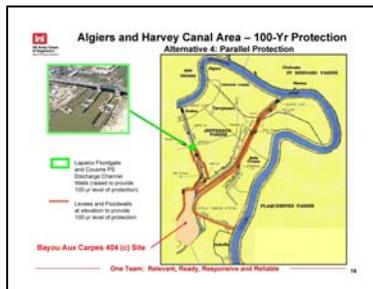
**Response 23.** Kurgan: I understand your concern and I don't know the area per say but this is a hydraulic model for this event. If you can get with me afterward to give me your contact information I can get you in touch with the person who can answer that question for you.

**Question 24.** Margie Leclere: I live on the line ¼ mile to the North of Oakville. You are elevating the levee to 10 feet in Oakville?

**Response 24a.** Vignes: The 100-year protection level for which ever of these alignment we choose, varies: it is 14 on Algiers and Harvey canals but when we get in this area the hydraulic model tells us it can be lower, I think it can go to 11 feet.

**Response 24b.** Connell: Only behind the landfill, the areas on the outside of the southern levee will be 14 feet. Only by the landfill will be 11 feet.

**Question 25.** Margie Leclere: We have the Harvey floodgate and it is closed, how many more floodgates will there be?



**Response 25.** Vignes: There is an existing gate here and we are proposing we can build a single gate down here or a gate in Algiers Canal that would require us to raise this gate. Depending on the alternative we select, we could have a single gate here that would provide protection from hurricane surge. That gate will remain in place and operable because it provides drainage storage for the canals. We have a single gate here or a gate in Algiers and

we raise the Lapalco Gate.

**Question 24.** Margie Leclere: If you install the gates does the levee height vary? Water will take the path of least resistance. If there is a gate then the storm surge would be higher on the levee, if you don't have a gate then it would be less because it would have more room to travel under the Lapalco Bridge. If you put a gate should you raise the levee? The water takes the path with least resistance. If we stop the water then it is going to go some place else.

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**Response 24.** Vignes: If we close the Lapalco gate, if we have a gate down here and a storm surge comes down this way it would be blocked by a gate here; but, from this point the water has south of this location to the Gulf of Mexico to spread. So it does not increase the water elevation against the adjacent levee.

**Question 25.** Margie Leclere: When the Lapalco gate went up there we were worried, but now you want to put a floodwall there. Now you are talking about putting a floodgate further south to protect part of Belle Chasse. We need a harder levee.

**Response 25.** Vignes: Are you saying that because you are stopping the water here, then the water would be stacking up further out and you need a higher levee to stop the water?

**Question 26.** Margie Leclere: Would the water be stopped?

**Response 26.** Connell: There is only so much capacity in this model. If we don't put in gates water would flow in but would fill only as much [as the canals could hold]. During a storm event they would fill up fast then spill over the levees.

**Comment 27.** Margie Leclere: I agree but it is not going to help us. It is going to increase the height of the water over the levees standing 10 feet.

**Response 27.** Connell: What I am saying is that it does not increase the height of the water. Once the storm surge comes in and fills the canals it is the same as if the gate is here. You get the same hydraulic effect once the canals are filled. Those canals do not have a tremendous storm capacity. Once they fill up with water, the water will be at elevation 14. By putting the gates in it does not raise the requirements of the height of the levees, it is the same.

**Question 28.** Margie Leclere: What is the rationale of having the gate here verses in the lower wetlands?

**Response 28.** Connell: The rationale is it stops the water from going into the ground.

**Question 29.** Margie Leclere: The standard part of the levee is 10 feet and you are changing the water flow. If one thing changes...

**Response 29.** Kurgan: The Hero Canal will be at elevation 14. Volumetrically this is like a cup of water to a swimming pool. When you look at the cup of water taken out of a swimming pool, you don't notice the level. When you talk of the amount of water going in here and the amount going from the canal to the Gulf of Mexico you are talking about a lot of water. By closing this off you are removing the negligible capacity. So it does not have an impact.

**Question 30.** Margie Leclere: It is just scary being close to levees, because of the splash. Is the curve taken into consideration?

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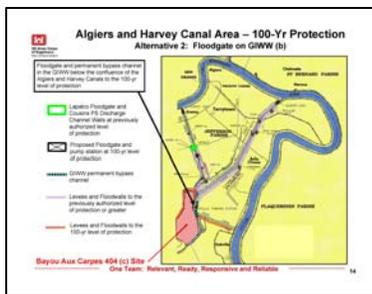
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**Response 30a.** Connell: All of it was taken into consideration. The numerical models have determined the hydraulic conditions and decided that the storage capacity here fills up extraordinary rapidly.

**Response 30b:** Maj. Kurgan: Like I said, it is like a cup that needs to fill up. Once you fill that cup up the safe elevation of water is mimicked by the gate and so the factor of the gate here on these levels does not change. The models still shows it needs to be elevation 14 for 100-year protection in 2057.

**Question 31.** Margie Leclere: And you can't go below the wetlands because the soils are unstable in the wetlands?

**Response 31.** Connell: Well this is just a natural point of convergence. Where we have the existing Hero Canal Levee, there is a short narrow part. This project takes out about 41 percent of the levees of the whole Westbank project. When you put this structure here [pointing] you take out 27 miles of levees and you take out the uncertainty. A relative reliability analysis was done and there will be a further risk analysis done by experts in the field. They've concluded this on a relative scale that compared to parallel protection this is a more reliable way to provide protection.



**Question 32.** Margie Leclere: If it was placed lower, it wouldn't be stable enough because that levee is low and not rising any further than what it is currently?

**Response 32a.** Vignes: If it was put any lower then we would have to build more to tie into it.

**Response 32b.** Connell: It has been modeled and the model shows that it does not have the effect of pushing water higher.

**Question 33.** Margie Leclere: So does a floodgate make Oakville more vulnerable?

**Response 33.** Maj. Kurgan: The floodgate would not increase the risk to Oakville.

**Question 34.** Man: The more you block there, the more build up you would have below?

**Response 34.** Maj. Kurgan: It has a negligible impact. If you look at the land mass there verses the land mass south of there, it is miniscule.

**Question 35.** Man: The land mass south of there would fill up because you stopped the flow and then it would build up from Oakville south?

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**Response 35a.** Vignes: If the storm surge is coming this area would be flooded. You would have all this area for storage. Once it is filled, it has an infinite area to be stored in all the way to the Gulf of Mexico.

**Response 35b.** Connell: Has anyone seen the storm surge of the MRGO, which was taken at the pump stations, at the way the water was coming in? Essentially this is going to be filled up in a matter of minutes, so the effect; once these canals fill up is the same as if the gate were here. No more water can fill up, so the only path would be to spill over but we are trying to avoid that.

**Question 36.** Leander Perez: So the water is going to stop? Where is it going to go?

**Response 36a.** Vignes: It goes south, it can not go further, and it disperses itself over a large volume of land. This is a large coast, so it stops and the water accumulates over the lower coast all the way to the Gulf of Mexico. The water has tens of thousands of acres of land to be dispersed over as opposed to the narrow canal.

**Response 36b.** Connell: So it either stops or floods the whole area.

**Question 37.** Blaire Rittiner: Aren't you taking the water out with a pump, in addition?

**Response 37.** Vignes: Yes, in addition to having the gated structure to block the surge, pump stations are a part of those alternatives.

**Question 38.** Matt Rota: Thank you for adding an alternative for IER 12 that goes around the 404(c) area. If the goal is to get protection by 2011, then [going through the 404(c) area is not the best way to do it. Also again that increases the amount of levee protection this area has and is better outside the levee system. There is a bill in Congress that just got out of committee and is going to the Senate. The bill calls for taking the 404(c) area and adding it into the National Park System, you don't want to destroy a National Park. I also want to talk about IER 13 and urge you to consider the alignments that avoid the wetlands, particularly alternative 2 and 3 that cut through a large amount of wetlands. When a storm surge came in the levees that had wetlands in front of them had less surge and fewer breaches, than the ones not near wetlands. We support the alternatives that do not damage the wetlands.

**Response 38.** Maj. Kurgan: That is why we have the alternatives. Thanks.

**Question 39.** Blue shirt: Since there are four alternatives, are you favoring one more than the other?

**Response 39.** Vignes: The parallel protection alternative, from the standpoint of impacts to people, it is estimated that there are 70 houses would have to be taken down to construct the levee and fifty businesses along Engineers Rd. Along the Algiers Canal there would also be

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impacts by parallel projection. Additionally, in the risk assessment one (phase 1), we are currently undergoing a much more detailed assessment to determine which one would provide the most reliable system. Parallel Protection scores the lowest for reducing risk. It is also the most costly alternative and has about 27 miles of levees. We'd also have to do work at the existing structure. We are currently evaluating all four and the impacts, but the two alternatives for the GIWW gates (Alternatives 1 and 2) would have the fewest impacts to residences and businesses but, there would be an impact on the environment. Then one alternative would require a large pump station and maintenance costs. Those are disadvantages of the gate alternative including impacts to the 404(c) area. If you remember the dates I had up earlier we are not going to publicize our selected plans until September. We are going to still be looking at other information about environmental and navigation of the canals and other stakeholder feedback. There are lots of players are involved in deciding what we do so we have to plan carefully.

**Question 40.** Councilwoman Clarkson: Who makes the ultimate decision?

**Response 40.** Vignes: Colonel Lee, commander of the New Orleans District, will be the one to sign the decision record for the reports.

**Question 41.** Black shirt: Who is responsible for closing the gates and starting the pumps?

**Response 41.** Vignes: At the completion of construction, the law now requires that the government turn it over to a non-federal sponsor. Traditionally that is the West Jefferson levee district. The state has changed some of their laws, and now has established the Southeast Louisiana Flood Authority and the Coastal Protection and Restoration Authority, as a state entity for levee reform. The best way to answer is: the State of Louisiana.

**Comment 42.** Jeff Grimes: I hope that you look at Alternative 2-4 to avoid impacts to the 404(c) area.

**Question 43.** Leander Perez: What is going to happen to the non-federal levees south of Oakville?

**Response 43.** Bill Maloz: We are taking those levees up to 12 feet right now but also we are doing studies to see what elevation they should be taken to, probably about 14 feet. We have overbuilt those levees and are going through the same processes you see here. There were public hearings in March 2007 and we have developed 20 alignments, as you know, I have shown them to you. We are finding the best engineering solution to build a levee that works while assessing the impacts and looking at the alignments and economic advantages of those levees. We expect to bring them to record in January 2009 and construction we hope would start in mid 2009 with completion by June 2011.

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**Question 44.** Leander Perez: I would like to be on record, my name is Lee Perez and I'm from the Oakville area. I would like to see the levee follow the footprint of existing levees that are there now for a few reasons. Right now we have people living there that have their livelihood as farmers and have for generations. If the footprint is not followed, on the back of levee that will cut our property. I don't know if people in Jesuit Bend, if they would express the same feelings and would want it to follow the same footprint.

**Response 44.** Vignes: You are talking about the non-federal levees shown here (pointing).

**Question 45.** Man: Are there different alignments being proposed there to Jesuit Bend?

**Response 45a.** Leander Perez: I don't know what the thoughts are, but I have heard they may or may not follow the same footprint. That would cut off peoples land and livelihood. It may follow the foot print you feel it should not, but want to be on record to say it should follow the same footprint.

**Response 45b.** Vignes: That area is not included in IER 12. There will be an Environmental Impact Study for that project.

**Response 45c.** Gib: There are many other alignments being looked at, not just the black line.

**Comment 46.** Leander Perez: I understand being on record would help so I just wanted to be on record.

**Comment 47.** Councilwoman Clarkson: I learned that part of Plaquemines is not on the flood maps and I am appalled. Why isn't everyone on the same flood map? Can you get back to me with an answer? I want to know too. As one goes, all of us go.

**Comment 48.** Leander Perez: We are protecting the whole south...

**Comment 49.** Councilwoman Clarkson: Master planning is important, we've been there with the [Mississippi River Gulf Outlet]. We have been there with a lot of those things especially me, I remember that since 1947. I want to see a master plan of the Westbank that includes all of us before Col. Lee makes a decision.

**Response 50.** Kurgan: I don't know why but we will get back with you on that.

**Question 51.** Kenny Stewart: The other alternatives are they out there that display the Oakville area.

**Response 51.** Gib: I don't know if they are posted but we can put them on the [nolaenvironmental.gov](http://nolaenvironmental.gov) Web site.

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**Maj. Kurgan:** Thank you for coming and for your questions.

[Clapping]

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