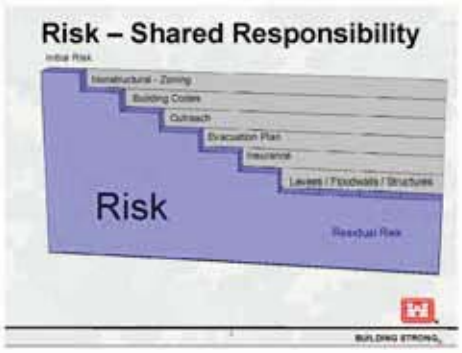
Public Meeting Summary

GIWW West Closure Complex Operating Plan and Master Water Control Manual
Wednesday, March 16, 2011

Location	Visitation of Our Lady
Time	Open House 6 p.m. - 6:30 p.m. Presentation 6:30 p.m.
Attendees	Approx. 13
Format	Open House Presentation Discussion
Handouts	• Draft Water Control Manual • 2010 Status Map
Facilitator	Rachel Rodi, public affairs
Presenter	Tim Connell, project manager

Rachel Rodi: Thank you for coming. I'm Rachel Rodi with the public affairs officer here in the District of New Orleans. We are here to talk about the GIWW West Closure Complex Operating Plan.



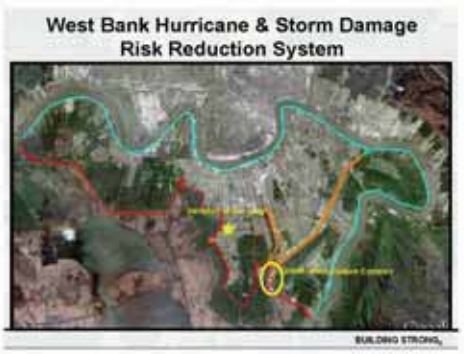
If you've been to one of our meetings you have seen this slide. Everyone has risk and there are several ways you can buy down risk; through zoning, building codes, outreach, evacuation plans and levees, floodwalls and structures. There is always going to be residual risks and that is the point we try to make. Listen to local officials and when they call for an evacuation please evacuate and just know there is always going to be residual risks.

We are here to talk about the operating plan for the West Closure Complex for this hurricane season, which is going to be the interim plan as well as the permanent plan that will begin in 2012. We are also here to get your comments and we will do that at the end of this presentation.

I'm now going to turn this over to Tim Connell and he will talk about the construction status and the two plans.

Tim Connell: My name is Tim Connell and I'm the project manager for the West Closure Complex. I'm just going to go over the proposed operating plans of the project and am looking forward to hearing feedback and comments about the project.

This is a map of the whole risk reduction project; it has all the projects listed on the East and West Banks.



This is in particular the West Bank system. The lines in red and orange were the original system that was here prior to Katrina and it was at various heights and elevations. What the West Closure Complex does is block off the surge from entering the Algiers and Harvey Canals and the canals that are lined in orange are then moved into a secondary role from their primary role of storm surge protection and puts them into a role of detention basin behind this structure. The area of protection that is part of the West Bank and Vicinity, the acreage has not changed, it's just that this structure forms blockage for that storm surge from entering the Harvey and Algiers canals.

This is what the site looked like in 2009.

In July and August we started and by November of 2010 you can see a lot of development there.

Here we are in January 2011 with the pump station on your right. There is a large sector gate structure to facilitate navigation and in times when there is no tropical event is that butterfly-shaped structure on the left and eventually we will close off the channel that is on the far left as it will meet up with the wall that is running along the 404(c) bank and it will provide the storm surge protection for the West Bank.

This is a picture of the gate and you can see the size of the structure that is involved here; this is actually one of the gate's leaves.

This is the placement of those gates that occurred a week or so ago. Each one of the gates weight about 750 tons. We are looking to have that operational within the next two weeks.

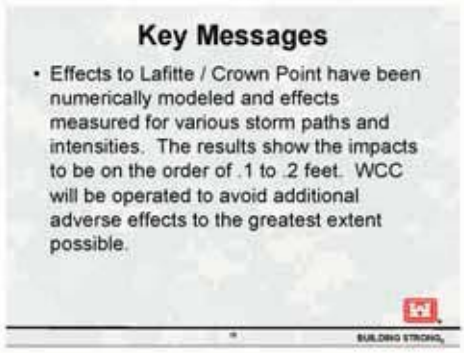
This is inside the pump station. The capability of this pump station is about 19,000 cubic feet per second. It's the largest in the world of this type.

This just shows some of things that have been part of this project. This was the beneficial use of dredge material that came out of the Algiers Canal. It was placed in the Lake Salvador Geocrib Site and that is working with the National Park Service. We are also going to be putting some rock out in front of this to finish this particular portion of marsh restoration.

Here is what we are really here to talk about.

We really are going to operate this structure this hurricane season. The primary function of the West Closure Complex is hurricane storm damage risk reduction for the 250,000 people that are in the interior of the West Bank and Vicinity Project. It's going to be operated to ensure it performs its function.

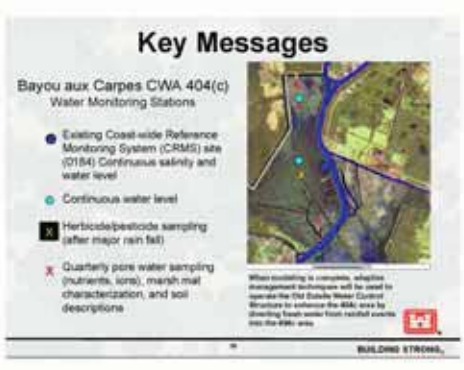
Both commercial and recreational navigation were considered during the design and construction and it will be considered in the operation of the project. The navigation interests, commercial and recreational, need to be aware that this structure is likely to close for tropical events and you need to prepare accordingly. There are different operations for these two canals. Before they were basically open, but now there will be a barrier that will prevent entrance into the Harvey and Algiers Canals. Once the decision is made to close them, and we will get into how the decision to do that will be made, they will not be reopened until after a tropical threat has passed.



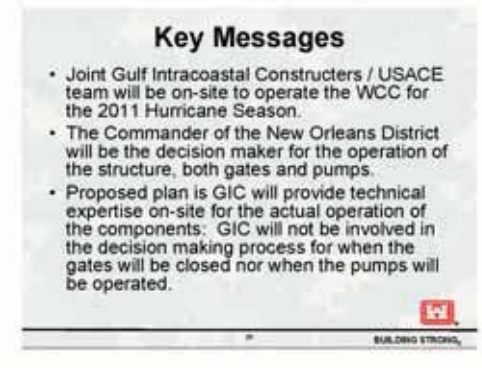
When we did this structure and we looked at the effects, the effects to Crown Point and Lafitte have been numerically modeled and when you look at the results of these models, the effects on these areas are in the range of between .1 and .2 feet; it's a very small amount. What is important to know that even though this structure is here, there are different ways to operate and it will be operated with the understanding that there are people who on the other side of this structure in Lafitte and Crown Point and it's going to be operated to minimize those effects. What that means is if there is a wall of water that's built up behind the structure, we will not just open up the gates and let it come flowing out. That's a key point to take away.

Female Speaker: [Inaudible]

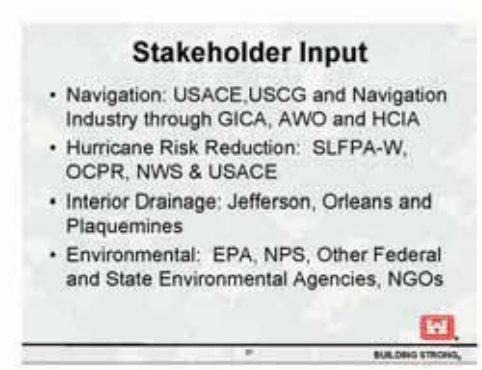
Tim Connell: Yes, but let's get through this and we will get back to that question.



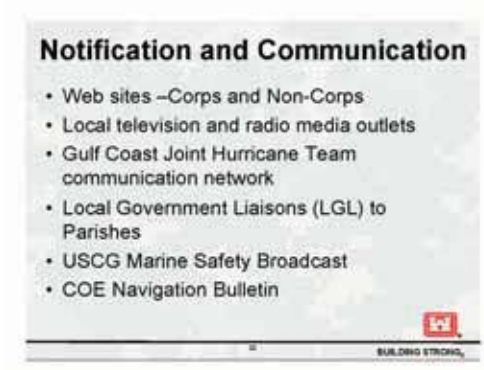
This is for those who have an environmental interest here. We do have a structure right here along the 404(c) at the Old Estelle Outfall Canal. The purpose of that structure is to facilitate water flowing from the Old Estelle Outfall Canal into the GIWW just as it currently does, but there is modeling going on to see if it's beneficial to close that structure off during non-tropical events and allow fresh water to flow over the 404(c) area. Depending on the results of that modeling and analysis there will be a plan of adaptive management use and if it's beneficial that's what we will do with it; if it turns out not to be beneficial we will let the structure run as it normally does and let water flow out through the Old Estelle Canal and it will only be closed during a tropical event.



This structure is not 100% complete for this hurricane season. On June 1st the surge barrier will be in place and there will be eight of 11 pumps in place so the station will be at about 80%. This season the pump station will be run by a team of Corps of Engineer personnel and contractor personnel will be on site to run the pump station. The commander of the New Orleans district will be the decision maker for when the gates will be closed and how the pumps will be operated. In future years it will be the water control manager, whomever that is designated to be. The proposed plan is that the GIC will provide the technical expertise to operate this structure. We are in a tight timeline for getting this structure on line and GIC, our contractor Gulf IntraCoastal Constructors, they have the technical expertise necessary to make sure we can operate this structure. We will have Corps people who are trained but they will be there to makes sure this structure operates properly.



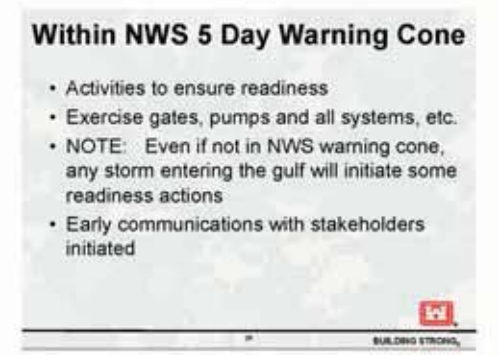
I don't know how many of you have been to these public meetings, but we have been doing these meetings on these projects for basically three years. The navigation industry has been represented as they have offered input through the Corps of Engineers, the Coast Guard, Gulf Intracoastal Canal Association, American Waterway Operators, and also the Harvey Canal Industrial Association have all been involved with this. We have had SLFPA-West involved, Office of Coastal Restoration, National Weather Service and the Corps has all been involved. Jefferson, Orleans and Plaquemines drainage departments have also all been involved and the EPA, the National Park Service and many other state and federal environmental agencies, as well as non-governmental organization, have been involved with this plan.



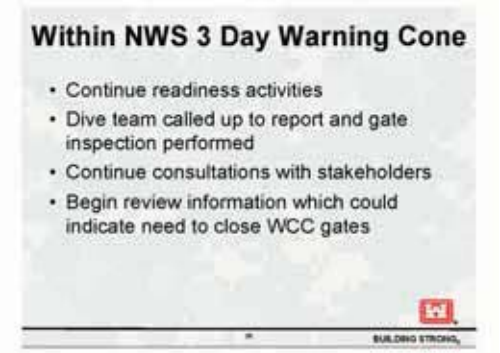
One thing about this new barrier that will be in the waterway is communication and notification; making sure people know what is about to happen. When there is a tropical event it's time to tune in. We will have a lot of information on the internet, both the Corps and non-Corps websites. SLFPA West has developed a good website so you will know what is happening with the gates. We will also be using local TV and radio media outlets. For commercial navigation we use the Gulf Coast Joint Hurricane Team communication network. What we have right now is what we call Local Government Liaisons or LGL and that is a person from the Corps is in every parish EOC. This has proven to be an effective way of communicating what will be going on. The Coast Guard will be doing its marine broadcast and the Corps will be putting out navigation bulletins as well.

The idea of this meeting is put out the proposed plan for the way it's going to operate and get your comments. There is nothing that is written in stone so I think you will see a lot of flexibility. We are very interested in hearing what you have to say. The complex is going to be staffed throughout the year to make sure there is maintenance on all the equipment, pumps and gates and all the things that go with the mechanical systems to make sure that is taken care of throughout the year. We will be exercising the gates and pumps and make sure the fuel is ok and make sure everything is working with this large mechanical system.

Right before hurricane season starts it is our intention to go through a large scale pump readiness test. We will make sure that the system is ready to do what needs to be done. We will do a dive inspection of the gates to make sure no debris has built up in the offseason. We will do a monthly exercising of closing the gates and using the pumps. We will also bring all the fuel tanks up to fuel as they are diesel pumps so that the station is completely functional with power with diesel pumps and engines in the event of a hurricane. We all know that during a hurricane we are not likely to have power so that was planned with this station; to be self contained. We will also do our regular communications and data input checks. The pump station will rely on information coming from interior pumps and gauges along the canal so that will be checked out and operational. Maintenance of the pump station will be critical so that it's well maintained.

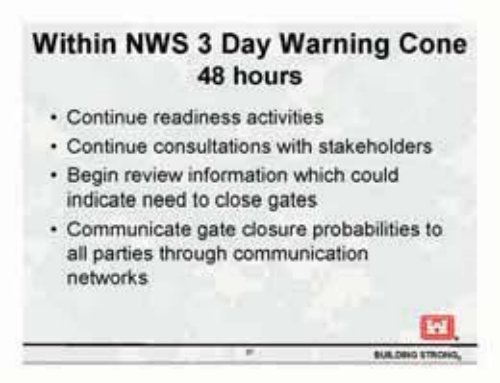


As we move along in the season and if something comes up where we wind up in the 5-day warning cone, basically we continue to the activities to ensure readiness such as exercising the gates. Even if we are not in the 5-day warning cone, everyone knows that there are a lot of variances on where these storms can be so we will be taking appropriate activities and just making sure we are ready to go in the event we need to operate the structure.

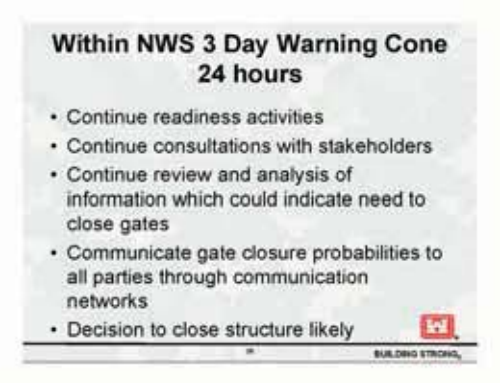


So if a storm gets closer and we are in a 3-day cone, we continue activity. The key thing for this structure is to make sure the gate is closed. Whether those gates don't close for any reason, mechanical or debris, then that's a system failure and we can't allow that to happen. If that happens, a dive team will be called up to do an inspection and will remain on site until the gates are closed. There will be continued consultation with the stakeholders and then you get to the point when, after they run the models for the storm, what is expected to happen in the

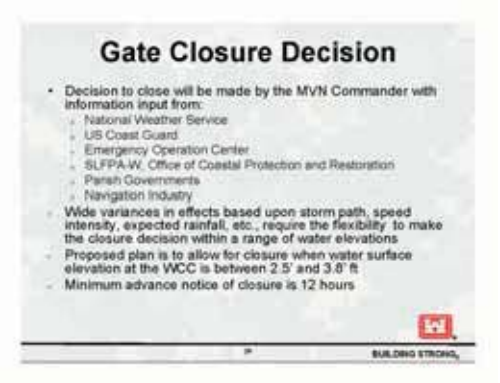
area with that particular storm that is on tract. We will evaluate on whether we have to close the structure.



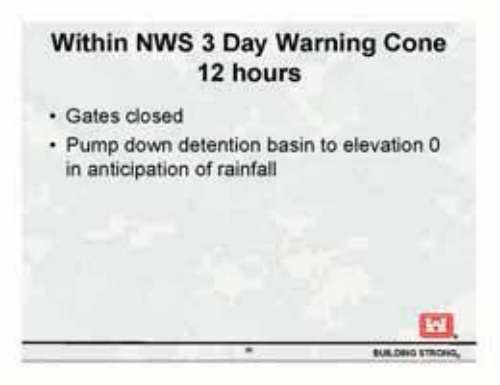
When we get two days out and if we are still in the cone, people are already taking actions such as evacuation. We will continue all our activities. At this time you will have a good idea on whether we need to close the structure.



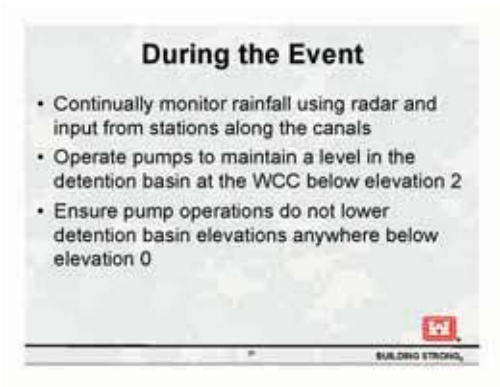
Now within 24-hours, all activities that we have done will continue. At this time we will be communicating the probability that we are closing the gate through all our communication networks. By this time, if we are still in the cone, it's very likely that we will be closing the gate.



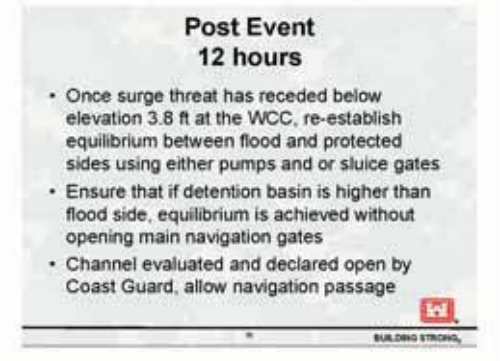
The decision on how to close the gate and who makes that decision. The decision will be made by the commander but he's not making the decision on his own. He will be consulting with many people like the National Weather Service, the Coast Guard, Emergency Operation Centers for all parishes and our Corps Emergency Operation Center, SLFPA West, all these groups will be involved in deciding when and if we close this structure. The parish governments and the navigation industry are all key players. That is one thing interesting with this structure is that there are a lot of players with a lot of different interests involved and they all need to be informed and understand what is going on. The bottom line though is that we can't give a set number on when the gates will be closed, like at elevation three we are going to close the gates. It all depends on the storm track, the rainfall intensity that is expected, and the navigation that will be in the area as it tries to evade the storm itself, all these things require flexibility to make a decision about closing within a range of elevations. Those proposed elevations are some time between 2.5 and 3.8 feet; that will be the time when they make the decision to close. You will have 12-hours notice from the time they make the decision to close to when it happens. What's very important for you is if you are looking to move into the Algiers and Harvey Canal areas, it's very important to know that at some point it will be impossible to do so.



Here we are within 12 hours and the gates are closed now. We can begin to pump down the interior detention basin. The Algiers and Harvey Canals will typically be at elevation between 0 and 2; maybe in a storm situation like this they will be between 2.5 and 3.8. Once the gates are closed they will start pumping down the interior basin to lower the water levels to help deal with rainfall that is expected to occur over the area. That basin will not be pumped down to anything lower than elevation zero.



During the event, they will continue to monitor the rainfall using the radar and input from the stations. They will operate the pumps trying to maintain a level in the detention basin that is below elevation 2. Under certain heavy, long-duration rainfall events, that elevation in the canal at the pump station will likely rise and back up the Algiers Canal toward the Lapalco Gates. The reason why that will occur is that this pump station has a capacity of about 19,000 cubic feet per second and the pump stations on the interior, when they are pumping with all they have during a heavy rainfall event, they have a capacity of between 24 and 29,000 cubic feet per second. The system is modeled in such that it's the storage capacity plus the West Closure Complex pumping capacity equals the pumping capacity of the interior stations for a 10-year, 24-hour rainfall event. That being said, the pump station does have the ability to operate for three days continuously. We also need to make sure we don't over-evacuate those canals going down below elevation zero because at that point it does start to effect the stability of the levees.



After the event and once the surge had receded below elevation 3.8 at the WCC, we will re-establish equilibrium between the outside and interior before the gates are opened for navigation. That will be done either using the pumps or the sluice gates. In the event that the detention basin is higher than the flood-side, if it's a particularly wet event and it goes on for a long time, then the water elevations inside the detention basins could actually be higher than the water elevation on the outside due to the surge if there was not a heavy surge. So the idea will be to use the sluice gates to allow equilibrium to occur and let that water out along with using the pumps slowly so that you don't wind up opening the navigation gates and releasing a large volume of water at a high speed out through the gates. At some point after the equalization occurs, the Coast Guard will do its surveys with the Corps and marine industry and eventually say the channel is clear and the channel will be reopened for navigation. That's it and we are here to answer questions. Ma'am, you asked a question earlier about what I meant about that, did I explain?

Ann Broughton: One of the your presentations was on the modeling and you said 1.2 feet flooding for Crown Point and then you made a few statements that I did not understand and I just want you to explain that a little more.

Tim Connell: The statement you asked was in reference to not opening up a wall of water on you when we opened the gates.

Ann Broughton: No, that wasn't the question. I asked you about your modeling. I own four properties that will be affected by this. I own a couple of townhouses in Harvey that previously weren't protected well, they were on the east side of the Harvey Canal and could have flooded prior to all the work you did. So the first thing I did was drop the flood insurance policy on both of them since I have ultimate confidence in your work and the 15-foot floodwall you built along the east side of the Harvey Canal.

Tim Connell: Well I can just tell you, I didn't drop my flood insurance.

Rachel Rodi: We also have a FEMA representative here as well that will tell you…

Ann Broughton: Well if it floods after that 15-foot wall and this West Closure Complex, I would be amazed. It has never flooded prior to this so with all this additional work I'm confident in it. My primary residence in on Barataria Island and I'm on the bad side of this. I have an additional lot there as well. From what I understand a few years ago, people thought they would pick up an extra foot of floodwater due to this closure complex, not an additional one to three inches. I'm interested in how you came to one to three inches. I can tell when they close the complex by the Lapalco bridge by the elevation of the water near my house because when we have winds from the south it causes several additional inches of flooding just with the breeze when that gate is closed. I just don't see how you can model one to three inches.

Tim Connell: This is an elevation map of Crown Point. If you look here the reds are those areas that above elevation 4. The blue shading is elevation 3.5 and elevation 4.

Ann Broughton: What does that mean, elevation 4?

Tim Connell: Elevation 4 in practical terms is 4-feet about sea level. It has to do with the data NAVD. Essentially we are talking about sea level. Typically the water in here is between zero and one. So when you look at this area, most of Crown Point is below elevation three. This is the same place with the colors and you can see most of the area around here is elevation 3 so it doesn't take much, whether the gates are here or not, it doesn't take much of a rise in tide for water to be going into Crown Point and Lafitte. This just has to deal with those pump station capacity that I was telling you about. One of the questions that came up is that you are building this huge pump station so you are going to dump all this water on top of this you are going to be flooding this. That's not the case and the next slide shows this. Before this structure was built the Harvey and Algiers Canals, total combined capacity, they have a maximum capacity of 29,000 cubic feet per second; that's the amount of water that can be coming out of these interior pump stations and flowing through this exact spot right here before this pump station is built. When the complex is closed the maximum capacity that can be coming through that location from rainfall is 19,000 cubic feet per second. So automatically there is less water from the pump stations coming through this location with the construction of this structure. So that is the first question on what the pump station is going to do. The answer to that question is simply it won't increase the amount of water coming through Crown Pointe and Lafitte.

You asked about the modeling. They did 152 storms. Clearly the storms are coming this way and over here they had very little affect on this side of the river, but storms that come through here or wind up turning and coming up this way, they do have an effect. So we took the storms and ran through a numerical analysis of the storm surge event. We looked at a 500-year, that's a storm that has a .2% chance of occurring every year; a 100-year storm and a 50-year storm. We ran these models with different paths.

This is the results of those models in the different locations after taking specific locations and running the numerical models. For the 500-year rainfall event, you have without and with the West Closure Complex, and you look at those elevations – 11.4., 10.9, etc.

Female Speaker: Did you use Rita for one of those?

Tim Connell: They didn't have actual names with it; these are just theoretical storms with those paths and intensities associated with them and storm flood event. Rita was not a 500-year storm in this location, so what I'm telling you is that…

Female Speaker: But it was a significant storm surge with significant flooding and it's probably because [Inaudible]

Tim Connell: I agree with that. The modeling that has been done tends to indicate that is not the case. When you look at the differences, you are looking at .2 and .1 feet, for the 100-year storm, which is what the system is designed for, you look at the still water elevations of 8.1, 7.46 with…again those are small differences we are picking up here. Even with storms with less intensity you wind up with elevations at 6 and 5 and 5.3, there are differences in order of magnitude of 2-tenths of a ft. All I can tell you is that I'm not a numerical modeler and this has been through the academic community and reviews and this is the modeling that is used to predict storm surge.

Female Speaker: If that is true and that is [Inaudible] it's still a reasonable amount. I'm just questioning that it would be such a small amount. I personally thought it would be in the order of feet of additional water if the surge was blocked [Inaudible]. If it's only going to be 3 inches, that would be wonderful. What happens if in reality when we test it in the real world, what happens if it does turn out to be in order of feet? Will the Corps consider buying out the properties in Lafitte and Barataria to those who wish to get rid of their properties now that they are in a real floodplain?

Tim Connell: That will have to be a topic that will need to be evaluated. I don't believe the modeling will be that far off. This numerical modeling has come a long way as a predictive tool that does give a good idea of what is expected to happen. There may be some additional modeling done, but right now this is what was run to answer the questions. When you think about it intuitively I know you see this structure out there, but when you look at what's out there in the gulf, there is an infinite supply of water coming from the Gulf of Mexico from the storm surge. If the structure wasn't there and the tides rise up to elevation 4, what's available for storage if the structure wasn't there, is from elevation 4 up to elevation 8.2 in just these two narrow bands. Relative to what is out there, the supply of water that is coming and the amount of storage behind it, once that storage is filled up its effectively the same as what you have with this gate, and that is not a lot of volume that is in these canals relative to what is going to keep coming from the storm surge.

Rachel Rodi: We are going to go back and talk about what we are here for. If you came in late, we have a fact sheet that talks about the operating plan for this season and the permanent plan and that's why we are here to see how you would like us to operate the West Closure Complex this season and in the future. I would also like to thank Jefferson Parish Drainage for being here and I know

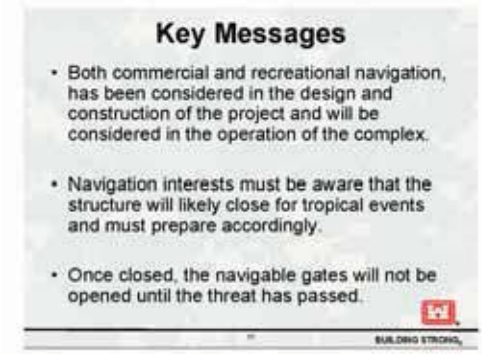
we have someone from the president's office is here as well. We also have a FEMA representative who will reiterate that we all need flood insurance.

Male Speaker: I have this statement from Mayor Kerner from the Town of Lafitte and he wanted to be on the record as being opposed to any and all [Inaudible] West Closure Complex Structure. There is no water control plan that will benefit Jean Lafitte and Crown Point area when this massive pump station is operated and dumping nearly 20,000 cfs of water, which is twice the capacity of Davis Pond Diversion, into an area that is already experiencing high water associated with tropical system in the gulf. The massive pump station [Inaudible] should be prepared to access legal responsibility for increasing damage to our homes, businesses and infrastructure. He also wants to let them know that we have a hard time believing that when this gate is closed and the pump is pumping that kind of water into the non-flood side, that we will not have extra damage in our area. He will send his letter if you call his office.

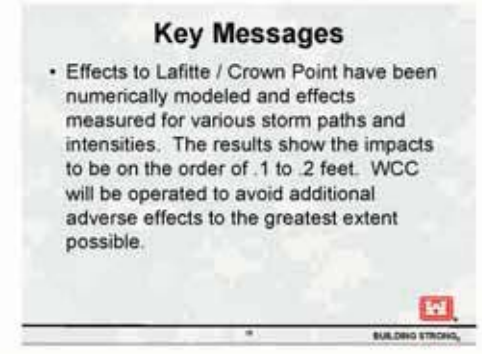
Bert Sandlin: I own two houses in the Belle Chasse area and I have several questions. Who determines when they close the gates?

Tim Connell: You must have arrived late. I can go over it again.

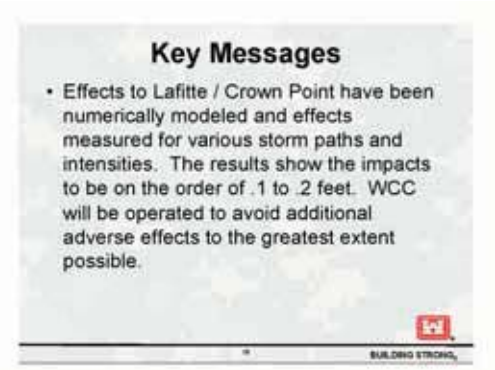
Female Speaker: I was going to repeat this just to make sure I understood it. You are going to call the gates if we are in the cone of the hurricane still 24-hours before the hurricane arrives?



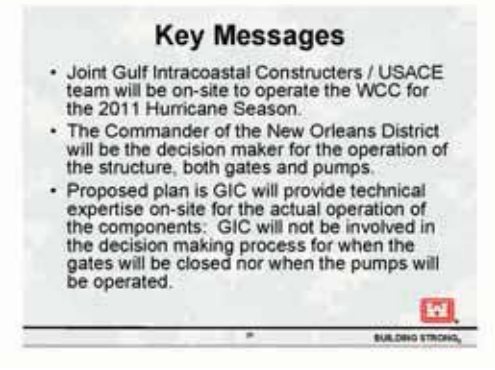
Tim Connell: Let me go over this plan again. This is basically a flood control structure and we will make sure it functions to make the West Bank and Vicinity project functional against a storm surge. The message here is for commercial navigation industry to understand is that it is a flood control structure and it's going to be operated to function as such.



Commercial and recreational navigation will be considered when things are too close, but you have to know that at some time it will close and there will be a barrier across the waterway and there will be no more entrance into the Algiers and Harvey Canals. Once it's closed, it won't be opened until the threat is passed.



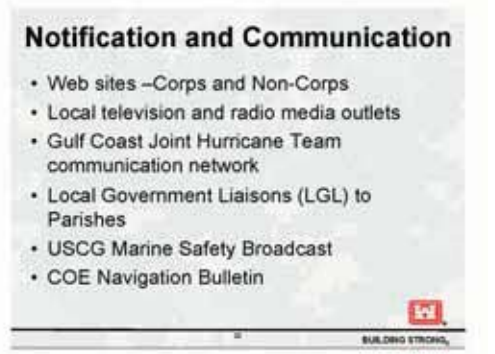
We talked about the effects to Crown Point and Lafitte from being from .1 to .2 feet, which I just went over the numerical models and the results of those.



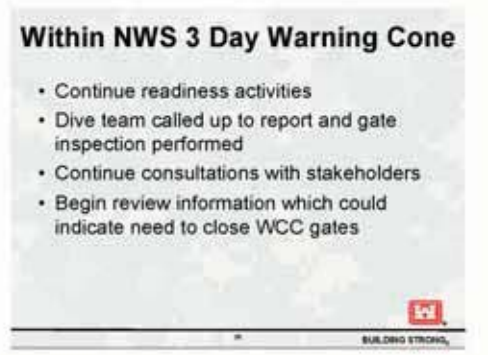
Basically this season is operating under an interim water control structures. The Corps will be operating with contractor support. The decision for the operation of the gate structure will be made by the commander, Col. Fleming…

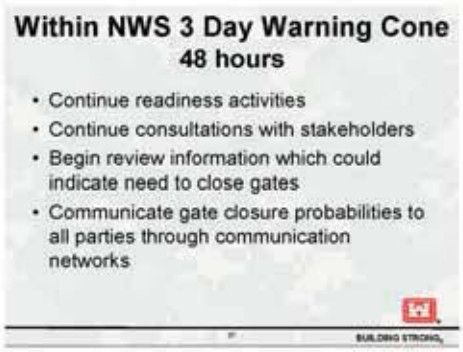
Male Speaker: Is he going to be located at that site?

Tim Connell: I do believe he will be at the site as he's indicated that he will be there. Whether he is or not, in the future, that's not something critical because it will be informed by a lot of other factors. This says that GIC will provide technical expertise for the operation of the equipment. We will be testing these pumps out in the next two months and GIC will be there.

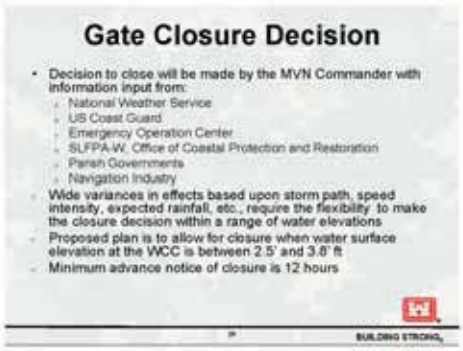


Notification and communication, when we are about to close off this waterway we need everyone to know and these are the methods we will be using to communicate. In particular for the area of Crown Point and Lafitte, these local government liaisons, we have people in Jefferson Parish EOC, the Corps who will be communicating what is about to happen.





Now we are getting into the 3-day cone so we are starting to increase the communication and activities. As the time goes by and we are still in the cone we will continue the readiness activities. We are starting to evaluate the expected surge and rainfall to see how large and which way it is coming. All these will factor into decisions. It continues and if we are still in the cone in 24-hours then we will be closing very shortly if we are in the cone with 24-hours to go.



Now for the gate closure decision. It will be made by the commander this season, then it will be the water control manager. The National Weather Service will be giving us weather and surge information. The Coast Guard will be there because they have the navigation interest and what is happening. We have the emergency operation center for both the Corps and local governments. We have the West Jefferson Levee, the Office of Coastal Protection and Restoration, the parish governments and navigation industry; they will also be informing the colonel and they will all be involved in the conference calls about what is happening. At some point though, the commander has to make the decision to close this. Because they have such wide variances due to the storm's path, the storm's speed, intensity, rainfall, the track, we can't narrow it down to at one specific elevation we are going to close the gates. It will have to flexible so that the commander can take all the information coming in and make an informed decision. The current thought is that he will make that closure decision between 2.5 and 3.8 depending on all those things. I don't see that closure going past 3.8., I don't see us allowing 4 feet of water into those canals unless that is the expected maximum that is coming. Again, this is all dependent on that particular storm and the we will make that informed decision as to what is the right thing to do. A key thing here is that we don't want to close the gate with a lot of people on the outside or have navigation with barges loaded. It's got to be advertised with enough time for people to react and make the decisions that need to be made. We are looking for 12 hours. It may be that it's going to close 24-hours in advance. Let's say for example Rita and it's out there and the National Weather Service is saying for certain that you guys are getting it, it may be that the closure takes place in advance of 24-hours, but in any case, the notification will have to be enough to allow people to take appropriate action.

Once the gates are closed, they will pump down the detention basin from whatever elevation we started at down to elevation zero in the Harvey and Algiers Canals. What that does is set up the starting point for the way the system is modeled for the rainfall. The West Closure Complex pump station is 19,000 cubic feet per second; you have greater capacity on the inside -- the interior pumps to pump out more than 19,000 cfs, so that's the WCC plus the storage capacity is equal to the capacity of the interior pumps stations for this 10-year rainfall event.

Male Speaker: Is there any type of communication between the pumping stations that are feeding into the Harvey and Algiers Canals? There will be some linkage between them and the WCC?

Tim Connell: Yes. The input from all of those stations will be received at the West Closure Complex via the SCADA system. That will inform how they operate those pumps. If only one station is pumping you don't want have seven pumps at the WCC dumping and then you find yourself

with a -3 inside the canals and the levees start failing into the canals. There will be a system of informing the WCC, which will be looking at the radar to see what rainfall is around. It's set up to coordinate with what is going on in the entire area and operate accordingly.

Male Speaker: Does he have jurisdiction of other pumping operators at other pumping stations?

Tim Connell: Jurisdiction, no. What we do have is a communication network between the Corps and the various EOCs through these local government liaisons. The local pump stations will need to operate to do what they do, which is to pump. In December, we had a lot of rainfall and everyone along the canal was pumping with all they had.

Male Speaker: We are using the canals as detention basins or holding ponds. We are looking at doing some upgrades to the canals themselves in order to make them holding pumps. We turn around a lot of water comes up and we pump it down to zero and we have all these boats tied up in the canals and we really haven't given these boats anything to tie up to. We are moving elevations on these boats and you worry about them breaking moors and coming through the levees. At some point and time, we want to be able to call a halt. If we are having problems with the 19,000 cfs pumping station or something happens, we don't want to sit there and have all the smaller pumps fill up the canal until they overflow and all these boats break moors and come through the levees. That's one issue that I have and want to know that there is someone who can stop this if it happens. I have two houses in the Belle Chasse area and I would rather see my house flood with rain water than have a bunch of junk from the canal come through the levee and spend three weeks waiting for someone to fix the levee.

Tim Connell: As you know right now, the Coast Guard has what they call the Regulated Navigation Area inside the Algiers and Harvey Canals. There will be an upcoming hearing with the Coast Guard specifically about that issue so that you can stay informed about this. About communication with all the pumps stations, you have Orleans, Jefferson and Plaquemines Parishes that all pump into the system. We will have a Corps of Engineers person in each one of those EOCs and those EOCs are in contact with their drainage department; that communication line is set up there and although there are no plans to have to do that, that communication line is set up to handle some catastrophic event, which I can't figure out would happen since there is so much redundancy in the station, but it can be dealt with in that manner.

Male Speaker: Is there still plans on doing the hurricane gates on the Highway 23 tunnel?

Tim Connell: Yes.

Male Speaker: What gain in elevation are we talking about, the difference of when and we wouldn't have to do it? Is it 6 or 10 inches, what is the elevation that dictates we have to do all this work. We are basically inconveniencing 20 to 30,000 people for a few months.

Tim Connell: The original elevation on the Algiers Canal levees was 7.5 ft and that was the elevation of the actual canal before it was built up before it was a hurricane protection system. It was for tidal storms; it wasn't part of the West Bank and Vicinity Project. When they dug the Algiers Canal they knew it was under water so they put these levees up there. We all drive through the tunnel and you wonder if that foot or so of water is that close and critical makes people wonder about driving through the tunnel, but what I have to say is that you have to meet engineering criteria for the system. It is the opinion of the engineers that the tunnel does not met those criteria and that is the way the engineers

have elected to go ahead and deal with that particular issues. This is a fail-safe way of dealing with that issue.

Male Speaker: We are looking at volume as far as detention pond and pumping water in above people's houses, but I would prefer to look at it and say we have nine pumping stations and in each of those stations there is land around them that is a lot more elevation than what is in the canal and I would rather see that as a holding basin. I know you have problems getting politicians and engineers together to try and allocate those resources. It's trying to get the politicians to go the Corps and start making things available that they should have been looking at. I have concerns about when we have assets that are available, like land that is near the pumping station itself, but we are digging holes and we are not utilizing the holes. We are moving dirt that could be used for increasing the catch patch area and we are not utilizing that. We have land that is vacant around the new pumping stations and we could have created places that were safe locations for boats to tie up as opposed to having them haphazardly tied up in the canals. In doing so, we could have created volume and possibly not even doing the project at the Belle Chasse Tunnel because we would have created enough area near the suction on the pumping station. We are not getting the politicians and the engineers together to allocate the resources that are available and we are limiting the Corps to what they can do. That bothers me as a citizen.

Tim Connell: You are exactly right, if your storage area is big enough you wouldn't need a pump station, but the fact of the matter is…

Male Speaker: We wouldn't need to do the hurricane gates at Highway 23 because we wouldn't have to raise the level inside the canal as much and spend that money providing some other services to other people like the boats coming in looking for safe haven.

Tim Connell: I understand your points but the truth of the matter is those are decisions that have been made and there's no going back.

Male Speaker: There is because that land is still there and available.

Tim Connell: But the construction contracts have been done. I will address your concerns with the detention. Even though this 10-year rainfall events, which is 9.1 inches of rainfall in a 24-hour period and if you go for a 10-year rainfall event for a two day period it goes up to 11.1 inches. For 100-year rainfall events they go up higher. In a 100-year rainfall event, you are already having street flooding regardless, but the design of the detention basin has a water surface profile in the Algiers Canal that goes from 5.8 feet by Algiers Lock down to elevation 3 at the WCC and from 4 feet at Lapalco down to elevation 3 at the WCC. What I'm telling you there is that the levees are elevation 8.2 so even inside the detention basin for the design that is there, there is additional storage and the ability to take in more water than what we have showing. Should that occur, the capability of the pump stations that are pumping into the Algiers and Harvey Canals is [Inaudible] With regard to the navigation issue, I can't reiterate enough the Coast Guard is going to be doing a meeting within the next month that has to do with the regulated navigation area, which will determine what occurs with the vessels inside the Harvey and Algiers Canals.

Male Speaker: Is that the same notification that the Coast Guard is giving?

Tim Connell: It's not us, but we will get in touch with Commander Daniels and figure out how to get notification so those who are interested can participate in that meeting.

Male Speaker: The thing that I'm looking at is that we are spending how many millions of dollars on Highway 23 and putting gates around the tunnel and we are spending a lot of money on a

temporary tunnel. What is it, in two years we start tearing that down and come back and put…I wonder if we are getting our bang for the buck.

Tim Connell: Since Katrina there has been quite a push to get a level of protection that wasn't here before. In a perfect world there would be nothing done that would not be on target, but as you do these efforts it becomes an imperfect world and those are some of the things that have occurred.

Male Speaker: Harvey floodwalls, 9.5 elevation grades on the levee system form the Belle Chasse Bridge to the Mississippi River; that levee system has been raised to 9.5 feet and the rest of it is only 8.35 or 7.5 depending on where you are.

Tim Connell: That's where the water is according to the models. It takes awhile to get over the Belle Chasse Tunnel and make it all the way down to the pump station.

Male Speaker: How fast can the Closure Complex close?

Tim Connell: The gate can actually close in less than 30 minutes, but there is much more to that decision than waiting to the last minute to close those gates.

Male Speaker: I'm aware of that. When Katrina came we got water out of the canal and when it passed the water came back in with vengeance on the back side. The water went down on the canal probably about 3.5 feet and then came back in 3.5 feet above normal level in an hour and a half.

Tim Connell: These plans are going are out there. This is an input session to this plan to get public comments.

Female Speaker: In the newspaper for the past few years about the Closure Complex, it said there is an ongoing dispute about who is going to pay to operate the complex. The Army Corps said it's going to be the West Bank and the West Bank says it can't afford to operate it. Beyond this year has any solution been resolved on who is going to operate this in the future?

Tim Connell: I wouldn't call it a dispute. What has occurred is the Office of Coastal Protection and Restoration has entered into an agreement with the operations and maintenance of the station. We all understand that there is a cost involved and SLFPA West, who may be called upon by OCPR to operate it, we understand they don't have the budget. There is an effort to get the Corps of Engineers to operate the station on a long-term basis and if that occurs legislatively, then of course that is what we will do. Right now we do not have the authority to operate the station as it stands right now as it is the responsibility of the state.

Female Speaker: So it is possible that after this year no one will operate it?

Tim Connell: I would say that the responsibility for operation as it stands right now is the responsibility of the state once it is completed. I would presume that the state will live up to its responsibility and maintenance. I can't image why they wouldn't do it.

Female Speaker: Isn't it going to cost more than one million dollars a year to operate?

Tim Connell: Yes, it will cost more than a million a year to operate it, but it's speculation that they don't have the money to operate it.

Female Speaker: The bottom line is that no one has come to an agreement yet?

Tim Connell: That's correct. There are many agencies and entities are trying to change the way these projects are operated. The IHNC Surge Barrier and the West Closure Complex, being more navigational channels, they are looking to have these federally operated.

Female Speaker: If it doesn't pass legislatively and the state says they will operate it, will they become the decision makers on policy?

Tim Connell: They are participating in the development of this water control plan and the plan will be the governing document on how the structure will be operated.

Female Speaker: Right, but if they pay to maintain and operate it will they be responsible for it?

Tim Connell: They are responsible for the operation and maintenance according to the water control plan that will be developed.

Male Speaker: Are there any plans for this complex to develop public access or utilities associated with it like boat launches, public recreation?

Tim Connell: At this time, no.

Male Speaker: No one is trying to do anything else with this to bring anything to it?

Tim Connell: At this time the answer is no. if the parish or other governments want to initiate discussion on that it's up to them.

Male Speaker: On of the things that has disturbed me over the years is the development of property along the canal. We have this facility that we don't want to build property along the canal because when a storm comes it moves debris along the canal. The debris gets floated up against the levees and the parish is supposed to remove the debris but when Gustav happened, it was five months before they cut the grass and removed the debris. The areas that were developed took care of it at no cost to the parish. Rather than try to spend the money on the parish cleaning up the mess, get the residents and businesses to take care of by encouraging proper development along the levee. Once this property becomes residential or business they take care of it.

Tim Connell: If you are talking about the Algiers Canal, it is privately owned to the middle of the canal.

Male Speaker: I know that but we have done everything we can to discourage development as far as permitting process.

Tim Connell: That's a local issue. The Corps only gets involved in permits that are along the coastal waterway but the development to the protected-side is a local issue.

Male Speaker: I would rather us spend the money and manage it. If we encourage property development then we have people do it at no cost to the community and do a better job of it.

Brian Bartley: I'm with FEMA and want to talk about flood insurance. I just want to make a couple of comments concerning risk and managing your risk. It's clear that what is being done here is unprecedented. It's a huge undertaking in human terms and clearly the protection system that will be here when this is finished is better than anything that has been in place before. That being said, this is a slide

that I've seen in all the meetings and you will notice that it is a stair-stepped approach to managing your risk and insurance is one of the components of that process. I've spent most of my working career in things that are related to insurance and risk management and I would encourage you that if you live anywhere in Southeast Louisiana, that you seek the advice of a professional insurance agent before you cancel your flood insurance.

Male Speaker: Do you see insurance rates dropping because of this project.

Brian Bartley: When these projects are finished there will be another flood study and they will re map and there is a potential that in some areas it could improve the rating profile of a particular risk. If you need specific information on an area, I would encourage you to visit lamappingproject.com, which is a website where we track the development of new flood insurance rate maps. If you are interested in specifics about location, that is a good place to go to start your research.

Rachel Rodi: We encourage you to get this handout tonight and send us any comments. You can e-mail your comments to AskTheCorps@usace.army.mil. You can call us at 504-862-2201 or go on line. We also have a construction impact line you can call. We are also on Twitter and Facebook.

Thanks for coming and let us hear from you.