STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

WATER RESOURCES COMMISSION
SEVENTH REGULAR MEETING
THURSDAY, OCTOBER 1, 2015
BATON ROUGE, LOUISIANA
11:00 A.M.

LASALLE BUILDING - 1ST FLOOR
LABELLE ROOM
617 NORTH THIRD STREET
BATON ROUGE, LOUISIANA 70802

REPORTED BY:
LAURA QUINETTE, CCR, RPR
BATON ROUGE COURT REPORTERS, LLC

APPEARANCES

COMMISSION MEMBERS IN ATTENDANCE:

KYLE BALKUM
LOUISIANA WILDLIFE & FISHERIES

HONORABLE GLENN BRASSEAUX
MAYOR OF CARENCRO
LOUISIANA MUNICIPAL ASSOCIATION

JONATHAN "JAKE" CAUSEY
LOUISIANA DEPARTMENT OF HEALTH & HOSPITALS

DAVID D. CULPEPPER
ENGINEER WITH EXPERTISE IN GROUNDWATER
RESOURCE MANAGEMENT

MARK S. DAVIS
TULANE INSTITUTE ON WATER RESOURCES LAW AND
POLICY

PAUL D. FREY
LOUISIANA LANDOWNERS ASSOCIATION

JERRY V. GRAVES
PORTS ASSOCIATION OF LOUISIANA

CHRISTOPHER P. KNOTTS, PE, FASCE
LOUISIANA DEPARTMENT OF TRANSPORTATION &
DEVELOPMENT

BENJAMIN MALBROUGH
LOUISIANA RESIDENTIAL CONSUMERS

JIM PRATT
THE SABINE RIVER AUTHORITY

CHARLES SUTCLIFFE
THE GOVERNOR'S OFFICE OF COASTAL ACTIVITIES

JIM WELSH
COMMISSIONER OF CONSERVATION, OFFICE OF
CONSERVATION

FRED ZAUNBRECHER
THE GEOGRAPHICAL AREA OF THE STATE UNDERLAIN
BY THE CHICOT AQUIFER

COMMISSION MEMBERS IN ATTENDANCE (CONTINUED)

LINDA ZAUNBRECHER
LOUISIANA FARM BUREAU

ALSO PRESENT:

GARY SNELLGROVE
EXECUTIVE DIRECTOR
ENVIRONMENTAL DIVISION

MATTHEW REONAS
EDUCATION AND MARKETING REPRESENTATIVE

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MR. REONAS:

If you want me to go ahead and call roll call, I can, and when Jerry comes in, we'll make a notation of it.

MR. BALKUM:

Let's do that.

MR. REONAS:

Mr. Balkum?

MR. BALKUM:

Present.

MR. REONAS:

Mr. Brasseaux?

MR. BRASSEAUX:

Here.

MR. REONAS:

Mr. Causey?

MR. CAUSEY:

Present.

MR. REONAS:

Mr. Cormier?

(NO RESPONSE.)

MR. REONAS:

Mr. Cramond?

(NO RESPONSE.)

MR. REONAS:

Mr. Culpepper?
MR. CULPEPPER:
Here.
MR. REONAS:
Mr. Davis?
MR. DAVIS:
Here.
MR. REONAS:
Mr. Dove?
(NO RESPONSE.)
MR. REONAS:
Mr. Duplechin?
(NO RESPONSE.)
MR. REONAS:
Mr. Frey?
MR. FREY:
Here.
MR. REONAS:
Ms. Gautreaux?
(NO RESPONSE.)
MR. REONAS:
Ms. Gonzales?
(NO RESPONSE.)
MR. REONAS:
Mr. Graves? I will make a note that

he is on his way. Mr. Knotts?
MR. KNOTTS:
Here.
MR. REONAS:
Mr. Leggett?
(NO RESPONSE.)
MR. REONAS:
Mr. Long?
(NO RESPONSE.)
MR. REONAS:
Mr. Malbrough?
MR. MALBROUGH:
Here.
MR. REONAS:
Mr. McNeely?
(NO RESPONSE.)
MR. REONAS:
Ms. Mitchell?
(NO RESPONSE.)
MR. REONAS:
Mr. Morgan?
(NO RESPONSE.)
MR. REONAS:
Mr. Pratt?
MR. PRATT:

Here.

MR. REONAS:

Mr. Spicer?

(NO RESPONSE.)

MR. REONAS:

Mr. Sutcliffe?

MR. SUTCLIFFE:

Here.

MR. REONAS:

Mr. Welsh?

MR. WELSH:

Here.

MR. REONAS:

Mr. Zaunbrecher?

MR. ZAUNBRECHER:

Here.

MR. REONAS:

Mrs. Zaunbrecher?

MRS. ZAUNBRECHER:

Here.

MR. REONAS:

So we have 13 right now. We'll need 14 for a quorum. We can proceed with the meeting, but any official action would need to have Mr. Graves here, although we have seen him. He is here. So I

guess we can go ahead and proceed from that point.

MR. BALKUM:

We have a new commissioner, Mr. Tony Duplechin. He wasn't able to join us today. He is replacing Mr. Eugene Owens who served on this commission for a number of years. With that, we'll move to Agenda Item Number 3, Adoption of the Previous Meeting Summary, and ask the commission members if they have any added comments, questions about the previous meeting summary at this time?

MR. BRASSEAUX:

Move to accept.

MR. BALKUM:

Second?

MR. WELSH:

I second.

MR. BALKUM:

Approved. I want to make a quick comment regarding the public's opportunity to provide comments during this commission meeting. At the end of the meeting, you will have that opportunity. The public will be required to fill out a comment card. You can get those comment cards outside at the sign-in table and fill out the card and provide it to our staff here. At this time, we move to Agenda Item

Number 4, the Staff Update from the Office of Conservation, Mr. Matthew Reonas.

MR. REONAS:

Thank you, Mr. Chairman. Let me get the PowerPoint pulled up real quick. First off, I'd like to thank all the commission members that submitted feedback to our inquiry about future topics and studies. We are still receiving comments as of this morning and we will review those to see how they can help us shape future commission meetings. Please consider this as an open and ongoing request. Our goal, of course, is to keep the commission abreast of key issues of importance, not only to the commission members themselves, but also to the state as a whole. So again, we certainly appreciate the feedback we've gotten and are requesting more going forward.

Slide 2, that's to be my next topic, which is really an overview or recap of this commission's duties and responsibilities. I last presented this overview in December of 2012. And since then, we've had a large turnover in membership and, of course, then we try to provide this information to each new member. We thought it might be worthwhile in this particular meeting to provide some perspective and context of the commission as a whole.

To start with -- and again, I have copies of these in your packets if you'd like to follow along, and, of course, we'll post all these online after the meeting, probably no later than tomorrow. To start, it's important to remember that this commission started off as the Groundwater Resources Commission. Hence, many of the current responsibilities of the commission relate to groundwater management and are therefore intimately connected to the Office of Conservation Commission, as I'll discuss in a minute. That's the reason why the Office of Conservation Commission serves as a staffing agency for the commission and why you'll see me in some capacity at most meetings updating you on all the current groundwater management issues around the state, including the Capital Area District, all the areas of concern, South Caddo emergency, water well registration, awareness and education issues and so on.

So quickly, to kind of go through what these duties and responsibilities are -- and I'll kind of provide sort of a recap at the end and talk about the context. The first responsibility, to review or approve or reject any Commissioner of Conservation orders, restrictions on water well

placement upon petition by the owner of the affected well, or any owner which may adversely be impacted by the well in question. To date, there have been no petitions by either people seeking to place a well or by people being adversely impacted by the placement of wells, and that goes back to the Office of Conservation's evaluation process. When new well registrations come in, we evaluate the local impact, the rate and volume of draw of groundwater, and, again, try to evaluate how that would impact other wells that are registered in the area. And, again, to date, although that authority is in place for the commission, there have been no petitions to review and/or reject or approve that have come through our office and come to the commission.

The second point, to "review rules and regulations proposed by the Commissioner of Conservation pursuant to the proper administration and enforcement of Chapter 13-A-1, Water Resources Management." This is essentially an ongoing process. As the Commissioner puts new rules and regulations in place, we'll present those to the commission and the commission will have an opportunity to review those.

The third duty or responsibility is to "continue the development, in cooperation with the

Commissioner of Conservation, of a statewide groundwater resources management program." And again, the program as whole is encapsulated within Chapter 13-A-1, Water Resources Management and revised statutes. And that program being in place, again, is one of the reasons we're here at every meeting providing updates as to what's going on in terms of groundwater management, and, again, giving this commission an opportunity to comment, review, advise on the development of that program going forward.

The last point, in terms of groundwater management specifically, is to "review the contingency plan developed by the Commissioner of Conservation to respond to a groundwater emergency." There was an emergency plan in place, a contingency plan in place. It was recently revised and improved within the past two years or so, I think. We had a plan in place. We ended up making some revisions to it and bringing it for the commission, and that aspect of it has been completed, that duty.

The next duties or responsibilities deal more with surface water management and/or administrative duties of this commission. The main responsibility that was added in the reorganization

of this commission in 2012 dealt with surface water management authority. And again, that was put in place so that this commission could "Evaluate the state's surface water resources, including current and projected demands, surface water supplies, technical research, potential future deficit areas, alternative use scenarios, incentives, technologies, public education and conservation programs," a pretty broad stroke there that gives this commission a lot of authority to investigate all these different aspects of surface management.

This is something that the Office of Conservation considers as what we call "emerging duties or responsibilities." It's something again that was added in 2012 with the reorganization of this commission. It's something that we as a staff are still trying to come to terms with on how to integrate this responsibility into what previously had been specifically a groundwater-related commission. So we try to branch out and bring in surface water management issues, speakers, research, the ongoing -- some of the ongoing research projects we have underway. Within the Office of Conservation and outside of it, we are really trying to integrate surface and groundwater resources and think of those

as whole. Again, this is an emerging, evolving process.

You know, for us, the Office of Conservation, our statutory authority is specifically within the realm of groundwater sustainability. Although, the Department of Natural Resources does have an interest in surface water through its surface water program and Jim Devitt and Thomas Van Biersel are here today who will present on that a little bit later, but from a statutory perspective, the Office of Conservation is involved in groundwater exclusively and groundwater sustainability, which I'll talk about in just a few minutes and make that reference a little more clear.

So next, the commission has the authority or the responsibility to "Direct the Commissioner of Conservation to promulgate rules and regulations through the appointment or designation of up to five regional bodies based on the general location of major aquifer systems and water sources of the state and composed of local stakeholders who are representative of current users." This was an issue that was reviewed in the past by this commission. The general gist of the previous commission's decision has been to hold on this, pending additional

studies. And there are current studies underway right now. There's The Water Institute of the Gulf. That's a project we're working on right now. David Borrok over at UL is working and looking at the Chicot aquifer. So this was an issue that the commission has sort of put on hold, again, pending additional study. And I imagine we'll come back to this at some point once more science is available to consider what the composition of these regional bodies would be or whether or not they are in fact necessary.

The last duty or responsibility is to "attend relevant meetings called by the Commissioner of Conservation and to meet as a body at least twice a year." Of course, those are more administrative issues. So as you can see from this long list, groundwater management continues to be an important part of this commission's purview.

And, again, this responsibility relates directly to the enforcement authority of the Commissioner of Conservation who is, by statute, "empowered and responsible for the administration of all matters related to the management of the state's groundwater resources," and who has "the authority to make any reasonable rules, regulations and orders

that are necessary from time to time in the proper administration and enforcement" of groundwater management. These would include -- this list would include: To do all things necessary to prevent the waste of water resources; to prevent or alleviate damaging or potentially damaging salt water movement or water level decline and loss of sustainability in the state's aquifers; prevent the subsidence of the land surface caused by the withdrawal of groundwater; require registration of all new water wells; determine areas of groundwater concern and designate critical areas of groundwater concern; collect data with respect to water wells and water resources and continue development of a statewide groundwater resource management program, again, in coordination with this commission; and issue compliance orders and civil penalties. That's a broad authority.

Keep in mind that the Commissioner's authority does have some jurisdictional limits. DEQ, of course, has some responsibility for water quality in the state. The Department of Health and Hospitals have the charge of the state's drinking water program and so on. So there are some limits to that authority, which is rather broad. But in the realm of groundwater sustainability, the Commissioner's

authority is very strong and very clear.

Which brings me to my next point, which is this topic which was broached at the last meeting on the definition of the term "sustainability." As you know, this is in our statutory -- the Office of Conservation's statutory authority, Commissioner of Conservation's statutory authority. It's a tricky term to define to be sure, but we thought it merited some review.

Your fellow commissioner, Mr. Davis, Commissioner Davis, he was kind enough to put together a memorandum that dealt with this issue and we've included it in your packets today, the definition of "sustainability," and then provided his take on the term. And, of course, we went and scoured a number of additional sources as well to offer some context.

Just straight from Merriam's dictionary, sustainable means: "1. able to use without being completely used up or destroyed; 2. involving methods that do not completely use up or destroy natural resources; or 3. able to last or continue for a long time."

From the United Nation's Brundtland Commission, they have a special committee that

started in the late '70s or early '80s on sustainable development. The Brundtland Commission, their definition in 1983, "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

From the USGS circular from 1999, "In this report, we define groundwater sustainability as development and use of groundwater in a manner that can be maintained for an indefinite time without causing unacceptable environmental, economic or social consequences." And I'll come back to some of these terms here.

And from the National Groundwater Association, 2004 position paper -- it's pretty blunt -- "There is no universally accepted scientific definition of groundwater sustainability that is applicable in all situations. For purposes of this paper, groundwater sustainability is the development and use of groundwater to meet both current and future beneficial purposes without causing unacceptable consequences."

So what you see from these definitions and what Mark outlined in his memo, is the general coherent thought about what sustainable and

sustainability mean, although the interpretation of that definition will in fact vary on context. What is acceptable? What is unacceptable? Will what we find acceptable today be unacceptable 100 years from now or 200 years from now? And are the social and political forces weighing locally today on issues of sustainability looking at a situation with a sense of immediacy, that is what's going on right now and how do we solve the problems of right now or with a long-term vision? How do we solve today's problems in light of what the future holds? How do we protect the needs of future generations?

So at present, our Office of Conservation uses the definitions found in the governing authority of the Commissioner of Conservation. I'll again remind you about Chapter 13-A-1, Water Resources Management, Revised Statute 38:3097.2. And this is in the revised statutes, so this is the law we're working from. "Sustainability means the development and use of groundwater in a manner that can be maintained for the present and future time without causing unacceptable environmental, economic, social, or health consequences." So again, that key term of "unacceptable," and looking at it from a perspective of time, not only the present, but the future as

well. And that is coupled with the definition that we used and is in the declaration, or the Commissioner would use in the declaration of areas of groundwater concern, which "shall mean an area in which, under current usage and normal environmental conditions, sustainability of an aquifer is not being maintained due to either movement of the saltwater front, water level decline, or subsidence, resulting in unacceptable environmental, economic, social, or health impact, or causing serious adverse impact to an aquifer."

So again, even within the state statutes, you encounter these same issues with acceptable verus unacceptable. But this is a definition we use, the Office of Conservation, providing management oversight to the different problem areas around the state, the Capital Area District, which we're tasked by statute -- working in conjunction with the Capital Area Commission. The issues here in the Baton Rouge area are overuse and saltwater encroachment. The Sparta areas of concern in North Central Louisiana, again, overuse issues and, of course, elsewhere around the state.

Keeping that in mind, again, one of the duties of this commission is to work with the Office

of Conservation and the Commissioner of Conservation on the development of a groundwater management plan. So with this in mind, I would like to submit that these legal definitions from the state, already in the statutes, should be the guiding principles for this commission in addressing concepts of sustainability. And on that note, I close, and we can take any comments or questions.

MR. BALKUM:

Any questions.

(NO RESPONSE.)

MR. BALKUM:

Matt, I think that it's worth mentioning that our definition and statute falls closely, not exactly, with the USGS circuit definition.

MR. REONAS:

Mr. Chairman, I would like to make a note that just from an administrative point of view for the commission, Mr. Graves is here and present, so we do have a quorum. I'm not sure if we need to go back to the previous meeting summary and make that -- I guess we do to make that official. I mean, there was a motion and a second, and I think that approval was unanimous.

MR. GRAVES:

My apologies. I had to step out and feed my traffic meter.

MR. REONAS:

That's okay.

MR. CAUSEY:

Why don't we take another vote on it.

MR. BALKUM:

Okay. We'll take another vote on the adoption from the previous meeting summary from August. Again, motion to approve.

MR. BRASSEAUX:

I approve.

MR. WELSH:

I second.

MR. BALKUM:

It's approved. I think we're moving on to our fifth agenda item. Ms. Barnes, can you give us an overview and update on the Deepwater Horizon Oil Spill?

MS. BARNES:

Thank you very much for having me. My name is Chris Barnes and I work in the Governor's Office for Coastal Activities, and I'm a legal advisor in that office. So my boss, Chip Kline, is

the Governor's executive assistant for coastal activities as well as the chairman of the state Coastal Protection and Restoration Authority board. So in that capacity, he is the Governor's designee to the RESTORE council, which folds right into my presentation today.

I will be discussing sort of a broad overview of the Deepwater Horizon Oil Spill and the processes associated with recovery from that spill, and then I'm just going to get into a more detailed discussion of some updates with respect to the RESTORE Act.

All right. So there are four primary funding processes related to the oil spill recovery effort. The first is economic damages. And according to the BP Agreement in Principle, there will be a billion dollars in economic damages that will come to the state of Louisiana.

Now, according to state statutes, those funds will go to the Deepwater Horizon Economic Damages Collection Fund where they will be distributed at 45 percent to the Budget Stabilization Fund, 45 percent to the Medicaid Trust Fund, and 10 percent to the Health Trust Fund. So I will not discuss those funds in great detail today. I just

wanted to give you visibility on those.

There is also the criminal penalties, which are dedicated to the National Fish & Wildlife Foundation to distribute to the state according to the criminal plea agreement. And then the Natural Resource Damage Assessment, which is designed to pay for the cost of restoring natural resources damaged by the oil spill.

And I'm sure you've seen the headlines that the state is anticipating to receive approximately five billion dollars from the Natural Resource Damage Assessment, and I failed to mention approximately 1.272 billion dollars for the criminal penalties.

Then there are the discharge penalties under the Clean Water Act. And the Clean Water Act was amended by the RESTORE Act, which dedicates 80 percent of the Clean Water Act civil and administrative penalties in the Deepwater Horizon Oil Spill to the Gulf Coast Restoration Trust Fund. And the state is estimated to receive approximately 787 million dollars from the BP settlement through the RESTORE Act. And I'll speak about that more in just a few minutes.

I do want to say that the RESTORE Act was designed to be a regional approach through restoring

the long-term health of the valuable natural ecosystems and economy of the Gulf Coast region.

And on the next slide right there, the criminal penalties for work in Louisiana, again, are approximately 1.272 billion dollars and are administered by the National Fish & Wildlife Foundation, which is a congressionally chartered, independent, non-profit organization. And the proposals for NFWF projects are required to be approved by the CPRA Board and the NFWF Board. And these funds can only be used for barrier island restoration and river diversion projects. So they're very limited in use.

The approved expenditures under NFWF, we have three of them for barrier island: Caminada Increment II, 3 million dollars for engineering and design; East Timalier, 6 million dollars for engineering and design; Caminada Increment II, 155 million dollars for construction, as well as several projects under the river diversions component via the Atchafalaya River for planning, 4.9 million dollars; and the Mississippi River diversion for engineering and design, 40.4 million and 13.6 million dollars.

The next slide is discussing the Natural

Resource Damages. Again, the state is anticipating to receive approximately 5 billion dollars or more from this process. So the Natural Resource Damage Assessment is a process established by the Oil Pollution Act for damages to natural resources. And there's three steps in the process to assess the damages, the natural resources resulting from the spill.

The first is that the Natural Resource Trustees have to solicit participation from the responsible parties and design a restoration plan. The second step is the plan is paid for by responsible parties implemented, and if the responsible parties cannot reach an agreement with the Natural Resource Trustees, the Trustees can then sue the responsible party for those damages under OPA.

So in terms of the payments received under the Natural Resource Damages process, the early restoration, which represented a 1 billion dollar downpayment that BP provided early on in this process, the state has received 368 million dollars from that 1 billion dollar downpayment. Under the Agreement in Principle of BP, the additional payments will be paid out in 15 installments over the next 16

years. The first payment will be received into a federal account one year after the entry of the consent decree. And due to previous criminal settlement verdicts, the second payment will be a half payment -- so they will not be all equal payments -- and a full payment towards Louisiana allocation expected to be approximately 319 million dollars per year.

Then the next slide represents the process that we're going through now, which is that the draft program payment assessment and restoration plan is being drafted and will be put out for public comment fairly soon. There will not be projects on it as it is a programmatic assessment. The public comment period should run approximately 60 days and the Trustees then have an obligation to review and address all of the public comments and present a consent decree to the judge. And that presentation of the consent decree is anticipated early 2016. And then the first payment will be one year after the final consent decree, so approximately sometime in 2017, perhaps early 2017.

And then this slide shows a chart that many of you may be familiar with relating to the RESTORE Act. But by way of some background, if you're not

familiar with the RESTORE act when it was passed, there were various opinions for how this money should be used. Some people said it should be split equally among the five Gulf Coast states that were impacted; some said it should go to the Gulf Coast Ecosystem Recreation Council for large-scale ecosystem restoration; others said it should be impact based and divided amongst the states based on their injuries from the spill; some other people said, look, we need to also think about monitoring technology that's Gulf wide; and then others said we need the states to work on their nongovernmental organizations to develop their science in natural resources.

So basically, this act does all of those things, and these are the five comments in the act represented on this chart. So 35 percent is equally distributed amongst the Gulf Coast states, 30 percent goes to the Council for Ecosystem Restoration; another 30 percent is impact based and is distributed amongst the five Gulf Coast states based on their impact from the spill; and then 2 1/2 percent goes to NOAA for their NOAA science program; and the remaining 2 1/2 percent goes to each of the five Gulf Coast states in equal shares for their centers of

excellence.

And right now there is approximately 800 million dollars in the trust fund. And this is from the 1 billion dollar transition settlement. So that is the money that we currently have available. If the BP Agreement in Principle holds for 5.5 billion dollars, 80 percent of that will go into the trust fund, or 4.4 billion dollars, meaning the total amount for the RESTORE Act Trust Fund could be 5.2 billion dollars in total. And that will be paid out also, similar to the NOAA payments, 15 installments over the next 16 years, approximately 379 million dollars a year, with year two representing a smaller amount of 189 million dollars due to the previously existing criminal penalties that they have to pay.

All right. So I talked a bit about each of those five components briefly. The first, again, is a direct component, also known as Bucket 1, and this is the largest funding component that provides 35 percent of the money in the trust fund be distributed equally among the five Gulf Coast states. So each state would receive 56 million dollars in the transition fund, and then an additional 308 million dollars in the BP fund. Now, the state of

Louisiana's direct component is divided. Seventy percent goes directly to the CPRA Board and 30 percent is given to the coastal parishes.

So the state currently has 39.2 million dollars available out of the direct component. Now, the direct component also requires an approved multi-year implementation plan before you can actually request funding for projects. And so the CPRA Board has approved the state's first multi-year implementation plan. And on September 21st, the U.S. Department of Treasury approved Louisiana's multi-year implementation plan. We were the first state to get their multi-year implementation plan approved by the Treasury. That's wonderful news. So the state may now apply for grants from the Treasury for those projects and programs referenced in the multi-implementation plan.

And we have four projects and programs in our plan: The Houma Navigation Canal Lock for engineering and design, for 16 million dollars; the Calcasieu Ship Channel Salinity Control Measures project for engineering and design. That's 16 million dollars as well. And those two projects are projects designed to restore the historic regime in the areas in which they are going to be

constructed and save thousands of acres of marsh and degradation, approximately 25,000 acres.

Then there's also the Adaptive Management project, which is a strategy to streamline implementation of the coastal master plan and increase data collection and systemwide monitoring.

There's also parish matching, which provides 10 percent of the funds in the direct component that the state receives that can be allocated to the parishes through the matching programs. Parishes are not required to use direct component funds for matching from the multi-implementation plan project, but the goal is to incentivize that they use master plan projects with their direct component dollars or projects that are consistent with or complimentary to the master plan.

And on the next slide, this is Bucket 2, or the council selected restoration component which provides 30 percent of the funds in the RESTORE Trust Fund go to the council for comprehensive, large-scale ecosystem restoration in the Gulf. There are 11 council members on the RESTORE council, five Gulf Coast states plus six federal agencies. Five of the federal agencies along with five states are eligible to submit projects for funding under the funding

component. So that's a total of ten members that can submit requests for funding under the council selected restoration component, and approximately 240 million dollars are available now in the funding component along with an additional 1.32 billion dollars if the BP Agreement in Principal remains, and then that would be a total of about 1.56 billion dollars in the funding components after the BP consent decree is released. And this requires an approved funding priorities list. The funding priorities list has already been put out for public comments, and that period has now closed. And the projects will be submitted to the RESTORE council rather than the U.S. Department of Treasury.

The state of Louisiana had five projects that it submitted that were on the FPL. So all of the projects that the state submitted are on this initial funding priorities list for the council and this includes: West Grand Terre Beach for engineering and design, 7.2 million dollars; the Maurepas River Reintroduction project for engineering and design, 14.2 million dollars; Biloxi Marsh Living Shoreline for engineering and design, 2.2 million dollars; Gold Triangle Marsh Creation for engineering and design, 4.3 million; and the Lower Most

Mississippi River Management project for 9.3 million dollars.

On the next slide there were also two federal council members that submitted projects that will directly benefit the state and those are also on the funding priorities list and include the Jean Lafitte Canal Backfilling project from the Department of Interior, 8.7 million dollars and the Bayou Dularge Rivers, Marsh and Hydrologic Restoration project from the USDA, and also Chitimacha tribal proposals for 5.1 million dollars.

Now, the next step is the RESTORE council is required to update their comprehensive plan every five years. So the next comprehensive plan is due in 2017 and we anticipate the next degradation will include significantly larger projects and programs.

And then moving to Bucket 3, this is the third largest funding component in the RESTORE Act, and this provides 30 percent of the money in the trust fund will be divided amongst the five Gulf Coast states based on the formula established by the council by regulation. So right now there is approximately 83 million dollars, it looks like, that Louisiana will get under the transition fund, under the regulation that has been published by the council

earlier this week. With the BP funds, it will be an additional fund of 56.6 million dollars for a total of 539.6 million dollars for the state of Louisiana under this funding component.

So the council regulations are out, as I've mentioned, for public comment with this formula that they've established. So October 29th, if you'd like to take a look at it, you can find it on the council's website at restorethegulf.gov, and submit your public comments. These funds will be directed by the CPRA Board and they require an approved state plans, and once the plans are approved, project plans can then be submitted to RESTORE council. There are no funds that are actually available at this point in time for the state to request and they will not be final -- those funds will not be available until the regulation is completed and until the consent decree is finalized.

And then the next slide discusses Bucket 4, which is 2 1/2 percent that goes to the NOAA Science Program and the allocations that will be available, the transition funds that we currently have and the anticipated BP funds. And this second component is designed to carry out research, observations, monitoring to support the maximum to the extent

practicable, the long-term sustainability of the ecosystem, fish habitat and recreational and commercial and charter fishing industry in the Gulf. And grants will be issued to NOAA.

And then the final component is for the Centers of Excellence, and those are the allocations identical to the NOAA Science Program, 2 1/2 percent, and these require establishment of state procedures for handling the grant, which the state has done. Grants can be issued to the CPRA Board and the Water Institute of the Gulf, which was selected through the RFP process to serve as Louisiana's Center of Excellence.

And then on the next slide, this is just a map showing the RESTORE project that I discussed and where the state is targeting those projects for funding under RESTORE, those that are approved being considered and pending. And that's just sort of a broad scale picture.

And then the next slide shows all of the projects by funding including NRDA, NFWF and RESTORE, just to kind of show you all of the different areas that will receive benefits from one or several of the funding processes that I've discussed.

And I know that lots of information on that

slide, but on the next slide there is some contact information for those of us in my office who you can contact if you have more questions about RESTORE: Meg Bankston, myself, and Vasillo Manthos, who is another attorney in our office who also works on RESTORE. So thank you very much for your time. I'm happy to answer any questions that you may have.

MR. FREY:

I'll talk loud. If my understanding is correct, the formula that you mentioned -- what was that -- the 40 percent, based on that, only applies to Bucket 3?

MS. BARNES:

So there is -- yes. The formula with regulations out now is for Bucket 3, but there is a formula that looks similar to that for the parish allocations under Bucket 1.

MR. FREY:

Well, you said equally distributed among the states. It's obvious that Louisiana experienced the biggest impact, and the formula would apply and would allow us to get more funds. And I know y'all have looked at that. I talked to Chip about this. You know, it seemed only fair, but, then again, you know --

MS. BARNES:

That's right. So one funding component is distributed equally among the five Gulf Coast states and then just the impact component, which is distributed according to the formula established by the council of regulations. And so some definitely don't think that Bucket 1, equal application is fair to Louisiana. Does that --

MR. FREY:

So the train has left the station on that one?

MS. BARNES:

Uh-huh. It has. But there are still comments available for Bucket 3 if you would like to make public comments. And those will close October 29th.

MR. BALKUM:

Any other questions of Ms. Barnes?

(NO RESPONSE.)

MR. BALKUM:

Thank you very much.

MS. BARNES:

Thank you.

MR. BALKUM:

Moving along to our sixth agenda

item, Water Resources Funding Resolution. That was discussed at our last meeting. I'll initiate discussion on this item. The funding resolution, again, was proposed at our last meeting. It was to dedicate sources of funding from the Governor or the legislature to support the water monitoring network currently in place in the associated water resource plan. At this time, I'm going to ask Mr. Reonas to approach the summary of the resolution.

MR. REONAS:

Thank you, Mr. Chairman. Again, at the last meeting, y'all heard kind of the situation with regard to the groundwater monitoring network and the complimentary surface water network, gauging stations, and all that were established. Again, out of the 2012 reports to the legislature, the recommendation was to -- that was a top priority, was to beef up the network to provide the necessary signs to proceed with the management plan. Again, the Department of Natural Resources was able to put up about -- was able to secure about 3 million dollars in federal funds to provide that monitoring over the next three years.

The three years ended this fiscal year. We were able to get an extension into next year, but

that funding will again expire after June of 2016. So again, at the last meeting, the discussion centered on putting together a resolution that would request the Governor and/or the legislature to develop appropriate funding to put the network into a -- to dedicate long-term, continual funding to keep this network in place, realizing, of course, that the temporary funding was going away at the end of June of 2016.

And, again, working from that conversation, there was also discussion about putting -- requesting money for some associated planning to go along with that. And that's essentially where we've drafted this resolution, copies of which we forwarded for review yesterday. We included some more stylistic, rather than substantive changes, and those copies are included in your packet. But as you'll see, the resolution is pretty straightforward. Again, that goes through a lot of stuff we've already detailed in previous meetings.

In the meeting last August, we talked about the need for additional funding for the monitoring network. We also talked about the need -- again, based on the report from the legislature in 2012 from this commission, that there was a "need for the

state's water management efforts to evolve into a more robust, comprehensive plan." A process, which we're already on that road, but, again, with this resolution to also include requests for additional funding, to develop that plan and move forward with the development of that robust, comprehensive plan.

And again, based out of this commission's statutory authority, to continue the development and cooperation with the Commissioner of Conservation of a statewide groundwater resource management plan and, also, of course, to evaluate the state's surface water resources, including current and projected demands, which, of course, is necessary in putting together any sort of comprehensive plan, to have that scientific basis.

So that's essentially the gist of the resolution that we drafted. Certainly, we can make any edits or changes as the commission sees fit. But that's what the gist -- again, the conversation that took place at the last meeting was our charge. And so from this point on, we developed a resolution that we have right now, so --

MR. BALKUM:

Matt, did you confirm -- I believe when we identified the need for additional monitoring

that we met with USGS to help identify the stations that we -- or the additional data that was necessary for us to develop our water resources. Did you confirm that?

MR. REONAS:

The --

MR. BALKUM:

Did we not coordinate with USGS in identifying --

MR. REONAS:

Oh, yes, sir. That was -- USGS has been our partner with this and has basically implemented the plan that we put together in cooperation with them. So it's been a very good, productive partnership.

MR. BALKUM:

Thanks, Matt. Any comments on the resolution?

(NO RESPONSE.)

MR. BALKUM:

Seeing none, we can call for a vote.

MR. DAVIS:

Well, I was going move that we adopt the resolution.

MR. GRAVES:

Second.

MR. BALKUM:

Second, Jerry Graves?

MR. GRAVES:

Yes.

MR. BALKUM:

Okay.

MR. WELSH:

Do we need to clarify that we're voting on this particular resolution? It's got strikethroughs and underlines.

MR. REONAS:

I noted the Commissioner did just some minor stylistic edits. So it's not substantive. I would just say that the vote would be on this particular document.

MR. WELSH:

On this document?

MR. REONAS:

Yes, sir.

MR. WELSH:

Oh, that's fine.

MR. REONAS:

Yeah.

MR. BALKUM:

And with that second, I guess I would ask Matt, so the changes will be incorporated into the resolution and we'll go forward and then ask the Chairman -- get his signature and distribution to the appropriate staff of the Governor's office. So we'll call for a vote. Those in favor.

(AYE, in unison.)

MR. BALKUM:

Those opposed.

(NO RESPONSE.)

MR. BALKUM:

It's unanimous.

MR. REONAS:

And, Mr. Chairman, we will forward that to the Chairman -- oh.

MR. GRAVES:

I have a question. Have we targeted the funding source, the legislature in general, or is BP a potential source to tap into maybe some of these classifications Ms. Barnes described?

MR. REONAS:

At this point, it's just a resolution to the Governor and the legislature. I can't say we -- we haven't targeted any particular source other than, you know, requesting what this resolution would

request of the legislature and Governor.

MR. GRAVES:

It's possible BP funds could be found and funds could be made available?

MR. REONAS:

It's possible, yes, sir.

MR. GRAVES:

It's tough with the budget the way it is.

MR. DAVIS:

I would follow-up on Mr. Graves' point and that the resolution is the first thing we have to do. And I have a regret that I have one vote to put to it. But I think the commission is going to have to actively, you know, pursue sources. And I do think some of the BP money is a candidate, and not for everything we may wish to do and maybe not statewide, but, you know, the coastal zone is sinking. And in large part, it's because of withdrawals of groundwater in places like New Orleans and other places like that. You cannot manage that which you're not measuring. And I don't believe a coastal restoration program, you know, can successfully put out a vote that we're still drilling holes in. So I think it's an important part of --

you know, coastal sustainability is to begin managing subsidence and this is a piece of that.

But I certainly don't think that we can look to CPRA or BP money, you know, as a panacea, but I think the piece -- and I think we have to -- should probably talk with Mr. Sutcliffe and his team to see where we, you know, take that conversation.

MR. BALKUM:

Thanks, Mark. If there are no other comments, we'll move to Agenda Item 7. That's the Status of Surface Water Management Program. We will have Mr. Jim Devitt.

MR. DEVITT:

In your handouts -- my name is Jim Devitt and I'm with the Department of Natural Resources and I work with the Surface Water Management Program. You have a legislative history for the Surface Water Management Act. The legislature created it in 2010 and then it had a sunset provision which would allow for the existence for two years. So every two years, the legislature has seen to it to keep it in play, which they did in the spring of 2014. And the program is set to sunset now in December 2016. So the legislature would need to consider it either in the regular session this

coming spring or purpose one of its special sessions that it be discussed. I'll let Mr. Van Biersel talk to you about some of the statistics in the program.

MR. VAN BIERSEL:

Thank you, Jim. My name is Thomas Van Biersel. I'm in the personal management for the Office of Coastal Management. I do most of the technical review for all of the surface water applications that we have. As you may recall, this is a voluntary program, so I'm going to give you a little bit of an idea of where the program stands this year.

We had 11 applications. We have signed six agreements for a total amount of 226 million gallons. What you'll notice is I have a little summary sheet, and behind that a more complex table.

A lot of the applicants we have will give us an estimate to the amount of water they have. A lot of the agreements we have, that amount of water is not being pulled from, partially because you have a lot of the operators who will try to evaluate or a company will try evaluate how much water they may need and ask for that amount, but what's reported to us is usually substantially less.

But in this case, this year, we have

requested -- there is six agreements for 226 million gallons. To date, we have signed agreements for 6.8 billion gallons. Of the 6.8 billion gallons, if you look at Table 1, which is the following page, what you will actually notice is that up until now reported to us is about 719 million gallons, which is not a very large amount of water.

We have had a total of a hundred agreements signed through the program. Off of those, 42 are still current; the rest have expired. As part of the program, aside from issuing a corporate end of our agreements, we've also reviewed all the withdrawals that are submitted to the Corps. This year we have reviewed 30 requests. Most of those are related to surface water, but are not surface water withdrawals. The Corps this year has only had three Section 10s, no requests.

Would you have any questions with respect to agreements that the state has issued? If not, I'll move on to the next --

MR. BALKUM:

A quick question or point here, Mr. Van Biersel. It appears the drop in 2015 applications received and reviewed is reflected as a slow down of gas activities.

MR. VAN BIERSEL:

Yes, pretty much. Most of the activities involve gas. It is down, but you have to remember that they sign these agreements long before they're going to pull. So if you look at the, you know, reported amount of water for 2015, it's only 3,000 gallons. Most of that water will be pulled a year or two down the road, but we signed the agreements this year.

MR. BALKUM:

Okay.

MR. DAVIS:

A quick question on those. On this, what's the accounting mechanism for making sure that the compensation that is sometimes in new jobs, you know increased tax revenue, that that actually is, you know, appearing? Is there any way of tracking that as we move forward?

MR. VAN BIERSEL:

There is two tracking mechanisms. In the agreement, there is a reporting requirement in our agreements that they provide us. It's a 13-month report every year that is notarized. At the same time, those volumes are also reported to the Office of Conservation on the well history form. So there

is a way to look at those values and we can actually also see what is the station rate.

MR. DEVITT:

When there isn't a cash payment -- I think you were also referring to that -- there is a statement that we require as part of that in the application as to the economic impact of the use of the water and then we have an economist who reviews that and confirms that that is in excess of paying in cash.

MR. DAVIS:

That's a big job.

MR. WELSH:

I have one question. It may be for Kyle. When a company applies for or submits an application for a surface water withdrawal for practical purposes, if that river or stream is in a wild or scenic river, is that an automatic disqualification for that application?

MR. BALKUM:

No, Jim. We've received a couple of applications in the last five or six years for water withdrawals on our natural and scenic rivers. As you know, we've discussed, and some of those applications have been approved. At least one was denied. But,

no, that is not a prohibited activity. It's an activity that can be permitted if the impacts are avoided, minimized, mitigated as best as possible.

MR. WELSH:

Okay. Thanks.

MR. VAN BIERSEL:

The third item that we are bringing to you is we were contacted by the state of Arkansas. And this is not an unusual kind of request, except this one is a little more formal because they actually filed an application on this case with the state of Arkansas where BWG, Inc. is looking at a water transfer from the Mississippi River through the state of Arkansas to East Texas.

In this case, Arkansas contacted Louisiana to see, you know, where we would stand with respect to that. But in this case, this is preliminary. You have attached to it a small report that was done by the Arkansas Natural Resources Commission besides the application. But this is more or less to tell you that one of those requests is being made more formal than just curiosity. Jim has also had contact with Arkansas as well, so --

MR. DEVITT:

In response to Arkansas' noticing us of

that, we assembled representatives from various state natural resource agencies, including DNR, DEQ, CPRA, Wildlife & Fisheries, DHH, I believe the Department of Agriculture, and have had the Arkansas representatives come and speak to us about the application. And we were able to question them and had a very good, positive session with them. I think they did the same thing with Mississippi as well.

So we are looking forward to an opportunity to comment as a state on this withdrawal. And we're asking those various state agencies to contribute comments. DNR will compile them and pass them on.

MR. DAVIS:

Jim, there will be a formal response from our state agencies that the DNR will coordinate?

MR. DEVITT:

We expect them to, yes.

MR. DAVIS:

We're not there yet?

MR. DEVITT:

No, not quite. We're still waiting on some more information from Arkansas. I believe they're at the stage -- and correct me if I'm wrong -- they've asked for the applicant to give them more detail, before they move along. And then, you

know, when we get more detail, we'll be in a better position to make a comment.

MR. BALKUM:

Mark?

MR. DAVIS:

Yeah. We've been tracking that as well, as you know, Jim. I just think that the commission needs to be aware that, you know, if anything, this is a prototype project. You will see more. And the entire premise of this is that there is surplus flow in the Mississippi River.

Arkansas has not yet figured out how to make that determination, but I believe Louisiana has to be very aggressive in asserting the flows it's going to need. Keep in mind that if sea levels rise, you know, municipal flows are going to -- you know, water supplies are going to be affected. They already are in South Louisiana. You're going to see the Coastal Restoration Program not just need a cash budget, but a water budget.

So those are the things we need to be, I think, preparing for aggressively. And, you know, the future that we're headed for is at least on par with what Texas put on the table in 1968, which was to divert through Louisiana, not Arkansas, 12 million

acre-feet per year, which is the equivalent of the annual flow of the Colorado River. And I would put that on the lower side of the demand that this river system is going to be under.

So I think this is absolutely, you know, a top priority for Louisiana to get right. Otherwise, we'll see the river that we're counting on and assuming will be there for our future, it's going to be taken someplace else. And quite frankly, no one along the river is going to make much money from it. Only the people moving it will make the money. That's the way the laws of the river states are currently set up.

So I just want to really encourage that this not be handled as kind of a low priority, you know, can always wait to handle this later. This is essentially the door opener. And I believe it's vital that Louisiana get its house in order at this time.

MR. BALKUM:

Thanks, Mark. Thomas, I have a question. They discuss supplemental stream flows in the document -- in the application. The water would be possibly diverted in certain municipalities or locations across Arkansas before reaching Texas. Do

you know more about that?

MR. VAN BIERSEL:

That is one of the things the applicant was providing. I think the initial application was one 10-foot diameter by the length of the Mississippi River to East Texas, and then they suggested maybe to do two 10-foot. So they would be able to put diversion in some of the streams in Arkansas.

MR. BALKUM:

Is that for drinking water or streams that have -- are they withdrawals?

MR. VAN BIERSEL:

I would anticipate -- I assume it would be more agriculture in that part of Arkansas.

MR. BALKUM:

Okay. Any other questions?

(NO RESPONSE.)

MR. BALKUM:

Thank you, Thomas.

MR. CULPEPPER:

Yes. Just real quick, did Arkansas sell this to Texas too, this water? Is it going to Texas or just the Arkansas side?

MR. DEVITT:

Our intention is for it to be used in Texas -- primarily to be used in Texas.

MR. VAN BIERSEL:

And Arkansas does have a water management plan for the state. However, it does not include the Mississippi River. It is not one of the rivers that they looked at as part of their management of resources. So they can -- that's why I'm saying it's a long-term process because they are not having to deal with -- how do they handle a stream regulated by the Corps of Engineers that has no contact on it? And that's why they came to Louisiana and talked to Texas. They had approached the Corps to see where does this spread.

MR. DEVITT:

This is a 75-year request, so it could be a big deal.

MR. BALKUM:

Our next agenda item is an update on the Naegleria fowleri Response from the Department of Health and Hospitals, Mr. Jake Causey.

MR. CAUSEY:

All right. Thank you. The handouts are not in color, so they may be a little more difficult to follow because there was a lot of color

on this graph. So maybe you'll have to try to look at the screen. So I'll give you -- on the last presentation -- I'll be very quick. I'm as hungry as you are. I'll give you an update on the latest surveillance monitoring that we've done this past summer. This will be our second year of monitoring for this amoeba in our public water supplies. And so I'll maybe just jump right in.

The first page is just an overview of our -- the tables on the right are kind of our inventory, I guess, if you will. We have a total of 1,360 public water systems that we regulate and have in our inventory. 1,180 of the systems are groundwater systems. You'll see 76 of those are groundwater purchased. It just means that they purchase their water from the groundwater system and resell it. We have 58 surface water systems and 48 surface water purchase systems. And the population breakdown, it's a little over half. The population is served by the groundwater system, and then right at 40 percent of our population is surface water.

Then just below that, if we look at disinfection, the type of disinfectant residual, I guess, that's maintained in our distribution systems, is just under 10 percent of our water systems use

chloramine, but those are pretty much our very large systems. So a little over half of our population is served by systems that use chloramine, and then the other 90 percent of our systems use free chlorine, which represents the other half. We have a handful of systems that currently do not disinfect. Those are the industrial systems.

So just moving right along, let's see the next page. The background, I guess, just kind of a quick reminder, is that testing was conducted in 2013 by CDC in response to a death of a child that was playing on a slip and slide and was diagnosed with Naegleria fowleri. We did follow-up testing in St. Bernard and detected a presence of amoeba in the water supply and then we did follow-up testing in DeSoto Parish because there was a case there in 2011, and we also found amoeba in that water supply in 2013. So that led us to issuing an emergency rule requiring all public water systems to increase their minimum disinfectant residual in their distribution system to a half milligram per liter. And you can see the total chlorine or chloramine systems are true chlorine. It means you can just use chlorine.

The rule for monitoring for this infection residual, revised from one or two plans for bacteria

and chlorine residual, required nitrification control plans for chloramine systems. And then in basically the summer, the warm weather season of 2014, we launched a surveillance monitoring program, really, to give us a full measure, you know, how well these increased residuals were working and to give us an idea of what we would find.

There really aren't any water supplies in the country, frankly, that are monitoring their systems for this amoeba. But then none of them have had a death attributable to having this amoeba in their water supplies either.

So to date, including this past summer, we have had six different water systems in the state test positive for this amoeba in their distribution system. One thing that's interesting is that six of those systems are surface water systems using chloramine as their disinfectant. And, typically, those systems have had low residuals following the emergency rule and have been experiencing nitrification, which is -- one of the concerns about our chloramine systems is that in order to form monochloramine, they add ammonia. And when that residual breaks down, then ammonia is released and then Naegleria fowleri bacteria consumes that ammonia

and converts it to nitrite and nitrate. And then basically, the full impact is that it drags down this chlorine residual and you have a population of bacteria present, and that's also a food source for these amoeba. So we can't say for certain, but it does seem like maybe there is a slightly greater risk in those circumstances. But we do know that in Australia they have found this amoeba in their systems that had free chlorine in their groundwater system. So I'm confident it might not be elsewhere, but so far, those seem to be the places that we're finding it.

So we touched base on the last testing capacity. One of the first challenges was, you know, we needed to develop the ability to test for this because it really didn't exist. There were a lot of methods published in peer-reviewed literature, but there were no standard methods to prove. So we worked with a consultant to help us establish a methodology and we began testing, like I said, in 2014.

In the last bullet on the slide, we've been specifically looking for Naegleria fowleri because that, you know, has a very severe consequence, but there are other amoebas that are pathogenic that can

cause illness. So we're looking to see if we can incorporate some of those into our test.

The next slide -- so this was just an overview of the parishes with the systems where we've had Naegleria fowleri test positive. If we go to the next slide, this is the map of St. Bernard in 2013, with the locations and the whole area there. And there was one site in Violet.

But then we go to the next one, I think it's the 2015, and we sampled again in the whole area and then we went further down into the extremities of the system, but -- well, we did find a site in there that was positive for Naegleria fowleri this summer in St. Bernard again.

Now, an interesting thing is when we monitored, we had a total chlorine residual of 0.6 milligrams per liter. But that particular site, there was flushing. They were sampling a station that was set up to automatically flush on a timer. And, frankly, that station was leaking. It had been damaged slightly. There was an above-ground gasket that was leaking. So there was some question to, you know, hey, was this just an issue with the site? Do we really have Naegleria fowleri in the system? So we went back and resampled at that location and two

other locations in the area.

Now, that original location, that sampling station, because of leaking, had been removed and the system put in a brand new tap on the main that we used to resample from, but we requested the system not actually do flushing while we were sampling so that we could determine what the real residual was in that area. And, granted, this was about a month after our residual sampling. But when we went back to sample these three sites, we actually did not have a chlorine residual at any of those three sites and they all came back positive for Naegleria fowleri.

So really what the issue was is that there was continuous flushing and just sort of fairly meeting that residual, but the reality was there was significant nitrification occurring. And they stopped flushing for one day and, I mean, their residual dropped to zero. So that's why we monitor. So they are in the middle of doing a free-chlorine burn.

So the next slide, when we went out and resampled the stations, we actually had to remove a section of pipe. This is a two-inch cast iron pipe that is reportedly part of the original design, original installation back in the '30s or so. So we

had this pipe section cut out, and it was preserved so that no external contamination got in the pipe. And it's actually at Virginia Tech. Their engineering department is doing a study on the microbial community and the vials from inside this pipe to try to better understand maybe what some of the conditions are. I know they did immediately take a swab and had a vial filled and it had amoebas growing in it, et cetera. Again, there was no residual here either, you know, at this particular time. So we're hoping to learn a lot from that.

So this is a table of the residuals and the results. We've monitored St. Bernard in 2013, 2014 and 2015. And you'll see last year when we went there, the residuals were found to be higher than they were this year. So again, we're seeing a consistent pattern for these surface waters that use chloramine having severe nitrification and the presence of Naegleria fowleri.

I guess a little picture on the right is the sampling kit set up. It's an ultrafilter in there. They just have a little pressure regulator between the sampling station and an ultrafilter and then a flowmeter on the back side. And the flow rate is about two to three liters per minute to collect

the 100 liters. So it generally takes about 45, 50 minutes to collect one sample. And those are ultrafilters used in dialysis machines. But anyway, we can move on.

So here is a graph with the results. The color -- I'll tell you what the sites are. You see the green is high at the point of entry, disinfectant residual that's entering the distribution system. They do have, I think, at least one location or distribution system, going down south where they boost.

But in the Arabi area where there's three sites, the ACR005, TCR003 and TCR010, those are the three sites in the Arabi area that were positive. You see, at least in early 2014, they had a pretty good residual. And then, I guess kind of late summer -- I'm trying to think. I think we sampled about in August of 2014 and then, you know, in late summer, early fall you see those residuals kind of drop off. And then you see in early 2015 a big spike where it jumps back up. We actually issued an emergency order at that time informing them that these continued months of noncompliance with the emergency rule is not acceptable. And so there was a big jump in the residuals at that time.

Unfortunately, you see when we got back into the warm weather season, I guess the nitrification took over and they let the residuals drop. So then we had some positive samples.

So this is De Soto. We had St. Bernard and De Soto. You know, we actually had three years of data, which is really nice to compare. You see in 2013 they had low residual nitrification and some positives for Naegleria fowleri. In 2014 there's residual. 2015 we didn't have any positives. Residuals were lower, and one cite was actually below, so they were definitely battling nitrification, but fortunately, did not find Naegleria fowleri.

Then the next site, St. John in 2014, again, this was a surface water chlorine system, nitrification, no residuals, but you see this year they really stepped up the game and they are maintaining pretty good residuals. So we didn't have any issues there.

The next slide, so Ascension Consolidated, this was a system we monitored this year, 2015, that we found Naegleria fowleri. The MRT, which is actually at the top of the slide, I put a graph here. They purchased all of their water from Assumption.

So this is a surface water purchase system. So the residual at their point of entry, which is the bottom, was at 2.0 milligrams per liter. And then, actually, coming out of the first tank, just above that point of entry, if you look at the graph there, Tank 1, that residual was .21. So we went from a 2 to a .21. And one thing we see and know about tanks that have stagnation, low turnover, they're ripe for nitrification. And that's certainly likely the case there. And then as we get into the second tank and the MRT, you'll see the residuals just drop to basically zero.

And then the graph at the top there is the nitrates, which is sort of the end of the nitrification cycle. And you see the entry point of 1.3. And then when we get to the MRT, it's up to a 2 and then you see the nitrate as nondetectable at the entry point. By Tank 2, you're up to about .14 nitrate. And the MRT is in fact nondetected. That just means that that whole nitrification cycle has been completed from the point of entry to the MRT.

So that's just a major issue that these systems, using chloramine, are really going to have to tighten up on. So this is again the residuals for A, C and D, the point of entry. And then you see

the -- the MRT has consistently been below -- or crossed the emergency rule level, and so we found Naegleria fowleri present at that location.

And then the next slide is -- this is the latest system, I guess, we had test positive, the Schiever system in Terre Bonne Parish, a very large system. Several boosters in different areas in the system with this site there on the far right did test positive. And if you go to the next page, I think I have the residuals there, you'll see it was a .44 total chlorine residual. And, you know, that's not an insignificant number. That's pretty close to .5. It wasn't quite there.

What's interesting is you'll see that same site in 2014 actually had a lower residual of .15 and everything, you know, tested clean. We didn't find Naegleria fowleri then. Then this year when the residuals increased, we did find it this time. Of course, keep in mind, we're only taking 100 liters, which is a large amount of sample, but compared to how much water is produced and distributed daily, it's a pretty miniscule amount we're actually monitoring. So again, this is certainly experiencing nitrification and there are going to be questions. I mean, that definitely seems to generate a higher risk

for our systems, the nitrification.

So again, that's their time series. You know, when the weather gets warm, those residuals get tough to maintain. And, you know, there's a number of reasons for that: Certainly increased flushing helps, tanks turn over, low flow, low usage, there's a lot of factors that can contribute to that. But frankly, it's just being proactive and monitoring the system, specifically looking at nitrification and considering their problem. Even if your residual is okay, nitrification is something you've got to address before your residual is not okay. Because once it sets in, you're going to probably be looking at a free-chlorine burn, some major response to essentially remediate the system.

Let's see. If we could go to the next slide, some of our additional responses, we certainly plan to -- we did some training last year on just disinfection, grade point system inspection, maintaining residuals, you know, looking at tanks and other things. So this year we're going to really try to focus on chlorine disinfection and focus on nitrification control, understanding, preventing, detecting and actively responding to nitrification and the distribution for that role.

So let's see. We've also been working on some information management system improvement. We are working on a system where we can capture these chlorine residuals electronically, you know, and geographically, so we can map those, graph them and look at them and try to better assess risk. You know, a lot of our -- surveillance monitoring has been focused on systems that have tested positive before, but also systems that are not maintaining residuals, because frankly, that seems to be where the higher risk is.

So this section of the resolution is basically for the Health Department to form its final ruling on the emergency rules. You know, we had wanted to get at least two years of monitoring in to really see, you know, especially for the chlorine systems, that total residual, you know, is that .5 sufficient, nitrification plan sufficient, et cetera. So certainly now that we have some data, we are on target to have those published by the end of this calendar year to implore our final rule.

There are two more slides. So this is just sort of a more holistic view. We're looking at total chloroform positive samples for the universe of our water systems over time. So this is focusing on the

2012, '13, '14 and thus far '15 time frame. We certainly expect that a higher disinfection residual will help not only with amoebas, but other pathogenic organisms. So our chloroform monitoring is really the only routine microbial monitoring that occurs for all of our water systems. But if we look at just the trend and the total number of positive samples, you know, we do see a decrease, a slight decrease after our emergency rule in early 2014. And so, I guess, we're hoping over time we'll see that continue.

And then I think the last slide is like 10 years -- 13 years -- a 13-year overview of, again, total chloroform positive samples. So we do have a steady downward trend. But, you know, one of the, at least -- probably prior to 2012 or so, we have -- it may be 2010 -- a pretty significant decrease in the total number of water samples. We have a lot of water systems that are consolidating. The total number is shrinking, which is good, but the size of the systems are getting bigger, which is what we want. So the reason for a lot of these downward trends over time is just for that.

But when we do look at the 2012, '13, '14, '15 time frame, again, where the total number of systems has been pretty static, we have seen a

downward trend in the total number of chloroform positive samples. So I certainly think that these increased residuals in our distribution systems are having a very positive impact. But the chlorine systems, the nitrification and where these residuals are not being maintained, certain water systems are at risk. So I'm sure we've got one question for sure.

MR. GRAVES:

Sorry, Jake. Do you think some of these contaminations could be related to the extensive street repairs being done? Post Katrina, they had subsidence caused from the flooding in places like St. Bernard where water lines were literally separated at joints, and streets were dug up and repaired. And I know this was a soil-borne contaminate. Does that play a factor? And what is being done to prevent that from continuing as road repairs are ongoing?

MR. CAUSEY:

Yeah. Well, one thing that's for certain is that our water distribution systems are not watertight and they never will be. And they are pretty much at risk every day for entrance of contaminates, whether it is contractor, subsidence,

or a disaster of some sort. It's why we monitor routinely for chloroform bacteria and it's why we're monitoring residuals.

You know, with these distribution systems, there's a cross connection. Every time you have a house connected to the water system, well, that house is connected to a pipe to something else, which is another pathway for contaminates to enter the system. So we definitely want regulatory framework in place that, you know, is aware of those risks and protect the systems from them.

Certainly when water main breaks occur, pressure is an important aspect of what contaminates are entering the system. When pressure is not maintained to our water systems, we should monitor because, frankly, you know, the integrity of the system has been compromised at that point. So they have to restore pressure. Typically, they disinfect flushes and they resample for chloroform bacteria to make sure the damage is clear and then they can notify the customers and say, hey, you know, water is safe to drink again. So eliminating water main breaks, preventing those positive residuals, we can work on to help reduce those risks, but they're never going to go away.

And then in pipes, frankly, you have biofilms that occur over time. And there's a lot of research and studies looking at these biofilms, and you can have pathogens in these biofilms. And as long as they're in the biofilm, they're not at risk. It's when they get in the boat water and enter people's homes it's a real risk. So maintaining those residuals is an important aspect of all of that, as well as maintaining pressure.

So, you know, you're not going to prevent those contaminates for an airborne system, but we also have to have framework in place that helps monitor those distribution systems and protect the water quality. So that's kind of where it's at.

And with the biofilms, you know, I don't know if you've seen, but there's a lot of stuff going on with Legionella now that's more in the premise of a plumbing system issue, but it's still a water supply issue. And there's still Legionella cooling tower stuff too, but there's a lot of these other pathogens that are not regulated. They're free living.

Traditionally, water supplies are monitored and regulated for fecal contamination. What we're seeing is that there's other, we call it

"opportunistic pathogens," that are free living in the environment, finding other ways into plumbing systems, water systems. And so there's a lot of urging EPA, that we'll need to start looking at these from a national perspective. But, you know, Naegleria fowleri in the state of Louisiana is leading the country and control of Naegleria fowleri in our water distribution system.

MR. DAVIS:

Two quick questions. First, since we keep seeing reports that, you know, each summer is one of the ten hottest summers we've ever had, is your definition of the warm season that you have to really start managing, is that changing as time passes, or are we using just a historical period?

MR. CAUSEY:

So what we've been using thus far is a 20-degree C threshold, although, we know that these amoebas can survive much colder temperatures. There's been quite a number of infections with Naegleria fowleri this past year, all related to recreational water exposure. But, frankly, several of these were in the far northern states as you call it, where, you know, the amoebas can persist in the winter pretty well, apparently. But I think that

when it gets warm is when they really start to get active.

So right now, our time frames have really been sort of May to September, that 20-degree C range. But we don't see that as a hard line or a hard number. There's a lot of work to do. It's a very resource-intensive effort. I don't know how you -- that is certainly the highest risk time frame, but it doesn't mean that it can't occur at some other time in the year.

MR. DAVIS:

Well, my second question goes to financing to make all this happen. Since we've had any number of boil water advisories in South Louisiana, and we've had some of these situations of contaminants, including some tragic deaths, are local governments hearing from their insurance, particularly errors and omissions, saying that, you know, you need to manage differently or your insurance coverage is going to cost more or not be available? I mean, those are just the kind of things that drive investment that --

MR. CAUSEY:

Right. You know, I wish I knew the answer to that. What I can say is I've not had a

single utility make a comment to me to that effect, that, you know, we're hearing from, you know, our insurers on our water supply issues. But that doesn't mean they would tell me or that it's not happening either. That's a good point.

MR. CULPEPPER:

And just to follow up, can you say that these pathogenic microorganisms are not in actual source water itself, but it's in the piping infrastructures of the systems?

MR. CAUSEY:

Well, we know that Naegleria fowleri is in surface water. And when we've been testing a lot of these -- well, all of the systems we test, we do a raw source water test. So certainly several of the water supplies being tested, not all water tests, have been positive for Naegleria fowleri. But what I'll say is we assume that. A bigger question in our my mind is with respect to groundwater.

MR. CULPEPPER:

That's my -- let me clarify it for groundwater, yeah.

MR. CAUSEY:

And we have been doing raw groundwater samples and we've not had any of those

come back positive for Naegleria fowleri. We've had a few with amoebas present. There's -- I guess one example would be St. John. Their wells are very deep and they're coming out of the ground at about 35 degrees Celsius. It's very warm water. And in that particular case, it actually goes through a pretty extensive treatment, et cetera. So the quality is not that great. But statewide, it's something that we want to take a close look at.

MR. BALKUM:

Anymore questions for Jake?

(NO RESPONSE.)

MR. BALKUM:

Excellent presentation.

MR. CAUSEY:

Thank you.

MR. BALKUM:

At this time we'll move on to public comment if there are any and we can open the floor.

PUBLIC:

Mr. Chairman, I just would to like recognize that we have municipal association director, Ron Harris, who is with us today. That's all. Thank you.

MR. BALKUM:

Thank you. Thank you, Mr. Harris. Seeing no public comments, I'd ask for a motion to adjourn. Glen Brasseaux. Jake Causey. Thank you.

(MEETING ADJOURNED AT 12:52 P.M.)

REPORTER 'S CERTIFICATE

I, LAURA QUINETTE, Certified Court Reporter in and for the State of Louisiana, Registered Professional Reporter, do hereby certify that the foregoing is true and correct transcript of Water Resources Commission Meeting to the best of my ability held on October 1, 2015, as set forth in the foregoing 78 pages.

I further certify that said testimony was reported by me in the Stenotype reporting method, was prepared and transcribed by me or under my direction and supervision, and is a true and correct transcript to the best of my ability and understanding.

I further certify that the transcript has been prepared in compliance with transcript format guidelines required by statute or by rules of the board and that I have been informed about the complete arrangement, financial or otherwise, with the person or entity making arrangements for deposition services.

I further certify that I have acted in compliance with the prohibition on contractual relationships, as defined by Louisiana Code of Civil Procedure Article 1434, and in rules and advisory opinions of the board.

I further certify that I am not an attorney or counsel for any of the parties, that I am neither related to nor employed by any attorney or counsel connected with this action, and that I have no financial interest in the outcome of this matter.

This certificate is valid only for this transcript accompanied by my original signature and original required seal on this page.

Baton Rouge, Louisiana, this 20th day of October, 2015.

Laura Quinette, CCR, RPR
CCR No. 2014011, RPR No. 73367