STATE OF LOUISIANA

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF CONSERVATION

GROUND WATER RESOURCES COMMISSION

21ST REGULAR MEETING

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TRANSCRIPT OF THE GROUND WATER RESOURCES COMMISSION MEETING, REPORTED BY DONNA T. CHANDLER, CERTIFIED COURT REPORTER FOR THE STATE OF LOUISIANA.

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THE CLAIBORNE BUILDING - 1ST FLOOR

THE LOUISIANA PURCHASE ROOM

1201 NORTH 3RD STREET

BATON ROUGE, LOUISIANA 70802

COMMENCING AT 12:15 P.M., ON JANUARY 19, 2012

APPEARANCES

GROUND WATER RESOURCES COMMISSION MEMBERS:

SCOTT A. ANGELLE
KYLE BALKUM
BO BOLOURCHI
JAMES S. BURLAND
ELLIOT D. COLVIN
PAUL D. FREY
CHARLES KILLEBREW, Ph.D.
JACKIE LOEWER
ROBERT DAN "MICKEY" MAYS
TED W. McKINNEY
PAUL D. MILLER
EUGENE OWEN
BRAD SPICER
JAMES H. WELSH

GARY SNELLGROVE
JEFFREY JONES
JOHN W. ADAMS, ESQ.
OFFICE OF CONSERVATION
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BATON ROUGE, LOUISIANA 70804-9275

MR. ANGELLE: Okay. We are going to go ahead and call the January 19th meeting of the Ground Water Resources Commission to order. I appreciate everyone being here. I apologize for being tardy. And I would ask that the staff call the roll.

MR. ADAMS: If, if you could please sound off when I call your name.

Secretary Scott Angelle.

MR. ANGELLE: Here.

MR. ADAMS: Kyle Balkum.

MR. BALKUM: Here.

MR. ADAMS: Bo Bolourchi.

MR. BOLOURCHI: Here.

MR. ADAMS: James Burland.

MR. BURLAND: Here.

MR. ADAMS: Glenn Cambre.

Elliott Colvin.

MR. COLVIN: Here.

MR. ADAMS: William Downs.

Paul Frey.

MR. FREY: Here.

MR. ADAMS: Mayor Dan Hollingsworth.

Jimmy Johnston.

Charles Killebrew.

MR. KILLEBREW: Here.
MR. ADAMS: Jackie Loewer.
MR. LOEWER: Here.
MR. ADAMS: Mickey Mays.
MR. MAYS: Here.
MR. ADAMS: Ted McKinney.
MR. MCKINNEY: Here.
MR. ADAMS: Paul Miller.
MR. MILLER: Here.
MR. ADAMS: Eugene Owen.
MR. OWEN: Here.
MR. ADAMS: Kelsey Short.
Brad Spicer.
MR. SPICER: Here.
MR. ADAMS: Jim Welsh.
MR. WELSH: Here.
MR. ADAMS: Mr. Secretary, we, we do have enough people to constitute a quorum. A quorum requires 10 members. We have more than 10 members.
MR. ANGELLE: Thank you very much.
Item No. 2, Adoption of the Meeting Summary of December 7, Mr. Adams.
MR. ADAMS: Yes, sir. Thank you, sir.
As all of you received along with a

copy of the agenda in an e-mail earlier this week, we sent a copy of the minutes from the December 7th meeting. At this time, we request a motion to approve those minutes.

MR. SPICER: I motion.

MR. ANGELLE: Motion by Spicer.

MR. MILLER: Mr. Chairman.

MR. ANGELLE: Second by Miller.

Any objection? Any discussion?

Hearing none, that motion is adopted.

I wanted to defer Item No. 3 because we are going to spend the majority of our time on Item 5, which is going to be part of what we, what we are developing in, in Item No. 3.

I do want to recognize Mr. Lou Buat, with the -- former Assistant Secretary of the Office of Coastal Resources, as well as Mr. Tony Duplechin, a former employee of the Department of Natural Resources.

Thank you for being here. We appreciate your past contributions to the state government and the sacrifices you made to serve us. Great public employees, and I appreciate you being here in your private

role.

Next item will be for us to -- I will just pick up 4 and 5. And so just to kind of pick up where I think we started some couple years ago, it was to reconstitute the Ground Water Resources Commission and make it the epicenter of ground water policy in the state and to, to bring about the, the kind of conversation and the debate that I think was missing when it came to, to ground water resources.

At least my observation, again, as I shared with you at the last meeting, for some -- we are going to celebrate 200 years of statehood this year. And for some perhaps 190 years, ground water debate has been somewhat absent in terms of the management of that resource, how do we, how do we manage the resource to guarantee sustainability. I think we have sustainability, but my observation has been more about good luck than it's been about good management. And, and now, I think it's fair to say, from a variety of challenges, the time has come for us to hope for good luck, but to replace that

luck with good management. And I think good management starts with, again, trying to understand what are the component parts of any resource management plan, and I think there are a variety of things that we can look at in the state government whether we are, again, managing deer population or waterfowl population or coastal resources, as may be the case, some of the processes are the same.

So having said that, we are, obviously, moving towards giving the legislature a report that is going to be due on March the 1st. That will have a variety of recommendations.

And having said that, I have asked -- we have identified, I think, nine different component parts. I want to add a particular item, I would call -- and we can do this tomorrow. And it -- and I'm open, quite frankly, to anybody bringing up any subject matter that they believe ought to be added. This is, again, our work, but it's not -- we don't have a monopoly on good ideas.

While education probably takes into

account conservation, I do believe that conservation at least has to be discussed. And in a separate way, we may end up merging conservation into education, but I do think that we need to have a specific conversation on, on conservation. And I'm not talking about Office of Conservation or the Commissioner of Conservation, as I am talking about --

MR. SPICER: Or soil and water.

MR. ANGELLE: Yeah, or soil and water conservation or any other kind of conservation. But, but, but the verb, the verb "conservation."

So having said that, I think we will go ahead and move to Item 5.a., and Monitoring is the first subset. We've reserved a block of time for Monitoring. We are going to go through a list of questions. Some of them are going to be very obvious. I would hope that, that the chairperson who is leading the discussion, can provide additional questions. I'm hopeful that Commission members can provide additional comment. And we are going to be interested

in hearing from members of the audience on each particular section, not -- we are not going to wait until the end to hear on, on Evaluation or Incentives. We are going to take those questions and those comments as we go. This is intended to be kind of a get comfortable, roll up the sleeves and begin to put together, if you would, the meat on the bone.

And I do want to thank the USGS for being here. We appreciate you-all's tremendous support and cooperation. Certainly, we would not be doing the things that we are doing in this state without your support. And I do apologize for the issue that we had relative to another item that I will speak with you about, but, certainly, we are very, very appreciative of that relationship. It's one of the better ones we have with the federal government in Louisiana.

So I'm going to turn it over to Mr. Killebrew, and staff will kind of begin to lead these discussions points. And you can take it from there.

MR. KILLEBREW: Thank you, Mr. Secretary.

Let me just first say that knowing the condition of our ground water resources is certainly fundamental to our ability to effectively manage those resources. And as the Secretary said, Louisiana is now confronted with increasingly complex issues and challenges to our management and use of ground water. That requires a broadbased understanding of the status and the trends of those resources.

So the subject of our first section this afternoon, then, is Monitoring, which essentially asked the question as to how we can enhance our ability to collect information from the aquifers, from the landscape, look at changes in the present, and to compare those changes with historical data and information to determine whether those changes constitute a threat to sustainability.

So we have formulated to that end a number of questions which are designed to get at these issues. And what I will do is read

the question off, and hopefully that will stimulate discussion, comments, and we will take them each in turn. And I see we, we have the questions up on the presentation there for, for the audience to see. So let's go ahead and start with the first one.

The question is, Should the state invest in a robust network of observation wells?

Let me just say that we all know that ground water monitoring normally involves a network of observation wells to obtain aquifer and geological information. They usually measure ground water elevation or levels. They can measure water quality. I don't know the, the exact number of observation wells we have currently in our system, but I am aware of the fact through our previous discussions that there are significant data gaps in aquifer monitoring. And the idea behind this question, basically, is to increase the monitoring, the number of wells and the frequency of monitoring that we do.

So with that, let me invite any

comments that we might have on that particular topic. Any --

MR. ANGELLE: Mr. Killebrew --

MR. KILLEBREW: Yes.

MR. ANGELLE: -- so I guess the question should the state invest. I would say that, certainly, from my standpoint, the answer would be yes.

I'm also -- I also think we need to expand that question to, to define, to define what is a robust network. What is a, what is the minimum network that would lead to good management decisions, lead us to manage the resource.

This tells me that, the fact that we are asking this question, leads me to believe that we do not have a, an appropriate network of observation wells to give us robust management opportunities. So I don't know if our staff or USGS can help us with that to help -- you know, I don't know if there's a, by way of a comparison, a good feel, a Good Housekeeping Seal of Approval on how many wells you have. I realize that different aquifers may have different challenges. And

so I'm looking to Mr. Lovelace. Hopefully you're looking at me that you're ready to jump in and answer this question.

MR. LOVELACE: Sure.

Yeah, there's no magic number or magic formula to determine how many wells you need. As you said, every, every aquifer has different issues. There's different uses, depends on the water quality and the use, how much interaction of the aquifer to the -- impacts the pumping as to how many wells you might want to have.

I can tell you back prior to about 1984, we had about 800 wells that we monitored water levels in different intervals. Some were monthly; some were quarterly; some semi-annually; some we are doing every five years.

Certainly, we have about 200 now on networks with DOTD and Capital Area that we monitor water levels in. And, obviously, you know, 200 wells scattered across the state in, in a couple dozen aquifers, you know, you are going to have plenty of holes there. And so more data is always better. You know, it

would be nice to be able to patch some of those holes, and that's something we could look at and see, you know, where -- go through aquifer-by-aquifer, and say really what are the data needs in those areas. And to do that, you look at, you know, current impacts, basically, potentiometric surfaces, what do the water levels look like now at this time? Are there places where there are cones of depression that we should be monitoring? Where is all the pumping? Look at the pumping records, the water use stuff that we have, see what the impacts of that are. Is there, you know, planned future pumping that you want to look at? Where are the areas of development?

Obviously, the Haynesville Shale areas, you know, we -- that was an area that we really weren't monitoring in because, prior to that development, there just -- there hasn't been a whole lot happening up there. But between the frac wells and the growth of subdivisions south of Shreveport, all of a sudden there was a problem, and we didn't have a whole lot of information for

that area.

So all those things need to be taken into account to look and really develop a plan as to the best way to sort of optimize the monitoring.

MR. ANGELLE: So given the opportunity, could USGS assist -- and, obviously, I realize there's costs associated with that -- in the development of the appropriate network of observation wells on an aquifer-by-aquifer basis?

MR. LOVELACE: Absolutely.

MR. KILLEBREW: Just further clarification. You said there are 200 monitoring wells, observation wells, currently?

MR. LOVELACE: For water levels.

MR. KILLEBREW: For water levels.

MR. LOVELACE: Right.

MR. KILLEBREW: Okay. And what frequency do we get information from those wells?

MR. LOVELACE: Most of them are quarterly measurements.

MR. KILLEBREW: Quarterly

measurements.

MR. LOVELACE: Yes, sir.

MR. KILLEBREW: Okay. Are there any realtime monitoring facilities?

MR. LOVELACE: There are, there are a few in, in about -- we have about a dozen of them set up right now. The bulk of them are in the Sparta aquifer. We do have one or two in the Chicot, and a couple in different aquifers in central Louisiana around the Alexandria area.

You know, that's something that, you know, we look at, too, is the actual frequency. In some areas, you don't necessarily need realtime monitoring where water levels aren't changing very quickly. Quarterly may be adequate. Semi-annual may be adequate in some.

In other areas where water levels may be changing very rapidly due to either development or due to just rapid fluctuations caused by seasonal pumping or something new happening, you may want to look at, you know, doing something either realtime or monthly or something at a higher frequency.

The down, the downside of quarterly is that you don't always see the peaks. You know, typically as water levels go up and down in a lot, in a lot of aquifers that are impacted by seasonal pumping, you know, they rise and they fall. You know, quarterly measurements don't always get those peaks. We get somewhere in between that fluctuation.

MR. KILLEBREW: Okay. Any further questions, comments?

MR. LOEWER: Over here. My button is not working.

The 200 and some monitoring wells we have now, someone made a decision at some point to do that. And given the fact that we know that there's data gaps in our information, is there anything on, on the plan now that the decision has been made for more? We know what we had. Before we jump and say let's have a whole bunch more, you know, is that an increase in number? Are there plans, or is it just static? That would be good to know.

MR. LOVELACE: Right now the work we do is pretty static.

MR. LOEWER: And no plans for more to fill these gaps and the holes that we have now?

MR. LOVELACE: No, sir.

MR. ANGELLE: I think I would answer that I think that there would be a desire to do more. Obviously, somebody made the decision in 1984 to go from 800 to 200. I'm assuming -- it may not have been 800 to 200. It may have been 800 to 750 and a gradual rather than falling off the cliff.

I'm assuming that that was a financial -- can anybody provide any history on that?

MR. SPICER: Well, I can't provide history on that, but --

MR. ANGELLE: You're a pretty old guy.

MR. SPICER: USGS cut back, but know why the state did, and, of course, that's a corporate agreement. So that was the impact. We had a serious budget crisis starting in '84. So that's probably what happened.

MR. LOVELACE: That's exactly what it was. The nature of our agreement with the cost-sharing was with a cut on the state

side, there was an equal cut on our side.

MR. ANGELLE: So what is the nature of that cost-share? Historically, it's a 50/50 cost-share.

MR. LOVELACE: It was back then. It's sort of deteriorated now. It's closer to probably 60/40, the state providing more. Because our, our budget has been pretty static for quite a while as far as our what we call our cooperative funds that we can use for matching.

MR. ANGELLE: And you don't see that changing based on home office discussions?

MR. LOVELACE: No, sir.

MR. ANGELLE: In fact, it could be the opposite?

MR. LOVELACE: Unfortunately, no. No.

MR. ANGELLE: Okay. All right.

So, Mr. Killebrew, again, you know, we are going to have a variety of discussion on a lot of items. I would like to suggest that one of the take-aways under the Monitoring program is that, is that we make the observation that at one time we had working with USGS in 1984, 800 monitoring wells.

That was viewed to be an appropriate amount. And through a variety of budget cuts and management decisions, that number has dwindled to 200.

Has that number dwindled, say, in the last four years?

MR. LOVELACE: No. It was pretty sharp. It happened in '84.

MR. ANGELLE: Okay. So we did fall off a cliff and get to 200?

MR. ARCEMENT: Yeah.

MR. ANGELLE: Okay. So we could probably get some history on graphing -- and I'm just reaching out to the staff on that -- because I think that's important to the legislature to know where that number fell off and then we've been, we've been constant.

But my suggestion, Mr. Killebrew, would be that we would, we would get -- make that observation of the historic amount, and that we would, we would reach out as an action item to USGS -- which I think we already have, but to make it official -- asking them to help design what would be the appropriate monitoring observation well

network, whatever the appropriate wording, phrase, on an aquifer-by-aquifer basis.

MR. MAYS: Scott.

Would the real purpose of the monitoring wells, or a part of the purpose of the monitoring wells, be to build models for each aquifer?

MR. ANGELLE: I think, I think that there is some discussion in one of the slides about modeling. But absolutely from my standpoint, yes, sir.

MR. KILLEBREW: I think we will address that later on in the questions. We will have an opportunity to discuss it a little further.

Any other comments?

MR. MCKINNEY: Yes.

I would assume that in making this decision to continue monitoring, any additional ones would be in areas that we deem to be critical areas that are needing it and not just arbitrarily. Logic will tell you that.

MR. ANGELLE: Right, I think that's right. And I think that's why it's so

important that we look at from a, from a aquifer-by-aquifer basis. Certainly, some are going to need more medicine than others and we ought to apply where the sickest, if you will allow me to use that analogy.

MR. MCKINNEY: Sure.

MR. OWEN: A definition of terms. Is the title "observation well" intended to mean a well in which solely the use of that well is observation of water levels, or can a production well that is taken out of service and levels measured suffice?

MR. LOVELACE: Yes. No. The wells in our network now are a variety of wells for different uses. Back in -- some of them are USGS wells, but the bulk of them are wells that some of them are still in service. We, we look for an area where there's a need and then start looking for wells that we could possibly use. Obviously, when the well's out of service, that's even better, because we are looking for that static water level measurement. But in some cases, we do ask the well owners to turn the well off long enough for, for the well's water levels to

equilibrate and get a good static measurement.

MR. ANGELLE: So that's driven by, in some cases, if you, if you had a need to have a, a, a much more numerous, a more numerous I should say, number of monitoring wells in a particular area and you're challenged by resources, you would try to find any way you possibly could to get that data through the cooperation of folks in the area from well owners?

MR. LOVELACE: Yeah, from well owners, yes.

MR. ANGELLE: I got you. All right.

MR. KILLEBREW: Okay. If there are no other comments, let's move ahead so we can try to stay within our time allotted.

Are there any opportunities to leverage with other state agencies, such as DEQ, Coastal, LSU Shreveport, et cetera?

I'm aware of the fact that -- of course, this is related to the first question. At a previous Commission meeting, we did have a number of state agency representatives that presented information on

their monitoring programs. I wasn't at that meeting, but I realize that DEQ does have an aquifer sampling assessment program, which I think samples are of water quality, and, of course, DHH also has a program that has to do with public supply wells. I don't know the details of those.

But, but the basic question is, can we see opportunities in those kinds of monitoring programs to, to leverage and get -- provide more information to our effort? And so I would have to ask the first question, since we have already reviewed some of this, and this was probably -- I think there's a transcript back there back in 2010 where we discussed that.

Are there any thoughts on that, that whole issue, the question about leveraging resources with other state agencies?

Gary, do you have any thoughts on that?

MR. SNELLGROVE: Well, I would like to add that in discussions with DEQ, it may be difficult to -- for us, for our purposes of seeking water level data, to rely upon their

existing network or the way that they do their business as their focus is water quality, and they typically just take draws from taps, if you will, and don't really open the wellhead and go into the well and, and what have you to pull the samples. So we may not, we may not have an opportunity there.

With the public supply group, in our discussions with Department of Health and Hospitals, it's pretty much the burden on the public supply provider or the well owner to submit data, water quality data, into that agency. Even if we could, you know, utilize that as a possibility, for what we had mentioned earlier, USGS had reported that the gain with water levels and determinations of water levels is to assess static condition. Most of the public supply providers are in a well or well nest field, what have you, and they're aggressively pumping pretty much all the time. So even if they have a well that may be in that, in their network or in their field that's nearby, it would still probably most likely be unduly be influenced by the pumping of the other nearby wells. So,

therefore, you'd get a biased water level.

But, but there still may be some opportunity there. I wouldn't say that that would be a true statement for all public supply providers, as they have a pretty big reach with, you know, the size and, and the volume of what they deal with, with what is all defined as public supply.

So, so, you know, of course, we, we do recognize on here -- it does list LSU Shreveport and Gary Hanson's group and their network. I think they have got eight wells that we currently are utilizing for us to monitor or to, to assess conditions in the south Shreveport or south Caddo Parish area under the ground water emergency. So there's, there's certainly some opportunities there, and there may be others.

I guess I'm aware of these three here, but I would ask, you know, the group if there are some that we are not considering, please, you know, at this time, please inform us and we can pursue it. Our staff can look further into it. Are there other groups out there that are doing water level monitoring or

water quality monitoring that we could possibly include in our research?

MR. SPICER: Yes. LDAF has that monitoring program, pesticides. And we had had the same issues as the other folks that are collecting data.

MR. SNELLGROVE: Tap versus pulling a wellhead?

MR. SPICER: Yeah.

MR. ANGELLE: So we would want to, we would want to reach out to every possible water stakeholder, whether it's the Rural Water Association, DEQ, LSU Shreveport, whoever is out there, Coastal and, and try to have them part of what we are doing here.

I thought it was interesting what you said about DEQ not being able to, perhaps, help us in, in water level monitoring. However, provided whatever money they are spending on water level monitoring, if they would spend that money on more observation wells, they could ride coattails, they could ride coattails on water quality by taking samples from our observation wells as opposed to us riding coattails on their, on their

program. And as a result, they would have a much broader water quality sampling program than we would have.

MR. SNELLGROVE: Yes, sir.

MR. ANGELLE: Than we currently have.

MR. SNELLGROVE: Yes, sir. They could benefit from our effort should we be able to grab more network and into the network, yes, sir.

MR. MILLER: Mr. Secretary.

I might add, I mean, our focus is really water quality. But, again, if you're assessing an overall aquifer, that's an important piece of information. I think it's good as far as the coordinating between the agencies, DEQ and the efforts as far as quality of the water, and Ag as far as their work in the same basic area, maybe from a different perspective. But all of that comes into play with quality of the aquifer.

As everybody, as all the agencies sitting here, funds are all limited as far as what we can do. So each one of us kind of have a mission and a focus. But I think the point is well made that we need to make sure

that each of us know what the other is doing so we are not wasting any effort or overlapping and try to see if we can tailor maybe some of the efforts to meet a bigger purpose.

MR. ANGELLE: Absolutely.

MR. MILLER: I think those kind of coordinations will bring benefits to us, even though our focus may be somewhat different.

MR. ANGELLE: Correct. Correct.

MR. KILLEBREW: And question No. 3, really, is kind of derived from the second question in a sense: Should the state investigate opportunities to leverage where surface and ground water resources exist then reassess monitoring needs?

I guess that's kind of a procedural question. So if we look at the resources that exist for monitoring, perhaps, in other agencies or other institutions, should that be a first step in developing a monitoring plan, and then derive our monitoring plan from that?

Any thoughts on that?

MR. ANGELLE: Yeah. My thought would

be that that would be the question we would put to USGS trying to tie into No. 1, taking into consideration where, where, given the fact that we already, we already have monitoring opportunities going on in the, in certain areas, how might we use that to assess or, in this case, reassess our needs.

MR. KILLEBREW: Any further thoughts?

And speaking of USGS, the next question, Should USGS be the primary resource for monitoring?

Well, we have already heard that DNR does have some existing contracts, I think, with -- is that true, Gary? -- in the Sparta area, and then we have something recently developed for Wilcox --

MR. SNELLGROVE: Yes, sir.

MR. KILLEBREW: -- with USGS. And, certainly, as everyone knows, the agency enjoys a reputation for a very high level of technical expertise credibility, and we have already alluded to the fact that they would be an excellent partner in this effort. So those just are my thoughts on that, on that question.

Anyone else have any, any comments to that?

MR. ANGELLE: I do think that it's important, and we don't have to do 100 percent of the monitoring wells with USGS, but I think, I think it is important that USGS be our certainly -- I mean, I realize that LSU Shreveport may have some outliers, we have may have a particular situation. Like, I think we're partnering with, with Union County, Arkansas, that may be outside of this network. I get that.

But from my standpoint, we should rely on an agency with the credibility of USGS to gather that data and to report to us in standard operating procedures that, that would withstand the, the test of, of, you know, peer review.

MR. MCKINNEY: Mr. Chairman.

I think the question also would be would they be willing to do it.

MR. ANGELLE: Yeah. I think, I think it's if you pay me, I'm going to do it.

Did I save you a trip to the microphone?

MR. LOVELACE: Yeah. Pretty much, yeah.

MR. ANGELLE: I mean, that's what you do, right?

MR. LOVELACE: That's what we do. We are a water research organization agency. Pretty much the monitoring of surface and ground water is, is, essentially, our bread and butter. That's what we do and --

MR. ANGELLE: We just need a little bit more bread. I got it. I got it.

MR. KILLEBREW: Further comments on that one?

The next one, If resources are limited, would monitoring programs be limited to areas -- excuse me.

I'm sorry.

MR. HANSON: Yeah, could I?

MR. KILLEBREW: Yes, sir.

MR. HANSON: I was just going to add, that the program we have at LSU Shreveport is a joint Caddo Parish program. They pretty much fund it and then we use our student and faculty to do that. We are a little different from what the USGS is doing. And

they certainly are the eminent authority in that field.

We collect our data monthly for level and we do quarterly, like USG -- USGS does, for water quality. So it is water quality wells and level.

One of the things that we were very concerned about was that there were no skips and data gaps into the future. So the parish has agreed to pay for this from here on out. That is one unfortunate thing that happens occasionally with USGS, depending on how the funds are going, so -- but, but they certainly are the preeminent authority on that. Thank you.

MR. KILLEBREW: Thank you, sir.

Any more comments?

Okay. If resources are limited, would monitoring programs be limited to the areas of ground water aquifers with existing aquifer sustainability challenges due to water level decline, saltwater encroachment or subsidence?

And, and almost certainly resources will be limited in somehow or another. But

this gets at how the monitoring program would be planned and what it would address.

Do we have any further thoughts on that? One alluded to it in an earlier --

MR. ANGELLE: Yeah, I think that goes to what Mr. Ted was saying. Right, Mr. Ted?

MR. MCKINNEY: Absolutely.

MR. KILLEBREW: Okay. If no further comments, we'll move ahead.

MR. ANGELLE: Would we be able to rank, may be a poor choice of words, but would we be able to rank the aquifers on which ones are having more challenges and, therefore, should have a larger network, monitoring network? I mean, obviously, you know, the Sparta and Wilcox issues that I'm aware of would lead me to believe that we would have a more robust monitoring network there than in fill-in-the-blank. I don't want to say which one it is, because I'm not sure which one is the least challenged. Obviously, Baton Rouge has some issues with saltwater encroachment. So would we on a scientific standpoint be able to do that?

MR. LOVELACE: Yes. Yeah. The draft

recommendations pointed out the number of problems, and definitely wanted to try to address those problems. And, and, you know, try and -- yeah. Yeah. Absolutely. Definitely prioritize the need in different areas.

MR. ANGELLE: Okay. Good.

MR. KILLEBREW: Further comments?

Okay. What are the pros and cons of implementing a technology-based approach versus labor-intensive approach to the collection and reporting of water level and water quality data?

We had some discussion of this at a previous meeting.

Gary, would you mind addressing -- yeah -- addressing this issue? I think you had some comments the last time we spoke.

MR. SNELLGROVE: Yeah. Well, the comment, I mean, the question there is, is focused on remote, say, data access versus physically -- you know, a person or a technician physically going to a well location and collecting the data, collecting the sample. So, so the discussion was, I

think, that, you know, whether or not -- what would be the most practical or feasible way about getting the data, both short-term and long-term, and putting into consideration. Of course, initial cost, but then looking over time whether or not that cost would, would -- you know, initial cost is high, but over time it would pay for itself, because you are not having to consistently go back out there.

I think this is probably more of a question that USGS may have a better feel for as they, as they incorporate both technologies and probably a spectrum in between somewhere, you know, all throughout.

Which, you know, when we had our meeting the other day, we really didn't have enough information to be able to, to develop a firm answer one way or the other.

MR. LOVELACE: Well, basically, you could send somebody out to get the water level measurement. What we do now is, we have someone go out to a well quarterly and measure -- typically quarterly to measure the water level. We have some wells where we

have recorders in them. They are basically pressure transducers. They are down below the water level. They record the change in pressure, which is the difference in the water level. We still send somebody out there quarterly to download the data from it and make sure that it's still working.

The third option is what we call the realtime wells, which we have the pressure transducer out there. And those, I should say, those are measuring hourly water levels. There's a pressure transducer in there, whether it's going to a recorder or going to equipment that's sending it up to a satellite and beaming it back to our office where we put it on the Web. It's, it's hourly data. Still someone needs to go out there at least quarterly to make sure that the, that the equipment is, is functioning, that the recorder is still working. Because when it's just sitting out there, it's a battery-powered device, and we all know batteries fail on occasion.

The interesting thing about the satellite data we've found out is that,

especially with our surface water gauges, is that, that when those things do go out, it's apparent to everybody right away and they want you to go out there right away and fix them. So especially with our surface water gauges, we typically are making more than quarterly trips.

The equipment is, is definitely more expensive, especially -- the recorders aren't necessarily that expensive, but, but it is an additional expense of equipment. When you get into the realtime, that expense goes up quite a bit because now you are talking about transmitters and receivers and having the license for the satellite. And it just, it gets pretty expensive.

MR. ANGELLE: Is there any value for managing ground water to have realtime? I mean, it would seem to me that the decision for management to invest in it is, first of all, the cost comparison of labor versus electronics. And I get that. I'm not sure that daily, hourly measurement of ground water levels is, is something that is necessary to manage the resource.

MR. LOVELACE: And we have, we have debated that. I would look at it in two, two ways.

If you are in an area where there's big fluctuations, either seasonally or during the day, maybe you would want to have that. Take the situation in south of Caddo Parish. Those are mostly domestic wells and frac wells that are causing the issue there. Well, I mean, along with the drought. The drought is the real problem. But when everyone gets home from work and they turn on -- everyone turns on their water at the same time to start cooking dinner, wash clothes or whatever, all of a sudden the water levels drop. You see that if you have that hourly data. You can start picking up on that and use it as a -- try to use it as a management tool. You can, you know, see that, hey, when this guy started fracking, all of a sudden the water just, the water level just drops. So it's really on a, a specific, you know, point basis whether you want to do that.

The other thing could just be, you know, sort of I look at it as being

educational. When you have something out there on the Web that people can look at, you may just want to have, hey, this is one representative well for, say, the Chicot aquifer system. It's right in the middle of the Chicot and the rice farming area. And you can see how water levels are changing over time. It's real easy to bring that up and look at that data, and sort of gives people a sense of what's going on. They can see, well, maybe, in their area water levels really don't change all that fast. There's a lot of public misperceptions about what ground water -- what happens with ground water.

MR. ANGELLE: So you would envision, obviously, a mix of, of different types of --

MR. LOVELACE: Different technologies. I wouldn't say a whole lot of realtime wells, but things where we would discuss that with, with the DNR staff and the Commission and determine, you know, where we possibly want to put that, where we will get the most bang for the buck.

MR. KILLEBREW: Any further thoughts?

Okay. Who all would benefit from expansion of the existing observation well network?

Well, to me that sounds like kind of a cost benefit question in a way, even though we are not talking about quantitative information here. But if we build a robust network of observation wells, increase our capacity to monitor ground water. Over on the other hand, we would certainly improve our ability to serve Louisiana public at large, public that uses the resource. We would benefit DNR's capability to monitor. Perhaps, DEQ and other agencies might also capitalize on that.

Are there any other further -- any further thoughts on that in terms of the benefits?

MR. ANGELLE: Our local governments, perhaps.

MR. KILLEBREW: Yes, sir.

MR. ANGELLE: Economic development leaders, Farm Bureau.

Brad.

MR. SPICER: I think a focus of this

network to provide information to the users, really, so they know if an action -- they would like to take action. If we have a series of drop in water levels, then the community needs to be aware of what's happening. And you can learn from that. It's a better informed public and easier to manage.

MR. ANGELLE: Yeah, I think that's right. I think what I'm leading at here, for instance, I'm aware of a facility where Louisiana and Texas are competing for, from an economic development standpoint. I think we have all kind of heard some issues in Texas with regard to their drought issues. The question to me then would be, you know, if our economic development secretary could sit down with the decision-makers and say, you know, while they are having trouble across the state line, let me tell you what our observation network is providing and we have this. You know, our sustainability shows that we can, we can be here for you, not only for today, but for the life of, of your investment.

So I'm kind of trying to find the non -- I mean, the users I get, and that's a user, too, but just trying to look for non-traditional ways.

MR. MILLER: Mr. Chairman.

If there are incentives that come about at some point in the future, part of tailoring the incentive plan could be driven around the same data set. So that we know what the issues are, you may -- the legislature may come up with some concepts of some incentives to switch people from ground water to surface water and may tailor it based on areas where the greatest needs are. And, I mean, the data would be available for a lot of good uses, even from a planning. In fact, a lot of public planning perspective.

MR. ANGELLE: Yeah. The educators and -- as well.

MR. SPICER: In fact, it's through monitoring that we are able to change what happened in southwest Louisiana with the Chicot. You know, moving them off of ground water to the surface water had a huge impact on that aquifer back in the '80s. And

looking at the ground water data, so you can see that spiked up as soon as, as soon as industry is off those wells.

MR. ANGELLE: Yeah.

MR. KILLEBREW: These are all reasons for proceeding to expand the monitoring network, all good reasons.

The next question, I think we have already touched on, Could DEQ enhance their monitoring program with expansion of the observation well network?

And I think that answer was yes.

Gary, can you shed some light on that, please?

MR. SNELLGROVE: Yes, sir.

They would -- they could possibly benefit as -- if there was a collaborative effort for them to be, you know, for more water quality to be collected as well as water level data with the expansion.

MR. KILLEBREW: Anything else?

All right. Should expansion of the observation well network be to the extent that data derived from the network could be as a vital statistic to issue a grade or a

sustainability rating to each aquifer system from a multi-departmental perspective?

Secretary Angelle asked a question similar to this a little bit earlier. I have a question about it. How -- does anyone know how or what parameters would be looked at in terms of issuing or developing a sustainability rating for an aquifer? I'm sure this is being done in other instances somewhere. Does anyone know, or --

MR. LOVELACE: Well, I'm just familiar with what they do, you know, they have their sustainability measurements in Arkansas, what they determined -- that's how they determine critical areas. They say that the aquifer is not sustainable at the pumping -- at the current rate of use if water levels have fallen below the top of the formation, or if water levels are falling at a rate of, I think, greater than five feet per year over at least a three-year period or something like that.

I would also say, that to look at that, you might want to look at water quality also. If you have a water quality issue that

pumping is exacerbating, I would definitely put that into the sustainable use formula.

MR. KILLEBREW: Yeah, the last part of this is for a multi-departmental perspective. So it would certainly bring in more people that are interested in that.

MR. ANGELLE: So in Arkansas there's a specific definition that's for "sustainability" that's -- I think ours is pretty broad in our statute. And theirs defines a metric what happens to water over a given period of time?

MR. LOVELACE: Yes. I don't necessarily agree with their, their looking at just at the water level falling below the top of the aquifer. In my mind, it's when the water level falls below -- starts falling below pump settings, when you start affecting a lot of people, to me that's, that's really when you have a problem. It becomes an economic impact and hardship.

People in the Chicot, for instance, the aquifers 50 to a hundred feet down. Domestic well owners typically, in a lot of the irrigation wells, will pass that, you

have -- you may have six, 700 feet of aquifer.

Anyway, your pump setting isn't necessarily going down to the top of the formation in a lot of cases. We have a lot of feedback. The pump is going to be, you know, a hundred, 200, 300 feet down. It's when it becomes an economic issue to either lift the water or water levels are falling below pump settings on a lot of wells, I think that's really what I look as more of a sustainability issue. It's not that the aquifer is going to run out of water. It's that it's going to become too expensive to either pump the water out or for, for the average person to be able to pump the water out.

MR. ANGELLE: So are you familiar with the definition in any of our rules or statute of "sustainability"?

MR. LOVELACE: No, I'm not.

MR. ANGELLE: Gary, do you have a copy of that?

MR. LOEWER: That was my question, too. We surely have a criteria by which we

determine some -- if an area is of critical concern. Is that the term, something like that? Critical area. We have some benchmark. And, and --

MR. ANGELLE: Yeah.

MR. LOEWER: -- maybe we are going to develop that to be broader that it's not just involved in a drought, the closer we come into it maybe.

MR. OWEN: The definition comes up in the Evaluation section, doesn't it?

MR. ANGELLE: Do you have it, Gary?

MR. SNELLGROVE: It's in -- it's on -- it's in your handout. It's under Evaluation. It's bullet Item 5.

MR. ANGELLE: Can you read it?

MR. SNELLGROVE: It's bullet Item 5. It says, The current definition of "sustainability" under ground water management law is, "the development and use of ground water in a manner that can be maintained for the present and future time without causing unacceptable environmental, economic, social or health consequences."

MR. MCKINNEY: Mr. Chairman.

Ben McGee of the USGS in Ruston, in the Ruston area, has said it numerous times. We must have sustainability data. In other words, you can't really do much of anything else unless you have that. So whatever it is, as I know Arkansas has four, three or four different bullet points, but we desperately need sustainability benchmarks.

MR. ANGELLE: Right.

MR. MCKINNEY: Other than generically as he's read.

MR. ANGELLE: So your opinion is, is that, is that the generic -- that may be a goal. But you think to manage the resource, there needs to be a water level? I'm trying to understand the message that you would have there.

MR. MCKINNEY: Well, I don't know the exact bullet points that I would put to the test. But I'm saying that each aquifer, obviously, is going to have different characteristics. So, therefore, whatever would be appropriate for that aquifer level or that stream or that lake or whatever it is, it needs to be something that shows us

that you're not taking out more than is going in or is in there already.

MR. ANGELLE: So for you, sustainability is, is a mathematical equation that the withdrawal is not more than the, than the recharge?

MR. MCKINNEY: To an extent that you have set whatever that elevation is. I have no idea. But you're correct.

MR. ANGELLE: But, obviously, adjusting for some seasonal --

MR. MCKINNEY: Exactly. Exactly.

MR. ANGELLE: -- situations measured over time.

MR. MCKINNEY: Some trigger point, sure.

MR. BURLAND: Mr. Chairman, I would have to chime in and kind of complement our current definition, because I think it brings up things other than metrics that are important. And that is, economic viability, health issues, other -- mentioned some other things with regard to an area or a locality that I think come into play, not just, you know, whether it's below the top of the

aquifer. You mentioned, yourself, the idea of drawdown past where most of maybe the domestic well users are -- where their pumps are located, that sort of thing. So I think we have got to keep it as flexible as possible.

Obviously, if we set a definition in metrics that we can't pump below the top of the aquifer or, or we can't pump more than we recharge, you know, you are going to shut down industry tomorrow and other -- and maybe even some public water suppliers. So, I mean, that's -- you know, I think we have to be careful how we set those parameters.

MR. ANGELLE: Well, yeah. I guess I agree.

One of the concerns that I would have would be in, in the drought conditions that we had this past year, we, we probably would have pumped below a certain level. And the idea is that that's what we, we had to do. And if sustainability is a hard and fast line, then, then you are, for a moment in time, would be negatively impacting the entire user group, when history shows that we

do have those periods of drawdown but also followed by periods of recharge.

So I agree. I think we need to find some, something that -- I think Mr. Ted is driving at something and I do believe -- I think folks need to understand -- and I think you put a -- you know, one of the things that came out of one of our meetings in the Sparta is that it was 17-million-gallon-per-day deficit. Now, I don't know if that's a -- you know, that's a big number if you're talking money. That may not be a big number if we're talking water. Okay. And then I think solutions are then driven around, okay, well, what did the Graphics Packaging plan -- plant do, and, and, okay, that's a 10-million-gallon-per-day diversion. So that means that we have a 7 million -- now we down to 7 million.

It gives, I think, managers goals. So it's probably a combination of some numbers and some of that broad type of language.

MR. BURLAND: And I think it moves across to surface water issues, too, because in the Ouchita and the Sabine and creeks that

flow off of there during the drought, the levels were so low, a lot of industries couldn't discharge --

MR. ANGELLE: Wastewater.

MR. BURLAND: -- you know, with their wastewater --

MR. ANGELLE: Right.

MR. BURLAND: -- into the streams. And I think working with the Corp and having the flexibility with the local governments who, who happen to own or manage, you know, surface water impoundments, were able to release water and, and work together in a cooperative environment, rather than look at a metric and say, well, if the water falls below this level, you know, we are turning the faucet off. So --

MR. SPICER: There's --

MR. BURLAND: -- that's my comment.

MR. SPICER: -- there's other things you can do rather than just turn the faucets off, other management tools you could use. And I think that if it falls below the top of the aquifer, we shut it down. No, you take conservation measures and, and implement

other measures to address that.

MR. LOEWER: So what we are saying is, that right now we have a ruler that's just tells you it's nothing on it. It's either longer than the ruler or shorter than the ruler. And we need something that has some lines on it, some marks on it, and not just for the sake of numbers, metric, but, but so that, so that you can measure where, where you're at and know what you have to do in the time --

MR. SPICER: That's -- what you have to do when you reach the threshold.

MR. BOLOURCHI: Is this on?

I want to mention that what they use in Arkansas, it may be appropriate for that area, for that aquifer, but it may not be appropriate or usable in other aquifers, even in Monroe area, for instance. The depth of sand there is 150 or 200 feet in Arkansas. It maybe seven, 800 feet in Louisiana, No. 1.

No. 2, in the past 30 years, all the studies that we have done is related to water use, how much we pump, how much is being used. To my knowledge, we have never ever

done any sustainability studies.

And in my opinion, if you really want to know, we have to know how much water we have stored in each aquifer, and then how much we pumping out, how much we get recharge. In other words, determining the budget for each aquifer. So much water, rain, gets in, so much comes out, and so much. This is in storage. Then it becomes simple, very simple, to decide what's the sustainability.

Sustainability based on the water drop below the sand is not valid, basically. May be valid in Arkansas. That may be just a policy, may be a policy, but that's not based on science.

So where we need to go, in my opinion, the next studies that we going to be doing should be sustainability for each aquifer. Every aquifer is different. Thank you.

MR. MAYS: Just one point to the sustainability part and I --

MR. BURLAND: To sustain.

MR. MAYS: -- I will address this to someone that knows a lot more than I do. But

if you continue to pump more than it can sustain, and, and it cannot recharge ever back up to the point that it ever was. So that has to be part of a definition, too. It's not like surface water. These guys can point that out. Just like a dried up sponge. It will not absorb as much water next time. So you get to those levels like that, and you get past the point of being able to correct it through conservation or whatever effort is out there.

MR. BOLOURCHI: That's given. That's, obviously, true to consider, that's right.

MR. KILLEBREW: Anymore comments on that particular issue?

Okay. The next question is, Should we require public supply, irrigation, industrial and other non-domestic well owners with wells above a certain size or withdrawal capacity to report production to the state?

And I might ask also, is there any intent to require this type of reporting in impacted aquifer areas?

Gary, can you shed a little light on that, please?

MR. SNELLGROVE: Currently, as far as DNR's jurisdiction, the only reporting for production that's required is for the areas of ground water concern in the Sparta aquifer. Outside of that, there are no requirements for water production to our agency. Only if we, by order, require it on a case-by-case basis as we are evaluating, say, a proposed installation, a new well installation.

MR. KILLEBREW: Should this be part of the management plan, this type of reporting?

MR. OWEN: Well, I might add, Mr. Killebrew, that that type of reporting is already the norm in the Capital Area Ground Water Conservation area.

MR. KILLEBREW: Okay. Any further --

MR. FREY: I have got --

MR. KILLEBREW: -- discussion?

MR. FREY: -- a question for Gary, in particular.

Gary, and I think we discussed this at a previous Commission meeting, but I was unaware that there were actually public water suppliers that didn't have meters on their,

on their individual wells -- not wells, but on their individual locations. I talked with Gene about that. But do you have any idea how many suppliers, public water suppliers, are out there are strictly operating on a flat rate versus metered conditions at all the various residences and other users?

MR. SNELLGROVE: I don't have any information on that particular topic. It's my understanding that it's an OPH requirement, DHH/OPH requirement, that meters be placed on public supply wells when installed. But there's no requirement for them to do anything with the meter as far as providing production data into the agency.

MR. FREY: But, you know, it just appears to me that if somebody is playing -- excuse me, paying a flat rate, they are not going to be involved much with conservation measures or could care less if they are paying a flat rate, versus if they, you know, if they paid based on their usage. If they are paying based on their usage, it's going to -- you have a different mindset. And I think that needs to be addressed, you know,

before we get into other issues like, like flow meters on irrigation wells, for instance.

MR. KILLEBREW: You had a comment, sir?

MR. LOVELACE: Yes, sir. I was going to say we do have what we call our water use program where we estimate water use in Louisiana on a five-year basis. And that, that data is very heavily used for management purposes. It's for knowing how much is being taken out is vital, really, to managing the resource and data. You have to have that data if you are going to go into sustainability issues, which I'm sure we'll be getting into ground water modeling. Right now that's where we are getting the data every five years.

DOTD and, I think, DNR now have had the power to collect, to collect that data, and it's been coming to us. We put it together. It's very important data to have.

MR. SNELLGROVE: I will add to that. What John is referring to is a statutory law that's pretty broadly written that, that

essentially gave formerly DOTD under their authority, now under DNR, to, to require well owners to provide various types of information to the agency as it's deemed necessary. And production data was one of the items that, that's listed specifically as I remember in the actual statutory language, along with, perhaps, water levels and other conditions as it's deemed necessary.

We haven't -- Conservation hasn't exercised that authority at this time. It is certainly something that, that we could consider to do, but we just haven't done that at this time.

MR. ANGELLE: Do you know the -- I'm sorry. Go ahead.

MR. SPICER: Does it state how that data is to be collected or how you measure that? That's the key.

MR. SNELLGROVE: The law doesn't provide for how to go about obtaining it. It just states that, if needed, the agency can, can seek and require the well owners to provide it.

And that is a good point. I mean, we

had discussions in the past about flow metering or flow meters versus calculations or pump rates or finding other ways to determine production. And, and we certainly are open to, to the most efficient and effective way to get the information. If a meter is not that or it's cost prohibitive or it's an issue with maintenance, then we certainly are open to other ways of getting that data that are more objective than, say, more broadbased calculations in general, but more site specific/user specific as we can get.

MR. SPICER: User specific with, with irrigation, as an example, rice. It's pretty easy to get a pretty darned good calculation of how much is used in a season per acre. And that's pretty reliable information you can gather there.

MR. BURLAND: Gary, in the areas of ground water concern, what are the additional reporting requirements that are now required by the Office of Conservation? Is it just large volume well users?

MR. SNELLGROVE: No, sir. It's any

well owner other than domestic.

MR. BURLAND: Okay.

MR. SNELLGROVE: So regardless of size or, or other purpose, they are required on a monthly basis to provide production data, if they are within those established areas of ground water concern.

MR. BURLAND: You mean pumpage rates, or what data specifically?

MR. SNELLGROVE: I think they are provided in total volume per month.

MR. BURLAND: Okay.

MR. SNELLGROVE: It's a form that they complete, and they certify and send it in, you know, trailing month. I think they've got two months to submit from a particular month.

MR. ANGELLE: So my comment is that sustainability is achieved through management and regulation that is necessary, and only necessary, to, to achieve sustainability. And that may, that may be not worded exactly right. But there should not be more regulation than that which is necessary to achieve sustainability. So I think it does

make sense that in an area of ground water concern, you say I need more information. Okay.

In the areas where, where the monitoring wells and, and the data shows that sustainability is not in question, then I think it's -- it would be poor public policy to tell people we want detail on this information because information is useless to us anyway, other than to fill out some report that goes on a shelf that -- so estimates seem to work for me.

But I think that, again, you know, when, when, again, using the patient, when we present and we have, you know, issues of health, we tend to run a more battery, a bigger battery of tests or wider battery of tests in that area which, you know -- but we don't run the same test on everybody all the time. And I think that's a good analogy.

MR. LOEWER: Mr. Chairman.

In our conversations on this issue after some of the reporting has gone out, this has probably been the most passionate, whether it should be earth wells or not,

particularly in rice irrigation, that the Chicot is very involved in. And we, as a member in the farming community, we have a saying that says, if you can't measure it, you can't manage it.

But this isn't about whether you should measure it or not, it's how you should measure it. I think we all think that understanding how much we use is very important. It's, it's different -- even in accounting, there's a different way of measuring, you know, a full auditing or a review. There's different ways of arriving at numbers that are, that are efficient that are cost benefit.

MR. ANGELLE: And USGS puts out the report every five years that does group it, and that seems to be a good enough number, if you allow me to use that phrase, for purposes of guaranteeing sustainability except in those areas where ground water concern has, has. So, yeah, having information to the level that you need it to manage, I think we are saying the same thing.

MR. LOEWER: You need more X-rays when

you have a tumor than when you don't.

MR. ANGELLE: Exactly.

And just to speak to the whole metering thing, because, for whatever reason, as presentations were made across the state, it's difficult to have these kind of questions posed to the public without the public reacting in the way, in this particular case, the way the agricultural community reacted. To me, the great thing about asking the question and, and seems like where we are going to, is that we can report to the legislature that we have asked that question. We went out, we got public debate, and we believe that it is not necessary to do it when we have answered that question. So some questions have to be, to be asked.

MR. LOEWER: Absolutely.

MR. ANGELLE: They tend to, they tend to, you know -- we all have stakeholder groups and they tend to react to why you even asking that question. Well, sustainability means that we need to know.

And so I appreciate you bringing that up. I wanted to clear the air on that. I

got a few letters that I'm not so sure my mom wasn't one of them.

MR. SPICER: Me, too.

MR. ANGELLE: Did you draft them? Did you draft them? Told them where to put them.

MR. KILLEBREW: Comment.

MR. COLVIN: Yes. I think when you talking about actually monitoring the wells in a sense, as far as metering, you know, definitely I think you need -- all this goes hand in hand. You could start at the top of this page and go to the bottom of this page. And the agenda here is, you know, do we need monitoring? And I think we all agree we do. I think it's the basis for everything else that we do.

MR. ANGELLE: That's what I say.

MR. COLVIN: If you don't have a monitoring program, the depth of that monitoring should be, according to the amount of how critical that situation is. Well, it's obvious in the state, we know the situation, for the most part, which aquifers are the worst. So naturally the resources, the, I guess, the focus should start there

and work outward. We almost need a tier result as far as like a Christmas tree. You know, if you have an aquifer and it is, it is sustainable through well monitoring, through observation well monitoring, it is sustainable, and it is sustaining itself, even though you have fluctuations throughout the year, don't focus resources on that. If for some reason it does become a situation through that monitoring, you know, that you do over, you know, whether it's once, twice, four times a year, you know, if you accumulate that data over two or three years and it does show that there's some needs there, implement, you know, education, some like -- you know, try to address that situation in a like way.

Naturally, that would be a lot different if it's just like in the Sparta. I mean, you have got a serious issue. You need a lot more regulation, a lot more implementation of, you know, not only monitoring, but, you know, education, managing, and everybody is involved in that needs to be more involved in that.

So I think it all comes down to, you know, the whole discussion about monitoring is, it's the basis for start, for starting a process, and it's also the basis for keeping the process where it needs to be, in a sense.

MR. BURLAND: And, Mr. Chairman, if I could follow up on your comments, and yours as well, that it also needs to be economically tied or matched with our response to what is it this Commission wants to do. For instance, you know, designating areas of ground water concern is one thing, but then managing, implementing policy, and then assessing the results after a year or two of close management, you know, would at that time be a time when restrictions could be lifted. I'm not saying that monthly reporting is burdensome on a business, but you have to look at the economic impact. Somebody has to be paid to prepare a report to put on that shelf. And if it turns out that after several years or after several months of close monitoring, that maybe a three-month or a six-month report is -- because, obviously, how quickly can we deal

with a critical -- with an area of concern or critical area if tomorrow something was discovered in an aquifer? You know, and I don't think that, you know, do we then go to daily monitoring of, you know, of certain well users. So I think we also have to be consistent when we plan out how we monitor, make sure we have a technology and a system that's not overly burdensome or inappropriate to the responses that we can naturally effect on that aquifer. That's just my thought.

MR. KILLEBREW: Any further comments?

The next question, I think we have already addressed it in the previous comments to a great extent. So I, if no one has an objection, I think we will just move past that and go on to the next one. Except for the fact I just wanted to, point of clarification for my own thinking, the gentleman from geological survey said that ground water production is measured through more or less an indirect method of water use as opposed to, to the monitor metering. Is there a connection there or did I misunderstand that?

MR. LOVELACE: In some cases. We directly contact public suppliers, industries, large commercial establishments, power generation. By and large a lot of those have at least a master meter or some way to estimate their, their pumpage. For large groups, domestic well owners, irrigators, agricultural folks, we estimate that pumpage based on various, various other information such as crop acreage, number of people on domestic wells, all based on census data.

MR. KILLEBREW: All right. Thank you, sir.

Let's go ahead to the next one, then. Should ground water production reporting be limited to certain areas within aquifers and/or certain aquifers, or should ground water production reporting be applied statewide?

Gary, do you have any?

MR. SNELLGROVE: Yeah. I think we kind of hit on that one pretty well. I think the consensus that I got out of it was that it shouldn't be statewide unless, you know,

it should only be aquifer-by-aquifer as it's warranted based on what our monitoring network is showing where the areas are, are required or need to be.

MR. KILLEBREW: Okay. More comments on that?

MR. ANGELLE: I totally agree.

MR. KILLEBREW: Okay. Should the state rank (prioritize) aquifers on their sustainability so we can apply resources to the most troubled?

I think we have also talked or spoken to that particular question. And there seems to be some consensus that that's probably something we ought to do.

Any other comments on that?

The next question, Should Louisiana considering improving surface water quantity measurements in areas where surface water is likely to be a supplement or alternative resource to address ground water sustainability issues?

MR. ANGELLE: That should be quality. That should be water quality measurements.

MR. KILLEBREW: Yeah.

MR. ANGELLE: So I recall this being discussed in a way that if our management leads us to recommend that surface water be used as a solution to deficit ground water problems or ground water sustainability problems, we would certainly want to make sure that the surface water that is being targeted for the solution has a water quality that makes sense. So as you understand what's in the bull pen to come out onto the mound to help, you need to make sure that, again, by analogy, the pitcher's arm is in good enough shape to come onto the field.

And so I think the answer is yes, we should consider whether it's improving -- probably the better word is "expanding" -- our surface water quality measurements in areas where we feel like surface water may be the solution for ground water sustainability problems.

MR. BALKUM: Mr. Chairman.

I would say that it needs to be quantity against quality. You know, I have the privilege of working with your staff on cooperative endeavor agreements. And because

of the drought, we do know that some of those agreements have virtually dried up. Wildlife & Fisheries, we're obviously concerned about fisheries habitat. We understand the need to reduce pumping in our aquifers, but we also want to see that our wildlife and fisheries resources are provided for.

So we do recognize that sometimes we don't have the water level data to make good decisions. What we hear from staff, I think we are doing a pretty good job. We are doing the best we can.

MR. ANGELLE: So quantity and quality?

MR. BALKUM: Yes, sir.

MR. KILLEBREW: So essentially what you're saying if the surface water is used in lieu of ground water, we need to know if it can sustain the ecosystem and not have adverse effects to it?

MR. BALKUM: Correct.

MR. KILLEBREW: And I think we just spoke to both those issues here.

Let's move on to the next one. Excuse me.

MR. MILLER: If I might make another

comment.

MR. KILLEBREW: Yes, sir.

MR. MILLER: Yesterday at the Coastal Protection and Restoration Authority meeting, it was extensive discussion about use of Sabine River water. Part of it centered on the fact that it was beneficial in using the surface water to replace the ground water, but there was also an extensive amount of discussion about trying to balance use of water in coastal restoration activities because there's a need for water nutrient there as well, and that any management plan, including our water, our water management plan, needed to take into account those coastal issues as well. So it's important that as we look at, at what we are going to do with the water resources in the state, including the surface water, we need to also be looking at how that impacts the coastal.

MR. SPICER: It's not limited to, to coastal resources. The impact of freshwater moving into the coast also impacts agriculture. Because flushing salt out, moving the salt out, keeping the salt away

from coming back in, agriculture has become saltwater for irrigation. And that's, that's not acceptable. So it's, it's really difficult to try to separate these water sources. Doesn't work every time you try to do it.

They are all connected and the uses are connected. Until we get to the point in this state where we can see that as one package, it's going to be difficult to manage.

MR. BOLOURCHI: Mr. Chairman, just for everyone's information, we discussed about monitoring the station of ground water this morning. Just for everyone's information, our present surface water network with USGS, has 184, 184 monitoring stations. Now, they are not all discharge measurements. Only 33 discharge measurements. The rest of them are related with the stage and flood profile. Also, we have 36 water quality stations.

And in regard to ground water, there's information that, perhaps, is good news, that presently we have 45 water quality measurement stations. That's more than 1984.

So that's good news. That show you that there's been a lot of talk on the monitoring well or water quality monitoring.

MR. ANGELLE: So quality has, water quality, has been more the emphasis as perhaps quantity has, again, not been as big of a concern.

MR. BOLOURCHI: Right. The size of the network is directly related to the availability of funds. If the funds is not sufficient, then you spread your stations to cover everybody.

MR. KILLEBREW: Any further comments?

We're getting a little bit short on time, so I would suggest we --

MR. ANGELLE: You are fine. I think we can do it.

MR. KILLEBREW: Okay. Thank you.

There was a reference to modeling earlier, and then this question addresses that. It is, Should the state further investigate the necessity, timing and resource commitment for developing, implementing and maintaining ground water availability modeling?

Of course, as we all know, modeling is a very expensive enterprise. We have looked at how this has been handled by other states. And I think Texas, I have been told, has a very good monitoring program. Certainly, Texas has a vested interest in, in addressing it's ground water supply issues because its surface water supply is questionable.

I think Jeff has some information he might want to share with us.

MR. JONES: Right.

MR. KILLEBREW: Thank you.

MR. JONES: Actually, as you said, in Texas what really started it off was a severe drought in 1954-56. And as a result, in 1957 the Texas Water Development Board was created and -- by an act of legislature. From that point on, Texas, as you very correctly stated, Texas without, without a Mississippi River, without anything associated with a river such as the tremendous alluvial aquifer system, Mississippi River Alluvial associated with it, Texas, again, my understanding is, there aren't any lakes in Texas. There are reservoirs. So Texas had to do something.

They were in, in a very severe situation and, you know, they are in a severe situation right now as well.

So they have, through their Texas Water Development Board, have really put together a tremendous program where all nine major aquifers and all 13 minor aquifers throughout the state have models, ground water availability models. And, again, we are looking at regions, ground water management regions, that they have developed, that are also on a county-by-county basis as well. And they also have water districts established throughout the state.

I think the main thing is that Texas has done that, they had to, and, again, they have consultants. But mostly, as, as we talked with John Lovelace of USGS, that's what USGS does. And that's what they did for Texas.

That's also what they have done for our neighbor to the north in Arkansas, is they have actually put together -- what it is is, it's the assessment, the ground water availability of the aquifer systems within

the Mississippi embayment. That's primarily the Mississippi River alluvial aquifer system, which, to, to just give you an idea, John and I were talking earlier, they have actually got problems. They have withdrawn so much with regard to their irrigation there and usage of the MRVA.

In this state right now, everybody says go to the MRVA. There's no possibility. It's recharged constantly by the river. But there, in portions, you know, they do have -- they have got problems with, with depressed water level and declines.

But what, what the ground water availability models have done, also I will say this, for north Louisiana, this is a 2011 document that has just come out. It's part of USGS's regional planning ground water availability studies. They have a number of others that are in progress, but the Mississippi embayment is complete. The other one that is complete is the -- it's actually the one that was put together for -- it's the, it's the Floridian aquifer in, of course, in Florida, Alabama, but also in

Mississippi as well. So Mississippi is covered really by two -- has two of the ground water availability models. And Arkansas has got, has got the one that's also associated with Louisiana.

So Louisiana, Louisiana, what we are doing, is we are -- actually, we have a portion of the MRVA, the Mississippi River alluvial, and we have also got -- they call it the middle Claiborne aquifer. That's the Sparta. Effectively, it's the Sparta and, and a few other minor aquifers within the, within the middle, the middle Claiborne system.

I will say this: Again, I see, I see us continuing to, to work with USGS, but I see USGS now putting together a model for the Southern Hills aquifer system that's here in the Baton Rouge area. We have been doing this project, project-by-project, need-by-need. And, again, work has also been done on the Chicot aquifer system, this ground water availability modeling. But, again, it's the stressed aquifers that we were talking about before.

MR. KILLEBREW: All right. How, how, how do we fund that type of an effort? For example, Arkansas/Louisiana model you referred to, is that a cost-shared?

MR. JONES: I'm not, I'm not sure about that. I can definitely look into it.

I do know that the Texas Water Board, they have had, they have had a trust fund established from an early, as I said, 1957. They are looking at 2.3 billion that are in that fund at this point.

Again, there are various ways of going about this type of funding. But, again, with regard to the embayment study and the Floridian aquifer study, I'm not sure where all the funds came from for those, but I definitely will, will look into it.

MR. KILLEBREW: Thank you, Jeff.

MR. FREY: I had a question about the model. Can I assume that that model takes into account the recharge area, the acreage within it, the land use, land types within that area?

MR. JONES: Yes. Yes, it does.

MR. FREY: Okay.

MR. ANGELLE: I know, Mr. Mickey, you had a question earlier about modeling. I don't know if this discussion addressed your concern.

MR. MAYS: No. I think it's very important. I guess, maybe, the USGS will come up and tell us what they need to do for a proper model. I think they are, according to Ben, that we have a pretty good model of the Sparta up there. It may be as good as any in the state.

Would you agree or disagree with that?

MR. LOVELACE: (Nodding head.)

MR. MAYS: And we have had the Police Jury, we have participated as far as southwest Arkansas goes, some of their funds came, and they basically established a water district and had some revenue to do some things with and to match and have some matching money. So I don't know if that's answering any of the questions or not on that part.

MR. ANGELLE: So the model that's -- can you, can you speak to the, to the Sparta model that you're aware of. Obviously, you

said the Lincoln Parish Police Jury put up some resources.

MR. MAYS: Well, there was a whole combination. We had some federal grant money that we went after, the local money went after, and USGS, and I'm not sure if, like, just recently we asked for some money to go to Arkansas for some monitoring wells. And, obviously, those monitoring wells are part of the model.

MR. ANGELLE: Who owns the model? Is that --

MR. LOVELACE: The USGS has the model. So it's available to the public.

MR. ANGELLE: Right.

MR. LOVELACE: We --

MR. ANGELLE: I'm sorry. Any idea what the average model in the average situation costs? Your head is shaking no. No way? I mean, just, I mean --

MR. SNELLGROVE: How about the example from the USGS model you are developing for the Capital Area?

MR. LOVELACE: That's running about $700,000.

MR. ANGELLE: That's to design the model?

MR. LOVELACE: For the Southern Hills, yes, sir.

MR. ANGELLE: To design?

MR. LOVELACE: Yes.

MR. SNELLGROVE: And how extensive is the reach on that model?

MR. LOVELACE: It extends up into Mississippi across southeast -- basically it covers southeast Louisiana down to and just beyond the Baton Rouge fault. Trying to capture all the freshwater zone north of the fault. Also take into consideration the saltwater south of the fault.

It is a solute transport model, it's not just a flow model, which adds a whole new dimension to it. It's a very complex as model goes. It's as complex as models go.

MR. ANGELLE: Right.

MR. LOVELACE: Has many layers in it.

MR. MCKINNEY: I know Ben McGee has told the Sparta Commission that the model developed for the Arkansas group would not be suitable for the Sparta in north central

Louisiana because of the clays and the sands and a number of other things. So they are designed specifically for the region, as I understand it.

MR. ANGELLE: Right.

So I would give a big old resounding yes to question No. 2 on the screen, which, which is you definitely need to determine cost, timing, those kind of things, because I believe we are going to be held to, to having that kind of information by, by others who ask us of that. And, again --

MR. OWEN: That's -- Mr. Moderator -- though, I think it's important to distinguish in the development of the solute transport model, that that model, itself, is being built on the back of 25 or 30 years of data gathering in this area. So the $700,000 is just a tip of the iceberg for what has been invested in that, in that overall compilation data over the years.

MR. ANGELLE: Good point.

So I think that, certainly, the reason that we put Monitoring as our first item for discussion, everybody would agree that it's a

robust monitoring investment that leads to these other opportunities, and, certainly, in the Capital Area, they have been monitoring, perhaps, before it was cool.

MR. LOVELACE: We are using pumpage and water level data since about 1940.

MR. ANGELLE: 1940.

How old are you?

MR. SPICER: Which makes it that much more reliable model.

MR. LOVELACE: What's that?

MR. SPICER: I said it's much more reliable model with that kind of data.

MR. ANGELLE: How old were you, Mr. Brad, in 1940?

MR. SPICER: I'm as old as soils, so...

MR. MAYS: Scott, I just want to ask, when they prepare or are trying to work on or fund for a model, and, I guess, as you go from Sparta to Sparta, whichever one mark is in the worst condition to prioritize that, is -- what, what does the USGS need to get a good model?

And I will go back to James' point

there, that I was wondering how could you have good model with just monitoring if you don't have some data on pumpage? I don't understand that. There seems to be a disconnect to me. So I would like to, to hear your comment on that.

MR. LOVELACE: You really need good pumpage data. It's pretty vital to the model.

The way modeling technology has gotten these days, you can estimate anything. There's routines, computers will grind through this and estimate it for you. But the more parameters you have to estimate, the less reliable your model will be. So pumpage is something that's kind of obtainable, and, and pumpage and the water level data especially.

MR. ANGELLE: You would agree that modeling is not necessary in areas where monitoring shows no sustainability issues?

MR. LOVELACE: Yeah, I could, I could say that. If you are not -- if there's no big concerns, why do the model?

MR. ANGELLE: Okay. Got you.

So I think I'm trying to get to a point where if an area of ground water concern and sustainability of Sparta is ranked as questionable, whatever is the right word, that pumpage data may be more necessary in that area to, to have a more reliable model?

MR. MAYS: I agree.

MR. BALKUM: Mr. Chairman, I would just like to say, let's not reinvent the wheel.

You-all may recall LSU presented a Chicot model to us a couple -- several months back, couple years back. An impressive model to me. Of course, I'm not an expert. But if that is deemed important, let's not create our own Chicot model.

MR. ANGELLE: Right. Sure. Sure.

MR. KILLEBREW: Okay. More comments about modeling?

MR. ANGELLE: That would probably be a collaboration issue where we would be reaching out to academics. I know I saw academics somewhere on here. All right.

MR. KILLEBREW: Okay. The next

question, Should capital outlay and fiscal policy be tied to compliance with production metering or quantification and reporting for public supply well owners and other well owners seeking state funds?

I must confess, I don't know the background for this particular question. So I have to rely on someone else to --

MR. ANGELLE: I will address it.

MR. KILLEBREW: Thank you.

MR. ANGELLE: So if, for instance, the policy of the state were to become, say, for public supply, public suppliers, that the policy is you shall have a master meter and you shall report to us. I doubt if there's going to be, you know, civil penalties, if they don't. I don't think that's what we are talking about using a stick.

The question would be that if you are in non-compliance with that, but, yet, you are now applying for capital outlay monies to improve your plant, your well, your treatment system, whatever, and you, you haven't checked the box that you have been in compliance with this policy, then you would,

by matter of public policy, not be eligible to, to receive these kind of funds. Again, using the, perhaps, a carrot. One might say that's a stick, but...

MR. BURLAND: That's what I was fixing.

MR. ANGELLE: Yeah, yeah. Well, yeah, yeah, but you always say --

MR. BURLAND: That's why I'm here.

MR. ANGELLE: Right. No, I understand.

MR. BURLAND: And let me say, you know, the reverse of that is, from the public -- from the private sector view, is that, gee, wouldn't it be great to be able to use state capital outlay and financial incentives from the state or other entities to purchase or subsidize the cost of that compliance by purchasing the meter. I mean, I think PSC or Entergy or someone has a program about residential metering of electricity and how -- I think there's some subsidy program being worked up, if it isn't in effect already. And I think, you know, we could look at something like that to assist

these well owners to, to, you know, to reach compliance.

MR. ANGELLE: Well, you know, and I'm happy to have the discussion. I think what I'm saying is, that, you know, by analogy, we have a, a Coastal Master Plan, and there's been an executive order signed by the Governor that says every state agency must comply with the Coastal Master Plan. And I will give you the for example.

Prior to that kind of coordinated efforts, not because it was anybody's fault, DOTD -- and I think I have my facts right -- DOTD needed to build a bridge over Highway 1 -- I mean, over Bayou LaFourche on Highway 1. They went forward doing that. And in another room in another building, another state agency, DNR, was planning a diversion off of Bayou LaFourche or doing some work on Bayou LaFourche. And the bridge that we spent taxpayer dollars on end up, ended up being a problem to accommodate the Coastal plan.

So as a matter of operation now, when you want to do those things, even though you

don't need a coastal use permit, say, in this example, DOTD would check the box and say, you know, does this in any way over the next 25, 50 years kind of compromise, you know, what it is what you are trying to do.

And I'm simply saying that I think there needs to be some discussion. I mean, this clearly is, is an idea for the legislature to decide. You know, I understand my limitations and where I'm at on the food chain, and the food chain should not be about us adopting something that says nobody gets capital outlay money unless they put a master meter on, on their public well supply.

But I think, again, the legislature wants us to ask the provocative questions to help guide that, and that's what this is.

MR. BURLAND: Well, and I don't disagree that there shouldn't be some level of, of compliance or minimum standards for people to apply for those kind of funds and check those boxes. I'm not arguing against that. I was just kind of expanding it into more of an incentive to get it done rather

than a disincentive.

MR. ANGELLE: Right. And I was probably more talking about public supply as opposed to just private operators. And maybe it would be reversed in, in or added saying that the first of your capital outlay monies that you would be eligible for should be used to pay and install the master meter. And once you got that, then you're in compliance. That we are not going to give you any more money until we give you some money for this purpose and then you move forward.

You know, I know Chairman Fannin has spoke to me a number of times where he's getting requests to do water -- community water enrichment programs when he has knowledge of a particular system that the billing versus the production is not matching up. And I realize there's some, some percentage for unaccounted use, but that's, to me, a function of a major leak somewhere along the line. And if it's cheaper to, to not worry about the leaks than to spend money on it, because they are not responsible for managing the resource, you know, I get that.

I mean, it's not good long-term management, but it gets you out of a bind for the next, you know, budget. And, and, I guess, trying, trying to establish that, that, you know, if it takes us 10 years to get to a point where every -- we are going to pay, for instance, out of a community enrichment fund, community water enrichment fund, our focus is going to be master meters. That, to me, is management of our fiscal policy being consistent with our, with our, hopefully, our master plan here. I know we are saying something.

MR. KILLEBREW: Any other comments?

MR. MILLER: Mr. Chairman, one of the things that DEQ has done is, actually, looked at, you know, classically we have dealt with the wastewater side of things. But we have, actually, looked back at the metering aspects of systems, so that if you minimize the amount of water that's coming in for treatment, you are actually winning on both ends.

MR. ANGELLE: Right.

MR. MILLER: The limited capacity of treatment system is, is improved because you

are not treating water that you shouldn't be dealing with in the first place. It's also beneficial to the ground water system that you are not wasting any water. So we have, actually, been in some projects, we have actually incentivized folks to actually do metering, improve their metering, as part of water type project.

MR. ANGELLE: Mr. Incentive likes to hear that.

MR. MILLER: They are hand in hand because the two issues are connected.

MR. ANGELLE: You are right.

MR. LOEWER: I understand why this is listed under Monitoring, because it deals with monitoring, but also it's incentive enforcement also.

MR. ANGELLE: Correct. Correct.

MR. LOEWER: I would like to make a comment that's probably under Enforcement. But if the law is that you have to comply, you should be complying not because you can't get capital funding because you don't. You should be doing it because that's what you should be doing, not because you may not get

capital funding.

MR. KILLEBREW: Okay. We are down to our last question: Is there agreement that monitoring is the fundamental and key component to aquifer sustainability discussions and ground water budget design planning and management decisions?

Well, I think that's -- my feeling, that's a pretty good summary of the whole idea of monitoring. Does anyone have any comments about that?

Does anyone have an additional question that we didn't anticipate in our list?

Any other comments?

MR. ANGELLE: Good job, Mr. Killebrew. Good job.

MR. KILLEBREW: Thank you, sir.

MR. ANGELLE: Okay. We, obviously, have folks that are scribing, and, you know, this will come back to you in a, in a report. So we are going to move on to the 1:45 session. We are 15 minutes late. That's not a problem at all. And we are going to turn it over to Mr. Paul Frey from the Education

standpoint.

MR. FREY: Is this thing on? Is it on now?

MR. SNELLGROVE: Yes.

MR. FREY: Okay. We are going to move from something controversial to something easy. Everybody is awake?

As Secretary Angelle mentioned earlier, he added water conservation, and that definitely is a connection and a tie-in to Education. It's one element of Education. And I think we will probably address that as we go along.

But just to set the stage, I want to compliment the Office of Conservation for the progress they have made in the educational arena. I know first-hand that it's, it is, in fact, reaching the classrooms, because I have got an eight-year-old granddaughter who fussed at my daughter, her mother, for leaving the water running while she was brushing her teeth. She took that home with her, and she's, you know, pointing that out to her parents. And, you know, just an observation that, in fact, we are reaching

those kids.

But in addition to reaching the young and the youth of our state, who are, in fact, our greatest resource, I think we need to also improve on the educational efforts of all users of water. And so I would like for you to consider that as we go through each of these elements that are identified. And with that, unless anybody has anything to add, we will go ahead and just get into the individual items.

Okay. The first one and I -- yeah, it is on the screen -- Should the state direct resources toward the establishment of ground water education and water conservation curriculum in elementary or higher grade levels statewide?

As I mentioned, there are programs in place currently, but I would like any comments in regard to that first item.

MR. SPICER: Well, now that I'm acting chair, I will, I will -- yes.

Department of Ag and Forestry Office, we have a Project WET program, educational program, that reaches thousands of teachers.

We train them in all aspects of water, including water conservation. That's an outstanding effort. I think our problem is we just don't have resources to do all we can do with it, with that program. And, of course, we have other programs within our soil and water conservation districts for education.

MR. FREY: And Project WET, Brad, as I remember it, is actually aimed at the teachers. The teachers go through a workshop and they carry the material back to the classroom.

MR. SPICER: And we have been fortunate, we have had the Louisiana Association of Conservation Districts has donated money to buy the manuals, which means that we buy them through Wildlife & Fisheries, I think, at a special rate. But I think they are 25 bucks a piece or something like that. The teachers, they are volunteering their time to receive this training, and, and it wouldn't be fair to charge them also for materials. So we buy the materials through funding from other

associations in the state. A very good program.

MR. FREY: Mr. McKinney.

MR. MCKINNEY: The Sparta Commission has only one paid employee, and that's an education person, the person of Lindsay Gouedy. And we also -- she also does Water Fest for the Lincoln Parish and Claiborne Parish area and for fifth-graders. So it takes a tremendous cooperation with the school systems to do that because they transport the kids there, lunch is provided in several cases, or I guess in both cases, and a very extensive program is put on. And, again, it's not only what we as the state can do, but it's what those school systems are currently doing. And it's working extremely well.

MR. SPICER: Yeah. We participate in that effort up there. I think the last session we had, we had over 400 students.

MR. FREY: All good comments. And I would -- Gary.

MR. SNELLGROVE: Yes, sir.

I just want to add a little clarity to

that bullet item.

This question was, was derived from a recommendation that came out of the E and U report that focused on establishing or pursuing in the state grade-level expectations and curriculum through the state education, Department of Education. So, so bear in mind that that's really what this first bullet is about, is, is pursuing, perhaps, should we pursue ground water education and water conservation curriculum as part of the required or mandated grade-level expectations so that each teacher in the system will be required to -- right now it's my understanding that they are not required to. There are no grade-level expectations for ground water conservation or ground water education or ground water science at certain levels. Maybe the water cycle, per se, but not the in-depth, you know, the in-depth study or, say, information that could be presented about ground water systems and aquifers and all the, the terminology and, and understanding recharge, all these things. So that's what the focus

of this first one is.

MR. FREY: So that would be approaching the Superintendent of Education and as a requirement within the --

MR. SNELLGROVE: BESE, Department of Education Secretary, and pursuing something a little more, more required in the curriculum.

MR. BURLAND: Gary, are you talking about multiple grade levels or just at one certain --

MR. SNELLGROVE: The recommendation was third through fifth, I believe, or sixth, but we had gotten some comments in our -- as we traveled statewide, on that particular comment, why stop there. So I broadened it somewhat here to include both elementary and middle school and, you know, whatever.

MR. MCKINNEY: I guess, being -- from a selfish standpoint and being a former educator myself, that would be a great vehicle of which to get the word out, I mean, when you are talking about the entire state. But on the flip side of that, given that they are required to do so much now, theoretically, that is another obstacle to

put into the mix.

I would personally love to see it. I think it would be great. But if I'm in Mr. Education's position, I would say, wait a minute. You know, we have got other things yet to talk about, you know. Not that this is not important, but where are you -- that's what you are going to get, I think.

MR. SPICER: Well, that's where Project WET really works well. You train the teachers to incorporate this science into the other education components in English, math, whatever you can work it in, so it becomes part of the everyday education.

MR. KILLEBREW: As I recall, there was, excuse me, an Office of Environmental Education or Environmental Education Commission at some point in time. I don't know where it is now.

MR. SPICER: It died.

MR. KILLEBREW: But, yeah, the idea of working it in, it sort of falls under the line there of water resources, but education in that particular area as a component of that, might think of it that way, too.

MR. BALKUM: Chuck, the Department of Wildlife & Fisheries has an environmental education department. It's a two-person program. We may discuss that further down this list of bullets, but that could be something that the Department and other agencies potential, whether that's Environmental Awareness Week or, or helping developing resources for teachers, that's a possibility.

MR. BURLAND: And I think there's some private resource alternatives, too. I know that the, or in the past, the, the LSU energy studies group had partnered with maybe the LCA or maybe the chemical group did it on their own. But there is an environmental education program in place where they provide materials to classroom teachers to discuss scientific principles, the science of chemicals, that sort of thing, to kind of educate the kids about that area, including, I guess, some industry stuff. But I would think that ground water could fit in.

I know there's a Ground Water Association, a group, you know, around the

state, that maybe could partner with the state agencies, whoever we would identify, to bring that to the classroom. And whether it's a voluntary effort or whether it's structured in the curriculum, I don't know, but those are avenues we could explore if we had time to explore them.

MR. SPICER: Any other comments?

MR. FREY: Well, if I could, let me see if I can sum this one up real quick. You know, this does identify curriculum, and that would be a change in curriculum. And as Mr. McKinney pointed out, you know, there's some inherent issues there.

So do we -- does our recommendation focus really on continuing the existing programs, encouraging the educational efforts toward ground water and water as, as just an issue, say ground water and surface water, encourage that with maybe some communication to folks like the Superintendent of Education, BESE, and put it back in their court and continue the existing programs and expanding on those, rather than shooting for an actual subject matter and curriculum,

which is what I think this is asking? Is that what I'm hearing?

I see a lot of nods. Okay.

All right. We will move on to No. 2, and that's, Should the state direct resources toward a more robust ground water resource and conservation education program?

I think we have heard some of that already.

MR. SNELLGROVE: Where this, this is focused is on our current efforts as an agency and where we are now. And so the question there is, you know, do we stay the course and improve with what we have, or, or should the state seek additional resources, staff, funding, what have you, to ramp it up to, to another level, perhaps?

MR. MCKINNEY: Well, I can give you a little follow-up on that. On the Sparta Commission, the one person that's there now, there is a good possibility that there will not be enough funds to go two years from now. In other words, we have got one more year covered, we know. But everyone's strapped for funds. Police Jury, Lincoln Parish

Police Jury, has cut our funding 80 percent during this budget, not Mickey, but the current jury. And I don't know where the City of Ruston is going to be, nor some of the others in the area cut. Now, all those funds were going for education.

So, firstly, we are probably going to be out of the education business unless we can fall back on something of this nature. And that, that will be very, very, very disappointing to lose something that we have the momentum going at this particular point.

MR. MAYS: Can I just add to what Ted said.

We did a cooperative deal where several governments, industry, donated money to put together to a CD, a conservation CD, and it went to the schools, not part of, of a curriculum. A short CD, distributed to students. And I think they all get that in the fifth grade.

So we may be a little -- seeking something too big as far as curricula goes in the school, where it could be something as small as, you know, an hour a year where they

get these CD programs and go over them and that's it. It's not, it's not an overwhelming burden to a teacher.

But as I look out here, most of us are of an age that we can remember when we didn't have to buckle our seatbelts. And our children came home from school and got in the car and told us to buckle our seatbelt. And so I think a consistent program at some age that doesn't have to be real extensive curricularly, if you will, can really help with conservation.

MR. FREY: Any other comments?

MR. SPICER: Any other comments? If not, you want to move on, Paul.

MR. FREY: Okay. Item 3, Should the state seek to partner with any existing Web-based education efforts -- Mickey just referred to one -- or develop, improve upon existing DNR Web-based education and outreach efforts?

MR. SPICER: Gary, do you know the basis for that?

MR. SNELLGROVE: Well, existing -- what we have right now, we have, on our Web

page, we have developed, compiled, from existing water conservation resources and information places, and put together somewhat in a repackaged or organized way some teacher aids, so that they can go to our website, they can find this material, they can find experiments, and do different things to provide education on ground water conservation and aquifers, et cetera. So, so we have, so we have something there. And it's, and it's Web-based, it's there.

But I'm thinking more tutorial type of, type of thing. Something a little bit more than just going out and finding information. Something that would maybe more like train, train the trainer type stuff, or -- which would be, of course, be for the teacher, where they would not have to interact with somebody, per se, but could go through and do it online and to get a basic education such that they can carry that forward to, to their classroom.

That's just one idea that I was thinking, or if there are any already existing Web-based types of, of programs

already out there, then, you know, that we're not -- may not be aware of, then, then identify them and then seek to partner with them to add some aspect of ground water conservation into their already existing program. Maybe Wildlife & Fisheries has something in their efforts that, that is Web-based that we could maybe partner with and add some materials, kind of piggyback it off of their existing program.

I'm not aware of a lot out there. And I think that's where we were when we had our, in our state agency discussions, it was a concept that we should pursue, you know, because it may be easier to do that than try to create or reinvent the wheel and start anew with resource, limited resources.

MR. SPICER: Any comments?

Paul.

MR. FREY: I do know the -- well, there was some mention earlier, I think, about Project WET. That's a train-the-trainer program. Sparta has developed the CD ROM. I know your staff has probably looked at other water conservation

agencies around the country and particular things that they have developed. I know if you just surf the Web, you can come up with a number of those types of things. So I think there's, there's a number of existing possibilities out there I think you can find.

MR. SPICER: Gary, do you have someone from the staff there that manages this website or is it --

MR. SNELLGROVE: Let's see, our public relations folks actually put it together. And that was about probably, you know, a year and a half back. But, yeah, I mean, it's kind of as needed.

We, we don't have -- right now we are -- we all share, as a staff of 12 or 13, different opportunities or events where we go out in the public and outreach. We don't have a dedicated person --

MR. SPICER: Right.

MR. SNELLGROVE: -- to, to go out and just do that. We share that responsibility based on goals that we have established to go out and seek certain parts of our education program, and we work it through our public

relation folks who do occasionally participate along with us when they have the opportunity.

MR. SPICER: And I think that's the issue for most agencies, or most all of them. They don't have the resources to dedicate one individual or several to this decision, and that's really a serious lack.

MR. SNELLGROVE: That's kind of where we were driving on this one. It's, you know, do we want to continue as we, we are right now?

MR. SPICER: I think it needs strengthened, absolutely.

MR. MAYS: I would agree. You know, the numbers that we looked at and saw on its face, if we look at, if we look at this as a value proposition, education is going to result in conservation. And I don't know what Paul's numbers look like from his association, but what we have looked at, is the potential to save approximately 20 percent with conservation. And education is the key to the conservation. Because I think some pricing would help with the conservation

part, too, but I think it's a very value-oriented proposition. If I'm a legislator and I sit down there and I see that I can put some money in education and that's going to help out with conservation, this is some of the best dollars that can be spent.

I know we have kind of maybe gone over this a little fast, and don't see it, but I think it's -- most of these points are very good points, Paul, in my opinion.

MR. ANGELLE: Yeah. You know, when you take a look at spending $10 million on master meters and getting some of the folks in compliance, that's one thing. But, but, you know, spending money on education, which leads to conservation, which leads to that 20 percent that you talking about over time, is, is -- for a lot less money than maintenance is the value proposition and it flows off the charts.

MR. SPICER: And it's long-lasting.

MR. ANGELLE: It's long-lasting, yeah.

MR. FREY: Okay. If I can take a moderator's prerogative, I would like to --

can you flip to the next page. I think the first item on the next page follows more in sequence, and then we can go back to that other item. We're talking about other programs, other Web-based opportunities, et cetera.

And that bullet addresses, Are there education opportunities through the LSU Cooperative Extension Service?

We have mentioned -- Mr. Spicer brought up the, the soil and water -- Office of Soil & Water work with Project WET. Mr. McKinney and Mr. Mays mentioned the educational efforts of the Sparta Commission. The LSU Co-Op Extension Services is named here. Wildlife & Fisheries has educational programs with two people in place.

So I think this, this probably addresses are there other opportunities out there, are there some we haven't reached yet. And have we really, because of trying to leverage dollars and leverage manpower, can we, in fact, look at other opportunities, or at least that's how I read it.

MR. ANGELLE: Uh-huh.

MR. FREY: Have we hit them all?

MR. ANGELLE: Well, I think, I think that there are a variety of resource education opportunities with our agencies that do miss the boat on, on environmental awareness education, and it's broader than LSU. You know, it's a lot of different groups for sure.

MR. FREY: Mr. Killebrew, you mentioned the Environmental Education Commission. Is that still a viable entity? Can anybody answer that question?

MR. KILLEBREW: Not to my knowledge. I think, I think Kyle had a comment about it.

Is that where the staff that you mentioned were, were members of that at some point in time, or part of that program?

MR. BALKUM: Our environmental education programs in the Governor's Office --

MR. KILLEBREW: Yeah --

MR. BALKUM: -- two years ago.

MR. KILLEBREW: -- that's what I was thinking. They transferred over there.

MR. FREY: That would be a, a

coordinating group, so to speak. If, in fact, various agencies, the various universities, all those folks have representatives on the, on the environmental education commission, and those folks could begin some dialogue in terms of coordinating efforts. Seems like that's what we are talking about here.

MR. MILLER: Paul, our DEQ still participates in that effort in the Governor's Office.

We have actually done other things as well, and I was going to touch on it over in the Enforcement area. But it fits here as well because it ties between.

As an agency, we found a lot of small operators who violated our rules. So we developed an outreach program called Enviro School. And, actually, what it does, it focuses on, like, little small gas stations who don't do the proper testing on their underground storage tanks. And the first one was actually on this poo poo school, because it was little, small wastewater operators who weren't doing things correctly. So what we

did as an agency as part of our enforcement, we tied an educational component to it. And we said that if you will go through this poo poo school, which was the original one -- and that's really, that's what we called it -- if you will go through that, your enforcement will be taken -- that will be taken into account in any enforcement actions as far as penalties and so forth.

It was highly successful. And we saw that instead of people coming back a short time later with yet another compliance order for having done the same mistakes, we began to get people to realize that there was a better way to do it to stay out of trouble.

So the same sort of component might become part of the effort of the Office of Conservation in the ground water area, that maybe if we see people that continue to have problems filling out the paperwork correctly or doing what they should, maybe there could be an educational component as part of the enforcement activities. It's been very, very successful with several programs at DEQ.

And then we expanded it out to not

only folks that were in non-compliance, but we went out and said to the community, if you want to know more about air quality, we will put a school on. If you want to know more about each of our programs, hazardous waste, solid waste. Again, it was -- it's been a very successful avenue to get the word out to people. So it's something that we may want to consider in whatever we come up with as far as our overall ground water management plan and communicate that out to people.

MR. ANGELLE: What -- and, I'm sorry, I had to take a call -- but if you could, just for a couple minutes at the most, describe the state's, to your knowledge, the state's efforts on ground water education.

MR. SNELLGROVE: DNR's efforts?

MR. ANGELLE: The state.

MR. SNELLGROVE: Well, we just heard, while you were away, we had several different groups, I think Project WET sounds like, from Agriculture and Forestry, may be one of the most aggressive programs out there. Wildlife & Fisheries has a, an environmental education group that is staffed. They have got two

staff members there. And we have had, you know, Cooperative Extension Service has kind of a network out there we're aware of.

When we're talking about education, though, I have to separate conservation from educating folks on how to comply.

MR. ANGELLE: Right.

MR. SNELLGROVE: So most of my -- most of our effort, to be quite honest with you, in conservation has been on getting people to comply.

MR. ANGELLE: Sure.

MR. SNELLGROVE: To manage that resource from withdrawal and, you know, our main drive, which is, which is, of course --

MR. ANGELLE: You manage, you manage sustainability.

MR. SNELLGROVE: Right.

MR. ANGELLE: You manage the withdrawal. We are talking about managing the users, which are the 4 million people in the state.

MR. SNELLGROVE: Correct.

And through that outreach --

MR. ANGELLE: Right, Mr. Mickey? Is

that right?

MR. MAYS: Yes.

MR. ANGELLE: So, I mean, your efforts have been, your withdrawal either as the domestic person or, you know, a public supply, we want you to comply with this rule, we want you to register, and so, so we are doing that. That, that, that to me is, is not why you're educating folks. You, you -- that's more enforcement to me.

MR. SNELLGROVE: It's part of enforcement; correct. It's to get -- it is education, but not conservation education.

Now, conservation education we have participated with various, over the years, with various school, you know, going into the school systems and going out and providing this, the video that we partnered with Sparta, getting that message out. We distributed throughout the state public education system to reach further than just the Sparta area, but statewide.

I mean, so we have done -- I would say we have done a lot, and we were aggressive as we were able to have the staff to put effort

into that, and I think we grabbed as much low-lying fruit as we could at the time and I think we continue to do so. But right now it's not really -- it's not a uniform approach.

MR. ANGELLE: Right.

So let's, for, for, I guess, the take-away, from my standpoint, I would recommend, Mr. Paul, would be that we should review and analyze all public dollars that are being used for environmental education and determine if there is an opportunity to expand the role of ground water conservation, conservation -- ground water education/conservation in that, in that -- as we analyzing the monies that we have.

Because I think, you know, there's no question that it might, it might make more sense for DNR, DEQ, Ag and Wildlife & Fisheries each to put up a few dollars and have one person that we are all contributing towards, and that person is out there doing a variety of environmental education, not just ground water, but, you know, other things as well. And, of course, we need to know what

the population of dollars are so that we can determine whether or not it's an opportunity there. And then, of course, that ought to include, again, LSU, it ought to include local governments. You know, what are we doing as a state, I think is what we need to answer the question.

MR. SPICER: And I would like to add to that, that we should have an official component here, not just imposed, that we have an education program of some type that, that's focused on educating school children. I think if we leave this subject without nailing it down, we are going to go on another however many years and not do it proper. So I really think we need to --

MR. ANGELLE: To bring in the Department of Ed?

MR. SPICER: Whoever we need to make sure that we have a solid program for education.

MR. ANGELLE: Do we know if there's an Environmental Awareness Week --

MR. SPICER: Yes.

MR. ANGELLE: -- in the state where

fifth or seventh or eighth graders are focused on?

MR. MILLER: I know there are various components of that. I don't know if there's--

MR. SPICER: Our districts participate in environmental. We have a Soil and Water Stewardship Week at the end of April each year. We go out in the schools, public schools, and churches, for educating water conservation, soil and water conservation. And I think it's --

MR. MILLER: We have an Air Quality Awareness Week, as well. I think it's media by media maybe. A larger, more overall picture may be, may be something would be --

MR. SPICER: Through the Governor's Office, don't we do something each spring, some kind of event?

MR. ANGELLE: Let's research that.

MR. MAYS: Mr. Angelle, but -- and I don't know what department, falls on one of you guys, I'm sure, the Wellhead Protection Program. And you have --

MR. MILLER: DEQ.

MR. MAYS: -- these ladies that come to the Police Jury and different governmental bodies. And you make a partnership with them, and you, you -- they put the signs out. And it is kind of, I would say, maybe a model that could be looked at for possibly conducting a statewide-type education.

MR. ANGELLE: All right. Good point. Make a note of that.

MR. FREY: I think before we leave that one, too, the fact that it's LSU Cooperative Extension Service was identified. No one mentioned the 4-H program, county agent system in place. I know Mr. Loewer has all the farmers, Mr. Colvin on county agent, in terms of education, continuing education, in regard to that.

Gentleman in the audience.

MR. LELEAUX: Yeah, excuse me. Louisiana Rural Water Association is probably one of the largest groups in Louisiana. And, I mean, you need to continue to participate with it. The Louisiana Ground Water Association, we have the continuing education for the water well drillers to, to -- we're

pretty much doing that now, but you do have to have funding to get those people there to participate.

MR. FREY: Thank you, Mr. Leleaux.

MR. DUPLECHIN: If I could make just a few comments so that people will realize that the Department has done -- had done a lot of work in the past. And like everything else, it all comes down to funding.

Two years ago, for Ground Water Awareness Week, which there is a set aside Ground Water Awareness Week established by National Ground Water Association, the state, DNR, sent teams around the state to cities that spelled out water, Walker, Abbeville, Tioga, Epps, and Ruston, to teach kids in school as best they, you know, as many as they could reach, about ground water conservation. And we worked with Lindsay Gouedy up in Sparta to do that, the Department did. Unfortunately, there's been -- it's had curtailed with a lot of the educational activities over the last two years due to funding.

Secretary Angelle had set up what was

called a Geaux Team at the Department of Natural Resources that went out and instructed people on many different facets of things that DNR did. But, unfortunately, here again for funding, those activities had to be curtailed. So it all comes down to funding.

There has been a lot that the Department has done over the last two years in getting out to educate the public on ground water. And if funding becomes available, I think that those activities will start up again.

MR. FREY: Thank you, Mr. Duplechin.

Okay. Are we ready to move on to the next?

MR. SNELLGROVE: Can I recap what I believe to be the task for the staff to pursue?

MR. FREY: Please go ahead.

MR. SNELLGROVE: Okay. I think, I think what I heard was investigate or to go out and assess how much money is being spent or appropriated towards various agencies on environmental education and awareness. And

then, perhaps, pursue some type of multi-agency partnership whereby each of these agencies contribute to, say, one single group or individual within, within that partnership.

MR. ANGELLE: I wouldn't, I wouldn't limit it to one. Just, just to determine what is out there, what is being done, and to determine whether or not there can be a more integrated approach to, to achieve a better result.

MR. SNELLGROVE: For comprehensive environmental awareness as a whole where ground water is an aspect of it; is that correct?

MR. ANGELLE: Correct.

MR. SNELLGROVE: Okay. Got it.

MR. WELSH: I have got one comment.

Mr. Mays mentioned the Wellhead Protection Program. That's a DEQ program. I believe the name, Paul, now has been changed to the Ground Water Protection Program?

MR. MILLER: I still refer to it as the Wellhead Protection --

MR. WELSH: I know.

MR. MILLER: -- but I may be -- that may be not doing it correctly.

MR. WELSH: I think that's right. But if somebody wants to do some research on that program, you might.

Do you know, Lou, has that been changed?

MR. BUAT: Yeah, I believe it has been.

MR. WELSH: Okay. It's the Ground Water Protection Program now.

MR. FREY: Okay. We are going to jump back to the last item on page 10. Should statewide water districts be required to provide on a regular basis ground water resource conservation education announcements to customers via billing invoices?

Gary, I assume that came out of some public comment in the various meetings, or was that a recommendation from, from the draftees of the plan?

MR. SNELLGROVE: This, I believe, has some history. I think we kicked it around internally, maybe even in a meeting or two in the past with Ground Water Resources, our

Commission meetings.

I believe that we did investigate this sometime back, as I recall, and we found that there are, actually, many suppliers who are currently doing this type of activity wherein in their bills, billing, or whatever, they will put little tips in there on ground water conservation and what have you. But I think what this is -- what the difference is that's all been voluntary. So what this is saying here, should there be an effort to mandate it or require it.

MR. FREY: Comments in regard to that suggestion?

MR. ANGELLE: Other than working with children in the school system, I think this is the No. 1 easy, cheap way to -- when you're getting a, a bill, and I realize bills -- probably most water bills don't come in, in envelopes anymore. They come on a card. So how you do it might be, you know, somewhat challenging. But, obviously, when you're getting a bill, and you are getting a suggestion on how you might lower your bill, that to me is the point of interaction that

is, is going to be the highest and best results or outcomes. So whether or not we require, suggest, incentivize, can be a few different words.

MR. MAYS: The water systems, the small, rural water systems, do they have to send out, do they have to send out what's in the water? Like, the City of Ruston sends out a pamphlet every year to everyone what's in the water. And my thought is, it's not going to cost anymore to put a little conservation piece right there. Otherwise, probably just sending out a little postcard type deal.

MR. ANGELLE: Right.

MR. MAYS: I don't know if they have -- if that is a requirement that they had to send that.

MR. ANGELLE: Right.

So, so I think what we would do is research whether or not water districts are communicating other requirements to comply with guided DHH or DEQ rules that would present an opportunity for conservation measures to be added to that, to that, to

that vehicle.

MR. MAYS: You know, they are always looking for your capital outlay money, No. 1. And, No. 2, they are always coming to your local Police Jury for help or support.

So -- and I don't know if it would be a mandated deal, but I believe you could come up, come up with a program to get some results. Doesn't necessarily have to be a mandated deal.

MR. ANGELLE: Right. No, no, no.

MR. MAYS: Ask them to send out a piece that they prepared.

MR. ANGELLE: Absolutely.

MR. FREY: Any other comments on this one?

Okay. The next item is -- it would be item two on page 11, Could the state rely upon local governments through building permit offices to provide ground water education and conservation practices, et cetera?

MR. MAYS: I guess that I can probably speak to that more than most, but I think they, they would be willing to give out

literature that would stress conservation, but already the system, itself, as far as building permit, is, is an unfunded mandate, Scott.

MR. ANGELLE: Yeah. Yeah.

Can we pass a constitutional amendment about that, when I was wearing a different hat?

MR. MAYS: Exactly.

MR. ANGELLE: I think it's a great idea now.

Yeah, I think what we are saying there is, again, it's a point of interaction. It's been, it's been my experience as a parish president that folks come in for building permits, you know, to build homes. It's usually a pretty exciting time. And if there are ways to, to provide information.

I remember when I got my marriage license, the Clerk of Court gave me a little gift pack, and it had a variety of things in there, some of which I had never seen or understand why I got them. And, and by your laughter, you know what I'm talking about.

So, you know, is there the opportunity

for us to say, you know, as you design your home or as you're doing it, you know, here's an opportunity for us to -- again, it's just, I think this is, is -- it's like an advertising campaign. It's some media, you know, some billboard, some direct mail, some of all of the above. And this is just one idea where I don't necessarily rely, but, again, "request" is probably the right word.

MR. FREY: I would add to that, Mr. Secretary, that it be done early in the process.

MR. ANGELLE: Right.

MR. FREY: Because after dealing with the permit offices in East Baton Rouge and Cameron, they were not the best messengers later in that, in that --

MR. ANGELLE: Yeah. Yeah.

MR. FREY: But early on, yeah. I mean, you know, obviously, some, some things that could be done.

MR. ANGELLE: Right.

I mean, like, didn't -- did the federal government pass a law on the -- and then end up repealing the law on the liters,

the liter size for commodes?

MR. OWEN: They do require now low-flow toilets. They require flow restrictors on showers. And I'm not familiar with permit places in every place, but in cities that I know of, you cannot get a building permit to install plumbing or water-using fixtures without compliance with those regulations.

MR. ANGELLE: Right.

So, so to a new homeowner who is shopping for those accessories, have they outlawed the manufacture of -- I kind of remember, like, 1.6 liters per flush?

MR. SPICER: They haven't outlawed the manufacture. They've outlawed the sale of it.

MR. ANGELLE: Okay.

MR. SPICER: They can sell them in Mexico, but they can't sell them here.

MR. OWEN: You can't find one.

MR. ANGELLE: You can't? You can't buy a big toilet?

MR. OWEN: No.

MR. MILLER: Go to Canada.

MR. ANGELLE: You can go to Canada.

MR. MILLER: They are still available for sale in Canada.

MR. ANGELLE: Okay. But you really -- so, seriously, you cannot go to Coburn's, or those kind of places, and get that?

MR. COLVIN: I think in an educational sense, I mean, it's a great opportunity. You know, they get a building permit, it's got a packet in it --

MR. ANGELLE: Right.

MR. COLVIN: -- recommending, you know, use reduced, you know, shower heads that use less water, I mean. And then also just the educational aspect of conserving water within your home, it's going to save you money.

MR. ANGELLE: Right.

And so it's not so much about -- I think Paul has a good point about the concern of who the messenger is. It's really more here, you know, here's a document that's almost attached to your building permit, and it's a point of interaction, and hopefully you find it to be useful.

MR. MILLER: Just had a, a point of clarification. The official name of the program is actually the Drinking Water Protection Program. But in the newsletter it still references the Wellhead Protection Program.

And there's, actually, a lot of resources that are available online on our website associated with that. So maybe a good dovetail in to what we had mentioned earlier.

MR. ANGELLE: Keep putting it in front of folks.

MR. MILLER: Absolutely.

MR. ANGELLE: You know, I think something as simple as -- I know this is ridiculous -- a little sticker that says -- it's on your bathroom mirror -- that says, Turn off the water, as a reminder when, you know, I'm told when you're brushing your teeth, you don't need to run the water. Well, you know, I'm not so sure that all of us are following that.

MR. SPICER: I didn't know that.

MR. ANGELLE: You didn't know that?

MR. MILLER: To that point --

MR. ANGELLE: You've got to brush your teeth to know that.

MR. MILLER: To that very point, I find myself much more conserving water having been involved in this effort --

MR. ANGELLE: Right.

MR. MILLER: -- from just learning a lot on the Board. I find that I turn the water off when I brush my teeth.

MR. ANGELLE: Absolutely.

MR. FREY: Before we leave building permits, it maybe triggered the thought -- and I know, I know Mr. Spicer would remember these, but a lot of the rural homeplaces had cisterns back in the, the old days.

I mean, would -- is that, from a DEQ standpoint, Paul, is a cistern still a viable option for -- and I'm not necessarily for drinking water, but other water uses?

MR. MILLER: There are a lot of areas of the country that even use gray water; they would reuse gray water. So depending on where you are, there are a lot of uses of water that are there, even as far as the

actual regulation of drinking water by the Department of Health and Hospitals. We just -- it was just a tie between the agencies. I think we have heard, you know, a number of discussions today, and many of the meetings that we have had, there's, actually, a lot of ties with what agencies do.

But we, we deal with the drinking water side from the protection of the source; hence, the original calling it the Wellhead Protection, which was to make sure that underground storage tanks weren't leaking, or that chemical tanks weren't leaking and impacting ground water. But, you know, the intent behind those efforts are to protect ground water and protect the drinking water supply of those. So while we don't regulate specifically, we are involved with Health in actually protecting that supply.

But as far as cisterns, that would fall in under the water -- Safe Drinking Water Act, which is under the Department of Health and Hospitals.

MR. FREY: Any other comments before we leave this one?

Okay. The next bullet is, Are there any social media opportunities for ground water education and conservation?

Gary, can you shed a little bit of light on this one?

MR. SNELLGROVE: Yeah. Social media, I guess, Facebook, Twitter, you know, some of the things that I'm not that particularly involved with but most of the, I guess, most of the rest of the nation is. It's become seemingly a more and more viable tool for getting the word out and for understanding things.

That -- are other agencies involved in that type of activity? Do they have these things set up? I mean, Wildlife & Fisheries?

MR. BALKUM: (Nodding head.)

MR. SNELLGROVE: Is it something we can --

MR. ANGELLE: DNR is tweeting -- we are tweeting right now, and we got, I think, a Facebook. So, I mean, is it just a matter of, of, you know, making it a responsibility of our public information center? I mean, that's the cheapest way to get information

out, and it's free, you know.

MR. SNELLGROVE: Yeah.

MR. ANGELLE: You've just got to have a network where you can, you can do it, right? I mean, who would have thought that state government would be tweeting? Is that the right word?

Jackie is over there saying -- like you know, Jackie.

MR. LOEWER: Get the youngest person in the room.

MR. FREY: I can see the tweet now, Secretary Angelle says only rinse once when brushing.

MR. ANGELLE: Once when brushing and three times when flushing.

MR. SNELLGROVE: So, so, yeah, I mean, what I'm hearing is it's -- I guess it's a pretty common aspect of the way we communicate nowadays.

MR. ANGELLE: So I think the take-away would be to, to investigate and determine opportunities for social media for ground water education conservation.

MR. SNELLGROVE: Okay.

MR. ANGELLE: The answer is yes. And, obviously, staff is going to kind of put, you know, kind of put all this together in, in a report.

MR. SNELLGROVE: Should we get with our PR folks?

MR. ANGELLE: Yeah, that's the way we would do it. You-all will have to have a --

MR. SNELLGROVE: A discussion.

MR. ANGELLE: -- a session right after this, Monday or something.

MR. SNELLGROVE: Okay.

MR. FREY: Okay. Any other comments on this one?

And that last bullet on page 11, Should the state seek resources to develop an internet-based driller certification and annual continuing education program?

MR. ANGELLE: Who can speak to what's required now of the driller?

MR. FREY: The gentleman from the Rural Water.

MR. SNELLGROVE: I'm going to let Jeff give you a tutorial on that.

MR. ANGELLE: Why don't you come to

the --

MR. LELEAUX: It's six hours of continuing education for each water well drillers licensed on. Environmental drillers, same thing.

MR. ANGELLE: For the record, would you -- you get paid more if you sit down.

MR. LELEAUX: Okay.

MR. JONES: This is Harold Leleaux, by the way.

MR. LELEAUX: But, basically, before you get a water well driller's license and environmental driller's license, you have to have six hours of continuing education each year.

MR. ANGELLE: And who do you get that license from?

MR. LELEAUX: (Indicating.)

MR. ANGELLE: From Snellgrove's office?

MR. LELEAUX: Yes.

MR. ANGELLE: Okay. And how do you get that education now?

MR. LELEAUX: Right now the Louisiana Ground Water Association is providing that

service at a convention in January, and they do it again in April.

MR. ANGELLE: And it's done by --

MR. LELEAUX: Louisiana Ground Water Association.

MR. ANGELLE: Right. But just seminars and presentations, whatever?

MR. LELEAUX: Correct. Correct.

Now, that's the group of water well drillers that put it together or environmental drillers that belong to this association. They have a similar type thing with rural water operators, you know.

MR. ANGELLE: Right. Right.

So one of the things that we will begin to roll out in the state is virtual schools, and the Governor announced this earlier this week, where hopefully we will be able to -- you know, you will have a, perhaps, a ninth, tenth or eleventh grader, some kid, who will not physically be at a bricks-and-mortar school, but will have a lesson through a delivery of a technology computer system. And so what I'm looking to do is to say that -- and that is a, you know,

that's a, that's a great goal, and it's far-reaching, it's going to have beautiful impacts on this state.

It would seem to me that the state could, perhaps, provide some leadership in making it easier for drillers to get that six hours by the state coming up with a program that a driller wouldn't have to go to New Orleans or Baton Rouge or Shreveport or Lake Charles or Lafayette for the seminar, that takes away from the opportunity to do work and costs money; that they could actually just do it, do it online. And, and, and, I mean, I'm assuming that would be something that -- now, look, drillers tell me, no, no, look, we like our weekend in New Orleans, you need to not, you know.

MR. LELEAUX: We have a lot of drillers that are from out of state, and they have to fly in to come to Louisiana for that particular. I understand it would be, you know, really good for a lot of different drillers. So we have some drillers that use Louisiana continuing education for the next state over, you know. I mean, they -- I

mean, it might be for a national association, those licenses. So, yes.

MR. ANGELLE: All right.

MR. SPICER: Can I ask you, do they -- is there an examination at the end of the training?

MR. LELEAUX: You have an examination before you get your driller's license.

MR. ANGELLE: And after that --

MR. LELEAUX: After that, you have to have six years every -- six hours every year continuing education.

MR. SNELLGROVE: We have experimented with this just last year with SONRIS and Sunsets seminars. We actually provided three hours of continuing education units toward driller's licensing. We had -- we didn't have a great turnout, but we also didn't have a lot of time to advertise and get the message out.

We do intend to continue to do that, which could be somewhat of a, a fun -- a basis for us to provide a more Web-based approach because the materials, you know, will be pretty much there --

MR. ANGELLE: Right.

MR. SNELLGROVE: -- to do so.

So, you know, we intended to extend just from three hours credit to six hours such that you can get the whole, you know, the whole annual commitment --

MR. ANGELLE: Right.

MR. SNELLGROVE: -- at the SONRIS and Sunset seminar. So we will see how it goes.

I mean, we have initiated somewhat of a process to begin -- the state to begin to provide that, that accreditation versus, say, the LGWA. Of course, they are going to still continue to do that.

MR. ANGELLE: Right.

And let's just think what's going to end up happening, if you can do, if you can do it easier, cheaper from home, then instead of six hours, you have the ability to require nine hours. And so you have more education, everybody is happier. You know, they save money, they save time. Six hours, nine hours, over a period of a year, or 12 hours over a period of a year, versus, you know, again, the cost and expense of away from job

site, just seems like it's something we need to take a look at.

If we're going to allow ninth graders to have, you know, attendance at virtual schools, we certainly can allow folks in business to do it as well.

MR. JONES: Mr. Chairman, I have got to say that we have received requests, particularly someone from Texas or out of state, as Harold was mentioning. And we have accepted online credits from certain, certain companies, depending on, on the actual course.

We don't accept Texas water well rules and regulations, for instance, but we do accept course work from National Ground Water Association. And these are, as I said, these are national courses in hydrogeology. But we have also, like I say, accepted from Red Vector is one website, but we don't -- we have not, I will say this, publicized it to any effort. But when we do receive the requests, we, we have complied. Thank you.

MR. COLVIN: It could be easily implemented, just like the ethics are right

now, Louisiana ethics. You can go on and do your ethics thing online. It's a pretty simple process. I mean, if you want to do an hour a night, or whatever, you do it, you go back, you start back where you left off. I mean, it looks like it would be a self process that's already underway in other parts of the state; you know, could be probably implemented in this instance pretty easily, I would think.

MR. FREY: Any other comments on that item?

Okay. We are on to page 12, the first bullet on that page, Should the state focus resources on developing a ground water conservation education strategy and materials directed at various youth groups?

We've had some extensive discussion, I think, already on that particular item. I don't know if we need any clarification.

MR. MAYS: I would like to add one thing, Paul.

We've got all of us representing different -- a lot of us representing different associations and have memberships

and publications monthly. If we could get either an ad agency or the department or something to provide an ad similar to -- I mean, in Sparta we have Every Drop Counts type deal, that won't cost anything, except the preparation of something. And they will run it. They will be glad to.

MR. ANGELLE: Yeah. Very inexpensive way.

MR. FREY: Okay. Anything else?

Next item, Should the state establish a multi-agency Environmental Awareness Week to include ground water resource sustainability and conservation issues in collaboration with other state agencies?

I know we had some discussion about that.

MR. ANGELLE: Yeah, I think the staff -- that kind of goes back to the other one, where staff would look at what other opportunities exist. I think we have covered that one.

MR. FREY: Or at least dovetailing into the existing environment.

MR. ANGELLE: Yes, sir.

MR. FREY: Okay. And the last item under the Education component is, Should Conservation seek to partner with each parish to establish a single point of contact person within that parish to serve as the champion of the parish's ground water education and conservation leader in coordination with state efforts for the same? And be a leader, I guess, in coordination with state efforts for the same.

I know, and just in my familiarity, and I don't -- I know with budget cuts, I'm not sure if it's still that way, the Ag Center at some point in time had a county agent in every parish. I'm not sure that that's the case anymore.

MR. COLVIN: Probably not.

MR. SPICER: They still do.

MR. FREY: They still have a representative in every parish? So that's one obvious point.

MR. SPICER: We operate out of 46 district offices, conservation districts. We cut back in our fleet drastically four years ago.

MR. WELSH: I think we have the law, ground water law set up a system of local commissioners that would represent the local, different parts of the state. And I think each parish is represented. For example, the Sparta Commission has the 16 parishes in north Louisiana that use that aquifer, and they kind of form our source of information from that -- for that part of the state. And I think that was the original concept, rather than take each parish individually. It was kind of an aquifer-by-aquifer program.

MR. ANGELLE: So, perhaps, the question should be should we work with -- not every, not every, not every aquifer has that kind of organization. Actually, most of them don't.

MR. WELSH: That's true.

MR. ANGELLE: One of the things that I think we did as a recommendation that was made by a member here, is that we e-mail to parish government every fill in the blank for me on, on --

MR. SNELLGROVE: Right. We have a water well notification e-mail distribution

system, if you will, whereby anyone can provide their e-mail address and pick the specific parish, or pick them all, for any time that we receive and assign a ground water resources number to, to a particular form. So that they can go out and -- they will get the notice, and then they can go and view it, they can see where it's located, what it's going to be used for, what have you. So it's --

MR. ANGELLE: And that was a shortfall that folks had. Things were going on and they were unaware of it, so we -- I think we, we did that.

MR. SNELLGROVE: Right.

MR. ANGELLE: So, again, my concern is that sometimes that goes to parish government dot org, as opposed to a particular person who has the responsibility for that. Of course, that's not our fault. You know, we can only do what we can do.

But we probably ought to work, I think -- like, the Keep Louisiana Beautiful Program tries to establish a champion in each parish, and, of course, those are volunteers,

that help with litter abatement. Again, it would seem to me that we would have a person in each parish in our system that would be the person that the parish government had designated -- could be a volunteer, could be an employee -- that we would communicate with on a regular basis, somebody, perhaps that has some passion in this area, to get ground water education out and visit in the schools and doing something. I think you will find there are some troops out there that are willing to be our soldiers.

MR. MCKINNEY: I think that's, to me, that's the best approach.

The downside to the, say, the Sparta and the 16 parishes, even today we have grumblings among some of the outlying parishes, that Ruston is the center of the Sparta and they are not getting their fair, due share of attention. So you would think that in the state there would be agent or agents who could do this of some sort.

MR. ANGELLE: Yeah. I think most parishes have some type of environmental coordinator, and, you know, that could -- we

could ask, you know, through the Police Jury Association, perhaps, that that person could be given the additional duty of just receiving the e-mails and kind of pumping out the information that, that we think is, is appropriate. I would like to think that we could do that.

MR. SNELLGROVE: Okay.

MR. MAYS: I think -- do you-all -- I think they -- you-all do that already, don't you, Gary? I mean, we distribute it out.

MR. ANGELLE: Not so much education material, I think, as -- I think we get you.

MR. MAYS: I'm sorry. I thought you were talking about the water well registration.

MR. ANGELLE: No. We use -- I'm just using that by analogy.

MR. MAYS: Okay.

MR. ANGELLE: We use -- we've kind of perfected it for that purpose and that has helped. But I don't think we have a champion who is passionate about ground water that the parish government has said, You are going to be our volunteer person and we are going to

provide you information and here is the pipeline that comes from state government, we are going to get you e-mails, we are going to get you information, here's the website, here's the links, here's what -- you know, the curriculum that you can help teach. This is what you ought to be talking to principals in schools about.

MR. MCKINNEY: I serve on the Lincoln Parish 4-H Advisory Board. And each year they come up with a plan, some action of some sort. So something of that nature with the 4-H or whatever would be what you are looking for.

MR. ANGELLE: Absolutely. That's a great idea.

MR. FREY: I think the -- I'm glad you brought up the Police Jury. I made a note here Police Jury and Parish Council. We know they exist in every parish. And we know they don't have quite the funding problems some state government agency folks have, so...

Right, Mickey, you just pass a tax?

MR. MAYS: I wish.

MR. FREY: Okay. That really covers

all the bullets.

Did that trigger any additional -- did we miss anything, any additional thoughts from anyone in the audience, members of the Commission?

We have covered the -- we have covered youth, we have covered users, we have covered drillers. Weathermen, do we need to approach weathermen?

MR. ANGELLE: Suffice to say, I think the state needs to have an organized effort on education as part of this management plan.

MR. FREY: Absolutely.

Thank you for your participation. I'm done, Mr. Chairman.

MR. ANGELLE: You did a good job. Thank you.

Do you-all want to take a 10-minute break? Be back at 3:15, seven minutes.

(Recess)

MR. ANGELLE: We are going to go ahead and get started.

Mr. Commissioner, I think you have the Registration item. And that item is on the screen now.

MR. ADAMS: Mr. Chairman, as a point of information, I would like to remind everyone to please use your microphones. And some of you may need to move a little bit closer. The court reporter is doing a fabulous job of transcribing everything, but she's having a little bit of difficulty every once in a while.

MR. ANGELLE: Thank you.

MR. ADAMS: Thank you.

MR. ANGELLE: Appreciate that.

And you are doing a great job.

THE COURT REPORTER: Thank you.

MR. ANGELLE: Appreciate it.

Okay. Mr. Commissioner, you have Registration.

MR. WELSH: Yes, sir.

Thank you, Mr. Chairman.

I think, you know, that registration is one of the most important things when you are regulating efforts. I'm, of course, more familiar with regulating the oil and gas industry. Just imagine if we didn't have a, a bang-up registration or permitting program in the oil and gas industry. We have 230,

240,000 wells that have been drilled. What kind of chaos would we have?

So I would like to -- that, that's how important registration of water wells is, because without good registration, without good tracking, without knowing what's going on, we are just, we are just shooting in the dark. So, you know, this is a very important program. And I think DOTD, Bo, you-all have done a good job with it, and now we have it. And we are, we are brainstorming is there any way that we can improve it. And I think that's a job of this Commission.

I have only five bullets to talk about, and the first four address the water well drillers, and the fifth one really addresses the water well owners. So just remember we are talking about the drillers in the first four bullets and owners for the last one.

But the first bullet, basically, it's a long bullet, but here's the gist of it: Should the state amend existing Louisiana Administrative Code regulation for water well drillers to insure that water well

pre-installation notification evaluation has been performed and appropriate agency response issued to the well owner before the construction begins?

So is there anything that, that we need to do, the state needs to do, to better that process, to make it more effective? Comments?

MR. LOEWER: Are we not at a hundred percent now?

MR. WELSH: I'm sorry?

MR. LOEWER: Are we not at a hundred percent now?

MR. SNELLGROVE: We haven't been, no, sir.

MR. LOEWER: In other words, wells are being drilled without being pre-notified?

MR. SNELLGROVE: Wait. Say again.

MR. LOEWER: Wells are being drilled without notification?

MR. SNELLGROVE: Yes, sir.

MR. ANGELLE: Just like folks are speeding on Interstate 10, right?

MR. SNELLGROVE: (Nodding head.)

MR. ANGELLE: So what you get, if you

had to use the data that you gathered, what kind of compliance do you think we have now?

MR. SNELLGROVE: Well, in the past, what we have found was about nearly 100 percent for industrial well users, big industrial well users. Running about 40, 45 percent on irrigation, as far as compliance goes. So, in other words, 55 percent not compliant. 50 to 60 percent not compliant in both irrigation and public supply.

We haven't had the opportunity to conclude our compliance audit from 2011.

MR. ANGELLE: You can make that statement because you can compare what the drillers are filing and what you are getting?

MR. SNELLGROVE: Yes, sir. That's exactly how it arrived.

We assumed 100 percent driller registration --

MR. ANGELLE: Right.

MR. SNELLGROVE: -- and compared that as our benchmark to what prior notifications we had received and documented in our database. That's how we derived those numbers.

So to give you -- it was our hopes that we would have more up-to-date data after we implemented our aggressive compliance audit over a two-year period to get the message out, but we, unfortunately, we have run into some limitations on resources and what have you, and we are now focused on doing a comprehensive audit for the entire year of 2011 here in the next couple of months to -- and that will give us a good data set as to how much we have improved on those two areas, irrigation and public supply, in bringing the compliance, bringing them closer into 100 percent. But I can tell you just from experience and day-to-day operations that, with confidence, that we are not at a hundred percent. No where near.

MR. ANGELLE: Okay. So the first one is, the question is -- it's a pretty long -- should the state -- I'm on the fourth line -- should the state amend the Administrative Code for water well drillers to insure that water well pre-installation notification evaluation has been performed.

So what we are basically saying is,

is, Mr. Water Well Driller, we need you to help us manage this resource. It's important for you as a water well driller to have a sustainable resource. And since there are 350 of you and 4 million people, we need you to be -- and nobody can drill a well on their own, I'm assuming. I mean, they have got to do it with a, whatever, but that's a rare situation. That we would say that a water well driller shall not be allowed to drill a well until he or she has evidence that the proper notification evaluation has been sent in to the agency and the agency has acknowledged the receipt of that?

MR. SNELLGROVE: That's correct. That would be the idea. And we believe -- well, we know that we could pursue this under the -- through the Louisiana Administrative Code as our existing statutory authority would allow us to. So, so it's --

MR. ANGELLE: Do we know what kind of burden that would put on the industry, on the drilling industry?

MR. SNELLGROVE: No, sir, I don't. I mean, it wouldn't prohibit them from drilling

the well.

MR. ANGELLE: Right.

MR. SNELLGROVE: But it would be, it would be somewhat of a hurdle they would overcome to make sure the well owner, you know, does what he has to do to get that well notification into our agency and let us go ahead and --

MR. ANGELLE: So they showed up on the day to drill a well, and they don't have evidence of that notification being forwarded and received, there would be -- we would basically make it an illegal practice to allow that well to be drilled or cause that well to be drilled without that information?

MR. SNELLGROVE: It would be -- yes, sir. It would be, it would be an enforceable violation of the Louisiana Administrative Code.

MR. ANGELLE: So from a public policy standpoint, when they got that call and said I need to hire you, they, they -- to drill a well, the first thing they would say is, okay, you're going to send that form in, I will come help you fill it out, you have got

to send that form in, you've got to get that form in. And, and you can e-mail it in, you can fax it, you can wire it, you could Pony Express it. And then we would immediately then send out a, a -- because this is only -- this is not where we have to have -- this is pre-notification type stuff?

MR. SNELLGROVE: Correct.

MR. ANGELLE: And we could immediately send an e-mail out and --

MR. SNELLGROVE: The way this would work would be, once we have received the form, we have got -- you know, there are requirements placed on the agency as well -- we have got basically 30 days to review and evaluate and make a determination. So, so that's -- we have had issues in the past where folks thought this lingered forever, but it doesn't. It comes in and we are under a time frame as well to, to get, to get to the end point, which is our final determination of evaluation.

MR. ANGELLE: For the ones that you are getting, are you meeting that 30-day requirement?

MR. SNELLGROVE: We do. The clock ticks -- starts ticking for us when we receive a complete form. Many times there's another issue -- here's another issue.

A lot of times we will get, we will get forms in, folks are wanting to comply, but they are not quite sure how to do that. So if we take 350 versus 4 million, we can better educate. Each driller will become very familiar with that form; they will know all of the blanks and how to fill it out because it will become a repetitive thing for them. So we believe that the timing of this should happen much more quicker, would be much more efficient for both the water well owner, potentially the driller, as well as our own agency to be able to work through this process.

MR. WELSH: Well, do you think, Gary, that since -- apparently, you believe that we have the statutory authority to require that.

Would it be proper to suggest that if a comprehensive management plan or maybe a statute was passed this year, it would include language that requires Office of

Conservation, for example, to pass rules to get -- to show or demonstrate that, you know, that the proper notification has been done and, and so forth, to direct us to do that in a statute? Would that --

MR. ANGELLE: Would it be necessary?

MR. SPICER: Could you just go ahead through administrative procedures and do that.

MR. WELSH: I know that's, that's the bottom line. Would it be any advantage in your opinion of having that mentioned in a statute for us to do that?

MR. SNELLGROVE: Well, if it was in a statute, then, yeah, obviously, we wouldn't have a choice. We would have -- we would be required to, so...

But I can say this: We have already started this process. We have issued a potpourri announcement several months back that alluded to our desires to, to implement a regulation to do exactly what we are discussing right now.

MR. WELSH: That's a regulation. I'm talking about a statute.

MR. SNELLGROVE: Yes, sir.

MR. ANGELLE: Have you got any feedback on that?

MR. SNELLGROVE: John.

MR. ADAMS: No, we haven't -- we haven't -- we have not submitted a potpourri or spoken to any legislators or anything like that about proposing a statute.

MR. ANGELLE: No, no.

MR. SNELLGROVE: No, no.

MR. ANGELLE: He said that you have already issued a potpourri --

MR. ADAMS: On the regulation.

MR. ANGELLE: On the regulation.

Have we got any feedback on that?

MR. ADAMS: None directly, no.

MR. ANGELLE: Okay. That begs another question. How much you got indirectly?

MR. ADAMS: Well, we submitted that potpourri item along with numerous other potpourri items. So we did get tremendous amount of feedback on a bunch of different issues. And some of the feedback were things as, as, as ambiguous as, We don't want you involved in anything. So, you know, in a

sort of roundabout way, that does -- you know, that, you know, people -- that particular person didn't want us involved in anything, which would include this.

MR. ANGELLE: Right.

MR. ADAMS: But no one spoke directly to that point and said we think that's a bad idea.

MR. ANGELLE: Okay. Is there a drillers committee or a drillers group?

MR. ADAMS: There is, yes, sir.

MR. ANGELLE: Have we, have we talked to them?

MR. SNELLGROVE: Yes. They have been made aware of this potpourri announcement as well as the subsequent amendments that were passed. This item was one that we did not pursue in the last amendment that we created.

MR. ANGELLE: What's the feedback you are getting?

MR. SNELLGROVE: The feedback I'm getting predominantly is one of either indifference or, you know, I'm getting it's not a bad idea. I mean, I think the drillers, in essence, you know, understand

their resource and they depend upon it for a living. And they -- and I believe that they, they have a vested interest for us to do what we do.

MR. ANGELLE: Right.

So we're not asking them to fill out the form. We are just telling them that, that it's kind of like a, a contractor that goes out to build a home. He has a responsibility to make sure that the building permit has been issued. Not telling them you have to issue a building permit. Saying don't start construction until you know that a building permit has been issued.

MR. SNELLGROVE: That's the idea.

MR. LOEWER: It's really not unlike the electric company can't hook up a utility until a sewer's in place.

MR. ANGELLE: Absolutely.

MR. LOEWER: The only problem is, that, that the sewer contents belong to the house owner until he wants to release them into the environment.

So here you have a private -- public oversight to a private asset. You have to be

careful not to outrun the law here.

MR. ANGELLE: Right.

MR. WELSH: That's pretty much like an oil and gas application. You need to certify you have done certain things, and, and here's documentation I have done that. Then you are eligible for a permit.

MR. LELEAUX: Some of the industrial wells, they will not issue -- the DEQ requires that this has to be done before they can get their plat permit. Okay. And so they are going to do it. The larger industrial wells, the larger municipal ones, they have a civil engineer.

MR. ANGELLE: Yeah, we have got a hundred percent compliance on those folks.

MR. LELEAUX: But you're talking about a totally different category. And the biggest problem is the domestic drillers. When someone is building a house, and at the last minute he says I need a water well. You know, and compliance of that is probably the biggest issue.

MR. ANGELLE: Right. Right.

But if it's against the law for the

well owner to -- if the well owner is required to notify us, and he's not, then we're doing everybody a favor -- we're doing the resource a favor, we're do the homeowner a favor, we're doing -- long-term we're doing the well driller a favor by using that person to say, well, time out, you can't do this until you get this form.

Do you agree with that, or no?

MR. LELEAUX: I agree with it for, you know, the type of work that I do in the industrial, municipal.

MR. ANGELLE: Right.

MR. LELEAUX: It becomes a domestic problem. You know, domestic well. In other words, the power company doesn't hook up your utilities until you have it in some places. Some parishes demand that you have certain regulations about your sewer plant and whatnot.

MR. ANGELLE: Right.

MR. LELEAUX: And, I mean, but, you know, again, the water well driller having to comply with it on somebody else's property, that's an issue.

MR. SNELLGROVE: Well, let me speak to the domestic side.

This regulation would not be applicable to the domestic because they are not required to give us prior notification. This is only focused on the well uses that would require us to evaluate. In other words, the non-exempt well.

MR. ANGELLE: Irrigation, public supply, industrial?

MR. WELSH: Right.

MR. SNELLGROVE: That's it.

MR. ANGELLE: So...

MR. LELEAUX: We are doing that now. We are helping the agricultural well drillers -- I mean, the owners fill out these forms before we do it.

MR. ANGELLE: Right.

MR. LELEAUX: Not every contractor is doing that, but that's what the idea is. We have been told that we need to help.

MR. ANGELLE: Right.

If I'm, if I'm in the agriculture business, I have an absolute need to make sure that water is a sustainable resource in

my area. And as much as I need my well done today, but there's a prior notification requirement, and I need done what I need to get done today, tomorrow, or, like, two years from now when my neighbor doesn't follow that same prior notification and a well is drilled that impacts me, I'm going to say what's going on here. Why do you-all allow that. And so it's really for everybody's protection in my mind, right? I mean, you would agree?

MR. LELEAUX: And, again, your rules say that if it's an emergency type situation or a drought, you can file it, if it's an exact well that's being replaced in the same aquifer under certain conditions.

MR. ANGELLE: Sure. Right.

MR. LELEAUX: I say, you know, it's not a big issue for the larger contractors. It's for the smaller ones. And I didn't realize you didn't require that.

MR. WELSH: I guess to focus, again, on the question, you know, is there anything that the state needs to do to beef up what we have now to make it work better, or is it working well now? I mean, that's where we --

where I think we are trying to go.

MR. ANGELLE: I think we need to beef it up. I think we need to use our partners who are our drillers to get this information so that we can make sure that not only are we managing the resource, but we are, actually, protecting other water well drillers -- I mean, water well owners who may have complied with the law and somebody is getting ready to drill a water well that's going to have a negative impact on them, and we need to do that.

I mean, what's the worst thing you could do is spend 25, 30,000, 50,000 to drill a water well that you didn't give us prior notification and it ends up having a negative impact on your owners, and we say, sorry, Boudreaux and Thibodeaux, you didn't get permission, and the law says you've got to P and A the well. I don't want to go to that meeting.

MR. WELSH: Well, that's, you know, what we are discussing. Do the Commissioners have any comment on this? Do you agree with the concept?

MR. FREY: I have a question for the staff. I'm having a hard time understanding why it's only 45 percent for irrigation and public supply wells. That -- do you have any -- I mean, what --

MR. SNELLGROVE: Well, that's where it was. I'm hopeful that it's improved. We are going to find that out when we complete 2011 compliance audit statistics, which, again, I'm hoping that we will have that in the next six to eight weeks, we will be done with that.

The question as to why. I think some of it is what Mr. Harold was just explaining about other agencies requiring that they go through a compliance -- you know, that they comply with all state, all applicable state regs, yadda, yadda. And I believe that's part of it.

And we have partnered with, with the NRCS with -- for the agricultural side of things, because what NRCS does, is they will provide funding, you know, for certain projects and what have you. And they will not issue, they will not issue that funding

until they know that compliance with all state regs has occurred. And, you know, before 2008 or so, we weren't on their radar. We are now. And it is working.

They have been the police for us on certain aspects of agriculture or irrigation well installations. And they, they won't issue and they will help the well owner to get the paperwork into us. And Jeff knows, because he, he sees the paperwork come in, and it's been a very effective effort collaborating with them on helping with the irrigation wells.

But they are not -- that's a domain within a broader domain of, of well of the irrigation community. Not all of them are seeking funding through the NRCS. So...

We do what we can to communicate through Louisiana Ag Center, which we have done, with folks partnering with Agriculture and Forestry. We have provided materials and what have you. We have tried to hit the ground and get out there and get the message out. That was part of what our public ed and outreach effort was focused on, was

regulatory compliance.

So all I can say is, is right now I don't -- I really don't know why the agricultural community has not responded. Maybe it's because they, you know, they still don't know we exist. But, you know, we are doing the best we can to get the message out right now.

But I'm very confident that the solution so that problem is through the driller. And if we do this, I believe that -- well, it's just -- it's going to correct the problem.

MR. COLVIN: Gary, I can vouch for this. I can tell you, you know, when this process first started, the talk of a notification or whatever, whatever, if I as a farmer got ready to drill a well was -- it never was mentioned. And now most drillers -- and I will say most -- that's the first thing they talk to you about.

So I think that you are going to find that, you know, the ag sector is just a little bit more hesitant about coming around because of regulations and everything else, a

lot of stuff they have to deal with. But on the same token, I think it will improve, and I think you will probably see that.

And it's going to be done, just like you said, through the driller, because the educational tool that that landowner is going to get, in all honesty, is not going to be from you or from us or from the state. It's going to be from the driller whenever I call my driller and say, I need to drill a well up here to water my field, he's going to say -- then that's when he's going to say, well, this is some of the stuff we need to do so we can get the process rolling.

MR. ANGELLE: Yeah, he's going to first of all say, Let me tell you what them SOBs in Baton Rouge did. And then we are going to get to it.

MR. MCKINNEY: Let me ask a question, Gary.

MR. SNELLGROVE: Yes, sir.

MR. MCKINNEY: Explain to me again how you determined this 40 to 45 percent. What are you benchmarking to get that?

MR. SNELLGROVE: Okay. The state --

every well that's drilled in the state is required to be registered by the water well driller.

MR. MCKINNEY: Okay.

MR. SNELLGROVE: So the assumption is, is that that database is, is, is --

MR. ANGELLE: Complete.

MR. SNELLGROVE: -- complete and accurate.

MR. MCKINNEY: Right.

MR. SNELLGROVE: So using that information as our base, we compare for the time period where our rules are applicable, which was from 2001 to current. So we looked back and said, okay, for all wells of a specific type, public supply, that were drilled and still, and still active, or, you know, not plugged and abandoned, we did a comparison. We know, we know through DOTD's database who was out there for that time period, and we had our own database where we compared what we had as far as entries where we had received prior notification, and we just, we just did a comparison, a well-for-well comparison.

MR. MCKINNEY: Okay. And no, and no idea as to the excuse other than what we have been talking about here? I mean, you didn't do a follow-up or you didn't knock on the door and say, hey?

MR. SNELLGROVE: Oh, yes, we did. Yeah. We sent out --

MR. ANGELLE: Couple of thousand.

MR. SNELLGROVE: -- couple of thousand -- over, yes, over 2000, almost near 3000 enforcement actions against all violators.

MR. MCKINNEY: And then?

MR. SNELLGROVE: And then we got, we got responses.

MR. ANGELLE: We got some phone calls.

MR. SNELLGROVE: The Secretary got phone calls, yeah, and the fun started.

And we're fixing to do that again. In fact, that's one of the items on here, is whether or not we should continue.

MR. ANGELLE: Again, so, so the well owner is the person that we want to communicate with from time to time, if there's a problem. The well driller is

certainly important to us. But the well owner is, is the person who we are regulating in this instance. It's important that we have his information. It's important that we, we know how to contact that person. And I realize that things change, but you have got to start somewhere.

And so, you know, it was, it was a seismic shift in management to go look at the DOTD base and see where water well drillers filed their paperwork but well owners had not filed their paperwork. So that means we had over 2000 instances where we didn't know. So when we doing evaluations, we didn't know that these, these wells existed, other than DOTD having a database saying that a well -- a driller said that he drilled it.

And, you know, again, part of the evaluation, is -- I think somebody said this -- having the best data helps to make good management decisions.

So, you know, again, send those letters out, not intending to cause people to pay a fine. Just say, look, you have got to get this done. You have got to let us know.

You know, piece by piece. You know, I got calls, I didn't know I did anything wrong. Look, don't worry, we will be okay; just get the paperwork filled in and nobody is coming over there. No water police are not showing up, and it's going to be good and just send it in. And people did that. Okay.

But it doesn't make sense for us to go through another 10 years and then do that again. And so what we're trying to say is -- and I used this example I think before -- in Louisiana we don't regulate people who give money to candidates who run for office, because there are 4 million people live in the state. We regulate the candidate. And we make the candidate file a report. And he has to disclose who he got his money from, because there are only 500 candidates as opposed to 4 million people, as an example. Just seems like this is the way to do it.

MR. MILLER: Mr. Commissioner.

There's one other thing. The ones that are public supply wells, actually, under the Safe Drinking Water Act, the state has promised them a program. And the DHH,

actually, has to approve that from a sanitary perspective. So another avenue may be to try to see that they, in their communications when they are doing their approvals as the Health Department of that well being installed, that they, again, call attention about the need for coming in with the paperwork to DNR.

MR. ANGELLE: But the public supply know. They, you know, hire a engineer. This, this, you know, is major, major investment. You know, it's, it's a little bit more sophisticated of a transaction. So, so we don't have problems there.

MR. MILLER: I guess, then, I misunderstood. I thought the 40 percent was public supply and --

MR. ANGELLE: Irrigation.

MR. MILLER: -- irrigation.

MR. SNELLGROVE: We did. But public supply is a big category. It's the big municipal suppliers, et cetera, but it's also the mom and pop gas stations, and, you know, some of those. And, and that's a large portion of the non-compliant, is the smaller

public supply.

MR. MILLER: But those are regulated under DHH under the Safe Drinking Water.

MR. SNELLGROVE: I agree. Actually, DHH has assisted us once that, you know, we got active with all of this. And what I have been seeing is that they will cc. They will send a letter to the well applicant, reminding them that they need to, you know, they need to check with DNR to see, you know. So they have been, they have been helpful in that regard, too.

Like I said, I'm very curious to see what our 2011 data looks like because I think we have done a really good job to, to do some things to effect a change for both public supply. Because when we partnered with LRWA, we traveled the state last year, and got our hands on with the operators.

MR. MILLER: And that's fine. That's fine.

Another venue for discussing is the Louisiana Conference on Water and Wastewater. That's held -- it's an annual conference, and you have got a lot from the public water

supply side of things. They have to be licensed again under DHH as operators of the water supply. Again, it's another venue to make sure that the licensed operators from the supply side realize that when you are dealing with a new well, they have an obligation to DNR as far as pre-notification is concerned.

MR. SNELLGROVE: Appreciate that.

MR. MILLER: So you have another opportunity.

MR. ANGELLE: Jeff, do you have something?

MR. DUHE: Actually, Mr. Chairman, my name is Bruce Duhe. And I'm the district manager of Layne Christensen in Baton Rouge, and I would like to speak to Mr. Welsh's comment about more teeth.

Of course, municipalities, industrial, are normal customers, they understand this. And I'm a big fan of the 60 day pre-notification. I think it's done a wonderful job and it's going to continue to do so.

The problem I have been seeing for the

last two years, especially in New Orleans, there's been a lot of federal funding, a lot of work going on over there. The Army Corp of Engineers pump stations, a lot of wells being drilled for cooling water to cool the bearings in the big turbine pumps.

Where we get into it is no one wants to take responsibility to provide the information or sign the permit. The owner, a lot of times, will not let me sign the permit. There's always a discrepancy about who owns it.

Last year and a half ago, Jefferson Parish and Plaquemine were fighting over who owned the pump station and who was going to sign the permit.

So I get into a real bind with that, and I would like more teeth. They are not scared of me when I tell them, look, you have got to have this. They will be scared of you guys, see. If I could beat them over the head with it, I would do it.

MR. ANGELLE: So in that example, you would be able to tell Jefferson Parish folks and Plaquemines Parish in this instance,

unless you get this thing pre-notified, I can't drill your well.

MR. DUHE: And that's the first --

MR. ANGELLE: And that would force a decision on who's the owner and who's the responsible party.

MR. DUHE: It's the first thing I tell them. And now --

MR. ANGELLE: So bluff.

MR. DUHE: -- we submit a proposal. I'm sending the notification form filled out and tell them that you fill in the rest of this, you know, who's the owner or the contact. Okay.

But the out-of-state contractors that have been coming in, and there's a bunch of them, they have a deadline. They are a general contractor. They might have 30 or 40 different subs working on bigger parts of a project all at the same time.

MR. ANGELLE: Yeah.

MR. DUHE: Okay. They will slot the well in there, say, between March and April. Okay. But -- and if you plan for that, you can do it and get notification. If they call

me up and say they want it now, hey, it's 60 days, we don't give -- we don't care about that, you sign the contract and you have to be here. And, get this, $3000 a day liquidated damages is the norm on those types of contracts. Okay. If you hold up another contractor.

So this causes a lot of angst, you know, frustration, and it puts us at odds with engineers who are not really civil engineers that do things for, for municipalities and public suppliers.

MR. ANGELLE: No, no, no. Current policy -- under current policy, you are not doing anything that you shouldn't be doing by drilling that well without pre-notification, right?

MR. DUHE: Oh, I never drill a well without pre-notification.

MR. ANGELLE: No. You may not. But you could, and you wouldn't be breaking the law.

MR. JONES: That's right.

MR. SNELLGROVE: That's correct.

MR. LELEAUX: That's right. Penalty

on the owner.

MR. ANGELLE: While you, while you may be, while you may be subscribing to a higher standard, they got -- when you say no, that you can't do it, they got somebody coming in behind you saying we will do it.

MR. LELEAUX: That's correct.

MR. ANGELLE: And they're not breaking the law. They're not breaking the law.

MR. SNELLGROVE: So what this would do, it would create a level playing field. It would create a level playing field. Because then you, you know, you would be then required not to drill that well.

MR. ANGELLE: Right.

So when that driller would send that information in to DOTD on, on -- to you-all on that, on that part, and you didn't have a pre-notification. And now you got this rule. You don't have to go chase the landowner. You've got a driller who makes a living doing this saying, You violated this law. You didn't have to go pre-notification. Our rules require you have it.

MR. SNELLGROVE: And I would bet that

we wouldn't -- it wouldn't even get to that point because we would probably get a phone call from competition saying I just -- I'm complying, but yet they're there, they're set up and drilling. I would expect that that would be -- that's where this would go.

MR. WELSH: This discussion kind of brings home the first question of ours, my concern whether we need in the law? Do we have the law? Do we have the authority under existing law to issue rules that are enforceable, and when we get sued, we are going to win? I mean, I was a regulator. I like to have, you know, it covered.

MR. SNELLGROVE: I appreciate that.

MR. ANGELLE: As a regulator, you want the legislature to pass a law so he can say I didn't make up this. So --

MR. WELSH: I might take that. I might have to say that.

MR. ANGELLE: No, no. I understand.

MR. BURLAND: Well, what do you do about the impairment of the existing contract? You just wait until they expire, an active provision like that, and then all

future contracts? Because I still see the conflict between, you know, the law saying the driller can't drill but the contract says you must.

MR. ANGELLE: Well, at that point in time, you take some education, if he comes -- the driller, driller will know that he can't drill this until, until -- you know, the $3000 ought to start -- the liquidated damages ought to start the day after the permit is issued, you know, because --

MR. BURLAND: It's not so much the driller there, it's the driller's customer, the client.

MR. ANGELLE: Exactly. But you educate the client through, through the driller.

Just like when a person running for office, somebody says, look, I think you're doing a good job, I want to contribute to your campaign, I want to give you a check for $2,500. Oh, no. Look, I'm in this category. The maximum contribution I can take is a thousand. Okay. You know, if you're statewide.

So, I mean, that's how we educated donors, through candidates. Because we hold the candidates liable if you take -- you know better. You can teach the class.

MR. BURLAND: I have. I don't want to teach one today.

MR. WELSH: Okay.

MR. COLVIN: What about drought relief wells, where will they fall into this regulation or whatever the law is talking about?

MR. SPICER: They are exempt from this.

MR. COLVIN: Okay.

MR. SNELLGROVE: They are exempt. They are exempt as far as installation during the drought event. After the drought is no longer there as a documented occurrence, then the well owner is required to provide to us prior notification before he begins to use a well for any other purpose.

We have -- we, by the statutory law, were required to provide a drought relief emergency plan, which we did, and it's been authorized through the Commissioner. And so

we have, we have a procedure that goes -- that follows a drought relief to the point where it comes, you know, they drill it, we get notice, then, then we evaluate, and then we close it out that way. So they, they are only temporarily non-exempt -- I mean, temporarily exempt, until such time as the drought has abated. And then they are required to provide the notification, 60 days, the whole nine yards.

MR. WELSH: Anything else on this first bullet?

MR. MCKINNEY: Let me ask you a question.

On domestic wells inside a city corporation limits, are those requirements the same as outside, with the exception of maybe the city would require some specifications of some sort?

MR. SNELLGROVE: The state law, DNR's law, Conservation's laws and regs, are if it's domestic, it's irregardless of its location.

MR. ANGELLE: No distinction.

Good job.

MR. MCKINNEY: Okay.

MR. SNELLGROVE: Yes, sir.

MR. SPICER: I have a question.

Gary, is there anything you can do to assist the applicant so this 60-day period or 30-day period has all the information you really need? You said that there's quite a few that are incomplete. So is there anything we can do to help them?

MR. SNELLGROVE: Well, certainly. I mean, what we do now as a practice, we get it in, we pick up the phone and call the individual who provided the form and you walk, you coach them through the process to get the data that you need to be able to move forward.

MR. ANGELLE: The reality of it all is that the well owner probably is going to fill out this one time in his life, maybe twice. So he's learning the whole -- whereas, the driller, you -- again, the driller, if you put the emphasis on him, as Gary said earlier, before you know it, we have got a whole group of people who are experts at filling this out. And they get it quicker,

we get it quicker, saves taxpayer dollars on going back and forth with, with an incompetent owner, well owner, regarding this issue.

MR. SNELLGROVE: Correct.

So, yeah, this could solve several, several issues, inefficiencies, and certainly streamline for regulating, you know, the way that we do for registration.

MR. SPICER: Thank you.

MR. ADAMS: As an addition, as a point of information on, on your question, Mr. Spicer, the Commissioner's also signed a, a guidance statement basically stating -- and we have also put it in the form of a regulation -- stating that should we complete our evaluation prior to the 60-day process, the driller is allowed to go ahead and begin construction on the well as soon as he receives our evaluation. So they don't have to wait the full 60 days. As soon as we complete our evaluation, they are allowed to go ahead and commence construction immediately.

MR. SPICER: Well, I was just

concerned about having to send it back and forth, because that eats up a lot of time. We used to have this same issue with coastal zone permits, very serious issue, years ago.

MR. ANGELLE: Did you solve that?

MR. SPICER: Yeah.

MR. ANGELLE: Can you say -- can you tell the audience why that happened.

MR. SPICER: Yes, they regulated.

MR. ANGELLE: Let's move on to the second bullet. We are still talking about water well driller -- the water well drilling community. Are there any other ways that the water well drilling community could be utilized to obtain 100 percent registration of pre-installation notice compliance?

So that's assuming the drilling community does things. I guess, maybe you would want to come back and tell us what you do. And then is there anything else that, that you could think of ways you could enhance your part in insuring 100 percent compliance. The state does things, but we are asking specifically the drilling community.

MR. LELEAUX: The biggest problem is water well contractors were not responsible for it. So they weren't going to be penalized. It's the owner. So several of these guys, they only want to fill out the only documentation that they have to do. So they did that. They knew they couldn't get another license next year unless they registered all their wells, but they didn't have to do this compliance. If you issue it, it's not a problem for the type of wells I do, municipal, industrial and whatever. I don't see it's a big, big issue. They know how to do it. Every domestic or agricultural driller knows how to do it now. And he's been telling the owner he has to have it done. Some of them are stubborn owners. You know, I'm not doing it unless somebody tells me I have to do it. When you send that letter saying that you are going to fine them $750, they will come asking for help. I promise you.

MR. ANGELLE: Yeah.

MR. WELSH: Is there only one water well drillers association in the state?

MR. LELEAUX: Yes, sir.

MR. WELSH: And do you think most of the water well drillers are members of your association?

MR. LELEAUX: They have to be if they are going to get their continuing education. They have to belong to our association to get that. If they don't, and there's no other place to get their continuing education. If they are a licensed water well driller, yes, sir, they do belong to Louisiana Ground Water Association, or they are, they are going to get their continuing education some place else.

MR. ANGELLE: We have the name and address of every licensed driller. We have a database.

MR. WELSH: All right. I think that's important that we do have almost all the names. I mean, it's like an oil and gas association, they are used to disseminate information that we have, to put things on their mailing list, and things like that, so... And you have training or you have periodic meetings to educate your members and

so forth?

MR. LELEAUX: When we have our continuing education, LDNR's going to be there to go over these forms and fill them out. And the first time when they told them about it, you know, this is going to be in 2000, when I was at that meeting, it was kind of like, well, who is going to be responsible for it? Then why are you telling us.

So if you are going to issue and you say these guys responsible, you need to be at that meeting to tell it to the guys to their face. And if you don't do it, you are not going to get your license.

MR. WELSH: Well, Commissioners, do you-all have any ideas what the drilling community can do to comply with this?

MR. MCKINNEY: No, not that issue. I have another point. Go ahead.

MR. MILLER: I think it's important to have a level playing field, so whatever makes it a level playing field is what I would suggest.

MR. WELSH: You have something?

MR. MCKINNEY: I have another comment.

There's one component part of this that I think we are overlooking, and that is in the case of the New Orleans situation. You know, you've got the super, you've got the engineer waking up on Monday morning and says, oh, look, I need a well here by the end of the week. You know, I mean, he should have scheduled that two months prior or whatever. And I think that is probably what you are coming up against. And that is a factor that you will never have any control over. I mean, that's just the beast. That's part of the business.

MR. LELEAUX: The question -- I mean, this is just general data about the information. The owner doesn't have to sign it. The contractor should be able to sign it. Anybody that can provide that information on behalf of the owner, whether it's Jefferson Parish or whatever, you know. But your form says the owner has to sign it. That's an issue for these parishes.

MR. MCKINNEY: That's a good, that's a good point.

MR. LELEAUX: If the contractor can

sign it, and that's probably what you are going to have to do, to say I'm sending this in in behalf of this owner.

MR. ANGELLE: Well, I hear you. But, but there's something about the owner, who is the person that is getting the right from the state to be able to have this well bored and to have this infrastructure. I can see two years later, well, I didn't tell him to sign it. I didn't authorize him to sign this.

So I think we are getting into, into some weeds here. I think what we need to do is gather with the drilling community, tell them what we think we need for all of us, and get it.

But you are right, Mr. Ted. You know, there's always going to be an ally. You can put, on I-49, you know, from Lafayette to, to Shreveport, all the troopers you want. There's going to be somebody who is going to go over the posted speed limit.

But if we go from 45 percent compliance to 95 percent compliance or 90 percent, of whatever it is, then job well done. We will come back and plow -- we will

get those weeds a little later.

MR. LELEAUX: I'm providing that information on the well, water well, for the owner when I fill out the registration. I fill out the registration, I tell you all about it, tell you who the owner is, and I sign it and say --

MR. ANGELLE: Yeah, but that's for -- we allow you to do that for domestic well, right?

MR. LELEAUX: No, no. That's for every water well that's being drilled. In other words, that's the state registration. And we've been doing it since 1985.

But the form that your -- the notification form, it's always an issue. You want the owner to sign it. Getting that owner to sign it is sometimes -- it might be several people own that property.

MR. ANGELLE: Got you. Okay.

MR. WELSH: Bo, you had something?

MR. BOLOURCHI: Yes.

Bruce.

MR. DUHE: Yes, sir.

MR. BOLOURCHI: Who is the owner in

your mind? Is it, okay, the landowner or the well owner?

MR. DUHE: Oh, the well owner, certainly.

MR. BOLOURCHI: Well owner. That could be a contractor from Massachusetts.

MR. DUHE: It could be.

MR. BOLOURCHI: Doesn't know anything about the rule.

MR. DUHE: Right. Right. And the general contractor --

MR. BOLOURCHI: So what difference does it make? You can fill it in. Who pays you?

MR. DUHE: Oh, the prime contractor. I'm speaking of a specific case.

MR. BOLOURCHI: Exactly.

What we used to do with the watering wells, landowner says, I didn't need those wells, that's not mine, that's the contractor. So those things, in my opinion, those forms can be sent in under the name of the person or company that pays you.

MR. DUHE: Well, that would be fine.

MR. BOLOURCHI: What's wrong with

that? He's the owner.

MR. LELEAUX: It might be the Corp of Engineers, though.

MR. BOLOURCHI: Whoever. Whoever pays you. You know who you signed the contract with.

MR. DUHE: Yes, right.

MR. LELEAUX: He should be the contact.

MR. BOLOURCHI: In my opinion, he should be the one signing that pre-drilling form. Okay. And just send it in. Because the purpose of that is, for LDNR to check it to see if that impacts anybody nearby. So what difference does it make who the owner shows there? The registration form should have the correct name.

MR. DUHE: Right.

MR. BOLOURCHI: That should resolve your issue.

MR. DUHE: And in these cases where the prime contractor does it, that would put the heat on him to get the owner.

MR. BOLOURCHI: There's no different than the Corp of Engineers de-watering wells.

There's hundreds of them. And every time there's another contractor. So finally, just put the name of the contractor. And you know what the Corp says when they go for plugging? Oh, they not our wells. Say we don't require that the de-watering wells is ready for plugging. Thank you.

MR. WELSH: Okay. Thank you, Bo.

We will move on. Third bullet. This is really a question to the state. And, I guess, Mr. Snellgrove, you mean the state DNR? Should the state focus resources to implement integration of the water well driller registration and the well owner notification database, you know, into one system? I mean, is that, is that a question to ourselves?

MR. SNELLGROVE: Well, state being loosely as our agency and/or a higher order because, you know, to do this is going to cost some, some money. There's going to be some, there's going to need to be some allocation of funds. So we have already blueprinted this process. And, you know, we, we have an idea of what we need to do to make

it happen, but we didn't have the funding to implement it. So whether that be an appropriation matter or an in-house internal DNR/Office of Conservation issue, I'm not aware of where it would come from, but that's where, that's why I use the word "state."

MR. WELSH: Well, we have, you know, we have a process to get money for different things, and it's going to have to be triaged, if you will, with everything else. And whether that's -- I mean, we can push it. I'd suggest we do push it, you know, and throw it out there.

And, I mean, does the Commissioners have any ideas? I mean, does that -- would that be a good idea to merge the water well driller database and the owners? I think it would.

MR. LOEWER: What's on the notification that can't be on the registration?

MR. SNELLGROVE: Volume, rate, production information.

MR. LOEWER: Why can't it be?

MR. SNELLGROVE: It's just essentially

what the difference between the two is. Now, there could be more discrepancies in what was proposed to be the, say, the lat/long, the location of the well, versus the actual that was -- that the driller reported in his -- when he installed it. That wouldn't be uncommon, because on the front end you're saying, yeah, I think it's going to be possible in here, getting you in the ballpark. And then when you actually drill it, the driller may say, well, I can't back my rig up in that specific location, I have to move it over a little bit over to the left or right or whatever. I mean, there may be some discrepancies in their.

But the idea was -- the blueprint was not to, say, eliminate one or the other. It was to have -- basically have them all under the same database and to have all that information in a manner that could be sorted, filtered, used and queried and reports to be generated from and to do the statistics that we do so painstakingly now with two different systems. Whenever we do these audits we talked about, it takes a lot of effort and

manpower, resources, to do this because we are having to, to create two different spreadsheets and then merge them together, and it's just a mess.

So, we know -- we already have investigated this possibility, again, and we understand and our contractor understands what needs to happen. We just, we just didn't have the funding to implement it.

So, I guess the question here is whether or not it's valued, as you as the Commission. I value it. I see the benefit in it. But with limited resources, and we have to pick and choose, we're going to educate, we're going to do this, that and the other. Then at some point we are going to have to look at all of these wants and prioritize and say this is a greater want or need than this, and, and, you know, come together under a master plan to, to implement.

MR. WELSH: Well, I say, again, there's a budget process that we go through, and we will have to push it. I mean, I feel strongly that it would be a good thing.

Secretary would, I guess, you know, for this Department, be the ultimate money manager, so to speak. And just have to get it through the process.

MR. MILLER: I was just going to say, I was going to kind of echo the same comments. I know we have done some of that at the DEQ. Because if you can spend the effort up front to get that system merged where you can do your auditing automatically -- I mean, your audit -- you are going to save the time that you would use by going through those. We are going through a lot of efforts right now to try to do as much online as possible; putting permit applications online. I think it will bear good benefits to spend that effort up front merging these systems so that electronically you can do a lot of things that, otherwise, you would have had to have manually done with a lot of hours spent doing that. You would be better able to focus your attention and your manpower.

MR. WELSH: Okay.

MR. MAYS: Mr. Commissioner, what

happens in the change of ownership? Was there any --

MR. WELSH: Change of ownership? I mean, that needs to be tracked.

MR. MAYS: Somebody supposed -- I mean, the land sells, and there's a new owner of the well and the land. Is anybody under --

MR. SNELLGROVE: There's an obligation.

MR. MAYS: -- obligation to send that in?

MR. SNELLGROVE: Yes, sir. Actually, both under Title 56, which is the former DOTD requirements, as well as on DNR's regulations under Title 43, there change of information, change of ownership. We actually have a form that, that would be initiated by either the new owner or the existing owner -- I mean, the former owner -- to, to recognize that change. So that the database can be updated and, and, you know, with the new location of the new owner so we can maintain some regulatory authority, I guess, in that sense. We know who to find or who to go to, but it's

in -- it's on the books. It's there.

MR. WELSH: I think this next bullet kind of tags on to the previous one: Should resources be directed toward developing online technology and applications to provide the water well drilling community greater access to agency notification, evaluation, response, correspondence, and so forth?

In other words, I guess is that should we make an effort to put all this online, just like we are trying to do in the office? You know, with permitting and unitization and work permits, and everything else, let's put it all online.

MR. ANGELLE: Yeah. So I think that this question was, was one that I brought up about, perhaps, some kind of iPhone app. And that may be a bit too much into the lead.

But, again, our promise to water well drillers, if you help us in this deal, we are going to give you some immediate action when we, when we have a decision or a process is complete, we get to get something out to you right away, and you don't have to worry about us sending it to the well owner and the well

owner gets it and he didn't really know what it was or he was out of town. We can immediately send something to you. You know, I'm assuming that most business folks now have some type of e-mail capacity in their pocket.

So I think, clearly, we need to -- if we are going to ask drillers to do something for us, we need to be able to find ways to shortcut the information to them.

MR. WELSH: I think ultimately that would make everyone's, you know.

MR. ANGELLE: No question.

MR. WELSH: The last question is addressed basic concerns to the well owner: Should the state pursue amending statutory or regulatory requirements to mandate well owner registration of any water well still in existence? That's on the records it's not officially plugged, it's not abandoned, it's not destroyed.

What about these, these wells sitting out there? Should we amend requiring the law to require that? I guess it's a question to everyone about the owners of the well. It's

the first time we have talked about putting something on the owner.

MR. MCKINNEY: Would it be fair to assume that if I were an individual, and I had 500 acres or whatever, and a couple wells on there, that I knew it was there. And you think I'm going to willingly tell you that those -- they are there, and you are going to ultimately possibly require me to plug them?

MR. WELSH: Certainly a good way to--

MR. MCKINNEY: Whatever it costs, it cost me. I probably won't be calling you.

MR. ANGELLE: So who was previously grandfathered?

MR. SNELLGROVE: What, prior to 1984?

MR. ANGELLE: Right.

MR. SNELLGROVE: I'm asking Bo. Wells that were drilled were, were not required to, except with the exception of public supply, as I appreciate it, and that was driven by OPH; that if you are still an active water well under the public supply domain, then you -- they needed to be aware of it and put it in their database.

MR. BOLOURCHI: Under the original

rules of 1976, it was a requirement for the owner to send a short form informing the state that there's an abandoned well. Okay. But in 1985, most of the state agencies were involved. The question came up, what good is it going to do to tell you there's an abandoned well. Abandoned well should be plugged properly by the statute. So we did not pursue that. So as soon as we find out someone has an abandoned well, we just send them a letter. If they don't do it, it would be a certified letter.

Now, the Ag industry, ALCS, had funds. So we work with NRCS using federal funding as much as we could to plug those wells.

MR. SPICER: So, Bo, if you recall, I also had some EPA funds, and I couldn't spend one buck of those funds trying to get wells closed down. We offered, I think, $2,500 a well. And we had no takers.

MR. ANGELLE: Well, regardless of the P and A part, so after Hurricanes Katrina and Rita, we had this program where we were interested and we got some federal money to, to look to see if any wells that were in

existence were, by the low, medium, or high --

MR. KILLEBREW: Risk.

MR. ANGELLE: -- high risk offenders to the environment. The only way we knew how to go about doing that is to go from the database; correct? We might have put troops on the ground, but --

MR. SNELLGROVE: That was the, the beginning of the process, was to go to the database.

MR. ANGELLE: So all wells drilled prior to 1984, there may be a risk to the environment because they are, if you would, a drinking straw into the aquifer. And if they haven't been properly P and A'd, I get that. I understand that costs money. But we don't even know where they are at?

MR. SNELLGROVE: That would be -- yes. This is the deal.

When we do our evaluations, we are completely dependent upon the water well registration database to identify to us in our areas of review who's in the neighborhood, who's around, what impact, what

are the potential impacts. So we recognize, definitely, that there are areas of the state that, that, especially on the domestic side, subdivisions that were built prior to '84, what have you. I mean, there's a lot of wells that are unregistered.

MR. ANGELLE: But on the evaluation side -- I guess I'm looking at it from the evaluation side than the environmental side -- from the evaluation side, is it fair to say that the totality of those domestic wells are such a small part of the volume of use that it is likely not to have much of an impact on your evaluation whether you have that information or not?

MR. SNELLGROVE: I'm looking more to those that are not registered --

MR. ANGELLE: To protect them.

MR. SNELLGROVE: To protect them -- correct -- from somebody else coming into their neighborhood, or nearby. Could be an industrial well, or an agricultural well. Big drawdown, sucks him dry and then I'm getting a phone call, and then I'm asking, well, where is your well located. Well, I'm

not registered. Whoa. Okay. So they weren't even on the radar. I couldn't protect you.

MR. ANGELLE: And there was no requirement for them to be registered.

MR. SNELLGROVE: That -- correct. That's how I understand the way, the way the law was back, back then.

So what this is proposing is, is just -- it's out there. We know it's a problem. How large of a problem it is, I think it's depending on where you are in the state and the age of the community and their dependence upon ground water, what have you, as a resource and continued dependence.

So I think it's, it's relative in that sense, but we do know it exists. In fact, what we do now and to be cautious about this, is we, we put our responses and we word in there that, to make sure that they understand, this is -- we see no adverse impacts to register for wells. Be advised that there may be unregistered water wells in the area that, that may pose a risk, what have you. So, so...

MR. ANGELLE: I think it's going to be very difficult to get legislation approved that, that asks folks who were not required to do something 10, 20, 30, 40, 50 years ago, to do it now and expect the legislature to embrace that kind of retroactivity and that you wouldn't end up having compliance anyway.

So I think we need to, instead of saying should the state pursue amending regulatory requirement, I think the question for me that I would suggest for, for this group is, evaluate innovative ideas on how we may get those wells into the system. I don't know what those innovative ideas are. But I think passing a law, I would just give you my advice, be very difficult to get that.

MR. WELSH: Okay. I guess that's the -- basically the -- ends the last bullet. I guess I now would ask does the audience, anyone in this room, have any comments on anything we have been talking about, about Registration?

Mr. Secretary, that's all I have got.

MR. ANGELLE: We have --

MR. DUPLECHIN: I have got one

comment.

Would just like to reiterate the statements that were made earlier on possibly finding funding to be able to combine the drillers registration and prior notification into one database.

At Capital Area Ground Water Conservation District, we rely on both those sets of information for the permits that we issue in the five-parish area. So right now we are working with three sets of numbers. And, hopefully, if those two databases were combined, that would result in one identifier for the well that you have. You know, we would wholeheartedly support any effort for the Department to find funding to, to get those databases combined.

MR. WELSH: Thank you.

Anyone else? Yes, sir.

MR. LELEAUX: Basically, right now if I work on a well that's not registered, I'm supposed to register it. Even though it's done in 1900, I'm supposed to -- if I change the screen or do something of that nature, I register the well. That's a rule, that if I

find that it doesn't have any registration, I'm supposed to help register it. And that's, that's already part of the rules and regulations.

MR. ANGELLE: That's smart.

MR. LELEAUX: So it's already -- I mean, the water well contractors are going to help you.

But, again, when we drill a new well, if there's an existing well there, the inspector looks at it and says, hey, that well has to be complied -- abandoned by such and such a time. You know, the domestic well drillers, if they're part of a program, it has to be done. NCRS, they all telling them they have to do it. But getting them to do it is another issue.

But some of these wells are just for when saltwater is in the canals. They don't use them but every 40 years. They still have that old well there to pump whenever the saltwater comes up the intercoastal or somewhere in that area. So those wells exist also.

MR. WELSH: Thank you, sir. And I

thank all the comment-ors that participated.

MR. ANGELLE: Good job. Thank you very much.

Okay. Evaluation. Mr. Eugene Owen.

MR. OWEN: There are seven bullet points that maybe we can cover in the allotted time. We are running 45 minutes behind time.

But is the current law and regulation requiring submission of notices of intent to install a water well to Conservation for non-exempt water wells to be used for irrigation, public supply, industrial and other purposes, is this adequate, or does this procedure need improvement?

I think what we need to do, redefine or refresh our memory on a couple of terms here.

What are non-exempt water wells? They are domestic wells, they are emergency wells for the duration of the drought, and they are replacement wells.

Are there any other non-exempt -- are there any other exempt water wells that I haven't --

MR. ADAMS: Drilling rig supply wells.
MR. OWEN: Drilling rig supply wells.
MR. ADAMS: Yes, sir.
MR. OWEN: Regardless of capacity?
MR. SNELLGROVE: That's correct. Except if it's going to be used for the purposes of frac water supply, then it would be categorized as an industrial well, because the concept there is that these rig supply wells are temporary in nature.
MR. OWEN: Okay. We have really spent a great deal of time talking about this, the current law and regulation. And is the current law and regulation requiring submission of notices of intent for these non-exempt water wells sufficient, or does it need to be strengthened? That is the question.
MR. MAYS: I don't know all --
MR. BOLOURCHI: Gary. Gary.
MR. SNELLGROVE: Yes, sir.
MR. BOLOURCHI: If a well is exempt, does that require pre-registration notification?
MR. SNELLGROVE: If it's exempt, it's

still under Title 43 under DNR's requirement required to be -- notice is still provided to come into our agency but 60 days after it's been installed.

That is a duplication of effort with the water well drillers submittal of 30 days after it's been installed.

MR. BOLOURCHI: Because you are already getting the registration form by then?

MR. SNELLGROVE: Correct.

So what we have done there with regard to rig supply, to exempt well uses, we have amended the regulations under Title 43 such that a well owner, if he chooses, that he may -- that the water well driller's registration would suffice as his requirements under Title 43 to meet that 60-day well owner requirement. So we have tightened it up for rig supply and domestic.

We couldn't touch the, the drought relief because that's only a temporary situation. So, you know, which triggers at some point they have got to come back and give me that prior notification, if you will,

even though it's already been installed. They have got to give us the opportunity to evaluate that location and that use under more normal conditions. You know, in other words, outside of the drought event, before they can continue to use the well.

MR. BOLOURCHI: Could you, could you have used the registration form for the evaluation?

MR. SNELLGROVE: No, actually not, because there wouldn't be any intended use, rate and volume and number of days that they would intend to use the well.

MR. BOLOURCHI: Production well.

MR. SNELLGROVE: Yes, correct. That's the main issue.

MR. OWEN: Any other comments, questions?

MR. MAYS: I'm not familiar enough with the law to make a comment, but I would ask, is a supply, drilling rig supply well, it has a time frame on it. And after that, do they have to plug and abandon it within that time frame, or, or how does that work legally?

MR. SNELLGROVE: Right. No, sir, it doesn't have a, an expiration or a time period for its usefulness. If an operator wanted to maintain that well, he could or she could. They could put it into an inactive status, or they could transfer it to a landowner, for instance, for stock well or irrigation, what have you, which does occur. But there's currently no regulation for a rig supply well to be P and A'd at some point after its use for that purpose.

MR. MAYS: And could they use that water for fracking?

MR. SNELLGROVE: Only if they have been provided -- only if they have provided prior notification to our agency for evaluation for that specific use.

MR. MAYS: Is there any checking?

MR. SNELLGROVE: The oil and gas industry has been under much scrutiny from our agency as far as compliance with rig supply/frac water supply. We feel, and I think our data supports, that that, that that industry is compliant with those requirements.

MR. BURLAND: So what do you think the difference is between a high compliance from the oil and gas industry on those types of wells and a 45 percent compliance on, on, you know, domestic or other, other well users? I mean, I probably know the answer, but...

MR. SNELLGROVE: I can tell you. I think there's multiple answers to that.

MR. BURLAND: What can we do to duplicate what you are doing so successfully on that side?

MR. SNELLGROVE: Let me say this: We were at a competitive advantage, if you will, in dealing with the oil and gas industry because we have all their contact information in our databases. It was easy to reach out to that group, very easy. And predominantly -- well, in 2008, at the onset of Haynesville Shale, there was a very limited number of operators that we had to reach out to, 25 or so. There weren't, there weren't very many. In fact, in the very beginning, it was even less than that.

So -- and then we, we had a good PR effort. We, we had advisories that we sent

out. We changed policy in-house. The industry was very receptive. I think they saw the need to, to protect their resource. They had a vested interest as well because they were going to be there long-term. Just wasn't here today and gone tomorrow. So I think there was just a multitude of things. But I would have to say that the speed at which we were able to respond and react was -- it was certainly to our advantage to have all of that information right there within our own database to be able to get the e-mail addresses, the phone numbers. I mean, just logistically it was an easy process.

MR. ANGELLE: And we regulate the other, you know, the income stream of their production, so...

MR. BURLAND: Yeah. No where to hide, in other words.

MR. ANGELLE: Well. I mean, I think generally, generally people in business, I think human beings, I give them the benefit of the doubt. They want to comply, if you let them know what it is. And, of course, there are some folks that you have got to

bring along kicking and screaming, but for the most part, people want to comply.

But I think, I think just to get back to Mr. Mickey's question about, you know, do we have water that is being used to frac wells that is coming from a rig supply well. While I can't prove it, I would say instinctively yes. And I wouldn't necessarily say it's because the, the energy company is doing it. It's a rig supply well. It's no longer used for that purpose. And it may be left in that field for future use for that -- the landowner or whatever, and, and now it's out there, and, and water from that, which was originally a rig supply well, which may never have changed its status or registration, is not being -- the energy company is not using it for that, but some water broker/operator is looking for every opportunity he can, and there's one. And, and, and unless you have somebody to, to physically be there to, to interrupt that business deal, it's happening. I can't -- I just instinctively believe that.

And I think that's happening not only

on those. I think it's happening on every potential source of water that's out there that, that folks are trying to get.

MR. MAYS: Well, again, if, let's just say that they had a year, the application or the registration was that they had to abandon it or plug it in one year. What -- who would, who would suffer if they did that?

MR. ANGELLE: Well, I would say, I would say to that, is that would, that would be wasted resources that were used to drill that well that would not have a future utility for another purpose behind it.

So, for instance, if, you know, many of the practices in an oil and gas mineral lease negotiation are if you drill a water well on my property, I get to keep it. And, you know, it's in kind of a rural setting and it has a value. So in that instance, you would, you would take, you would take an investment that was made and, and that would have some, some utility, and you would just say, I'm sorry, but you've got to P and A, you can't use it anymore. I don't necessarily think that's a good use of

assets.

MR. MAYS: Well, I, I don't know. I mean, I can't argue the point. I was just wondering.

Like, we get reports of, you know, in our area up there, that some of those wells are 50 plus years. Jim, you probably know. Some of those wells are real old. And we get reports of there's an abandoned oil site there, but there's still a water well there that's not plugged.

And I understand that that was the normal process, is to leave a water well there for the landowner as part of the incentive to drill on their property and all that, but they are not actually using those with the water systems we have. And so you have a number of, of abandoned wells that are sitting out there.

And I wouldn't want to, to do something that would not -- you know, that's not, not being able to use that. But it seems like to me it would be appropriate to put some type of time frame on that, if it's not being used.

MR. ANGELLE: Well, maybe, perhaps it would be a time frame to say that within one year, just using that as a starting point, it has, it has to be P and A'd. It has to be -- you have to show evidence of continued use or you have to put it in the name of, of a, I'm assuming, a different well owner.

MR. MAYS: Well, that's where, that's where I was going.

MR. ANGELLE: Yeah. Yeah.

But in spite of that, in spite of that, I still think that, that the -- that there's -- that well, there's some cases where that well would still be used for a purpose of which it was not permitted. And there's another one nextdoor that was drilled for -- had something that had nothing to do with oil and gas that's, likewise, being used for a purpose for which it was not permitted.

I'm getting the glazed-over look.

MR. OWEN: So so far what we have really said, except for a change in ultimate use, there may be a way to firm that up and get some sort of residual notification change in use. And I do not know how that would be

done procedurally.

But except for that, this notices of intent for non-exempt wells seems to be adequate, is this the consensus?

MR. ANGELLE: Uh-huh. Yeah, I think so.

MR. OWEN: Now, the notice of intent, when it's received in DEQ, triggers off a whole chain of events, an examination of notice -- Department of Conservation, sorry. Triggers off a whole array of procedures in analyzing the notice of intent. And Gary sent me a full-page checklist of all the procedures that this triggers off. But there's a series in this checklist to examine sustainability of the aquifer, to examine whether that falls in Capital Area Ground Water Conservation Commission, for instance, to examine whether or not there is any predetermined sustainability issues with respect to this aquifer the well is to be sited in, and whether or not there are other issues regarding interconnection of the aquifers that need to be examined. Any of these would trigger a further examination

analysis of whether or not this contributes to the sustainability or non-sustainability of the aquifer.

The, the checklist appears to be perfectly adequate in it's scope. And my question was whether or not the checklist is done in practice as well. And if it's diligently pursued in practice, then this raises the question, which is bullet point No. 2, Should the conservation continue the implementation and improvement of their existing water well pre-installation notice of intent aquifer sustainability and existing water well impact evaluation procedure?

The water well impact evaluation procedure really, unless it's sustainability issues, which we will really discuss in the next bullet point, have arisen by some sort of publication or prior notice, then sustainability is examined with respect to proximity to existing water wells, and the proximity issue has to do with whether or not these wells, or with the proposed well, is within a quarter of a mile or less. And the presumption is that if the spacing of this

new water well is not within a quarter of a mile, and this is not in an area where sustainability issues have been raised previously, then it's presumed to be a non-issue as far as proximity is concerned.

The question is, then, is this procedure, which I gather from firm head nod from Jeff over there and Gary also, that this is being done in practice as well as in theory. Is this practice adequate?

MR. JONES: Yes. This is in practice. We are completing one of these -- one of these checklists is completed for each and every one of the non-exempt wells and it is attached. It's part of the file where we include the -- for each well, where we include the, again, the letter that goes out to the well owner and a copy of the completed form.

MR. ANGELLE: Is a copy of the form in the package here?

MR. JONES: The copy of the technically complete --

MR. ANGELLE: I mean, in our package of information here, do we have a copy of a

sample questionnaire?

MR. SNELLGROVE: We don't -- Mr. Eugene Owen has an example of it. Yeah, he's got the four-page evaluation checklist.

MR. ANGELLE: Okay. All right.

That needs to be a part of -- I know we talked about it. That needs to be a part of the report as an exhibit.

MR. JONES: Yes. I did send it to Jennifer, and she's got a copy of it.

MR. ANGELLE: Yeah.

So is your -- your position is that in every case where there is a well that requires evaluation, the four-page evaluation form is being completed?

MR. JONES: It's being completed, signed and dated, every time.

MR. ANGELLE: Got you.

MR. OWEN: But it is true, Jeff, that if the area has not been previously identified by some published work, like, some investigation Capital Area Ground Water may be making of the impact well, or some USGS investigation of where it raises the question of sustainability, that it's pretty much a

fill in the blank, because unless the, unless the conservation has been notified of a sustainability from some other place, then it's, unless it's the proximity issue arises, it is deemed to be sustainable; is this not correct?

MR. JONES: Again, yes. Again, we are looking at potential interference for the other wells, as you say, the proximity issue, but we also have a full listing of the USGS reports that you were mentioning. And the reports have been put together regarding the aquifers within the state and where those sustainability issues are predominant, where we have areas of water level decline. And just as we are looking at -- we look at all other databases as well, the DEQ database. And, again, the, the guys that are doing these evaluations are both geologists. They are both trained. And they both are aware of all of the maps that show these areas of where there would be a sustainability issue, such as the water level decline in the Chicot in Evangeline Parish. We all know of the Monroe area and the Sparta in the Ruston,

and, again, those are areas of ground water concern, but we, we are aware of those.

Plus, we are also aware of on a parish-by-parish basis, we have the maps that show the saltwater plumes within the Sparta aquifer. Say, all through central Franklin Parish, there are a lot of people that aren't aware that the Sparta is salty there. And we, actually, have a, through, you know, actually through Conservation, we have provided a company permits, these are actual permits, for brine production wells from the Sparta aquifer. And, again, we are talking about greater than 10,000 TDS.

But, Mr. Owen, we are doing the job of our research. And if we have got any questions, we, say, we spend more time with these. We are looking at -- as I say, we are looking at high volume wells. These are the non-exempt wells.

MR. OWEN: Right.

MR. JONES: Okay.

MR. OWEN: Please.

MR. MCKINNEY: I would like to make a comment on that that Mickey reminded me.

I was one of the few people that sat down with the people in Arcadia that were doing the, the leaching of the salt dome using purposely pure Sparta water to do so at the rate of some 10 million gallons a day, if I remember correctly. That caused quite a bit of a flurry of concern up in that area up there, and we were able to sit down with those people.

And through the negotiation and everything, they did begin to initiate some, some issues, I mean, some solutions, by using wastewater collections and so on and so forth with the Town of Arcadia and so on and so forth.

So the bottom line was, they rallied to solve the problem and help alleviate the problem, but we were a year into that process before they got to that point. So once they have finished within another 12 months or so, then that issue will be erased and they will move on some place else.

But this was as good of an example, people, of what should be done in the case of using extremely large amounts of aquifer to

do a project when, in fact, they may have met some preliminary approval. I'm not saying they didn't. But to go into a community to where there was an issue involving a very critical aquifer, and then begin to do what they did to that, and ultimately came up with somewhat of a solution, should be aired out far in advance, far in advance, of when they show up and start doing it. That is a very critical issue as far as I'm concerned.

MR. OWEN: Any other comments on that point?

Before we leave the notice of intent, in this checklist there is a place in the checklist that can trigger off an actual modeling of the effect of current withdrawals, if they are fully known, plus the withdrawal from the proposed well. And I suspect this doesn't happen very often.

Would you comment on that.

MR. JONES: Actually, we, with every single evaluation, we, we actually look at maximum drawdown. We actually have a simple formula. We don't do it. And, again, we are looking at, we are looking at scenarios that

don't require a full impact study that we require for projects involving several or a number of large volume wells. But if we are looking at a large volume well, or, actually, in most instances, when we see wells within the quarter mile, we have the Theis equation, which we have -- actually, we have got a little spreadsheet program that, that actually will give us, give us the maximum drawdown through the period of time that that well is proposed to be used per year. And generally for irrigation, we are looking at 30, 60 days, something like that. And then we look at it at a yearly basis.

But that's, that's what we are doing with each one of these. And that is attached also and it's a part of the packet, of the file, that goes with each notification.

MR. OWEN: The evaluation form is -- checklist is very complete. There's no question about it.

But my initial reaction was that you are really dependent on finding the straw that breaks the camel's back before it comes up with a negative evaluation; is this not

correct?

MR. JONES: That is correct.

MR. OWEN: And you don't often find the straw that breaks the camel's back in a single whip?

MR. JONES: We get, we get it -- actually, what we have done on a number of occasions, is on the last page, you see that if any of the conditions of potential concern are checked, then we request from the owner a ground water impact study to be completed. And along with that, with that study, and oftentimes these have taken a number of, a number of submittals from the owner. That study will eventually require another order that requires them to complete a monitoring program, a program to monitor water quality, water levels. And, again, this is if we have any of the situations that we see as, as problematic, such as the saltwater intrusion issues, particularly the Chicot area -- I mean, the Chicot aquifer along the area of the, of the coast where we have, we have got USGS maps that show where the saltwater wedge is.

Then, also, like I say, the situation where we have wells going in in the, in the Baton Rouge area. We are also very concerned, as we all are, Capital Area as well, and you-all, that we identify any of that.

But, again, there are a number of different programs and, as I said, we have got Capital Area also looking at that situation.

MR. SNELLGROVE: And, Mr. Owen, I believe -- I think you are correct in what you are saying, is that the form doesn't directly speak to an accumulative effect.

MR. OWEN: Correct.

MR. SNELLGROVE: That's where I think you are going. I think in practice, though, we take those things definitely into consideration in our evaluation. Perhaps, the form could be, could be improved and maybe we can more specifically put an item in there that would be a check box that the technician would, you know, certainly have to cross out and say I have looked at, you know, so we don't get to that straw that broke the

camel's back scenario. You know, I think that's a good point. I think that's one room for improvement on the evaluation checklist.

MR. ANGELLE: Yeah. And I would say in addition to more than just checking a box. It's actually some statement of what the process was used that, again, can, can be defended on checking the cumulative deal. You know, I need to know -- I think it's important when you file with the public that, not that I looked, but this is what I looked at, and these were my concerns, and this led me to the decision.

MR. SNELLGROVE: Point taken. As we do with the Theis equation, we always print that out and attach it to the form so that we -- the file will speak for itself, in other words. When Jeff Jones is not around and Gary Snellgrove is not around, we will have a good public record that will show -- the determination that was made.

MR. ANGELLE: You-all are going to be here a while.

So, Mr. Owen, could I ask Mr. Ted, could you, on that issue that you described

about the notice and the one year late, I didn't, I didn't follow all that. Would you try to get it in there one more time real quick for me.

MR. MCKINNEY: Well, basically --

MR. ANGELLE: On what happened and what should have happened.

MR. MCKINNEY: All right. Basically the project did not come to light until after some local conversations, or whatever, and the Sparta Commission got involved in it. And were -- we asked to sit down with them to understand the whole process and everything.

But it was a two-year process, if I remember correctly, in which they are leaching two domes in the Arcadia, Louisiana, area, salt domes, for the storage of natural gas. And they were already, I would say, 80 percent complete with the first dome when we got word of it and to the extent that we needed to sit down with them, because people were becoming quite concerned about the elevation of the wells within the region and so on and so forth. And also to the extent that supposedly the City of Arcadia made an

agreement with the gas company to use one of their municipal wells for, for the water purposes to do this.

Once we sat down with them and brought it to the attention, I think they voluntarily put metering devices on all the, the water surfaces that -- sources that they are using, be it the creek, be it the wells, be it whatever else that they are using.

But anyway, they, in the second year, in the second dome, they began to show the use of the surface waters and the byproducts from the poultry plant that was there, the sewage system that they had there from Arcadia, and they significantly began to get off of the Sparta in the second phase. But that was half of the use. And they, they were using, at the maximum time, the same amount that the City of Ruston was using for its daily purposes, they were using also daily. So you're sitting there with a city the size of Ruston sucking out of the Sparta to leach salt out of the dome. And that's basically where we are. And I think the project will end up probably in October or

November of this year and they will be completed with that.

MR. ANGELLE: Okay. So, so was the decision-making process from the state's aspect of that the resource could, could, could take that volume of withdrawal? We can have the discussion whether or not the state, the state, in your opinion, someone else opinion, erred in that decision.

What I'm hearing, though, is that it's the process of notification that you're driving at on this issue.

MR. MCKINNEY: I think it's several things. I think it's notification issue, notification to the general public initially from the beginning, okay, of the project. Lack of notification, let's put it that way.

And the other would be simply to the extent that maybe there wasn't due consideration into the volume that was going to be used and the effect that it would have on the region.

Now, Ben McGee has been monitoring these wells in that area. Some have dropped drastically, some have recovered. But,

again, it's all related to --

MR. ANGELLE: Right. And we can have the discussion, you know, all day long on should have or shouldn't have.

MR. MCKINNEY: Right.

MR. ANGELLE: And there will be, you know, a variety of opinions. But there ought not be any, any daylight in a process that gets stakeholders to the table.

So I guess I'm going to come back again and try, the second time you were advised because of your late notice on the first one. So you got brought to the table or -- and I say that just in, you know --

MR. MCKINNEY: Midstream, yes.

MR. ANGELLE: But, but --

MR. MCKINNEY: Not by the state, no.

MR. ANGELLE: No, no. I'm not at all alleging that. I'm not at all alleging that.

What, what would you propose? I'm assuming that when -- did the Police Jury get -- who applied for that well?

MR. SNELLGROVE: These wells were old. This was 2008 before we had the e-mail distribution. That was part of the reason

why we put the e-mail distribution system. We have responded with policy to provide the notifications to, to eliminate a situation like that from occurring again.

MR. ANGELLE: Okay. So -- excuse me. Where there is a, a water management authority, for lack of a better word, like Capital and Sparta group, do they also get that e-mail?

MR. MCKINNEY: They do now.

MR. SNELLGROVE: They should. I mean, we put them on there, but they can opt out.

MR. ANGELLE: No, no, no. I understand that, but...

So in, in a going forward basis, the state would notify someone and there would be some high alert that would say what's going on here, we want to have an opportunity to --

MR. MCKINNEY: Well, I just wanted to make sure that that scenario does not occur again.

MR. WELSH: Was a hearing held, Gary?

MR. SNELLGROVE: Yes, sir. Well, to my knowledge, the Injection and Mining Division in the application for the actual

cavern, itself, which had a disclosure as to where all the water was coming from, did hold a public hearing to my knowledge, as I recall.

MR. ANGELLE: I'm -- I don't want to spend any time on what we, we --

MR. MCKINNEY: Didn't do.

MR. ANGELLE: -- we didn't do, because I think we can have that meeting tomorrow or we can have it the next day. What I'm trying to make sure is that you have a sense of satisfaction, because I want that same satisfaction, that, you know, I think you just made -- the goal was just want to make sure it doesn't happen again.

MR. MCKINNEY: Right.

MR. ANGELLE: I'm trying to make sure that you're convinced that there are policies in place that would, in effect, guarantee that goal. Do you believe that there are now?

MR. MCKINNEY: I'm assuming you publicly are telling me that, and so, therefore --

MR. ANGELLE: No, no. I'm searching.

And, and the only thing I would know is that when someone would apply for -- you know, they don't have to send out a news release when they apply for, for, you know, a pre-notification, whatever it is.

MR. SNELLGROVE: Right.

MR. ANGELLE: It is a public record. And in an effort to reach out to stakeholders, we now -- I'm going to make a statement, correct me if I'm wrong -- the system picks the parish from which it is located, and sends out an e-mail to the Police Jury, and for those parishes that are within, again, water management unit area, it goes to that office as well. That may not be enough.

MR. MCKINNEY: I don't know. All I know is I get those notices. They come on my computer also, because I'm on that list, but...

MR. ANGELLE: All right.

MR. MCKINNEY: I can't answer for the rest of the folks.

MR. ANGELLE: Well, but in your standpoint -- from your standpoint, you feel

like you're getting the notice now. You see the system in place that gives you a chance to, to comment if, or to ask, begin to start asking questions?

MR. MCKINNEY: Right.

MR. ANGELLE: Okay.

MR. OWEN: Well, what the bullet point says, really, is should we improve the existing notice of intent system. And, frankly, Mr. Chairman, my own assessment is it is an excellent system. It is only operating in two respects that I think could be improved.

One, is the fact that it's always operating on published prior knowledge. You have to have been notified that there's a problem in this aquifer to trigger off much of the protection that's going on, instead of asking the stakeholders during the application process, do you know of any effect.

And the other point is that might be improved is this incremental method of analysis of the effect of the well as opposed to an aggregate analysis on having to do with

the effect of, of an incremental well.

If there are no other comments, we will move on to the next, which should be simple. It says, Should this notice of intent be revised to remove the exempt status of certain replacement wells in the case where those wells have been long inactive?

And I think that there ought to be a statute of limitations that a well has been inactive so long, it's no longer eligible for -- as a replacement well.

Any comments on that point?

Moving ahead.

MR. BARR: I'll disagree with you on that.

MR. OWEN: Okay.

MR. BARR: I'm Jesse Barr.

You know, we have got, we have got the procedures out there to handle replacement wells. And if you go in with a replacement well, you have still got to come back and record the information on it. And I think what you are really looking for is the information. It's not the problem with the well, itself. And what we are getting, then,

is the information and going through the process there that you are seeing that it's being used and coming back into production.

Most of these areas that you are going to be having replacement wells, to a large extent, are not in the areas where you are going to necessarily be having problems. And I think you need to take that into consideration. And that's why the replacement provisions were largely put in there to begin with, in that this is a well that's existing. Whether or not you have got information on it, if it was grandfathered in prior to '84, you are going to start collecting information on it, and you will have the ability to get the information on it at that point.

MR. MAYS: Now, can you explain to me, give me an example of inactive well that would be a replacement. I have no idea what that could be.

MR. BARR: Well, as we were alluding to earlier on on some of these de-watering wells or wells that may be on some of these agricultural operations that have saltwater

that are only run periodically, I mean, they could have been grandfathered in prior to the '84, were coming on now that, you know, to the period of time where 20 plus years that those wells have got to be reworked. And when you come back in now to rework them, or put something down right next door to them because the well has sanded in or whatever, because they have been in operation that long, that's going to qualify as a replacement well.

MR. MAYS: You are saying the procedure for replacement well is the same as it would be if it was a new well?

MR. BARR: No, it's not. It's going to be -- the procedure there is it's going to go in as a replacement well, but you may not have necessarily had the information on that well beforehand, but you are going to get it now. When they come in, the driller comes in and provides you that information, again, when he registers the well.

MR. BURLAND: And then since it is a replacement, that's why there was no 60-day pre-notice?

MR. BARR: Pre-notice on it, that's exactly right.

MR. BURLAND: Because the well you're replacing is either producing or what, inactive, abandoned?

MR. BARR: Or inactive -- hadn't been necessarily active in a while.

MR. OWEN: Well, but, I understand the point you are making, which is a good one, but consider that aspect of the same thing. Suppose the well has been effectively abandoned. It hasn't been abandoned, but it hasn't been used in 15 years. Just sat there on your property. All of the sustainability calculations would have been based on that well not existing because it's been idle for such a long period of time.

For you to then call that a replacement well, seems to me that ought to have some sort of limitation on the time within which the replacement well could replace an idle and effectively an abandoned well.

MR. BARR: Mr. Owen, I think we are coming at this from two different

perspectives.

MR. OWEN: I suspect that's true.

MR. BARR: I think you're coming at it from the perspective of I would like to deny the ability to have that well there because it hasn't been in operation and I haven't had the information on it prior to. And I'm coming at it from the side of in the area that I'm from, there is really no reason to begin with, because there's adequate water there, for that well not to come back into production and be available for use, whether it's been sitting there for 15 years or, or not, or whether it was registered prior to 1984 and was grandfathered in under the old, under the old requirements. And now it's needing to be reworked.

MR. BURLAND: And that's assuming you're not changing the classification or the use of?

MR. BARR: Assuming, that's right. That's exactly right. Assuming it's going to be used for the exact same thing it was intended for to begin with.

MR. MAYS: So what if that inactive

well was in an area that you had a water shortage problem. Your scenario was that most --

MR. BARR: Well, then, then when the driller comes in and does it, that well is going to show up now on the records, if it wasn't there to begin with. And while it would not necessarily have to go through the prior notification, it's going to be flagged when it comes in to be registered and they are going to have the opportunity to review it now. And if it's in a critical area or an area of concern, they will then have the ability to go in and regulate it.

MR. OWEN: Would they?

MR. BARR: If it's in, if it's in an area of concern, yes, they would.

MR. SNELLGROVE: Okay. If the replacement well, if the replacement well comes in -- when a replacement well comes into our agency, as it's defined today, there is no evaluation process, because it is exempt.

What this, what this is contemplating is the scenario where there may be a well in

existence that hadn't been part of production in an area, and perhaps it's not in an area where there's prolific water resources or what have you, but it's in an area where there's issues, sustainability issues, water level drawdown, et cetera. And it now -- and now -- and maybe some of these are, are large wells. I mean, some of them are, you know, very large volume wells that are coming in as replacement wells is what we have seen.

So, so 15 years passes by, the well hasn't been active. All of a sudden it is active, and there's been some other wells that have populated around it since that time who have gone through an evaluation process. You know, maybe they have been somewhat put under a watchful eye or management plan or something. And all of a sudden, this, this older well now goes into production without any, without any type of evaluation by the agency. It just -- it goes untouched. And so it's, it's almost as if there has been an unlevel playing field now.

I think that that's what this is contemplating. It's not necessarily,

necessarily looking up the situations where there are no existing issues. It's looking to protect against an unregulated situation that, perhaps, that is warranted.

MR. LOEWER: We have to be careful of the unintended consequences here, too, because what we, we should be like in the fact that it hadn't had to run, and now it's bad and it has to run, we don't want someone to say, well, let's crank up old Joe over here, because let's just keep it running for a couple hours a year just to get it running so it can be a continuing well. You don't want to fill in the fact that you have to run it just because you want to keep the tag. Here we're trying to conserve water. Let's not be careful that we don't flip over too hard here.

MR. BOLOURCHI: I have a couple of questions.

This inactive well, is it in the state water well registration database?

MR. BARR: Well, I guess depending on, you know, it may or may not be.

MR. SNELLGROVE: Correct. It

certainly could be a well that dates back to the '50s.

MR. BOLOURCHI: Okay. So, regardless, when you decide to replace it, are you going back in the same old casing? Are you going to rework it, or are you going to drill the new well?

MR. BARR: That would be the condition -- largely depend on the condition of the well when you started back -- started it back up and realized it wasn't going to really work anymore. It would be a matter of is it an equipment failure problem or -- in terms of has your screen collapsed, has the stuff rusted out, or whatever, and you could just go in and pull the equipment out and put new equipment in, or has there something happened to the formation there over that period of time to where it's not allowing you to pump and you need to put one in right next to it or very close to it.

MR. BOLOURCHI: Let's assume you put in a new well. Then what happens to the, to the old inactive well?

MR. BARR: Then that one is going to

be sealed over and plugged.

MR. BOLOURCHI: Thank you.

MR. SNELLGROVE: Yeah. The regulation and the requirements for establishing a replacement well requires that it be P and A'd within a certain time period after the new well has been installed.

MR. OWEN: Well, the question that we will need to consider, and I suggest we don't attempt to settle it tonight, is whether there ought to be a statute of limitations set on the age of a non-used replacement well to still qualify as a replacement well, and that's, that's as an exempt replacement well.

Moving on, unless somebody had something else to add to that.

Moving on, the notice of intent requirement regarding the feasibility of using alternate water resources. The way this is posed in this bullet point is, Should the water well pre-installation notification requirements for installation of water wells be used for non-exempt purposes -- that is, irrigation, public supply, industrial and so forth -- include disclosure of the water well

owner's intent to use alternate water resources?

And I would suggest that the intent would be better replaced with consideration of the feasibility of using alternate water resources.

And there is no requirement at this time for this pre-installation notice of intent to note whether or not there was any consideration, or, if so, what consideration was given to the use of, say, surface water instead of reducing ground water.

I would -- I have my own opinion on this, and I would -- my own opinion is that this would not be for very high capacity wells. This would be an excellent thing to require, and I think it should be done. I suspect others have a different opinion.

MR. BURLAND: What's, what's the purpose of disclosing the intent?

MR. OWEN: Well, it's just that where industry, in particular, is located with equal access to a river or a stream that might provide the water supply, or ground water, whether or not they considered the

feasibility, and, if so, what the analysis was of using alternate supply.

MR. BURLAND: Do we do that now with Haynesville, or is that a special reg that was passed in that situation?

MR. SNELLGROVE: No, sir. What's happening in Haynesville right now, or any frac, is the disclosure after the fact of where the water was sourced from. And it's a reporting mechanism.

On the front end of that we issued an advisory that encouraged operators to seek alternative sources outside of the Carrizo-Wilcox or the --

MR. BURLAND: But it's not a requirement?

MR. SNELLGROVE: It's not a requirement, only unless we evaluate a frac location where we see that they are going to pose an adverse impact or impact a nearby well owner or what have you, then we would go down the path of requiring additional information, which may include water level determinations, production reporting, and, if needed, restriction.

MR. BURLAND: And the source of that authority is what?

MR. SNELLGROVE: Statutory law.

MR. BURLAND: Oh, it's statutory not issued since by regulation?

MR. SNELLGROVE: Statutory.

MR. ANGELLE: So on this issue, is it, is it right to say -- I guess this is to John Adams -- that a property owner has an absolute right to capture water from his or her property by following -- and a requirement to follow these regs, that if the decision, the evaluation of the impact to the resource is such that the, the volume which is being requested to be withdrawn, that the evaluation of that, if, if it's, if it's a passing grade, that they have an absolute right under Louisiana law for that, and, is it yes or is it no and --

MR. ADAMS: I would have to agree with that statement.

MR. ANGELLE: And -- to finish -- and that, and that no one, not the Commissioner, the Attorney General, nobody, has a right to say while you meet the requirement of not

having any negative impact on the resource, we still want you to use surface water here?

MR. ADAMS: Reiterating the points that you made, once a landowner complies with the evaluation process, and the pre-notification process and we have completed our evaluation, then -- and he's passed the evaluation, that's correct. He has the -- he can, he can produce whatever water he is able to capture, and we do not, under current statutory law, have the authority to direct him, other than through requests that he seek alternate sources.

MR. ANGELLE: Okay. So in the Haynesville where the guidance document was issued saying, We do not want water from the Carrizo-Wilcox and maybe the Upland Terrace to be used for this specific purpose, the reality of it all is that if a company makes application for a well, a property owner makes application for that use, whatever amount of water it is, and an evaluation procedure would, would yield that it is not going -- and that area would not be a negative impact, the Commissioner's guidance

document is, is just what it says, it's a guidance document. And is it fair to say that those folks who are cooperating, are just going or just understand the impact and, and to, you know, that certainly natural gas extraction is dependent upon, on water resources; that folks are just doing this to be good citizens?

MR. ADAMS: The, the direct answer is yes, all that's correct. However, in the Carrizo-Wilcox aquifer, the evaluation process will more likely than not simply yield a yes, you passed. More likely than not when our evaluation process is, is concluded, we would end up sending them a request for additional information. Some of those other items on our checklist may have been triggered so that it's -- before you reach a, a yes answer in that particular aquifer, there's going to be additional study and additional information that's required.

MR. ANGELLE: Right. I understand.

MR. ADAMS: But, yes, sir, once you reach that -- so once you reach the yes answer then --

MR. ANGELLE: So what I'm trying to facilitate what, what I understand why Mr. Owen thinks it's a good public policy and why Mr. Burland says why you asking for that information. If I have an automatic absolute right --

MR. BURLAND: And not just that, I want to make sure that the disclosure of that kind of information, absent a legal obligation, doesn't subject -- doesn't affect your decision-making process. If you see an application that has no alternative use one side-by-side with one that a guy voluntarily says, oh, yeah, I can use the river next, you know, whatever, well, if that impacts your administrative decision-making process, without a legal obligation for that -- for them to go to an alternative source, I think that's an injustice of some sort.

MR. ANGELLE: Well, it opens --

MR. BURLAND: Arbitrary and capricious or whatever. You know, we have got to be careful as administrators that you're following the law.

MR. ANGELLE: Right.

MR. BURLAND: So I like the idea of disclosure so that you can work it out like you have voluntarily with the oil and gas industry. But I don't want to -- I don't know about a mandate that would, that would, you know, force that disclosure, expose him to people in the department that may say, well, I'm going to say no, or go call him and move him over, because I see that he can do that. I don't know. I mean, that's a tough issue, but that's the concern.

MR. ANGELLE: Right.

MR. LOEWER: I would think it would be different in oil and gas. But to just add additional information, for irrigation purposes, if a person decided to dig an irrigation well and come up with about $75,000, he has already concluded that there is no other alternative, because any other alternative would have been a lot less.

MR. BURLAND: Well, and that's -- you're stealing part of my presentation, because these decisions are starting to move out of the corporate boardroom who make those economic decisions to a state agency with a

scarce resource. And I want to make sure as administrators that you are not taking that option away. That a company that comes here, comes here for certain reasons, and, you know free ground water. You know, that's an -- that's a jewel in our crown that nobody really talks about. You don't have to pay right now for ground water. And that attracts certain industries. It's not on the front page, but it's, it's not a fixed cost. You know, that's why we've got, still got paper mills here and other poultry operations. But, you know, we're getting off the subject.

But the point is, those are factors to be considered. And I think you have to be careful when you move in to more restrictive regulation, what you are doing to the economic development of, of some industries that are here and some that want to come.

MR. ANGELLE: I guess, I would, I would say that while it would be good to have that information, I do agree that it, it sends, it sends the executive branch into an area that is contrary to what is an absolute

right that the legislature has spoke to, that you have a right to capture the water from your property, regardless of how many alternative water sources are available to you. If there are a hundred of them, you could say, Damn them all. I have a right to do this, and I'm going to do it as long as I'm not having a negative impact on the ground water. So, it's a tough issue. Tough issue.

MR. OWEN: Can we just let it be known that we are not in a hundred percent agreement?

MR. ANGELLE: Sure. Absolutely.

MR. BURLAND: That's always the case.

MR. OWEN: The next item is revision of -- is it necessary to -- somebody flip the page there. Thank you.

Should the state considering revising statutory or regulatory definition of sustainability?

We talked about this for about 20 minutes this afternoon already.

Current definition of "sustainability" under the ground water management law is,

quote, "The development and use of ground water in a manner that can be sustained for the present and future time without causing unacceptable environmental, economic, social, or health consequences. This is a general set of criteria that leaves a lot of latitude."

If an area is found to be an area of concern, then existing statutory law, as I understand it, adds to the Commissioner's quiver in analyzing this sustainability for each specific criteria; that is, is there a subsidence of the land surface measured in the area, is there evidence of ground water -- of saltwater intrusion in the ground water, and, third, is the, is there -- I have forgotten the exact word -- but is there excessive drawdown of the static water level. Those three criteria. And I'm not -- what I'm not sure about here is, is the excessive term that I put in there. I'm not sure that's part of law.

MR. SNELLGROVE: We typically don't use the word "excessive," but for clarity, it would be water level drawdown that would --

that are causing for adverse impacts.

MR. OWEN: Okay. So unless an area is an area of concern, the general definition applies as far as sustainability is concerned.

The question for us in this bullet point is that, Should the state consider or recommend the statutory or regulatory definition of "sustainability" be changed or enhanced in some way?

MR. ANGELLE: So this seems to -- the statute seems to kind of follow the constitution to a degree. Article IX of the constitution, which is also known as the Public Trust Doctrine, says, The natural -- quote, The natural resources of the state, including air and water, and the healthful, scenic, historic and aesthetic quality of the environment, shall be protected, conserved and replenished insofar as possible and consistent with the health, safety and welfare of the people. The legislature shall enact laws to implement this policy.

And so it seems like, like any definition of sustainability has to be at

least consistent with the Public Trust Doctrine. And I guess when we talk about "the legislature shall enact law to implement this policy," taking, for instance, air and water. From, from, from a quality standpoint, there are certain rules and regulations that create limits of effluent discharge and, and noxious emissions.

So, I guess you could continue on with a -- trying to address Mr. Ted's issue of some metrics here.

MR. MILLER: Mr. Chairman.

MR. ANGELLE: Yeah.

MR. MILLER: Yesterday at the CPRA Board, the actual Attorney General's Office put a presentation on -- it's not on? Am I on now. Can you-all hear?

Okay. But in the presentation, they were saying any decision rendered by the Coastal Protection Resolution Authority had to keep the Public Trust Doctrine in mind. Anything dealing with the way water was managed, whether it was sent through a diversion project out into a marsh, or whether that water was used for some other

purpose. So that it, actually, had to become a part of any decision that was considered by the Authority. And it said the same thing held true for all agencies and all boards. So everybody is bound by the constitution.

MR. ANGELLE: Oh, sure. Sure. So I agree with that.

The question is --

MR. SPICER: Do we meet that?

MR. ANGELLE: Well, I think, I think this meets that. I think you can, you can -- yeah, I think it meets it.

The question is, to go on to the next part where it says in the constitution, "the legislature shall enact laws to implement this policy," the legislature has, has passed laws to implement this policy. Can you go a little bit further and say that sustainability of a, an aquifer is defined, and use the Arkansas model, to, to start putting some parameters around it. I don't know enough about how, how that would be measured.

I do think it's good to have metrics every way you can, but not have those metrics

box you in so that you can't go through some extraordinary circumstances.

MR. SPICER: And we have discussed this for hours in the past -- Jackie, Jesse, and a group of us -- when we went through this process several years ago. Well, Jimmy --

MR. BURLAND: Yeah. If you could cut and paste my comments from earlier into this section, too, I would appreciate it.

MR. LOEWER: What's interesting about the wording that's, that's listed in our, in our material, is that while we take it to mean it can't adversely affect them so we have to be careful, it also means that if we try to be too restrictive, it could also adversely affect it, particularly economic and socially. So it really cuts both ways. Talking about meeting the needs of the present and the needs of the future in these four, in these four areas.

MR. ANGELLE: Well, I mean, when you take a look at, again, shall we maintain without causing unacceptable environmental, economic, social, health consequences, that

tells me where our state has been on the management of all of its natural resources. It's all about balance. And, you know, you can't, you can't protect the environment at the absolute cost of the economy, and you can't allow things with the economy at the absolute cost of the environment. And nor can you have the economy roaring and having poor health situations.

So I think that I would like to see us at least put, put a comment that there is at least some, some discussion and some disagreement among the Commissioners as to whether or not additional metrics, and if you-all could research with USGS models that other states use for their sustainability that has, that have metrics in it. And, and I think the comment would be, is that, you know, that's an area where we continue to have debate about. And compare them to other areas.

MR. BALKUM: Mr. Chairman, to back you up on that, I wasn't privy to the earlier actions of the Commission prior to, prior to this one. But if I were an administrator

using this definition to make regulatory decisions, I don't think it would be specific enough to provide that sort of guidance to make decisions. I find it to be pretty vague. Maybe one administration would interpret one way or another administration another way.

Personally, I would like to see, as you say, maybe a little more meat to that definition, as difficult as it may be to do that.

MR. ANGELLE: Right.

MR. BALKUM: That's my thought.

MR. OWEN: Mr. Chairman, I think that we can hardly settle this lack of specificity tonight or any time near future.

MR. ANGELLE: Right.

MR. OWEN: And I would caution the Commission about opting for criteria, as has been quoted earlier today, that allegedly is Arkansas' criteria of sustainability, because it has to do with so much the depth and arrangement of the aquifer that you can hardly use a drawdown criteria, for example, to predict anything. Ultimately, a rapid

drawdown may put you so deep in some of our aquifers that it's not feasible to pump the water out, but you haven't, you haven't proved that the aquifer is not sustainable there.

And -- but I would suggest that we -- that there are ways to, to adopt criteria that is more specific than the generalized definition that we have. What I observed Mr. Welsh do the other day in a meeting that the way to get some specificity is to get yourself declared an area of concern, then you have got some specifics that go on.

But, but I think we would have to be careful with a universal definition of "sustainability" that is just one set of criteria because of the difference in depths and arrangements of the aquifers.

MR. ANGELLE: Right.

But, perhaps, to, to -- as a compromise to build on to this, is, is that the Commissioner of Conservation, the Ground Water Commission, whatever is the right, may be authorized to, to promulgate rules on a aquifer-by-aquifer basis on, again, metrics

of sustainability.

I do think it is unfortunate that you have to get -- you have to be declared an, an area of ground water concern for that specificity to apply.

MR. OWEN: Right.

MR. ANGELLE: You know.

MR. MAYS: Scott.

I think the aquifer-by-aquifer has a lot of interest to me from the Sparta. We are the sole source of our spot. We don't have a river. We don't have a lake. We don't have an alternative source of water. Okay. So when you say critical, it's critical for us.

So sustainability of the Sparta for us is a lot more critical than it would be for another aquifer that has multiple aquifers that they can get to or rivers or lakes. We don't even have a place in Lincoln Parish that we could build one, if we wanted to.

MR. ANGELLE: Right. I understand that. That's a very good statement.

What is your -- on this particular issue, on sustainability issue, are you -- do

you like the adding the aquifer-by-aquifer metrics?

MR. MAYS: I'm not -- I don't know. I don't know if it's an aquifer-by-aquifer that should have it, that definition or not, or if there should be something more in the law that gets the management of that resource more controlled when you get to a point of that.

MR. BURLAND: That was my thought. You know, I just want to make sure we are not being -- misdirecting ourselves or, you know, convincing ourselves that "sustainability" definition is the issue when, in fact, if someone just wants more control of the resource or more authority for you in an area of concern, ground water concern, then that's what we do. You know, if we want to shut the faucet off of production or other ideas, or, or well space-age or depth or whatever, in an area of ground water concern, let's take a look directly at that issue.

MR. ANGELLE: Yeah.

MR. BURLAND: I don't know that I want to define "sustainability" to the point of --

MR. ANGELLE: No. It's --

MR. BURLAND: -- and the guy can't drill.

MR. ANGELLE: Right. I understand that. But, but isn't sustainability the, the real issue when you are trying to get -- when you are seeking area of ground water concern designation?

MR. SPICER: Well, the real concern --

MR. ANGELLE: No, I know. But, but I think -- you make a good point. You make a good point. But if sustainability is the issue -- let me ask. I need an answer.

Is that what ends up being on trial, if you would, in, in area of ground water concern, is, is sustainability becomes questionable?

MR. SNELLGROVE: What would be the trigger would be whether or not there are these issues that Mr. Owen brought up about water level decline to a point where it's causing adverse impacts, saltwater encroachment issues that are causing adverse impacts, and, and subsistence -- and subsidence issues.

If these things exist in a manner that is posing problems for the social, economic, health consequences, and environmental that's unacceptable, then that would be somewhat part of the basis for your determination or, say, in the application of an area, consideration for an area of ground water concern. That's, that's the trigger mechanism to get to that point where you make the application for the Commissioner to put all things under consideration.

MR. ANGELLE: All right.

MR. FREY: Can I ask a question, before we leave this, and I don't want to debate it any longer.

But, you know, sustainability comes up in a number of resource arenas. I have dealt with it before in other areas. And it's difficult to put your finger on on what each individual would assume is sustainable.

So I would question whether do we have enough in the way of monitoring data currently, do we have enough in the way of modeling and inputs from models, to even be able to set a metric standard for what's

sustainable? Let's get that in place first, and then we can move beyond that. But I don't think we are at a point -- at least I, in my opinion, we are not. I don't think we have got sufficient evidence to determine if, in fact, this is sustainable, this is not.

We have seen from your own data some dramatic shifts in surface water use versus ground water use over the last five years. We have actually seen less -- if I remember correctly, data showed less ground water use statewide over the less decade maybe, or it's gone -- the actual consumption has gone down. Seemed like I recall some data like that.

So, you know, I'm not convinced that we have enough information, or at least I don't, to try and tie down some kind of, you know, precise definition. I think you have got a good broad definition here, but we have got to attach parameters and metrics later as we accumulate more data. That's, that's my perspective.

MR. OWEN: Kind of like the Chief Justice observed about pornography. I can't define it, but I know it when I see it. I

think I know --

MR. ANGELLE: Sustainability.

MR. OWEN: -- sustainability or lack thereof when I see it.

MR. ANGELLE: Got you.

MR. FREY: Okay.

MR. ANGELLE: So the report will reflect that sustainability in areas such as the Sparta, where ground water -- there is no alternative to ground water, is a -- is -- or the lack of sustainability is not acceptable in areas where there are no alternatives. Okay.

MR. OWEN: Bullet point No. 6, the next to last, is, Should resources be provided to improve and increase availability of the reservation well network and state agency ground water level and quality data through the DNR SONRIS GIS system?

MR. SNELLGROVE: That's a typo. The word "reservation" should be "observation." I apologize.

MR. OWEN: Observation.

MR. SNELLGROVE: Yes, sir.

MR. OWEN: I think most of us have

used --

MR. BURLAND: I say yes.

MR. ANGELLE: Yes.

MR. BURLAND: The answer is yes, I guess.

MR. ANGELLE: Yeah.

MR. OWEN: Moving on to the last bullet point, Should there be a request of the legislature to develop a fund for the development of aquifer-wide ground water availability models?

MR. BURLAND: Yes. I vote yes.

MR. MAYS: Yes.

MR. ANGELLE: I would just add to that, where on a priority basis for the most challenged aquifers.

MR. BURLAND: Yeah. I think we talked about that earlier.

MR. ANGELLE: Yeah, we did.

MR. MCKINNEY: Just prioritize those.

MR. BURLAND: Prioritize --

MR. ANGELLE: Not everybody gets one. Not everybody wants one.

MR. OWEN: Mr. Chairman, that concludes the Evaluation discussion.

MR. ANGELLE: Okay. I'm going to suggest that we move the 4:45 to 5:40 discussion, which is now -- it is now 5:55 -- to tomorrow morning. And that Mr. Burland pick up with Incentives at 8, which means we may be in here just a little bit longer tomorrow.

You okay with that?

MR. KILLEBREW: I second.

MR. ANGELLE: Motion by Spicer. Second by Killebrew.

Any objection?

MR. BURLAND: I object. No.

MR. ANGELLE: Any discussion?

Okay. So we will go ahead and move that. That motion is adopted.

And then I would go ahead and entertain a motion to recess until tomorrow morning at 8:00.

MR. BURLAND: Move.

MR. ANGELLE: Motion by Burland, second by --

MR. MCKINNEY: Second.

MR. ANGELLE: -- McKinney.

Are we here tomorrow same building?

MR. SNELLGROVE: Same.

MR. ANGELLE: Same place.

Any objection to the motion to recess?

Hearing none, then that motion is adopted. See you tomorrow morning.

(MEETING RECESSED AT 5:56 P.M.)

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

I, DONNA T. CHANDLER, Certified Court Reporter and Registered Merit Reporter, do hereby certify that the foregoing pages 1-287 of Volume I, are a true and correct transcript of the Ground Water Resources Commission Regular Meeting on January 19, 2012, as taken by me in Stenographic machine shorthand, complemented with magnetic tape recording, and thereafter reduced to transcript, to the best of my ability and understanding, using Computer-Aided Transcription.

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 action.

Baton Rouge, Louisiana, this 26th day of January, 2012.

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DONNA T. CHANDLER, CCR, RMR
CERTIFICATE NO. 29002