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MEETING MINUTES FOR THE
FIRST REGULAR MEETING
OF THE
LOUISIANA WATER RESOURCES COMMISSION
HELD AT
LASALLE BUILDING, LABELLE BOARD ROOM
617 NORTH 3RD STREET
BATON ROUGE, LOUISIANA
ON THE 28TH DAY OF JULY, 2022
COMMENCING AT 11:05 A.M.

REPORTED BY: ELICIA H. WOODWORTH, CCR



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LOUISIANA WATER RESOURCES COMMISSION

1 COMMISSION MEMBERS IN ATTENDANCE:

2 KYLE F. BALKUM

Louisiana Department of Wildlife and Fisheries

3

4 EDWARD "MICHAEL" BOPP

Louisiana River Pilots' Association

5 JOSEPH C. "JOEY" BREAU, JR.

Louisiana Department of Agriculture and Forestry

6

7 BRANDON M. FREY

Louisiana Public Service Commission

8 LINDSEY K. GOUEDY

Sparta GWC Commission

9

10 THOMAS F. HARRIS

Chairman, Office of the Governor

11 HOUSTON BARLOW HOLLEY

Office of Conservation

12

13 DENNIS G. LAMBERT

Geoscientist/Engineer

14 BENJAMIN J. MALBROUGH

Louisiana Residential Consumers

15

16 DAVID B. RABALAIS

Ports Association of Louisiana

17 CHARLES SUTCLIFFE

Governor's Office of Coastal Activities

18

19 ELLEN J. TORGRIMSON

Louisiana Wildlife Federation, Coalition to Restore
Coastal Louisiana, League of Women Voters

20

21 GLENN J. VICE

Louisiana Landowners Association

22

23

24

25



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No quorum available for adoption

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MR. HARRIS: Good afternoon, everyone. I'd like to thank you for showing up today and attending our meeting of the Water Resources Commission.

I believe we're going to be one short of a quorum, but we do have some very important presentations today.

But, Matt, for the record, would you please call the roll?

MR. REONAS: Yes, sir, Mr. Chairman.
Mr. Balkum.

MR. BALKUM: Present.

MR. REONAS: Mr. Beard.

(No response.)

MR. REONAS: Captain Bopp.

MR. BOPP: Here.

MR. REONAS: Mr. Breaux.

MR. BREAUX: Here.

MR. REONAS: Mayor Butler.

(No response.)

MR. REONAS: Representative Coussan.

(No response.)

MR. REONAS: Mr. Cormier.

(No response.)

MR. REONAS: Mr. Davis.



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1 (No response.)
2 MR. REONAS: Mr. Forsman.
3 (No response.)
4 MR. REONAS: Mr. Founds.
5 (No response.)
6 MR. REONAS: Mr. Frey.
7 MR. FREY: Here.
8 MR. REONAS: Oh, okay.
9 Mr. Gingles.
10 (No response.)
11 MR. REONAS: Ms. Gouedy.
12 MS. GOUEDY: Here.
13 MR. REONAS: Mr. Gray.
14 (No response.)
15 MR. REONAS: Mr. Harper.
16 (No response.)
17 MR. REONAS: Secretary Harris.
18 MR. HARRIS: Here.
19 MR. REONAS: Mr. Hensgens or Senator
20 Hensgens.
21 (No response.)
22 MR. REONAS: Mr. Holley.
23 MR. HOLLEY: Here.
24 MR. REONAS: Mr. Knotts.
25 (No response.)



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1 MR. REONAS: Mr. Lambert.
2 MR. LAMBERT: Here.
3 MR. REONAS: Mr. Malbrough.
4 MR. MALBROUGH: Here.
5 MR. REONAS: Mr. Rabalais.
6 MR. RABALAIS: Here.
7 MR. REONAS: Mr. Schoeffler.
8 (No response.)
9 MR. REONAS: Mr. Sutcliffe.
10 MR. SUTCLIFFE: Here.
11 MR. REONAS: Ms. Torgrimson.
12 MS. TORGRIMSON: Here.
13 MR. REONAS: Mr. Vice.
14 (No response.)
15 MR. REONAS: Mr. Witty.
16 (No response.)
17 MR. REONAS: And Mr. Zaunbrecher.
18 (No response.)
19 MR. REONAS: Yes, sir, just one short, but
20 we can proceed.
21 MR. HARRIS: Well, we are not going to be
22 able to take any official actions as a board as we are
23 short of a quorum, but we do have some presentations.
24 Matt, would you like to please take...
25 MR. REONAS: All right. The first one's



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1 going to be Amanda Ames from the Louisiana Department of
2 Health.

3 MR. HARRIS: Ms. Ames, thank you for being
4 here today.

5 MS. AMES: Good morning. I'm Amanda Ames.
6 I am the chief engineer for the Louisiana Department of
7 Health, and, of course, we regulate all of the drinking
8 water supplies in the State of Louisiana.

9 Today I'm going to go over some of the
10 regulatory changes and updates that we've had in the
11 last couple of years in regards to drinking water.

12 So a brief overview of the slides, we'll
13 talk about some of the bills that were in the recent
14 session, some of the state rules that we have now in
15 place, federal bills and changes, funding opportunities
16 and just some around the industry type information.

17 So in the past session, of course, we have a
18 set of fiscal bills that went through. House Bill 1,
19 for those of you that aren't familiar, that's just our
20 state agency budget, which was passed, for our Engineer
21 Services Division.

22 House Bill 406 by Representative Zeringue
23 was -- had a lot of different line items for funding,
24 one of which was for the Water Sector Commission. For
25 those of you that are familiar with the water sector,



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1 that's a very large fund for water and sewer systems to
2 apply for. Last year they appropriated about
3 \$300-million for water and sewer, and this year in this
4 bill they appropriated \$450-million. So it's a very
5 substantial amount of money going into that
6 infrastructure in our state.

7 House Bill 2 is our Capital Outlay Budget
8 Bill. One of the important notes on this was that this
9 year they did include an action that any water system
10 project will be required to have a rain study as part of
11 the project. Capital Outlay was one of the funding
12 agencies that before this bill was actually not
13 requiring that type of information, so this, of course,
14 relates back to a water system's sustainability. So in
15 order to make sure that water systems are sustainable
16 long term, most the funding agencies at this time are
17 requiring them to go through a rain study.

18 Senate Bill 48 by Senator Reese basically
19 made a lot of changes to the current Water Sector
20 Program, some of them as it relates to technicalities.
21 They did remove storm water from the language from the
22 previous bill, so it will strictly fund water and sewer
23 at this time.

24 It also allowed for the Commission to
25 rescind some of the grant awards if the grant recipient



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1 failed to comply with the guidance approved by the
2 Commission.

3 So right now round two for this particular
4 program is in place. It opened on July 15th, and it
5 will close on August 31st. They did allow for a
6 population breakdown this round. There was some concern
7 that maybe some of the super large water systems and
8 sewer systems were competing alongside the smaller
9 systems, and they wanted it to be more fair, so the
10 projects will be looked at based on population. So the
11 very small systems will all be kind of grouped together,
12 then you have your medium systems, and then anybody over
13 10,000 population, they will all be looked at together
14 as a group.

15 House Bill 847 by Representative Lacombe,
16 this will exempt certain entities from Capital Outlay
17 match. And so it's important to note that current
18 connections is 1,250 connections, so that's roughly
19 about 3,300 people, and that will encompass about 77
20 percent of all of the community water systems in our
21 state. And it also applies to natural gas utilities as
22 well.

23 So I like to always include a slide of bills
24 that could have been. This presentation was also given
25 to our water systems a couple weeks ago, and I like for



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1 them to follow the things that are going on in the
2 legislature. Even if they didn't pass, these are items
3 that may come up again for them.

4 One bill, House Bill 390, was a bill that
5 would have allowed for rules to expire every June 30th.
6 So from a regulatory perspective, all of our drinking
7 water rules, which take sometimes years to adopt from
8 the federal government and also long-term rulemaking,
9 would sunset every year, so this would have been a
10 tremendous amount of work for our agency along with
11 pretty much any other agency that promulgates rules.

12 And there was Senate Bill 352 by Senator
13 Fields, and this was to allow for utility providers to
14 issue a credit to customers who have an outage. So this
15 bill was amended several times and eventually did not
16 pass, but for water systems, they would have been
17 required to issue credits to their customers. And so
18 some of our water systems, unfortunately we have major
19 issues during hurricane season and cannot provide water
20 for one day, maybe up to several weeks, and so that
21 would have affected them pretty tremendously actually.

22 So this year we did promulgate a rule in
23 response to Act 98 of the 2021 Legislative Session, and
24 we call it our Grade Rule. This bill was passed in 2021
25 by Senator Mills, and the intent was that he felt like



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1 water systems' customers maybe did not understand all of
2 the information that was coming out regarding their
3 water quality. So every year water systems is required
4 to send out what's called a Consumer Confidence Report
5 or a CCR.

6 CCR outlines your water quality results that
7 were taken that year, any violations that the system may
8 have had, et cetera, but violation language can be
9 difficult to understand. You know, I don't know that
10 the average person would know what a total
11 trihalomethane is or how that affects their health. So
12 he wanted this to be something that everybody could
13 understand, which everyone knows what letter grades are.

14 Also, the grade would encompass a lot more
15 than just your water quality results. It would look at
16 your financial sustainability, customer complaints,
17 things of that nature.

18 So we worked to promulgate that rule and
19 publish grades by January of 2023. So our grade was
20 finalized -- our grade rule was finalized in April, and
21 we will also require a rates study as part of this rule.
22 And this is pretty much what the grade will encompass.

23 So your federal water quality violations,
24 and that's based on sample data, et cetera, will be up
25 to 30 points. Everyone starts out -- I should say



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1 everyone start out with 100 points, so these are
2 deductions from the grade. So if you have any state
3 violations, and that would be issues like maybe the
4 system cannot maintain a chlorine system, that's a
5 violation. Your financial sustainability, did you pass
6 your audit, did you actually get an audit done last
7 year, are you under fiscal administration, things of
8 that nature would count under the financial
9 sustainability operation. And maintenance performance,
10 infrastructure violations, customer satisfaction. So
11 this will pull in all of the brown water complaints that
12 both the health department receives and the water system
13 receives. And the level of secondary contaminants. So
14 when there is an issue within the system, and let's say
15 it's a brown water issue and customers are complaining
16 about that, a lot of times it's due to iron manganese,
17 which are not regulated contaminants. So if you have a
18 lot of iron manganese in your system and you are not
19 currently removing it, this would be where it would
20 count towards your grade. And also under customer
21 satisfaction.

22 So all of those types of issues that systems
23 have but maybe don't receive a violation for, it will
24 count towards their grade.

25 There's also a way that systems can receive



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1 extra points, and so those are going to be things that
2 they can do that are kind of outside regulatory
3 authority, things that you're doing to make yourself
4 better, but you're not necessarily required to do them.

5 So asset management plans, storage tank
6 maintenance programs, well assessments and participation
7 in management training and things of that nature will
8 all get you extra points. And the point values in the
9 parentheses are the maximum amount of points they can
10 receive.

11 So moving along to some of the federal
12 regulations that are coming down. So the Lead and
13 Copper Rule revisions have been anticipated for several
14 years, especially after the flood in Michigan issues.
15 The current rule hasn't been updated in quite some time,
16 and there was a lot of discussion about maybe the action
17 level of lead should be lower than 15 parts per billion,
18 maybe there should be more monitoring requirements,
19 things of that nature.

20 So when EPA published the rule, about a
21 month after that, the administration changed, and so all
22 of the federal rules were pulled back and allowed for
23 another year under the Biden Administration to be
24 reviewed.

25 So in December they reissued the rule and



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1 kept a lot of the rule that was already in place. The
2 one major thing that water systems will have to do is a
3 lead service line inventory. So basically all of the
4 service lines throughout the distribution system, which
5 would be from the meter to the home, need to be
6 accounted for and described. A water system will not be
7 able to say "I don't know what we have." Otherwise,
8 that will we deemed as lead, having a lead line. So
9 that is due in October of 2024, which is also when the
10 rule compliance begins.

11 The caveat to this rule is is that EPA, when
12 they published it, said we may still change certain
13 things in this rule. I can say, as being in a
14 regulatory agency for 20 years, I've not ever seen them
15 put a final rule out and say we might change part of the
16 rule, so we need another year to change certain things.
17 With that being said, it is very possible that they may
18 change the action level from 15 to 10 or maybe even 5.
19 So there's been a lot of national discussion on that
20 particular item.

21 Also, they are still looking at monitoring
22 plans. Instead of one sample taken at each home, now it
23 might be two samples taken at each home. Exceedances
24 for lead will be elevated to Tier 1, so that basically
25 means that's an imminent health threat and you have to



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1 notify your customers within 24 hours.

2 Currently some of the Tier 1s that we have,
3 we have very few, but 1 would be E. coli. So if you
4 know of an E. Coli outbreak, of course, the system has
5 to notify customers immediately. So lead will be
6 treated in the same manner.

7 So there's a few things that we're still
8 unsure about with this particular rule, but the lead
9 service line inventory is definitely one of the things
10 that will not change.

11 Also, school and daycare sampling, don't
12 anticipate that changing either. Right now schools and
13 daycares can voluntarily have their distribution systems
14 and their plumbing tested for lead and copper, but it
15 will be a requirement going forward.

16 So there's a lot of discussion on emerging
17 contaminants right now at the national level. So these
18 are unregulated contaminants, but we know they're out
19 there, and they still have not formalized any maximum
20 contaminant level for these contaminants.

21 PFAS is one of those particular subjects at
22 the emerging contaminant realm. It is a huge problem in
23 some states. So these are what are considered forever
24 chemicals. They don't break down any further in the
25 environment. They primarily come from manufacturing,



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1 Teflon industry, fire foams. So a lot of the military
2 bases around the country have had issues with
3 surrounding water supplies with PFAS contamination. We
4 have very limited data in Louisiana on PFAS other than
5 our unregulated contaminant monitoring that systems do,
6 and some investigative monitoring that we as a state
7 have done. We have not found an overwhelming amount of
8 PFAS, but the health advisory for PFAS was at one time
9 70 parts per trillion. Now they came out with, a couple
10 weeks ago, with a new health advisory that was -- one
11 component was down to .0004 parts per trillion. So they
12 have changed their science and toxicology on this area a
13 lot, and we as a state are just trying to get further
14 information, do some of our own unregulated monitoring
15 on this and go forward.

16 Manganese is also considered an emerging
17 contaminant. We have a tremendous amount of manganese
18 in our state. So there are health advisories for
19 manganese once it gets to a very high level, but because
20 it's considered an emerging contaminant, it does allow
21 for that particular type of project to be funded under
22 some funding that I'm going talk about in a little
23 while, but there's a lot of money out there for emerging
24 contaminants. So because manganese falls in this
25 category in Louisiana, we will see a lot of free money



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1 going towards these projects.

2 Harmful algal blooms and Naegleria Fowleri,
3 of course, also emerging contaminants. Naegleria
4 Fowleri is an issue in our state. Over the course of
5 about three years, we actually had three people pass
6 away due to brain-eating amoeba, and we, in turn, as a
7 state actually promulgated rules for a minimum
8 disinfectant residual to control the amoeba. So, again,
9 it is an emerging contaminant. We are the only state
10 that actually monitors for that particular contaminant.

11 So moving into some funding opportunities,
12 the Revolving Loan Fund is at LDH in our engineering
13 group, and it is basically we had an annual
14 capitalization grant and it's about -- used to be about
15 \$16-million a year, and we were allowing for about four
16 or \$5-million dollars of that money to go towards
17 consolidation projects.

18 So as I was speaking of earlier,
19 sustainability in water systems is a very big issue in
20 our state, and so if systems can consolidate with each
21 other, increase their population, then they may not have
22 to increase rates. They can share resources, et cetera.
23 It's really a positive way to go, especially in some of
24 our rural communities that they just don't have the
25 resources that they need to maintain long-term



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1 operations.

2 So in the past few years we've been able to
3 give out millions of dollars for that type of project
4 and allow for 100 percent principal forgiveness. We
5 also have money available for any water system,
6 honestly, that wants to apply. It's very low interest
7 rates. It's 2.45 percent, 20 to 30-year term, depending
8 on what type of infrastructure you're proposing.

9 Another great funding opportunity is the
10 Water Sector Program. So we are in round two of
11 accepting applications for that. Those applications go
12 to the Department of Administration, and then they go
13 out for grading, so to speak, by the LDH and DEQ.

14 So \$450-million was appropriated for round
15 two. Last year it was 300-million. There were 60 water
16 projects last round that were awarded totaling about
17 \$180-million. So 45 projects with a 40 severity were
18 funded, and that basically means those are kind of their
19 worst-case scenarios in the state, so systems that were
20 under an administration order, have violations for water
21 quality, aging infrastructure, things of that nature, 45
22 projects were funded with that.

23 Also 27 consolidation projects were also
24 founded through this program.

25 The website for the portal and how to apply



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1 is actually noted at the bottom of this slide.

2 So the Bipartisan Infrastructure Law
3 recently allocated \$50-billion to EPA for drinking water
4 and wastewater systems. So basically they are going to
5 funnel additional money through the Revolving Loan Funds
6 both at LDH and DEQ under this program for the next five
7 years. So for the water side, there's a general
8 supplemental funds. So in addition to our base money
9 that I was speaking of a couple slides ago, we will
10 actually have another \$28.8-million a year over the next
11 five years for water infrastructure upgrades.

12 49 percent is going to be principal
13 forgiveness, and up to \$3-million, and 51 percent loan.
14 The loan portion will still be 2.45 percent, but this is
15 a really good opportunity for people to come in and get,
16 you know, almost 50 percent of their project, up to
17 \$3-million, forgiven.

18 Also, the emerging contaminants, manganese
19 being one of those, PFAS is another, we will be getting
20 \$11.2-million a year for the next five years, and all of
21 those projects will receive 100 percent principal
22 forgiveness. So that's pretty much free money for
23 anyone that wants to put in treatment for manganese.

24 And then lastly the Lead Service Line fund,
25 so that was a very large amount of money coming into the



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1 State, \$42-million a year, and that, again, will be 49
2 percent subsidy, 51 percent loan. The loan portion of
3 this will be zero percent interest. So EPA really wants
4 systems to come in grab this money and get the lead out
5 of their systems. It has to be a full lead service line
6 replacement. It cannot be a partial. And we do have
7 some pretty significant water systems in our state that
8 are lead service lines.

9 So we cannot apply for this money until we
10 have a list of projects. So currently we are working on
11 those lists and getting applications in to EPA. This is
12 a lot of money coming into Revolving Loan Funds over the
13 next five years.

14 Just to kind of wrap up, of course, when you
15 have all of this extra money coming in, you have supply
16 chain on top of supply chain issues, there's concern
17 about contractor workforce. There's a lot of hefty
18 deadlines on these moneys where, you know, you have to
19 allocate it out and you have to spend it on certain
20 timeframes, and, of course, you know, you're not sure if
21 you're going to be able to get all of the products that
22 you need in time to be able to do that.

23 Build America, Buy America, we -- the
24 Revolving Loan Funds are not exempt from that, and that
25 basically means that every product that you buy for your



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1 project has to be made in America. That will be very
2 difficult, again, to the top build for a supply chain
3 because every single state is also getting the same
4 money and ordering the same products for these projects.
5 So there's a lot out of national discussion of trying to
6 get the EPA to exempt this particular Build America, Buy
7 America from projects. It also increases the cost
8 significantly.

9 And then lastly, cyber security. That's
10 definitely a huge topic. We have a lot of water systems
11 now that use data, and being able to make sure that it
12 is secure, that no one can tap into those and
13 potentially contaminate water supplies is a big deal, so
14 I do anticipate regulation coming down from the federal
15 government about waste systems and their cyber security.

16 So I will be open to any questions.

17 MR. HARRIS: Thank you, Ms. Ames. I do have
18 a question regarding the lead and copper rule and the
19 implication of that.

20 So those samples that are taken, unlike the
21 primary contaminants that are sampled at the source of
22 where it enters the distribution, these are samples
23 taken at households?

24 MS. AMES: Correct. Correct. So the way
25 the rule is shaped is that so you may have lead and



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1 copper components in your plumbing in your home, so the
2 idea is that as long as the water system maintains their
3 water quality, it's not corrosive, there will be no
4 leaching of those metals in the home.

5 On top of that, we have lead components in
6 the distribution systems. Some systems have joints,
7 some people have gooseneck connections, so they may not
8 have a lead line, they have a lead gooseneck from the
9 main of the house to connect the house. So the rule
10 requires the samples to be pulled at the tap inside the
11 home. It's very difficult for some systems to actually
12 get compliance, you know.

13 This addition in the rule would have two
14 draws. So your first draw, which is after the water has
15 been sitting no more than six hours, say. You put your
16 sample container under and you turn it on, that's the
17 first draw. Then you -- now you would take that one and
18 let it run for a little while and then take another
19 sample. So systems are concerned about, you know, how
20 the homeowners are going to be able to comply with that.
21 But the idea is that the first draw is the fixture. If
22 there's any lead associated with the fixture, that it
23 would come out there. The second draw would pull from
24 any other piping downstream. So if you did have a lead
25 service line and it was leaching in any way, that that



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1 second sample would be how you capture that.

2 So, yeah, they're all home samples.

3 MR. HARRIS: And certainly you can't sample
4 every home. Is it random?

5 MS. AMES: It is based on tiers. So if you
6 have a known lead service line, obviously those are the
7 homes that you want to pull from first, then they kind
8 of look at the dates of construction. So the lead band
9 would have been in the late '80s. So if you're a 2016
10 neighborhood, pretty much they don't have lead, so
11 you're more on the tier 3 side. So they want you to get
12 the older homes and the ones that, you know, have actual
13 lead. So your higher-risk populations with lead, those
14 get sampled first, and then it tiers down.

15 MR. HARRIS: Thank you.

16 Are there any other questions for Ms. Ames?

17 Mr. Frey.

18 MR. FREY: I've got one. And thanks,
19 Amanda, for all of that, and I'm probably going to
20 follow up with a little bit more detail later.

21 But on the grading system, I've already had
22 some of our constituents reach out to me and their
23 concerns -- or with concerns of what that's going to
24 look like, if it's got a rate increase and they get a C
25 on their grade.



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1 But the question I had was about the
2 financial sustainability, and we're talking about grade
3 studies. Can you elaborate a little bit on that? I
4 mean, if someone's got a rate on file with -- for a case
5 three years ago and they're filing their annual reports,
6 is that going to be sufficient or are they going to have
7 to have an annual update?

8 MS. AMES: So that's a good question.

9 The rate studies that we are requiring for
10 this particular rule, it's every five years.

11 MR. FREY: Okay.

12 MS. AMES: It's every five years.

13 And then to talk a little bit further, if
14 you are an A or a B or a C system, it is basically, it's
15 just your grade for that year. If you were a D or an F,
16 those systems will actually, that list will go to the
17 State Bonding Commission, you guys, the Public Service
18 Commission, and it would will go to the auditor's
19 office. Pretty much everyone will be informed of that.
20 And if you are a D or F, then you are going to be
21 required to use your water revenue only on water. So
22 there will be no allowance for transferring your water
23 revenue to pay for all of your operational expenses.
24 You have to fix your water system.

25 Also, it increases the enforcement for



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1 receivership. So currently the agency does not have
2 receivership ability. However, now the receiver will be
3 allowed to actually make substantial changes to the
4 system, similar to the fiscal administrator. And, also,
5 that plan may include consolidating with your neighbor.

6 So, yes, if you are a D or F, there are a
7 lot of more ramifications than...

8 MR. FREY: And that last part is very
9 helpful. I know we talked about the need for
10 consolidation. We've got a receiver award coming up
11 right now who I think is trying to offload theirs, so
12 that's all very helpful. So thanks.

13 MR. HARRIS: Thank you.

14 Mr. Sutcliffe.

15 MR. SUTCLIFFE: Thank you.

16 Just on the lead thing one more time, just
17 you mentioned there's an inventory kind of required by
18 2024, and I was kind of thinking about that IFJ money.
19 If the water system doesn't have that inventory, can
20 they use that money to fill in that data gap and then
21 kind of design projects to get on the list? Is that a
22 possibility?

23 MS. AMES: Yes. That's a great point.

24 The lead money, under the bill, the lead
25 fund, they can actually use that money for doing their



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1 inventory work. And then, of course, they kind of need
2 their inventory before you know, so you need to start
3 with placing lines.

4 Some of the -- I mean, they did have an
5 original inventory, but it's really old, so this would
6 be an update. Yes, they can use that fund for that.

7 MR. SUTCLIFFE: Okay. Thanks.

8 MR. HARRIS: Any other questions?

9 (No response.)

10 MR. HARRIS: Ms. Ames, thank you very much
11 for being here today. Thank you for your presentation.

12 MS. AMES: Okay. Thank you.

13 MR. HARRIS: Our next presentation.

14 MR. REONAS: Yes, sir. We have Gina Brown
15 and Kristen Jacobs from the Legislative Auditor's Office
16 to review some recent audit reports. Let me pull that
17 up real quick.

18 MS. BROWN: Good morning. I'm Gina Brown,
19 and I am a Performance Audit Manager with the Louisiana
20 Legislative Auditor's Office. And beside me is Kristen
21 Jacobs, she's a Senior Auditor. And we were asked here
22 today to present to you a report we issued a couple of
23 weeks ago on surface water valuation, it's a follow-up
24 to a report we had previously issued, and just to give
25 you a little bit of background about what we've been



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1 doing in our office.

2 For the past five years now we've issued 11
3 audits on water regulation on audits pertaining to water
4 regulation and issues in Louisiana, and we're actually
5 about to issue a 12th one on the watershedding
6 initiative.

7 MS. JACOBS: And you-all should have a
8 handout on those.

9 MS. BROWN: These 11 audits have ranged from
10 the State Drinking Water Program to water rates in
11 Louisiana, the Capital Area Ground Water Conservation
12 Commission that regulated the groundwater here in Baton
13 Rouge, and our comprehensive valuation of Louisiana's
14 management of water resources.

15 The common theme among these audits is not
16 about who and who cannot use Louisiana's water
17 resources, but the need to regulate these valuable
18 resources so it could be sustained for future
19 generations.

20 Our most recent audit that we issued a
21 couple of weeks ago was a follow up to our February 2020
22 audit on Louisiana's management of water resources, and
23 if you missed this report, don't feel bad. It was
24 issued right when the whole state shut down because of
25 COVID, but it was a comprehensive report detailing what



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1 Louisiana is doing to manage its water resources.

2 Basically we found in this report that
3 although Louisiana's perceived as a "water rich" state,
4 it faces threats to its water resources, including
5 declining water levels, salt water intrusion and intents
6 from other states to use our water.

7 Declining water levels is a huge issue in
8 some parts of the country, as you've probably been
9 seeing in the newspapers. The audit we issued a couple
10 weeks ago focuses specifically on the regulation of
11 surface water, as I'm sure you know is the rivers and
12 lakes in the state.

13 Basically we found, just to begin, it was a
14 follow up to our 2020 audit, that Louisiana still does
15 not have a statewide water management plan, which could
16 help Louisiana better regulate and value surface waters.

17 We also found that Louisiana still faces
18 barriers in developing this plan. First there is still
19 a lack of a water code in state law, and I know that
20 Louisiana law is currently working on this code. And
21 the second is we have a need for more water use data,
22 and this has delayed the creation of the statewide water
23 management plan.

24 The data we collect right now is fragmented,
25 and it's collected from a lot of different groups, and



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1 as a result, it's difficult to determine whether
2 Louisiana has enough data to create this water
3 management plan.

4 We presented this audit actually last week
5 in front of the Louisiana Legislative Audit Advisory
6 Committee, and we did have two matters for legislative
7 consideration dealing with the creation of a water
8 management plan. The first is legislature may wish to
9 consider designating a person or entity to develop a
10 comprehensive water resource management plan that
11 ensures water resources are protected, conserved and
12 replenished for the health, safety and wealth for other
13 people as stated in our Constitution, and this person or
14 entity can help facilitate and determine what data is
15 needed and collecting the data from different entities.

16 And our second matter for legislative
17 consideration is we had one that the legislature may
18 wish to consider adopting key pieces of the anticipated
19 new water code or of the Regulated Riparian Model Water
20 Code prior to the completion of the entire proposal for
21 a new water code.

22 Since the Louisiana State Law Institute is
23 still working on recommendations for a comprehensive
24 code that would integrate all of Louisiana's water
25 resources, there may be certain pieces that could be



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1 adopted prior to the passing of this new code.

2 In conclusion, a comprehensive, statewide
3 water management plan noted in this report is important
4 because other states do want to purchase our water. It
5 needs to be sustainable, and groundwater and surface
6 water are interconnected, and any plans need to address
7 both of them because one impacts the other.

8 Kristen's now going to go over the key
9 findings dealing specifically to surface water
10 regulation.

11 MS. JACOBS: Thanks.

12 So we looked at the DNR Surface Water
13 Management Program, which is a voluntary program. They
14 created that after -- there are a few AG opinions that
15 came out about non-riparian water users needed to
16 purchase water from the state. This is considered a
17 public value that can't be donated or given away freely,
18 and so we found that the Surface Water Management
19 Program is still voluntary. That was the recommendation
20 we made in the 2020 report, that the legislature
21 consider making it mandatory.

22 We found that during Fiscal Years 2020 and
23 2021 there were 87 active CEAs, or cooperative endeavor
24 agreements, for the surface water withdrawals requesting
25 a total of 1.54-trillion gallons of water. Not all of



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1 that water was actually withdrawn. That's just what the
2 agreements were for.

3 You can see the map. Most of the CEAs are
4 in Northwest Louisiana. That's going to be Shreveport
5 area and around the Haynesville/Shale area. If you can
6 see, I know it's kind of small, the blue dots are CEAs
7 who actually pulled water, whereas the red dots are CEAs
8 that there hasn't been any water reported -- used.

9 For this, we made two matters for
10 legislative consideration. The legislature may wish to
11 consider either making the surface water CEA process
12 mandatory or another process, such as state permitting.
13 Some other states do permitting or registering for
14 entities who wish to use a certain amount of surface
15 water. We also suggested that they consider specifying
16 a minimum amount of surface water withdrawal that would
17 be subject to a mandatory process. There are some other
18 states that have, like four, like if you're using more
19 than however many, 100,000 gallons or whatever, then you
20 will be subject to a requirement for registration.

21 We also found that even if the CEAs do
22 remain voluntary, that DNR should have a more robust
23 surface water regulatory process. We found that 10
24 percent of the CEAs enacted during our two year-scope,
25 2020 and 2021, contain errors in the total volume of



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1 water reflected. That was where the application
2 actually requested, most of the time, less water than
3 the CEAs were signed for. Most of that was just staff
4 mistakes entering in extra zeros or having typos. And
5 the chart you see is the difference between what was
6 requested and then what was signed for the CEA. Because
7 most of this water wasn't actually pulled out, it was
8 more just paper error.

9 We also found that DNR was limited staff and
10 funds to administer the program because it's voluntary,
11 and because of that, they don't also monitor all of the
12 aspects of the CEAs. They rely a lot on self-reported
13 information, and they do some steps to check what they
14 can, but they have two staff members who work on this
15 program. That's in addition to their normal duties.
16 All of the money that they collect goes to Wildlife and
17 Fisheries, which I'll talk about in a minute.

18 So we made two recommendations to DNR. They
19 agreed with both of our recommendations. One was that
20 they should improve its process for improving surface
21 water CEA essentially so there's no errors, and they
22 have implemented a second layer of review to fix that.
23 And we also suggested they improve its monitoring of
24 compliance with the terms of the surface water CEAs.

25 We also made a matter for legislative



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1 consideration that the legislature may wish to allocate
2 funds to DNR to administer this program, which could
3 include DNR retaining a percentage of what they
4 collected from the program or sending it back to general
5 funding to be appropriated during the normal
6 appropriation process.

7 We also found that state law caps fair
8 market value at 15 cents per 1,000 gallons, which
9 doesn't allow for increases based on inflation or office
10 demand. During Fiscal Years '20 through '21, DNR
11 collected about \$300,000 from surface water CEAs, which
12 went into the Aquatic Plant Control Fund. The purpose
13 of that fund is to control evasive aquatic vegetation.
14 It's made of up revenue from surface water CEAs in
15 addition to boat fees and boat license taxes.

16 You can actually see a picture of that at
17 our tour at Latt Lake, which is kind of similar to Lake
18 Vista, which is further north, but this is Giant
19 Salvinia covering the whole water body. It's evasive.
20 It's hard for Wildlife and Fisheries to keep control of
21 it because it just keeps coming back no mater what you
22 do.

23 So the CEA payments make up about 11 percent
24 of the Aquatic Plant Control Fund revenue and only 3.5
25 percent of their overall Aquatic Plant Control Program.



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1 We made one matter for legislative
2 consideration that the legislature may wish to consider
3 directing a person or entity to develop a valuation law
4 for determining the fair market value of Louisiana's
5 water resources and reevaluate that over time. We found
6 that is a very challenging process because states view
7 things differently. How the Western states value water
8 is very different than how Eastern states value water.
9 Texas, for example, charges much more for Toledo Bend
10 water then we do, but, say, Mississippi, Missouri,
11 Arkansas, they don't charge anything. So we just
12 suggested that the legislature designate an entity to
13 determine that fair market value.

14 That's all for this part.

15 So we made six matters for legislative
16 consideration and two recommendations to DNR, which they
17 agreed with.

18 So Gina is going to talk about Capital Area,
19 but if anyone has any questions about this report, I'll
20 be happy to answer any questions. Thank you.

21 MR. SUTCLIFFE: My question is quick.
22 Sounds like, is the water code almost done or do you
23 have a sense for what the timing is on that? I know
24 it's been under works for quite some time.

25 MS. BROWN: We don't have a sense of when



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1 it's going to be.

2 MS. GOUEDY: Thank you very much.

3 So one point I would not necessarily
4 question, I know that in maybe 2012 there was a
5 directive that actually this department took part in on
6 discussions of developing a statewide water plan.

7 Well, I guess the question, did you find any
8 action or movement that came from that when you're
9 talking about the distinction between the plan and the
10 code that's been talked about, but where did that land?
11 Where did that stop?

12 MS. BROWN: This commission actually issued
13 some recommendations for a comprehensive water
14 management plan, and that's where it's kind of the last
15 actionable item it was until there's a code developed
16 that can be discussed, then the creation of a plan.

17 MS. JACOBS: Some of them were in the same
18 place they were generally in 2020. But, yeah, COVID and
19 all of that. But we do talk a little bit about it in on
20 Page 6 of the report.

21 MS. BROWN: And in our 2020 report we
22 brought out, you know, the other states, what other
23 states have had comprehensive water management plans,
24 what's included in those plans, kind of high-level
25 points that they have, including, you know, valuing



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1 water. It's just important because, you know, we do
2 have an abundance of water. We want that to be
3 sustainable so that other states are, you know, in need
4 of water. And we've already seen that in the past of
5 other states trying to either purchase or use other
6 mechanisms to get our water, and so we really need to
7 have that plan developed and secured so we can better
8 regulate to know how much we can help other states and
9 regions within our state as well.

10 MS. GOUEDY: Okay. Agreed.

11 My other question was related to valuation
12 of water, surface water that's sold. I know, I believe
13 it was Senator Mills had a bill go through -- attempting
14 to go through that did not move, but I believe I read in
15 the report that the Sabine River Authority is charging
16 18 cents per thousand gallons for long-term industrial
17 contracts and 1.80 for short-term.

18 Now, how does that equate if in 2014 that
19 valuation was capped at 15 cents?

20 MS. JACOBS: The valuation is capped not for
21 Sabine. It doesn't effect the Sabine River, so they can
22 charge whatever.

23 MS. GOUEDY: Okay.

24 MS. JACOBS: So they're charging about 1.80
25 for, say, like fracking contracts basically, whereas the



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1 state law caps DNR to 15 cents.

2 MS. GOUEDY: Okay. Thank you for that
3 distinction.

4 And I did find it interesting that you noted
5 Texas, but Texas is charging 4.50 per thousand gallons
6 for the equivalent, so that was interesting.

7 MS. JACOBS: I believe the 15 cents back on
8 whatever year it was, several year ago, was set based on
9 what Sabine River was charging at the time, what
10 Louisiana was charging at the time.

11 MS. GOUEDY: Yes, I did read that.

12 Okay. Thank you.

13 MR. MALBROUGH: Thank you. I have a quick
14 question.

15 The CEAs you referenced in the presentation,
16 is there somewhere in the audit report a summary of who
17 holds these CEAs and what they are being charged per
18 thousand gallons individually?

19 MS. JACOBS: I don't think we list them by
20 name.

21 They either pay 15 cents per thousand
22 gallons or they can provide an economic, like, impact
23 study where they don't have to pay anything. They'll
24 show that the economic value is greater than that of the
25 15 cents.



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1 MR. MALBROUGH: So in all instances, the
2 CEAs either pay nothing or 15 cents per thousand
3 gallons?

4 MS. JACOBS: Correct. Some of the really
5 old ones might not, but for our scope of 2020 and 2021.

6 MS. BROWN: And that's why we have a
7 recommendation in this report about that 15 cents.
8 Because it's stated in law, there's no flexibility to
9 adjust for economic changes if, you know, if your water
10 is valued differently, those types of changes. It's set
11 at 15 cents, so, you know, the state has its hands tied
12 regarding that.

13 MR. MALBROUGH: One more thing. Do y'all
14 have a breakdown of what most of these water usages are
15 for?

16 MS. JACOBS: Most of it's for fracking in
17 that Northwest Louisiana, and I want to say about 40
18 percent, I believe, are in lieu. Let's see. 35
19 percent, which is 31 CEAs, are in lieu, they don't have
20 to make cash payments, whereas 56, or 64 percent, would
21 have a cash payment.

22 MR. MALBROUGH: Thank you.

23 MR. BALKUM: Great report, ladies.

24 Refresh my memory, or am I correct, 2010 is
25 when this CEA process was established?



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1 MS. JACOBS: Yes. 2020. Act 985 in 2010 is
2 when the act --

3 MR. BALKUM: And I was around back then. A
4 lot of it came about the discussion with Wildlife and
5 Fisheries and Department of Natural Resources had two
6 things blowing up all at once. We had, I think it was,
7 Haynesville/Shale, as you mentioned, plan of water for
8 fracking, and we had also had droughting issues at the
9 same time and our agency, Wildlife and Fisheries, were
10 certainly concerned about massive water withdrawals in
11 small streams and how that may affect aquatic life. And
12 then DNR discussions came up with this process, and
13 certainly thankful for that.

14 One question, Lindsay mentioned the \$4.50
15 that Texas charges, that is for fracking?

16 MS. JACOBS: I believe so.

17 MR. BALKUM: They're all on this side of the
18 state line?

19 MS. JACOBS: I didn't hear you. Say that
20 again.

21 MR. BALKUM: That \$4.50 is per thousand
22 gallons of water for fracking purposes, is that
23 generally charged on the Texas side and their portion?

24 MS. JACOBS: Yeah. That -- let me find the
25 slide. The 4.50 would be the Texas side.



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1 MR. BALKUM: Right.

2 MS. JACOBS: Right.

3 MR. BALKUM: And, of course, the fracking in
4 West Texas.

5 MS. JACOBS: Yeah. And the Louisiana side
6 of the Sabine River Authority. The Louisiana Toledo
7 Bend side is 1.80.

8 MR. BALKUM: Coming from the Sabine River.

9 I certainly thank y'all for your efforts
10 here in identifying some of the these challenges. I
11 know DNR staff works hard at this, and you probably also
12 know that all of these water withdrawals are permeated
13 through the Eastern District of Army Corps of Engineers.
14 That's all that I remain aware of. Thank y'all very
15 much.

16 MR. SUTCLIFFE: Sorry. Just one more
17 question on the CEAs. The big disparage between the
18 actual applications of the CEA, is that the CEA always
19 kind of upper bound and then they only apply for what
20 they think they'll actually need? Because it wasn't --
21 it was two zeros difference and not just one. I just
22 wonder how much error that was or how much
23 overestimation it might be. Kind of get back to his
24 question of do we know how much water we're using for
25 things. It seems like there's a big, big difference.



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1 MS. JACOBS: Yeah. So they submit an
2 application, and this is how much we think we need,
3 we're going to withdraw this, how long it's going to
4 last, and then based on that, they create this CEA
5 document. So most of the errors were just like typos
6 where three extra zeros were added. I think maybe two
7 instances where three were added. So that makes a big
8 difference, but that much water was not actually pulled.

9 So most of it was just little typos that
10 just sort of added, but there wasn't more water pulled
11 because of it, if that makes sense.

12 MR. HARRIS: Yeah. And, Charles, if I could
13 just add a little flavor to that, 99.9 percent of that
14 error was in a single cooperative agreement that was
15 signed, I believe, back in 2013 where someone got
16 billions and trillions mixed up. That's what it looked
17 like.

18 MS. JACOBS: But I don't think anything was
19 ever pulled from the CEA in general.

20 MR. HARRIS: Yeah. And that's the other
21 thing, and none of those cases were -- was the amount
22 drawn or paid for more than the original application,
23 so, but, we absolutely agree with the legislative
24 auditors, and we've added another layer of review.

25 I would like to comment that we receive no



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1 funding whatsoever. We don't keep any of the money. We
2 don't get any general fund dollars. We have about four
3 staff members who do this in addition to their normal
4 job, which, in our conversations that have come up with
5 Senator Mills in this past session, told them we'd be
6 happy to do whatever the law says, like we're doing now,
7 and he was able to get the law changed where we wouldn't
8 need additional staffing to do enforcement if that's
9 something that the law provided for. As of now, we have
10 no statutory authority nor staff to provide any
11 enforcement.

12 Any other questions?

13 (No response.)

14 MR. HARRIS: Thank you very much for coming
15 today and providing this new information. And as a side
16 note, it was a pleasure working with you on this issue.

17 MS. BROWN: Did y'all want an update on the
18 Capital Area status report that we issued? It was
19 issued a year ago. We just have a couple of slides on
20 it if y'all would like to hear about it.

21 MR. BALKUM: Sure.

22 MS. BROWN: Okay. Just to continue then,
23 we, you know, in another water report we issued in 2019
24 was on the Capital Area Groundwater Conservation
25 Commission in May of 2019. We found numerous issues



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1 with the regulation of the groundwater here in Baton
2 Rouge, including not having a complete inventory of the
3 wells it should be regulating, does not limit withdrawal
4 amounts by wells, its restrictions at that time, and
5 that resulted in reducing the amount of water for
6 withdrawal causing saltwater intrusion, and not
7 monitoring the withdrawal on wells and uses
8 self-reported data and its fees were lower than other
9 similar water districts.

10 So we actually had 19 recommendations, which
11 is a lot of recommendations. I'm not going to go into
12 all of them. As of last July, five have been
13 implemented. And I know we've been in close contact
14 with Gary Beard, and he's been keeping us up to date on
15 what he is currently implementing. He was not the
16 director at the time of our 2019 audit.

17 And so these five are the ones that they
18 have fully implemented. And then they've partially
19 implemented one, and that's the application fee. And
20 this is just a lot to go over, so if you want more
21 information, I'd be happy to send you the report, but
22 the remaining were in the process of being implemented.

23 So the one update I do have from this is in
24 April of this year the Commission did pass a fee
25 increase above what they had previously increased from



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1 this 2019 report to \$65 per million. So when we started
2 the 2019 report it was \$5 per million gallons pulled,
3 and now it is 65.

4 So that's just a very brief update on the
5 Capital Area. And if you have any specific questions,
6 I'd be happy to answer them or if you want the report,
7 I'd be happy to send it.

8 MR. HARRIS: No questions?

9 Thank you, once again.

10 MS. BROWN: All right. Thank you.

11 MS. JACOBS: Thank you.

12 MR. REONAS: The agenda calls for a
13 10-minute break. What's the will of the Commission?

14 MR. HARRIS: Plow forward?

15 Matt, I think we're going to push forward.

16 MR. REONAS: Okay. The next, if we're going
17 to kind of skip through the break, Billy, you're already
18 here. Okay. Great.

19 Billy Williamson from the Department of
20 Transportation and Development to talk about the
21 Watershed Initiative.

22 MR. HARRIS: Thank you for being here.

23 MR. WILLIAMSON: Thank you, Tom.

24 All right. My apologies. We had quite a
25 few high-profile pictures in our presentation, so,



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1 anyway, it's like 200 megabytes, so I couldn't e-mail it
2 over, so we are going to go with Adobe today.

3 As Matt mentioned, my name is Billy
4 Williamson. I'm with the Department of Transportation
5 and Development's Office of Public Works and Water
6 Resources. I'm involved in the modeling effort, big
7 projects effort with Louisiana Watershed Initiative.
8 Our main role with the Watershed Initiative right now is
9 development of the modeling effort.

10 So I'm just going to kind of give a brief
11 overview of the Watershed Initiative, how we got here,
12 and go through our state projects and programs, just a
13 quick overview. I'm going to spend most of my time on
14 number 3 up here, the Statewide Data and Modeling. I
15 think it's probably the most information that will be
16 helpful to you-all, and I'll leave a little time for
17 questions.

18 So this all kind of started in March of
19 2016. In North Louisiana there was a storm that came
20 through from March 8th to March 15th that brought over
21 22 inches of water, kind of centered around Ouachita
22 Parish that you can see on the map. There was a major
23 disaster declared from this one in 23 different
24 parishes. There were four individuals who lost their
25 life. This was about as major of a riverine situation



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1 as we get in the State of Louisiana.

2 So fast forward five months later to August
3 of 2016, the 12th through the 22nd. There was over 31
4 inches that fell kind of centered around north of Denham
5 Springs area. The actual total is kind of disputed.
6 Basically whenever I say over 31 inches, that is the
7 lowest estimate of all of them. Some of the estimates
8 go up to 36 inches over that period.

9 So that's two in a single year, that's two
10 events that exceed the .2 percent annual exceedance
11 probability, so a 500-year storm or worse. This was an
12 unprecedented year for flooding force. We had 145,000
13 structures impacted. Eighty percent of those were
14 uninsured. And what that tells us is how much this
15 falls out of our existing kind of floodways or flood
16 zones. Most of the people that are in the flood zone
17 are carrying flood insurance. A lot of this just
18 exceeded those flood zones that we typically see that
19 100-year level, and so we had a lot of uninsured people.
20 It was a major issue for the state.

21 There was over 10-billion in damages.
22 Again, there's another one where I put that "over."
23 Ten-billion was the lowest estimate I could find of the
24 economic impact of these storms. Other ones put it well
25 over 20-million -- or \$20-billion.



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1 So the challenge we face as we're kind of
2 dealing with water in the state, this is kind of our
3 quote that we use, "Flooding does not know political
4 boundaries." That water does not follow invisible
5 lines, so anything we do that increases discharge from
6 our locality or to reduce water trickle in our locality
7 runs the risk of putting that water into somebody else's
8 back yard, and so that is something that we have to look
9 at whenever we're improving projects and plans.

10 Everybody is kind of focused on coordinating their own
11 parish or their own municipalities, and so the Watershed
12 Initiative kind of come up with the concept of getting
13 everybody in the same room dealing with each other,
14 let's work together to fix our collective problems,
15 because if there's flooding on the Red River, it's going
16 to flood on the East Bank and the West Bank. So a lot
17 of that work has to be in done in conjunction to make it
18 really beneficial to both of us.

19 So we took this as an opportunity. It's not
20 very often that we get \$1.2-billion in flood funding in
21 the State of Louisiana, particularly riverine flooding.
22 We see some of these big chunks of change that happen in
23 the coastal zone from storm surge associated with
24 tropical events or the BP oil spill, but with the
25 riverine systems, they just don't have that same level



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1 of focus and funding. This was the first time we've had
2 a big chunk of money that we could use on riverine
3 events, so we wanted to use that as an opportunity to
4 just change the state's approach to flood risk
5 management, as I mentioned previously, and basically
6 proactively address it with kind of a statewide
7 floodplain management. And part of that was kind of
8 putting together these regional watershed coalitions
9 that are working together to evaluate projects, to
10 identify projects and bring it to the state agencies
11 that have the funding opportunities so that we're not
12 getting a bunch of conflicting projects from different
13 municipalities and parishes.

14 So the council was set up. As I mentioned,
15 there was \$1.2-billion, and the Governor recognized the
16 major task that we had on our hands and put together,
17 through executive order, the Council on Watershed
18 Management. Now, this is kind of the, I guess, action
19 arm of Louisiana Watershed Initiative. There are five
20 agencies listed there: GOHSEP, CPRA, Wildlife and
21 Fisheries, DOTD, and then the funding comes down through
22 the Office of Community Development from HUD.

23 Now, that is not the extent of the Louisiana
24 Watershed Initiative. We do have DEQ involved in the
25 Louisiana Watershed Initiative as another agency that we



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1 recognize as very important to the role and task at
2 hand.

3 So this is just our basic mission statement
4 is: "Reduce flood risk, improve floodplain management
5 throughout the state and maximize the natural and
6 beneficial function of floodplains."

7 So as I mentioned, I'm going to kind of just
8 give a brief overview of state projects and programs.
9 This was some projects that state agencies identified
10 needs for and kind of brought those forward as early
11 funding opportunities. It was needs that the state
12 recognized that are more -- you know, whenever they're
13 coming from the state, it tends to deal more regionally
14 than some of the local projects, and so the state
15 agencies just kind of worked together to identify
16 projects that they had and proposed them. They have
17 been selected, and they're kind of all in separate
18 processes of contracting right now.

19 On DOTD side -- I'm sorry. I skipped a
20 slide.

21 So there's 163-million in flood risk
22 reduction in drainage and infrastructure projects here.
23 Contracts are in development. Most of them have been
24 signed. What you have there are kind of pins on the map
25 of the different projects that are available there. And



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1 if you want to, you can go to Watershed.LA.Gov, and we
2 have all of these maps, you can click on the pins and
3 get more details on those projects.

4 So DOTD was basically awarded eight
5 projects. This is actually nine different project
6 locations or project sites. Two of them are very near
7 to each other. You see kind of south of Toledo Bend, in
8 the Toledo Bend area, there are two that are dams and
9 lakes that kind of function in series, so it's best to
10 kind of do those together and couple them together.

11 So the projects were broken into two
12 separate groups kind of trying to isolate similar
13 projects. We thought it was good to get two separate
14 contractors on this. The projects are separated to
15 like-type projects so that we can get contractors who
16 were best suited for doing that type of project.

17 Michael Baker International and Freese &
18 Nichols were chosen for these projects through our
19 typical two-tiered selection process that DOTD uses for
20 selecting consultants. NTPs have been issued, notice to
21 proceed, and we're expecting about a five-year project
22 timeline right now. So they are now in the process of
23 further ironing out, developing these projects for
24 construction, working on the necessary information for
25 permitting, getting these projects through the



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1 environmental impact and everything. So we do expect to
2 see construction on these in the fairly near future.

3 And now for kind of my focus. It is the
4 statewide data and modeling.

5 So one of the things that we saw with the
6 need for after these events was a better understanding
7 of what is happening. We need data to make these
8 decisions. To make the right decisions, it needs to be
9 data-driven to keep our focus on what is needed.

10 Another interesting thing about it is
11 without modeling those bigger events, we don't know
12 what's going to happen when that 500, 1,000-year event
13 happens unless we've seen it historically. Through
14 modeling we can get pretty close to it so we can
15 understand what our risk is to those larger events,
16 those vulnerabilities, which, unfortunately, as we saw
17 in 2016, are becoming more frequent.

18 So to generate and use that best available
19 data and science, there were two projects. The main
20 ones are the data -- or the modeling effort, and then
21 the river and rain gauge network. We can use the models
22 to select projects and kind of identify why issues are
23 occurring, but one of the things that you need for
24 calibrating and validating models is data. So the
25 stream gauge network kind of came up so that in the



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1 future, when we do any updates and recalibration on
2 these models, we have will have even further better data
3 available to help us with that.

4 So I mentioned the river and rain gauge
5 network. This was a \$15-million investment that was led
6 by, I believe, the University of Louisiana at Lafayette
7 to identify 100 different gauge locations throughout the
8 state. As you can see on the map up there, the little
9 red dots are typically the gauges that we have existing
10 now. There are big gaps in North Louisiana, and so what
11 we have to do there whenever recalibrating and
12 validating any models and looking at our issues, you
13 have to go back and start looking for high water marks
14 and stuff like that, and if you haven't collected those
15 at the time of the events, it becomes very hard to go
16 back and kind of fill in those gaps. And so they kind
17 of -- they put out a, I guess, an RFQ to kind of look at
18 different gauge sites, and there was an entire process
19 set up where the public can go on this website that they
20 set up, suggest gauge sites, and this can be engineering
21 firms or people that are just a farmer that recognizes
22 an issue in his area and said we really need to know
23 what the water's doing here. And so there was a real
24 deliberative approach to selecting these 100 gauge
25 sites, and it has begun moving forward quite well.



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1 So as of right now we have 35 sites that are
2 online as shown on the map here. There's 35 stream
3 gauges, and at 34 of those locations they also have rain
4 gauges. I believe the reason why the other one does not
5 have a rain gauge is because it was near enough to an
6 adjacent gauge that the spatial distribution of that
7 rain, one of those gauges was sufficient, but there was
8 some different confluences of the canals that you just
9 needed a separate stream gauge location.

10 So another kind of data source that we
11 wanted updated was the NOAA Atlas 14 updates. So the
12 Atlas 14 is basically a database that the National
13 Oceanographic and Atmospheric Administration put
14 together that prevents those, whenever we say the
15 100-year storm, the 100-year rainfall event, that is
16 based on NOAA Atlas 14, but as we've seen with
17 increasing precipitation values, that has been exceeded
18 quite a bit and so we kind of got ahead of it. And the
19 Office of Community Development was willing to put up
20 the funding to actually get that NOAA Atlas 14 updated
21 for us, and so that process is ongoing so that whenever
22 we're looking forward into kind of the 21st Century, the
23 22nd Century, we will have better data.

24 And one of the things that we're seeing is
25 the federal government actually recognized the value in



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1 this and has chosen to do this nation wide. However,
2 our funding that we put forward to it put us at the
3 frontline, so we're expecting that hopefully within the
4 next six to eight months this NOAA Atlas 14 data will
5 become available.

6 So the Statewide Watershed Modeling effort,
7 this is my baby. In May 2020, this was actually before
8 I was over the program, we issued requests for
9 qualifications to develop watershed models for the
10 state's 59 watersheds. We used our two-tier selection
11 approach that I mentioned earlier for consultants to
12 send in a large binder that showed not only their
13 capabilities, projects they've done, just kind of puts
14 their best foot forward. The top three are selected to
15 come in and do oral presentations, further scored, and
16 then a team is chosen.

17 Task Order 1 would be used. Seven contracts
18 were chosen. Task Order 1 was issued in November of
19 2020 to develop the cost estimates and design approaches
20 that will be used. We did, as a state, put together a
21 guidance of modeling methodology to ensure consistency
22 between the watershed and kind of defined how we wanted
23 them set up.

24 So right now we have \$77-million that are
25 set up for regional modeling. This is basically to set



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1 up the models using historic storm events and getting
2 them calibrated and validated. That is one of the
3 important, I guess, distinctions I want to make is that
4 they're calibrated and validated modelings. A lot of
5 time when people are proposing projects, if they're
6 required to submit modeling, the modeling they submit
7 has not been calibrated or validated, so what they're
8 showing as an existing condition may or may not be the
9 case, you just have to take them at their word for it,
10 and the level of validation is very -- typically not
11 very high.

12 What these models will allow us to do is
13 have a baseline. We know what's happening because these
14 are calibrated and validated, and it sets those
15 engineers up for project evaluation that they have the
16 front-end, the model built, then all they have to do
17 make the tweaks to their product. So it really helps
18 with valuation of the projects on both the front end and
19 the back end. And we hope that that will facilitate
20 additional review from engineering firms to really dig
21 into their projects and make sure they're doing what
22 they expect them to do.

23 So we broke down our models. We're building
24 them on HUC8 level. That is a fairly large watershed,
25 but it's -- we needed to break it down, so we had to run



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1 four models. As your models get bigger, there's more
2 calculations and they take longer to run. We felt that
3 HUC8 was a good level to bring it out to. We chose kind
4 of there's a Coupled 1Ds/2Ds, which is the model that
5 you see in the picture there.

6 You see the cross sections in the stream.
7 That's in the lower Amite River. Whenever it's within
8 the stream, it flows in a one-dimensional flow
9 direction, just the direction of the cross section.
10 However, once you hit flood stage, that water starts
11 flowing into the overland areas and it's given a
12 complete two-dimensional grid there where it can flow in
13 any direction it wants to. And we just find that that's
14 more accurate in that overlaying area, and it just gives
15 you a much better functional model.

16 We looked at a tiered approach. We didn't
17 want to spend too much money modeling in super detail
18 extremely rural areas that have no development in them.
19 We found that doing the 1D kind of course model gave us
20 enough information to meet the needs of that area.

21 All of the design approaches were reviewed
22 and approved by TDQ, which is the Technical Design
23 Quality Assurance and Quality Control Team, which
24 includes several universities and a couple of
25 international engineering firms that do this type of



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1 modeling. They just add another layer of input on
2 making sure we're taking the right approach.

3 We did chose to do all of these in a
4 software called HEC-RAS, and the reason that was
5 selected is because it was a fairly well-established
6 program, and more importantly it's a free license, so
7 anybody in the state can, at no cost, install this
8 software on their computer and run it. You know, as far
9 as how useful it will be to them, it's their technical
10 expertise, but we did not want cost to be an inhibiting
11 factor and force.

12 So we split the model into regions, into
13 Series I and Series II, with the idea being that we
14 would run into some design issues on these Series I
15 models, and we would take those lessons learned into
16 Series II to better facilitate the efficiency of those
17 later models.

18 Series I is a 20-month task order. We're
19 typically looking at around June or July of next year as
20 the end date of most of these. They're well on their
21 way. But, like I said, we just wanted to kind of get
22 these in there so they deal -- it's almost like a pseudo
23 pilot for these series, that any issues that we run into
24 here, we can set ourselves up to not run into those when
25 we get to Series II.



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1 The Series II is a 24-month process, and we
2 have actually -- I feel like these are probably going to
3 come in much quicker than that 24 months because what
4 we've been seeing is the efficiency found from that
5 Series I is really coming out, but they're having a much
6 easier job submitting their Series II deliverables.

7 Right now we look like our deadline date is
8 around January of 2024. A lot of the last four months
9 on that, as you can see, the 20-month is hydraulic model
10 validation. That's really when we'll have deliverable
11 models. Everything after that is reporting, putting
12 together quick guides, just documentation. So we expect
13 to have those complete by October or November of next
14 year and have functional models statewide.

15 So Region 1 is kind of the Northwest region.
16 For this region, a team led by Atkins North America was
17 selected. All surveyed lands have been approved. The
18 task order is issued. Their Series I survey collection
19 is underway, and they are setting up their hydraulic
20 models. They were a little bit later on starting on
21 surveying than some of our other teams, but they used a
22 lot of artificial intelligence to kind of clean up some
23 of the LiDAR that we're using. The LiDAR, if you're not
24 familiar, is basically satellite imagery or -- I'm
25 sorry. I misspoke there. It is airplane-derived data



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1 that they fly over and get natural contours of the Earth
2 from that information from basically a laser shot from
3 the plane. And so we're getting that updated
4 information, and once they get that, you can start
5 building physical models or a layout of a physical
6 model, but it requires a lot of processing to get your
7 streams put into it. And then you have to, when you get
8 survey data, you cut it into that LiDAR. They used a
9 lot of machine running in Region 1 to kind of accelerate
10 that process. So at first we were concerned about this
11 one being behind, but it sounds like they were just
12 doing a lot that we weren't seeing.

13 One thing I will note, we did not chose to
14 model the Middle Red-Coushatta. You can see the middle
15 section there. That is basically the mainstem of the
16 Red River. What's happening is that's heavily studied
17 by the Corps of Engineers and FEMA, and so there's a new
18 model coming up on that one. And we thought it was, you
19 know, what's the point of spending \$2-million on this if
20 the Corps is already doing it.

21 Region 2, we selected Freese and Nichols.
22 This was the same consultant that one of our state
23 projects and programs contracts. Their Series I and
24 Series II task orders have been both approved, all of
25 their survey plans have been approved, so they're



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1 actively out surveying Region 1. And they have actually
2 submitted their hydrologic model setups, so that's kind
3 of their skeleton of the model, has been approved, and
4 so they are kind of -- they've been our guinea pig so
5 far. We're hopeful that the time we took reviewing this
6 one, they're working very well between our teams
7 communicating regularly. So what they're hearing back
8 that they need to change, they're sharing that with our
9 other consultants, which should expedite their review
10 process because they've already incorporated all of the
11 comments that Freese and Nichols received.

12 Region 3 we selected Wood Environment &
13 Infrastructure Solutions. They're doing a -- most of
14 their area is doing a full two-dimensional model
15 approach. If you're familiar with that area, Northeast
16 Louisiana, there's a lot of agriculture up there, which
17 has resulted in a lot of diversions and agricultural
18 channels that are being brought to irrigate those
19 canals, and so whenever you cut those laterals between
20 channels, you create real complexity into the model.
21 And so whenever I say 1D modeling, basically what that
22 modeling does is when you cut a cross section in the
23 stream, the flow is allowed to go either positive or
24 negative, perpendicular to the cross section. That's
25 the only direction it can flow. So whenever you get to



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1 these complex areas when you have cross spaces and
2 exchange through these channels, that water's flowing in
3 whatever direction it wants to go depending on where
4 that raindrop hit, so the decision was made to go full
5 two-dimensional in most of this area. It's led to a
6 little bit of issue with there was some USGS LiDAR data
7 that was provided to us that unfortunately we discovered
8 was not great data, and so there's been a lot of effort
9 put into cleaning up that published data to get it ready
10 for modeling.

11 Region 4 was one of our only true local
12 firms. All of these firms have offices in Louisiana.
13 C.H. Fenstermaker is a Louisiana born and bred
14 engineering firm, so they were selected for Region 4.
15 They do a lot of work in that area. They're on retainer
16 with Calcasieu Parish and Cameron Parish. They do a lot
17 of work in the area, so it was a natural fit for them.
18 Both of their Series I and Series II task orders have
19 been approved, survey plans approved, and they are
20 blowing and going on surveying.

21 An interesting part of that is that
22 Fenstermaker is one of our larger survey firms in the
23 State of Louisiana, so they're actually a sub on a
24 couple of the other firms' teams as just a survey lead.

25 Now, this is another one where we have a



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1 little bit of a quirk in the modeling. You know, this
2 is kind of the Louisiana/Texas border. This is the
3 Lower Sabine hub. What happens down there is that most
4 of the hub is in Texas. The portion that is in
5 Louisiana, if you're familiar with that area, it is
6 pretty much just open marsh. There's the little area
7 that you can kind of see, I guess, below the "u-r" in
8 Port Arthur, it looks a little purple, that's an area
9 that we actually added to the lower Calcasieu watershed.
10 There is some development in that little region. So
11 what we're doing is we're going to model that as a part
12 of the Lower Calcasieu, but technically it is part of
13 the Lower Sabine that we're not modeling, but we wanted
14 to make sure that every developed area does get some
15 modeling.

16 Really, that area, the riverine flooding is
17 not an issue there. It's really more of a
18 coastal-impacted area, and so the existing master model
19 that the state has in CPRA are pretty much sufficient to
20 manage most of that watershed.

21 Region 5 we selected HDR Engineering.
22 Again, all surveys and all task orders are approved,
23 survey plans approved and selection underway. Right now
24 they're the first one in these regional zones we did
25 mostly 2D, and that's the setup for future transitions



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1 zone modeling, so how does the joint probability of our
2 riverine floods coincide with coastal storm surge. And
3 so with these areas, whenever you get large flows, these
4 are flat, marshy areas, a lot of them, and so kind of
5 the same things with Region 3 that I mentioned, when
6 water starts moving out there, it's moving in every
7 direction because every's flat. You know, when you pour
8 water on a table, it's not going to run one direction
9 unless it's still. They're the first 2D, full
10 two-dimensional hydrology that we have reviewed, so
11 we're actually kind of in the process of setting up our
12 review on that one.

13 We discovered that these 2D models, they
14 need to be reviewed in a different way. So we're
15 setting up different review matrixes with the TDQ to
16 kind of resolve these, and I think it will also help us
17 whenever we get to these other reviews that are coming.
18 So they're kind of our two-dimensional guinea pig,
19 whereas Freese and Nichols was our 1D guinea pig.

20 So Region 7, Dewberry Engineers were
21 selected for this one. All of their task orders are
22 approved. They've done most of their survey collection
23 on Series I. That all remains ongoing through
24 calibrations and validation. Their first hydraulic
25 model has been approved for Bayou Sara-Thompson up in



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1 West Feliciana Parish.

2 One of the things that kind of help them
3 stand out in that region was this was our consultant
4 that actually built our Amite River Numerical Model
5 pilot. We served as a pilot for this whole program. So
6 after 2016, they were contracted to do a model of the
7 Amite River. They built it, and it looked great. It
8 really gave us great ideas on how to do this. So their
9 knowledge in building that one just really helped them
10 stand out because they built so much knowledge through
11 that effort in this region.

12 So that's really kind of where we stand at
13 from a status standpoint. We do have some future tasks
14 that are ongoing. Design storm development, that was
15 something, whenever we mentioned the NOAA Atlas 14
16 update, we thought it was better to hold off on setting
17 up design storms to implement into these models and base
18 them on that NOAA Atlas 14 update. And, furthermore,
19 ULL is under contract with the Office of Community
20 Development right now to do some sensitivity analysis of
21 how many storm centers we need to be plugging into these
22 models to get representative basically flood maps, not
23 regulatory flood maps, but basically maps that show the
24 inundation boundaries and stuff like that, how many do
25 we need to put in there to get a real, real idea of the



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1 risks.

2 We're, in that next task force, we come out,
3 Task Force 4, we see them having the design storm
4 development and that consequence modeling. We've been
5 getting some presentations done on consequence modeling.
6 It looks like we're kind of moving towards a new
7 software squid called Go Consequences, which the Water
8 Institute of the Gulf, who is, you know, a partner
9 agency, the CPRA is doing a lot of analysis on it. It
10 seems like we'll be able to provide some great statewide
11 dashboards on risks using our models in Go Consequences.
12 So that's kind of the direction we're leaning now.

13 And then there's kind of the future tasks of
14 Coastal Transition Zone Joint Probability that I
15 mentioned earlier. This is kind of a bleeding-edge
16 effort. There's a few states that are doing this. I
17 believe Virginia is kind of looking at it a bit as well
18 as New Jersey has kind of been looking at it, but it's
19 how do we model those two things together and get a good
20 idea of the risks from the two because those storm
21 surges are not happening in vacuum. There's rainfall
22 from outer bands that's hitting before it, and so it's
23 just kind of looking at how those two interact in that
24 coastal transition zone.

25 And so, you know, I'd be happy to take any



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1 questions, technical, status, anything, I'll do my best
2 to answer. I'd be happy to come back if y'all want more
3 technical.

4 MR. MALBROUGH: Thank you, Billy.

5 So in the previous presentation, and it has
6 been bought up a lot to this Commission in the few years
7 that I've been here, is the lack of a statewide water
8 management plan. Specifically from a surface water
9 perspective, you are essentially building a basis of
10 what can be adopted as statewide surface water; correct?

11 MR. WILLIAMSON: Yes and no. It will give
12 you good data on flows. I think what will really help
13 is the stream regions. That will tell you -- that's the
14 kind of data that you can use to show I have, you know,
15 100,000 cubic feet per second moving at this point in
16 the stream, down here I'm only getting 75 feet per
17 second, so there's some losses in there, what are they.
18 And so but then we can see where those uses are, and so
19 there's value there. There is value to the modeling. I
20 think a lot of the need on management is going to be,
21 and I'm sure Chuck can kind of stand behind this as
22 well, is that whenever those flows get reduced below a
23 certain point, we start having fish kills, there's, you
24 know, contaminants increase in kind of density. I'm
25 sure I'm misspeaking, but that's the gist. And I think



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1 a lot of it, to get to those level of models, it would
2 almost add some additional refinement.

3 Now, our models are a good basis for doing
4 that refinement, but whenever it came time to, you know,
5 start cutting things, low flows is one of the things
6 that was kind of removed out statewide. And it just
7 becomes, to get that level to keep the models running
8 properly, low flows can cause issues. If you get zero
9 flows, it will sometimes break the model. And so the
10 level of refinement that you have to get into the stream
11 to get that flow going would be a whole other level of
12 bathymetric surveying, but it is something that we are
13 building into certain areas of it where it's needed.

14 I think it will set up a very good basis for
15 it. I don't know that our models, as delivered, you
16 know, will be a turnkey solution to it, but it will
17 certainly be a tool that you would want to use when
18 you're doing these.

19 MR. MALBROUGH: My other question is
20 where -- so once these models are developed, where are
21 they going to be housed for future use?

22 MR. WILLIAMSON: So, oddly enough, I had two
23 video slides on that that I then cut out for the sake of
24 time. What they're doing right now is a thing called
25 the modeling use, storage and maintenance plan is being



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1 developed, and that's to deal with how do you store
2 them. And so there's kind of two thoughts going. One
3 of them is some of the regions, the regional watershed
4 coalitions, they're like we want to store it, we want to
5 house it, we want to maintain it. Other ones, in more
6 rural areas, are saying, no, there's no possible way, we
7 don't have the expertise or the staff to do this, and so
8 it's kind of balancing that.

9 I think what we're seeing is a lot of this
10 is going to be, no matter who is in ownership of it,
11 it's go to be stored in the platform, and that's where a
12 lot of this is going to be -- you know, you're not going
13 to be coming to DOTD with a thumb drive to download it.
14 There will be a dashboard set up to where you can
15 access, download, whether it is a regional dashboard or
16 statewide dashboard. I don't think we're going to see a
17 single physical location of storage. I'm sure we'll
18 keep one on hand just for dexterity purpose, but it's
19 sounding like there will be probably Amazon or Google,
20 cloud computing will be the real storage site for it.
21 And then from there you can set up, you know, it's all
22 here, then each of those regions can have their own
23 dashboard in that same service.

24 MR. MALBROUGH: So, along the same line,
25 there's no one entity that's going to be charged with



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1 not only storing, but also updating the models. So the
2 models going forward, the baseline is going to be
3 2021-2022 tomography and imagery?

4 MR. WILLIAMSON: So all the states or all
5 the state agencies, the intent is to update these every
6 four to five years, but, you know, that is dependent on
7 funding, as are all things. We've seen this before
8 that, you know, we had a great -- it's called the
9 bluebook. It was kind of watersheds of Louisiana, the
10 floodplains as of 1985 I believe was the date on that
11 one, and it was supposed to be updated every five years
12 in law, we'll update this every five years dependent
13 upon funding being available. Well, the legislature
14 never assigned an entity to it. So there is an effort
15 to create -- to take from Louisiana Watershed Council
16 and take it out of an executive order and get it
17 legislatively-created, and that would give you that
18 entity to keep it going into the future. Otherwise,
19 we're just going to be looking for funding sources and
20 working on a case-by-case basis.

21 You know, the risk is that a new Governor
22 could take office and say, you know, I'm killing that
23 executive order. I don't think I'm going to stop
24 talking to the Office of Community Development at that
25 point or with CPRA. We will always be partner agencies.



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1 We just won't be under that executive umbrella at that
2 point, but it will just be a matter of finding those
3 funds and constantly chasing those funds for those
4 updates. But we certainly see these as living models,
5 and that we will -- because the idea is for people to
6 use these models, whenever you're planning a development
7 in Lafayette Parish, to use this model to see what that
8 development will do, and if you approve that
9 development, you then make that change to the model,
10 upload it, and then we will have staff that goes in and
11 verifies that all of those changes are correct and then
12 that becomes the model.

13 So it's going to be an evolving model, and
14 it's just matter of how much funding and effort we have
15 that can go in maintaining it.

16 MR. MALBROUGH: So the model will be
17 updated?

18 MR. WILLIAMSON: It will be. It absolutely
19 will be. It's just a matter of how long we can keep it
20 with the funding we have.

21 MR. MALBROUGH: Okay. Thank you.

22 MS. GOUEDY: You know, it's interesting,
23 everything you just asked, the Sparta Groundwater
24 Commission has -- it's like you sat in these.

25 MR. MALBROUGH: I wasn't there.



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1 MS. GOUEDY: You weren't there. But, you
2 know, we're embarking on a new model, but that's coming
3 from, as we've dug into the history, the last model
4 created was back in 2001. Nobody knows where it is.
5 Everybody who worked on it has either moved or died. I
6 mean, literally, so, and it's interesting the struggles
7 we've come up with.

8 Now, I do have a question. You asked most
9 of mine.

10 But in the RFP, I'm assuming y'all built out
11 who will own the proprietary rights to the models?

12 MR. WILLIAMSON: The rights to the models
13 will be owned by Office of Community Development.

14 MS. GOUEDY: Okay.

15 MR. WILLIAMSON: But it will be treated as
16 public domain.

17 MS. GOUEDY: Got it.

18 My other question is, so you've broken this
19 down on regions. You have different modelers coming in
20 here with different designs. How well are those going
21 to knight together? And I understand -- believe me, I
22 understand more than most that one size fits all is not
23 the approach to take.

24 MR. WILLIAMSON: Yeah.

25 MS. GOUEDY: So I commend the forethought



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1 that y'all have put into building out this program, and
2 but it does beg the question, you know, in my region, I
3 have three, so I cover 16 parishes, and some of my
4 parishes I think fall in all three of those. I think
5 that would probably be Lincoln Parish and -- so how well
6 does that fit when you start weaving these together?

7 MR. WILLIAMSON: So I think they're going to
8 fit very well.

9 MS. GOUEDY: Okay.

10 MR. WILLIAMSON: So, as I mentioned, our
11 consultants are meeting almost weekly with each other,
12 and so they're coordinating. So one of the things is we
13 wanted to build these models to where ultimately in the
14 future when computing gets to a point that we can run
15 these all together instead of -- so right now, if you're
16 running, say, Model -- Model A feeds in to Model B.
17 You're basically taking out, you know what the flow
18 coming out of Model A is, and you put that as an input
19 on Model B.

20 The better way to do that is, in the future,
21 when the computing power gets there, you can stitch
22 those two models together, and it's no longer just a
23 number that's being dumped in. It is actively
24 interacting with that upstream watershed.

25 And so one of the things we've done is we've



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1 really worked with aligning all of their streams when
2 they have 2D grids. We're make sure that all of their
3 points on their grids along the boundaries meet up. So
4 they're saying, hey, where did you put this point, and
5 so I plug that same point. So whenever it comes to
6 stitching them together, the grids are already set up,
7 they just slide right in together.

8 And so on top of that, you know, the TDQ
9 that I've mentioned in their reviews, we have -- let's
10 see. So on all of these different deliverables, they
11 have a review on each of those, and that's something
12 else that provides consistency.

13 I mentioned the Guidance on Modeling
14 Methodology. That was another layer that we wanted to
15 do to ensure consistency. And so there's numerous
16 layers of review and documentation that's setting us up
17 to make sure that we're consistent across the board.

18 Knowing that there's some spots. Like I
19 said, with Region 3, the complexities in that region on
20 flows just necessitated a 2D model, but it will still
21 integrate closely with the Region 2 models. And so, you
22 know, it has some flexibility in there to deal with
23 those individual issues of the area, but they are
24 absolutely being designed that they will mesh right
25 together, you can put them together and start running



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1 them.

2 I mean, my thought is that you can put it
3 together immediately after we build them all. It will
4 take some time, and it will take probably weeks to run
5 whenever you start getting all of these models put
6 together. So it's just there's not a whole lot of value
7 to run them all together at this point. Once computing
8 speeds kind of catch up, we'll see more of it. But I
9 think what you'll see is where you have those areas,
10 they'll probably just stitch the two together that are
11 interacting, and you don't have to have the next one
12 because now you know what's happening here, you can
13 stitch those two together. I don't see a need for
14 really stitching them all together and running them all
15 at once, but it is something that we have set up.

16 MS. GUOEDY: And last question, so the
17 Sparta, we've just embarked on phase two of our updating
18 our groundwater model, one of the things we're looking
19 forward to in our long-term plans is finding a way to
20 meld this knowing that surface water modeling is taking
21 place, is to meld our surface water data that we're
22 collecting through this model and the potential surface
23 water. Are the platforms that -- and the way that the
24 model's being built out right now through -- and not
25 that it's not relevant across the state, but I'm just



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1 curious, on the top three regions of the state, are they
2 being built out where that's a viable option to meld a
3 groundwater model and groundwater data in with surface
4 water?

5 MR. WILLIAMSON: That's not something that
6 it's being designed to do. Now, a critical portion of
7 the hydrology, which is kind of that first deliverable
8 that we have, is the infiltration layer. And so I think
9 what will happen is, whether it does it directly, I'm
10 really not certain. I haven't used the model like that
11 in the past. It's just outside of -- you know, I come
12 from a flood control aspect. But having those
13 infiltration layers, those innovation boundaries, it
14 should be able to provide you with valuable infiltration
15 data for those areas and for that groundwater, but --
16 and that's sort of -- whenever you said, you mentioned
17 y'all's model, that's something I would love to hear
18 more about how that modeling is done so I could maybe
19 have a better idea on how we could interface those two
20 together.

21 MS. GOUEDY: Well, we specifically spoke
22 with our engineers and talked to them about this
23 initiative that's taking place in the state so that they
24 understood we wanted, however they built out forward,
25 that we could incorporate that at some time in the



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1 future potentially to run different scenarios.

2 MR. WILLIAMSON: I'll give you my card
3 afterward and speak with you.

4 MS. GOUEDY: Absolutely.

5 MR. WILLIAMSON: I think there's some
6 synergy there that we can...

7 MS. GOUEDY: 100 percent. Thank you.

8 MR. BALKUM: Super impressive effort there.
9 Who are some of our end users? Once these models are
10 completed, you mentioned the parish may be evaluating
11 development projects.

12 MR. WILLIAMSON: Yeah. And that's -- what
13 we want to build it for, and how I mentioned the free
14 licensure of this software, is that we see every
15 engineering firm from -- you know, there's some 10 or so
16 engineering firms that do a little bit of hydraulic
17 modeling, and we want them to be able to use these
18 models. With the kind of the data portals that they're
19 putting up with showing risks and everything, I think
20 you'll be able to see floodplain measures. There's --
21 we were setting them up in a way that whenever the
22 different parishes and municipalities go through the
23 FEMA CPT program, they can access our data and give them
24 a very good data source for updating their flood
25 respects. And so there's -- I mean, it's uses all over



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1 the place from city planners where they can look at
2 where, you know, existing inundation boundaries are.
3 You know, it's one thing to design everything to the
4 100-year event. It's pretty typical along highways. On
5 a lot of local areas, they're designing to a 10 or
6 25-year. That doesn't mean that a 100-year or 500-year
7 event will not hit that area. And so you can go in that
8 area and say, okay, well, I'm designing for this, but
9 what happens if that bigger storm hits it? Because it's
10 going to. The 100-year, whenever you have that 30-year
11 mortgage, you're likely going to get a 100-year event
12 come through there over the life of that mortgage, and
13 so just having that information available to builders
14 to -- and that dashboard will be available to the
15 general public where if you're looking at building a
16 house or you're looking at buying a house, you can go
17 pull that map up. And, you know, the FEMA map, as we
18 saw in 2016, a lot of people that were outside of the
19 flood areas, the flood zones, flooded. Our map will
20 give you an opportunity to go look at those areas, like,
21 hey, it's outside of the flood zone, I'm safe. No,
22 that's not what that flood map says. You can go look at
23 our map and see, you know, scroll through the different
24 events, what happened on the 50-year, I'm safe. What
25 happened on the 100-year, I'm safe. The 500-year,

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1 uh-oh, I flooded. Well, now I can start talking about
2 the economics of that probability. And then so I see
3 there's benefit to this for every citizen in the State
4 of Louisiana in my opinion.

5 MR. BALKUM: Thank you.

6 MR. HARRIS: Bill, thank you for your time
7 today, and thanks for all you do for our --

8 MR. WILLIAMSON: Thank you.

9 MR. HARRIS: And then our final speaker, I
10 think...

11 MR. REONAS: Right. Professor Kennedy
12 unfortunately had some issues come up that he had to
13 deal with, so he had to back out. He wanted to express
14 his apologies for having to miss, but we'll try and get
15 him on the agenda for the Fall meeting, and he was
16 amendable to that, so...

17 MR. HARRIS: Outstanding.

18 As I mentioned at the beginning, at the
19 onset, this is not an official meeting of the Water
20 Resources Commission due to the lack of a quorum, but
21 since we're all here, any Commissioners have any old
22 business, new business or comments?

23 (No response.)

24 MR. HARRIS: Any members of the public?

25 Yes, please.



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1 MS. HALL: Hello. I just want to introduce
2 myself to you. I am Machelles Hall. I am at the
3 Attorney General's Office in Lands and Natural
4 Resources, and I am the legal representative to both of
5 our interstate river compacts. Right now I am
6 particularly engaged in doing some work on the Red River
7 Compact.

8 As some of you may know, we've had an
9 ongoing failure to see eye to eye with Arkansas on some
10 of the waters on that boarder, and so I just want to
11 introduce myself. I've met some of you already, as well
12 as some of the other people in this room. And so Matt
13 Reonas has my contact information, and I look forward to
14 hearing from any of you that have an interest in those
15 compacts. Thank you.

16 MR. HARRIS: Thank you very much. It's nice
17 to put a face with the name.

18 Well, at this point I think it's time to
19 unofficially close the unofficial meeting of the Water
20 Resources Commission. Thank you-all.

21 (Meeting concludes at 12:52 p.m.)
22
23
24
25



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