

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA  
COLUMBIA, SOUTH CAROLINA

PROCEEDING #16-11551      SEPTEMBER 15, 2016      10:30 A.M.

ALLOWABLE EX PARTE BRIEFING – ND-2016-36-WS  
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL -  
Request for Allowable Ex Parte Briefing Regarding Drinking Water and Wastewater  
Public Health Challenges

TRANSCRIPT OF  
PROCEEDINGS

ALLOWABLE  
EX PARTE BRIEFING

COMMISSION MEMBERS PRESENT: Swain E. WHITFIELD, *Chairman*;  
Comer H. 'Randy' RANDALL, *Vice Chairman*; and  
COMMISSIONERS John 'Butch' HOWARD, Elliott F. ELAM,  
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HALL, and G. O'Neal HAMILTON

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Hope Adams, Hearing Room Assistants

APPEARANCES:

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**CATHERINE E. HEIGEL** [Director, SC DHEC], **MYRA C. REECE**  
[Director, Environmental Affairs / SC DHEC], and **DAVID  
G. BAIZE** [Chief, Bureau of Water / SC DHEC],  
representing and presenting for **SOUTH CAROLINA DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL CONTROL**

**SHANNON BOWYER HUDSON, ESQUIRE**, representing  
the **OFFICE OF REGULATORY STAFF**

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Please note the following inclusions/attachments to the record:

- Presentation Slides (PDF)
- 9/14/2016 AP article referenced at pg 12

Please also note: For identification of additional referenced materials and/or links for same, if any, please see Certification correspondence filed by the Office of Regulatory Staff.

**P R O C E E D I N G S**

1  
2           **CHAIRMAN WHITFIELD:** Please be seated. I'll  
3 call this allowable ex parte to order and ask our  
4 attorney, Mr. Butler, to give us a little  
5 instruction.

6           **MR. BUTLER:** Yes, sir, Mr. Chairman, other  
7 members of the Commission, this is an allowable ex  
8 parte briefing by the South Carolina Department of  
9 Health and Environmental Control. It is under ND-  
10 2016-36-WS. The topic today to be considered is:  
11 Drinking Water and Wastewater Public Health  
12 Challenges. And Mr. Chairman and other members of  
13 the Commission, the filings in this proceeding are  
14 in order.

15           **CHAIRMAN WHITFIELD:** Thank you, Mr. Butler.  
16 I'll ask the parties – the attorneys to  
17 introduce themselves and their client?

18           **MS. LAKE:** My name is Susan Lake. I'm an  
19 attorney for the South Carolina Department of  
20 Health and Environmental Control. We appreciate  
21 your allowing us to be here today for this  
22 briefing. We will have speaking, first, Catherine  
23 Heigel, who is our Director of DHEC; then, David  
24 Baize, who is the Chief of the Bureau of Water of  
25 the South Carolina Department of Health and

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Environmental Control; and Myra Reece, our Director of Environmental Affairs for DHEC. So, thank you, very much.

**CHAIRMAN WHITFIELD:** Thank you. Thank you, Ms. Lake.

At this time I'll turn it over to ORS, to Ms. Hudson, and also maybe a little further instruction from her, as well, concerning allowable ex partes.

**MS. HUDSON:** Good morning. Good morning again, now that I've got the microphone on. My name is Shannon Bowyer Hudson, and I am the Chief Deputy Counsel for the Office of Regulatory Staff. I am the ORS designee to certify this allowable ex parte briefing. And before it begins, I'd like to just go over a few rules. And please forgive me, because I'm going to be reading these.

First, as the ORS designee, it is my duty to certify the record of this proceeding to the Chief Clerk of the PSC within 72 hours that this briefing was conducted in compliance with the provisions of South Carolina Code Annotated Section 58-3-260(C).

The requirements of that statute are, in part, that this allowable ex parte be confined to the subject matter that was noticed. In this case, the subject matter noticed was: Drinking water and

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wastewater public health challenges. I, therefore, ask that only the noticed subject matter be discussed.

Second, the allowable ex parte statute prohibits any participants, Commissioners, or Commission staff from requesting or giving any commitment, predetermination, or prediction regarding any action by any Commissioner as to any ultimate or penultimate issue which either is or is likely to come before the Commission.

Third, I ask the participants, Commissioners, and staff to please refrain from referencing any documents, reports, articles, statutes, or written materials of any kind that are not already included in today's presentation. The reason for this request is to prevent me from having to track down copies or links to documents, since we are under the 72-hour certification requirement.

Fourth, as none of the information contained in the presentation appears to have been marked or requested to be granted confidentiality, I ask that the presenters refrain from referencing or discussing any confidential materials, because this is a public hearing. And I ask that everyone please be understanding if the presenters decline

1 to provide such information to questions here  
2 today.

3 Last, everyone please make sure to read, sign,  
4 and return the form which you were given or picked  
5 up at the hearing room door when you came in today.  
6 This form needs to be signed by every attendee to  
7 certify that the requirements contained in South  
8 Carolina Code Section 58-3-260(C) have been  
9 complied with at the presentation today. You must  
10 return the signed form to the Commission attendant  
11 before you leave today.

12 Thank you for listening to me, and thank you,  
13 Mr. Chairman. This concludes my presentation of  
14 the allowable ex parte rules.

15 **CHAIRMAN WHITFIELD:** Thank you, Ms. Hudson.  
16 Anything further from ORS at this time?

17 **MS. HUDSON:** No. And thank you for checking.

18 **CHAIRMAN WHITFIELD:** Thank you.

19 Ms. Lake, you can start with your panelists in  
20 whatever order you would like to.

21 **MS. LAKE:** Thank you, sir. Our first speaker  
22 will be Director Catherine Heigel.

23 **MS. CATHERINE E. HEIGEL [DHEC]:** Am I on? Is  
24 this on?

25 **CHAIRMAN WHITFIELD:** Closer.

1 MS. CATHERINE E. HEIGEL [DHEC]: Closer?

2 There we go [indicating]. Okay. Thank you.

3 Good morning, Commissioners. It is a pleasure  
4 to be here. It's been a number of years since I've  
5 been before you, and today in a very different  
6 context. I'm happy to not be here prosecuting a  
7 rate case at this point.

8 [Laughter]

9 And also happy not to be talking about Zika.

10 So, why are we here? We have issues of mutual  
11 concern, and I believe that it is our  
12 responsibility as regulators to work together to  
13 make sure that we are empowering one another with  
14 the best information available to help us do our  
15 collective jobs better. And, today, what we're  
16 hoping to do is really open a dialogue with you  
17 all. And it's a dialogue on an issue that has  
18 gotten a lot of national prominence since the  
19 Flint, Michigan, crisis in January. But make no  
20 mistake, this has been an issue that you have seen  
21 and we have seen for many, many years prior to  
22 this. And so we're going to provide some  
23 information today that I think will be helpful to  
24 you in understanding just where are we in South  
25 Carolina? What does it look like here? What does

1 the landscape look like here for us? We're not  
2 going to be talking about specific regulated  
3 entities or companies, but providing kind of a  
4 high-level overview. And Mr. Baize is really going  
5 to provide a lot of that kind of detail.

6 And Myra Reece, who is sitting here to my  
7 right, is head of our Division of Environmental  
8 Affairs, and she's going to talk about our  
9 outreach, our collaboration with the regulated  
10 community, and what we're doing even within DHEC to  
11 strengthen our regulatory competencies.

12 You know, bottom line, Flint highlighted for  
13 all of us the inextricable link between regulation  
14 of our environment and health – and public health.  
15 We are very fortunate in South Carolina. We are  
16 one of three states where our environmental  
17 regulation agency, our State EPA, and our public  
18 health agency are one.

19 Now, being colocated and housed under one roof  
20 does not automatically make us better at making  
21 connections. And you'll hear from Myra about some  
22 of the things we're doing to try to improve and  
23 leverage the strengths that we have and leverage  
24 that colocation that we have. But we all have a  
25 role. At the end of the day, DHEC is a public

1 health agency. The so-what of environmental  
2 regulation – clean air, clean water – is public  
3 health. It's why we do those things. And so we  
4 have to make sure that our lead-and-copper rule  
5 administrator, who shows up for work every day,  
6 comes to work saying, "My job is a public health  
7 official. It's my job to help make sure that we're  
8 making the connections that we need to make." And  
9 too often, in many jurisdictions, that individual  
10 comes to work seeing their role fundamentally as a  
11 water chemistry manager. And that's where we, as  
12 regulators, have opportunity, and that's something  
13 that we've been very much focused on, even prior to  
14 Flint.

15 Our job is to work with the regulated  
16 community, to help get them into compliance and  
17 keep them into compliance. I do not  
18 philosophically see our role as one of being the  
19 gotcha, punitive regulator. That said, we have  
20 regulations, so that we can take enforcement  
21 actions, when necessary, when that collaborative  
22 relationship breaks down. We have to make sure,  
23 fundamentally, that those regulations are being  
24 complied with.

25 Your role, what comes before you, is

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investments made by those water and wastewater utilities that you all regulate; your role is to make sure that the investments made are prudent, so that they can be recoverable in rates. And what we want to do is to make sure that we are supporting you all in understanding what's prudent and what's necessary. It is clear that underinvestment by utilities in their basic infrastructure has existed for some time, for a variety of different reasons, whether they're investor-owned or whether they're municipal. And so, what we want to do is to support the industry and to highlight the ramifications and the challenges, for all of us, of that underinvestment.

You will find that DHEC will be here. If we are a statutory participant in a proceeding, whether it's a CPCN, we will be here. There is a role, there was a reason why we were, as an agency, named to be a statutory party, and we are here as a resource, again. If there are questions about whatever role we've had, we want to make sure you have the opportunity to ask those questions of our folks.

What are we hoping to accomplish today? We want to tell you what the experience has been. We

1 aren't Michigan. We are very fortunate to not have  
2 a lot of the issues that they had in Michigan.  
3 Michigan was a breakdown on multiple levels. You  
4 can't change a water source in South Carolina  
5 without getting regulatory approval. That was done  
6 in Michigan. Testing is centralized; we do the  
7 testing. Now, the samples are collected out in the  
8 field for lead-and-copper rule purposes, but it's  
9 centralized testing; we're not relying on  
10 individual water systems to do their own testing  
11 and report in to us. So, there are a number of  
12 things where we have a different regulatory  
13 construct that provides, perhaps, some additional  
14 safeguards than what existed in Michigan.

15 We want to make sure that, as you all are  
16 determining the prudence of significant investments  
17 and operating expertise and equipment, that you  
18 have good context, so that's what we're hoping to  
19 show you today.

20 Let's see here. I think, fundamentally, I  
21 have covered my list. I did want to mention that,  
22 you know, we focus on lead and copper, as a – you  
23 know, from the Flint crisis, but there continues to  
24 be a criminal investigation ongoing in Michigan,  
25 regarding what was known by whom and when. And

1 just yesterday – and I'm going to let Cassie  
2 Harris, from our Communications Group, pass out –  
3 Ms. Wheat already has a copy.

4 [Document distributed]

5 There was an article, an AP article, that  
6 noted that Michigan's former state epidemiologist  
7 acknowledged in a plea deal – again, a criminal  
8 situation, and this is just yesterday – that she  
9 was aware of dozens of cases of Legionnaires'  
10 disease in the Flint area around the same time the  
11 City changed its water source, but that she didn't  
12 report it to the general public. At least 91  
13 Legionnaires' cases in that Flint area, between  
14 2014 and 2015, were detected, and 12 people died.

15 So, what our presentation is to show you,  
16 we're not just focused on lead and copper, even  
17 though that's certainly what's gotten the most  
18 attention, but we are focused on all contaminants.

19 We are, lastly, focused on continuing to show  
20 a leadership position as a State, because of our  
21 unique position of being both the health and the  
22 environmental regulator in the State. We met –  
23 Myra and I – met, the end of May, with just a very  
24 few handfults – a small group meeting, a handful of  
25 states, that we were invited to attend with

1 Administrator McCarthy of the EPA and some state  
2 health officials across the country. And,  
3 fundamentally, the underlying conversation was, how  
4 do we do a better job of making connections? And  
5 it is very difficult when these functions are so  
6 wholly disconnected from one another in the states,  
7 the public health and the environmental component.  
8 It's still not easy when we're under the same roof,  
9 but we have great opportunities and we are  
10 leveraging those.

11 All right. David, take it away.

12 And we welcome questions at any time or at the  
13 end. We've allowed plenty of time for questions,  
14 so jump in at any point.

15 **MR. DAVID G. BAIZE [DHEC]:** All right. Thank  
16 you, Director Heigel.

17 [Reference: Presentation Slide 1]

18 Thank you, and I appreciate being here today.  
19 This is a great opportunity for us. My name is  
20 David Baize; I'm Chief of the water program at  
21 DHEC. I've been with DHEC for 28 years and I've  
22 been involved in protecting our water resources in  
23 one form or another, really, my entire career. One  
24 of the things that I've always valued is working  
25 with public water systems, and we really do

1 consider it a collaborative partnership in  
2 providing a safe product for the public. In fact,  
3 when I started 28 years ago, the very first  
4 assignment I got from my supervisor is: Here's this  
5 new thing from EPA about creating a plan to help  
6 protect where the water comes from, for water  
7 systems, and develop it for South Carolina. So,  
8 that was my very first job, and I've been going  
9 ever since. So, I'm extremely glad to be here  
10 today to share a little information with you.

11 [Reference: Presentation Slide 2]

12 One of the things that's very interesting  
13 about drinking water is you can almost consider it  
14 a food product, because it is a direct consumable  
15 product. So, many of the environmental issues that  
16 we deal with are longer time frames or don't have  
17 direct exposure; obviously, drinking water does.  
18 So, anytime we have a direct pathway for exposure,  
19 there's got to be a heightened concern from a  
20 public health perspective.

21 I wanted to put this slide up just to show you  
22 everything that drinking water systems are expected  
23 to meet. So, they have to take raw water from a  
24 source, bring it into their plant and treat it and  
25 deliver it to a home, making sure that they are in

1 compliance with all of these maximum contaminant  
2 levels: 53 organics; 16 inorganics; radionuclides,  
3 which are largely naturally occurring, so it may be  
4 something that the water system is delivering that  
5 they did not cause; disinfection byproducts, which  
6 I'll talk about in more detail; and seven  
7 microorganisms, like E. coli and others, like  
8 director Heigel was talking about.

9 [Reference: Presentation Slide 3]

10 So, some of the challenges are really  
11 highlighted by what happened with the lead issue in  
12 Flint, Michigan. So, lead is typically not in the  
13 source water, so it's not a case where you have  
14 groundwater or surface water that has lead in it,  
15 but it's really in the piping in older homes. So,  
16 if your home is, say, pre-1982, you are probably  
17 most likely to have copper piping maybe with lead  
18 solder, or lead components in your fixtures, that  
19 sort of thing. And so it's really corrosive water,  
20 if the water is corrosive, that can leach that lead  
21 from those fixtures or piping. That's where the  
22 lead is coming from. So, the original lead-and-  
23 copper rule – and there's a link there, if you want  
24 to go to EPA's webpage and see more about it, but  
25 the original lead-and-copper rule, then, was really

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fixed on controlling the corrosive nature of the water and making sure that those lead components were not leaching out into drinking water in folks' homes.

So, one of the unique things is the point of compliance really is in homes, and that's where the testing is done. It's not – there is some testing done at the system, but mostly the compliance is done in individual homes, which is a challenge in and of itself. But many small systems – and Director Heigel already mentioned this – it's not just lead and copper, but, historically, we've seen more systemic problems with small- and medium-sized systems across the board, whether they're public or private. And, so, many small systems just don't provide corrosion control treatment. Some do, but many don't. Because anytime you add treatment, you've got to have a certified operator to control that treatment, so that's a very expensive proposition. Not only do you have to have the additional equipment to provide whatever treatment, but then you have to have someone who knows what they're doing and who is certified and has a license to do so, to add those chemicals to the treatment process.

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So, our experience was that some systems that have even purchased water have exceeded the action level when the original producer has not. So you have to think about that for a few minutes. So, you have somebody delivering or selling water to another water system and all that secondary system is doing is distributing it to their customers. The original does not have a lead exceedance and the one producing the water does. It's a very interesting scenario. We've actually traced some of that back to sampling error. This is a rule that's very, again, dependent on home compliance and sampling, and some sampling error has showed some of these exceedances.

Out of the 695 systems that are subject to the lead-and-copper rule in South Carolina, overall, we had a very good result. Obviously, 96 percent of systems did not have a lead exceedance, so that was very good news, overall. But, typically, those were the larger systems that do add corrosion control and are a little more sophisticated; they have more resources to be able to manage the lead-and-copper rule. What we did see, though, is those 28 – that 4 percent – where that lead action level was exceeded in that five-year period, were the

1 small- and medium-sized systems, again, where all  
2 that corrosion control and expertise is lacking.

3 [Reference: Presentation Slide 4]

4 Another challenge is disinfection byproducts.  
5 One of the conundrums in this is probably the  
6 greatest public health advancement in drinking  
7 water was the addition of chlorine. In 1908, there  
8 were challenges in several big cities, including  
9 New Jersey, and the sort of revolution of adding  
10 chlorine to the drinking water to reduce bacteria  
11 levels was – you know, has been called maybe the  
12 single biggest innovation in drinking-water public  
13 health protection. But when you add disinfection,  
14 sometimes you get byproducts of the chlorine, and  
15 different types of chlorine that are added then  
16 produce some byproducts which, in and of  
17 themselves, have some human health risk issues.

18 So, one of the things that EPA has done is  
19 that compliance with disinfection byproducts used  
20 to be just really a single sample at the source,  
21 and EPA changed that in 2012 so that disinfection  
22 byproducts compliance is out in the system, so  
23 there's many more samples that are collected. And  
24 as you may guess, then we're having some more  
25 exceedances that we need to deal with, and so the

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water system then has this delicate balance of keeping the chlorine where it needs to be in the system to do its job, and, yet, not produce disinfection byproducts. And so they've got a very difficult job sometimes to balance that.

And, again, we have some systems that purchase bulk water. And if the MCL is exceeded in their delivery, they really have to work with whoever they're buying the water from, to make those adjustments in their system, because they're typically not adding treatment of their own.

Emerging contaminants is another whole category we could probably spend, you know, a couple of days on, but, in essence, you can define "emerging contaminants" as those things that have been detected at trace levels in our water supply, but we don't understand the human health risks. So, those could be pharmaceuticals, caffeine, many other things that are being found at very low levels, really at a research sort of scope right now, and there are no known health risks quantified for those products, but we know they're there. That's why they're called "emerging contaminants"; some level of concern and study is going on. But we never know when some of those are going to be

1 moved to the forefront because there may be some  
2 new science or a new MCL set. EPA has a process  
3 where they're continually looking. We do  
4 monitoring of unregulated contaminants that are  
5 suspected to be a problem in the water supplies  
6 continually. And, so, EPA has a set process to  
7 look at those results nationwide, look at their  
8 distribution and occurrence, and they may move some  
9 of those to the forefront.

10 And I put "health advisory" on there because  
11 another new wrinkle to this is EPA finding some  
12 things that they call – that they would have a  
13 concern about. The most recent are PFOA and PFOS,  
14 and I won't try to give you the big chemical names.  
15 But, essentially, they were used in the  
16 manufacturing of fabric, and clothing, and in pots  
17 and pans, and –

18 **MS. CATHERINE E. HEIGEL [DHEC]:** Firefighting  
19 foam.

20 **MR. DAVID G. BAIZE [DHEC]:** – firefighting  
21 foam. And so it was used very widespread in many,  
22 many processes. And they have found some  
23 occurrences in groundwater, mostly near facilities  
24 where this manufacturing occurred. But for them to  
25 go through their entire MCL standard-setting

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process is very rigorous and time-consuming, and they felt like they wanted to go ahead and issue a health advisory, and which they did. The problem is – and EPA said, "Well, it's just an advisory," but a water system nor the State public health agency can treat it that casually. If we have some of these health advisories come our way, we're going to have to understand what occurrence we have, and take actions. No water system is just going to treat it that casually.

So, systems need to be able to react quickly, is the bottom line. If there's a maximum contaminant level that is exceeded, or even a health-advisory level, water systems need the expertise and the resources to be able to address those in a very rapid manner.

[Reference: Presentation Slide 5]

It's interesting if you look at our compliance rates. Generally, we have a pretty good compliance record in South Carolina. Director Heigel had mentioned our structure, which I think, quite frankly, adds to that. When I meet with EPA in other states, they wrestle with problems we don't have because of our structure. So, essentially, DHEC is the contractor that is hired by the water

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systems to do the sampling, so they pay a fee to us, and our staff go out and do the compliance sampling. It is run through our contract lab, which gives a lot of cost efficiencies, and we get the data first. We know what the data is, and we provide it to the water system.

So, our system has a lot of good safeguards in it, and yields a very good compliance rate. However, there were – even though we generally have a good rate, there were five PSC regulated drinking-water systems that had enforcement orders due to water quality or operational issues in the past five years.

If we look, generally, at what water systems deal with in groundwater, we're finding naturally occurring radionuclides are at issue. So, we do have areas of the State where radium or uranium are naturally occurring; they are picking it up in groundwater wells, through no fault of their own. But it is still – there's a standard there; they have to meet the standard to provide that water safely to their customers. And we bring them under order very often to do that, and they have to go to the expense of adding additional treatment to deal with what's in front of them. In surface water, I

1 had already mentioned the disinfection byproducts.  
2 That's probably the single biggest issue we have  
3 right now, for our surface-water systems.

4 So, again, most of our small systems usually  
5 rely on groundwater. So, do they have the  
6 resources to address things like naturally  
7 occurring radionuclides? They, again, typically  
8 have fewer resources. It's not only that; it's  
9 more operational-and-maintenance violations we see  
10 with small systems, because they – even the  
11 operators that they may have, the level of  
12 expertise at their system just may be more limited  
13 than other larger systems.

14 [Reference: Presentation Slide 6]

15 There is – for your information, we compiled  
16 the recent data. There are 24 companies regulated  
17 by the PSC. About 150 water systems, serving about  
18 65,000 people statewide. And some of these are  
19 systems that purchase water from other water  
20 systems.

21 [Reference: Presentation Slide 7]

22 We can switch a little bit to wastewater,  
23 because obviously there are challenges there, as  
24 well. Sewer overflows, wet-weather events – as EPA  
25 would term them – are one of EPA's big initiatives

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and has been for a while. All states deal with this issue. We could add sort of system failures, I think, to that list, as well, like we saw recently, if you saw the articles, in the Saluda, where we had partially treated wastewater interfering with recreational opportunities in the river. So, there were, you know, many examples of this that happened throughout the year, where wet-weather overflows are impacting the environment, but not only the environment, but they're also impacting potentially a direct public-health link with folks recreating in those waters.

Another large emphasis from EPA is nutrient loading, like phosphorus. So, wastewater discharges would have nutrients in them: nitrogen and phosphorus. These can lead to things like harmful algal blooms. You may have seen that was another national headline story in Toledo a few years ago. We do have those challenges here in South Carolina, as well. We have some of our lakes where we're dealing with algal blooms and wastewater systems are trying to understand their occurrence, and we've got a protocol with them on how we're going to respond to those. But it's a very real issue. And we do have standards right

1 now for lakes, but we do not have numeric standards  
2 for estuaries or for our freshwater rivers. We're  
3 working on those. We're doing some pilot studies  
4 with Georgia, because we have some similar  
5 hydrology. And, again, that's a big emphasis from  
6 EPA, that we end up with numeric standards for all  
7 of our waters.

8 Financial arrangements for connection to  
9 regional sewer systems: Obviously, regionalization  
10 is one of the cures for the small systems that  
11 struggle with compliance. And so, obviously,  
12 there's challenges there working out the financial  
13 rates and options for making those connections.

14 [Reference: Presentation Slide 8]

15 Some more compliance information: This is both  
16 for private and publicly owned systems, but it's  
17 not the compliance rate that you saw with drinking  
18 water. Thirty-two of the 43 PSC-regulated  
19 wastewater systems with discharge permits received  
20 either a Notice of Violation or Enforcement  
21 Referral during that last five-year period. There  
22 were 132 Notices of Violation and/or Enforcement  
23 Referrals that were issued. Part of that is  
24 administratively how we deal with water systems  
25 versus wastewater systems, and them having the

1 occurrence that would warrant the issuance of a  
2 Notice of Violation. But, still, you can see it's  
3 a more problematic universe for us.

4 [Reference: Presentation Slide 9]

5 Just the scope, again, of what's regulated by  
6 the PSC: 14 companies, different treatment plants  
7 and discharge permits, with 43 separate systems.  
8 And then, of course, those bulk customers, again,  
9 are customers, as well.

10 [Reference: Presentation Slide 10]

11 So, if we look at a bigger picture, even, we  
12 have these ongoing operation-and-maintenance costs.  
13 When we do inspections and we look at systems that  
14 are struggling with compliance, very often this is  
15 what it can come back to. Are they really  
16 investing in their operation and maintenance? Are  
17 they replacing equipment as necessary? Are they  
18 doing what's appropriate to stay modern and to be  
19 in compliance?

20 Aging infrastructure is something that's  
21 talked about nationally. Obviously, we've got  
22 pipes that have been in the ground for a long time,  
23 different equipment aging. So, many situations are  
24 really past their life expectancy and due to the  
25 high replacement cost. So, finding sustainable

1 finances and future forecasting for those  
2 replacements to occur at a reasonable pace for them  
3 to be able to implement is certainly a challenge  
4 for both water and wastewater systems.

5 [Reference: Presentation Slide 11]

6 So, when it looks – with funding mechanisms,  
7 many of the financial assistance programs that are  
8 available – grants or low-interest loans – are set  
9 aside, really, for municipal and nonprofit systems.  
10 Private for-profit systems tend to have more  
11 limited options, looking at those opportunities  
12 outside of those traditional higher-interest loans.

13 [Reference: Presentation Slide 12]

14 I'm going to go through this real quickly, and  
15 then Myra, I think, is going to take some more  
16 detail. So, just again to mention, so, as medium  
17 and small systems have created the greatest  
18 challenges for us, we've created an Office of Rural  
19 Water, so that we can really focus on these  
20 solutions and work in the communities where it's  
21 necessary. And I will mention one of – well, not  
22 one of; the very first task that we asked the  
23 Office of Rural Water to do was to find the reason  
24 for those exceedances. Every one of those 28  
25 public water systems I mentioned that had a lead-

1 and-copper exceedance, we wanted to understand  
2 exactly why that occurred and what solution is  
3 there. Is it poor sampling? Do they really need  
4 to add corrosion control? Is there something else  
5 going on naturally, having naturally corrosive  
6 water that needs to be looked at or corrected? So,  
7 we want to understand each and every one of those,  
8 and come to some sort of resolution for the water  
9 system, working with our partners.

10 We've had lead-and-copper workshops across the  
11 State. We have created workgroups with the public  
12 water community to look at any proposed changes.  
13 We know EPA's coming out with changes to the lead-  
14 and-copper rule. We don't know exactly what they  
15 are, yet; we don't have a draft. But we want to be  
16 able to respond with our public water systems, as a  
17 partnership, to any sort of EPA proposed changes.

18 We work very closely with South Carolina Rural  
19 Water to help give technical assistance to water  
20 systems. We actually pay for some of those staff  
21 to go out and do that work.

22 [Reference: Presentation Slide 13]

23 And, so, in summary for my part, really,  
24 increasing regulatory requirements and aging  
25 infrastructure, I guess, can be the general theme

1 for the environmental challenge in South Carolina.

2 There will be ever-increasing scrutiny of  
3 drinking-water quality. There are going to be more  
4 standards promulgated by EPA for the water systems  
5 to meet, and the aging infrastructure is not  
6 helping that.

7 So, utilities are faced with having to respond  
8 to problems in a timely fashion, because, obviously  
9 again, you're dealing with a direct public-health  
10 exposure, so our expectations are that the water  
11 systems address these things very, very quickly.  
12 So, if they need to add treatment, if they need to  
13 respond to sewer overflows and try to get those  
14 corrected, having adequate resources for operation  
15 and maintenance, those are all critical things for  
16 the water systems to be able to do their jobs.

17 And I guess the last message is, as Director  
18 Heigel said, you know, we obviously both have a  
19 role – and a critical role – in assisting our  
20 utilities in meeting these public health  
21 challenges.

22 So, I'll turn it over to Myra Reece, and let  
23 her talk a little bit more about some of our  
24 initiatives.

25 **MS. MYRA C. REECE [DHEC]:** Okay. Good

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morning. Just a few comments before I open it up for questions, but I wanted to really take time to say that, certainly, you've heard about all of the challenges, but with challenges come opportunities, as well. And I think that's one thing that we are really focused on right now, is, with the spotlight on water infrastructure, the aging infrastructure, and the ability to provide clean, safe drinking water to communities across our State and the country, it's time to really step outside of the box and think about innovative strategies and stuff.

Let me go back just a little bit to Flint, Michigan. I want to make sure you know that, as an agency, in my team we have a saying: Never waste a crisis. And we always look and are paying real close attention to what's happening across the country and looking at those lessons learned. And one of the lessons that we did learn from Flint – and I will say that that whole situation just really saddened us, as an agency, and just really amazed us at the issues that occurred in that case. But one of the lessons that we did learn from Flint was never to be satisfied with a 96 on a 100, if you're taking a test.

1           And what I mean by that is, right after Flint,  
2           David and I sat down with our staff and we said,  
3           "Okay, how are we doing as a state, as far as our  
4           public water systems?" And the initial response  
5           was, "Well, we're doing very well, because 96  
6           percent of our public water systems are complying  
7           with lead and copper." And everybody was feeling  
8           really good about that. But then we started asking  
9           about the 4 percent. "Tell me about 4 percent."  
10          And as we looked at the details of that 4 percent,  
11          those communities are rural communities. Many of  
12          them are communities that are underserved, they are  
13          overburdened. They don't have, you know, the  
14          ability to put filters on their taps or go to the  
15          grocery store and get bottled water. And as a  
16          public health agency, it's – our job is to ensure  
17          that all of our communities across the State have  
18          clean, healthy water.

19                So, because of that, that was one of the  
20                reasons why we felt it necessary to have a special  
21                swim lane for those types of systems, and provide  
22                more compliance assistance and create this Office  
23                of Rural Water, which we're very proud of. And  
24                beyond there, you know, we have had a lot of  
25                conversations with our water systems, and they

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certainly have challenges. You know, every day they're thinking about how they're going to improve their environmental performance, how they are going to replace their aging capital, what they're going to do about succession planning – there are a lot of experts that are running these systems, that are getting ready to walk out the door – and keeping all of that in mind while keeping rates as low as possible.

And so we feel like, with this huge challenge that really is being posed to all of us across the country, that the door for collaboration is wide open, and it's important for us to be sitting down with water systems and other partners and talking about these rules.

One of the things we're hearing from our water systems is, "Myra, you know, we know that EPA is considering making some changes in some of the rules. Let's make sure they're not overreacting to things that are happening, but it's protective of public health and we can find that balance and get the job done." And so, these workgroups and workshops that David mentioned, really, in my mind, are really just sitting around the table and rolling up our sleeves and working together trying

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to address these challenges.

One group that we've pulled together is really more like an advisory group. And what really impressed me about the commitment of our water systems is the willingness to help each other and to mentor systems, some of these smaller rural water systems that don't have operators. They're willing to step up to the plate and try to mentor some of these systems. And, you know, they're also talking about, "You know, Myra, as a state, we really need to have a vision for clean drinking water in our State." We all know what that vision and that responsibility is for our systems, but as a state, it would be good for us to think through this and have a strategy or a strategic plan. And so, we're working together. We're looking for those opportunities.

I will just emphasize, again, Director Heigel's comment about the nexus between public health and the environment. We are so fortunate as a state to have the ability to sit down every day with our health colleagues and talk about these issues. In fact, when Director Heigel and David and I go to national meetings, we're almost like celebrities. They come up to us, you know, and

1 they go, "How did, you know, how have y'all got  
2 such a good situation, working with partners, and  
3 then you have health officials who were there  
4 working together on these challenging issues?" And,  
5 quite frankly, on a national standpoint, that's the  
6 direction everybody is trying to go.

7 So, I just want to say that we really  
8 appreciate the opportunity to share this  
9 information with you. We know that we have a lot  
10 of challenges ahead of us, but we're going to be  
11 looking for those opportunities. We're going to be  
12 looking for innovative funding strategies. We're  
13 going to go beyond what most people probably think  
14 is just our job, just to enforce regulations. Our  
15 job is also to sit down and look for those creative  
16 solutions and to really be the seed to bring people  
17 together and look for collaborative problem-solving  
18 with challenges like that.

19 So, with that, I'll turn it back over to  
20 Director Heigel.

21 **MS. CATHERINE E. HEIGEL [DHEC]:** So, I'll just  
22 close out and add a little bit of color to this  
23 connection and how does that actually work within  
24 DHEC? How do we leverage that? So, we have, in  
25 our Maternal & Child Health Bureau, folks who

1 monitor blood lead levels that are reported for  
2 children. And, so, we have, on the environmental  
3 side, the lead-and-copper rule. And, now, having  
4 said that, most blood lead level issues are not  
5 water related; they are typically lead paint and,  
6 you know, paint-based jewelry, and things like  
7 that, related. But, if we see – we have regular  
8 meetings and connections now between those two  
9 teams, to just make sure, if we've got blood lead  
10 level data, do we need to look at data from  
11 drinking water systems in that area? Yes.  
12 Probably not a connection, but we can do that and  
13 we do do that.

14 Last year in the flood, we had a lot of water,  
15 a lot of inundated wastewater treatment systems,  
16 and we understood there were going to be compliance  
17 problems. But we had the ability to not only know  
18 where the compliance problems were – because we  
19 were in regular communication with the systems. It  
20 really is a partnership. They're talking to us;  
21 we're talking to them. But also, at the same time,  
22 our epidemiologists are monitoring the enteric  
23 illness data from the providers in these areas  
24 where we know that there are these inundation  
25 problems, so that we can quickly respond to any

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potential water contamination issues. We have the ability to do that because we are connected, and we are drawing more and more of those connections every day. And that's how we get better.

And as I speak with state health officials weekly from other states and they are challenged with responding to these issues, I come to the table in a much better position because I have a lot more knowledge about the underlying issues, because of our colocation and being the public health and environmental regulatory agency. We need to leverage that, and we're continuing to do that. But it also means, while we're doing that internally amongst ourselves, it's also this external interagency collaboration, so that we're sharing what we are doing and what we know, with you, in a way that can be helpful to you. This is not a PSA for water utility or wastewater utility rate increases. This is more just to provide our view of the challenges that they're facing. And on a very personal note, I will say that, having prosecuted electric rate cases, it's never easy to come ask for money from the utility – as the utility executive. And so you have to know that you're coming in with that which is needed to

1 provide a basic level of service that consumers  
2 should expect, and deserve. And, so, the same is  
3 true of water utilities. And while I never had to  
4 deal with the issues of the cloudy jug of water  
5 being brought in at public hearing, or the smelly  
6 jug of water being brought into hearings – which I  
7 understand are very challenging, and very emotional  
8 for people; they're very emotionally charged. And  
9 these are difficult times. A lot of families still  
10 have not recovered. And rate increases mean  
11 something. They are impactful to the bottom line  
12 of South Carolina families. But, safe drinking  
13 water is a right. It is something that we have to  
14 expect our utilities to provide. And, fortunately,  
15 as you've seen, we have a good track record in  
16 South Carolina. But this infrastructure is aging,  
17 and we are seeing increasing challenges to these  
18 utilities, and so we have to solve them  
19 collectively: the industry, the environmental  
20 regulator, the Public Service Commission for those  
21 that have to come to you for their rates and  
22 charges.

23 So, we appreciate your time, and we welcome  
24 your questions, and thank you.

25 **CHAIRMAN WHITFIELD:** Well, thank you, Ms.

1 Heigel, and thank you, Ms. Reece, and Mr. Baize.

2 We'll now take questions from Commissioners.  
3 Commissioner Hamilton?

4 **COMMISSIONER HAMILTON:** Thank you, Mr.  
5 Chairman.

6 Madam Director, we are extremely proud to have  
7 you with us today, and with your other two folks.  
8 I think this is a forward step that will mean a lot  
9 to each of these agencies in the future, that we've  
10 got a way that we can talk to each other. I think  
11 that's wonderful.

12 Mr. Baize, I'd like to ask you a couple of  
13 questions about your 28 years' experience. When  
14 you started 28 years ago –

15 **MS. CATHERINE E. HEIGEL [DHEC]:** The last has  
16 been the best, right?

17 [Laughter]

18 **MR. DAVID G. BAIZE [DHEC]:** Yeah, there's a  
19 great date in there where it's gotten better.

20 **COMMISSIONER HAMILTON:** – and to today, and as  
21 to when we got up this morning, we should be – our  
22 drinking water should be much more healthy and safe  
23 than it ever has been. But we still seem to have  
24 some problems, and I notice you talked about aging  
25 infrastructure in your presentation, and you also

1 talked about management. Where is the problem?

2 **MR. DAVID G. BAIZE [DHEC]:** Well, how long do  
3 we have?

4 [Laughter]

5 I mean, yeah, you know, I go to a lot of  
6 national meetings, and there is an organization  
7 where all the State drinking water programs get  
8 together a couple of times a year with EPA, and  
9 these are the kind of topics that consume three and  
10 four days of conversation among them.

11 **COMMISSIONER HAMILTON:** Yeah.

12 **MR. DAVID G. BAIZE [DHEC]:** Setting  
13 appropriate rates is certainly one of them, how do  
14 the utilities do that appropriately? How do they  
15 convince folks that operation-and-maintenance is a  
16 wise expenditure, that it's not wasteful, that it  
17 really is going to pay dividends in the long run,  
18 whether they're dealing – you know, regardless of  
19 who they're going to for those cost increases, you  
20 know, it seems to be a central challenge.

21 Rules are ever increasing. Doug Kinard, who's  
22 Director of our Drinking Water Program, he has, I  
23 think, a set of rules from 1985; it's this thin  
24 [indicating].

25 **COMMISSIONER HAMILTON:** I understand.

1                   **MR. DAVID G. BAIZE [DHEC]:** The rules today  
2 would be all these papers stacked up this high  
3 [indicating]. So, what's in front of folks to deal  
4 with is substantively increasing over the years,  
5 and as I mentioned before, I think it's only going  
6 to continue to increase, because EPA has, in law,  
7 perpetual process to continue to evaluate  
8 contaminants, and for every new contaminant that  
9 comes up, there may have to be a new treatment  
10 strategy or process added. So, I think it's  
11 everything that we talked about. So, I don't think  
12 it's from a lack of effort or any one particular  
13 thing; I just think it's just a – it's a big job to  
14 take water from someplace like a lake, and put it  
15 in somebody's home as a food product, essentially,  
16 being that highly regulated.

17                   **COMMISSIONER HAMILTON:** Well, I know, where I  
18 live, we do take water from a lake. And from my  
19 days in municipal government, we did see, almost  
20 annually, new standards that had to be put into  
21 effect. So, I guess overall, we're talking about  
22 additional costs to be able to keep up with it.

23                   **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

24                   **COMMISSIONER HAMILTON:** I appreciate it, very  
25 much. I appreciate your being here. Thank you.

1                   **MR. DAVID G. BAIZE [DHEC]:** Thank you.

2                   **CHAIRMAN WHITFIELD:** Thank you.

3                   Commissioner Randall.

4                   **VICE CHAIRMAN RANDALL:** Thank you, Mr.  
5                   Chairman.

6                   And thank you folks for being here today. I'm  
7                   following up on Commissioner Hamilton. I know  
8                   Commissioner Howard and I are on the Water  
9                   Committee for NARUC, so we've heard a lot of  
10                  interesting facts and figures over the last couple  
11                  of years that I've been involved with this, and  
12                  including so many of our water – so much of our  
13                  water infrastructure is on 100-year replacement  
14                  cycles and on up, so you can imagine that.

15                  I had a question when you were talking about  
16                  certified operators. And also, like Commissioner  
17                  Hamilton, I come from a municipal background where  
18                  we took water in our little city out of the Enoree  
19                  River. And you see that and see it coming in, and  
20                  see what comes out of the pipes, it's like a  
21                  miracle. But are you all the licensing agency for  
22                  operators? This is something I don't know.

23                  **MR. DAVID G. BAIZE [DHEC]:** And that's  
24                  actually from LLR's that –

25                  **VICE CHAIRMAN RANDALL:** Okay.

1                   **MR. DAVID G. BAIZE [DHEC]:** – they are  
2                   licensed. We do have a lot of interaction with LLR  
3                   on that issue. We have operator certificate  
4                   requirements in our regs, so, for example, a  
5                   particular type of treatment or level of treatment  
6                   would then require a certain level operator and  
7                   experience. And so we work closely with them, but  
8                   those licenses are actually issued by LLR.

9                   **VICE CHAIRMAN RANDALL:** And another thing, I  
10                  was listening to you talk about bulk water and  
11                  people buying bulk water, one system to another and  
12                  that type of thing. I know, from one of my  
13                  experiences. Do you have many instances where  
14                  you'll have bulk water that is sold from one system  
15                  to the next, and it's sitting in pipes, and that  
16                  ends up adding to another contaminant being formed  
17                  or that kind of thing?

18                  **MR. DAVID G. BAIZE [DHEC]:** Yes, sir. That's  
19                  absolutely the truth, because, you know, the bigger  
20                  distribution system you have, the more piping you  
21                  have and the more dead-ends you have, you know, you  
22                  have that risk of not having the right chlorine  
23                  residual that you want to have and/or creating  
24                  disinfection byproducts along the route. So, it is  
25                  a challenge and, as a general rule, you're

1 absolutely right. So, the larger the distribution  
2 system that you've got – and especially with these  
3 dead-ends – something, you know, that goes to the  
4 end of a cul-de-sac or the end of a road, you know,  
5 are particularly challenging for water systems to  
6 maintain that, you know, pretty delicate balance  
7 between what happens at the plant and what happens,  
8 you know, 50 miles out in their distribution  
9 system.

10 **VICE CHAIRMAN RANDALL:** On the wastewater  
11 side, do you find – I know many, many years ago, a  
12 lot of stormwater drains were tied into the  
13 wastewater collection pipes and that kind of thing,  
14 and with aging infrastructure, you get a lot of I&I  
15 that's going on. Is that a major or big part of  
16 the source of problems, especially with little  
17 systems or municipalities, that kind of thing?

18 **MR. DAVID G. BAIZE [DHEC]:** It absolutely is.  
19 Without naming any names, one of our folks was  
20 working with a system that's nearly at capacity,  
21 and they're wanting to add more customers, but  
22 their I&I is so large we're saying, "You know, you  
23 really need to fix this. Because if you fix your  
24 I&I, then you would have the capacity to add the  
25 customers." So, yes, sir, it's a continual

1 challenge.

2 **VICE CHAIRMAN RANDALL:** Thank you.

3 **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

4 **CHAIRMAN WHITFIELD:** Thank you.

5 Commissioner Howard?

6 **COMMISSIONER HOWARD:** Ms. Heigel, it's a  
7 pleasure seeing you here.

8 **MS. CATHERINE E. HEIGEL [DHEC]:** Likewise.

9 **COMMISSIONER HOWARD:** Mr. Baize, I've been  
10 told you know more about water than anybody in  
11 South Carolina. Mr. Richardson passed that advice  
12 on to me. So, consequently, I'm going to take some  
13 time to pick your brain, if you don't mind. These  
14 are things that, as Commissioner Randall said, we  
15 hear about on the national Water Committee, and you  
16 wonder, why not South Carolina.

17 Secondary water standards is, by far – and I  
18 think Ms. Heigel mentioned or you mentioned coming  
19 in with the brown water jugs. What can be done?  
20 And, you know, the fall-back is, "We meet DHEC  
21 standards," but I don't think any one of us would  
22 drink some of that water we're seeing come into  
23 these night hearings. What can you do about  
24 elevating your standards, or is it anything  
25 feasible – now, if they say it doesn't meet DHEC

1 standards, then that's another issue. But when  
2 they say it meets DHEC standards, then it sort of  
3 takes it out of our hands.

4 **MR. DAVID G. BAIZE [DHEC]:** Yes, sir. That's  
5 a great observation. And, in fact, we do spend a  
6 lot of our time trying to deal with these maybe  
7 secondary standards – iron, manganese, things that  
8 really don't violate a health-based standard but,  
9 as you mentioned, plays havoc with your laundry,  
10 and it sure doesn't seem very appealing to drink.  
11 There are any number of situations like that we've  
12 tried to deal with over the years. I think, you  
13 know, largely, we try to be a technical advisor and  
14 help people through the situation. You know, each  
15 one is different. But just because it may be  
16 something that meets standards, we don't  
17 necessarily say, you know, "Good luck. You're on  
18 your own." We'll try our best to provide whatever  
19 technical assistance we can. Sometimes, the  
20 situations are just more difficult to deal with.  
21 There are some coastal situations where the  
22 groundwater source is shallow and there's naturally  
23 occurring iron, and the solution is, you know,  
24 either to have deeper wells or to tie on with  
25 another system. So, then they have the financial

1 challenges to do that and/or the resistance from  
2 other people who think that, you know, they've been  
3 drinking this water for generations and it's just  
4 fine the way it is. So, it is an area where we do  
5 spend some significant time trying to do some  
6 technical assistance.

7 **COMMISSIONER HOWARD:** It is an issue, and, you  
8 know, obviously an issue all over the United  
9 States; it's not just South Carolina, by any means.

10 I'm looking for Willie Morgan, but I don't see  
11 him. We're always having an issue with SFEs,  
12 single-family equivalents, when we're talking about  
13 wastewater. And tell me your thoughts on SFEs. I  
14 mean, there's a chart out; I think it comes from  
15 Florida. And it just – it doesn't make any sense  
16 to me as to how they arrive at these SFEs. What is  
17 your contention or is there any plans to look over  
18 the SFE calculations and see if there's a better  
19 way to do it, or –

20 **MR. DAVID G. BAIZE [DHEC]:** Well, I – that's a  
21 topic I really didn't come prepared to talk about  
22 today, and I think I'd have to become a little more  
23 educated, myself, to speak on it, so I would defer  
24 to that, but I'd be happy to come back and follow  
25 up and give you our thoughts.

1                   **COMMISSIONER HOWARD:** Well, it is an issue.  
2                   It's just about an issue in every wastewater case.

3                   Conditions of our water supply, both  
4                   groundwater and surface water – and I guess it's  
5                   just a rule of thumb with me, but most major  
6                   municipal cities and major suppliers use surface  
7                   water, whereas the small rural areas use  
8                   groundwater. Is there any – first, to go to the  
9                   surface water, it's always a cyber threat or a –  
10                  not cyber, but a physical threat on contamination  
11                  of groundwater – I mean, surface water, through  
12                  terrorists. What does your – do you all have any  
13                  connection with this, or is that Homeland Security,  
14                  or –

15                  **MR. DAVID G. BAIZE [DHEC]:** Well, a couple of  
16                  things. After 9/11, there were some very rigorous  
17                  security protocols that EPA put in place for water  
18                  systems to do an evaluation. That material, quite  
19                  frankly, was so sensitive, we didn't even get a  
20                  copy of it, but we know the water systems have all  
21                  gone through a security evaluation process. When I  
22                  was mentioning that plan to develop – when I first  
23                  walked in the door at DHEC, that's essentially what  
24                  that was, to look at how do you protect groundwater  
25                  and surface water sources from contamination? It

1           could be something simple like a drycleaner or a  
2           gas station, those sorts of things, or a truck  
3           having an incident over a bridge and impacting.  
4           So, how do you plan for those things, work through  
5           those, look at protection?

6                        So, we actually have set up these protection  
7           areas, which are the source waters, and we do  
8           certain things within those protection areas that  
9           are more protective. So, for example, an NPDES  
10          permit would have tighter limits within a drinking-  
11          water-source protection area or within wellhead  
12          protection areas for groundwater; you would not  
13          want to see those potential sources of  
14          contamination within those zones. So, we do work  
15          with water systems all the time – especially in  
16          locating new sources, new intakes, or wells, in  
17          trying to make sure that they are locating them in  
18          a way that is not only sustainable from a quantity  
19          standpoint, but making sure that the quality of the  
20          water is appropriate, as well.

21                       **MS. CATHERINE E. HEIGEL [DHEC]:** From an  
22          emergency response standpoint of some type of  
23          bioterrorism or something of that nature, there's –  
24          you know, we do have the ESF-8, the emergency  
25          support function, and EFS-8 and -10, so that's

1 health and environment. So, we would be a response  
2 agency in that event. Of course, that would all  
3 work through our State EMP, and we have – there is  
4 a Homeland Security State Council that I sit on.

5 **COMMISSIONER HOWARD:** You know, we talk about  
6 pharmaceuticals and PCPs in the water supply. But  
7 items have come up in the last year that – in my  
8 mind, and it could've been there for 10 years – is  
9 micro or mini beads. Is that any – play any  
10 position in –

11 **MR. DAVID G. BAIZE [DHEC]:** I don't know  
12 anything particular. Again, I think a lot of these  
13 are at the research stage, and so when they're  
14 finding these types of chemicals – and these,  
15 again, are at what you might call a trace level,  
16 part per trillion sort of levels. They're being  
17 investigated and looked at as to health effects, or  
18 on the environment, as well – not only just human  
19 health, but on the aquatic biology. So, I don't  
20 have any specific information on that.

21 **COMMISSIONER HOWARD:** My next question deals  
22 with – I guess Flint kicked it in. Let me see how  
23 I can word this without alarming the water  
24 companies. Right now, water companies are  
25 responsible for the water to the main. The

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problem, as you stated and has been stated, the problem is between the main and the tap, talking about lead and copper. There's some conversation – I'll put it lightly, "conversation" – about water companies changing the position from the main to the tap, and they'd be responsible for the water from their source to the tap. Then that opens up a whole new ballgame. Since 2004, 2008, all houses have standards now they've got to meet, so consequently any house built after whatever that date is, then they would probably be exempt. The problem, in my mind, comes from small, low-income families in rental units. So, you know, the landlord doesn't know or doesn't care, but the people vulnerable are the people renting from them that could have lead in their – you know, lead and copper pipes. What's your agency's thought on that, and is there any solution to it? Or do you all – and the thing about a tap, we've heard examples – Commission Randall and I – that looked all over the place, and there was one foot of lead pipe under a sink. So, with that in mind, you'd almost have to concern yourself with every tap in the house to make sure that they meet the lead-and-copper requirements. What are your thoughts on

1           that?

2                   **MR. DAVID G. BAIZE [DHEC]:** Yes, sir, I think  
3           you're hitting on exactly what is that national  
4           dialogue about the appropriate steps to take.  
5           There are still lead service lines, which would  
6           typically be the water system's responsibility up  
7           to the meter, in place throughout the country. So,  
8           that's one of those potential things that we are  
9           thinking may come out of the lead-and-copper rule  
10          revisions is looking at lead service line  
11          replacement. But, obviously, when the lead-and-  
12          copper rule came around the first time, it was  
13          decided to address it – I mean, largely because of  
14          what you're saying, that you could find lead  
15          components in many, many different places. We've  
16          even had some conversations about, if you're buying  
17          fixtures from out of the country, you know. So,  
18          it's not even lead service lines, but if you're  
19          buying some fancy fixture out of the country and  
20          maybe it doesn't have the standards that we do to  
21          be leadfree.

22                   So, one of the good news about the messaging  
23          that we can put out there to help protect public  
24          health – and we've talked about this quite a bit –  
25          is that getting that message to flush your lines

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before you use the water for consumption will make your water supply safe, in essence, to drink and use and consume. So, I don't know that that message has been robustly provided, because even in a disadvantaged community, even if they have some of these components, if they will just run their tap for 60 seconds and let that line flush before they use that water for consumption, they can go a long way in protecting their own health. And I don't know how much that message has really gotten out there.

**MS. CATHERINE E. HEIGEL [DHEC]:** That's a big part of the education and outreach piece that we are focused on. I think one of the other components here – we are fortunate, geographically. The Midwest and Northeast certainly have a lot more lead service lines in place, in the housing stock, than we do. It doesn't mean it's not an issue, in pockets. It's not quite the same level of issue as it is in some of the other regions. But when you look at the magnitude of the problem and what it would cost to do all the replacement – the service line replacement, it is a staggering proposition, to say the least, and who bears that cost and, you know, how will that get done, and all of the

1 mechanics around that. It's one of the things we  
2 talked about in our small group meeting with the  
3 Administrator back in May.

4 And so it's not gotten as much airtime, but  
5 certainly it's coming back to what can be done kind  
6 of here now. We've got the mitigation measures of  
7 running the tap for a period of time. But, also,  
8 there are point-of-use filters and things, that can  
9 be effective in reducing the risk, but those have  
10 cost. Now, they're substantially less than a  
11 wholesale service-line replacement in a home;  
12 that's not been politically popular, necessarily,  
13 to try to solve the issue with that. But these are  
14 all things that have to be on the table, and these  
15 are all things that we talk about with consumers.

16 **COMMISSIONER HOWARD:** The other thing is to do  
17 with aging infrastructure, and I want to say it's  
18 something like 15 or 16 states now, have introduced  
19 some surcharge – an infrastructure surcharge. I  
20 think North Carolina has one now. I know Arizona  
21 just passed one. Is there any conversation given  
22 to the infrastructure DSC program or an  
23 infrastructure surcharge? Granted that's economics  
24 – granted, that's an economic decision, but it  
25 still – I say it could play into your part, because

1           it deals strictly with replacing infrastructure,  
2           and that's the only thing – you know, 3 percent, 5  
3           percent; it varies among the states. But a  
4           surcharge is added to the bill that has to be used  
5           on infrastructure. You know, the problem with  
6           water infrastructure: If it breaks, it's no big  
7           damage. Gas infrastructure, it's a lot of  
8           publicity because when one of their mains break, it  
9           can be a big problem. Have you given any thoughts  
10          on any kind of a program like a DSC program to help  
11          solve the dilemma of aging infrastructure in some  
12          places?

13                 **MS. CATHERINE E. HEIGEL [DHEC]:** We have not  
14                 evaluated a surcharge. You know, that would be,  
15                 kind of, really, outside of our realm. We would  
16                 certainly be happy to participate in a discussion  
17                 by policymakers who might want to entertain that.

18                 **COMMISSIONER HOWARD:** Well, it's a poor  
19                 cliché, but in South Carolina, there's no one  
20                 carrying the water. And by that, I mean they've  
21                 got to be in the General Assembly – they've got to  
22                 get the attention of members of the Legislature to  
23                 get a lot of these things passed, if not all of  
24                 them. But you walk over there and you see, as you  
25                 well know, plenty of lobbyists for electric

1 companies, gas companies, everything else; you  
2 don't see any lobbyists for a water company, so  
3 it's really – that's one of the issues that I think  
4 we have in South Carolina, is there's no one  
5 literally, you know, going to carry the water.

6 I'm going to ask you in a few minutes if you  
7 could wake up the rest of my Commissioners, because  
8 I know they're tired of me doing all this. Today  
9 just happened to be Value of Water Day in the  
10 nation, and there's a lot of places playing on it.  
11 And I think one of the things that we, as the  
12 economic regulators, and you, have to get out to  
13 the population is the fact of the value of water  
14 and how valuable it is. You know, it just bothers  
15 me to hear people gripe about their water bill, and  
16 they're paying \$300 for a cable bill and they're  
17 griping about a damn \$90 water bill. I mean, it  
18 just seems like some priorities are out of order.

19 But I really appreciate you coming out today.  
20 Thank you for your time. You're doing a whole lot,  
21 you and Ms. Reece. Thank you.

22 **MS. MYRA C. REECE [DHEC]:** Yeah, I'll just add  
23 to that – that's an excellent point about the need  
24 to really get out and educate consumers on the  
25 value of water, because there is a cost of not

1           responding to the aging infrastructure. And I  
2           think that's one thing that we and the water  
3           systems will be talking about as we continue, you  
4           know, looking at the vision for South Carolina, is  
5           how we can do a better job educating consumers.

6           **COMMISSIONER HOWARD:** I know they're going to  
7           cringe when I say something else, but you mentioned  
8           – South Carolina does have a State Water Plan, do  
9           they not?

10          **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

11          **COMMISSIONER HOWARD:** How – how to word this?  
12          How accurate is it, or how realistic is it, or how  
13          useful is it?

14          **MR. DAVID G. BAIZE [DHEC]:** Well, the State  
15          Water Plan is actually developed by DNR, but we're  
16          actually in the process now where we're looking at  
17          modeling all of our major water systems – surface-  
18          water systems, and we're also doing some modeling  
19          for our groundwater systems, as well. So, we issue  
20          permits for quantity withdrawals for surface water  
21          and groundwater in the coastal areas. And, so  
22          having these models, we think, will help us make  
23          better permits decisions; it will help DHEC and DNR  
24          move forward with the planning process, which will  
25          start essentially after these models are completed.

1 So, that Water Plan is being updated, and it does  
2 need to be updated because right now it's on some  
3 very general – you know, good but general –  
4 recommendations, and the idea is to make it much  
5 more basin specific and in a lot more detail.

6 **COMMISSIONER HOWARD:** Thank you.

7 **MS. CATHERINE E. HEIGEL [DHEC]:** That's been  
8 basin by basin. That modeling is being done across  
9 the eight basins, and Clemson has been facilitating  
10 that for DNR, and DHEC is a second-seat co-sponsor  
11 of that effort, I guess is the best way to say it.

12 **COMMISSIONER HOWARD:** Thank you, Mr. Chairman.

13 **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
14 Howard.

15 Ms. Heigel, you can see we're very interested  
16 and have been starved for this dialogue for some  
17 time, and I believe all the Commissioners on this  
18 side have questions. We're going to take a brief  
19 break for our court reporter, just for a few  
20 minutes, and we'll be back and continue this  
21 dialogue in just a minute.

22 **MS. CATHERINE E. HEIGEL [DHEC]:** Sounds good.

23 **CHAIRMAN WHITFIELD:** Five minutes.

24 [WHEREUPON, a recess was taken from 11:45  
25 to 11:52 a.m.]

1                   **CHAIRMAN WHITFIELD:** Please be seated. We'll  
2 resume this allowable ex parte briefing, and  
3 continue with the Commissioners' questions.

4                   Commissioner Fleming.

5                   **COMMISSIONER FLEMING:** Yes. Good morning –  
6 still just barely. As the Chairman stated before  
7 we left, we really are delighted to have you all  
8 here today. This has been very informative and  
9 educational. And I think I heard you say something  
10 – I just want to clarify it – that DHEC, as a  
11 party, will be at our hearings in the future. Is  
12 that – did I understand that correctly?

13                   **MS. CATHERINE E. HEIGEL [DHEC]:** You did. For  
14 those things which DHEC is a statutory party to, we  
15 will have – Ms. Lake will be a presence here, and  
16 we will be as responsive to those proceedings as  
17 appropriate.

18                   **COMMISSIONER FLEMING:** I have to say, that is  
19 one of the best things I've heard in a while,  
20 because we have really wanted that to happen,  
21 because we value your expertise and input. And I  
22 think it's very necessary for some of our hearings,  
23 and hopefully you, as a party, will take part if  
24 settlements are part of those discussions, as well.

25                   **MS. CATHERINE E. HEIGEL [DHEC]:** Our role is

1 mostly as a resource, for background and  
2 understanding anything we may have done that  
3 impacts the application before you.

4 **COMMISSIONER FLEMING:** Uh-huh. And also if  
5 DHEC is involved in some of the issues, like – I've  
6 just lost the word for it – violations along the  
7 way, that can be very helpful to explain those to  
8 us, too.

9 **MS. CATHERINE E. HEIGEL [DHEC]:** And  
10 typically, we are not parties to rate cases  
11 statutorily. But, certainly, if there is a desire  
12 for expert testimony by our agency on any issues  
13 that a utility may be seeking rate recovery for  
14 investments, to address, that is something that we  
15 will provide.

16 **COMMISSIONER FLEMING:** Okay. That's great.  
17 Thank you very much for that. And, also, I want to  
18 say – I want to reiterate. I believe you were  
19 saying that you're nationally recognized for the  
20 work that's being done in South Carolina, and I've  
21 certainly had the opportunity to witness that  
22 firsthand with Ms. Reece and her work with the  
23 Clean Power Plan. And across the country, there  
24 have just been outstanding comments for the way  
25 that you pulled all the stakeholders to the table

1 that. Even though it's kind of a dead issue at the  
2 moment, it certainly was recognized, and helped  
3 South Carolina a great deal in the final ruling.  
4 And, so, what – having heard that and the results  
5 of that, is this the same kind of process that  
6 you're looking to doing with the rural water  
7 coalition you're putting together?

8 **MS. MYRA C. REECE [DHEC]:** Yes. Exactly same  
9 type of process and opportunities. And, in fact,  
10 we're doing so much work out in our rural areas,  
11 regardless of what environmental issue or challenge  
12 you're talking about. You know, we have clean air  
13 coalitions established across the State, and our  
14 plans are to really take advantage of those  
15 stakeholders at the local level and start talking  
16 about drinking water systems and the challenges.

17 And going back to – that's an opportunity to  
18 educate the consumers, you know, on challenges and  
19 the need to upgrade infrastructure and things of  
20 that nature. We also are spending, you know, a  
21 great deal of time trying to build community  
22 capacity and help our environmental justice  
23 community leaders across the State, also educating  
24 them and giving them the information where they can  
25 have a seat at the table and be more engaged in the

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discussions to come up with solutions at the local level, whether we're talking about wastewater infrastructure and issues, drinking water, or air quality, or maybe a contaminated site that's in your community. So, it all plays together. It's all connected. And we really see those opportunities to look more at multi-program areas and capture those opportunities, so –

**COMMISSIONER FLEMING:** So, do you see this also as an opportunity to look at certain issues that may involve legislation, like what Commissioner Howard was talking about for programs for financing infrastructure, like they're doing in other parts of the country, some of those best practices, so that in addition to municipalities and regional water area facilities that maybe these private facilities may be able to take advantage of that, as well? Because as you said, nobody – what the private customers pay for water is a lot higher than what municipalities and regional systems can provide the water for, and it might be a help if we could look at, you know, possibly future years rather than historic years, or a surcharge, or something like that – or interest rates – that could really end up helping the customer in the

1 long run to improve the infrastructure, that would  
2 help with the product delivery.

3 **MS. MYRA C. REECE [DHEC]:** Yeah. I think the  
4 beauty right now for us is being part of the  
5 national conversation and paying attention to the  
6 best practices, whether it's legislation or it's  
7 public-private partnerships, whatever type of  
8 innovative strategy we can come up with as a nation  
9 to deal with these issues. And I think that's what  
10 we're going to be trying to do at the national  
11 level, and then make sure that, when we bring it  
12 back to South Carolina, we look at the uniqueness  
13 of our State and try to put the tools – empty the  
14 tools out of the toolbox and say, "Here's how other  
15 states and other communities across the country are  
16 dealing with these very issues," but let it be a  
17 decision that's right for South Carolina.

18 **COMMISSIONER FLEMING:** So, but with the  
19 various stakeholders here –

20 **MS. MYRA C. REECE [DHEC]:** Exactly.

21 **COMMISSIONER FLEMING:** – it may be an impetus  
22 to get that down.

23 **MS. MYRA C. REECE [DHEC]:** Yes.

24 **COMMISSIONER FLEMING:** Let me ask you about  
25 one thing that I noticed I don't believe you

1 discussed, but you had a bullet point on regional  
2 connections and the financial arrangements with  
3 those. What kind of work is being done on that  
4 level? I know that's a very important issue, as  
5 well.

6 **MR. DAVID G. BAIZE [DHEC]:** Sure. Well,  
7 regionalization is essentially where the smaller to  
8 midsize utilities are tying into the bigger systems  
9 so that you can get these efficiencies and  
10 resources that you need to manage things correctly.  
11 The challenges of doing that are sometimes  
12 financial, where the resources to make those  
13 interconnections can be a challenge. Sometimes  
14 they're political, as in, you know, sometimes  
15 smaller communities have a very strong attachment  
16 to their own water source and don't want to be part  
17 of it. But I think that's some of the challenges  
18 that we see, and some potential gains that can be  
19 made in advancing regionalization as an overall  
20 philosophy, and implementing it throughout the  
21 State.

22 **COMMISSIONER FLEMING:** And how would you  
23 determine what are financially responsible prices  
24 for doing that?

25 **MS. CATHERINE E. HEIGEL [DHEC]:** We don't

1 determine it. That's the key here. So, part of  
2 the challenge is financial if they're  
3 transitioning, or if the system is being acquired –  
4 or customers essentially being acquired, rather.  
5 It's, you know, what is the value of that customer  
6 base or assets that may be going? And so those are  
7 bilateral discussions largely between individual  
8 systems and those regional systems that will be the  
9 acquirers.

10 There's a control issue in some of these  
11 communities that are more hesitant to regionalize  
12 or join into regional systems, because in the – I  
13 guess to put it in colloquial terms – they like the  
14 one throat to choke, the guy that's down the hall  
15 that they can shake if the water isn't what the  
16 community wants it to be. So there's a little bit  
17 of loss of control for those smaller communities  
18 that regionalize. So, there are a lot of different  
19 factors that go into it, and it's unique. It's  
20 really going to be case-by-case. But,  
21 fundamentally, on the financial challenges, they  
22 are commercial. Those are commercial: "I think  
23 it's worth this; you think it's worth that." And  
24 we, DHEC, do not have a role to play in that, other  
25 than, certainly, compliance history of an entity

1 can make its system more or less valuable.

2 **COMMISSIONER FLEMING:** Okay. And you were  
3 talking about the older homes with the lead pipes.  
4 What is the recommendation for older homes? I  
5 mean, we've been here a long time, so are they –  
6 are you recommending replacing them or how – in the  
7 ideal situation?

8 **MR. DAVID G. BAIZE [DHEC]:** We certainly have  
9 become aware of that being a choice by some folks  
10 that live in older homes, to just have whatever  
11 older plumbing they may have in their home  
12 replaced. That's obviously a very costly option.  
13 So, this message of lead exposure in drinking water  
14 being preventable is something that we want to help  
15 promote because, again, even if you – and myself  
16 included; I live in a house that was built in 1982,  
17 and so I just, every morning before I have my water  
18 for coffee, I'm going to run that tap for 60  
19 seconds or so, and greatly mitigate any type of  
20 exposure. So, that is the simple, straightforward  
21 recommendation that we can give to anybody who has  
22 any concerns about having lead components, either  
23 from lead service lines or in their home.

24 **COMMISSIONER FLEMING:** But that is a wonderful  
25 educational opportunity, because I don't think I've

1 heard that before. If I did, I don't remember  
2 hearing it. I mean, just simple things like that,  
3 I think, can be very helpful to the communities  
4 around the State.

5 **MS. CATHERINE E. HEIGEL [DHEC]:** Yeah, we've  
6 been working on public service messaging with the  
7 water utilities, and that's something that they're  
8 very committed to doing, both through their  
9 communications with their customers, as well as  
10 we've even looked at the minor-league baseball  
11 teams and getting messages up on the screens  
12 between plays kind of thing, so we've tried to be  
13 creative, too, about how to reach consumers.

14 **COMMISSIONER FLEMING:** And social media, I  
15 don't know if –

16 **MS. CATHERINE E. HEIGEL [DHEC]:** Social media,  
17 absolutely.

18 **COMMISSIONER FLEMING:** – you're using that or  
19 not.

20 Well, this has been very informative, and I  
21 really appreciate your coming today. And,  
22 hopefully, you'll be back more often.

23 **CHAIRMAN WHITFIELD:** Commissioner Hall.

24 **COMMISSIONER HALL:** Thank you.

25 Thank you, all of you, for being here. I just

1 have one question. As far as when you issue a  
2 Notice of Violation, for either wastewater or  
3 drinking water, what's the follow-up process and  
4 how long does it generally take for that system to  
5 come into compliance? And do you let the customers  
6 of those systems know, if they don't already know,  
7 what's happening?

8 **MR. DAVID G. BAIZE [DHEC]:** It's a little  
9 different process for both water and wastewater, so  
10 I'll maybe address each separately. So, if a water  
11 system has a Notice of Violation for a maximum  
12 contaminant level, then they are issued a Notice of  
13 Violation, and they do have to let customers know,  
14 and there are some consumer confidence reports that  
15 you may have seen, which come out in the mail, that  
16 every water system is supposed to, every year, send  
17 those reports to their customers. Now, how much  
18 customers pay attention to them or read them is  
19 another story, but in those, they're supposed to  
20 list any violations they've had throughout the  
21 year. So, there is a notice process.

22 And we try to get – obviously, since water,  
23 again, is a direct consumable, we try to get those  
24 addressed very quickly. It may or may not result  
25 in the need for an enforcement order. That's sort

1 of on each case's merit, so if we have a Notice of  
2 Violation and they immediately correct it, you  
3 know, we just sort of move on. If they have larger  
4 issues that need to be corrected and they need to  
5 be brought under a compliance schedule, then we'll  
6 do that and issue a consent order. In the most  
7 extreme cases, if that doesn't work, we'll issue an  
8 administrative order.

9 On the wastewater side, there are expectations  
10 for reporting spills to us over a certain quantity,  
11 and then requirements for them posting the stream  
12 segment, for example, that may be impacted, so that  
13 folks know a spill has occurred, you know, there's  
14 an investigation going on, there's some signage  
15 posted. Again, we sort of weigh the Notice of  
16 Violation, corrected and is it solved and can we  
17 just move on, or do we have multiple – you know, if  
18 we have multiple Notices of Violations, then we'll  
19 go ahead and proceed with an order in wastewater.  
20 So, it varies a little bit, depending on the media,  
21 but that's the general process.

22 **COMMISSIONER HALL:** Okay. Thank you.

23 Thank you, Mr. Chairman.

24 **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
25 Hall.

1 Commissioner Elam.

2 **COMMISSIONER ELAM:** Thank you.

3 I guess I get to say good afternoon. I'd like  
4 to talk about, I guess, the 4 percent of systems  
5 that were failing the copper/lead. Do you have a  
6 handle on whether the main source of the problem  
7 there is distribution or whether it's a pipe to the  
8 house, pipes in the house?

9 **MR. DAVID G. BAIZE [DHEC]:** Yeah. As I  
10 mentioned earlier, we're really trying to do a  
11 thorough investigation of each one of those. Some  
12 of them, we know are sampling error. So, for  
13 example, if you don't collect a sample in the  
14 right way or from, you know – so, a prime example  
15 would be if you went outside to an outside spigot  
16 that hadn't been used in three months and took a  
17 sample –

18 **COMMISSIONER ELAM:** Right.

19 **MR. DAVID G. BAIZE [DHEC]:** – it's likely to  
20 not yield representative results of what's in your  
21 house. Some of them have, upon resampling in a  
22 more rigorous, controlled manner, been explained.  
23 Some of them, because it does look like we may be  
24 dealing with some corrosive water, we'll have to  
25 address whether treatment needs to be added; and if

1           it does, you know, how's that going to occur. With  
2           a mobile home park, for example, how are they going  
3           to be able to afford adding treatment and an  
4           operator? So, we don't have that totally flushed  
5           out yet – no pun intended – but we will have a  
6           report that we'll generate from the Office of Rural  
7           Water, that will, you know, list a conclusion for  
8           each and every one of those.

9           **COMMISSIONER ELAM:** Okay. Is part of the  
10          problem – could part of the problem – I don't know  
11          if my facts are straight. It seems to me, when I  
12          used to do a little work with pipes myself, you  
13          know, was the solder was lead-based, wasn't it?

14          **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

15          **COMMISSIONER ELAM:** Is that more likely to  
16          leach in the water than just a lead pipe?

17          **MR. DAVID G. BAIZE [DHEC]:** Yes, sir. In  
18          fact, probably lead solder with copper pipe is  
19          probably the more common scenario.

20          **MS. MYRA C. REECE [DHEC]:** And can I add a  
21          little bit to the 4 percent?

22          **COMMISSIONER ELAM:** Yeah.

23          **MS. MYRA C. REECE [DHEC]:** I want to make sure  
24          that we don't leave today with you guys maybe  
25          having the impression that those 4 percent of

1 systems still have issues with lead and copper in  
2 their water, but we see a lot of these systems  
3 maybe having an exceedance and then go back into  
4 compliance, and that's why we're trying to figure  
5 out exactly what – you know, if we're seeing this  
6 happen maybe once every other sampling event, or  
7 whatever, that helps us exactly know what's going  
8 on.

9 And I will say that one of the issues that we  
10 hear a lot from these water systems is that this  
11 rule is so unique, in that the samples are  
12 collected by the homeowners, and it's data that not  
13 only we use from a regulatory standpoint but the  
14 water systems use to make major decisions, and  
15 there's no confidence in the chain of custody of  
16 that sample. So, you hear a lot of the systems  
17 say, "You know, I'm kind of concerned about not  
18 being able to have confidence that it's being  
19 collected properly, and then making decisions on  
20 the data points."

21 **MS. CATHERINE E. HEIGEL [DHEC]:** And we have  
22 had to prosecute some criminal violations for  
23 fraudulently submitting sample results. So, that  
24 is – so just so you know that there are those –  
25 there is that oversight, as well. If we get

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something in our investigation process that says something's not right here, then we have an internal unit, a committee, that will determine whether it needs to be investigated criminally. And you have seen, really in the last six months or so, you may have seen some press coverage about some of those prosecutions.

And so, we take it very seriously. We understand the challenges of the lead-and-copper rule, and the fact that we are relying on end users, effectively, to be part of your regulatory process, by giving you the sample. Some of the common things that you may see is that a sample hasn't been returned, and so you may have someone who works for the utility who doesn't really understand what it all means, thinks water is water from inside the house or outside the house, and they're just there to collect the sample and the sample hasn't been returned, so they take the bottle and go to the outdoor spigot. They might fill it up there. Or a sample bottle hasn't been fully filled up, and they get back to the water treatment plant and they fill it up the rest of the way. So, these are things that nationally are challenges, and it's about educating and, for those

1 people, understanding that all water is not equal  
2 and all sources are not equal. Point-of-use  
3 sources are not equal in terms of the compliance  
4 piece.

5 We were asked, when we were there in May, to  
6 provide some comments on that future lead-and-  
7 copper rule, and we have done that, some of the  
8 things that we want EPA to really consider. And so  
9 we want to make sure that we don't take an already  
10 challenging rule to administer, and make it even  
11 worse. So we want to get it right.

12 **COMMISSIONER ELAM:** Okay. If you go out and  
13 you have a sample that's from a house that's  
14 showing high levels of lead, and you find a house  
15 full of lead pipes, can you require a homeowner –  
16 if he doesn't have it – to do something to prevent  
17 backflow into the system?

18 **MR. DAVID G. BAIZE [DHEC]:** Well, yeah, I  
19 think, you know, backflow prevention has its own,  
20 sort of, requirements. And so that would be  
21 generally required anyway.

22 **COMMISSIONER ELAM:** I just didn't know, on  
23 older construction, maybe if that wasn't code at  
24 some point.

25 **MR. DAVID G. BAIZE [DHEC]:** Right. I don't

1 think we've ever looked at that or had to do that,  
2 specifically, with backflow prevention. But,  
3 hopefully, you know, they would be up to code on  
4 that anyway, but –

5 **COMMISSIONER ELAM:** For a system to fail, is  
6 it just – is it like a systemwide average, or is it  
7 just if you have any failing –

8 **MR. DAVID G. BAIZE [DHEC]:** Okay, we're going  
9 to go well beyond lunchtime, so –

10 [Laughter]

11 **COMMISSIONER ELAM:** Okay, well, then –

12 **MR. DAVID G. BAIZE [DHEC]:** No, no, but I'll  
13 give the short answer.

14 **COMMISSIONER ELAM:** Okay.

15 **MR. DAVID G. BAIZE [DHEC]:** It is actually the  
16 90th percentile. So, based on the size of the  
17 system, they have a certain number of minimum  
18 samples they need to take, and those samples are in  
19 individual homes. So let's just say they collected  
20 10, then you run the 90th percentile and that  
21 determines whether you exceed the action level.  
22 It's not actually an MCL; it's not a health-based  
23 standard, but it's an action level. But that does  
24 trigger, if you exceed the action level, that then  
25 – basically, you're making the assumption on those

1 10 homes that your entire system is not balanced  
2 the way it should be and they need to take those  
3 corrective actions.

4 But I will note, too, if you have – just, so  
5 you may run into the circumstance where nine are  
6 below the action level and one is above. Even  
7 though that may not trigger, then, the full  
8 response, that one person that does have over the  
9 action level will be notified individually, so that  
10 they are aware of that.

11 **COMMISSIONER ELAM:** Okay. And one last thing.  
12 Twenty-something years ago, I used to go to  
13 meetings of something called the Safe Drinking  
14 Water Committee. It was large and small  
15 municipals, large and small private systems, et  
16 cetera. Is that still around?

17 **MR. DAVID G. BAIZE [DHEC]:** No, I don't think  
18 in that current form, but I think really what has  
19 taken its place is working with the Water Utility  
20 Council, which is part of AWWA. So the water  
21 systems probably are members of American Water  
22 Works Association; the larger systems are members  
23 of the Water Utility Council; and the smaller  
24 systems, the rural systems, are members of the  
25 Rural Water Association. And we interact with

1 those – we actually have a seat on the Water  
2 Utility Council, so we are at every meeting  
3 communicating with them. And the Rural Water  
4 Association is having their conference this week,  
5 and most of my drinking-water folks are actually  
6 there at the conference. So, I think those  
7 organizational units have sort of taken the place  
8 of that, but there is good routine communication.

9 **COMMISSIONER ELAM:** Okay. Thank you.

10 **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

11 **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
12 Elam.

13 Thank you. You've been a very informative  
14 panel, and a lot has been asked and a lot has been  
15 answered, so I'll try to be as brief as I can. I  
16 do have a few questions for you, and you can field  
17 them as you choose. I don't know that any of them  
18 are directed at any one certain person – maybe some  
19 tilted toward you, Mr. Baize. But in the – Ms.  
20 Heigel mentioned that, as part of your role, is not  
21 only to be the enforcement body but also to be the  
22 assistance – the public assistance body. And in  
23 that line of thinking, when Commissioner Howard was  
24 asking you about the secondary contaminants – and  
25 I'm not talking about the lead; I'm talking about

1 the manganese, the iron, the secondary contaminants  
2 that are sometimes found, that might not be – rise  
3 to – in other words, it passes DHEC's standards,  
4 but yet it still may be a product that somebody up  
5 here wouldn't want to drink. And, of course, you  
6 mentioned the damage to laundry and that sort of  
7 thing, the discoloring of laundry and that sort of  
8 thing.

9 My question is, when that is discovered – say,  
10 whether it's in a small system or a large system,  
11 typically a – let's say – small- to medium-sized,  
12 when that is discovered, and whether that source is  
13 a private well or they're getting water from  
14 another bulk water supplier, would DHEC come out  
15 and assist the water provider in identifying the  
16 source, whether it's the source or whether it's in  
17 the system itself? Do you do those kinds of  
18 services, or are they just kind of on their own to  
19 pinpoint the source of their trouble in the  
20 secondary contaminants?

21 **MR. DAVID G. BAIZE [DHEC]:** We do have  
22 compliance assistance folks that go out and work  
23 with systems all the time. That's their job. And,  
24 certainly, whether it was a primary or a secondary  
25 contaminant, we would work to find a solution. If

1           it goes beyond – you know, they may need eventually  
2           to hire an engineering company to come in and  
3           design a solution or something like that. We  
4           couldn't do that for them. But at least to help  
5           them work the issue and figure out probable causes  
6           of the problem, we certainly do that.

7           **CHAIRMAN WHITFIELD:** Well, you can at least  
8           help them ID the source of the cause – the root  
9           cause. I mean –

10          **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

11          **CHAIRMAN WHITFIELD:** – fixing the problem, I  
12          get that; it's their problem.

13          **MR. DAVID G. BAIZE [DHEC]:** Right.

14          **CHAIRMAN WHITFIELD:** But you still have folks  
15          that can assist them in IDing the source or the  
16          cause.

17          **MR. DAVID G. BAIZE [DHEC]:** Yes, sir. You  
18          know, one recent example, there was a neighborhood  
19          in the Columbia area that had had [indicating]  
20          "discolored water" issues and concerns for a while.  
21          Ultimately, they were a groundwater source and they  
22          just didn't have enough pressure and flow from  
23          their groundwater source to properly flush the  
24          lines and keep everything where it needed to be.  
25          So, they did interconnect with another water system

1 so that they could provide that adequate pressure  
2 and fire flow, and that discolored water situation  
3 has been resolved, so –

4 **CHAIRMAN WHITFIELD:** I see. Well, thank you  
5 for that. And shifting gears next to wastewater, I  
6 think we've had – and it's only been in recent  
7 times – we've had Mr. deBessonnet – I think I'm  
8 saying his name right?

9 **MR. DAVID G. BAIZE [DHEC]:** Yes.

10 **CHAIRMAN WHITFIELD:** And he talked about some  
11 of the regs on SFEs that Commissioner Howard  
12 mentioned, and I don't remember the numbers. It  
13 was 60-something through – 61 through 68, or  
14 something. I don't – I can't tell you off the top  
15 of my head. But what I remember is those  
16 regulations were back from the 1960s. Is there any  
17 – does DHEC have any intentions of updating those  
18 regulations or anything? Or are you going to kind  
19 of go with what you've got, still?

20 **MR. DAVID G. BAIZE [DHEC]:** Yeah, I obviously  
21 should have brought Jeff with me, because I've had  
22 three or four people ask where he was at. And  
23 nothing against Jeff; he's just back holding down  
24 the fort, so I'll bring him next time we come. But  
25 Jeff and I have had some discussions on that front,

1 and I don't think we've reached a conclusion on  
2 that, yet, but we are looking at what the best path  
3 forward is.

4 **CHAIRMAN WHITFIELD:** Well, thank you. Got one  
5 or two more for you, and I'm done, myself. Since  
6 we've got such an expert panel here, and I don't  
7 want to miss out, you mentioned chlorine, and you  
8 mentioned going back to 1908 and how that was  
9 revolutionary at the time, now over 100 years. How  
10 do these systems – I know when the chlorine is  
11 entered in, if it's not – and you talked about if  
12 it's not equally dispersed at all times, you get  
13 too much on the front end near the treatment plant,  
14 not enough down the system. What happens when you  
15 see these higher levels of chlorine? Because while  
16 it does – I know it is the proper way and the 100-  
17 year way now of treating certain bacteria, but it's  
18 also an oxidizer and I know it also can be harmful.  
19 So, could you talk about, maybe just a second, how  
20 you monitor those levels and how operators monitor  
21 those levels?

22 **MR. DAVID G. BAIZE [DHEC]:** Sure. And a lot  
23 of systems now have gone to different methods or  
24 variations on chlorine to do their disinfection.  
25 Where chlorine gets – residuals get measured in the

1 system is important, because you need to have a  
2 certain level of chlorine. So, that's, again, sort  
3 of a delicate balance, and that the operator has to  
4 do at the plant based on what they're seeing. From  
5 a disinfection byproducts standpoint, when you have  
6 that chlorine mixed with organics – so, for  
7 example, if you have your source water high in  
8 organics, that's where you end up with formation of  
9 the disinfection byproducts, which means you have  
10 to make more adjustments in your treatment.

11 So, you know, they constantly monitor the  
12 source water, they constantly monitor the water  
13 that's being sent out into the system, and they do  
14 distribution monitoring to try and keep everything  
15 in balance that they need to keep balanced.

16 **CHAIRMAN WHITFIELD:** I know some systems – I  
17 guess I'm talking about maybe municipal now – have  
18 gone to another – I can't think of the name. It's  
19 not chlorine, but I can't think of the name of it  
20 right off, but it's apparently less expensive.  
21 What is DHEC's opinion on that?

22 **MR. DAVID G. BAIZE [DHEC]:** We do have, on the  
23 chlorine system – because free chlorine, as you  
24 say, sometimes can be dangerous to handle and has  
25 to be done carefully. So, some of these other

1 variations of chlorine chemical forms are being  
2 used. It's really up to the plant to decide which  
3 is best for them, which they can most efficiently  
4 manage and treat, based on their source water and  
5 their type of equipment and that sort of thing.

6 **CHAIRMAN WHITFIELD:** But you haven't seen any  
7 problems with these systems that are using the  
8 other methods, other than chlorine?

9 **MR. DAVID G. BAIZE [DHEC]:** No, sir.

10 **CHAIRMAN WHITFIELD:** And, lastly, you cited a  
11 number in one of your slides very early on, about  
12 the number of companies, of course, that we  
13 regulate here, and the number of people in the  
14 State, that we regulate at the Public Service  
15 Commission and that you all regulate. How many  
16 would you say in this State are added to that  
17 number, either municipal or special-purpose  
18 districts, and then how many of the rest of the  
19 residents are just plain wells, unregulated? Do  
20 you have any numbers on that, out of nearly 5  
21 million people?

22 **MR. DAVID G. BAIZE [DHEC]:** I do. The  
23 question is whether I can recall them off the top  
24 of my head. That's a bigger challenge. You know,  
25 the majority of the population is certainly served

1 by public water in one way or the other. I think  
2 we estimate now maybe about 20 percent of the  
3 population is on their own home well, so the rest  
4 would be served by public water. In South  
5 Carolina, we actually, of course, regulate anything  
6 above a single well as a public water system. We  
7 call those state water systems. So there's a  
8 federal definition, and then there's a single well,  
9 but we regulate that population that's in the  
10 middle. So, everything that's not a home well is a  
11 public well in South Carolina, or the public water  
12 system. So, I'm not sure I have the rest of those  
13 figures off the top of my head where I can  
14 reproduce them.

15 **CHAIRMAN WHITFIELD:** But 20 percent are home  
16 wells that –

17 **MR. DAVID G. BAIZE [DHEC]:** Yes, sir.

18 **CHAIRMAN WHITFIELD:** – are not regulated?

19 **MR. DAVID G. BAIZE [DHEC]:** Not regulated.

20 **CHAIRMAN WHITFIELD:** Others are either multi-  
21 wells that are regulated by you, special-purpose  
22 districts, or municipal systems.

23 **MR. DAVID G. BAIZE [DHEC]:** Yes.

24 **CHAIRMAN WHITFIELD:** And then us –

25 **MR. DAVID G. BAIZE [DHEC]:** Yes.

1                   **CHAIRMAN WHITFIELD:** – with the privately held  
2 companies. Okay. Well, that gives me a good feel  
3 or somewhat of a feel for how much you have on your  
4 hands over there.

5                   And given that notion, we appreciate even more  
6 y'all coming over here. And I can honestly say in  
7 my eight years, there were times that DHEC was a  
8 party of record and they weren't here. So, we  
9 appreciate you being here, and we appreciate your  
10 interest. I think you've got another person in the  
11 audience that has frequented those doors, as well,  
12 so – and I know you did, Ms. Heigel. So we thank  
13 you for being here, Ms. Reece. We know you've been  
14 here before. And we thank y'all for being here,  
15 and not only your willingness to come to the table  
16 with us in cases where you're a party of record on  
17 a certificate of public convenience and necessity,  
18 but also I certainly – and I think all the  
19 Commissioners would – welcome allowable ex partes  
20 like this again. It's our only method to  
21 communicate with you, and you can see, by the  
22 interest here from each Commissioner, that we have  
23 a lot of interest in what you do and certainly  
24 value what you do. And all I can say is, come back  
25 in the future and keep us informed.

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And with that, we're adjourned.

**MS. CATHERINE E. HEIGEL [DHEC]:** Thank you,  
very much.

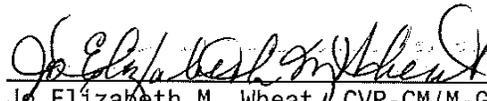
[WHEREUPON, at 12:30 p.m., the  
proceedings in the above-entitled matter  
were adjourned.]

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C E R T I F I C A T E

I, Jo Elizabeth M. Wheat, CVR-CM-GNSC, do hereby certify that the foregoing is, to the best of my skill and ability, a true and correct transcript of all the proceedings had in an Allowable Ex Parte Proceeding held before THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA in Columbia, South Carolina, according to my verbatim record of same.

IN WITNESS WHEREOF, I have hereunto set my hand, on this the 17<sup>TH</sup> day of September, 2016.

  
Jo Elizabeth M. Wheat, CVR-CM/M-GNSC  
Hearings Reporter, PSC/SC  
My Commission Expires: January 27, 2021.