Water Committee Meeting

4/26/16

JIMMY GUIDRY: I guess we can go ahead and get started. What I will do is officially appoint Amanda on the committee so we will have a quorum. Laurie, if you would call the roll.

LAURIE JEWELL: Dirk Barrios, Mayor Breland (absent), Ben Bridges, Robert Brou, Jeffrey Duplantis, Greg Gordon (absent), Dr. Guidry, Jimmy Hagan, Randy Hollis (absent), Pat Kerr, Rick Nowlin, Rusty Reeves (absent), Chris Richard, Keith Shackelford, Cheryl Slavant (absent), Joe Young (absent), David Constant (absent). We do not have a quorum.

JIMMY GUIDRY: You counted Amanda? I just appointed her. All right, that's what I call transparency. Do I hear a motion that we approve the minutes?

ROBERT BROU: So moved.

JEFFREY DUPLANTIS: Second.

JIMMY GUIDRY: Minutes are approved. Get into old business.

AMANDA LAUGHLIN: I will go through the bills. And I am sure a lot of you may be following the bills. I know Pat has been involved, a couple others have been to the capitol. We seem to be at the capitol weekly right now.

The first bill HB 700 by Representative Stokes is a bill that would allow for plans review fees. In its original form of strictly for plans review for us. It does include some sanitarian fees as well. On the engineering side it was plans review fees for drinking water, community sewage, and public pools. It was amended to actually double the safe drinking water administration fee from 3.20 to 6.40 and at the same time remove plans review fees for drinking water systems that already pay the fee. It was scheduled to be heard again on the floor Monday, yesterday, but it got removed and returned to the calendar and it hasn't been put back. Just a little bit about the bill. We've had a few meetings regarding if we increase our fee to 6.40 what additional services, if any, would be able to be provided. And honestly the 6.40 would pretty much just cover the program as is right now. It would not include additional sampling, et cetera. Because we're losing more and more of our state general fund every year. We're always facing budget cuts and we don't get a lot of state general money. So this fee would basically most likely replace the state general funds that we get which is about 2 1/2 million dollars. It would increase our revenue for self generated funds from 4 1/2 million to 9 million. It would benefit our program and we would not have as many budget cuts. I will talk about 995 cause it

kind of is similar in nature except that this is a Sam Jones bill and he is proposing to increase the safe drinking water fee to 12 dollars instead of 3.20. So 12 dollars per customer, per year. So a dollar a month. Part of the fiscal and programmatic impact was the services we could provide at that fee and we would be able to bring in state the bacteriological collection for sure. Also collect and analyze disinfection byproducts for water systems which we don't do at all right now. Fully pay for our naegleria fowleri surveillance program which runs about 1.1 million a year. It does not look like that would be funded in the next fiscal year. Also add personnel to do the collection, lab personnel to continue our crypto naegleria, all the specialized testing we do in the lab. And a few other things. Some contracts that are needed to provide operator certification training, et cetera. So there's a lot of things that we could do with that money. And that's going to be heard tomorrow.

DIRK BARRIOS: How much funds, like for a dollar, how much statewide y'all collect?

AMANDA LAUGHLIN: We have about 1.58 million connections. But I think it's like 18 million dollars in revenue at that number. It's about 10 1/2 to 11 million dollar program. So right now as it is. EPA gives us about 1.4 million. It's not a big chunk of our budget is our grant

money. Our self generated fund is about 60 percent. And then we had to take more and more state fund money over the years. We also right now in our budget, because we've been cut so many times over the last few years, we are using more and more set aside money from the revolving fund and we would not do that anymore if we had an increase in our fee. Because it's basically taking money that could be used for loans and we're using it for program cost.

DIRK BARRIOS: I was under the impression when I got on the certification committee that I heard, or maybe I didn't, not even sure, that when the safe drinking water program was set up it was set up to where it was supposed to be self funded. Am I dreaming that? It's supposed to have been, it never was. I know that.

JIMMY GUIDRY: If I can I will share some thoughts with y'all on these two bills. Right now the legislature is looking at how they're going to meet next year's budget cuts. Now they've lowered it. It was at 750 million, now about 600 million. But they're looking at whether they're going to do fees or are they going to go back and do a special session and address it with taxes or change the tax code. Do something different to try to pay for what we do in state government. So Representative Stokes' bill is the governor's bill and the governor is backing it to

try to get us funded for what we normally do. There has been discussion with the group that we would amend that bill on the senate side to try to get it up to I think 7.10 so we could do some more testing for y'all and save y'all some money. When I say y'all I mean water systems. But it would be placed on the consumer so the consumer is probably not going to be happy if they see an increase in their water bill. Of course the argument is even at a dollar a month that's one bottle of water a month you would pay to make sure your water is safe. It's really hard to say a dollar would be way too much. Representative Jones' bill is not what we've been behind, not what the governor has been behind, it's not what some of the folks that we've meeting with been behind. He's bringing his bill tomorrow. The issue with a fee bill it's got to come out of the house first and has to have 2/3rds of the votes of the members to pass. There's no sure thing on this. It may not pass the house. It may be the legislators in the house I don't know that we have the support yet or their vote to increase fees or not. As we said, maybe that will be heard tomorrow. We'll start seeing how they're posturing. You have some that are anti fee, anti tax, anti real world. We have to start paying for things or we're not going to be able to keep doing them. Right now and starting in July I have no money for

naegleria, no money for the brain eating amoeba. We will have to increase our efforts to make sure that we're monitoring chlorine and making sure the chlorine levels are where they need to be cause I won't be able to go around and check to see if the amoeba is in water systems unless we get some of these fee bills. It's up in the air. And obviously the support from the water systems help us do what we need to do to protect this. But we never charge what it cost to do business. It's always come from state general fund and that has been dwindling. But we haven't had an increase in 15 years. And so hopefully we'll get some extra money from somewhere. Otherwise we're going to do less and that makes me a little anxious because I don't feel like we're able to do what we need to do currently. We wanted to bring it here to kind of share with you so you would be aware of what's happening in the capitol so you understand what we're up against. I guess you want to discuss the other bill at this point.

AMANDA LAUGHLIN: So house bill 823 by Representative Hunter is the secondary contaminant bill that has been amended. Basically the original bill stated that all water systems, it was a statewide bill, would have to meet secondary levels. Which would be astronomical in cost for water systems to try to achieve. There's additional

things in the original bill about DHH, DEQ, and Public Service Commission basically enforcing that and doing inspections, putting all these reports on our websites, et cetera. And then even some enforcement language that was different than what we normally do in enforcement in the sanitary code. On last week in committee it was amended to only be for the St. Joseph Water System in Tensas Parish. However, going back and looking at the populations that were put in the bill and then comparing them with the census we feel like it will include another water system, not just St. Joseph. It would include Newellton. So that might be an issue for another water system. But basically in committee General Honore came and showed some footage about Flint Michigan and also brought lab results from Virginia Tech from a house that had an increased level of lead. I think it was 42 parts per billion of lead from this particular home. The committee meeting really went in the whole started to talk about lead, et cetera, but the bill is for secondary containments. It was an interesting committee meeting. Some of you were there. But basically it's going to be heard on the floor tomorrow. There is some concern for the town in the sense that they already have a budgeted plan to repair the system. And for those of you that aren't familiar with the St. Joseph story, which is

basically another item on our agenda to discuss, they have significant distribution problems. They also have water treatment problems because they have not taken care of their plant. But they are losing about 89 percent of the water that they produce. They have about three valves in their system so every time they have a line break, which is probably weekly or every two weeks, they have to shut down the entire system. When they do that and then they turn it back on the water quality, the brown water, I mean it's like chocolate milk color. They have tremendous iron and manganese. They're not using their full treatment ability anymore because they haven't replaced the media in several years, grain and sand filtration. But they have money through capital outlay funds available to them, but the town cannot produce a clean audit. So they are not able to draw any of the money that's been appropriated to them. They have money that's already in priority one that's ready for them to draw down and they have a lot of other money in priority five which would have to be moved by the legislature to priority one for them to pull it down. They have CUF money, LCDBG, there's like four different funding sources that is available to them that they can't use because they can't get an audit. So it has gone to all the way up to now fiscal administrator hearing. They've already had one. They were given 30

days to produce an audit and get everything in line. And then it's been 30 days so we're going back on Friday for another fiscal administrator hearing. And if they get a fiscal administrator the funds would be released. During committee last week the mayor was asked to voluntarily have a fiscal administrator assigned and he declined. What happens is if the fiscal administrator, to go through that process the committee on Friday they said yeah we want to assign you one, but they have to actually go through a court process. So you're looking at a lot more time before someone's actually assigned, usually like a CPA firm. And then once that's done they can get the funds. Every time there's a stall. It's just putting off more and more time to get any repairs done. It's not a good situation. Just continue to have more and more meetings and fiscal administrator hearings and different things. I think with house bill 823 that's kind of what they were looking to do is just to now they'll have to meet also secondary contaminants at that water plant. It might cost more money. And then on the lead front we have done things for DHH we have followed up on the lead. We went out there and actually took additional samples at that one house. We have done a lot of lead monitoring and copper monitoring. We've pulled samples at the source, in the distribution. You know that's not typically where you

pull lead and copper. We've done a round of investigative sampling at homes in St. Joseph and then they're going to have to do another round coming up soon. We haven't found, they're not exceeding the 90th percentile. They had one sample come back elevated at 22 parts per billion and the action level was 15 and that was taken at town hall. So it wasn't even taken at the right site. It wasn't a residence. Even with that we had them do a replacement sample and pull 11 samples instead of 10 and they didn't exceed the 90th percentile. Our data does not show a lead issue in the town. We did pull additional samples for that one particular home.

JIMMY GUIDRY: If I could, we might have to share the mike so she can hear or get minutes. While we're getting the mike, just to share with you, part of the reason they're trying to make this a health issue is they've been watching the news. What happened in Flint Michigan is they had elevated lead in children as a result of lead in the water and there's this huge settlement and all this money and all these things that folks are getting so hey, let's have a Flint Michigan here in Louisiana. First they tried manganese, that didn't take root. But they're still working on secondary characteristics. So they did all this on the lead to say there was a lead issue, which we haven't confirmed yet. We are still working to show it's

not. All about trying to make it a health issue to move this to a priority to where they get their system fixed. The bill itself is rather ridiculous in that here's a system that can barely meet primary because it's so poorly managed and has been run into the ground and we're going to have to replace, the taxpayers of Louisiana are going to have to put up 7.8 million to replace to get it to be able to give them clear water. If their bill passes, which requires they meet secondary measures, I mean here you have a system we're refurbishing or trying to rebuild it will have to meet higher standards, secondary standards, than other water systems. That's how ridiculous this bill is in my opinion. Pat, I know you have a question. If we can get a mike to him.

PATRICK KERR: I have a couple actually. I can't help but think they're having, at least for big excursions if they have short circuiting in that media, and I don't understand why the department can't do something about that.

AMANDA LAUGHLIN: It's ground water.

PATRICK KERR: They're using alluvial wells, it's just not under the influence?

AMANDA LAUGHLIN: Right.

PATRICK KERR: There's nothing that they're doing that exceeds any standard that's on the books right now and

they're compliant with all of the notification.

AMANDA LAUGHLIN: No, they have some administrative type violations and we did a survey in December with numerous significant deficiencies. But we have to give them the time.

PATRICK KERR: I sat through those hearings and we did it over two days and the frustration is this a system that is obviously not healthy. There's got to be something that we can do in our rule making or as a committee that would allow us to take action against a system like that. The frustration of the legislature right now is there's nothing. We basically say they meet the drinking water standards, we're very sorry. That just cannot be true. And I wish the department could think of something we could do.

AMANDA LAUGHLIN: There is an order that's about to go out for them to fix the physical things going on in the plant. There are significant deficiencies that could introduce contamination. Obviously if you're losing 90 percent of your water you're constantly compromising. They're not violating any of the primary containments.

PATRICK KERR: My concern is if we don't do something I think the legislature passing a law that says they have to meet secondary standards means the department has to regulate secondary standards even if it's just for one

town. You've got to go through the whole administrative procedures act, write the rules, do the whole nine yards just for one town.

CARYN BENJAMIN: They didn't tell us to do that.

PATRICK KERR: Yeah, but they're telling you you have to enforce the secondary standards and so I think you have to have regulations that say how to do that. Cause there's no enforcement language in the federal standard at all. Second standards are recommendations. I think you're taking on an awful lot of work.

JIMMY GUIDRY: We've met with all the folks involved, capital outlay folks, the governor's office to get this money moved to get it fixed and now we have to take the authority away from the mayor to be able to do it. I have worked on this water system more than any other system to try to get it to move that the issue that I see is that people want, if a system's not operating properly, if they have discolored water, they want the state to take it over. They want us to appoint someone to take it over. There are a lot of little systems in Louisiana that could not afford to meet some of these iron and manganese standards, or in the country. If everybody who is going to have a complaint about their water being brown or slightly discolored starts saying well the state needs to step in and take over. Which is what essentially they

want us to do. Then we just opened up, this town needed to be managed properly and so we've had to force the issue because if we take it then we would have to find somebody to put in charge of it. And who wants to go run the system. Even if we give them that initial money you're not going to make money on it, it's not going to sustain itself. This water system is 12 years old. The pipes are old, they need to be replaced. But the water system, treatment system, is 12 years old. That's not old at all. And it's not working because it's having to make up for the poor infrastructure where all this water's going through the system.

PATRICK KERR: They say they have 14,000 feet of pipe. The plant is mechanically sound, just needs to be serviced. And they have a capital outlay of almost 7 million dollars to do it. That's unconscionable. I'm sorry. Something's really broken here. And I know they've gone through an awful lot to get everybody's attention and it's not worth doing, I promise. This is a 90 day, you can replace 14,000 feet of pipe in 90 days no problem. I don't understand why they're doing what they're doing.

BEN BRIDGES: What scares me where does it end. If you do it for St. Joe then every other little town who has brown water all over North Louisiana is going to be the same way. The ripple effect would be catastrophic.

JIMMY GUIDRY: They latched on to Flint Michigan and still trying to make it a health issue.

BEN BRIDGES: But it has nothing to do with water. It's all the managing of the system, or the lack of, and the operation of.

JIMMY GUIDRY: Obviously they've never invested or reinvested maintaining their system. Literally even if you give the 8 million and get it up to speed you got to have somebody that's going to run it because it's going to be back to square one. Anyway, we thought it would be good to share with y'all because we're seeing a lot of push towards, most of our complaints about water are the fact it is color. That's where the complaints come from. So there is a lot of disgruntled folks if you would. Now we have, at St. Tammany for instance, they invested, they got the water clear, then the people complained about the rates. Same people who complain about the color complain about the rates. Just to share with you.

RICK NOWLIN: I was just going to say there's some consulting engineers in here in 35 years I've worked with a lot of different small water systems, and some people may not agree with me, I have never asked for capital outlay dollars for any of those systems. We use USDA, we use community development block grants, we use (inaudible) loan fund. But a lot of times we use revenue bonds. Now

they may have to charge more than 6 dollars a month for the water. We've told some of them 15 dollars is not outrageous. Another 9 dollars would pay for your improvements. You're talking about the budget, wait till this hits statewide. It's a disaster waiting to happen. We have to kill this bill.

PATRICK KERR: It's going to die tomorrow on the floor.

JIMMY GUIDRY: I'm glad I shared with y'all. I can't lobby, but I can share facts.

AMANDA LAUGHLIN: Discuss the tier one exceedance at People's Water in Donaldsonville. The tier one exceedance at People's during a routine sanitary survey staff went out and looked at their MORs, or different records, et cetera and they were using the Palintest for analyzing their chlorine dioxide and chlorite at the water plant. So in reviewing the paper MORs and the data that was retrieved off of the machine they were not the same. And the machine had recorded numerous exceedances for chlorine dioxide and chlorite. And under the surface water treatment rules, or actually, sorry, the disinfection by-product rules when you have an exceedance of chlorine dioxide or chlorite at the point of entry you have to do follow up sampling in the distribution. The chlorine dioxide if you don't do the follow up sampling in the distribution it's an automatic tier one. So if you do the

sampling and it comes back fine there's no violation. But you have to do the follow up. There is also on the MOR that we provide the systems there's what we call the 3rd sheet which basically gives water systems an opportunity to explain any exceedances or problems they may be having with their equipment, different things that might have happened. Even with the titration method and what they did. And it's a documenting form that basically gives water systems the ability to discuss something that might have been an excursion or something that happened. In this case nothing was ever documented. Because there were so many of them and one of them had occurred like the week before the staff went out we had a discussion and the water system was not able to explain the values or what was happening. So we issued the tier one and then also a do not drink because there was too many unknowns. We asked them to not use chlorine dioxide anymore. We went out, they redid their CT calculations using free chlorine and that's pretty much what happened in a nut shell. It's just very important, it goes back to something that we talk about in here often about operation and maintenance and how important it is. You can have all the bells and whistles you want at your plant, but if you don't understand the regs, or how to use the equipment, or you're not reporting when you're having problems it causes

a lot of other problems. You have to have the knowledge behind some of these chemicals and some of this treatment that you're using. Especially something like chlorine dioxide that has problems if you're not using it correctly or you're not following regulations that's around it. That's pretty much what happened at People's. Anybody else have comments or questions?

BEN BRIDGES: I would like to ask that DHH use caution. A lot of these newer gadgets or test equipment has memories and what not and digital. So from one standpoint it makes it safer. Say Pat or I run the same test we get a number instead of a visual. If you look at these machines, and I have one and I've played with it with different waters and I've had to learn how to use it. And so with that memory in there if you're teaching your new customer how to use this thing and you have data that is erroneous because your technique is not correct yet or perfected then you're going to have numbers that are out of compliance. I totally agree that there is a lot more behind the scenes, but to nail the Palintest and to limit that I think you're fixing to go back to everything manual titration and everything that is recordable will be gone.

AMANDA LAUGHLIN: That's why there's the third sheet on the MOR.

BEN BRIDGES: They should have made a lot of things more

clear. There's no excuse for the numbers that were there. But what if they were taking that chlorine residual in the plant, not out in distribution. You could have higher numbers in the plant.

AMANDA LAUGHLIN: But you would also have a piece of paper that said I took this on this day at this place.

BEN BRIDGES: And it was not there so it's his word against your word. I understand that. But just because it's on the machine doesn't mean it came from that particular POC or that tap that would put them in violation. They could have been experimenting with several different things.

AMANDA LAUGHLIN: Agreed, but that doesn't mean it doesn't either. That's just normal reporting. You just document hey, this is my sample sheet for this point in my plant and this is my sample sheet for that point in the plant. And honestly if anything is recorded it should have been recorded somewhere else and you should be able to explain it. It's not about the machine. If you know the machine is having a problem then you should be documenting that somewhere so that when DHH comes in you have an explanation and not just an I don't know.

BEN BRIDGES: I just don't want you to see a machine and have some memory in it and not know where it came from truly and fault them. Maybe they were playing with it. Who knows what could have been done. It wasn't recorded

properly, but every machine now that has memory I think they're gun shy and they're going to stay away from those type machines which actually are a benefit to the system because it gives you a number. It's a better device. But if you go back to manual there's no record of anything.

AMANDA LAUGHLIN: I agree. That was the question was where did these come from. Cause there are multiple places in the plant they pull from. But the answer that comes back was either I don't know or that was impossible.

PATRICK KERR: Are you saying that you just looked at the database in the machine to find these excursions, it wasn't what they recorded?

AMANDA LAUGHLIN: True.

PATRICK KERR: Well, that's not okay. Are you serious? So the operator who is keeping a written log you didn't accept his written log?

CARYN BENJAMIN: He didn't keep a written log.

PATRICK KERR: Okay. We don't log excursions if we're playing with the machine. So they weren't keeping a log so you went to the memory.

AMANDA LAUGHLIN: The log that we were getting every month is not anything that was recorded on the machine.

BEN BRIDGES: Could have been correct or incorrect.

AMANDA LAUGHLIN: Even the same day.

BEN BRIDGES: The evidence was what was on the machine.

JIMMY GUIDRY: There was nothing to refute it. There was nothing to say machine not working today, what site they took it. No explanation of what the machine had.

BEN BRIDGES: But if you had had a manual titration system you would have had the data to go against what I'm saying.

JIMMY GUIDRY: It begs the question, it's a good discussion, because here you go to technology today which documents everything. So you're not documenting then you don't know what documentation means. Were people exposed, were they not. There's no way to refute it. Then you have the same day, same time something on the machine is different than what you logged. Is it a machine error, or is it the person didn't want to, is it falsification of documents.

PATRICK KERR: My concern is, for example, just throw out a hypothetical, not that I've never done it, but if I take a high range kit and check the chlorine in my pool that meter is going to have that reading and I would also use that meter to check in the distribution system. But I don't keep a log that says on this date I did a swimming pool water test. What we do is we record the findings. We're not relying on the memory of the machine. But if you guys are going to download machine memory and look at it I think that's an issue.

JIMMY GUIDRY: I think it's an issue if you have nothing to

say where you took it, nothing to say the machine wasn't working properly. There's no log so literally you can't refute the machine because there's nothing else to back it up. There's no argument.

AMANDA LAUGHLIN: And in discussion, like lots of people using chlorine dioxide, the discussion with several other water plants anytime in other cases when people have a knowing issue, it's a known issue your machine is not working properly most people say I back it up with somebody else's machine, I do my own titration. They have a protocol. When you say I don't know, or I don't know what the regs are, you're not doing distribution monitoring you're using chlorine dioxide. You just can't do that.

BEN BRIDGES: It just concerns me I don't want to rely just what's on the machine because then you'll have to document every location and every time you sample for whatever it was even if you're playing with a jar test and just playing with it or if you're at the point of entry or the end point then that scares me that that data could be used against you if you can't validate or show where you took every sample.

PATRICK KERR: A conversation we're having is we do continuous monitoring for chlorine residual at all of our stations. We're required to report once a day. The

question becomes do we report once a day and not save everything else. And I am adamantly against that because I need to be able to look at trends and look at problems over time and if I'm just doing one a day I lose that capacity. That's the unintended consequence of y'all going to machine data or asking me for a dump from our SCADA system.

AMANDA LAUGHLIN: I do think that you have to also consider this disinfectant procedure and the regs around it verses chlorine or something that doesn't have a tier one associated to it. It's just more stringent and so your reporting and your recording should be more stringent. Especially for chlorine dioxide. And the code is very clear it says any exceedance, any time, any exceedance you have to do the follow up. And also though if I said, if I came to you and I said let's just throw it up, I pulled your chlorine data for six months and you have all these crazy numbers and you said yeah, that machine doesn't work very well. So for six months you knew a machine wasn't working well and you're okay with that. It's just kind of a whole, a follow up thing. If you go a month or so and you realize this machine is not appropriate or it's not working correctly you should go to another method, or buy a new machine, or whatever that might be. Not just continue to allow a machine to give you erroneous data.

CHRIS RICHARD: In this situation I think it was the reporting, the fact the machine wasn't working came from them. And the recordings were on the system. It was their normal recording. It wasn't testing, or equipment, or anything. It's a little different than what y'all are talking about.

JIMMY GUIDRY: It was a tough decision because if you have a machine not working like it should you would check it out, but you would also check to make sure it's not getting out the system. You want to make sure people aren't being exposed. So all of a sudden I don't have that answer. And today it's you know something and you don't act on it they want to know how long ago did you know. That was last week and you didn't act on it so people are being exposed. I still to this day don't know if people got exposed. All I know is there were higher readings on the machine. I don't know where the samples were taken and I have nothing to tell me the values are right or not. The action behind seeing these numbers and claiming the machine doesn't work is actually weak in that you might be exposing people to something you didn't verify. You didn't verify whether this was an exposure or not. It's getting harder and harder with social media that you're going to keep anything that's happening once you document you better be able to explain what you're

documenting. I understand if people stop using the machine cause they know it's recording. I understand that's a risk involved, but that's the whole point of technology is to make it easier, but also to document efforts. And to me if you're going to document, having been through the legal system on a number of occasions, you're going to have to document that number is not valid or something. You have to document why you didn't believe that value. If your logs are not matching up with the machine at all that's a bad sign. Anyway, thought we'd share for the purpose of hearing your thoughts. I think that's a good discussion. Anymore questions before we move on? What we had agreed to do is start part 4 which is probably our, I guess the part that has the most with the business of drinking water. And so we're not going to be able to do it all at one sitting so we thought we would start today. And as we get through it we're hoping once we get through part 4 and certainly hear your thoughts, once we get to that and get the voting done we're pretty close to finishing our work on the code if you will. I thought we would start with that. And today is just us coming back with questions and our side by side. And then I guess we'll start with that conversation.

AMANDA LAUGHLIN: We have been having a lot of internal discussion about this part. And it's taking us a while to

go through some of the comments, et cetera. So we'll probably do it in parts like Dr. Guidry said. I think we got through 4.3. And so on page 1 under 4.0 one of the comments was that worse condition and life of a facility are too nebulous. And our comment was that the facilities have to be planned with future requirements. Like it's trending that things are getting more and more, the regs are getting tighter and tighter and I don't think it's going to stop over time. So you do need to as an engineer look at a plan when you're designing it and think about the next 20 years or 30 years.

CHRIS RICHARD: Not to interrupt you, and I agree with you on that, but worse condition in the life of a facility. What is the life of facility. The Donaldsonville plant you mentioned was built in 1925. It's still operational. Is the life of the facility 100 years. So the worst condition you can foresee in 100 years. I think if you want to nail down what you wrote down in future regulations and that kind of thing. But just to say somebody could come back in 50 years and say the code said y'all should have considered the worse condition that could ever happen in the life of the facility. You can't do that. You can't say worst in the life of a facility.

AMANDA LAUGHLIN: And maybe the term worst is not right, but I think more about you need to consider the future.

You have to design considering the future. Like you cannot design a plant that works for just right now because even in 10 years from now you're not going to still probably meet some of the new regulations. Look at just the surface water treatment rule over the last 10 years. Now people are required to put in UV and 10 years ago that wasn't really even on the books yet. It's just going to get more and more and so I guess our point was like I just want to make sure that it's clear that it should be designed in mind of what may happen in the future and none of us will know for sure.

PATRICK KERR: Is there any objection to the language DHH proposes here?

CHRIS RICHARD: No. If that's substitute language that's fine. It's worse condition life of the facility just doesn't.

JEFFREY DUPLANTIS: Is that DHH's recommendation for wording or is that just a statement?

AMANDA LAUGHLIN: It's our comment. It's not put in.

JIMMY GUIDRY: You have worst condition and life of the facility as too nebulous. You're saying that's not acceptable language, right?

AMANDA LAUGHLIN: Right. Our comment on the right is what we thought.

PATRICK KERR: So just replace the struck through the

design of water treatment plant with DHH's comment. Is that okay with everybody?

AMANDA LAUGHLIN: And then the next comment was, and I actually have talked to Chris about this before, but on 4.2 clarification design. The minimum of two units was removed and then just so you know the subcommittee struck out anything that said should or recommended from the entire chapter. But that doesn't really work in all cases. In this particular instance we had the question was your design, your average daily design flow may not be adequate. Why wouldn't you want to have it at your peak flow? Are you using average instead of peak if one is out of service?

CHRIS RICHARD: You don't design a plant typically for peak flow. You handle peak flow with storage and you design for max day average flow. So this is the plant, not the system. You can have storage that handles those peak flows at your plant. You don't have to treat, you treat over the course of entire day to meet average.

AMANDA LAUGHLIN: If you have to meet the average, have the ability to meet the plants average daily design flow with one out of service. But if you don't have, what if you just have one?

CHRIS RICHARD: You can't have one unit. That's why I struck it though. I know you said you have to have two.

Took out the two units, but to comply with having to meet the design with one unit out of service in itself says you must have more than one unit in order to comply with that requirement. You can have 2, 3, 4 whatever. But if you have one unit, you take it out of service then you can't meet the requirement to meet the flow.

ROBERT BROU: Running on a typical day too low of a percentage.

AMANDA LAUGHLIN: What if you're in August in a drought?

PATRICK KERR: Peak day average hour cause you don't store more than a day's water. So would peak day average hour fix this?

CHRIS RICHARD: For treating you want the ability to design a plant for that high flow?

PATRICK KERR: Average hour of a peak day.

CHRIS RICHARD: I think that's high.

AMANDA LAUGHLIN: If you had your average and it's like August and we're in a drought are you going to meet it?

JEFFREY DUPLANTIS: Are you going to meet what?

CARYN BENJAMIN: When you take it out of service it normally takes at least a week to rehab the clarifier.

ROBERT BROU: That depends. We've taken them out and put them back in service that same afternoon on numerous occasions. I had to do it for decades because of our treatment plant one unit was more than 50 percent of our

demand. If I took the other two or that one offline the other two could not meet the demand before we built our new Eastbank plant. We went decades like that. We had an 18 hour window. Now it was falling apart by the time we got to refurbish it.

CARYN BENJAMIN: That's because of your storage, right?

ROBERT BROU: I was able to do it with some storage, but A plant and B plant combined were 3 million. C plant was 4. So if I took that 4 million offline my average daily demand was about 5 million. I could not meet it. I had about an 18 hour window.

CARYN BENJAMIN: We need to word it to where it's understood that you're not going to be able to treat or you're not going to be able to treat while it's at your peak demand. So you have to have either backup capacity in storage to allow for you to rehab one clarifier or you have to have two clarifiers and have the ability to meet the peak.

ROBERT BROU: And that wasn't truly, we do some refurbishment, but typically it was taking it to clean it, go down clean it out, patch some small holes. Even typically now when we clean a plant it is one day. It's taken down in the morning and it's put back in service that afternoon.

CHRIS RICHARD: When you're designing a plant you're

designing, like you said in your first statement, you're designing for the future. You're not designing for today. Plants don't run 24 hours a day. Remember this is the code we're designing today so if you design the highest I could see would be max day. If you do peak hour for a plant hugely over designed.

PATRICK KERR: If you have a mechanical failure, scraper craters and it's going to be a week if what's remaining could meet average hour of a peak day you could run it 24 hours and produce enough water. You would have to have storage capacity to keep the system serviced. So their comment is the average daily flow is not adequate. Why not peak. Well, you don't have to be able to meet the peak demand with the single unit, but that unit should be able to meet the peak demand over a day, right. You're saying that's over designed?

CHRIS RICHARD: I think it can be and it's not defined. We have average day design and max day. We don't have peak hour.

PATRICK KERR: Average hour peak day.

BEN BRIDGES: You still could run out of water.

PATRICK KERR: Yeah, but storage should take care of it. You would have to have enough storage.

CHRIS RICHARD: Again, your plant's operating at 24 hours a day right now for that to be an issue. Most of them

don't. Because then you begin planning for expansion.

PATRICK KERR: So what's the right number that is acceptable to them. They're saying average hour is not okay. What's right.

CHRIS RICHARD: What do you design a plant for, average, max day?

RICK NOWLIN: You have to look at utilization of the plant. You design for peak flow and it depends on the size system. If you have multiple plants in the system you don't worry so much. If you have one plant we do try to put as much in there as we can reasonably justify from the cost basis.

CHRIS RICHARD: Storage is cheaper than more equipment.

JIMMY HAGAN: Is the question we're asking is with one clarifier out of service it still has to meet average. Which would imply if they're both in service you'd be meeting two times average which would be more than max daily. Not much more, but still be more. With storage you will certainly get peak.

ROBERT BROU: This is minimum standards. You can always justify going more.

CHRIS RICHARD: If your average day is a million gallons you have to be able to do a million through one clarifier, but you have to have two. So in effect you have a 2 million gallon a day of clarification. If you do peak

hour that might be 3 million or 4 million to do in each clarifier. A lot more than I think you need.

JIMMY GUIDRY: What if it's the average when you know it's the most demanding time? What if it is the average in August as opposed to a 12 month average?

AMANDA LAUGHLIN: When we do surveys, when I used to do surveys that was definitely a conversation I always had with the plant. Was your design for this, you have a design capacity, you have an average production capacity, but what's the max. And I would always ask what is the worst case out of the whole year. And it was usually August or September and if it would happen to be a year where we had no rain it was tremendously different. And I realize we're typically not in a drought year, we have a lot of rain and all. And I realize you can't design for every circumstance. But typically there is just a ton more water production in the summer time. I don't know. Might be like what's the average during the peak of your year. Like if you were designing for the worse part of your year or something.

CHRIS RICHARD: Did we use average day month on some previous. I don't want to get into too many different definitions because we're going to have five different definitions for design.

AMANDA LAUGHLIN: In here you have plans average daily

design.

CHRIS RICHARD: I meant previous sections. Somebody came up with, I think it was Randy.

PATRICK KERR: Randy is the guy who uses average hour on peak day. And we use if for fire flow. If you have a fire at a peak hour on a peak day you're going to have a problem.

CHRIS RICHARD: For plant design I think he went with max month, average day in a max month or something like that.

AMANDA LAUGHLIN: What would that have been under, like part 2?

CHRIS RICHARD: Probably chapter 5.

ROBERT BROU: I was going to give one example of why peak does not work. Our peak typically is not August, it is when we have a freeze event. I have a 9 million gallon a day plant on the west bank and during some freeze events I'm producing 9 million gallons. If I had to have one unit out to get that now I need 14 million. That's way over designed because my average out of the plant is less than 4. My peak day would be outrageously over designed.

JEFFREY DUPLANTIS: What about like daily, average daily during the peak month?

CHRIS RICHARD: Max month was what Randy said. Let's stick with the same definition throughout the code.

AMANDA LAUGHLIN: Maximum average day demand. Supply and

storage of chemicals was maximum average day demand. Maximum average day demand is what we've used prior for chemicals, storage of chemicals.

PATRICK KERR: What the heck is a maximum average day?

CHRIS RICHARD: Max day typically which might be one and half times your average. But your peak might be four times.

AMANDA LAUGHLIN: What if you said you have the ability to meet the plant's average daily design flow with one unit out of service. Do you feel like that would include, indirectly include an amount of storage that you would have to have to meet that?

ROBERT BROU: I think we have in other places in the code you have to have a day's supply.

PATRICK KERR: No, we don't. I would have jumped up and down on the table if we had said that.

AMANDA LAUGHLIN: As design engineers when you design, like if you're going to design a new plant don't you typically go above what you think you are going to produce anyway just because you're going back to 4.0 when we just talked about you have to meet the future demand.

CHRIS RICHARD: So you have it built into the plant. But let's say you come up with you need a million gallon a day plant and that's got the future growth into it. And that's an average day. So on an average day they'll

produce a million gallons a day through it. You might have to augment it with storage, but you design it. If you did peak hour that suddenly would be a 4 million gallon a day plant to produce maybe 500,000 gallons a day. You're getting really cost prohibited. And it depends on when you classify a plant, how you classify a plant you said yours was 9 million gallons. What is that number based on. Cause that's what this is for. What the plant's designed for. If you're saying it's a 4 million gallon a day plant then it should be able to produce 4 million with a unit out of service. It's what it was designed for. If you design it on max day or average. I don't know anybody that designs a plant for peak hour or peak day. A lot of people do average day or you might do max day. Also you can meet max day with a unit out by having more units. You will meet peak hour, not with a unit out of service though cause you got basically double your capacity of design. Cause you have 2 million gallons a day online all the time. It's just during that catastrophic event, not scheduled maintenance, that you need to produce.

AMANDA LAUGHLIN: In the interest of time you all feel like the average daily flow is okay? I'm just afraid that we're going to get submittals for one clarifier.

CHRIS RICHARD: You can't.

ROBERT BROU: They have to meet their average with one out of service.

CHRIS RICHARD: It's pretty clear to me you can't meet it with one out of service.

BEN BRIDGES: If you only have one and it's out you're out of water.

JIMMY HAGAN: Is this for review of new plants? So you're going to have 20 years of capacity built in there. And your peak is going to be 1.8 times your average.

CHRIS RICHARD: No, it will be more than that. Depends on the size of the plant. It might be 4.

JIMMY HAGAN: Your maximum daily demand I haven't seen one that's over 1.8.

CHRIS RICHARD: You said peak.

JIMMY HAGAN: If you meet max daily and it's 1.8 you've got twice as much clarification as you need and you also have 20 years built in there you in fact have more.

KEITH SHACKELFORD: At the beginning of the plant life.

CHRIS RICHARD: When you're not doing maintenance for that one day you have double that. That you're maintaining and using. You're talking about, this is all about really not even plant maintenance, you wouldn't do plant maintenance during a max day event either. You would plan it for your least flow times. You're talking about an unplanned shutdown.

JIMMY HAGAN: You would be better able to handle it on day one then you would on year 1, or year 10, or 15.

CHRIS RICHARD: When you get to your capacity that's when you plan for your expansions.

AMANDA LAUGHLIN: We talked about it probably as long as we have been talking about it. When we started going through this it's just really a lot to discuss. That's why we didn't get a 3rd of the way through the whole part. I guess we see everyone else's point too. I was just trying to think about maybe some language that would benefit both sides. If you don't like the peak flow then what if there was...

JEFFREY DUPLANTIS: We talked about adding in before average daily design flow add in max month average daily design flow.

AMANDA LAUGHLIN: You are going to have a max month. Over time you would have that knowledge.

JEFFREY DUPLANTIS: It could be in the winter time. Whatever your max month is take the average daily flow of that max month and that's what you use.

JIMMY GUIDRY: So would an engineer know that on a new plant before we ever know.

CHRIS RICHARD: It would be hard if you had a brand new plant. If you're doing an expansion you have historical data. There's no way to project a max month.

KEITH SHACKELFORD: You can also contact similar sized communities.

BEN BRIDGES: Right. You can get a ballpark. You could get in a ballpark with a new plant, but to nail it to the gallon, no.

JEFFREY DUPLANTIS: You're ball parking a daily average on a new plant. You're guesstimating either one on a new plant.

BEN BRIDGES: With the experience most engineers would have you could be pretty accurate.

CHRIS RICHARD: I don't think there's a big down side if you missed it either.

BEN BRIDGES: Right. You just go back and do it again next year.

CHRIS RICHARD: I don't think it's going to be an issue.

JEFFREY DUPLANTIS: Is that a yes or a no?

JIMMY GUIDRY: I think it wins, average in a max month. Let's move on.

AMANDA LAUGHLIN: So 4.2.1 D it was scratched out. Detention time was scratched out. And I guess the comment was, I think it was only scratched out because it was recommended, greater detention may be required. And our comment was while detention shall consider removal requirements for the unit. As a substitute instead of just eliminating it we propose to add that particular

language back. Some of the things I realize were taken out because it was recommended or what have you. And there will be times we propose a different, like a substitute to go back in. And it's not because everything needs to be completely defined. I know Chris your point a lot is that needs to go back to the engineer, and it's true. But not all engineers are created equal and you have to have some of that in there. I mean we see a lot of interesting stuff. And you have to have some things outlined for people, even if it's just to jog their memory or their knowledge like oh, yeah I need to consider that as well. It's not that we're trying to define every little thing. It's just sometimes people need to be prompted to consider things. Does anybody have any comment on that one? 4.2.2 coagulation D. The flow was removed and we fell like you should have a requirement for flow to ensure your dosing and stuff. You have to know what your flow rate going through is so you can dose appropriately.

CHRIS RICHARD: If the flow is split after and then you split it and you're not really measuring it. You're just sending it equal to the two basins. There's no need to measure it.

JOHN WILLIAMS: We have plenty of systems that feed independently on each clarifier separately. In those

cases they would need.

CHRIS RICHARD: If you have multiple basins and multiple mixers then you would have to. But if you don't, so you need to address it differently than just saying you have to. Not every case does have that situation. Because in the case we just said you would have to measure, but there's no need to measure.

JOHN WILLIAMS: We see all kinds of things and some of them fit exactly what you are saying and others engineered completely different.

CHRIS RICHARD: I'm just saying if you put it as a requirement then those we're talking about would have to measure and there's no need for that. You have to figure out a way to address both situations without encumbering the ones that don't need it.

BEN BRIDGES: The only problem is you don't have the word in there with the common rapid mix. If you have one rapid mix then that negates having to measure the other two. Just flow between basin you have to measure each one. I have one plant that has three with one common feed point three separate basins and then have to measure all three when they can measure just the one.

CHRIS RICHARD: Just address it with chemical feed that you have to be able to measure the flow if it's split.

AMANDA LAUGHLIN: I was going to say what if you added a

statement that said when you have a chemical feed.

BEN BRIDGES: Multiple injection points.

PATRICK KERR: What about from a mixer standpoint so saying coagulate dosing needs to be...

CHRIS RICHARD: Flow needs to be measured prior to--

PATRICK KERR: Mixing. Move it up to mixing.

DIRK BARRIOS: Many plants like ours they talk about clarifiers, I don't know the first thing about clarifiers. We don't have clarifiers. When you start having to measure the flow in every one of the troughs that we have cause we have eight basins.

CHRIS RICHARD: What does it say in part 5 on chemical feed?

CARYN BENJAMIN: Just states it has to be.

CHRIS RICHARD: Doesn't say you have to measure the flow prior?

BEN BRIDGES: You have to know the flow rate to be able to dose accordingly.

AMANDA LAUGHLIN: Yeah, that was our point.

BEN BRIDGES: I'm not agreeing with the statement, it just says if you split it you have to measure it. If you have one common feed point with one rapid mixer split at 14 different basins it shouldn't matter.

AMANDA LAUGHLIN: What if you said except for common feed situations?

BEN BRIDGES: I'm good with that. I just don't like having to measure each basin.

PATRICK KERR: What if it just said coagulative dosing must be based on flow. And then wherever you dose you have to know the flow into that basin.

CHRIS RICHARD: That's what I was asking if it was covered in chapter 5 already.

AMANDA LAUGHLIN: We will check on that.

JOHN WILLIAMS: It also gets a little more complicated where you might have one plant several different drains with clarifiers in each drain and going to maybe different banks of filters. We have situations like that where not only dosing, but clarifiers are serving particular filters as well.

BEN BRIDGES: Say that one more time.

JOHN WILLIAMS: I have plants that have multiple clarifiers on site and they are serving different filter banks so they're separated. So I guess what I'm talking about is treating it as a train and not just as each train would require flow monitoring for the purpose of like CT. And so it's not just with chemical application sometimes where this type of flow monitoring is important.

BEN BRIDGES: But you have monitoring for all the water coming into the whole facility and each filter should have a GPM rate on it so you can calculate GPM going through

each filter verses what's coming in and figure.

CHRIS RICHARD: This is design. Let's remember too this is moving forward, not going backwards.

JOHN WILLIAMS: I'm thinking about what I see in the field and a lot of times we don't have that monitoring or it's there and it's no longer functional.

BEN BRIDGES: I can see nonfunctional. It was there, it just doesn't work anymore.

ROBERT BROU: With each of our accelerators we have an individual train as you speak about with filters on the end of each. We do monitor the flow coming into each of those. But the two new super pulsators we built are a combined rapid mixing chamber and proportionally split between the two. We were able to divert to either basin, but typically an even amount is going to each unit.

JOHN WILLIAMS: I will add to that one of our gold star systems.

DIRK BARRIOS: In general what ends up happening is guys like him and us who have open trough systems and we're going to have to figure out a way to monitor or get flow rates on open trough systems. That's not easy.

PATRICK KERR: Again, what Chris said, this is design.

ROBERT BROU: This is a relatively new design. It's a good design.

PATRICK KERR: But it's done.

ROBERT BROU: Somebody could come behind us, same thing, one single rapid mixing chamber, it's a great design, it gives us a lot of flexibility to be able to do it. You don't want to write something that wouldn't allow somebody to build one identical.

AMANDA LAUGHLIN: What about just basically stating that the flow must be measured for coagulate dosing. That doesn't really say a location. If you're doing it in multiple locations you have to know the flow at each location verses if you just have one coagulative dose you have one flow. I just think it's important to not, in the chemical chapter it talks about the dosage is proportional to the flow, but it doesn't necessarily state you need to measure the flow. I think it's important here.

BEN BRIDGES: I'm assuming it's understood, but again you need to put it in print, put it in print. That makes sense.

AMANDA LAUGHLIN: 4.2.3 B. For flocculation the detention time our comment was that detention shall account for regulatory requirements like LT2 for instance for the plant. Consideration should be given for floc sharing and carryover. I realize I think it was removed because it said should be 30 minutes and all of that. I don't necessarily know detention times outside of this range. If you kept it kind of general and you're going to have to

look at the detention time. Similar comment to what we said detention shall consider removal requirements for a unit. Any comment? For D our comment was why wouldn't you leave the language in. Variations or alternate designs can be submitted to the state health officer at anytime. Like we would actually add that comment.

PATRICK KERR: Cause nobody wants to design to meet a variance.

AMANDA LAUGHLIN: It wouldn't necessarily be a variance because there is no requirement so it was just if you're going to not use-- the comment or the language was baffling may be used to provide for flocculation in small plants only after consultation with the reviewing authority. The design should be such that the velocities and flow noted above will be maintained. It says in small plants only after consultation with the reviewing authority.

DIRK BARRIOS: Are we considered a small plant?

AMANDA LAUGHLIN: No.

DIRK BARRIOS: We couldn't use baffling?

JOHN WILLIAMS: Carrollton uses it.

JIMMY GUIDRY: Is baffling just one example of others? Why not leave it as just others. Are there other designs that people might submit?

JEFFREY DUPLANTIS: Apparently because what they're

suggesting is that variations or alternate designs can be submitted so apparently there are a bunch of other ones. So why are we singling out baffling?

JIMMY GUIDRY: Yeah. There's a process that if you have another method you just submit your proposal for the alternate design. Why are we singling out baffling as one of those or is it the most common?

AMANDA LAUGHLIN: I guess just in reference to flocculation.

KEITH SHACKELFORD: It's one of the least expensive ways, least effective ways.

JOHN WILLIAMS: Takes a lot of area too. Carrollton was using baffling, football field size flocculators. It's old school.

JIMMY GUIDRY: Just curious as to why it was written in as such if you could state other designs. I mean hopefully we find cheaper and better ways in the future. But right now it seems to be common or the cheapest one.

DIRK BARRIOS: The mechanical flocculation is a very labor intensive issue when it comes to repairs because as an engineer you design a new lead, but we have to maintain them and they break and they are expensive to maintain. A baffling situation if it's done and designed correctly there's not a whole lot of maintenance that has to be done because it's just a series of baffling over and under flow

and it creates its own energy. We find it works well.

JEFFREY DUPLANTIS: Does DHH have to approve?

DIRK BARRIOS: You have to show you can get the proper velocity and mixture in the calculations.

ROBERT BROU: I don't think the statement's required at all. I think it covers everything y'all need is still covered. They want to submit something outside of the regular design criteria come to y'all, y'all would approve all the plans. Really should be designed as a regulatory document. I don't think it helps clarify anything.

JEFFREY DUPLANTIS: Can it just say other designs and put the statement they have in the comment and delete what's the existing language?

AMANDA LAUGHLIN: That's what our comment was was to add the language under other design variations or alternate designs can be submitted to a state health officer.

ROBERT BROU: I don't have a problem adding that sentence, but I don't think the original language needs to go back in.

JEFFREY DUPLANTIS: Delete all the original language and just add their statement in.

AMANDA LAUGHLIN: G we're back to the flow again. We said it should be a requirement at least per train. A means of measuring and modifying the flow.

JEFFREY DUPLANTIS: That gets back to 4.2.2. D.

BEN BRIDGES: Again, if you have one rapid mixture and you're splitting it again and you're measuring flow that you have inlet and outlet numbers on why have a redundancy again there. Unless you're changing chemical dosage at that point you have done nothing but split the flow that you've already treated and filters that are going to capture coming out.

AMANDA LAUGHLIN: What if you are going to modify the flow?

BEN BRIDGES: Increase or decrease?

AMANDA LAUGHLIN: A means to modify the flow. It says if the flow was split it's recommended a means of measuring and modifying the flow to each train provided. I think it was removed just because it said recommended. And our comment was it really shouldn't be recommended, it should be a requirement. If you're splitting the flow.

DIRK BARRIOS: If you have one common point coming in you're already measuring the flow coming in. How do you propose to measure the flow? What do y'all determine is acceptable as a way of measuring flow?

CHRIS RICHARD: What if you split it equally among the basins? It's not measuring, just splitting.

BEN BRIDGES: You're still measuring it because you have an end of meter and you have 4 or 5 filters on the back end measuring what's coming out. They should be real close to the same. You have three raw water pumps one 700, one's

1,000, one's 1,200. You know what that flow is because you have a meter there or you've tested and proven this is 700, 1,000 or 1,200. Why meter it again in the same process?

PATRICK KERR: It doesn't say you have to meter it. You have to be able to measure and modify it. If there is no other introduction you can measure the out.

BEN BRIDGES: But you already have a pre and a post.

CHRIS RICHARD: You're not really measuring the flow. I read that as direct measure at that point.

BEN BRIDGES: How do you mean it?

CARYN BENJAMIN: Measure the flow through each train. Chemical dosing, performance of filters, CT calculation, all that you have to have a flow measure.

AMANDA LAUGHLIN: We go into a lot of plants that have no ability to measure flow or they're not. And it's like how do you know what your CT is, how do you know what you're dosing if it's right or not. And the typical answer is I don't. If you're not even putting it in the design.

CHRIS RICHARD: If you split your flow, you mix it, you add your chemical, you go and you split it equally, it doesn't measure anything, it splits the flow equally below three floc basins. Why is that a problem? I'm not measuring. I guess I could say I know it's whatever divided by three, but it's not a direct measure.

CARYN BENJAMIN: Over time they're not going to be equal. Too many factors, head loss, filter bed, patch, all that changes.

BEN BRIDGES: I agree, there's not a set basin that runs identical to its sister. There's not one anywhere and it doesn't make sense cause they're designed the same everything. But if you have a meter at the backend on the flitter effluent and a meter at the frontend all that middle doesn't matter. Unless you change dosage on one train then measure that flow to make sure it's correct. But if you're not making any more adjustments why would you reconfirm your flow?

PATRICK KERR: Why do we say a flow is split? Why don't we just say a means of measuring and modifying a flow to each train is required. Split doesn't have anything to do with anything.

AMANDA LAUGHLIN: It's the treatment, right. Honestly chemicals are added throughout the treatment train. There is not a lot of plants that aren't adding at each unit something.

BEN BRIDGES: Most of mine it's before and after. There's nothing in the middle.

JOHN WILLIAMS: We get plenty in the middle. We get them in every unit.

BEN BRIDGES: Well, tell them they can't do that anymore.

AMANDA LAUGHLIN: We've seen it and we see a lot where they don't know how to, they're literally dosing like trial and error. It would be much easier if they knew the flow with that unit and then just with CT.

BEN BRIDGES: Just don't record those values on the digital machine.

PATRICK KERR: If you know the flow at the end of the filter, the out, you know the flow in also unless there's overflow.

CHRIS RICHARD: But you don't know the flow through an individual flocculation basin. If flow is split and then combined back to filter. This is under the section of flocculation.

BEN BRIDGES: But usually you have a bank of filters per sed basin. They are constricted or refined to that sed basin.

CHRIS RICHARD: You don't have to. This is future design. Why would you design it to where-- I mean you get more redundancy if you have some inter connection. This is under flocculation. This is not the filters beyond or the mixing. The flocculation basin is what this section is on. It's saying you have to measure the flow going into the flocculation.

JEFFREY DUPLANTIS: Is there a section in every part of the train requiring flow measurement? Is there that sentence

flow measuring here, flow measuring here throughout the entire.

AMANDA LAUGHLIN: That's interesting because it wasn't removed under sedimentation. 4.2.4 C it's still in there. If flow is split a means of measuring the flow to each train or unit shall be provided. And I guess it wasn't removed cause it said shall be provided here.

JEFFREY DUPLANTIS: Can we remove the discussion of flow measurement from every single section and make one statement about flow measurement overall through the plant or is it necessary to have a discussion of flow measurement at every single treatment station?

BEN BRIDGES: You can't measure flow though a sed basin as it goes from point A to point B.

CHRIS RICHARD: They're usually in the same tank.

BEN BRIDGES: It's just one big pot. You can't separate internally.

JEFFREY DUPLANTIS: Can we just make a statement somewhere outside of these individual units?

DIRK BARRIOS: What it's saying right now it's confusing like you almost at every segment you have to have a way of measuring that one particular and it cannot be done. I don't think it can be done.

JIMMY GUIDRY: How about wherever flow should be measured it should be measured.

CHRIS RICHARD: If you make any alteration in treatment or chemical addition you should be able to know what the flow is to be able to do that, but other than that.

AMANDA LAUGHLIN: It was only removed, we missed it in a couple places. It's because the other ones say shall and these say should. That's why they were removed I think.

DIRK BARRIOS: If you think from a practical standpoint-- you're familiar with our system. How do you measure that. How do you put something in there that's going to measure when you have a baffling system for flocculation how do you measure that. Individually, not talking about on the whole. How do you individually take that sedimentation basin which is 8 to 10, 12 foot high, I forget how wide, it's big. There's four of them at one plant, eight of them at the other.

AMANDA LAUGHLIN: What are you doing for, where are you measuring flow cause you're measuring somewhere?

DIRK BARRIOS: Influent meter and effluent meter and plus we have flow meters on every one of our filters. We have a totalizer. We can get individual flow to each filter and we know how much is coming in.

AMANDA LAUGHLIN: You're measuring it at the rapid mix.

DIRK BARRIOS: Right before. Influent meter right before the rapid mix. One line coming in.

AMANDA LAUGHLIN: And then you split after that.

BEN BRIDGES: If you're measuring before and after you're good.

CARYN BENJAMIN: Does it combine before it goes into the filters or no?

DIRK BARRIOS: The weirs interconnect and if we ever want to take a basin out for cleaning up we can still use the filter.

BEN BRIDGES: Most plants don't have the capability to have a common rail to go to a filter 1 or 2 or 5 and 6. This train went to these two filters and ten years later they built train two which does these two filters, ten years later that's why they're all separated. It would be nice to have one common rail to send them wherever. You take one filter out and still run, but that's not the design of how they are.

CHRIS RICHARD: Is the intent for chemical addition? Is that why you want to measure is to know how much chemicals?

CARYN BENJAMIN: Your contact time on sed basin so you use the peak flow.

DIRK BARRIOS: I would have to ask Jared.

JEFFREY DUPLANTIS: Can we add under 4.2 an F or whatever where we're at now, whatever letter, but says something a means of measuring flow at all points where chemical feed or dosing is required shall be required. Something like

that.

DIRK BARRIOS: I think that point is where you want to use.

JEFFREY DUPLANTIS: If you're chemical dosing.

DIRK BARRIOS: Different from the mix it means you got to have to measure at that point. I think you want to measure it to where you're pacing to be able to know what your flow rate is so you're pacing what your chemical feed is going to be accurate. I think is what you're getting at.

JEFFREY DUPLANTIS: Can we make a single statement of that nature up at the front of the thing rather than each individual train component that says that I need to be able to get that information?

DIRK BARRIOS: I don't think there would be a problem with something like that. You got to be careful how you word it. If you say where you feed it at. Some feed in the middle of the train so at that point they would have to be able to measure. If you can measure before and after.

CHRIS RICHARD: Basically you want your chemical pace to flow.

DIRK BARRIOS: And we do pace our chemical.

PATRICK KERR: Chemical dosing shall be based on flow.

BEN BRIDGES: You have to know what you have to be able to dose the right regardless of whether it's manganese or zinc ortho.

PATRICK KERR: Put that at the beginning.

JEFFREY DUPLANTIS: If we put it at the front chemical dosing shall be based upon flow without getting specific do we need to discuss how they measure flow or where they measure flow? That's left to the individual and whether it's acceptable to health and hospitals on how flow is measured.

AMANDA LAUGHLIN: We'll strike our comment. Let's move on. Y'all can have flocculation.

JEFFREY DUPLANTIS: I think we were talking about taking all of that in flow measurement and putting a statement under 4.2 saying chemical dosing shall be based upon flow and that covers all these components and you take out the one underneath sedimentation as well. It's probably in there, but putting a statement here doesn't hurt as a reminder.

BEN BRIDGES: We agree you should be able to monitor the flow.

AMANDA LAUGHLIN: At least to say measure and modify the flow. We will look at adding something right there. Let's move on. I mean we figured it would be a long discussion. We did this already just internally talking about it. There's so many prospectives and so many different designs out there so it does take a lot of time. We will take that recommendation from you and try and

draft something, just have a general statement about flow, measuring and modifying flow. Okay, next comment under F outlet devices. We just wanted some clarification on that. It was scratched about submerged orifices should not be located lower than 3 feet below the flow line. We just changed it around to say submerged orifices located greater than 3 feet below the flow line shall be justified. I don't know why you would want to do that. For G can you explain, can you clarify G. The discharge shall be equipped with monitoring equipment to annunciate the overflow or be installed at a location where the discharge can be observed. Just wanted to clarify.

CHRIS RICHARD: I'm just guessing, maybe it wasn't visible so they had a level indicator that would be set at the weir height to let them know when it would discharge.

DIRK BARRIOS: I know for a fact we would have a problem being able to see it. We have an overflow that you can see the overflow, but you can't see that water coming out. We have an overflow pipe on every one of the sediment basins and the guys can visually see where the level is. Through reading it basically saying supposed to be able to (inaudible), but also said somewhere you should be able to see where it's discharged.

AMANDA LAUGHLIN: But on a new design wouldn't you design it to where you could see it. If you're a plant that's

expanded on and expanded on I can see where you might run into different constraints that way. But brand new.

DIRK BARRIOS: Let me throw this out, I might be wrong, my assumption the way they were designed. Everybody talks about clarifying. We don't have clarifiers. So we have a big settling basin and a pipe and that level is going to set when it gets to this level. Water is going to overflow. That pipe is going underground and is discharging into our sump pump. The sump is not where-- I can go out there and visually see it, but if it's the one overflowing is the basin on the far end, we have four basins, and sump is on that end you can visually go and see it. It's how do you interpret being able to see it.

CARYN BENJAMIN: We're not talking about, we're talking about the water that's going into the filters.

DIRK BARRIOS: I misunderstood that.

AMANDA LAUGHLIN: This is on sedimentation.

CARYN BENJAMIN: Not a true overflow. This is talking about the clarified water going into the filters.

PATRICK KERR: All this is saying though is that in lieu of being able to see it you can put something out to monitor it and annunciate it.

CHRIS RICHARD: Tells you sooner.

PATRICK KERR: Probably.

CHRIS RICHARD: Rather than have to go out and observe

accidentally.

CARYN BENJAMIN: Yeah, but the reason you want to see it so you can see if you have floc carry over or growth.

PATRICK KERR: If it enunciates you're going to go look, right. The fact that you can see it overflow you still got to go out there. I'm sorry, many people would go look.

BEN BRIDGES: You are not going to know what to do at that point anyway. If you don't do anything when it's overflowing.

CARYN BENJAMIN: I don't think you want to go look at it when it's overflowing, you want to just be able to see it daily and check on the performance of your clarifier or sedimentation basin. Just want to see how it's looking. You don't have a turbidity monitor normally, it's not a requirement to have one on your sedimentation. Y'all are thinking when it's overflowing you want to see it, no. You want to see it when it's just performing continuously.

CHRIS RICHARD: I read this as a basin overflow.

JENNIFER KHILKEN: I am thinking about at Logansport and the pipe when it flows over when it's over full. This is an overflow from the actual basin, not to the filters. This is when your basin gets too full instead of going over the sides then it overflows into a pipe. And so what he's saying is when it overflows, and the example Ben used is the one if Logansport overflowed it would flood the

office. That's the example.

BEN BRIDGES: You'll know real quick.

JENNIFER KHILKEN: But you're saying they want a way when it is overflowing the way that pipe is it could be right at it and you don't see how much water is going in it and this way gives you a signal, some way that you know that it's overflowing without having to walk all the way to the sump pump to look. Is that right?

CARYN BENJAMIN: Read the first statement. That's what gives me the impression this is going to the filters.

CHRIS RICHARD: If you're relying on your wall to be your overflow then you can get more than your maximum level you want to have on your filters. So you have an internal overflow which is set at the highest level you want to be on your filters. That's what this is. And so if you have some type of alarm, or level indicator, or something to tell you that it's overflowing to me that's actually better than being able to see it because you're in your office and getting an alarm that your basin is overflowing.

BEN BRIDGES: I can see on your filter bed having a level indicator. As your filter gets dirty and backs up before it would overflow it alarms you. Hey, I have 2 foot, 3 foot of head space I just lost so I put more water in my filter than I can filter out. I have to backwash or dump.

But if it runs over the sed basin it just runs over the sidewalk.

CHRIS RICHARD: No, this is to prevent that. This is saying I want this much water here, my sed basin has to be here. The wall would be your overflow.

CARYN BENJAMIN: I thought we were talking about the clarifier water.

AMANDA LAUGHLIN: Going to move on. I drainage, sedimentation basins shall be provided with a means for dewatering. Our comment was that you should leave the language in and change it to a shall, basin bottoms.

BEN BRIDGES: I want a valve in the bottom of the sed basin.

ROBERT BROU: It's the second sentence they're wanting to add back in.

AMANDA LAUGHLIN: If you want to remove it, why? That's just really what, why would you remove that? Just because it says should.

CHRIS RICHARD: Not everything was done that way. But like I said, it was a year ago.

AMANDA LAUGHLIN: Moving because the slope was 1 and 12?

BEN BRIDGES: Take a fire hose and wash it towards the end where the sump where your valve is so you're not going to get every piece of dirt and spec out of there. You get the big out, most of it out, and then you can wash it with

a hose, fire hose and wash it.

CHRIS RICHARD: One and 12 it's a standard clarifier bottom, wastewater, water it's always 1 over 12.

BEN BRIDGES: Why is that a problem to not have a slope bottom? Why would you not want a slope bottom?

DIRK BARRIOS: That's a big drop.

AMANDA LAUGHLIN: What if the slope wasn't in there and you just said like the detail of the slope?

CHRIS RICHARD: Just say it sloped.

AMANDA LAUGHLIN: Keep the statement basin bottom shall be sloped towards the drain where mechanical sledge collection equipment is not required. If the 1 and 12 cause that may change from different designs.

DIRK BARRIOS: We had long settlement basin 1 to 12 slope, might be kind of tough.

CHRIS RICHARD: So basin bottoms shall slope towards the drain where mechanical sludge collection is not a requirement.

AMANDA LAUGHLIN: We'll just remove the 1 and 12. Moving on. On the next comment on page 5 number 3 we realized the valves may be in the basin so we just said the revision would be access to the valve shall be outside the tank. Like a valve stem, right. To me I'm under the impression that you're going to have to take the whole thing down to access the valve.

CHRIS RICHARD: No. It can be operable outside the basin, but not accessible because it's two different things. Accessible means you can get to it.

AMANDA LAUGHLIN: I see what you mean. That was our intent. Solids contact unit. Our comment we talked about 4.2 and should also apply to the filters we talked about the design capacity. Average and max month. Operating equipment. Insert after sampling taps or other means to sample sludge. So like keep it in and then adequate piping with suitable sampling taps or other means to sample sludge. Cause it was removed, looks like it was removed because of didn't like sample taps. What are your other means to sample sludge?

CHRIS RICHARD: Like on lime softening sample tabs are inoperable after a short time.

AMANDA LAUGHLIN: So what you are doing?

CHRIS RICHARD: They'll use a sludge judge or something else to collect it from the outside.

AMANDA LAUGHLIN: If you're using another means to do it. If y'all are okay with that language. Chemical feed we went through this a little bit already in our discussion. It got removed that chemical application basically you need to have satisfactory chemicals in the water. And our comment was that careful consideration needs to be given to the location to ensure that dosing application is

satisfactory. Just substituted. This is equipment. Large basins should have at least two sumps for collecting sludge located in the central flocculation zone and it was removed. May have other means to remove sludge without slumps. For example, vacuum systems. We just propose to leave the language in.

CHRIS RICHARD: I've seen a 6 unit with 2 sumps and an 8 with one. What's large? 80 foot diameter, 50 foot. I'm just saying it's very vague. A code shouldn't be subject to interpretation that openly. If you want to define large or say basins over a certain size, or capacity, or something. A lot of the concentrators like on are proprietary. The equipment manufactures some have two, some have one based on the design. We had one that was two and the equipment we were replacing it only needed one the way it was set up.

AMANDA LAUGHLIN: I'm sorry, when you said you have one that has two how big is that one?

CHRIS RICHARD: There was a 6 MGD unit that had two, some 8 MGD units had one. Then when we replaced the equipment in the 6 MGD unit the manufacturer of that equipment said they only used one so the second one was abandoned. I don't know what large means. When would it apply?

JOHN WILLIAMS: I keep going back to Carrollton because we don't see a lot of sedimentation flocculation. It's more

solid contact. Where they do have them like Carrollton I believe their basins might have three. But they are the length of a football field. I don't know.

CHRIS RICHARD: This is under solids contact clarifier.

JIMMY GUIDRY: I guess my question is does that mean that the manufacturer decides what's necessary and you're going to have to, if we say you need two you're going to have to buy the one that has two.

CHRIS RICHARD: Or they'll put in two and abandon one.

AMANDA LAUGHLIN: And in the past I have considered the manufacturer specs on things instead of like in this particular case if the manufacturer said well our unit only needs one and it's designed that way I think that's acceptable. You could even say in accordance with the manufacturer.

CHRIS RICHARD: The reason it was scratched is because it says large. What is large?

AMANDA LAUGHLIN: That's what I'm saying. What if you took out large and just sed basins shall have the number of sumps their manufacturer.

DIRK BARRIOS: Then why put it in?

AMANDA LAUGHLIN: Yeah, I'm kind of going there.

ROBERT BROU: Really it's going to be based on the turbidity of the water they're treating. The higher the turbidity of the raw water the more need they will have

for these sumps to dump more frequently. As the river clears up we find the need to dump a lot less and of all of our units they all had two, but we've abandoned at least one of them and half of one cause we don't use them. And the other ones we're still only using one exclusively.

BEN BRIDGES: But this would still go back the design of the manufacturer that know their process and say if I have one that's a 2 foot door or two 1 foot doors what's the difference.

JIMMY GUIDRY: I think we're in agreement we're not going to say it.

AMANDA LAUGHLIN: Scratching it. 4.2.5.9 detention period. All the different detention times were scratched out. Our comment basically was if you're going to remove the language what would the detention time, provide what the detention time should be or shall be.

PATRICK KERR: It will be based on raw water characteristics. They didn't strike that. And conditions that affect the operation of the unit. We don't have an arbitrary detention time.

AMANDA LAUGHLIN: What if we added raw water characteristics and other conditions that affect the operation of the unit. Raw water characteristics and other local conditions and regulatory requirements. Because you're going to have to design it for whatever.

KEITH SHACKELFORD: You should be doing it, but this is almost going to force you to do a pilot study if you're designing a plant, brand new plant from scratch for a new client in order to come up with that criteria.

PATRICK KERR: I don't think so. You don't think you could do that?

KEITH SHACKELFORD: Then I'm going to fall back to the old criteria that was established prior to us taking it out of this.

PATRICK KERR: Someone else with similar characteristics may have designed the same and I think it's okay to assume in a lot of cases that it will work for you too. If you're suggesting do a pilot plant for each new designed plant I think that's kind of a stretch.

KEITH SHACKELFORD: First go back to a company I used to work for in design. Nobody had ever taken water out of this particular body in order to treat it for potable consumption. We did a pilot study on that one and we needed to. We still followed the original criteria.

PATRICK KERR: But the next guy half a mile down the river doesn't need to.

KEITH SHACKELFORD: The quality can change significantly in the reach of the river on the cut bank or the fill bank side.

CHRIS RICHARD: The code doesn't change that. It says 2 to

4. Which one you're going to use. You're going to have a basis for your design. If you left it in there it would still be 2 to 4. You can still go back and if you want to use 10 state standards to say what the recommendation is for the design you're still welcome to do that or any other means you might have. In the code if you say it is 2 or it is 4. Base it on the water qualify if it needs to be more than 4.

AMANDA LAUGHLIN: Just had a question about why 4.2.5.10 was removed. I'm assuming it was removed because it said should. Is there a different concentration? Would that change or?

CHRIS RICHARD: I don't remember. On lime softening is it important to measure and maintain it?

DIRK BARRIOS: Why wouldn't we consider it if it's a should.

CHRIS RICHARD: I'm not sure if they measure the concentration to make sure what it is as much as watching their blanket and blowing it off and making sure they get a good floc and not measure what their concentration is. So if it's not a basic operation of the plant.

AMANDA LAUGHLIN: We're just curious. Don't have any other comments on that page. So general design criteria A and then B was removed and our comment was in areas where freezing occurs consideration shall be given regarding

sufficient freeboard. We do have areas of the state have freezing. We just provided alternate language. Next comment modules, we propose to leave that as a shall. And change it to a shall and leave the language. I don't know if anybody had any problems with that. Same thing for J. Change it to a shall and left it in. That was our comment was to leave it in. On page 9 rate of filtration our comment was under maximum filtration rates for plants treating surface waters or groundwater under the influence of surface water shall meet 3.0 gallons per minute per foot squared. We proposed it should say shall not exceed. And I think it might have been like an over site. That's from our code. Next comment.

PATRICK KERR: So you're going to have a shall and then allow an exception immediately after that if you do a pilot test?

AMANDA LAUGHLIN: That was what the subcommittee put in.

CHRIS RICHARD: That was in the code already.

AMANDA LAUGHLIN: Where it's highlighted that was our comment was to change. If it was written in red that was what the subcommittee wrote.

PATRICK KERR: I'm just saying there can't be a period after a shall. And then even if you do submit data from a pilot test to the state health officer you still have to comply with the shall not exceed 3 feet per gallons per

minute, per square foot, excuse me.

JEFFREY DUPLANTIS: Put a comma unless and then change the second sentence.

AMANDA LAUGHLIN: Unless, got you.

PATRICK KERR: Just figure out how to tie the two together.

BEN BRIDGES: Primary or secondary?

AMANDA LAUGHLIN: This is primary.

BEN BRIDGES: If you remove you can't have a second process for an esthetic issue.

CHRIS RICHARD: After the fact.

AMANDA LAUGHLIN: This was for the rate of filtration in this section would be for surface water or primaries.

PATRICK KERR: What we're discussing is whether you can do filtration for secondary standards like manganese and iron.

BEN BRIDGES: Ten gallons is ten instead of three.

CHRIS RICHARD: You're saying you have two sets of filters.

BEN BRIDGES: Yeah.

AMANDA LAUGHLIN: That's covered in another.

BEN BRIDGES: Just making sure I'm on the right page.

CHRIS RICHARD: Unless approved by the state health officer based on data provided.

PATRICK KERR: If you're going to do that though, I'll probably get kicked out of this side of the table, the pilot test is one thing, but then we also need to have a

way to measure after the fact and that you can throttle back that flow rate if it's not actually meeting.

CHRIS RICHARD: You have your continuous turbidity monitoring to be required anyway so you have to have it all the time.

PATRICK KERR: So why leave this at all?

CHRIS RICHARD: You can't exceed three.

PATRICK KERR: We're writing for the future. So if that's true then why do we need this at all? Why do you have to prove it? If we're going to base it just on turbidity meter downstream of the filters why not run 15. If it works it works.

CHRIS RICHARD: If you want to show greater than three you can't have the turbidity meter until the plant is built. You can't build your plant till you know it's going to work. If you want to do greater than three on a new plant you would have to pilot test it to show. Three is demonstrated that it works.

PATRICK KERR: I guess what I'm saying though is if you go to the state health officer and you say this system five is okay based on pilot testing and you start running the plant and you can't meet turbidity limits at five they need to have a way to say run it again or four is okay and not permit to run five anymore.

CHRIS RICHARD: You'll be in violation if you don't meet

it.

AMANDA LAUGHLIN: They would have violations and they would have to.

PATRICK KERR: Again, why do we need this if we have continuous turbidity monitoring?

CHRIS RICHARD: Cause you don't have that until your plant's built. Your basis for the design is three because that has shown and demonstrated to achieve the water quality that you need. If you want to do something greater than what has been demonstrated you have to demonstrate it yourself.

AMANDA LAUGHLIN: Number of filters. And our comment was to keep the original language. This is where actually the original language had projected maximum daily demand. And then it was removed and put the plants designed average daily filtration.

CHRIS RICHARD: We should have the same flow rate we had before which would be the average day max month. We should be consistent.

CARYN BENJAMIN: We need to come up with a definition for that. Leave that to you.

AMANDA LAUGHLIN: So we will come up with language. The next comment about curbing. We talked about this for at least an hour and a half. We changed to say prevention of floor drainage into the filter a mechanism is needed to

assure prevention of floor drainage into the filter and we deleted the curb. We would delete the curbing, the 4 inch curbings. Different designs have different things and we realize that. We talked about it for a long time. But I think the intent is to just not have all the floor drains going into the filters and washing down stuff with chemicals. You don't want that going into the filter. You need some kind of mechanism to prevent that. The walkways around the filters to not be less than 24 inches wide and the safety handrails. I realize there's been a lot of disagreement in here around anything that is considered safety. But we just kind of disagree with the deletion. Mainly because we go out there as well. A lot of people visit plants and I want to feel safe too, I don't want to fall in something.

CHRIS RICHARD: Why do you need a walkway completely around the perimeter of every single filter if you have a bank of ten filters?

AMANDA LAUGHLIN: And I realize a lot of designs are not like that.

CHRIS RICHARD: There's no necessity to walk around the filter.

AMANDA LAUGHLIN: You have some walkway somewhere.

CHRIS RICHARD: Yeah, but it says all the way around.

AMANDA LAUGHLIN: The filter bank may have a walkway around

it.

CHRIS RICHARD: But it says all the way around the filters. Safety handrails and walls around all filter walkways. Walkways around filters.

PATRICK KERR: It doesn't say you have to have a walkway around every filter, but where you have to have a walkway it has to be 24 inches wide.

BEN BRIDGES: That's his interpretation.

CHRIS RICHARD: What if OSHA says the walkway has to be 36 inches?

PATRICK KERR: That's okay as long as it's not less than 24.

CHRIS RICHARD: I don't like the potential for conflicting codes.

PATRICK KERR: What if you say where walkways around filters comma where provided comma to be not less than 24 inches wide. That just makes clear that we're not saying you need a walkway around every filter. Is that all right?

CHRIS RICHARD: Uh-huh.

PATRICK KERR: Walkways around filters comma where provided comma to not be less than 24 inches and safety handrails around walkways.

JOHN WILLIAMS: Doesn't that also apply to handrails around filters where provided and where we're saying it is

required to have handrails?

CHRIS RICHARD: You'll need guardrails. See OSHA there's guardrails and there's handrails. There's two separate things. You're getting into requirements that you can have some conflict. OSHA would require next to that opening a guardrail. That's a different code that's going to require that. It's going to be there. That doesn't affect the drinking water quality. We're trying to address drinking water quality. The NEC's going to address the electrical code. That's what our committee was saying. Let's stick to water quality issues. The fire marshal will address fire marshal issues. OSHA will address safety issues and so on. It's going to be there.

JOHN WILLIAMS: Actually OSHA won't address a lot of these safety issues where the water system is operated by a municipality, correct?

CHRIS RICHARD: They don't have enforcement on municipalities, but any engineer that's going to do the work is going to do it to OSHA standards because it's a recognized standard and as soon as something happens you're going be sued. That's why you see it in municipality plants.

AMANDA LAUGHLIN: But if we got a set of plans and we realized that wasn't there we wouldn't be able to say hey, you're not following safety protocol. And I realize

that's outside of our purview, but we are the health department. I realize we're talking about drinking water and we have to also have a means, our personnel has to be able to go to plants and be safe and have safety stuff put in. What if there was just a reference to all safety regulations.

JEFFREY DUPLANTIS: Isn't that in the general whatever section one that has some statement about safety?

AMANDA LAUGHLIN: I don't remember. But my understanding was most of the safety stuff that was in ten state standards has been completely removed because it's not health department business.

PATRICK KERR: What's the objection, and I know it's redundant, we can have a philosophical conversation, but of saying if there's a walkway it needs to be 24 inches wide and have a handrail. If there's a fall hazard needing a guardrail that's a different story, but it has to have at least a handrail which is what this says. So they feel comfortable if they're on a walkway that's 24 inches wide it has a handrail.

CHRIS RICHARD: The term would be actually guardrail around a filter, not handrail. There's different height requirements. That's actually not a handrail, it's a guardrail and OSHA has requirements for it. Two inches high, intermediate rails, post requirements.

PATRICK KERR: But a handrail may be adequate. A handrail is just something so you can stabilize yourself. If you need a guardrail more power to you, put it in. But they're saying at a minimum you have to have handrails.

CHRIS RICHARD: And what I'm saying is around an opening what you need is a guardrail not a handrail.

PATRICK KERR: I agree. A kick plate and everything else and you can do that. But a guardrail is a handrail, but a handrail is not necessarily a guardrail.

CHRIS RICHARD: There's different requirements on diameter of the posts and how high they are.

AMANDA LAUGHLIN: We wouldn't necessarily comment on that. I want it to be visible on plans and I want to be able to say I looked at these plans and I'm concerned about this or that and make sure you're doing that. Not because we're like looking at the diameter of the railing and whether it's a guard or hand. And there's been times, just in my personal reviews where I've seen things that I happen to know another code and wasn't in our code and I can have that discussion with the engineer on the side and say hey I noticed these things, you're not going to pass over at such and such if you don't put this in. It wasn't in my code.

PATRICK KERR: The guardrail is very specific about the width between the pickets, it's completely different. If

it's more than 31 inches of fall you have to have them 3 inches apart and all that.

CHRIS RICHARD: Not industrial application, not a water plant. You notice when you go down some stairs you have two rails because OSHA says you have a guardrail here, life safety code says you have a handrail here because they have different requirements, different diameters, different heights.

JEFFREY DUPLANTIS: Who reviews that? Nobody submits their drawings to OSHA so who reviews? If there's an accident somebody comes after and go oh, you didn't meet.

PATRICK KERR: Exactly.

CHRIS RICHARD: OSHA won't even give you a preliminary ruling. You can ask a question they won't answer it, but they'll be happy to write you up afterwards.

AMANDA LAUGHLIN: There's not even really a plans review process then for any safety stuff.

JEFFREY DUPLANTIS: Fire marshal.

AMANDA LAUGHLIN: But for OSHA requirements there's no plan review?

CHRIS RICHARD: No. They won't review. You can ask a direct question and they won't give you a direct answer.

JEFFREY DUPLANTIS: In that regard should we include some sort of regulatory statement from this, not in this section but somewhere, stating the adherence to.

CHRIS RICHARD: You may want to put something somewhere about fall protection. We have the filters, we made it through sedimentation basins and clarifiers and we never talked about falling in. But you can walk along the side of them cause there's walkways.

AMANDA LAUGHLIN: So put in a statement about following fall protection.

CHRIS RICHARD: Yeah, provide guardrails or something to prevent as a safety measure. If you want to put something to prevent somebody from falling in. But it's got to be a general statement because there's stuff at the plant, throughout the plant you can fall in.

JEFFREY DUPLANTIS: There's pump stations, storage tanks, and whatever else. You have to have some kind of, it's not specific to this one.

CHRIS RICHARD: That's what I'm saying. This happens on filters, but we didn't talk about it before.

AMANDA LAUGHLIN: Is that OSHA, when you say fall prevention, is that the OSHA standards or who is the overseer of that, OSHA.

PATRICK KERR: Why are we going into fall protection? I think it's up to the individual plant. They would like a handrail and a 24 inch wide.

JEFFREY DUPLANTIS: But the only place they're asking for a handrail is right here when there's so many other places

handrails could be.

PATRICK KERR: Great, great. If they want to change that later they can come back. Right here they would like the walkways.

CHRIS RICHARD: I would just put it in the front section that you want to prevent walkways next to open basins shall have. If you're providing a walkway adjacent to an open basin, sedimentation basin, a filter, anything, a mixing basin that you have a guardrail.

AMANDA LAUGHLIN: So if you're providing a walkway around any open basin provide a guardrail.

PATRICK KERR: This is the least restrictive is what I'm saying and I would like to keep it this way. Handrail is a specific thing. Guardrail, I'm sorry if Amanda falls off her heels in my sedimentation basin and she went underneath the handrail that shouldn't be my problem other than to throw her a ring. But a guardrail has a specific connotation that you're going to prevent people from falling in. You're also going to prevent people from doing their work and a bunch of other things.

CHRIS RICHARD: You're thinking there has to be the 4 foot space and you can't space a sphere through it. That's not the case. What a guardrail says is you have to have 200 pounds of force on a post so if someone's leaning on it he won't fall in. But you will not notice a difference when

you go out there because what you are seeing is a guard rail. The galvanized 42 inches high, 19 to the second, intermediate posts every 8 feet.

PATRICK KERR: So safety guardrails are walls.

JIMMY GUIDRY: There is what four more pages between us and our glucose level. So I'm hoping y'all want to go ahead and finish before we break. So let's move on.

AMANDA LAUGHLIN: We actually don't have that many more comments, although one comment can carry on for a time. Wash water troughs we just added someone could explain the language that was inserted there.

CHRIS RICHARD: I think that was when you're backwashing your water.

AMANDA LAUGHLIN: At the main wash water gullet.

JEFFREY DUPLANTIS: What the heck is a gullet?

CHRIS RICHARD: Troughs go into the main gullet and that typically is a little higher so it doesn't overflow that and short circuit when you're backwashing. So you have your troughs that the water's going over that are evenly spaced to maintain your velocity going over your filters. Those go into a main gullet where it's collected to go out the plant. You don't want water going over that wall. During the backwash that is your many gullet. If you let water go over it then you're short circuiting and creating low velocity.

JEFFREY DUPLANTIS: Is that a standard industry term?

CHRIS RICHARD: Yes, it is.

AMANDA LAUGHLIN: We are okay with F. We deleted the granular filter media, we deleted shall be because it's just redundant. So I think there was a typo in one of the standards. Because C 604 covers the instillation of buried steel water pipe and B 604 covers granular activated carbon. So I think that's a typo there. Should be B 604. Next comment was on page 13, 4.3.1.8 media washing. We added a comment that for water pressure I realize 45 PSI may not always be the standard so we just said design it with water pressure per the manufacturer's requirement because it may vary. Appurtenances 4.3.1.10 the question we had was why only the effluent rate of flow. That was a word that was added.

BEN BRIDGES: You don't measure the inflow into the filter.

CHRIS RICHARD: You just measure what's coming out and that's how you control it. If it's going in it's coming out.

AMANDA LAUGHLIN: Okay. And last page.

BEN BRIDGES: Go back to 4.3.10 on number 2 indicating loss of head gauge. Historically your loss of head gauge is irrelevant. The turbidity would be higher before your loss of head will come up to indicate.

CHRIS RICHARD: Could be a ground water plant that you're

not measuring.

BEN BRIDGES: But you'll have break through. Traditionally you'll have breakthrough before you see a loss of head on a filter. You'll have a breakthrough of whatever you're trying to remove before you see a loss of head.

CARYN BENJAMIN: Not necessarily. You can have a loss of head due to (inaudible) built up in the filter which you may not have breakthrough with that.

BEN BRIDGES: Everyone I've ever seen was useless. Loss of head of head gauge will exceed by turbidity or whatever you're trying to move.

DIRK BARRIOS: That's old terminology.

BEN BRIDGES: Generally you don't see a loss of head till after.

DIRK BARRIOS: If you buy a standard table it will have it on there unless you design it yourself.

JOHN WILLIAMS: We have some facilities that do operate filters off of loss of head. It think it may be something good to have on a filter historically if you were keeping the data to see how the filter performs and might give you an idea how the media is being worn down.

BEN BRIDGES: In my experience the ones I've seen don't work.

JOHN WILLIAMS: In my experience most of the ones I see are yeah not working, but there's a whole lot of other things

too that aren't working.

PATRICK KERR: But if they don't work and we're not really concerned about it if it's in the design and you design a plant it's going to have to work going forward.

JOHN WILLIAMS: With the surveys where I've come across these loss of head filters that have been out of service some 20 years we write them up and bring them back. And the assumption is the more data you have on these filters whether it be loss of head or turbidity it's tools the operator can use to run these filters and manage them.

BEN BRIDGES: What you're being regulated on is what the effluent coming out is either the iron and manganese you're trying to remove or the turbidity, not loss of head. There's no manual that says if you have a certain loss of head you're in violation. Your turbidity is up or your manganese comes through, that's your problem.

CHRIS RICHARD: A lot of people they'll have, and I'm not saying you have to have it as a necessity, but you may operate your filters based on a variety of parameters. Your turbidity goes up you do a backwash. Your head loss goes up. Before your turbidity goes up triggers a backwash. It's been going for a long, so many hours and neither one of them hits it you do a backwash. It's just a tool.

BEN BRIDGES: But I don't see the head loss ever being the

factor that puts you into backwash. It's turbidity or whatever you're removing that you reach that first.

PATRICK KERR: Given today's technology do we need a head gauge. The answer is no. The answer is no.

BEN BRIDGES: Most of them don't work.

JOHN WILLIAMS: But that's because of neglect.

AMANDA LAUGHLIN: It's not because it doesn't work because they shouldn't use it or they don't need it. That's just because they probably have all kinds of other problems at their plant too.

JOHN WILLIAMS: They're doing only what they can do which is perhaps based off of time.

CHRIS RICHARD: The question is if it's in here you have to put it. If it's not in here you can still put it if the plant wants to have it and they feel like it's a good tool. But is it necessary I think is the question.

BEN BRIDGES: It's great in lagniappe if it works. If it doesn't you have plants that are 30 years old haven't worked for 25 years.

AMANDA LAUGHLIN: How much does it cost?

BEN BRIDGES: I don't know.

AMANDA LAUGHLIN: Are you talking about 100 dollars or a million dollars. Is it cost prohibitive to have them. Why not give people all the tools they might need. I think you would want it.

CHRIS RICHARD: I think Pat's point too if it's a requirement from this point forward if it's in there they can be written up, if they don't feel like they need it anymore and they're not using it they can be written up.

BEN BRIDGES: Shall be provided.

AMANDA LAUGHLIN: They can also consult with the health department and discuss it and say we're using this instead or we've gone this route, we're not going to use these, we're taking them out of service.

BEN BRIDGES: It doesn't say this or this. It says shall be provided.

AMANDA LAUGHLIN: I think it's necessary. That's my vote.

BEN BRIDGES: Then why aren't they fixed?

JEFFREY DUPLANTIS: It doesn't say usable, just says they have to have one.

BEN BRIDGES: If it's of no value, it's nice to have and could be a useful tool if it works, but if it's not working.

JEFFREY DUPLANTIS: Is this another one of the circumstances where the code is specifying something that the design engineer should be just working with the client as far as their preference rather than something that should be mandated.

DIRK BARRIOS: Technology when I first came in 31 years ago there was no turbidity. Loss of head to determine.

CHRIS RICHARD: We put them on a lime softening plan to trigger the backwash cause you're not measuring.

JEFFREY DUPLANTIS: Are we going to come back and revisit this section again?

JIMMY GUIDRY: No.

JEFFREY DUPLANTIS: So we need an answer on this either keep it in or take it out.

PATRICK KERR: There's lots of tools that would be nice to have that we don't regulate. If you think it's a got to have it put it in here. If it's a nice to have it ought to be up to the design engineer and the owner.

JIMMY GUIDRY: This is where I have a conflict. We're going through it and we're discussing it, the workgroup left it in. So to me the workgroup had no problem. Is it a problem or not. Doesn't sound like they always work, doesn't sound like we're citing them for it.

JOHN WILLIAMS: We site them.

JIMMY GUIDRY: And what happens when it's not working?

BEN BRIDGES: Absolutely nothing. Sits there for the next time and it's cited again.

AMANDA LAUGHLIN: Well, that has a lot to do with significant deficiencies and our inability to enforce some of the things over the last few years.

PATRICK KERR: There's no improvement to water quality that could be requiring this.

BEN BRIDGES: It could be attributable to it if it worked. But if it hasn't worked for 20 years what's the have to have it in here if you're not using it as a tool to decide whether or not you backwash.

JIMMY GUIDRY: Are we citing it for 20 years. I'm hearing conflicting issues here. I'm hearing it doesn't always work, we do cite them, it is part of compliance. But they've been a problem for 20 years.

JOHN WILLIAMS: It works if it's maintained and if it doesn't work there are other tools the water system can use to manage their filters to keep them out of trouble.

JEFFREY DUPLANTIS: Which is exactly why we're saying this doesn't need to be in here because there are other ways for them to do it.

BEN BRIDGES: That are more reliable.

JOHN WILLIAMS: From a compliance standpoint and turbidity, certainly. For just operationally time knowing that you're going to backwash your filter every so often and sometimes that's going to keep you out of trouble. But I would think that knowing the head loss on that filter and having historical data might be important as well. I don't run a plant, I regulate them, but this seems like it's basic information on the operation of the filter that would be of some value.

BEN BRIDGES: My argument to that is you have a head loss

that you're looking at in this range and you need to be right here when you backwash. You may never reach this one PSI head loss that your gauge is showing. You may need to do it at quarter. If you never get to the one that's insignificant that you don't use that to determine when you backwash. Some plants run 130, 140, 160, 200 hours before they backwash. They just arbitrarily do that.

JOHN WILLIAMS: Would that information be used for something else other than just for backwash? Would that be the only good reason to have head loss on filters?

CHRIS RICHARD: It wouldn't justify having it all the time. You could use it to check the condition of your media and your filter. But you could do that at some point in time if you needed to. Your media starts rounding out you actually might have a clean filter with less head loss or you get mud balling or cementing of your gravel or your under drains you're going to have more on a clean filter than you had before.

JEFFREY DUPLANTIS: Is that something that the design engineer is going to meet with the client and their operators and say would you like to have this gauge for you to monitor that type of stuff and not necessarily as a requirement.

CHRIS RICHARD: The question was is it of use and it can be

of use, but I think the problem is when that point in time happens when you would want to do those kind of things is 10 years after the plant is built. It's not going to be something you are going to monitor constantly. Your media doesn't round out in a year.

JOHN WILLIAMS: I think it might be one of those type of indicators like if you have collaboration problems on your chemicals and you're checking them every shift and operators become very familiar with how much they're dosing and if something changes they can pick it up very readily. If you're monitoring these head loss gauges on filters if they're there and you're using them. Wouldn't that?

JEFFREY DUPLANTIS: But everything you're saying is it's you should have this in order to monitor that, you should have this and we've taken all the shoulds out.

JOHN WILLIAMS: I would say certainly there are other tools that are available to you to manage filters and backwash. My impression has always been this was a very useful tool.

CHRIS RICHARD: It's useful on a ground water plant probably more than a surface water plant because you don't have a trigger like you do on turbidity.

RICK NOWLIN: I think if you take it out you're still going to see plant designs with them in there.

JEFFREY DUPLANTIS: Absolutely.

RICK NOWLIN: But you're not going to be cited for it if it's not working.

JEFFREY DUPLANTIS: It's a tool for the operator, it's not something that needs to be regulated by DHH as a water quality component.

JOHN WILLIAMS: And to your point I will say, and again I keep using my biggest system Carrollton Water Plant and head loss on all of their filters they went out, probably out for 20 years and ran their filters without, managing them in other ways. I understand where you're coming from. And a lot of the older plants I've seen they've been out for a while.

CHRIS RICHARD: And of course when you're measuring a plant might have say 10 filters and they're running, they only really need six so they're running slow rates. They have a range they can operate that plant out in the course of a day where your head loss is going to change based on how much water they're pushing through them. If you want to increase it.

BEN BRIDGES: I hate for you to be citing for something that may or may not be used.

CARYN BENJAMIN: This is for new plants. It helps the life of the filter when you may need to change it out.

BEN BRIDGES: When you get to mud balls and your filter is so dirty you're going to short circuit and you'll blow

through that media at some point in time.

CARYN BENJAMIN: This prevents that. You don't want to get to that point.

BEN BRIDGES: I don't think you will see that. I don't think your head loss is going to go through the roof oh, we're fixing to have a problem. I think it's going to be so small it's going to blow through and you'll have turbidity issues before you have loss of head.

CARYN BENJAMIN: This is to prevent. Systems that have it use it.

AMANDA LAUGHLIN: It's something we look for even when we do (inaudible) evaluation of longer term.

BEN BRIDGES: I just don't like for you to use a yard stick to measure something you need a feeler head for.

JIMMY GUIDRY: I'm not the expert here, but I have trouble when I'm going to cite something that I know is not going to work. I have trouble when I'm going to regulate something I know is not going to work. I'm not convinced it can be helpful does not mean I have to have it. I can have something else. You have to put language in there that says you can use this or something else.

KEITH SHACKELFORD: Add another paragraph and say consideration should be given to installation to loss of head gauge.

BEN BRIDGES: In all actuality it's probably going to be

there on every set of filters that you buy anyway, but to say that you have to have it.

JIMMY GUIDRY: That's a citation. The minute you require something you have to cite it and you have to make them fix it.

BEN BRIDGES: If it's not fixed why even have it, that's my question. They're going to be on probably 100 percent of what you buy today. There will be a gage on it. I think you have better tools to measure what you're trying to measure.

AMANDA LAUGHLIN: Which means it will still get cited in the future even if we're not requiring in the design if it doesn't work when we got out to the plant and it's put in the design. They'll get cited on the survey either way.

JEFFREY DUPLANTIS: That's fine, but it gives the operator or client the option of having one or not. If they're not going to use it then they just don't include it.

AMANDA LAUGHLIN: Actually most people rely on the design engineer to tell them if they need it. Not the opposite do you want it.

BEN BRIDGES: But it's going to come with the package. I don't think Chris is going to say hey I need it.

CHRIS RICHARD: When we do large filters we do it ourselves. I think they're useful on a ground water plant. I put them on a wastewater plant. Cause you're

not monitoring the quality. We have to put filters on the wastewater plant. You're not monitoring turbidity so it's a tool they need in order to backwash. I understand Ben's point of a surface water plant it may not be used at all.

JIMMY GUIDRY: Do you want to vote on it? We're at an impasse and I want to finish. So we either vote on it or we accept.

PATRICK KERR: Let's vote on it.

JIMMY GUIDRY: We have a quorum to vote, right?

PATRICK KERR: Yes, we do.

JIMMY GUIDRY: For leaving it in show of hands.

(Amanda Laughlin and Caryn Benjamin)

JIMMY GUIDRY: Just think we got our vote. Taking it out.

AMANDA LAUGHLIN: Page 15. We changed the language because you have to leave the language in because it's a federal law exception. It's in the code. About two or less filters there's an exception already in the code so you have to leave it. Exceeds 0.3 NTU. We put exceeds regulatory turbidity limits. Because the LT2 rule you might have to use .15 like if you're using that instead of UV.

CHRIS RICHARD: Then it could change again.

JIMMY GUIDRY: I would like to thank our group of folks that worked so hard on this. You see how difficult it would have been to do the whole chapter today. We've had

many, many events lately that have taken a lot of our time from drinking water. I think we're getting closer to finishing our task as far as the code goes and hopefully we can continue to work through this. It may be helpful to look at this stuff before hand and so we can maybe speed it along. I don't know. Some of this needs discussion. But I do think our engineers in the department have been working extremely hard with the session and drinking water issues and trying to meet with this committee. I thank committee members, but I want to thank our employees for all their hard work. Is there anything else before somebody motions for adjournment?

RICK NOWLIN: Move.

JEFFREY DUPLANTIS: Second.

JIMMY GUIDRY: I think we're adjourned. Thank you.