WYOMING WATER AND WASTE ADVISORY BOARD

IN RE: WATER QUALITY DIVISION

TRANSCRIPT OF MEETING PROCEEDINGS

Pursuant to notice duly given to all parties in interest, this matter came on for meeting on the 25th day of July, 2014, at the hour of 9:16 a.m., at Casper Community College, University Union Building, Room 415, 125 College Drive, Casper, Wyoming before the Wyoming Water and Waste Advisory Board, Ms. Marjorie Bedessem, Chairwoman, presiding, with Ms. Lorie Cahn and Mr. David Applegate in attendance.

Mr. Kevin Frederick, Water Quality Division Administrator; and Ms. Gina Thompson, Water Quality Division; Mr. Bill Tillman, Water Quality Division, were also in attendance.

microphone so all the members of the Board can hear their testimony. So if we -- if we might have 10 minutes to move your tables back and adjust it to where the lectern would be available to speakers.

CHAIRWOMAN BEDESSEM: So hold a 10-minute recess.

(Meeting proceedings recessed 9:53 a.m. to 10:09 a.m.)

BOARD MEMBER APPLEGATE: Madam Chair, can I make a process suggestion?

CHAIRWOMAN BEDESSEM: Are we back on the record?

BOARD MEMBER APPLEGATE: Yes.

CHAIRWOMAN BEDESSEM: We're reconvening.

BOARD MEMBER APPLEGATE: So a process suggestion I have is we -- this has been in front of us multiple times in the last several years. Can you sort of start off highlighting what's maybe changed since the last time we've been together, because we have a redline that's really --

MR. TILLMAN: It's okay.

BOARD MEMBER APPLEGATE: So if you could highlight, maybe, any substantial changes since the last Water Waste Advisory meeting, I think that would be helpful.

MR. TILLMAN: Do I need to -- Mr. Applegate, basically from our last meeting there have been no substantive changes, you know, to the chapter. We have done something different on the table that's more --

THE REPORTER: I'm sorry. I can't hear. It's just the people out there.

MR. FREDERICK: You might get closer to the mic.

MR. TILLMAN: Again, in regards to Chapter 25 from the previous board meeting that was in April, 18th of April, we have made changes as far as formatting and grammar and things of that nature. We have condensed a few tables, but there haven't been any substantive changes to what was presented before.

BOARD MEMBER APPLEGATE: Okay. So let me -- let me follow up with another kind of question. Were there any substantial or substantive comments that you chose not to address, and if so, could you provide some insight on -- on your thought process related to those?

MR. TILLMAN: Okay. I -- I believe that we've addressed all the comments that were presented to us before. In regards, there was a request by Ms. Cahn on percolation tests. There's been a presentation that was prepared that is quite detailed entering into calculations and theory that we'd be more than happy to share with you

at another time. I don't think this is the venue to go through that, because, like I said, it's quite extensive.

BOARD MEMBER APPLEGATE: So could you at least talk to the general --

MR. TILLMAN: Yes, basically --

BOARD MEMBER APPLEGATE: -- conclusion of that.

MR. TILLMAN: -- when we looked at that, we -- the engineer southeast -- southeast district engineer, he basically put together an analysis of looking at the various hole sizes in comparison to the original perc test that was proposed in New York, and came to the conclusion that the 12-inch hole gives the best, more consistent results as opposed to a 6-inch or 18-inch or any other size hole, that the 12-inch gave better results. And also that our sizing criteria, our loading rates, are as conservative or slightly more conservative than what was originally proposed in the New York, when they first proposed percolation tests. So we feel that our -- our percolation test and the results that we would get yield a conservative answer that makes more likely to work for long-term. And I think our history -- our records show that I believe Wyoming has one of the lowest failure rates for septic systems in the country, following those same criteria.

BOARD MEMBER APPLEGATE: So --

MR. DRINNON: Do you have any --

BOARD MEMBER APPLEGATE: Were there any substantial -- there will be a chance for the public to comment.

MR. TILLMAN: We didn't receive any comments. We haven't received any comments over the last two presentations to the Board with regards to --

BOARD MEMBER APPLEGATE: Okay. So the primary technical issue that was discussed at the last meeting, which you put together a technical presentation, is related to this --

MR. TILLMAN: Yes.

BOARD MEMBER APPLEGATE: -- kind of leach field design concept?

MR. TILLMAN: And in regards to, I believe Ms. Cahn was alluding to the use of soil texturing as -- as an alternative to the percolation tests. And we had a staff meeting here in Casper where we had an NCS soil scientist come and give a presentation on soil texturing. And basically his comments were that to do that soil texturing takes months of practice with someone alongside of you, working with you to make sure that you are analyzing that soil correctly. And he would not recommend that's something you would turn over to a homeowner with a

table that says it's this type of soil, so this is your loading rate. He thinks that would not be a good thing to do for average homeowner, that it takes several months of training alongside someone that's already, you know, trained in that, you know, to basically do that in some sort of consistent manner. He also alluded to the fact there's no certification for soil scientists currently, even through the NCS. So, again, there's no way to certify that someone is doing that correctly without someone alongside of them at that time.

BOARD MEMBER APPLEGATE: Thank you. I appreciate that context for where we are.

And, again, just to back us up just a second. So are we in the same position today, we're looking to try to forward this to the Environmental Quality Council? Is that --

MR. FREDERICK: Yes -- Madam Chairman -- that is correct. This is essentially I believe the fourth time we've had this rule before the Advisory Board, and it's been very beneficial to have your feedback and input and perspectives as we've gone through the process.

Additional formatting changes have been made. Since the last meeting we've corrected some confusing phrases that we talked about at the last meeting. We think the rule is -- is much improved, thanks in large part to

the Board's analysis.

It is our intent, I think, that the rule is ripe. I think we're comfortable with the work that's been done with establishing and looking at the soil textural analysis questions that have been brought forth and things like that, and so it would be our recommendation that the Board consider the current regulation for approval and move it before the Environmental Quality Council.

MR. TILLMAN: There was a comment. The gentleman in the back there had a comment. I don't know exactly procedurally.

CHAIRWOMAN BEDESSEM: Do you --

MR. DRINNON: I can wait for you guys to deliberate or I can ask my questions.

BOARD MEMBER CAHN: We want to have Board discussion first. Is that -- I didn't hear what you said.

MR. DRINNON: Sure. Go ahead. When -- if you open it up for public comment, I'll --

CHAIRWOMAN BEDESSEM: We will.

BOARD MEMBER CAHN: Typically we open it up for public comments first, and then we have Board discussion, but --

CHAIRWOMAN BEDESSEM: I prefer that we have public comment first, so that we can wrap it into our discussion. So if you -- members of the public would like

to --

MR. DRINNON: Did you want me to come forward?

MS. THOMPSON: It would be appropriate for you to come to the microphone.

COMMISSIONER BAILIFF: These are just questions. My name is John Drinnon. I'm with the Casper-Natrona County Health Department.

THE REPORTER: I'm sorry. Can you repeat your name?

MR. DRINNON: John Drinnon, D-R-I-N-N-O-N, and I'm with the Casper-Natrona County Health Department. And we maintain a delegation agreement to oversee the wastewater systems here in Natrona County. And there was mention of the lowest failure rate for wastewater systems. Does Wyoming maintain a database for state and local --

MR. TILLMAN: That was based on EPA publication that was presented, I believe -- I don't remember the year, but it was from EPA publication. It wasn't our data. It was the EPA's data.

MR. DRINNON: We've never been -- our wastewater program has never been solicited for that information, but, nevertheless, just kind of going through some of this. We provided our comments on page 25-5, on residential design flows.

BOARD MEMBER CAHN: Excuse me. Are you on a strike/underlined version or a clean version?

MS. THOMPSON: It's blue and red, so strike and underline.

BOARD MEMBER CAHN: Okay.

MR. DRINNON: Okay. Regarding the changes you've made --

BOARD MEMBER CAHN: Excuse me. The page?

BOARD MEMBER APPLEGATE: Yeah, it's easier for us to follow you if you go page number and line number, that way we'll be able to follow you.

MR. DRINNON: 25-5, Table 1, residential design flows, in blue.

BOARD MEMBER CAHN: I don't have a table in blue. Wait a minute. 25-5?

MS. THOMPSON: Line 191?

BOARD MEMBER APPLEGATE: I'm in Chapter 25 right now.

BOARD MEMBER CAHN: Yeah, I'm in Chapter 25, and I don't have Table 1. I have a Table 4.

CHAIRWOMAN BEDESSEM: I have a Table 1.

BOARD MEMBER CAHN: I have a Table 4.

MS. THOMPSON: I think it's after the page that you're on.

CHAIRWOMAN BEDESSEM: It's page 25-5.

BOARD MEMBER CAHN: Yeah, page 25-5, and it's this table.

BOARD MEMBER APPLEGATE: Are you in a different version?

CHAIRWOMAN BEDESSEM: Are we in a different section, because mine matches yours and you two don't match me.

MR. DRINNON: We are looking at the draft, correct?

MR. TILLMAN: Yes, I'm with you.

BOARD MEMBER CAHN: I'm in Chapter 25 -- Chapter 25, strike/underline, page 25-5, and I have a Table 4.

BOARD MEMBER APPLEGATE: Mine is the same as Lorie's.

CHAIRWOMAN BEDESSEM: I'm looking at -- yeah, Chapter 25, underline, and mine matches --

MS. THOMPSON: Oh, the -- there must be a section problem. Do you see where the page numbers started over?

BOARD MEMBER CAHN: Oh.

MS. THOMPSON: So everyone's will be not great in the middle. I apologize.

CHAIRWOMAN BEDESSEM: Move to the very front.

BOARD MEMBER CAHN: Okay, the first 25-5.

MS. THOMPSON: I apologize for that.

BOARD MEMBER CAHN: We're with you now. Sorry.

MR. DRINNON: Leave it to me to find this kind of situation here.

Anything in blue, are those the proposed changes?

MS. THOMPSON: That's correct, sir.

MR. TILLMAN: Yes.

MR. DRINNON: Okay. Because we base our design criteria on 150 gallons per bedroom per day. It seems like there's been a reduction, because if you look at -- like perhaps just off the cuff here -- for four bedrooms, it's 470. We -- at present time, that would qualify for about a three-bedroom. It would be a fairly significant reduction. Is this based on EPA design criteria or --

MR. TILLMAN: No. Basically the -- I can't recall the -- the wastewater engineering by Metcalf & Eddy. The 20 -- the 2003 edition. They basically reduced some of those flows based on more efficient use of toilets and sinks and things like that. So those numbers have come down little bit, and we basically concurred with that reduction. And we picked the middle range. We didn't pick the least. We didn't pick the maximum. We picked middle

in those reductions. So it's from that reference.

MR. DRINNON: I know there was some newer technologies, low-volume showers --

MR. TILLMAN: Right.

MR. DRINNON: -- and toilets and things like that. I was just kind of curious about --

MR. TILLMAN: Again, being a delegated county, like you are, you would have the option to be more stringent, so you can raise those if you'd like.

MR. DRINNON: Yes.

Let's see. Page 25-16, Table 4. Public water supply well. It's 200 feet minimum from absorption system to a well. Very problematic for us sometimes. We have areas -- and I certainly understand what you're trying to accomplish here, you know, protect the shallow aquifers, and maintaining as much separation as you can from potable water sources, but we have areas, strangely enough, right across the wellhead protection area in Casper here that has become very problematic. Those properties have been subdivided so many times that what was once probably five-acre parcels minimum are now half acre. And by the time you consider the location of their dwelling and their outbuildings and property lines and they're still on -- surprisingly still on wells, that's going to be very difficult for us to maintain.

MR. TILLMAN: Okay. There is a caveat. If you look at the subscript 2 that gives you a way to propose, I guess, a deviation from that standard. If you perform, you know, a test, basically, to see whether or not what effect it has, you know, on that well. So there is -- there is a way maybe around that.

MR. DRINNON: Where is that at?

MS. THOMPSON: It's in the subscript table, under the table --

MR. TILLMAN: The subscript under the table.

MR. DRINNON: Okay. Like 411, 412, 413?

MS. THOMPSON: We're --

MR. TILLMAN: Yes.

THE REPORTER: One at a time.

MR. DRINNON: Got it.

MR. TILLMAN: Starting line 414, ending line 442.

MR. DRINNON: Okay. Got it.

BOARD MEMBER CAHN: But they will be required to obtain an individual permit to construct and require PE?

MR. TILLMAN: Yes. Again, it's for source water protection that we're trying to make sure we address that.

MR. DRINNON: Well, we're very supportive of that. It's just trying to make it --

MR. TILLMAN: Can present a problem, yes.

MR. DRINNON: Uh-huh. I think the other property need a moratorium, but nobody wants to step up to that political hotbed, so...

BOARD MEMBER APPLEGATE: So let me ask a clarifying questioning. They're a designated county, so would they -- they have -- they issue the permit so they wouldn't have to, by -- help me understand how that process would work for a homeowner. Do they get that specialized permit through the County?

MR. TILLMAN: Through Natrona County.

BOARD MEMBER APPLEGATE: But this regulation requires them, as a county that doesn't have to follow this requirement. Is that -

MR. TILLMAN: To a minimum they can be more stringent, but they cannot be less stringent.

MR. DRINNON: Right.

BOARD MEMBER APPLEGATE: So the impact on them is that they -- if they have houses that can't meet this setback, they're going to have to require of that local landowner this professional engineering certification process.

MS. THOMPSON: And additional treatment.

The system will require additional treatment.

BOARD MEMBER CAHN: So you're saying the houses are closer than 200 feet to the public water supply?

MR. DRINNON: To the wells.

BOARD MEMBER CAHN: To the wells.

MR. DRINNON: That's not public well.

MR. TILLMAN: Is that public well or individual well? Because this one says that 200 foot applies to a public well. If you look above it, that's an individual well.

MR. DRINNON: No, these areas are -- we do have some situations like that; however, the one I'm referring to is private wells.

CHAIRWOMAN BEDESSEM: So this doesn't apply.

MR. DRINNON: Well, actually some of them are transient noncommunity, like our mobile home park out there.

MR. TILLMAN: Okay.

MR. DRINNON: So it's a mixed bag of stuff going out up there.

BOARD MEMBER APPLEGATE: Just so we understand, your interest as a -- as a citizen commenting, are you commenting that you think this is overly rigorous or just going to be a challenge? I mean, I'm assuming --

MR. DRINNON: Challenge.

BOARD MEMBER APPLEGATE: -- you want that increased; is that a fair statement --

MR. TILLMAN: Yes.

BOARD MEMBER APPLEGATE: -- WDEQ?

MR. TILLMAN: Yes.

CHAIRWOMAN BEDESSEM: What were the previous --

MR. DRINNON: 100 for us.

THE REPORTER: One at a time.

MR. DRINNON: 100 feet for us.

BOARD MEMBER CAHN: Okay. So let's walk through two situations. One is with a 200-foot setback that can't be met in a -- to a private well.

MR. TILLMAN: To a public well.

BOARD MEMBER CAHN: Okay.

MR. TILLMAN: To 200 foot for a public well.

BOARD MEMBER CAHN: So in the table -- oh, our public water supply. Okay.

CHAIRWOMAN BEDESSEM: Public water supply.

BOARD MEMBER CAHN: Okay. So do you have a situation where you're less than 200 feet to a public water supply well for domestic-based water?

MR. DRINNON: I think that certainly is

applicable, yes, we do.

BOARD MEMBER CAHN: Okay. So if --

MR. DRINNON: For transient noncommunity.

BOARD MEMBER APPLEGATE: Okay. So then we go to footnote 2. Would that then -- would they all be within zone 2 attenuation or -- I mean, I don't know how to read this footnote as determined by DEQ's source water assessment project or guidance document. I mean, does that automatically put them in this zone 2 or not?

MR. TILLMAN: I believe you have to go to that document, and it tells what zones are around the state. So you have to see where -- where they fall. I don't know where they would fall, if they're automatically zone 2 or not.

BOARD MEMBER CAHN: Okay.

MR. TILLMAN: But the reference is correct, and can be -- is a direct link, so you can go right to that if you were to put that into -- go to Google Search or to the Internet. So it would pull up that table so you would know where you are and what your -- what zone you are in.

MR. DRINNON: I think I know what you're referring to, because we know that there are -- this specific location that I'm talking about, we do know that lower density, for example, they are in zone 1, you know, as you get further away from that area, zone 2, zone 3.

BOARD MEMBER CAHN: So if they're in zone --

MR. DRINNON: This is for potable -- this is for potable systems.

BOARD MEMBER CAHN: So if they're in zone 1, this footnote doesn't apply, what happens?

CHAIRWOMAN BEDESSEM: It can't be zone 1.

BOARD MEMBER CAHN: What's that?

CHAIRWOMAN BEDESSEM: I thought they weren't allowed to be in zone 1.

MR. FREDERICK: If they were in zone 1, they would effectively be in zone 2. Zone 1 is, as I recall, a radius of 100 feet around the public water supply well.

BOARD MEMBER CAHN: Okay.

MR. FREDERICK: So there are no extraordinary requirements if you're in zone 1. If you're within zone 2, then these requirements apply.

BOARD MEMBER CAHN: That's not obvious to me on that table. This table says you have to be within 200 feet of a public water --

CHAIRWOMAN BEDESSEM: Outside.

BOARD MEMBER CAHN: Has to be outside of 200 feet from a public water supply well. And the footnote says small wastewater systems that discharge to the same

aquifer that supplies a public water supply well and are located within zone 2 as determined by these documents. So what happens if you're in zone 1?

MR. FREDERICK: Yeah, the regulation should include zone 1 as well.

BOARD MEMBER CAHN: Okay. So that footnote needs to change.

MR. FREDERICK: Right. Right.

MR. DRINNON: We concluded with that one? Okay. Page 25-7. I guess I just need some clarification a little bit.

BOARD MEMBER CAHN: Hold on -- hold on just a second. Page 25-7.

MR. DRINNON: Uh-huh.

MS. THOMPSON: What section are you in, sir? We've identified a numbering error, and --

BOARD MEMBER CAHN: The numbers repeat themselves.

MS. THOMPSON: It gets confusing in the middle. I apologize.

MR. DRINNON: I'm just thinking of the pages --

MS. THOMPSON: Sure.

MR. DRINNON: Section 8.

MS. THOMPSON: Okay.

MR. DRINNON: Excuse me, Section 9.

BOARD MEMBER CAHN: So we're on the second 25-7?

MS. THOMPSON: Yeah.

BOARD MEMBER CAHN: And the line number?

MR. DRINNON: I'm just creating all kinds of confusion here.

BOARD MEMBER CAHN: Yeah.

MR. DRINNON: If you look at line 819 to 823, holding tanks. This beast, you know, raises its ugly head periodically for us, because we do have some places up on Casper Mountain where individuals want to place the holding tanks, but our criteria, generally, is that holding tanks are really meant for temporary purposes, you know, a drilling rig, drilling sites, and that sort of thing.

I guess what constitutes seasonal?

MR. TILLMAN: Like someone that has a cabin, you know, up on the mountain where, you know, eight months out of the year it's inaccessible due to winter, drifting, and whatnot, so they can't be in there. So there's a limited time frame that they're going to be occupying that residency.

MR. DRINNON: Often they are there -- they have snowmobiles and that sort of thing.

MR. TILLMAN: Right.

MR. DRINNON: And that, therein lies the problem, I think. They can't get a vac truck back there, and sometimes people do find creative ways of getting rid of their wastewater, so --

MR. TILLMAN: True.

MR. DRINNON: -- we've pretty much tried to limit the use of that. It was sort of forced upon us at the cabin sites out at Alcova, because over the years things have evolved out there, and we had to kind of come up with a workable solution for these people other than just random greywater disposal and everything from refrigerators to railroad ties. So we pretty much had them deactivate the pit privies and even vaulted privies or holding tanks. And, again, that would be seasonal, because there is a defined period of time there. It's specified in their leases.

MR. TILLMAN: Right.

MR. DRINNON: But, you know, for private cabins and things like that, there isn't.

MR. TILLMAN: This was the best approach we could come up with --

MR. DRINNON: Understood.

MR. TILLMAN: -- without being overly restrictive. Because, again, for those people who do have cabins that are truly seasonal, it gives them a way out to

handle their waste, and they can address it, you know, when they're there in the spring or before they leave in the fall.

MR. DRINNON: And I do know it's their responsibility to get rid of it, but, you know, to get a vac truck way back there on Casper Mountain sometimes is very difficult. You know, especially when the snow starts flying around October, November, and doesn't melt until April or May. So I was thinking maybe define the seasonal as like three-month period of time of periodic occupancy or something, but it's up to you guys.

BOARD MEMBER CAHN: So, excuse me, can you get closer to the microphone and explain what your -- what you'd like to see, what change you'd like to see, what you would propose here. Is it a definition of seasonal as three months, or what --

MR. DRINNON: Well, whatever's decided upon, I think if rules aren't more specific, it always raises a question. While seasonal is six months, seven, eight months, that sort of thing, I think if there were some parameter that we would refer to, something more concrete than just, you know, seasonality, it might be a little bit more efficient for us to either prove or disapprove of the use of a holding tank.

BOARD MEMBER CAHN: So do you have a

suggestion for how many months seasonal would be that would work for -- what would work for you?

MR. DRINNON: Maybe perhaps a quarter or a semester or something. Well, anywhere from maybe four -- three to four months or something.

BOARD MEMBER CAHN: So like a definition of seasonal.

BOARD MEMBER APPLEGATE: We're not making that suggestion as a Board yet. You're taking that down as a comment, right, Lorie?

BOARD MEMBER CAHN: Yeah.

MR. DRINNON: And lastly, page 25-19, that would be Section 13, mounting systems. 25- -- 25-19.

BOARD MEMBER CAHN: Which line number are you on?

MR. DRINNON: It would be paragraph small I, 318 to 3 -- excuse me, 1318 to 1321, small I. A minimum of 1 foot of vertical separation of native soil is required between the bottom of the sand filter for a sand fill on top of the high groundwater level or any restrictive layer. It's pretty minimal, our experiences have been, with these types of applications, excuse me.

MR. TILLMAN: I think I -- what I see reads different. A minimum of 1 foot vertical separation from the native soil and the bottom of the sand fill and the top

of high groundwater, okay.

MR. DRINNON: Sand fill, okay. Which would be a mounded system, I'm assuming?

MR. TILLMAN: Yes.

MR. DRINNON: That 1-foot vertical separation doesn't leave a whole lot of separation in my -- based on our experiences between variability and groundwater levels and wicking and just the porosity of sand filter, our concern is that it's going to interface with the groundwater and eventually migrate through the sides of the mounted system itself. We've had that experience.

MR. TILLMAN: Okay.

MR. DRINNON: Currently, with the use of advanced treatment, we allow 2-foot separate -- we're not suggesting that you come in line with our rules and regulations, but with advanced treatment. Even with advanced treatment systems that are metered and pressure dosed, we require a minimum of 2-foot separation. Just a recommendation. It seems to have worked fairly good for us.

MR. TILLMAN: Okay.

BOARD MEMBER APPLEGATE: Madam Chair. So what would be the -- what would be WDEQ's basis for the 1 foot that's currently in the proposed reg?

MR. FREDERICK: I guess it's -- Madam Chairman -- not quite clear to me how an additional foot is going to eliminate the problem of seepage from the -- from the mound unit itself, if I understand correctly what you're saying. The separation distance is between the native soil and groundwater. I think the problem that you're alluding to is more reflective of the inability of that underlying interval between the sand layer to actually absorb any of the infiltration from the sand unit as opposed to the vertical separation to groundwater. So it's not clear to me how --

MR. DRINNON: Increasing an additional foot would make a lot of difference?

MR. FREDERICK: Right. Yeah.

MR. DRINNON: Okay. When you've got a lot -- you have -- groundwater is not static often. It's -- it rises, especially with irrigation practices and things like that. I think -- you know, and there's going to be a zone of saturation when you apply wastewater continuously, you know, for domestic purposes. For example, I think it's going to hydrate that foot layer, and between that and the groundwater level, I think there's a much more enhanced possibility of the interface between the two when that happens, and that soil layer becomes more saturated, and bio matting builds up, that sort of thing,

but then I think there's going to be more propensity for water to start looking for other methods of distribution, and typically that might -- could be through the sidewalls of the sand mound itself, because we're talking about a very porous soil.

BOARD MEMBER APPLEGATE: I can just say, for someone who was not familiar with the design of these, I'm struggling a bit with what we're describing. It's different for me, maybe, because I'm a visual thinker.

BOARD MEMBER CAHN: You can draw a picture.

CHAIRWOMAN BEDESSEM: Yeah. There's a dry erase board up there.

BOARD MEMBER APPLEGATE: Although -- I guess I would say maybe -- maybe that's a level of detail -- I don't know if I want to take us down that rathole.

MR. DRINNON: Yes. Go ahead.

BOARD MEMBER CAHN: I think we should. A picture is worth a thousand words.

CHAIRWOMAN BEDESSEM: They can show you.

MR. FREDERICK: Just -- Madam Chairman, for Mr. Drinnon --

MR. DRINNON: Yes.

MR. FREDERICK: -- if I can refer you to the following requirement in the regulation here that's on

line 1322.

MR. DRINNON: Of the same page?

MR. FREDERICK: Yes.

MR. DRINNON: Okay.

MR. FREDERICK: There's a requirement here that the underlying native soil achieve a certain level of infiltrative capacity. I think -- I think that's intended to help ensure that we don't encounter the type of situation you're describing. I was just curious as to whether you're taking that into consideration.

MR. DRINNON: I have, indeed. And I don't know if there's really an actual level of assurance with any wastewater application, because there's lots of unforeseen circumstances and variability in that, but I would suggest that if you have a 50-minute per inch soil type there, and with the poor distribution of wastewater with a very tight restrictive soil, I think that this possibility is going to be much more enhanced. You know, I don't know if that it's going to really -- I mean, that -- 1-foot layer will probably filter out some of the wastewater, but ultimately what we're looking at is a method of wastewater disposal that's not going to end up perhaps surfacing or infiltrating through the sides of the sand filter. We've had several experiences in areas that actually have had 2 foot of separation between the two, and

they haven't been very successful.

BOARD MEMBER APPLEGATE: So the figure begs more questions to me than answers. So the minimum, is that how -- is there no -- is the 1 foot -- could you show me where the 1-foot distance is measured from in that design picture? Minimum of 1 foot of vertical separation of the native soil is required between the bottom of the sand fill and the top of the high --

CHAIRWOMAN BEDESSEM: Yeah. The native soil is down there where you have written earth. Yeah, take that off the top.

MR. FREDERICK: Okay. This is essentially the sand filter on top of the native soil. Regulation requires a minimum of 1-foot separation between the high groundwater table and essentially this 1 foot of native soil. I think Mr. Drinnon's suggesting that that should be increased to 2 feet.

BOARD MEMBER APPLEGATE: So there is -- increased restriction would make it -- I mean, do we have areas where we -- I guess this is sort of in river bottoms. How many places do we have where the water's only that close?

MR. TILLMAN: Up in the northwest part of the state, they have high groundwater quite a bit.

MR. DRINNON: We do as well.

CHAIRWOMAN BEDESSEM: But you mound it.

MR. TILLMAN: That's why you mound it, just to get our separation.

BOARD MEMBER APPLEGATE: Okay.

BOARD MEMBER CAHN: And he's saying he's seen failures when it's 2 feet.

BOARD MEMBER APPLEGATE: Also, if you look at the next ii.

MR. TILLMAN: Right.

BOARD MEMBER APPLEGATE: ii is designed to accommodate -- the failure situations that he's describing would likely not occur if you could meet the second criteria, which is the percolation rate that's in the second criteria. I believe that's what we were told.

MR. DRINNON: I guess I would ask how? You know, there's a whole range there. You know you've got five minutes per inch and 60. I mean, that's a big range of soil types there. You know, it would be -- the argument, I think, would be better supported if you had more narrower range, that, you know, under these circumstances you can maintain a 1-foot separation, which I still wouldn't think that would be enough, but --

BOARD MEMBER CAHN: So it was on the 60 minutes per inch end, then the --

MR. DRINNON: No, not good.

BOARD MEMBER CAHN: -- 1 foot might be okay.

MR. DRINNON: Actually, I don't --

BOARD MEMBER CAHN: No.

MR. DRINNON: I don't think either would. Because if you've got extremely permeable soils, that waste flow is going to come from the bottom of this sand filter and interact with the native soils much more rapidly. But with clay-type soils, once they become more hydrated, they don't distribute the effluent very efficiently. It's like a sponge --

BOARD MEMBER CAHN: Right.

MR. DRINNON: -- just retains water.

You keep pumping more and more wastewater to it, there's no place for it to go. There's some lateral distribution of it, but I think you probably could facilitate this, based on our experiences, with minimum of 2 foot of soil.

I guess what we can do is be more stringent and we can maybe look at it from that avenue, because currently we do require, with advanced treatment, a 2-foot separation, otherwise it's 4 feet.

CHAIRWOMAN BEDESSEM: So I -- so the results of requiring that 2 feet now is that if somebody's trying to build a wastewater system on a site where the

high groundwater table is only a foot below the surface, they can't put a mound -- even a mound system in.

MR. DRINNON: Based on our criteria, no, not with a foot.

CHAIRWOMAN BEDESSEM: But the way these rules are, if you only have groundwater a foot below the surface, you could build a mound system --

MR. TILLMAN: A mound system.

CHAIRWOMAN BEDESSEM: -- and put in a septic system.

MR. TILLMAN: Yes.

MR. DRINNON: The only accommodation we made for extremely elevated groundwater is if you have advanced treatment, like in the textile filter, where the effluent, in theory, is cleaned up and applied to the land, otherwise we require 4-foot separation.

BOARD MEMBER APPLEGATE: So you present us with an interesting comment, because it's not often we have a municipality or somebody that's arguing for more stringent requirement.

MR. DRINNON: Leave it to us, right? Yeah.

BOARD MEMBER APPLEGATE: What you're suggesting is your local experience suggests that this more rigorous requirement is beneficial, but do I also understand you have the ability to --

MR. TILLMAN: Delegate.

BOARD MEMBER APPLEGATE: -- employ that more rigorous requirement?

MR. DRINNON: We do.

BOARD MEMBER APPLEGATE: And so I'm questioning the need for a change, meaning here in this community they have determined, through their application of this set of rules, that they have a more rigorous requirement. And if there was failures in another community -- is this -- is it typical for most communities in Wyoming to implement this through their own set of rules, or is this just the bigger communities that do this, like Casper and Cheyenne?

MR. TILLMAN: There are different delegated counties with the state, and we have those delegation agreements with those counties. And if you're a delegated county, you have the option to be more stringent. Our rules are a minimum requirement. They can elevate that to whatever they deem is necessary, through their own experience or just whatever they'd like to do. They can be more stringent.

BOARD MEMBER APPLEGATE: Okay. Thank you.

CHAIRWOMAN BEDESSEM: Okay. Any --

MR. DRINNON: That's all I have. Thanks for your time.

CHAIRWOMAN BEDESSEM: No.

BOARD MEMBER APPLEGATE: Thank you.

MR. TILLMAN: Thank you.

CHAIRWOMAN BEDESSEM: It was very educational. Great.

MS. THOMPSON: Madam Chairman, I think we have another commenter.

CHAIRWOMAN BEDESSEM: Please come forward.

MS. GINDULIS: I'm April Gindulis with the Casper/Natrona County Health Department. I work with John. And a couple of things that he didn't bring up that I would like some clarification on is under your definitions, in the first set of numbers 25-4, line 165, soil absorption system, and it gives a definition of that. Is that what you are defining as a small wastewater system?

MR. TILLMAN: Yes.

MS. GINDULIS: Okay. It has come up in discussions about whether or not a small wastewater system includes a pressure dose -- is pressure dosing system included in that definition or a mound system?

MR. TILLMAN: Those are treatment options for a small wastewater system. There are varieties of small wastewater systems, stone and pipe, pressure dose, and, as you alluded to --

MS. GINDULIS: It's come to our attention,

with our regulations and whether or not we would be able to permit a pressure dose system because it does require the PE design. However, I did just see in the regulations that there's going to be a packet online --

MR. TILLMAN: Yes.

MS. GINDULIS: -- that the public can use.

MR. TILLMAN: Yes. Yes, ma'am.

MS. GINDULIS: So we would still be able, as a delegated county, to permit these systems.

MR. TILLMAN: Yes, you would.

MS. GINDULIS: Okay. The only other concern or question. I have two installers that make concrete tanks here --

MR. TILLMAN: Uh-huh.

MS. GINDULIS: -- in Natrona County. And under the second section of the page numbers, 25-4, starting with 709, they changed the -- the minimum riser size from 6 inches to 20 inches. And the way the two tanks that are in Natrona County are designed, they have the 6-inch riser that comes to the surface over the -- one over the outlet for the effluent filter, because they're single compartment tanks, and another for cleanout when the tank needs pumped out. And their concern is they're going to have to change their forms in order to meet this requirement.

MR. TILLMAN: We're aware of that.

MS. GINDULIS: Okay. All right. So, I guess, is that something that's -- they want to keep in place with the 20-inch minimum -- or -- yeah, minimum riser, or is there going to be room for people who already have tanks that have been approved?

MR. TILLMAN: Okay. If and when this gets promulgated, there will be new listing of tanks that are approved. So at that point they would have to comply with the 20-inch minimum.

MS. GINDULIS: Okay.

BOARD MEMBER APPLEGATE: And just for clarification. There's been extensive discussion about this in previous meetings. Help me. I'm not asking you to describe sort of the rationale behind it, but there was a rationale for the increase, I believe. Could you share that with us?

MR. TILLMAN: Basically we looked at all the states surrounding us, I believe Nebraska, Utah, Colorado.

MS. THOMPSON: Is this the opening?

MR. TILLMAN: Yeah.

MS. THOMPSON: Yes. Where we started with the EPA onsite wastewater manual, and they give a range. And their range is 18 to 24. So that we -- we went down

the middle to start with and picked 20.

MR. TILLMAN: Yeah, as a minimum size.

BOARD MEMBER APPLEGATE: But the practical -- or help me understand sort of the engineering reason for the -- their suggestion and the proposal for the larger size. I remember there was one. I just can't remember it.

MR. TILLMAN: Okay. Basically the comment was that a particular installer puts a person down through that opening. And this was not designed for a person access. This was an access to stick a tubing down or a flashlight, something of that nature, to remove the contents of the tank. That if someone were to want to go inside to clean it, fix it or address problems in the tank, they would uncover it, pull the lid and go inside. It was not intended for a person, as a manway in like a pressure vessel. I come from a refining background. Usually manways are 36-inch, 48-inchopenings for egress and ingress of a person. This was not intended for that purpose.

MS. THOMPSON: So if I might, you know, show a comparison, this comment is actually the opposite end of the problem.

BOARD MEMBER APPLEGATE: Yeah, it is.

MS. THOMPSON: So previous comment was too small.

CHAIRWOMAN BEDESSEM: I think what Dave is asking is -- you said where you got the recommendation.

MS. THOMPSON: Uh-huh. Uh-huh.

CHAIRWOMAN BEDESSEM: He's asking why did they make that recommendation.

MR. TILLMAN: It was --

CHAIRWOMAN BEDESSEM: Why the 6 inches to 18?

BOARD MEMBER CAHN: It went 18 to 24, EPA manual.

BOARD MEMBER APPLEGATE: I think I understand my question -- or where I was trying to go with this. So the idea was to make it small enough that a person can't go in it, but they are using tanks that are -- have 6-inch openings, which -- help me understand why a 6-inch opening --

CHAIRWOMAN BEDESSEM: That's what I was asking.

BOARD MEMBER CAHN: We're not saying --

BOARD MEMBER APPLEGATE: We're not --

THE REPORTER: One at a time.

BOARD MEMBER APPLEGATE: We're not meeting the need, because no one is going to crawl through a 6-inch opening, but yet you're going to require a change in forms.

MR. TILLMAN: There was comment that, you

know, 6-inch opening is rather small for different size of hoses that have to access that tank for -- to remove the contents. And a 20 gives them a little more latitude, depending on the outfit what type of equipment that they have. But a 20 is also, we figured, small enough that really doesn't induce a person to go in there, because there have been incidences in the northeast, up by the Black Hills, where people have crawled in and died by going in through that access opening.

BOARD MEMBER APPLEGATE: Yeah, so I wanted to suggest an idea that maybe would address both of these. You can have the opening would be no larger than 20 inches, and you still address this concern of no one getting in it, but the smaller -- if they've been designing tanks that have 6-inch opening, and those have worked, why would we suggest that somehow you need a larger opening?

BOARD MEMBER CAHN: But let me get some clarification. You say in these tanks there's two openings. There's a 20-inch one and there's a 6-inch one. What's the difference between what the 6-inch -- what you do in the 6-inch one versus what you do in the 20-inch one?

MS. GINDULIS: The lids on the concrete tanks have the manhole, and then in the middle there is the hole for the 6-inch riser that comes to the surface and is capped.

BOARD MEMBER CAHN: And what goes down the riser versus what goes down the manhole?

MS. GINDULIS: The riser for the outlet, often for the single-compartment tanks, have an effluent filter, and that effluent filter does need to be accessed so that they can pull it out and clean it. So that's that riser.

The middle riser, on a single-compartment tank, since there's two, is for hoses for vac trucks to use to vacate the solids from the tank.

BOARD MEMBER CAHN: Okay. I'm just wondering if we need to be more specific about -- because this says a riser shall be provided to each compartment of the septic tank for inspection and cleaning. You're talking about something different than that. In that case that's the manhole that's providing the access for inspection and cleaning.

MS. GINDULIS: And that's below grade. That's covered.

BOARD MEMBER CAHN: And you're just talking about a second opening to the tank, that the only thing that's in there is an effluent filter.

MS. GINDULIS: The outlet has -- in single-compartment tanks, has an effluent filter in the T baffle. And that has to be accessible for cleaning. And

like I said, it has the minimum 20-inch already on the tanks, but bringing them to the surface was the concern of the -- of the installers.

BOARD MEMBER CAHN: So if we say at least one -- I mean, if we somehow distinguish between those two different functions, that the 20-inch minimum is for the manway, and if there is a second thing, it can be -- on the -- on the effluent end, it can be 6 inches? I mean, would that -- I don't know. I'd have to talk to Dwight.

BOARD MEMBER APPLEGATE: We have the same -- we're trying to understand what -- we need to ask about. Their interpretation is somehow required to change in design, which may not be necessary.

CHAIRWOMAN BEDESSEM: Well, I'm wondering if --

BOARD MEMBER APPLEGATE: If the rules -- they're being forced in that direction.

CHAIRWOMAN BEDESSEM: If you say at least one riser in each compartment shall be 20 inches.

BOARD MEMBER CAHN: There you go. Would that work?

CHAIRWOMAN BEDESSEM: Because you're a one-compartment tank, and you've got one riser that's 20 inches.

MS. GINDULIS: Right.

CHAIRWOMAN BEDESSEM: The other is 6. Right now this says the riser will be 20 inches.

MS. GINDULIS: And on single-compartment tanks, you need to -- you can have the 20-inch. It has to be on the outlet side of the tank, though, because you have to be able to access that --

BOARD MEMBER CAHN: Right.

MS. GINDULIS: -- effluent filter.

BOARD MEMBER CAHN: So wouldn't her suggestion work?

MS. GINDULIS: I think I'm following correctly. I think so.

BOARD MEMBER APPLEGATE: Suggestion --

THE REPORTER: I'm sorry. Can you repeat that? Repeat that.

BOARD MEMBER APPLEGATE: Madam Chair, make your suggestion again for WDEQ's evaluation.

CHAIRWOMAN BEDESSEM: I was wondering whether you might be able to say at least one riser per compartment shall be minimum of 20 inches, so that they have an additional riser that's a 6-inch riser. They don't have to change that to 20 because they have another 20-inch riser anyway. But in here it says "the" riser shall be a minimum diameter of 20 inches.

MR. TILLMAN: We can -- that's --

CHAIRWOMAN BEDESSEM: I'm wondering if that would take care of the issue.

MS. GINDULIS: So you're still saying that the 20 inches would still have to come to the surface, one 20-inch riser would still have to come to the surface. And the way their tanks are set up, they have -- the form is there's the lid, and the lid has a 6-inch riser in the top.

BOARD MEMBER CAHN: So where's the 20 --

MR. TILLMAN: The 20-inch is the diameter of the cover?

MS. GINDULIS: Yes.

MR. TILLMAN: And then underneath the cover is only 6-inch diameter going down?

MS. GINDULIS: So you have your 20-inch manhole.

MR. TILLMAN: Right.

MS. GINDULIS: And in the center of that 20-inch manhole is the riser that comes to the surface.

BOARD MEMBER CAHN: So then you have --

CHAIRWOMAN BEDESSEM: What's the difference?

BOARD MEMBER CAHN: You have a 20-inch opening.

MS. GINDULIS: You do. Yeah.

BOARD MEMBER CAHN: Because nobody can go down --

MR. TILLMAN: But it's --

BOARD MEMBER CAHN: -- it's a 6-inch riser.

THE REPORTER: One at a time.

MR. TILLMAN: But --

CHAIRWOMAN BEDESSEM: She keeps us in line.

THE REPORTER: Hardly.

MS. THOMPSON: We do need all the help we can get, so...

BOARD MEMBER APPLEGATE: So now I come back to what I said originally, Lorie. That the riser that's coming to the surface, that 6-inch riser, even though it enters the tank through a 20-inch manhole --

MR. TILLMAN: Yeah.

BOARD MEMBER APPLEGATE: -- the intent is to be able to clean out the tanks, which they must be able to do through this the 6-inch risers, if they have tanks that are installed and they're using. The whole intent of not going larger than 20 inches was to prevent human entry into the tanks. So my question to WDEQ is if the tank -- if the entry point that comes to the surface is less than 20 inches, is that really a problem, if they've been able to clean those tanks out with the smaller diameter riser?

MR. TILLMAN: No, I guess it wouldn't be a

problem.

BOARD MEMBER APPLEGATE: And, therefore, should it be rewritten such that instead of it saying 20-inch riser -- a minimum of 20 inches -- maybe it should be a maximum of 20 inches.

BOARD MEMBER CAHN: No.

BOARD MEMBER APPLEGATE: Well, a maximum of 20 inches is what prevents a person from entering.

MR. TILLMAN: For a person that would like for someone to go in that way --

BOARD MEMBER CAHN: Our person does go into tanks all the time.

MS. THOMPSON: Teton County, as a delegated county, they adopted regulations which state that the -- the diameter must be a minimum of 24 inches.

BOARD MEMBER APPLEGATE: So people can go in it.

MR. TILLMAN: They can do it.

BOARD MEMBER CAHN: That's what he does for his profession.

MS. THOMPSON: When Laramie County --

BOARD MEMBER APPLEGATE: So why are we putting any requirement on the diameter? What's it matter? If some people are going to clean it out with not going into the tank and --

CHAIRWOMAN BEDESSEM: The strike --

BOARD MEMBER APPLEGATE: -- some people want it to be big enough to go into it, why are we making a requirement on the riser?

BOARD MEMBER CAHN: What I'm wondering is whether it's a difference between a riser and a manway. So that may be we're talking about some regulations for manway and some for riser.

MR. TILLMAN: It's a terminology thing. We purposely did not call it a manway, because we did not want a person to go in there. We call it an access opening.

BOARD MEMBER CAHN: Okay.

MR. TILLMAN: Manways, from my background, is what you use to get a pressure vessel, a much larger opening, so you can in tanks and hoses and stretchers and the whole works.

BOARD MEMBER CAHN: Is there a difference between access opening and a riser?

MR. TILLMAN: (Shakes head.)

BOARD MEMBER CAHN: You're saying there is. You're saying there's a riser inside --

MR. TILLMAN: Right.

CHAIRWOMAN BEDESSEM: Yes.

BOARD MEMBER CAHN: -- an access opening.

MS. GINDULIS: Yeah.

BOARD MEMBER CAHN: I'm picturing a riser coming out of the middle of a 20-inch hole, access way.

MS. GINDULIS: I'm trying to picture the two tanks that I'm thinking of, and I know that the one tank has the lid on the end for the effluent filter, and there is a 6-inch riser that comes to the top. The second one is in the center of the tank, where there is not a lid, now that I think about it, and it has a 6-inch riser coming to the top for cleanout purposes for vaccing the truck -- the tank out.

And the second one, it, too, has two 6-inch risers that come to the top, but whether or not they're part of that lid, I can't -- I'm having a hard time picturing, because it would just -- it was just -- the second one is a Phillips-Sutton tank, and it was just now reapproved, and we haven't had much experience with those, so I apologize.

But they -- the installers brought the concern to me and asked if I would discuss it. So, you know, their concerns are -- and I can't say that I disagree with the 20-inch riser that comes to the surface; small children falling in them in rural areas. The newer poly tanks have the 20-inch risers, but they were riveted down. They have protections with these concrete-like tanks, 20-inch riser. I'm sure you can get a manhole cover that -- that a child

wouldn't be able to remove.

BOARD MEMBER CAHN: And there are requirements in here, as I recall, that -- that preclude a child opening these, make --

MR. TILLMAN: Yes.

MS. THOMPSON: Right. The line directly under this diameter, line 718, if it's -- if the riser cover terminates above grade, it shall have an approved locking device.

BOARD MEMBER APPLEGATE: Madam Chair. I'm still trying to -- trying to come to the conclusion I understand this issue. So you have an interest, Lorie, because you have an interested party who wants to have a larger opening because they have historically gotten into the tank to do cleaning. There's also designed tanks that have smaller openings that have been adequate for cleaning, I guess, through some sort of pumping system. They've chosen sort of this middle ground where they have an opening that they think will prevent people going in, which doesn't meet your party's interests. And it also doesn't meet this party's interests, because they want to use smaller diameter pipes. Have I described the problem?

MS. THOMPSON: Actually, if I might clarify, Mr. Applegate. We're not preventing Mr. -- the gentleman from Teton County. We state a minimum of

20 inches, and so by using a 24-inch opening, he's still well within compliance.

BOARD MEMBER APPLEGATE: Okay.

MS. THOMPSON: And he's in compliance with the regulations within Teton County as well. So he's -- he's -- the compliance issue for him is less. We've -- if we make it a minimum of 20, and they're having a 6-inch opening, I think that seems more tricky.

BOARD MEMBER APPLEGATE: So help me understand why you would -- what your -- what's your reasoning for not wanting the 6-inch openings?

MR. TILLMAN: There was no reason for not wanting it. It was just to allow more options for the cleanout companies, depending on the size of their hoses and what they might want to stick in there. If they want to stick a camera to look in there, as well as their hoses, things like that.

BOARD MEMBER CAHN: Different pumps.

MR. TILLMAN: Right.

BOARD MEMBER APPLEGATE: But we have a manufacturer who is successful here in Casper. The smaller opening, is it really a requirement from you guys to try to dictate a design that you think will have more flexibility? I mean, that seems like a -- do you have any reason why a 6-inch opening does not meet your regulatory intent?

MR. TILLMAN: No, I don't. I don't think so.

BOARD MEMBER CAHN: But the EPA on-site manual, wastewater manual -- on-site wastewater treatment systems manual recommends 18 to 24. There are -- we were hearing that there were larger diameter pipes, there's pumps that people -- they're larger than 6 inches, there's things that people are having a hard time getting down a 6-inch opening.

BOARD MEMBER APPLEGATE: But we have someone here in Casper, where they obviously are using smaller openings and been able to install, and I assume they've been able to clean out those tanks.

MS. GINDULIS: Yes. To my knowledge, yes.

BOARD MEMBER APPLEGATE: So, therefore, why are we trying to dictate some narrow regulatory requirement when the market is showing us that 6-inch risers work as well as larger 20- to 24-inch risers? Why -- why regulate that?

BOARD MEMBER CAHN: If we're going to go back -- if we're suggesting going back down to 6, then I would like more time and go back and talk and refresh my memories with the gentleman, Dwight Reppa, from Macy's about all the issues that there were with 6 inches, because he had a bunch.

BOARD MEMBER APPLEGATE: So his -- he had -- he didn't want smaller openings because that doesn't allow him to clean out --

BOARD MEMBER CAHN: But also equipment that he has.

BOARD MEMBER APPLEGATE: I understand.

BOARD MEMBER CAHN: Changing out pumps and --

BOARD MEMBER APPLEGATE: He's working up in that area, and he's trying to have a tank designed that meets his economic interests, and up here you have another economic interest that are working with a smaller diameter opening. So it seems like we're trying to regulate to serve someone's economic interests, not the -- not the requirement, which is simply to have a tank that you can clean out.

BOARD MEMBER CAHN: I would like to go back and look through the EPA on-site manual. I mean, I need -- I need more time, because it's one thing to be comfortable with 20-inch and another thing to go back down to 6. So -- I mean, that, just for me as a Board member, that's what I'm going to need. I need -- that was probably a year ago we had this discussion, so I would need more time to look at that, as a board member, so...

BOARD MEMBER APPLEGATE: So Kevin, can

you -- do you have a problem if there was a smaller diameter -- I asked this question previously. Do you have any regulatory issue with a smaller diameter opening? It says 20-inch minimum. I'm trying to understand.

MR. FREDERICK: For the riser?

BOARD MEMBER APPLEGATE: Yeah.

MR. FREDERICK: Absolutely not.

BOARD MEMBER CAHN: What about for the manway?

CHAIRWOMAN BEDESSEM: Doesn't have to be a manway. I mean, you aren't calling things a manway.

MS. THOMPSON: Right.

BOARD MEMBER CAHN: Okay. For the access --

THE REPORTER: One at a time.

BOARD MEMBER CAHN: Access opening. Sorry. Access opening.

MS. GINDULIS: The way I understood the regulations was that they had to have a 20-inch diameter hole on the tank to be able to access the tank and for additional cleaning or change the baffles, if need be. And then in addition to that, they had the risers, the 6-inch risers that came to the surface.

BOARD MEMBER APPLEGATE: So maybe if we added some language that said the manway had to be at a

minimum of 20 inches, but no requirement on the riser diameter that comes to the surface. Maybe that would cover the range of things we're seeing? That would -- that would be consistent with the design you've described, right? They have a 20-inch manway into the tank, but a 6-inch riser. The gentleman who's talked to you wants to make sure that -- that hole into the tank itself is at least 20 inches. So maybe the change is to add to the language here that says the manway -- the manway opening -- I don't want to use the word manway, but the --

MS. THOMPSON: Access.

BOARD MEMBER APPLEGATE: -- the access opening into the tank is a minimum of 20 inches, but riser height through that manway to the surface can be of smaller diameter.

BOARD MEMBER CAHN: And you're not clear on the design. You're a little bit fuzzy on that.

MS. GINDULIS: The one I know for certain is the A.J. Vollmer tank.

MS. THOMPSON: Can I stop you --

MS. GINDULIS: Sure.

MS. THOMPSON: -- and ask you to draw picture. I think we're getting some description issues, and maybe a picture would help us to understand.

BOARD MEMBER CAHN: Sure.

MS. GINDULIS: Sure.

CHAIRWOMAN BEDESSEM: It worked on the mound.

MS. GINDULIS: My drawing isn't the best here. So this is your outlet, and their tank -- their form -- this is the top of the tank. Right here, on top of this is a lid, and it has a 6-inch coming to the surface here for the -- to access the effluent filter. In the center of this tank is also a 6-inch riser that comes to the surface, and that's for vacating the tank.

BOARD MEMBER APPLEGATE: But that 6-inch riser goes through a 20-inch --

MS. THOMPSON: So my question is, is this above the lid 6 inches? Is that what you're -- you're saying? Or the diameter of this access is 6 inches?

MS. GINDULIS: The diameter here is -- in the hole of the tank, comes up to 6 inches. There's a lid that goes on the whole thing, and then there's another lid that comes -- that's 20 inches right here.

MS. THOMPSON: Sure.

MS. GINDULIS: And in the middle of that is 6-inch riser for the effluent, and then there's a 6-inch hole in the middle of the tank to vacate for vac truck.

BOARD MEMBER APPLEGATE: If you -- can you get into the tank if you remove that 20-inch --

MS. GINDULIS: Here.

BOARD MEMBER APPLEGATE: So, again, if you have at least one 20-inch opening into the tank by person access, but your riser height -- or your riser diameter for cleaning the tank out with some sort of vacuum system wouldn't have to be 20 inches.

BOARD MEMBER CAHN: So the riser just goes to the surface and stops when it gets to the --

MS. THOMPSON: Uh-huh.

MR. TILLMAN: Yes.

BOARD MEMBER CAHN: -- access opening?

MR. TILLMAN: A riser is just to get you to the tank.

BOARD MEMBER CAHN: Okay. I mean, that -- then fits this definition, as Marge suggested, if line 715 said at least one -- instead of saying riser, at least one opening shall have a minimum diameter of 20 inches, then.

BOARD MEMBER APPLEGATE: That's consistent with what I was trying to say.

BOARD MEMBER CAHN: Yeah, so...

MR. TILLMAN: That's --

CHAIRWOMAN BEDESSEM: Is that just -- it's that just the riser doesn't come to the ground surface at 20 inches.

MR. TILLMAN: Right.

CHAIRWOMAN BEDESSEM: It's 6 inches.

MR. TILLMAN: Right.

CHAIRWOMAN BEDESSEM: But your hole in the tank is 20 inches. So is it just -- I don't even know where we say in here --

BOARD MEMBER CAHN: I think the confusion came in from when the word "riser" replaced the word "manway access," and it sounds to me like they're different things. One was a larger opening for bigger pieces of equipment and/or -- but you don't want to see a person -- but and/or a person. And the other one is just a small riser that allows --

CHAIRWOMAN BEDESSEM: So maybe it's just a change --

BOARD MEMBER APPLEGATE: Don't go back to the manway.

CHAIRWOMAN BEDESSEM: But don't say manway so that -- you say the tank access shall have a minimum, because then it's not implying that a person should go down there.

MS. THOMPSON: I pulled up the tank access information out of the on-site wastewater manual out of EPA, and the way it reads --

BOARD MEMBER CAHN: Which section are you in? I wonder if I have it.

MS. THOMPSON: Starting -- are you -- starting at page 4 --

CHAIRWOMAN BEDESSEM: She's got a copy.

MS. THOMPSON: -- 4-42, under Tank Access.

BOARD MEMBER CAHN: I didn't bring it with me.

MS. THOMPSON: Okay. So I'll read it. Manways are large openings 18 to 24 inches in diameter or square, at least one that can provide access to the entire tank for septage removal, if needed. If the system is compartmentalized, each compartment requires a manway located at the inlet/outlet or center of the tank.

Let's see. Inspection ports are 8 inches or larger in diameter and are located over both the inlet and the outlet, unless a manway is used. And both inspection ports and manways are expected to be securely capped to prevent children from getting in. So I'm wondering if that would be more of an inspection port.

CHAIRWOMAN BEDESSEM: It just seems like for some reason the -- we've changed it from manway access to riser, and --

BOARD MEMBER APPLEGATE: That's creating a problem.

CHAIRWOMAN BEDESSEM: -- that's creating the problem.

MR. TILLMAN: I think what's -- and just speaking off the top of my head, I'm pretty sure that the intent was to have the access opening and the riser the same diameter that you don't let down as such to allow for variability of equipment and hoses and things like that. So it's probably intended to be one and the same. But what you're proposing is that the riser diameter be different than the access opening.

CHAIRWOMAN BEDESSEM: Uh-huh.

MR. TILLMAN: EPA manual says the access opening and riser, I believe, is integral. So it's the same diameter. The inspection port is smaller.

BOARD MEMBER APPLEGATE: I didn't get that from what she read, the fact that the riser has to be the same.

BOARD MEMBER CAHN: I heard riser 8 inches, at least 8 inches, and I heard manway access at least 20 -- 18 to 24.

MS. THOMPSON: 18 to 24.

MR. TILLMAN: Okay.

CHAIRWOMAN BEDESSEM: Sorry we're spending so much dang time on this. This is just -- I think Kevin was getting some additional information, whether we want to defer this until he returns with that and move on to the next topic.

BOARD MEMBER CAHN: Here he comes.

MS. GINDULIS: I apologize.

CHAIRWOMAN BEDESSEM: It's a terminology thing, and if we're confused, then chances are people reading the rule will be confused.

MR. TILLMAN: The constructors. Nobody can read this. Honestly, I mean, if you're a homeowner, you're not going to read about the tank. You're going to order a tank a certain size and they're going to worry about the access opening and riser height.

CHAIRWOMAN BEDESSEM: We'll, I guess I'm not concerned homeowners so much as the various companies that are producing or, you know, trying to meet the requirements, so whether it be, you know, the septage pumper or the people that are producing the tanks.

MR. TILLMAN: Correct.

MR. FREDERICK: I think we -- I think we may have some confusion in terminology here.

CHAIRWOMAN BEDESSEM: While you were out of the room we discussed the fact that -- that it seems like the crux of our problem is the distinction between manway access and riser, and that term -- and that it's been switched from manway access to riser.

MR. FREDERICK: Right.

CHAIRWOMAN BEDESSEM: And so if you want to

enlighten us a little bit more.

MR. FREDERICK: Well, if we go down to the bottom of the page, on line 718, which should be paragraph C, by the way.

CHAIRWOMAN BEDESSEM: Yeah, you're right. It should be C.

MR. FREDERICK: The riser shall terminate at a maximum of 6 inches below the ground surface. This is not the type of riser that she is describing.

CHAIRWOMAN BEDESSEM: Uh-huh.

MR. FREDERICK: Perhaps a simple fix would just simply be to rather than describe this as a riser, describe it as an access.

CHAIRWOMAN BEDESSEM: Which was the way it was before, but just take out the word "manway."

MR. FREDERICK: Exactly.

BOARD MEMBER APPLEGATE: That would allow her tank to be consistent with the requirements.

CHAIRWOMAN BEDESSEM: Can we just call it tank access, like we said a couple minutes ago?

MR. TILLMAN: That's fine.

BOARD MEMBER APPLEGATE: So the suggested change would be tank access, delete riser in both line 709 and 714?

CHAIRWOMAN BEDESSEM: As well as in 718?

MR. FREDERICK: Right.

BOARD MEMBER CAHN: No. 718, now we're talking about the riser. Leave riser as riser.

MR. TILLMAN: 718 is definitely a riser.

CHAIRWOMAN BEDESSEM: Right. 718 stays as riser, excuse me. And just tank access back in 714 and 709.

MR. TILLMAN: Yes.

CHAIRWOMAN BEDESSEM: I'm glad that same conclusion was reached in both parties, in the hallway and in the room.

MR. FREDERICK: Thank you for your patience.

MS. GINDULIS: Thank you. I appreciate you listening.

MR. FREDERICK: Thank you.

CHAIRWOMAN BEDESSEM: Okay. Do we have any additional comments on Chapter 25 in the audience? Hearing none, we'll move to Lorie for Board comment.

I like the resolution of this last one.

BOARD MEMBER CAHN: I would first like to say that I don't feel that my comments -- all of my comments that I made at the last board meeting were not substantive, and I'll just leave it at that.

I did ask -- well, I guess I will start with less

substantive. Back to pathogens definition on -- and I'm on the clean copy, page 25-3, line 117. I thought E. coli was an indicator organism, am I wrong on that, and not a -- we had wanted pathogens --

CHAIRWOMAN BEDESSEM: Where is this?

BOARD MEMBER CAHN: I'm on the clean copy in definitions, pathogens. I thought we were going to remove E. coli. We removed the other indicator organisms.

BOARD MEMBER APPLEGATE: I agree with you, E. coli is an indication of pathogen, but not a pathogen itself.

CHAIRWOMAN BEDESSEM: Well, it can be, but it's a subset.

BOARD MEMBER CAHN: Yeah, it's a subset.

CHAIRWOMAN BEDESSEM: A sub subset, meaning that -- yeah. What's your opinion on that?

MR. TILLMAN: I don't have an opinion. My background's chemical engineering. I don't -- I'm not a bacteria person. So from the people that -- our other engineers, our civil engineers, licensed, and they thought that E. coli was part of the pathogen, but if that's a disagreement or if there's a definition that says otherwise, we can entertain that.

BOARD MEMBER CAHN: Since it says pathogens include, but are not limited to, I would remove E. coli,

because it's not saying -- so it then would have cryptosporidia, giardia, hepatitis, Legionella, things that are clearly a pathogen.

MS. THOMPSON: Madam Chair. I looked at some previous responses to comments, and we have looked at pathogens before. But it was at the September meeting about a year ago, and the request was that we -- we look at pathogens and that we remove coliform.

CHAIRWOMAN BEDESSEM: Uh-huh.

MS. THOMPSON: So we removed coliform bacteria and fecal coliform from the definition, because we agreed that the terms indicate possibility of pathogens that are not necessarily pathogenic themselves. So that's where we were before. So am I hearing you correctly that E. coli would fit also into that category of it is -- it's an indicator along with coliform bacteria is an indicator and fecal coliform are indicators, but are not necessarily pathogenic?

BOARD MEMBER CAHN: That's my understanding, but --

CHAIRWOMAN BEDESSEM: Well, when I think of -- I think of E. coli strains, you know, that are -- are very nasty, and I'm used to, you know, looking at coliform as being a major group, and then fecal coliform being a subset that aren't necessarily all pathogenic, and E. coli

is subset of fecal coliform, and then the highly pathogenic forms of subset of E. coli, but whether all strains of E. coli are pathogenic --

BOARD MEMBER CAHN: That's my question.

CHAIRWOMAN BEDESSEM: Yeah.

BOARD MEMBER CAHN: So I'm thinking since it says they're not limited to, we could -- unless we can find out that every --

CHAIRWOMAN BEDESSEM: Or you know what would be a good thing? If you want to make sure -- this is a compromise, since I'm -- my micro biologist -- biological background is rusty -- is that, for example, there's some very nasty E. colis that have, you know, like a number after them.

MS. THOMPSON: Uh-huh.

CHAIRWOMAN BEDESSEM: Okay? You can put one of those in there. Okay?

MS. THOMPSON: Okay. Or I think I might have found a broader, yet accurate, compromise. In Chapter 21, in the chapter we just looked at, we have a definition of pathogenic organisms, and we define a pathogenic organism as a disease-causing organism. These include but are not limited to certain bacteria, protozoa, viruses and viable helminth ova. That is a --

CHAIRWOMAN BEDESSEM: That's in Chapter 21.

MS. THOMPSON: 21 that is moving to 11.

CHAIRWOMAN BEDESSEM: And why are we not using the --

MS. THOMPSON: I don't know.

CHAIRWOMAN BEDESSEM: Because otherwise you could use like E. coli 256, which is a clear pathogen without necessarily implicating anything.

MS. THOMPSON: If it pleases the Board, we could use this pathogenic organisms definition for consistency.

CHAIRWOMAN BEDESSEM: Yeah. I don't understand why we would have different definitions of pathogens in two different chapters of the Water Quality Rules and Regulations.

MS. THOMPSON: I'm --

MR. TILLMAN: They were promulgated at different times, different areas, different people.

MS. THOMPSON: Yeah. But at least --

CHAIRWOMAN BEDESSEM: It's not --

MR. TILLMAN: No, I'm just saying --

THE REPORTER: One at a time, please. I'm sorry, but it gets out of hand.

MS. THOMPSON: We have a chance to fix that, so we can make that substitution, if it pleases the Board.

CHAIRWOMAN BEDESSEM: Every one of the -- of the Board is shaking their head yes.

MS. THOMPSON: Okay.

CHAIRWOMAN BEDESSEM: It would make things more consistent throughout, and then we won't have to discuss whether E. coli is pathogenic or not.

MS. THOMPSON: Okay.

CHAIRWOMAN BEDESSEM: And people will just use the same definition. A wonderful opportunity to streamline your rules.

MR. TILLMAN: So am I hearing the Board would like us to change it to this more broad --

CHAIRWOMAN BEDESSEM: Yes.

MR. TILLMAN: Okay.

CHAIRWOMAN BEDESSEM: Yes. Thank you.

BOARD MEMBER CAHN: In Section 7, one of my comments was for standard trenches. I didn't think we should be including sidewalls. If I go -- if you go to the EPA manual, they conclude, including sidewall as an active infiltration surface and design should be avoided. If sidewall areas are included, provisions should be made in the design to enable the removal of the ponded system from surface periodically to allow the system to drain and the biomass to oxidize naturally. And I'd like to read this, but it's going to be slow.

I'll read slowly for you.

Both the bottom and sidewall area of the SWIS excavation can be infiltration surfaces; however, if the sidewall is to be an active infiltration surface, the bottom surface must pond. If continuous ponding of the infiltration surface persists, the infiltration zone will become anaerobic, resulting in loss of hydraulic capacity. Loss of the bottom surface infiltration will cause the ponding depth to increase over time as the sidewall also clogs. And there's some references.

If allowed to continue, hydraulic failure of the system is probable. And then that part I read before comes in that, therefore, including sidewalls -- sidewall area as an active infiltration surface and design should be avoided. That's on page 4-10 in Section 4.4.5 of the EPA on-site wastewater treatment systems manual.

And on page 4-17, under Sidewall Height, they say because the sidewall is not included as an active infiltration surface and sizing infiltration area, the height of the sidewall can be minimized to keep the infiltration surface high in the soil profile. A height of 6 inches is usually sufficient for most porous aggregate applications. So I'm at a point again where I don't think that sidewall should be counted in standard trenches.

BOARD MEMBER APPLEGATE: Madam Chair. So

can I ask just a clarifying question. So -- two questions. Have we traditionally included it?

MR. TILLMAN: Yes.

BOARD MEMBER APPLEGATE: If we have, have we seen failures?

MR. TILLMAN: It has been included in the past, and we would like to continue to include it. And I think our failure rate speaks to that, that it's successful including that sidewall.

BOARD MEMBER APPLEGATE: So by not including it, it would result in an increase in the area required for these type of designs, right? Is that -- is that a significant increase in design footprint if one doesn't include sidewalls.

MR. TILLMAN: It can be, especially in areas where the lots are becoming smaller, and they don't have amount of area. I think in her part of the country that is an issue. So that definitely keeps the area -- the footprint much more manageable.

CHAIRWOMAN BEDESSEM: Aren't we also reducing the wastewater loading calculation? Didn't we--

MR. TILLMAN: Yeah, we did --

CHAIRWOMAN BEDESSEM: Didn't we load --

THE REPORTER: One at a time.

MR. TILLMAN: Yes. The loading rate was lower, yes.

MR. FREDERICK: Madam Chair. I'd like to draw your attention to some additional requirements on the sidewall in the context of the calculation of the total infiltration area. And I'm looking on page 25-18 in the strikeout version.

CHAIRWOMAN BEDESSEM: In the second set of numbers or first set of numbers?

MS. THOMPSON: Probably the second set.

BOARD MEMBER CAHN: Second set.

MR. FREDERICK: First set.

CHAIRWOMAN BEDESSEM: First set.

MR. FREDERICK: And in particular, the calculation for the total infiltration area on line 503 references the Factor S. And on 511 S is defined as a sidewall height of 12 inches or less. So we see in there a restriction on sidewall height to begin with. Following on to line 513, the sidewall height is the depth below the flow line of the pipe to the bottom of the trench. In essence, we aren't calculating the entire sidewall of the trench, only that portion that's below the flow line of the pipe. And normally the pipe, as I suspect, is actually installed some distance within the trench. So any of that distance above the flow line or the center line of the

infiltration pipe, any of that sidewall height above that would not be included in the analysis. So I think it minimizes the factor -- the sidewall height factor in the overall calculation.

BOARD MEMBER CAHN: What is it typically, then?

MR. FREDERICK: Is it typically done?

BOARD MEMBER CAHN: What -- what -- how many inches is that typically done?

MR. TILLMAN: Depends on the installer.

BOARD MEMBER CAHN: I mean, it can be 12 inches.

MR. TILLMAN: It could be up to 12 inches, but below the flow line of the pipe, as Kevin's indicating. Not the whole depth of the trench, it's just below the flow line of the pipe.

BOARD MEMBER CAHN: Yeah.

MR. FREDERICK: So I just wanted to point out there are some restrictions on the inclusion of the sidewall.

BOARD MEMBER APPLEGATE: I have a process question here.

Lorie, you have a number of comments. How fast are we going to move forward on this? Do you want to like have -- are there comments you feel strongly enough to want

to vote on, or do you want to -- I mean, how are we going to move forward with this? Because that's a technical comment that, for example, I'd probably support it, you probably don't. I don't know how we move forward.

BOARD MEMBER CAHN: Well, let me get through a few more comments and then we can decide where we want to go at that point.

BOARD MEMBER APPLEGATE: Okay.

BOARD MEMBER CAHN: So -- okay.

The other comment that I made, and I don't remember which board meeting I made it at, about the minimum spacing of trenches. Now it's 3 feet, and I said, I think it was the last board meeting, that that was not very conservative. If you do a survey of the states around us, South Dakota, Idaho, Colorado, have 6 feet; Utah has 7; Montana has 4; and Wyoming has 3. So I'm -- it's difficult -- I couldn't find any other states that had 3.

And then -- I'm on page, I'm sorry, 25 -- of the clean version, 25-19, line 759. And EPA recommends 6 feet. Let me find that section.

BOARD MEMBER APPLEGATE: Madam Chair, I have a comment.

Lorie, since you've done some research into that, is there any empirical evidence to suggest why one is better than the other, or do we have just a range of

differences?

BOARD MEMBER CAHN: Let me -- let me finish. I'm just -- when I looked at our old regulations -- or the current ones that are still in effect, in Section 10(d), we had 3 feet or horizontal distance equal to 1.25 times the vertical depth of the trenches, whichever is greater, of undisturbed soil shall be maintained between adjacent trench walls. And so it's not clear to me why not only are we the least conservative of all the states, but now we've also removed that 1.25, which, if we had that 1.25 in there, we would at least be up with Montana, and be the most conservative in our region. So I don't understand why that got dropped, the 1.25.

MR. TILLMAN: We thought that that was very confusing. We didn't calculate that width, so we just figured we'd pick a width. Let me ask you again, was your question the difference between trench walls is a minimum of 3 feet, is that your concern?

BOARD MEMBER CAHN: The spacing between trenches.

MR. TILLMAN: In line 1171?

BOARD MEMBER APPLEGATE: 759 on the clean.

BOARD MEMBER CAHN: 759 on the clean version.

MR. TILLMAN: Okay. I'm on the strike and underlined version.

BOARD MEMBER CAHN: It's in Section 11.

MR. TILLMAN: It says --

BOARD MEMBER CAHN: (a)(vi)(F).

MR. TILLMAN: Minimum spacing is 3 foot. It can be increased to 9. So basically we're saying a minimum of 3. It can be larger.

BOARD MEMBER CAHN: I know, but I'm saying nobody else in our region has a minimum of 3. They typically have 6 or 7, except for Montana, which has 4.

MR. TILLMAN: And I think part of that justification, again, trying to accommodate the smaller plots that people have available to equip and install wastewater system. I believe I recall somewhere in the EPA on-site manual, or might have been in the other one --

MS. THOMPSON: Metcalf & Eddy.

MR. TILLMAN: -- I believe they said -- Metcalf & Eddy -- that a minimum of 18 inches was still usable between outside of the trench as sidewall absorption area. So if we give them 3 foot, that accommodates, you know, each trench being able to use that sidewall as an absorption surface. So that's why that minimum was set at 3 foot. But it can be larger than that.

BOARD MEMBER APPLEGATE: So -- Madam Chair.

My comment would be the fact that -- I come to whether there's evidence that failure of these given the design criteria. So although I can appreciate the fact there's all these other trenches, unless there's some evidence that says 5 feet has worked and 3 feet has failed, to me they're just sort of arbitrary data points.

BOARD MEMBER CAHN: What I'm hearing, though, is Wyoming doesn't -- although Mr. Tillman assures us that there aren't failure rates in Wyoming, what I'm hearing from Casper is that Casper doesn't report those in any way. There's no mechanism. So that doesn't do it for me to say we don't have a high rate of failure in the state, when I come from a county where there are high rates of failures. So I -- it doesn't do it for me.

BOARD MEMBER APPLEGATE: So have they failed -- so the -- I mean, I appreciate the perspective.

BOARD MEMBER CAHN: Yeah.

BOARD MEMBER APPLEGATE: Is there failures in Teton County -- is there -- is there evidence -- do they have a sense of why they failed, meaning are they under-designed? Is that really where you're coming from, they're underdesigned because they're too close together and they include the sidewalls, or is there anything that they've done to sort of understand why they've failed up in Teton County?

BOARD MEMBER CAHN: I can't answer that question, but I guess that's from my perspective, from comments that I've heard from the public, interested parties. My interest would be in being protective, and --

BOARD MEMBER APPLEGATE: Yeah.

BOARD MEMBER CAHN: -- designing something that can last for a long time and is less likely to fail, so we can use it for a long time. So that's --

BOARD MEMBER APPLEGATE: My only kind of counter I say to that is I agree with you conceptually, it's just whether or not the changes you're proposing actually leads to the solution you want, which is if there's failure up in Teton County, then we should be examining why there's failure and reasons for those. It may not have anything to do with sidewall size and trench differences.

BOARD MEMBER CAHN: Well, I don't understand why, other than -- why it was changed here, other than it was less confusing, but it --

BOARD MEMBER APPLEGATE: Yeah.

MR. TILLMAN: It was also changed to accommodate the smaller lot sizes. Again, if you demand that they have 9 foot or 8 foot, or whatever, between the trench wall, now you've effectively spread that area, what, threefold per trench? And some of these people just simply

don't have the room. And to accommodate those people, we're setting that minimum. Again, it's a minimum standard. They can be larger if they would like.

CHAIRWOMAN BEDESSEM: Teton County can make it larger if they so choose.

MR. TILLMAN: Absolutely, ma'am.

BOARD MEMBER APPLEGATE: Also, just to throw out how significant a change would it be if you went to --

THE REPORTER: I'm sorry. Can you repeat that?

BOARD MEMBER APPLEGATE: So if one were to suggest a change to 4 feet, which would be somewhat consistent with the previous requirement, consistent with Montana, would that satisfy your desire at this point?

BOARD MEMBER CAHN: Well, I guess, you know, I would prefer 6 feet, because 6 feet is what EPA's recommending, and they've looked at all the states, so -- and that would put us in line more with, you know, other states around us, South Dakota, Idaho, Colorado. Utah is 7; Montana is at 4.

BOARD MEMBER APPLEGATE: For the record, I never really much care what EPA says, so you can put me on the record for that.

MR. FREDERICK: Just one comment, Madam

Chair.

CHAIRWOMAN BEDESSEM: I like to have some flexibility as well.

MR. FREDERICK: Madam Chairman. It's important to keep in mind, too, Wyoming does require additional space for --

CHAIRWOMAN BEDESSEM: Reserve.

MR. FREDERICK: -- essentially a replacement system.

Now, whether or not that's considered in the separation distances in other states, I can't speak to it. It may or may not be. They may have the luxury of actually providing or requiring some additional separation. If they don't require the additional replacement area. However, we do.

BOARD MEMBER APPLEGATE: Help me understand that. I'm not familiar with septic systems.

CHAIRWOMAN BEDESSEM: Let me just interject here. I think what he's trying to say is that some other states may expect that that distance between the trenches will be reserve space to put in a replacement trench, as opposed to a separate area for a whole new leach field.

BOARD MEMBER APPLEGATE: Oh, okay.

CHAIRWOMAN BEDESSEM: So if that 6 feet or 7 feet or 9 feet is taking the replacement trench, that's

the reason for it to be that wide.

MR. TILLMAN: We do offer the caveat that if you would like to have a reserve area, you can expand that to 9, and then you have a reserve area between trenches, but still maintains the spacing for sidewall activity.

CHAIRWOMAN BEDESSEM: But some people would choose to have the 3 feet --

MR. TILLMAN: Right.

CHAIRWOMAN BEDESSEM: -- and just pick another spot on their lot, you know, to have replacement -- a space for a replacement system.

BOARD MEMBER APPLEGATE: So -- Madam Chair. Lorie, I would say that if Teton County has -- I keep coming back to the idea that they have the ability in the county to have more strict rules. And if Teton County has seen failures, then they should be implementing more rigorous design criteria based on whatever is causing their failures in Teton County. We shouldn't necessarily apply that more rigorous criteria to the whole state, if we aren't seeing failures. That would be my perspective. So I -- the reason I ask -- here's a question. We have this process in Wyoming. To move these things forward today, do we need all three of us to vote yes --

CHAIRWOMAN BEDESSEM: Yes.

BOARD MEMBER APPLEGATE: -- on something to make a change? We need a quorum of the five.

CHAIRWOMAN BEDESSEM: Uh-huh.

MS. THOMPSON: That is correct.

BOARD MEMBER APPLEGATE: I just point that out from a process perspective, because that's why I'm working to try to reach agreement, because we have to reach agreement amongst all three of us --

CHAIRWOMAN BEDESSEM: Thank you.

BOARD MEMBER APPLEGATE: -- to move this forward. I'd like to move this forward. So what I'm advocating, we maybe change it to 4 feet, give it some additional distance, understanding Teton County can be more rigid on this particular suggestion by --

CHAIRWOMAN BEDESSEM: Or does --

BOARD MEMBER APPLEGATE: -- my esteemed colleague.

CHAIRWOMAN BEDESSEM: Does it matter to make a difference from 3 feet to 4 feet?

BOARD MEMBER APPLEGATE: I'm guessing -- your opinion on 3 to 4 be a significant change, in your opinion.

MR. FREDERICK: Madam Chair. I understand the concern in trying to move the rule forward. Given the minimum quorum that we have here -- or the quorum that we

have here, and we -- we certainly don't have any problem bringing the rule back before the Advisory Board again for consideration to move it before the Council. We can certainly do that. If it appears that the chances of moving the rule ahead today are nonexistent, then that's fine. We'll take comments under consideration and go back and plan before the next meeting of the Board.

You know, quite frankly, I don't think we're plowing any new ground here. I think these are issues that we feel we've looked at carefully enough. We've taken comments into consideration. I think we've done a good job at that. I don't know that there's really going to be much to be gained for us to go back and try and revisit things again. And that said, we're certainly interested in hearing some new information that perhaps we aren't aware of, take that into consideration, but I think we've got a pretty good rule.

BOARD MEMBER APPLEGATE: So there's also been the process in the past, Madam Chair, where the rule has moved forward, and then it's been caveated to the EQC that, you know, the Advisory Board did not agree on this point or this point. See, I would like -- we've seen this three or four times. I really would like to come to the next meeting and not see Chapter 25 again. So I'm sort of trying to look for a way to move it forward, but also honor

the comments of my colleague on the board, who I respect her comments, if I don't always agree with them. So what we've done in the past --

BOARD MEMBER CAHN: I'm not even done with my comments.

BOARD MEMBER APPLEGATE: I know, but I'm trying to get process in place, because I know you're going to keep working through them.

What we've done in the past is we could -- we could vote on like the rules with the following caveat of items that there was a dissenting opinion on, and those could be caveated in your report to the EQC; here's the rule, but you can have footnotes, say, on these one, two, three, four, five items there was not --

CHAIRWOMAN BEDESSEM: Consensus.

BOARD MEMBER APPLEGATE: -- consensus by the Board. We're not a decision-making board anyway, so in the end the EQC would see we've moved the rule forward, but there was not a quorum of approval on this set of questions. So I'm just trying to throw out some ways we can maybe move forward today and still honor your comments.

BOARD MEMBER CAHN: Or DEQ can choose to go forward without us even voting on it --

BOARD MEMBER APPLEGATE: Yeah.

BOARD MEMBER CAHN: -- and take it to EQC

and then see what they do. I mean, that's always a possible -- that's been done before, not with a lot of success, but it was tried before. So that's another possibility.

BOARD MEMBER APPLEGATE: Yeah.

BOARD MEMBER CAHN: I'm -- I'm -- I don't see a lot of changes on greywater. And I still feel that the beginning on page 25-26 of the clean version, line 1072, it says it is the intent of the section to encourage and facilitate greywater from domestic -- reuse of greywater from domestic wastewater. And I don't -- I still feel like these are not very encouraging use of greywater, that they're onerous, so...

MR. TILLMAN: I think the information we've presented to the Board in the past, which you disagree with, showed that we're trying to reach that middle ground of regulating as opposed to completely nonregulating. There's been instances where nonregulation has led to significant problems. I think Natrona County is one of those areas where they've got problems with greywater systems that are unregulated, as well as Laramie County. And so we were trying to reach that middle ground. And there are some restrictions, there is no question about that, but those restrictions are there for -- to keep people safe, especially in the instance where they choose

to use greywater aboveground. Remember, if it's subsurface, the restrictions are minimal. But above surface -- greywater is a subset of wastewater, and there are problems with that just letting it pool on the ground and run across the surface of the ground.

So our regulations are trying to regulate that from a health and safety standpoint, not to discourage people from doing it. But if they're going to do it, they need to do it in a safe manner. And you always have individuals that will choose to do it as they would like to, that won't get it a permit, that do it as they wish, and they take that chance of health risk. So our position is that we feel like our regulations are a middle ground to all the information that is out there. If you call the state of California, look at all 50 states, this is that middle ground that we're trying to reach, and then some, I believe.

BOARD MEMBER CAHN: I guess, you know, that will just be something where we agree to disagree, or whatever, on.

Let's -- the only other thing that I have, basically, was I had questioned the percolation tests going from 6 inches to 5 inches, and now I think we have 12 inches to 6 inches on the test procedure.

MR. TILLMAN: The diameter --

BOARD MEMBER CAHN: No. The diameter, I think 12 inches is good. I'm happy with that. It's the drop in head when you're running the test.

MR. TILLMAN: Okay.

BOARD MEMBER CAHN: The traditional test is 6 inches to 5 inches, and I think now we're at -- I think it's 12 -- I'm not even sure where it's at. It's just starting at 12 inches, continued to measure the incremental water level drop for 10 minutes. So I'm not sure --

MR. TILLMAN: The reason why we changed it is to try to look at a 1-inch drop in a hole for a homeowner is difficult to. It is an impractical application of the test in a field situation. If you're in a lab or someone well trained, they may be able to do that. But this is to accommodate a person that may not have any scientific background or understand, you know, how to perform a test. So it's for practical use in a field is why we made that change.

BOARD MEMBER CAHN: Let's say we're going from 12 inches to -- I don't know if you want to 1 inch or 6 inches, I don't know. But to me that change in head, just thinking about Darcy's Law, all the other factors are the same other than your head drop --

MR. TILLMAN: Okay.

BOARD MEMBER CAHN: -- that should be a

difference.

MR. TILLMAN: All of that is addressed in our presentation. If you would like we can go through that at length and detail at another time -- I don't think this is the venue for that --

BOARD MEMBER CAHN: Okay.

MR. TILLMAN: -- where the engineer had went through and -- and if you look through this, it goes through the head loss --

BOARD MEMBER CAHN: Okay.

MR. TILLMAN: -- diameter of the hole, flux through the sidewall, infinite detail theoreticallywise. And it's practical to do it if you do it for a field, as opposed to you're just looking at a 1-inch drop, that's very difficult to do.

BOARD MEMBER CAHN: Okay. If this comes back before us again, then let's do that for the benefit of the whole Board.

BOARD MEMBER APPLEGATE: I'd definitely like to see a copy of the presentation, although I'm comfortable -- if you've looked at it in detail, I'm comfortable with the methodology.

MR. TILLMAN: I believe we have looked at it in detail, and, like I say, believe me, the presentation does demonstrate that.

BOARD MEMBER CAHN: And I would like to see the calculations that you've done. I'm not going to make a decision right here and now, but seeing it.

MR. TILLMAN: But you --

BOARD MEMBER CAHN: Not just a presentation, but I assume you have some spreadsheet or something?

MR. TILLMAN: Spreadsheets are in there as well.

BOARD MEMBER CAHN: I'm not going to look at it right now, but -- okay. That's all that I have.

CHAIRWOMAN BEDESSEM: So let me -- before you go through that, I wanted to read into the record Calvin's comments, okay? Our board member from -- representing the ag community. He had a number of individuals contact him from the Big Horn Basin, and so I want to relate those -- those remarks.

And then, you know, we've had this discussion about the best way to approach this when, you know, we have three out of five board members here. And, you know, we can either -- I mean, I like -- in some respects I like the approach of potentially putting this forward for a vote, whereupon, you know, if it -- if it does not pass, it does not pass, if it does pass -- but there's issues that are outstanding that you can just have this list of things that

we didn't have a consensus on. Otherwise, then it would have to go back to the -- to the Board again next time to discuss the same issues that we've discussed four times, and I'm not sure that's to any of our benefits.

The -- one thing I was concerned about a little bit earlier was we agreed for some minor changes. You know, we agreed on the pathogen definition change. We agreed on changing the terminology on the riser. Those are both good. I'm still a little uncertain about that one change in the footnote, whether zone 1 part is applicable or not. And so I guess I think, when we get to that point, perhaps you might -- leave that to you to investigate to see if that's appropriate, as opposed to specifying that that's the language that we've agreed upon.

BOARD MEMBER CAHN: Also, the separation distance to high groundwater in the native soil, whether it should be 1 feet or 2 feet, was another issue.

CHAIRWOMAN BEDESSEM: Well, it was an issue, but I -- you know, we have differing opinions on that, where it's a minimum, just like there's a minimum on -- with respect to the distance between trenches. Okay?

BOARD MEMBER APPLEGATE: On the language change, there was probably consensus that language needs to be re-reviewed regarding the Zone 1 versus Zone 2.

CHAIRWOMAN BEDESSEM: Right. I just listed

a few things I thought we had consensus on, the pathogen definition, the --

BOARD MEMBER APPLEGATE: The tank --

CHAIRWOMAN BEDESSEM: Yeah, the tank access versus riser, and that one item. But I want -- we want you to make sure that that's the correct language and leave that to your judgment. These other items are ones that we may not all agree upon on the Board itself.

So let me move from there on to what Calvin's remarks were that he forwarded with respect to, as I said, people from the Basin.

BOARD MEMBER CAHN: Here?

CHAIRWOMAN BEDESSEM: He says I've had calls of concerns from a couple of individuals from the Big Horn Basin, and basically the concern is the new regulations on greywater and making these regulations more complicated than needed. Evidently the old regulations were not as lengthy. Didn't the governor ask for reduction in size, and the need for permitting if the effluent does not leave the property came in question, more costly for the consumer.

I think you addressed this remark.

One -- one concerned constituent suggested figures suggested --

THE REPORTER: Slow down, please. Can you

start that paragraph over.

CHAIRWOMAN BEDESSEM: One concerned constituent suggested the figures for suggested septic tank size are not consistent with other states. As an example he stated other states use 250 gallons per bedroom, while Wyoming uses 150 gallons in calculating the size requirements. I was shown data suggesting larger tanks required less frequent cleaning and allowed for future expansion of homes or times when guests visit. This concept has a lot of merit. Some of the calculations for tank size determinations and design are very complicated and could be more easily stated.

I think you addressed most of those. I don't know that those numbers agree with the previous discussion we had of 150 gallons per -- as opposed to 100 gallons. He's mentioning 250.

MR. TILLMAN: Those are -- I believe those are loading rates coming from the households. So, again, that harkens back to a much larger footprint for us for wastewater system, as well as a much larger tank to accommodate those additional volumes.

CHAIRWOMAN BEDESSEM: But is it correct that -- I mean, the 250 is another state, not ours. Okay.

Then it says why do some of the data need a PE sign-off, gain driving costs, when WDEQ has a PE review the

application?

MR. TILLMAN: Most of the systems that we're proposing that we consider to be common would have a package that has already been designed by a PE, so that the homeowner would not have to go out and get a PE stamp to do that design. They simply have to kind of follow through the worksheet, fill in the blanks, and that would be sufficient to start the application process.

BOARD MEMBER CAHN: Which ones need the PE?

MS. THOMPSON: It's the extreme perc rates. The very slow rates. The very --

MR. TILLMAN: And the very fast ones.

MS. THOMPSON: Yeah.

CHAIRWOMAN BEDESSEM: So those are the advanced treatment systems. So those are the unusual circumstances. And basically, as a PE, there's the surface responsibility for that design, and a DEQ representative that reviews it does not incur that responsibility. So that is why that PE is needed. So I'm answering his question --

MR. TILLMAN: I'm agreeing with you.

CHAIRWOMAN BEDESSEM: -- if you don't mind. But those are some of the comments that he received from, as I said, kind of the agricultural community with regard to those.

So I think that wraps up the Board comments, so --

MR. FREDERICK: Madam Chair, perhaps given the discussion that we've had, obviously there are a few revisions I think that came out of the discussion today. Some additional comments for consideration that one of the absent board members brought -- brought before us here through your comment, just now, Calvin?

CHAIRWOMAN BEDESSEM: Uh-huh, which -- which comment?

MR. FREDERICK: Were they Calvin's comments that you read back to us?

CHAIRWOMAN BEDESSEM: Uh-huh.

MR. FREDERICK: Comments that he heard from others, I guess.

CHAIRWOMAN BEDESSEM: But you said there was something unresolved in there?

MR. FREDERICK: No. They're just -- just new, I guess, in the context of some of the discussion that we've heard before.

BOARD MEMBER APPLEGATE: Madam Chair. I'm going to throw out a suggestion, which will get us to the point very quickly here. I'm going to suggest a motion. If it doesn't get a second, then we're not going to be able to move forward.

CHAIRWOMAN BEDESSEM: Okay.

BOARD MEMBER APPLEGATE: Right?

So I'm going to make a motion we approve these rules to go forward with EQC, with the caveat that we list the four or five items in which there was not Board consensus on. The motion is we approve these rules to move forward with EQC, with the understanding there was not Board consensus on inclusion of sidewall height, the minimum spacing between trenches, the ease of permitting under the greywater system, that percolation test and the mounding height for mound design systems.

CHAIRWOMAN BEDESSEM: It's the separation, not height.

BOARD MEMBER APPLEGATE: Separation. Sorry. As corrected. That's my motion.

CHAIRWOMAN BEDESSEM: Okay. I will second that motion. So thanks.

BOARD MEMBER APPLEGATE: Okay. So then if there's any discussion, I'll let you carry forward with that.

CHAIRWOMAN BEDESSEM: Any discussion on those particular items? I guess I was wondering if there -- if you were -- if any of the Board was particularly concerned about the percolation test at this point.

BOARD MEMBER CAHN: Yes.

CHAIRWOMAN BEDESSEM: Yes. So that's an appropriate list --

BOARD MEMBER APPLEGATE: Madam Chair. My discussion that I would add is I think if we bring this forth again, we're still going to have these same points of sort of disagreement in that, from a process perspective, it makes as much sense to move this forward to the EQC, so they -- we would be highlighting to them the issues that we were unable to reach consensus on, understanding we are an advisory board, they would then have time to look at those issues themselves, and we'd be highlighting those, and that any Board member that wanted to provide additional detail or commentary on those five items would have the ability to, you know, either testify or submit in writing comments to the EQC on those five points.

BOARD MEMBER CAHN: My concern is we don't have a full board, so I'm uncomfortable forwarding it without the full board here. So that's part of where I stand.

BOARD MEMBER APPLEGATE: I just want to also say for the record, we -- we're on the board. We come to these meetings. Not having the full board here is frustration for me, because I've given half my day. So I don't feel compelled to slow down for those that aren't

here, because it just makes us do rework. So they've provided their comments. They've had their chance to participate, and the process is going to get slowed down because of that.

BOARD MEMBER CAHN: Go through your list again, Dave. Make sure --

BOARD MEMBER APPLEGATE: So the five items were sidewall height inclusion in the design --

BOARD MEMBER CAHN: Trench spacing.

BOARD MEMBER APPLEGATE: -- trench spacing, the ease of permitting under the greywater program, the percolation test protocol and the separation distance on --

CHAIRWOMAN BEDESSEM: For mound systems.

BOARD MEMBER APPLEGATE: -- for mound systems.

BOARD MEMBER CAHN: And --

BOARD MEMBER APPLEGATE: And my intent was --

BOARD MEMBER CAHN: -- counting sidewall is an issue.

CHAIRWOMAN BEDESSEM: Yes, that was my first.

BOARD MEMBER CAHN: That's different than sidewall height.

BOARD MEMBER APPLEGATE: I meant capture it

the way that you -- which was the inclusion of sidewall --

CHAIRWOMAN BEDESSEM: Height.

BOARD MEMBER APPLEGATE: -- in the area calculation.

BOARD MEMBER CAHN: And I guess I would feel better about that had the board meeting been scheduled when all five board members could make it.

MS. THOMPSON: If I might interject. We made quite an effort.

BOARD MEMBER CAHN: I know. I know.

MS. THOMPSON: And, again, between two divisions and five board members, and everyone having vacation and children and activities and professional commitments on your behalves as well, this was the best date, initially it -- the polling indicated that we would have four of the five board members, and we were not aware, until Monday, that we would only have three, so...

BOARD MEMBER CAHN: And also just a caveat that in the past it's been very difficult for us to find a July or August time to meet. It has been very difficult.

MS. THOMPSON: Yes, and we understand that, but we're also under several commitments to Governor Mead --

BOARD MEMBER CAHN: Yeah.

MS. THOMPSON: -- with time constraints,

and we're trying to -- we're trying to get --

BOARD MEMBER CAHN: Okay.

MS. THOMPSON: We're trying to meet our commitments, so we need to have quarterly meetings, and we had to bump that one from March until April, which also this meeting --

CHAIRWOMAN BEDESSEM: That earlier one was bumped due to a board member, actually.

BOARD MEMBER CAHN: I second your motion, Dave.

CHAIRWOMAN BEDESSEM: We had a second.

BOARD MEMBER APPLEGATE: I think we had a second.

BOARD MEMBER CAHN: Oh, you seconded.

CHAIRWOMAN BEDESSEM: We had a second. Through our discussion here, I want to say that as I mentioned before, I think we'd just be revisiting these issues again if we discussed this at another board meeting. I also feel that Calvin sent whatever comments he wanted to send. We made a personal effort to contact Klaus and ask if he had any comments that he wanted the Board to present for him for today. He did not have anybody send comments to him or ask for him to speak on their behalves. He did not have any additional comments for today. So I feel that they were both given the opportunity, through us, to be

able to have their remarks considered today, and don't feel that we need to have another board meeting to include the missing members' remarks today.

So with that, we have a motion and a second, and so I'm going to call for a vote. And the vote is -- again, the motion is to move it forward with a list of items that we didn't reach complete consensus on.

And so all those in favor of the motion, say aye.

Aye.

BOARD MEMBER APPLEGATE: Aye.

BOARD MEMBER CAHN: Aye.

CHAIRWOMAN BEDESSEM: Motion passes.

So we will leave it to the agency to craft the appropriate letter to EQC to explain that this was passed with these, you know, particular caveats to it.

BOARD MEMBER APPLEGATE: Madam Chair, I would ask, as just a request of WDEQ, to again honor Lorie's questions and comments that you provide us a copy of that before you send it on to EQC so that she can look at it and see that her concerns with these five items are appropriately represented.

BOARD MEMBER CAHN: Yeah.

BOARD MEMBER APPLEGATE: Is that a fair request?

MR. TILLMAN: That's fair.

BOARD MEMBER CAHN: Uh-huh. And I would like to see the actual spreadsheets. There's no way I'm going to be able to read this.

MR. TILLMAN: We can send you a copy.

BOARD MEMBER CAHN: But not in a PDF version. In a version where I can click on a box and see the calculations you've run.

MR. TILLMAN: That is no problem, ma'am. With all due respect, the calculations have been done in detail.

BOARD MEMBER CAHN: That would be great. I would very much appreciate seeing that so that I can --

MR. TILLMAN: Not a problem. I will actually schedule the engineer that did those. He can talk to you in depth about the calculations and how they were done.

BOARD MEMBER CAHN: Okay. Great.

CHAIRWOMAN BEDESSEM: We're -- considering that what we have left on the agenda is regarding hazardous waste rules, I'm assuming it is not extensive?

MR. THOMPSON: 45 minutes.

CHAIRWOMAN BEDESSEM: 45 minutes. If it's 45 minutes, you prefer to take five-minute break and continue through so we get through the rulemaking and then adjourn, okay? Five-minute recess.

(Meeting proceedings concluded 12:10 p.m., July 25, 2014.)

C E R T I F I C A T E

I, KATHY J. KENDRICK, a Registered Professional Reporter, do hereby certify that I reported by machine shorthand the foregoing proceedings contained herein, constituting a full, true and correct transcript.

Dated this 2nd day of September, 2014.

KATHY J. KENDRICK
Registered Professional Reporter