MINUTES
WATER QUALITY MANAGEMENT ADVISORY COUNCIL
July 21, 2020
Oklahoma Department of Environmental Quality
Virtual Meeting via Teams
Oklahoma City, Oklahoma

Official WQMAC
To be approved at the September 29, 2020 Meeting

Notice of Public Meeting – The Water Quality Management Advisory Council (WQMAC) convened for a Regular Meeting at 2:00 p.m. virtually via Teams. The meeting was held in accordance with the Open Meeting Act, with notice of the meeting given to the Secretary of State on October 16, 2019. The agenda was posted at DEQ twenty-four hours prior to the meeting. Mr. Brian Duzan, Chair, called the meeting to order. Ms. Quiana Fields called roll and confirmed that a quorum was present.

MEMBERS PRESENT
Robert Carr
Brian Duzan
Mary Mach
Mark Matheson
Rick Moore
Jon Nelson
Willard Smith
Duane Winegardner
Terry Wyatt

MEMBERS ABSENT
Steve Sowers
Debbie Wells

DEQ STAFF PRESENT
Shellie Chard
Chris Armstrong
David Pruitt
Mark Hildebrand
Paul Parks
Betsey Streuli
Matt Pace
Brian Clagg
Nicholas Huber
Brandon Bowman
Erin Hatfield
Lloyd Kirk
Travis Couch
Kendal Stegmann
Terry Lyhane
Melanie Foster
Jeff Franklin
Scott Raybern
Vance Pennington
April Eberle
Madison Miller
Malcolm Zachariah
George Russell
Michelle Wynn
Saba Tahmassebi
Greg Carr
Karen Steele
Quiana Fields

OTHERS PRESENT
Tammie Shipman, Court Reporter

Approval of Minutes from the January 7, 2020 Meeting – Mr. Duzan called for a motion to approve the Minutes of the January 7, 2020 Regular Meeting. Mr. Winegardner moved to approve and Ms. Wyatt made the second.

See transcript pages 4 – 5

Robert Carr	Yes	Willard Smith	Yes
Mary Mach	Yes	Duane Winegardner	Yes
Mark Matheson	Yes	Terry Wyatt	Yes
Rick Moore	Yes	Brian Duzan	Yes
Jon Nelson	Yes		

ANNOUNCEMENT OF DEQ STAFFING CHANGES – Ms. Shellie Chard, Division Director of the WQD announced DEQ staff changes.

See transcript pages 6 - 8

DISCUSSION OF RULEMAKING CHANGES TO OAC 252:641-"INDIVIDUAL AND SMALL PUBLIC ONSITE SEWAGE TREATMENT SYSTEMS" – Mr. Nicholas Huber, Environmental Programs Manager of ECLS, stated that the DEQ staff will be proposing emergency changes to Chapter 641 to: under certain situations, allow a reduction of the minimum size of subsurface absorption fields for individual on-site sewage treatment systems; and revise and combine the minimum spray area size for aerobic systems, most of which will result in a reduction of overall application areas. DEQ plans to ask the WQMAC to vote on the proposed emergency changes at the September 29, 2020, WQMAC meeting. DEQ plans to introduce the same rules as permanent rules at the January 2021 WQMAC meeting.

See transcript pages 8 – 34

INFORMATIVE PRESENTATION ON ACTIVITIES RELATED TO THE OKLAHOMA STRATEGIC ALLIANCE – Mr. Brandon Bowman, Environmental Programs Manager of the WQD and J.R. Welch, Chief Operations Officer with the Rural Water Association both gave a presentation on activities related to the Oklahoma Strategic Alliance.

See transcript pages 34 – 55

DIRECTOR'S REPORT – Ms. Chard provided an update on other division activities.

See transcript pages 55 – 60

NEW BUSINESS – None

ANNOUNCEMENTS – The next scheduled meeting is on Tuesday, September 29, 2020, 2:00 p. m.; Location/Format to be determined.

ADJOURNMENT – Mr. Duzan called for a motion to adjourn. Mr. Nelson moved to adjourn and Ms. Wyatt made the second. The meeting was adjourned at 3:25 p.m.

See transcript pages 60 – 61

Robert Carr	Yes	Willard Smith	Yes
Mary Mach	Yes	Duane Winegardner	Yes
Mark Matheson	Yes	Terry Wyatt	Yes
Rick Moore	Yes	Brian Duzan	Yes
Jon Nelson	Yes		

Transcripts and Attendance Sheet are attached as an official part of these Minutes.

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

REGULAR MEETING/HEARING AGENDA

WATER QUALITY MANAGEMENT ADVISORY COUNCIL

JULY 21, 2020 - 2:00 P.M.

VIRTUAL MEETING

REPORTED BY: TAMMIE SHIPMAN, CSR

COUNCIL MEMBERS PRESENT:

MR. BRIAN DUZAN, CHAIRMAN
MR. DUANE WINEGARDNER, VICE CHAIRMAN
MR. ROBERT CARR
MS. MARY MACH
MR. MARK MATHESON
MR. RICK MOORE
MR. JON NELSON
MR. WILLARD SMITH
MS. DEBBIE WELLS
MS. TERRY WYATT

Also Present:

Ms. Quiana Fields, Secretary of Board and Council
Ms. Kendal Stegmann, Director of Air Quality
Ms. Shellie Chard, Water Quality Division Director
Ms. Erin Hatfield, External Affairs
Mr. Brandon Bowman, Oklahoma Strategic Alliance
Mr. J.R. Welch, Oklahoma Rural Water Association
Mr. Nicholas Huber, Program Manager & TRL of DEQ
Mr. Mark Hildebrand, Director of Environmental Complaints and Local Services

Mr. Terry Lyhane, Assistant Director of Water Quality

(Meeting called to order at 2:00 p.m.)

CHAIRMAN DUZAN: This regular meeting of the Water Quality Management Advisory Council was called in accordance with the Open Meeting Act. Notice for this July 21st, 2020, virtual meeting was filed with the Secretary of State in Oklahoma, on October 16th, 2019. The agenda was duly posted at DEQ 24 hours prior to the meeting. Only matters appearing on the posted agenda may be considered at this regular meeting.

In the event that this meeting is continued or reconvened, public notice of the date, time and place of the continued meeting will be given by announcement at this meeting. Only matters appearing on the agenda of a meeting which is continued may be discussed at the continued or reconvened meeting. So we are ready for our roll call.

MS. FIELDS: Mr. Carr?

MR. CARR: Present.

MS. FIELDS: Ms. Mach? Ms. Mach?

MS. MACH: Here. Had a hard time unmuting. Thanks.

MS. FIELDS: That's okay.

Mr. Matheson?

MR. MATHESON: Here.

MS. FIELDS: Mr. Moore?

MR. MOORE: Here.

MS. FIELDS: Mr. Nelson?

MR. NELSON: Here.

MS. FIELDS: Mr. Smith?

MR. SMITH: Present.

MS. FIELDS: Mr. Sowers is absent. Ms. Wells is absent.

Mr. Winegardner?

VICE CHAIRMAN WINEGARDNER: Here.

MS. FIELDS: Ms. Wyatt.

MS. WYATT: Here.

MS. FIELDS: Mr. Duzan?

CHAIRMAN DUZAN: Here.

MS. FIELDS: We have a quorum.

CHAIRMAN DUZAN: Okay. The next thing is the approval of the minutes from the January 7th, 2020, meeting, which I believe has been sent to everybody ahead of time.

VICE CHAIRMAN WINEGARDNER: This is Duane, and I will move (inaudible) --

MS. WYATT: It's Terry. I second.

UNIDENTIFIED PERSON: Related to slide

advancement. Oh, no, go back.

CHAIRMAN DUZAN: Okay. If she got that, we have a second, so we'll call for a roll vote on that.

MS. FIELDS: Mr. Carr?

MR. CARR: Yes.

MS. FIELDS: Ms. Mach?

MS. MACH: Yes.

MS. FIELDS: Mr. Matheson?

MR. MATHESON: Yes.

MS. FIELDS: Mr. Moore?

MR. MOORE: Yes.

MS. FIELDS: Mr. Nelson?

MR. NELSON: Yes.

MS. FIELDS: Mr. Smith?

MR. SMITH: Yes.

MS. FIELDS: Mr. Winegardner?

VICE CHAIRMAN WINEGARDNER: Yes.

MS. FIELDS: Ms. Wyatt.

MS. WYATT: Yes.

MS. FIELDS: Mr. Duzan?

CHAIRMAN DUZAN: Yes.

MS. FIELDS: Motion passed.

CHAIRMAN DUZAN: Okay. Next on the agenda is the announcement of DEQ staffing

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changes by Shellie Chard.

So Shellie.

MS. CHARD: Good afternoon, everyone, and thank you for joining us as we embark on our first ever fully virtual council meeting. We've gone through a lot of changes here at DEQ over the last few months, in addition to trying to adapt to what a new normal looks like. We have had some staffing changes that, some of them directly affect the council, so I wanted to share those with you today.

As most of you probably have already learned, Mark Hildebrand has moved out of the Water Quality Division and is now the director of the Enviromental Complaints and Local Services Division. Richard McDaniels retired and Mark moved down to lead ECLS. It's great for ECLS and the agency, but I have to admit I'm missing Mark quite a bit.

We also are replacing Mark with Brian Clagg. He's been a longtime water quality field inspector, enforcement person, and been a manager in our municipal waste water group now for a while. So he has moved into that position that Mark vacated, so you will have the

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opportunity to work with him in the future.

We also had a change in our air quality division. Kendall Stegmann is now the director for air quality. Eddie Terrill is staying on with DEQ a few more months to help in the transition and to work on some special projects before he fully retires.

In the Water Quality Division, most of you know Terry Lyhane who has been my assistant director for the last, oh, six or seven years now. At the end of the month Terry is retiring from state service, so we will have some additional staffing changes as we look at who will be the new water quality assistant director.

And then those of you that do a lot of work with our operators' certification, licensing and training programs, may have heard that Chris Wisniewski, who has been our program manager for 20 years maybe, something like that, has been with the agency since it was formed in 1993. Chris will be retiring, and so we will have some changes in our operators' certification program leadership.

There's a whole lot of changes, so I

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just wanted to make you aware of those. You may be dealing with some new faces and new names, but I have every confidence that they're going to do great in new roles as we move forward. And we certainly wish well those that have left our division and look forward to what the future holds for them and for us.

If any of you have any questions for me, I'm happy to answer. And if not, I'll turn it back over to Mr. Duzan.

CHAIRMAN DUZAN: Any questions? Okay. We'll move on to the discussion of Rule Making, changes to OAC 252:641, Individual and Small Public Onsite Sewage Treatment System. And I believe we have a presentation by Nicholas Huber in the DEQ, so...

MR. HUBER: Yes, hello. Nice to see everyone again. I'm going to say thank you for joining us, as I get this a little bit larger so everybody can see.

As Brian mentioned, today I'll be discussing draft emergency rules that we will be presenting at the September council meeting for your vote. We have -- through these emergency rules, we're looking at authority for presenting

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these. We had House Bill 3461, which was presented to the House. It did move through the House with unanimous approval.

Due to the health emergency that we saw, it did not get out of the Senate and did not become law. The bill did, however, direct us to evaluate the reduction of our minimum length requirements for lateral lines based on some research that we had conducted.

The second part of this emergency rule authority we're looking at is the economic impact potential that these changes would bring about for a large population of the state. These changes that we'll be talking about here shortly, they will present a significant cost reduction related to the various installation of various onsite sewage treatment systems.

These changes will be including redefinition of Zone 1 water body protection areas. It will be a reduction in combination of aerobic spray system application sizing, and then we'll be evaluating the reduction of conventional subsurface absorption systems for certain areas of the state.

Our first item here is our water body

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protection area. This was brought about in our 2012 rule revision. It identified impaired water bodies that we felt or was determined needed additional treatment for the removal of nitrogen. The initial rule set a Zone 1 distance of 660 feet. Through discussion and evaluation, we are looking to move that distance back to 300 feet, which fits in line with our public water supply separation for these type of facilities to water wells, still providing adequate protection for the streams from nutrients, but still offering an expansion of the types of systems that can be installed again in those -- those areas. We are not proposing any change to Zone 2. Zone 2 strictly identifies a design requirement for the use of our profile within 1,320 feet of those listed water bodies.

The second thing here is an optional reduction for subsurface absorption sizing. We're proposing language that would establish optional length sizing for certain counties located in central and western Oklahoma. The reduction is being based on some research that we had completed by Dr. Sergio Abbott at

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Oklahoma State University. This research was centered on rainfall totals and their impact to soil moistures as we move from eastern Oklahoma to western Oklahoma.

The proposed revisions that we're looking at for the optional reductions would be placed at 15 percent in central Oklahoma and 30 percent in western Oklahoma. These optional sizing criteria would be applied to all conventional subsurface absorption fields.

The sizing did not, and the study did not indicate any recommendation for sizing decrease in eastern Oklahoma. Found that our sizing criteria for that part of the state, based on the rainfall and water usage, was adequate.

Along with these optional reductions, we're also evaluating the expansion of chamber sizing to include soil profiling. So we will be looking at -- and we've been working with stakeholders in evaluating appropriate sizing for a chamber type system or other manufactured media systems.

As we move on, we're also looking at, due to -- I don't recall the actual House bill,

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but there was another that was included in House bill 3461 that provided some direction to evaluate the aerobic spray and sizing for parts of the state. Again, we look back to a rule revision that occurred in 2007 that amended our spray application areas in eastern Oklahoma and based them off the 90th percentile of rainfall for certain counties.

What this resulted in is some application areas went from a 6,000 square foot application sizing to almost 20,000 square feet. What we're proposing in the rules that we're working on, and will bring to the September meeting, is taking the application numbers for some counties in eastern Oklahoma and reverting them back to what those 2007 numbers were.

We're also evaluating more current rainfall totals and 50 percentile numbers in evaluating those sizings to ensure that we're proper in our sizing, but yet not so much that it's causing that burden, having a need for extra property. In doing so, we did identify that the ten sizing charts that we had, there were some significant overlap in sizing. So we are now taking those ten charts and moving them

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to five. We want to simplify the rule and make designing these systems that much easier for our installers.

This last item here, we were reviewing these rules again and identified that small public aerobic systems, their dispersal sizing was not included in the permanent rule that we ran through last year. So in identifying that missing information, we've added sizing design criteria for spray and drip aerobic systems, for small public systems. These will require changes to Appendix H, along with those other changes that we talked about previously. So Appendix H will be the one appendix that will be revised through this emergency process.

The spray sizing will be based on the residential application areas. Linear square feet per gallon, per day, and then the drip sizing will be based on soil loading rates that we have initially -- or have set up for residential sizing.

As I mentioned, we have been working with several stakeholders in evaluation of sizing some of the products that we see here in Oklahoma. Our goal is between now and

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September, is continue those outreach meetings, work with our tribal partners and our stakeholders here to discuss these rules, and make a draft for your review in September.

In conclusion of this, we will be bringing these back to the September meeting for a vote. The emergency rules pending your approval, recommendation, would go to the board meeting in November. And then, again, we would take this to the permanent processes required in the January council meeting, and then that regularly scheduled February board meeting for the 2021 legislative session.

For all questions concerning the rules that we provided and we discussed here today and then the drafts moving forward, I'm the contact. My name's Nicholas Huber. My e-mail, I'll leave here. I did provide my office and cell number. Currently it's all one number with our teleworking situation. I'm happy to answer any questions that may come up in the future.

This concludes my presentation. I'd like to turn it back over to Brian for any questions.

CHAIRMAN DUZAN: Okay. Thank you. Are

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there any questions or discussion from the Council on this?

MR. SMITH: Brian, this is Bill Smith. Can you hear me?

CHAIRMAN DUZAN: Yeah, go ahead.

MR. SMITH: I have -- I have one comment and two questions. First of all, I have looked and compared our proposed regulations with Kansas, Texas and Arkansas, and we are still more conservative than either of our -- any of our neighboring states, so I -- I think that's really good.

My next question is, on your 90th percentile calculation of rainfall, are you now using the Atlas 14 numbers instead of the old TP-40 numbers for rainfall, as most everybody is now using that Atlas 14? It slightly increases the rainfall precipitation across the nation, and I didn't know if you might be using that.

And then my last comment or question is, if there's an existing public system that has to be replaced for whatever reason, I'm assuming that the replacement would be done under the new regulations and not have to be replaced with the old regulations, because

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that's what's in place.

MR. HUBER: Yes. Thank you, Mr. Smith. This is Nicholas Huber. To the first question, the rainfall numbers, as with the study that Sergio Abbott, Mr. Abbott had conducted, we were dependent on the mesonet information that was provided. So average rainfall totals were provided and gathered from the mesonet data. I'm unaware of the actual numbering or identification for those. I can definitely get into that and get that information for you.

I know in 2007 we made the change in eastern Oklahoma to the 90th percentile rainfall, which falls in line with our design criteria for 656 facilities. Due to the evaporation or lack of evaporation that occurs, the change was also made to the application areas because -- just the sheer impact that the rainfall totals have in that part of the state. We're talking, of course, Sequoyah County, Adair County.

It did not, however, take into effect any absorption that may occur or plant uptake in those areas. So we felt that the 50th percentile rainfall was more appropriate,

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because it is more representative of the impact that the rainfall would have at these application sites. So I can definitely find that information and provide some of that to you and make that available at a later time.

The second part of your question is any replacement, modification or installation of a new system or of adapting an existing system would need to comply with the current versions that were in effect at that time. So we would look at, if somebody needed to make a replacement of a system, they would be subject to the rules that are in effect at that time.

So if the emergency rules move forward and are approved by the governor, I would say around December, somebody needed to comply at that time, then we would allow them that installation, under those rules.

MR. SMITH: Thank you very much.

CHAIRMAN DUZAN: Okay. Any other questions or comments?

MR. NELSON: Hey, Brian, this is Jon Nelson. I have a question.

CHAIRMAN DUZAN: Okay.

MR. NELSON: Nicholas, you had

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mentioned stakeholders included installers, and I think you said the tribes. Were there others?

MR. HUBER: So we have been speaking with a couple of manufacture's who sell our product here in Oklahoma, Infiltrator is one. I've been working with Elgin Systems on some other interest in our rules. You know, we have been reaching out to several of the tribes, the Chickasaw Nation, IHS. The plan is to continue that conversation in our graphs of these rules as we move forward.

MR. NELSON: Okay. And -- and so the research that was done actually preceded the proposed action by the legislature, right?

MR. HUBER: Yes. So the -- the research was actually, I believe, a three-year project that was begun in 2000 and -- I think ended 2016, beginning of 2017. It was concluded over the Christmas time frame of 2019. It is still in the process of being peer reviewed and published, but that was a three-year project that was worked on with several of the undergraduates that Professor Abbott oversees.

MR. NELSON: And that was driven by what?

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MR. HUBER: I believe that some of the information --

MR. NELSON: I guess what I'm asking, Nick -- you know, reminded me of the driving forces behind these changes. I don't recall it.

MR. HUBER: So the main driving force behind this is there was some legislative inquiries that had come about regarding sizing of our conventional subsurface absorption fields. They were concerned that the sizing that we had, and had established for quite some time, was too conservative and that we needed to evaluate the reduction of those systems significantly. So our response to that inquiry and that questioning was the presentation of a project through OSU to evaluate the potential for the reduction of those footprints.

MR. NELSON: Okay. So say -- so passing this in September would likely satisfy the legislative concerns?

MR. HUBER: Yes, that is correct. The -- what we initially had is the bill of -- the House bill of 3461 that was penned by Representative Russ, was moving through the House and had made it through the Senate, and

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was in the process of being reviewed and presented for vote when Covid hit. And that hiccup, I guess is one way to put it, resulted in that bill not becoming law, which would have permitted us to have these changes implemented by October 1.

MR. NELSON: Okay. And the last question, just to make sure I understand, Zone 1, which you dropped the clearance from 660 feet to 300 feet, that's to the highest pool level of reservoir, correct?

MR. HUBER: Yes. That would be to the -- I don't have the definition in front of me. I do believe it's to the normal pool elevation. Because it is a water body protection area is -- sorry. Bear with me real quick while -- yeah, here it is. It is the highest normal pool elevation established for a reservoir or within -- it would be within 300 feet, pending these -- approval of these rules in September, that streambed.

MR. NELSON: Okay. So it's the non -- the highest normal pool level?

MR. HUBER: Yes. Correct.

MR. NELSON: All right. Thank you.

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MR. HUBER: Thank you.

CHAIRMAN DUZAN: Any other questions or comments?

MS. MACH: Hi, this is Mary Elizabeth Mach.

Nicholas, do you or any of the other council members or folks at DEQ have any concerns with these changes in the rules from an enviromental perspective?

MR. HUBER: No, we don't. The -- the research that was conducted in the presentation that was provided, along with the information that was there, does indicate that over the 20-year time frame that the model was run, there was no significant impact or failures in the reduction of these systems. And the 30 percent that we're proposing in western Oklahoma, we feel is still a conservative number for that area, based on that research.

Part of our evaluation was to ensure that the amount of reduction that was being proposed did not provide or produce any potential for detriment to environment or human health. These reductions are based on the aridness of those areas still within what we

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would consider to be a conservative number.
MS. MACH: Okay. Thank you.
CHAIRMAN DUZAN: Any other questions or comments?
Normally, we open this up for questions or comments from the public. I'm not sure how that works in --
MS. HATFIELD: The public -- the public comment period is now open. Please click on the Q and A tab at the bottom of your screen to comment. You may comment in two ways. You may either type in your question or comment. It will then be read aloud and answered or you may type in your name and phone number. The system will call you and you will be able to voice your comment. You will have three minutes and will be alerted when 30 seconds remain.
CHAIRMAN DUZAN: Okay. So I guess we'll wait a couple of minutes here and see if we get any questions.
MR. BACHELDER: Hello. Hello.
CHAIRMAN DUZAN: Yes, go ahead.
MS. HATFIELD: Mr. Bachelder, you are now connected and you may begin your three minutes.

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MR. BACHELDER: Well, thank you very much. Before I start, I'd ask if you have access to the draft text of the proposed rule language, as well as the draft Appendices H. I'd like to make reference to those, and it might be a little bit easier to follow my comments if you are. Thank you.
My name is Dick Bachelder and I'm a senior regulatory specialist at Infiltrator Water Technologies. I've been in the business about 30 years and my area of expertise is in regulation and Adecco pools.
Infiltrator is the Adecco based manufacturer of on-site septic system products all across the board. Germane to today, it's -- we are a leading manufacturer of chambers, of something that Mr. Huber mentioned in his comments.
If we go to page one of the draft text, the fifth or sixth, seventh, or eighth definition in the rules today, and it's unchanged in the new rule, conventional subsurface absorption field includes media filled EGG gravel poly fine and chamber -- there's the word chamber -- trenches. So

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chambers are in your rules and have been for, we think, something like 15 or 16 years.
The first infiltrator manufactured chamber product was approved by letter in 1999. And so Infiltrator has been selling and marketing and seeing systems installed with their products for over 20 years. And in all instances, because of the efficiency of the technology, these chamber products, these arched plastic modules which click together in the trench, they take the place of gravel in trenches, regardless of where we are on the planet. And they're more efficient because they don't take up all the space that stone takes up, rock takes up, and they also provide an unfettered basal area in the excavation for the initial treatment of affluent by way of biomat, and then subsequent distribution of the affluent into the subsurface native soils. There's more of that available if there isn't a bunch of stone, rock, gravel sitting on that interface.
If we switch from the draft text to -- to Appendices H, I'd ask you to roll to the first page where you'll see Figure 1 is a conventional subsurface absorption field table,

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and Figure 2 is a conventional subsurface absorption field utilizing chambers when both are used in a Perc test.
In a quick glance at the numbers in the table, I'll direct your attention, please, over to each additional bedroom column on the right side. And the second one down, 60 to 30 minute-inch Perc rates or -- in Figure 1 is 100 feet for each additional bedroom. And if you slide down to table 2, you'll see that's 80. That's a 20 percent change.
If we move down a couple more, you'll see the conventional gravel is 200, and then table 2, the fourth cell below each additional bedroom is 160. So chambers from the past many, many years have enjoyed a 20 percent trench length -- reduction is a tricky word, but that's what it's been in Oklahoma forever. That's loosely termed. And I would add that chambers -- since we started there are over 30,000 Infiltrator manufactured plastic leaching chambers in the ground, in Oklahoma today.
I want to point out, if you slide over to page two and -- page two, figure 4, is the table that's being proposed to provide the

50 percent reduction in Zone 6 through 8. If you see that in the title of figure 4. So those numbers reflect a 50 percent reduction from the gross trench length area required, and has been required for years.

The department's not recommending any change to the baseline sizing in the east, but in the --

MS. HATFIELD: Sir, your time has passed. If you could please wrap it up in about the next minute, that would be wonderful. Thank you.

MR. BACHELDER: Wow. Okay. Thank you very much. I appreciate that.

In short, I'm thrilled to hear Mr. Huber say that discussions are continuing with stakeholders, because we've written three letters since we learned about the emergency rules in October. And we had a meeting with the staff at DEQ three weeks ago, and we're disappointed that there's no language in the draft text, or tables in the draft appendices, that represent continued sizing for chamber technology.

We feel very strongly that there isn't

any technical justification for removing it, and we're looking forward to see the rules presented to you for vote in September, including language in tables that represent the sizing that's been in place for a long, long time.

And, finally, I would mention that we are anxious to see the study that was undertaken sometime ago and is being used as a basis for the sizing being put forward. We're not challenging the sizing, but we are also frustrated with the inability to be able to review the science behind the changes that are proposed. Thank you very much for an opportunity to comment.

MS. HATFIELD: Thank you for your comment.

CHAIRMAN DUZAN: Nicholas, do you have a response?

MR. HUBER: Yes. This is Nicholas Huber. I would just say that, you know, we do look forward to continuing to work with Dick Bachelder, Infiltrator, and we -- as we continue to evaluate how best to provide chamber sizing in our rules that's beneficial for everyone, and look forward to it occurring -- to that process

over the next several weeks.

CHAIRMAN DUZAN: Okay. Is the data that you got from OSU accessible or can be passed on, I guess?

MR. HUBER: Yes, this is Nicholas Huber. And to Brian's question, is -- that information is -- has been -- I believe it has been peer reviewed and is in the process of being published. I have not had any conversations with Professor Abbott concerning that -- the status of that project for the last couple of weeks. I expect it to be completed fairly soon.

I think with everything, that the Covid health emergency has probably delayed some of that from occurring, but it is something that as soon as it is available we will provide via our website and to those stakeholders.

CHAIRMAN DUZAN: Okay. Any questions or comments from the council about his questions?

MS. MACH: This Mary Elizabeth. I guess I was unclear exactly what the -- what exactly he was disagreeing with.

MR. HUBER: Yes, this is Nicholas

Huber. I think what Dick's point was, is in the version of the draft that we had sent out Monday of last week, which you guys have, we did not include any of the chamber sizing as was discussed today. We do intend --

MS. MACH: Is that (inaudible) lateral length?

MR. HUBER: Say that again, please.

MS. MACH: That was just with regard to lateral length?

MR. HUBER: Yes. So the chamber Infiltrator is looking to have sizing criteria in these draft rules, which was not included as we were still in discussions with them, working towards a mutually agreeable point.

MS. MACH: Okay. Thank you. I appreciate the clarification.

MR. HUBER: You're welcome.

MR. NELSON: So, Nick, this is Jon Nelson. Mr. Bachelder feels like numbers relating -- the design numbers in the tables relating to chambers type design or chamber type system should be less?

MR. HUBER: This is Nicholas. Yes, I think, based on their product and their

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information, that the sizing associated with the chambers, because they're more efficient than our standard arch and pipe systems, warrant having a separate sizing that is less than what we have set for our standard systems now.

MR. NELSON: And he has presented some kind of basis for this to his staff, to y'all?

MR. HUBER: Yes, he has -- we have been in receipt of the information from the company and we've been reviewing that, which we will provide when we bring these rules again.

MR. NELSON: Okay. Thanks.

MS. MACH: Nicholas, hi. This is Mary Elizabeth again. From what you had mentioned regarding the research surrounding the work that the OSU performed, it sounded like to me it had more to do with percolation. Will that -- does that research address the chamber sizing?

MR. HUBER: Yes, this is Nicholas. So the research that was conducted, in a quick version, evaluated the positive potential under a centimeter of water above a certain soil group. So the model was run to determine, not necessarily percolation rates, but case stats of those known soils with a certain amount of

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applied water over a 24-hour period, any failure rate that may occur.

So it made assumptions based on our standard sizing for our lateral fields, for certain soil groups in climate zones that they identified through the evaluation of mesonet data. That information was then extrapolated to show over, I believe, 20 years the incidents of failure, which they documented as being ponding waste water over that infiltrated surface of more than one centimeter. We would be able to expand it upon any sizing, for any system in Oklahoma that is reliant on location and subsurface location.

CHAIRMAN DUZAN: Okay. Is there any other questions or comments from the general public?

MS. HATFIELD: Yes, there is a comment from Kevin Roark. He is the president of the Oklahoma Onsite Waste Water Association. His comment is: Nicholas Huber has presented much needed modification (inaudible) --

(At which time, there was an unidentified interruption.)

MS. HATFIELD: -- has presented much

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needed modifications of the rules, result of good collaboration of DEQ, OOWA and others.

CHAIRMAN DUZAN: Okay. Are there any other questions or comments from the public then?

Any more from the council?

Okay. I think we'll go ahead and move on since we won't be voting on this at this time. The next thing is a presentation on activities related to the Oklahoma Strategic Alliance, Brandon Bowman and J.R. Welch. So I'll turn it over to them.

MS. HATFIELD: We actually have one more public comment that was just received --

MR. LENTZ: Hello.

MS. HATFIELD: -- from David Lentz.

David, you have three minutes, and you may begin whenever.

MR. LENTZ: Okay. Thank you. My name is David Lentz. I'm from Infiltrator Water Technologies and I'm a co-colleague of Dick Bachelder's. I just wanted to clarify on a couple of the questions that came up about the sizing of graveless systems.

And the sizing that Infiltrator has

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proposed to the DEQ staff is fully consistent with chamber sizing that's used around North America. Chambers have been in use for 30 years in North America. When they were made of plastic, they were used 50 years ago; when made in concrete, in eastern Canada and the U.S.

So what we have proposed is chamber sizing that is at least as large as the sizing in place for Texas, and Texas has had chamber sizing in their rules for over 20 years. So we're making sure that there's a level of conservatism incorporated into what we propose. And the way the chambers are sized is always relative to a gravel and pipe trench.

So when what we're proposing is in the east where there is no relevant pipe sizing reduction, there would be a 25 percent chamber sizing reduction. In the central area, there would be a 10 percent difference in chamber versus gravel and pipe sizing, and in the west gravel and pipe and chambers would be on a one-to-one ratio. There would be no difference in the length of trench.

Now, this -- like I said, this sizing is consistent with what we do on a national

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basis, and we have studies conducted by independent third parties that have been accepted by other state agencies that support the type of sizing that we're using. That concludes my comment. Thank you.

CHAIRMAN DUZAN: Okay. Any other additional questions or comments from the council on that? Or from Nicholas, if he has a response?

MR. HUBER: No, not at this time. Thank you.

CHAIRMAN DUZAN: Okay. Okay. I think -- I guess now we're ready to move on to the presentation on the Oklahoma Strategic Alliance, so Brandon and J.R.

MR. BOWMAN: All right. Thank you, sir. Give me a few moments while I pull up my slides.

All right. Good afternoon, everyone. I'm Brandon Bowman. I'm manager of the Capacity Development section here in the Water Quality Division of DEQ. I'm joined today by J.R. Welch, chief operations officer with the Rural Water Association. We're going to take a little time to tell you about the Oklahoma Strategic

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Alliance, about the work that we do and the results of helping small rural water systems across the state.

The members of the Oklahoma Strategic Alliance are the office of the Secretary of Energy and the Environment, DEQ, Water Resources Board, and the Rural Water Association. And all of us were working to help small water systems, small municipalities, small rural water districts across the state. And we work together, and we knew the work that each of us was doing. But when the Strategic Alliance was ratified by the governor on September 3rd, 2019, it formalized our commitment to work together, and we were able to take advantage of synergies and force multipliers to accomplish more and have a greater, positive impact on small rural water systems than we were able to achieve separately. Essentially, we were able to build off each other's strength, and we've done a lot of good.

Our work has been focused in three main areas. The first one is water loss control. We help systems understand the amounts and values of the uses and losses of their water and how to

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control it.

Our second area of focus is rate analysis. We help systems determine all of their financial needs and what rates are necessary to fund all of these needs.

Our third area of focus is long range sustainability, which is a comprehensive suite of tools and assistance geared toward helping water systems become resilient and sustainable.

Let's jump into each of these just for a moment to talk about what we do with our results. With water loss control, when we go out and we talk to systems, a lot of time we ask systems, what's your water loss? And they use a very simple equation. They have, okay, my water loss is 30 percent, and that -- I have water produced, minus water sold.

And what they're calling water loss is actually unaccounted for water. For example, if they produce 100,000 gallons in a year's time and they sell 70,000 gallons to their customers, they'll tell us that I have 30 percent loss. But what they mean is, they have 30 percent of their produced water that they can't account for.

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By participating in our program, we're moving away from unaccounted for water. We are accounting for all water uses and losses. We're teaching systems how to break that unaccounted for number down into amounts of water that's actually lost to leaks, amounts of water that may be lost to bad or nonfunctioning meters or antiquated billing software.

And a lot of times the real eyeopener, especially for small towns, is how much they're giving away in unbilled usage. How much are they using for municipal purposes, like a swimming pool? How much are they using for flushing? Or how much is the fire department using?

You know, when we're talking with towns, sometimes they panic. They think, well, I'm going to have to start billing my fire department or billing my municipality for the swimming pool. That's not what it's about. It's simply about knowing how much water is being used for these different purposes so you can budget appropriately.

We've completed 175 audits across the state over the past four years, and this is an

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idea of, on average, how things look for 175 systems. About 74.3 percent of all the water produced generates revenue for the system. Essentially, 75 percent of the water they produce makes them money. These unbilled, authorized consumption, that's what they're giving away for municipal purposes, for flushing, for firefighting, about 3.7 percent.

Real losses, water that's actually lost to leaks is 19.4, and this is what we're focusing on with our leaks detection, what we want to reduce. The remaining percentage is mainly customer metering inaccuracy, the 2.1 percent, and a very small amount lost to data handling errors and theft.

For this 175 systems, total apparent loss, which is water that's lost through bad metering or data manager problems is 900,000,000 gallons a year, valued at 4.9 million dollars per year. Total real loss, which is water actually lost to leaks, 6.9 billion gallons a year, valued at 8.4 million dollars a year production cost. And this is just for 175 systems. There are 1,392 water systems across the state, and we're going to try to help every

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one of them if they're interested.

Okay. So you've had a water loss audit done. You've had DEQ come out and meet with you, show you how the water audit software works. It's the American Water Works Association M36 method. We give -- we teach them how to do it; we give them the software. It's free. So now they have understanding of their unbilled usage and what their loss levels are like.

From that point on, we refer them to our friends over at the Rural Water Association for leak detection and meter analysis help. And this help is not a one-day event. It's not like an engineer or a specialist or a circuit rider come in and spending a day with the system. When the Rural Water Association comes out to do leak detection and meter analysis help, they're with the system all day for two to three to four weeks teaching system operators how to find leaks, using standard, off-the-shelf equipment, but in new ways that they may not have considered before. We teach night listening and valve squealing and zone metering to find these leaks and give the system information they need

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to get them fixed.

With meter analysis, the Rural Water Association specialists come out and they test all production meters and the oldest 10 percent of their customer meters. It gives the system an idea of how accurate their meters are, particularly their customer meters.

We teach systems that your customer meters are your cash registers for your system. They've got to be accurate so that you can generate the revenue that you need to operate.

So far we've conducted leak detection at 28 systems. We've identified 152 leaks that account for 810 million gallons a year of real loss, identified. We've done meter analysis at 11 systems, and 26.4 of customer meters, that oldest 10 percent are inaccurate. And, surprising, 50 percent of production meters are inaccurate.

With customer meters, it's primarily age. As meters age, they tend to under register. With production meters it's either age or it may be improper installation or wrong size. Meters that are trying to measure flow that's either below or above their design rate

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will measure incorrectly. We give systems the information they need to make that say, make a correction there.

Okay. So DEQ has come out and performed a water loss audit. The Rural Water Association has come out and helped with leak detection and meter analysis. That helps systems to identify their problems, but if they want to make real change they have to act on this information.

We've went back. We've visited with the 22 that rural water has conducted leak detection with. We asked them, what happened? About 50 percent of the identified leaks have been repaired. We've saved over 490 million gallons of water, valued at 1.2 million dollars. That's outstanding work.

We're noticing that water systems are also becoming more accurate with data recording and management. By going in and teaching water loss auditing, it goes back to the philosophy of what gets measured, gets managed. Systems are looking at their unbilled usage and starting to manage it.

We're noticing that by doing water loss

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audits, and returning and seeing how things are, water -- the operations cost of these water systems are increasing, partially because the cost of business is going up and partially because recordkeeping is improving. Apparent loss and unbilled usage is decreasing. Systems are understanding and finding their inaccurate customer meters.

They're listening to what we have to say about these meters being their cash registers and they're changing them out for more accurate meters. A system that has a significant portion of inaccurate, under registering customer meters can undertake a meter replacement program and have the program pay for itself and improve revenue.

Moving on to rate analysis. What we're teaching here -- we're not about raising rates. A lot of times we go and visit these systems, they -- you're coming to do a rate analysis; my water rate's going to go up. That's not exactly what we're talking about. We don't talk about raising rates, we talk about charging the right rates.

The right rate for a water system is

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one that fully funds all aspects of the water system. It fully funds operations and maintenance, it fully funds that contingency fund that is there for emergencies, and it fully funds depreciation and capital improvement accounts, so the water system has money set aside to repair infrastructure when the infrastructure has failed and reached the end of its useful life. And we want systems to pay their operators, their business office staff, their managers, a salary that is worthy of the experience and dedication that these professionals are showing.

We've completed nine rate studies. On average, operating ratio has been increased by .33, and water systems that have participated have increased their budgets by 2.06 million dollars per year.

Having a rate analysis completed by members of the Strategic Alliance, it's -- it's -- we meet with them, we do the rate analysis, we generate the data and the evidence that's needed to support a change in rates, because rates that are backed by evidence typically get adopted. If you try to institute

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a change in your rates and it's just because you feel we need to generate more revenue, odds are you're just shooting in the dark. You need it backed up by evidence.

With our long range sustainability plan, it is a comprehensive group of technical assistance all geared towards promoting resilience. One of the things that we like to talk about is a water system in many environments. A water system is used to thinking about themselves in a physical environment. We're concerned about quality and quantity of water that they're treating for our customers.

Water systems also exist in an environment with other systems around them. We encourage systems to develop mutual aid agreements, to consider regionalization and consolidation if it's important and makes sense.

They also exist in an economic environment. You know, fuel costs go up, electrical costs go up. Systems need to be looking at that and planning for it with their budgeting and their rates so they're not taken by surprise.

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Systems also exist in a political environment. Rules change. Regulations change. A sustainable and resilient system is keeping an eye on proposed rule changes and proactively takes action to be ready and prepared.

Finally, water systems exist in the social environment. Facebook. We live in the age of social media. Water systems need to have a good grip on how to manage their social media presence and use it for their advantage, to keep their customers informed and generate customer support for water system activities, and to involve these customers in the operation of the system. Water systems that are not aware of social media live at the mercy of it. We teach systems how to adapt, how to take this tool and use it for their own benefit.

At this point I'm going to turn it over to J.R. and he's going to talk a little bit about the apprenticeship program.

MR. WELCH: Hi, I'm J.R. Welch with Oklahoma Rural Water Association, and I am going to be speaking to you about the apprenticeship program. This is a new program we have just rolled out at ORWA. This program comes to us

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through our National Rural Water Association that we're members of.

This is an approved program. It's approved by the Department of Labor, Office Apprenticeship. It's developed for incumbent employees and future water and waste water system operation specialists. It will provide consistent base level of knowledge and training within the industry. The pre-apprenticeship program is designed for ages nine through 12th grade students. It introduces students to the industry who have job shadowing opportunities, STEM fairs, job career, tech job fairs also.

Okay. Apprenticeship Program, it is a water system operations specialists and waste water systems operations specialists program. Each program consists of a minimum requirement which is a two-year term, approximately 4,000 hours of on-the-job learning, 288 hours of formal classroom training that we will provide at ORWA with our partners. Eighteen years old or older to enter the program, is the age requirement. The hourly wage at the end of this two-year completion will be $17 per hour.

Okay. What this means for the

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apprenticeship program. We are currently in conversation, and have had inquiries and requests, from the City of Tahlequah and the City of Lawton for the program. Okay. There's -- there's multiple ways that you can enter this program, and it's designed to fit multiple entities and multiple apprentices coming into the program.

What's not listed on here is this also covers military. We have a -- we are currently in the process of -- of being able to administer funds through the Veterans Affairs Association. Okay. This program is designed -- well, the reason why it fits into this program with sustainability, when we talk about sustainability of the systems that we've been working with, one of our biggest assets that we're about to lose over the next ten years is 50 percent of this workforce, of these qualified, knowledgeable employees that we're about to lose in this industry.

That is what this apprenticeship program is designed to help with, to encourage these students from a young age on the pre-apprenticeship program, to -- to then -- to

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get involved with this program. To get involved in this industry. To seek career opportunities in this industry.

We're also working with the possibility of utilizing the GI bill for someone in the military that may be about to come out of service in the military. We're -- we have been in some discussions with some people over at Tinker with this, to possibly work right here in Oklahoma City, to assign these -- these veterans coming out of that, and to -- you know, systems that have water and waste water opportunities, for them to go into this apprenticeship program.

With that being said, a system -- the employee does not have to work for the system specifically. Anyone can sign up for this apprenticeship program. It is owned and ran by ORWA. It's approved through Department of Labor.

So an apprentice may be coming from out of state and want to enter in through this apprenticeship program. We will work to place them with one of our host cities for this apprenticeship program. And we're currently seeking funding to put into that program, to

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assist those apprentices with the systems, to put them into that apprenticeship program.

That's just kind of some highlights of it. It's much more in depth than that, but we wanted to kind of bring that to you a little bit, because it fits right into the same sustainability of the system, on the workforce development side of it, and that's what this program is geared toward, is the workforce development.

We want to capture that knowledge of guys like myself and some of the guys in the industry.

I know, Mark, you're on here from ORWA. We want to capture the knowledge of guys like us that's been in this industry and pass it on with this program. So in ten years, losing 50 percent of that workforce -- and that's a nationwide average. That's huge for this industry, that we're going to be experiencing that loss over the next ten years.

So that's what this apprenticeship's about. You'll be seeing a lot more about it in the very near future.

MR. BOWMAN: Thank you, J.R. One thing

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I'd like to mention is that all the help provided by the Strategic Alliance participating system is 100 percent free, without charge. And if the system serves 10,000 or fewer people, they qualify for help.

And for every dollar invested in our programs, we've generated over $6 direct economic benefit for participating systems. The Christian Science Monitor just wrote an interesting article about our leak detection program that you can Google and read. And we regularly get letters of thanks, letters of appreciation from water systems, detailing some of the good results that they've achieved by participating in our program.

Future plans. We're going to continue our work with water loss, control and rate analysis. Fixing leaks, controlling loss, it's not a once and done thing. You have to work at it continuously. Leaks appear and must be tracked down and corrected. New costs impact water system budgets. They need to be looking out for that, having a regular rate study, implementing those right rates to cover all their needed costs.

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We're also going to be increasing our focus on asset management and source water protection. With asset management and capital improvement, we know that infrastructure wears out. Systems are funding that capital improvement and managing their capital assets with asset management, they're better able to maintain the condition of their infrastructure and they have their own funding for repairs. They don't have to go around hat in hand looking for grants.

The final focus of our program is, with our long-range sustainability we're going to be expanding the focus on disadvantaged communities. We are joining forces with the EPA through the water infrastructure improvements for the nation, disadvantaged communities grant, and we're going to be bringing all the skills and tools that we have with sustainability and focusing on systems that are in violation of the Safety Drinking Water Act, and bringing every tool we have to bear to help them out, to see if we can't give them the knowledge and skills they need to lift themselves out of noncompliance and back into producing safe water.

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With all these things, it's always up to the system to make the corrections. So we can go out there, we can do a water loss audit, we can help them find the leaks, but improving a water system has always been, and it always will be, a do-it yourself task. We're here to support those water systems, water operators, that are willing to roll up their sleeves, stand alongside us, take action, and improve themselves to reach sustainability.

And thank you. That concludes our presentation. We'd be happy to answer any questions.

CHAIRMAN DUZAN: Okay. Thank you, guys. A lot of good valuable information you presented there. And I think that most of us have seen the numbers of the amount of water that's been saved at some of these various meetings, and it's truly remarkable. And especially some of the water districts in the western part of the state can't really afford to be losing much water at times.

Any other questions or comments from the council?

VICE CHAIRMAN WINEGARDNER: Yes, this

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is Duane. I think it's a wonderful thing that we are showing the people working on the water systems are true professionals. We're giving them a good opportunity to improve their living, and not to look at their thing as a job but to look at it as a lifetime profession.

I was on the Lake Thunderbird Board for about 12 years, and we had a lot of turnover on people because they looked at it as a job and not as a profession. And I think this program, the apprenticeship program particularly, is a really positive step in leading both the workers and the community to view their people who run their system to treat them with proper respect.

CHAIRMAN DUZAN: I think we all agree with that. Any other questions or comments from the council?

MS. HATFIELD: If there are no other questions from the council, the public comment period will open now. There are currently no comments or questions from the public, but I will leave the comment period open for about two minutes to see if we receive any.

CHAIRMAN DUZAN: Okay.

MS. CHARD: This is Shellie Chard.

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While we're waiting on public comment, I just want to commend the work of Brandon Bowman and his staff, and J.R. Welch and the Rural Water staff. This has been a great formalization of a great partnership we've had between our agency and Rural Water, and, of course, the Water Resources Board and the office of Secretary of Energy and Environment's office under Secretary Ken Wagner.

This has been a great program, and these guys are doing a great job working with our systems. And it's nice to have some non-regulatory responsibilities and be able to really show how we're helping communities, particularly when we start looking at decreasing budgets for various reasons, including the pandemic, and also as we see spots of drought pop up on the drought monitor.

So this is a great program, and that's part of why we wanted to share it with you a little bit today. And in a future Enviromental Quality Board meeting, they will also be presenting their findings.

MR. BOWMAN: Thank you, Shellie. Thank you very much.

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MS. HATFIELD: No comments or questions have been received in the public comment section, so we will go ahead and close the public comment period now and move on.

CHAIRMAN DUZAN: Okay. Moving on to the director's report. Shellie, that is you again.

MS. CHARD: Yes, all right. Thank you all very much. I appreciate you guys sticking with us. I know it's been a bit of an adventure trying to navigate this new normal.

One of the things that I wanted to just touch on very briefly, if you haven't looked at the DEQ website under our Covid pages, you might look at that. And you can get a glimpse into all of the activities that we have been undertaking during this time, everything from how we've been dealing with operator's certification, training, renewal, compliance and enforcement activity.

As you can see from my video, I am in the office today. As an agency, we're somewhere 15 to 20 percent across the agency on any given day in the office. The laboratory has been running close to full capacity, but they're

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operating in shifts so that if one person did contract Covid-19, that it would not totally disable the entire laboratory. So that's some of the things that we've been doing to keep ourselves up and running during this time.

Our program staff are getting back out in the field. They had some time where we were being very cautious and trying to wait and see what was happening. We were still responding to emergencies and complaints. When we had some drinking water sample analysis show contamination, those staff were working.

Sometimes we had to get creative. We were not always able to immediately go and help take samples or verify sampling procedures, but the agency was able to be a little creative. And we were doing some use of Facetime and reviewing how somebody took a sample and being able to show them proper technique.

So, you know, we've had some new approaches to some things, and we've also been using our drones to help us continue our social distancing, but also be able to conduct business.

For some of you, I know I've had some

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one-on-one conversations, but asking about what kind of training or information is out there for conferences that typically are held in person, either around the state or across the country related to drinking water or waste water. I would encourage you to look at American Water Works Association, The Water Environment Federation and The WateReuse Association, and the Ground Water Protection Council website. All of them have a lot of really good water related technical training available, and in many cases it's free or at a significantly reduced cost. So those are some options where you might get some of that training, if you're looking either for a particular subject or continuing education credit.

One thing that I haven't decided if I'm excited or terrified, next Tuesday I will be testifying virtually before the U.S. House Committee on Energy and Commerce, on the environment and climate change subcommittee. They are holding a hearing regarding standard setting processes under the Safe Drinking Water Act, so that should be interesting.

I'm the state person. There's someone

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from NRDC and someone representing a large drinking water utilities. We'll all be participating in that. So I think it's, you know, interesting and fascinating. We'll see how it turns out.

I know what it looks like in person; I'm not sure how it looks remotely, but we're going to find out. But I am excited that Oklahoma is going to get to have a voice in some of the early discussions in Congress as they're looking at potential amendments to the Safe Drinking Water Act in the future.

One last area that we talked a lot about, oil and gas produced water over the last couple of years. DEQ is still working with the Enviromental Protection Agency to see what delegation of that program would look like and how it will fit into other DEQ Clean Water Act programs.

How things usually go, the discussion is now between the DEQ general counsel and the EPA Region 6, regional council and headquarters of the general counsel, looking at a couple of legal issues that they have to get worked out before any of technical people can actually put

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together documents that need to meet the agreed upon criteria.

So that's something that's still happening, as DEQ is continuing to participate in various produced water workshops and research, partnerships, one being the New Mexico produced water consortium. It involves several universities, environmental NGOs, the states of New Mexico, Texas and Oklahoma, and many oil and gas companies. So that's a good place we're seeing a lot of research, ideas being presented, and moving on to some of the funders in order to fund that research so that, hopefully, we can work to become more water resilient by replacing produced water, using that in lieu of fresh water or potable water.

People get real nervous when you start talking about reusing produced water from oil and gas that -- oh, we can't drink that because it's highly contaminated. And nobody's talking about drinking it, we're just talking about making smarter decisions about our water, what we can do to include produced water as part of our water resources and not simply inject it and take it out of the water cycles.

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So those are some of the big things that we're working on and that are happening at DEQ related to water quality. So I will stop there. I know we've been here going on an hour and a half, and take any questions that anybody might have.

CHAIRMAN DUZAN: Okay. Does anybody have any questions?

Okay. No question.

Thanks, Shellie.

And we'll move on to new business, which I don't believe we have any new business, so the next thing is the announcement. The next meeting is scheduled for September 29th at 2:00. The location and format to be determined.

It may be back to in-person or it may be another one of these. We will have to see at that time. And then if there's no other announcements or anything, we'll seek a motion for adjournment.

MR. NELSON: So moved. Jon Nelson.

MS. WYATT: Terry Wyatt, second.

CHAIRMAN DUZAN: Okay. We have a motion and a second. We'll do a roll vote.

MS. FIELDS: Mr. Carr?

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MR. CARR: Yes.

MS. FIELDS: Ms. Mach?

MS. MACH: Yes.

MS. FIELDS: Mr. Matheson?

MR. MATHESON: Yes.

MS. FIELDS: Mr. Moore?

MR. MOORE: Yes.

MS. FIELDS: Mr. Nelson?

MR. NELSON: Yes.

MS. FIELDS: Mr. Smith?

MR. SMITH: Yes.

MS. FIELDS: Mr. Winegardner?

VICE CHAIRMAN WINEGARDNER: Yes.

MS. FIELDS: Ms. Wyatt?

MS. WYATT: Yes.

MS. FIELDS: Mr. Duzan?

CHAIRMAN DUZAN: Yes.

MS. FIELDS: Motion passed.

CHAIRMAN DUZAN: We are adjourned. Thanks everybody.

(At which time, the Water Quality Advisory Board hearing concluded.)

C E R T I F I C A T E

STATE OF OKLAHOMA)
)
COUNTY OF TULSA)

I, Tammie Shipman, Certified Shorthand Reporter in and for the State of Oklahoma, do hereby certify that the foregoing proceedings are a true and correct transcript of the record of the machine shorthand notes taken by me and transcribed into written form under my supervision, direction and control.

I further certify that I'm neither related to nor attorney for any interested party in the named action, nor otherwise interested in the outcome of said action.

WITNESS MY HAND, this 28th day of July, 2020.

Tammie Shipman

Tammie Shipman
Shorthand Reporter
CSR #1564