# In The Matter Of: <br> Hays, Kansas \& Russell, KS v 

Edwards County, Kansas \& Kansas Water Transfer Act

> Formal Hearing
> Vol. 3
> July 21, 2023

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|  | Page 553 |  | Page 555 |
| :---: | :---: | :---: | :---: |
| 1 | Cities ' exhibits |  | there as your Exhibit WP01695 through |
| 2 | EXHIBIT FIRST | 1 2 | WP01851. |
| 3 | number rererenced | 3 | MR. LEE: Okay, yes. Same thing |
| 4 | Number 1765................ . . . . . . . . . . . . . . 651 | 4 | so -- |
| 5 | Number 2625................. . . . . . . . . . . . . . . 621 | 5 | PRESIDING OFFICER: Is that correct? |
| 6 | Number 2654............................. . . . . 648 | 6 | MR. LEE: Yeah, I believe so. |
| 7 | Number 2655. . . . . . . . . . . . . . . . . . . . . . . . . . . . 642 | 7 | PRESIDING OFFICER: Okay. |
| 8 | Number 2666............ . . . . . . . . . . . . . . . . . 696 | 8 | MR. LEE: Yeah. |
| 9 | Number 2681............................ . . . . 640 | 9 | PRESIDING OFFICER: So it's correct |
| 10 | Number 2827. . . . . . . . . . . . . . . . . . . . . . . . . . . 672 | 10 | that that's the page numbering for that |
| 11 | Number 2828............................... . 664 | 11 | exhibit, and then, yes, if you can just |
| 12 |  | 12 | upload an electronic copy of that exhibit. |
| 13 |  | 13 | So at this point, that is the only one of |
| 14 |  | 14 | your exhibits that we have officially |
| 15 |  | 15 | admitted to the record. |
| 16 |  | 16 | MR. LEE: Okay. |
| 17 |  | 17 | PRESIDING OFFICER: Just so we're |
| 18 |  | 18 | aware of that and we can at some point here |
| 19 |  | 19 | next week kind of go through and make sure |
| 20 |  | 20 | that everybody has the same record, noting |
| 21 |  | 21 | what's been admitted and what's not so you |
| 22 |  | 22 | don't mistakenly think something was |
| 23 |  | 23 | admitted and it wasn't because of the way |
| 24 |  | 24 | we're going about this. |
| 25 |  | 25 | MR. LEE: Sure. Well, we definitely |
|  | Page 554 |  | Page 556 |
| 1 | PRESIDING OFFICER: We'll go ahead | 1 | will check on that, and I appreciate Your |
| 2 | and go on the record here and get things | 2 | Honor's approach to it. We will upload |
| 3 | started here for Friday, July 21st for our | 3 | this over the weekend, an electronic |
| 4 | hearing. | 4 | version. |
| 5 | Now, Mr. Lee, you were just addressing | 5 | PRESIDING OFFICER: Okay thank you. |
| 6 | the deposition, and I want to apologize | 6 | MR. TRASTER: Your Honor, from my |
| 7 | because I indicated that I didn't think you | 7 | perspective, I didn't intend that only the |
| 8 | had listed that on your exhibit list. Now, | 8 | Cities' exhibits would be admitted; I |
| 9 | the list I was looking at, whatever -- for | 9 | assumed that we were admitting all of the |
| 10 | whatever reason, cut off and I didn't get | 10 | exhibits provisionally. But that's -- |
| 11 | those last couple pages of your exhibits. | 11 | PRESIDING OFFICER: Okay. |
| 12 | I had your exhibits as being up through | 12 | MR. TRASTER: Whatever, I'm not -- |
| 13 | page 532, and then 533 started the next | 13 | PRESIDING OFFICER: Mr. Lee, would |
| 14 | page, so I wanted to clarify, then, I think | 14 | you -- |
| 15 | I made myself a little sticky note on that | 15 | MR. LEE: I won't make a strenuous |
| 16 | somewhere, if I can find it. So you'd | 16 | objection to that, Your Honor. |
| 17 | indicated that being an exhibit number | 17 | PRESIDING OFFICER: Okay. So with |
| 18 | starting at 2091. | 18 | that, then, we will go ahead and all of |
| 19 | MR. LEE: That's the -- that's the | 19 | those that were on your list, then, will |
| 20 | figure that we wrote or the number we wrote | 20 | be -- |
| 21 | down, Your Honor. That would be after -- | 21 | MR. LEE: Thank you. |
| 22 | PRESIDING OFFICER: When I went back | 22 | MR. TRASTER: Admitted for whatever |
| 23 | through your witness list -- or your | 23 | purpose. |
| 24 | exhibit list last night, it looked like | 24 | PRESIDING OFFICER: Uh-huh. |
| 25 | Mr. Dougherty's deposition was listed on | 25 | MR. TRASTER: I mean, I |




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A City clerk, finance director.
Q Then if there is a $15-$ or 18 percent interest in the project, is that Russell's percentage of the capital cost that it will have to pay?
A That'll still be negotiated.
Q It's unknown at this point?
A We still have options of -- that the Cities will have to negotiate that, how that arrangement
9 will be made.
Q Well, tell me about the options.
A One of the options is to purchase or pay for 18 percent of the development cost, or the other would be to be a preferred customer.
Q And what is entailed in being a preferred customer?
A The details of that are being worked out, but paying no more than the cost to produce the water.
Q And would that be in perpetuity or until some percentage of the development cost was paid?
A That's to be determined when that's negotiated.
Q So let's look at option one, 18 percent of what, $\$ 138$ million, is that the project cost, as you understand it, as estimated by Burns \& McDonnell?

A That's the estimate, yes.
Q Is that an amount that Russell can pay?
A That's an amount we'd have to finance or find funding for.
Q And if you finance it, how would you do that?
A Either through the state revolving loan fund or through the EPA or other federal programs.
Q So it sounds like it would be fair to say that you don't know whether it can be financed if you have to pay 18 percent, fair?
A Yeah.
Q Okay. Would one of the options be if you go the route of having to pay X amount for your share, Russell's share of the project cost, to increase rates for ratepayers?
A That wouldn't be the sole reason to. If there was a rate increase, that wouldn't be the sole reason. We regularly look at our operating costs for the utility and project out for ten years our capital needs and base our rates on a cost-of-service study which allocates a certain portion of those costs to different customer classes. So it's not as simple as we need $X$ amount of dollars so we're going to raise rates this much, we have to ...

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1 Q Well, I got that. I think what I hear you
saying is that one of the options the City would consider as part of a financing package is a rate increase; is that right?
A That's an option.
Q And if you were to -- I take it a bond issue
might be one of the financing options; is that right?
A That's an option.
Q Based on your experience -- maybe I'm getting ahead of myself, you have experience with bond issues, do you not?
A Yes.
Q And based on that experience, would it be the case that there would be expected to be a covenant about rate -- what ratepayers would pay?
A In a revenue bond, there would be a requirement that the rates are sufficient to meet the debt service and operating maintenance. A general obligation bond does not have that requirement.
Q Okay, thank you. So I know you are conversant with the Water Transfer Act application, right?
4 A I've read it.
25 Q Okay. You seem to be well versed in it, is that


A Can you zoom in, please.
Q You bet. I say that like I'm controlling things.
A Yeah, yeah. And out just a little bit so I can --

MS. LEE: Oh, sorry.

## BY MR. LEE:

Q Is that better?
A Yes, thank you.
Q Okay. So 1980, for example, was 5,427 and so on. Does that seem right?
A I'd have to look at the census, but I have no reason to say it's not.
Q Okay. And would it be true that the population of Russell over that period of time since 1980 has been declining through 2020?
A According to -- by that chart it looks that way.
Q And you wouldn't dispute that, I guess?
A If those are the census numbers, no.
Q Okay. So another part of the WTA application,
Mr. Quinday, that is incomplete, it appears, is that there is not any part that is -- shows what the projected water needs are going forward. Do you agree with that?
5 A I'd have to look at the document.

Q Well, let's look at the next exhibit, Myndee.
This is what's being asked in the application, that the applicant provide the projected water needs of the applicant and of any other entities to be supplied water by the applicant and the basis for those projections, that is not something that the City of Russell provided; is that right?
A I'm not sure if it's in the application, but we have records or documents that do project our water needs.
Q Well, we'll talk a bit more about that --
A Okay.
Q -- as we go forward, but are you aware, let me put it that way, of any document that's part of the application that projects the future water needs for the City of Russell?
A No.
Q And, similarly, if we could look at the next page or next slide, this is another question that's part of the application, which I think you've seen, that to be complete the application needs to include the projected per capita per day usage of any public water supply user to be supplied water by the applicant, and to your
knowledge, that is not a study that has been provided as part of the application on behalf of the City of Russell, correct?

## A I'm not aware.

Q Okay. So in terms of water usage just on a current basis, I think it would be true, at least from the things I've seen and the testimony I've heard, that by and large the City uses about 1,000 acre-feet a year; is that right?
A On average use 1,000 acre-feet a year, yeah.
Q Okay. Let's look at Quinday 6. This is --
MR. TRASTER: I didn't hear the exhibit number, sorry.

MR. LEE: This is taken, Mr. Traster, from the Hamilton rebuttal report.

MR. TRASTER: Okay. I need to kind of know where we are with exhibits so thank you very much for that.

MR. LEE: Certainly.
BY MR. LEE:
Q This is, I'm sure I'm repeating myself, but this is taken from Mr. Hamilton's rebuttal report. Mr. Hamilton, I think you know, is an economist

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1 that's been retained, I think jointly by the Cities but at least by the City of Hays.
A Okay.
Q You're aware of that?
A Yes.
Q Okay. And he says, and I'm starting not with
the truncated sentence but after that where it
says, Specifically, my report considers annual supply of 1,648 acre-feet for Russell absent drought, 1,152 acre-feet under moderate drought, and 789 acre-feet under exceptional drought. Is -- is that information, are those numbers correct?
$A$ The amount of supply that we have?
Q Yes. And can you see that adequately because I'm sure we can make it --
A Yeah, I'm just trying to -- the amount of supply that we have, we have a lot of water rights but the actual -- what's available to us, usable is 881 acre-feet from Big Creek and then 1776 from -- I'm sorry, 881 from the wellfield in Pfeifer and 1767 from Big Creek surface rights.
Q Okay. So by those numbers, which would be in excess of the numbers Mr. Hamilton has there, so Mr. Hamilton's numbers, at least, on the low end

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| :---: | :---: |
| would be appropriate. Is that fair? <br> A If the Big Creek is flowing, yes, but it's not dependable. <br> Q Well, I think what Mr. Hamilton is talking about is in the first instance what is normally available, in the second what's available under situations where there's moderate drought, and in the third what's available in those cases where there's exceptional drought. So does that make sense? <br> A Yes, except for, maybe it's somewhere else, it doesn't take into account the possibility of contamination to the surface water which makes it unusable. <br> Q Okay. Well, and I don't think that's part of his report. <br> A Okay. <br> Q So is it -- is it something that we can agree on that -- that the City of Russell is -- is only entitled to -- to water rights that are commensurate with its reasonable needs? <br> A We have water rights, 5,000 and some acre-feet of water rights, but we're only able to use Big Creek and the Pfeifer wellfield combined. <br> Q Well, and I've asked an inartful question, which | A No. <br> Q Or more water than the City needs presently? <br> A No, we would take quite a bit from it. <br> Q Quite a bit doesn't mean all of it? <br> A You mean all 4800 acre-feet? <br> Q Yes. <br> A The City of Russell wouldn't -- couldn't take all 4800 acre-feet. <br> Q Well, of course, you would only be -- I'm not privy to your agreement with Hays, but I'm assuming that you would be entitled to some percentage of that; is that right? <br> A We would take all of our percentage. <br> Q Okay. <br> A And use it. <br> Q And how many acre-feet would that be? <br> A 18 percent of 4800 . <br> Q So that part -- that part of it is simply based on your percentage interest? <br> A Yes. <br> Q Okay. So you did talk some yesterday about people moving back to Russell. Do you have -in recent years. Do you have a number for that? <br> A Oh, I'd say in probably the last two or three years, 40 or 50. |
| is not all that unusual. Is -- if you're going to acquire a water right, you're only entitled <br> to that amount that is commensurate with your reasonable need. Would you agree with that? <br> A Yes. <br> Q Okay. And as I understand, and correct me if I'm misstating this, the City of Russell at the moment has more water theoretically available to it that it can use; is that right? <br> A No. <br> Q Okay. So how is that -- how is that wrong? <br> A Because Big Creek is not reliable. If Big Creek <br> flowed every day of the year and we were able to use it, then we'd have enough water supply, but it doesn't flow regularly. When it doesn't flow, we have to use our wellfield more often, and the more often we use it, the more strain we put on it. And we also, because of that, Post Rock Rural Water supplies between 100,000 and 200,000 gallons a day to our industrial customers. So, no, we don't have enough. <br> Q Okay. So let me ask a slightly different question: If -- if you were to get your full share of the R9 water, is -- is that more water than the City can use presently? | Q Okay. And is there a common reason they're moving back or a variety of reasons? <br> A I think a lot of it has to do with them being able to work remotely so there -- a lot of -- we have high-speed internet, have for a long time, and they're moving back. Mostly for that and to be back with family and back in their hometown. And so when you say moving back, have these been mostly or exclusively people that were -- were Russell residents and now are returning? <br> A No, we're getting quite a few people from the -Colorado and California. <br> Q So would you characterize Russell's business prospects at the moment as promising? <br> A What do you mean business prospects? <br> Q People moving back, new business? <br> A Yes. <br> Q Okay. And I think you talked also about what I wrote down as downtown development, I think you specifically were talking about apartments, perhaps, in the downtown area, but has there been some downtown development or redevelopment? <br> A Yes. <br> Q And over what period of time? <br> A Last ten years. |

Q Okay. Is that accelerating at this point?
A Yes.
Q You talked at some length about -- about
PureField, which is a significant employer in
Russell, correct?
A Yes.
Q Let's look maybe at the next slide. This is,
8 just by way of explanation, a -- an excerpt from
9 a article from worldgrain.com. The link to the article is at the bottom of the -- bottom of the page, and it's from February 9th of 2022. And it has a dateline of Russell, Kansas and states that, in the first paragraph, that PureField Ingredients has completed an expansion of its facility at Russell that will increase annual production of its Heartland brand wheat protein by 50 percent. I think that is the -- was an issue that you talked about yesterday; is that right?
A You are talking about the expansion, no. This is an expansion that they completed in ' 22 like the article says.
Q Okay.
A They increased their wheat gluten production by 50 percent and also because of, whether it's

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technology or processes, they reduced the amount of water used by 24 percent per pound.
Q Okay. So the --
MR. TRASTER: Mr. Lee, is this in your exhibits?

MR. LEE: No.
MR. TRASTER: Okay. So it's not -not in your exhibits and -- how are we going to know -- are you planning to make it an exhibit or offer it?

MR. LEE: Well, I could but, no, I was not planning to.

MR. TRASTER: I appreciate that, I think we need it in -- the URL in the record so we can read the entire document at some point. I mean, I'm not -- if you can somehow --

MR. LEE: We're happy to do that.
MR. TRASTER: Okay, very good, thank you.

MR. LEE: You bet.

## BY MR. LEE:

Q So the -- the first sentence in this screenshot is related to a now completed expansion; is that right?

A Yes.
Q And I understand that you were talking about another contemplated expansion yesterday; is that right?
A Yes.
Q They also talk about that in this article, I
think, and the second part that's highlighted says, The company already is planning for another extension of its facility too. That doesn't say that that's on hold in some sense, is that an incomplete statement or an inaccurate statement?
A I'm going to be accurate that they are planning for another extension -- or expansion.
Q So when you say -- it says here, planning for an expansion, that says to me that nobody's pulled the plug on that at this point. Is that fair?
A You mean have they signed documents that said we're going?
20 Q No, have they said we're not going to do it?
21 A No.
22 Q So we're probably ambiguous at that point. Have they said that they are planning to pursue the expansion depending on circumstances, for example?

1 A They have told me that they are planning that expansion in phases, and one of their concerns is the availability of a long-term water supply.
Q But they're still planning on the expansion, it sounds like?
A Yes.
Q Okay. PureField is a fairly good size employer for a community the size of Russell, was it offered incentives to come to Russell?
A I'm not aware of anything.
Q And how long ago did they come to Russell?
A I believe the -- well, PureField purchased them, the previous company several years ago, I couldn't tell you the date when they took over.
Q During your tenure as city manager?
A I think it was before then.
Q And if they weren't offered incentives or at least you don't know that they were offered incentives, do you know why they chose to locate in Russell?
A If you're talking about PureField, to move to Russell or to buy the company, I have no idea why they chose to buy the existing gluten and ethanol facilities, and we did not offer them incentives to purchase the existing company.

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| :---: | :---: |
| Q So would it be accurate, then, that they, as far as you know, chose Russell on the merits? <br> A Pure -- yeah, I'd say PureField made their own decisions on why they purchased the existing gluten and ethanol facilities. <br> Q Has -- are you in fairly regular communication with PureField, at least, local executives? <br> A Yes. <br> Q And have they threatened at this point to leave Russell? <br> A No. <br> Q You indicated that PureField is receiving a fairly significant amount of water from the Post Rock entity? <br> A Uh-huh. <br> Q Right? <br> A Yes. <br> Q And I think you said 200,000 gallons? <br> A Up to 200,000 gallons a day. <br> Q Okay. So I was -- I was curious, as I listened to your testimony, that you said that -- first off, apparently Post Rock services a pretty -pretty wide area; is that right? <br> A Yes. <br> Q And I believe that you said that the source of | accustomed to using engineering studies that are 56 years old? <br> A Well, they may be part of our overall decision looking at historical thought processes or what was available then. We take a holistic approach when we're looking at plans. <br> Q I think that's fair, but I think the more specific question is if you've got an engineering study in the file that's 56 years old, you're not going to rely on that as the sole source of information, right? <br> A Not as the sole source, correct. <br> Q Okay. So let's look maybe at the next slide and if we could make that a bit bigger. This is taken from the -- can you read that? <br> A No. <br> Q Well, I can help. This is taken from the Wilson report, the top part of this is from page 15 , and it's talking about population growth, which I think is something you were alluding to earlier. And Wilson projects a population for Russell in 2020 of 12,300 persons. That misses the mark, does it not? <br> A Excuse me. Yes. <br> Q And then the Wilson report further at page 17 |
| their water is Kanopolis Reservoir; is that right? <br> A That's my understanding. <br> Q You, meaning Russell and the City of Hays, apparently considered Kanopolis not to be a viable alternative to R 9 ; is that right? <br> A I believe so. <br> Q And do you know why Post Rock gets water from and uses water from -- do you know why Post Rock uses and obtains water from Kanopolis but it's not a viable option for Russell and the City of Hays? <br> A I don't know why they do, and I'd have to look at the reports of why it was not chosen for Russell. <br> Q Okay, fair enough. One of the things that <br> Mr. Cole showed you yesterday were at least a couple of studies that I want to talk to you a little bit about. Let's look at 8. You recall this -- this exhibit, it's the Wilson \& Company? <br> A From what year? <br> Q It actually is from March of 1967. <br> A Okay, yes. <br> Q I'm assuming, and maybe you'll disabuse me of this, but I'm assuming that you are not | talks about a projection for annual total demand, and I'll read this for you because I know it's difficult from your vantage point to read, but the bottom part of it says, This amount to an annual total -- amounts to an annual total demand of 359 million gallons in 1970 and 728 million gallons in 2020 if normal rainfall occurs. So is that consistent with anything else that you have in your drawer at the City of Russell? <br> A The $\mathbf{7 2 8}$ million gallons in 2020 is more than we're authorized now, but it's a significant amount of water. <br> Q Well, that's -- yeah, let's scroll down just a little bit, Myndee, please. <br> This is the math, 728 million gallons equals 2234 acre-feet, so this is a projection, I think the significance of this, the reason I wanted to tie these together for you to look at, this is a projection of 728 million gallons in 2020, which is 2234 acre-feet, based on a population of 12,000 people. So none of that really fits Russell's present circumstances, right? <br> A Well, this, it looks like, is basing it solely |

on population growth. What it does not account for is our industrial customers. If you take the -- the annual use and acre-feet of water for the City in 2004 before we started becoming heavily restricted, which was a little bit more than 1400 acre-feet, and if you add in what PureField would need for their expansion, we would be over 2,000 acre-feet of water a year.
So that's fairly close.
Q Well, thinking about the Wilson report and looking at the information that's there, I think we can agree that it at least in some respects is not reliable, true?
A I think at the time it was reliable. If that report is from 1967, a lot of things have happened in Russell between then and now that caused our population to go up, then caused our population to decline. You had the Walker Air Base, the discovery of oil, and Russell's population exceeded 6500 people; then when oil crashed in the ' 80 s , people started moving out because there was no longer that need for those supports. So -- but at the time I think it was relevant. Is it relevant solely by itself today? No. But to look at it holistically with

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1 other planning documents, I would use it.
2 Q But you would -- surely you would discount it significantly based on how old it is and the
4 fact that there are a number of assumptions,
5 some assumptions at least, that are wildly
6 inaccurate?
A I wouldn't discount it.
Q Okay. We also talked -- you talked during your
testimony about a Bartlett \& West water supply
study from December of 2014; is that right?
A Yes, sir.
Q And this is the study we're talking about, isn't it?
A Yes.
Q Okay. Let's look at the next slide. You don't have anyplace you need to be?
A No, it's okay.
MS. LEE: It's like an all or
nothing. That's about as good as it's going to get.

MR. LEE: If I walk over here and look this way, can you hear me?

THE REPORTER: Yeah, just look this way.
BY MR. LEE:

1 Q Let me simply get over closer so I can read this to you.
A Okay.
Q This is, again, from the Bartlett \& West report,
and the part that's highlighted here says that Even though the City has more than adequate water rights for their estimated future demand of 2748 acre-feet, and then it goes on to talk about the restrictions that DWR has -- has imposed. Is that an accurate statement that the City has more than adequate water rights for their estimated future demand of 2,748 acre-feet?
A We have water rights, but we only have access to a certain amount of water from those water rights because the -- one of the water rights is Smoky Hill surface water right for $\mathbf{1 , 0 0 0}$ acre-feet; we can't take water from the Smoky, it's -- so we have a lot of paper water rights, but what we can actually use is not adequate.
Q Okay. So I understand what you're saying is that as far as this goes in terms of water rights, that's accurate but in terms of what you think is actually available to you, that requires further discussion; is that right?

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## 1 A Yeah.

2 Q Okay. If we could look at the next slide. This states, and you can tell me if this is just something that is not within your -- your knowledge wheelhouse, but this is on page 5 of the Bartlett \& West report, and it's under the heading 3.01 of existing demand.

MR. COLE: Counsel, would you mind,
I think we have a copy of that exhibit --
MR. LEE: Sure.
MR. COLE: -- if we can provide --
MS. LEE: It's 2887.
A I don't have one with me.
BY MR. LEE:
Q And we've probably made it a little better in any event. I think this is -- well, is this page 5?

## A Yeah.

MS. LEE: Yes.
BY MR. LEE:
Q Where it says under existing demand, Historical water demand criteria are necessary to develop a future demand projection, is that accurate?
A Yes.
25 Q Look at the next slide. Bartlett says --

A What page is that?
Q That is page 8, I believe.
A Okay.
Q Are you there?
A Yes.
Q Okay. In the middle paragraph, it -- the
Bartlett report says, Because the purpose of this study is to help identify a water source adequate to keep the City out of water conservation measures. Does that mean the City is looking to abandon its conservation, I guess it's probably characterized as a carrot and stick sort of -- sort of approach, is it the City's intention to -- to back away from conservation measures that the -- that have been traditionally imposed in the City?
A No, not at all.
Q So would you intend to keep those in place regardless of what happens with the R9 project?
A Yes. I think what this is talking about, to keep the City out of conservation measures, would be to allow our community and customers to have access to water like every other community does. But, no, the conservation plan and measures that we have in place would not change.

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1 type of stuff. So I don't think the
    conservation culture is going to change, but
    their quality of life would improve.
Q So does quality of life equate to increased
per capita water use?
A I couldn't tell you that. Quality of life is a
    bunch of different factors, but quality of life
    equates to improved economy. The gallons
    per capita per day is usage by different
    customer classes.
Q Well, and that's really my question, would it be
    the expectation that the gallons per capita per
    day figure would stay roughly the same as it is
    now.
A I couldn't tell you 'cause it fluctuates year to
        year. I know that in our conservation plan that
        our stated goal is not to exceed the regional
        average. I don't see it -- that it would
        skyrocket and exceed that. We're still going to
        be conservative as a community.
    Q Okay. And you don't have a projection or an
        idea of what that is because you didn't have an
        analysis done, correct?
    A On the gallons per capita per day?
    Q Yes.
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        A No.
    Q Okay. Let's look at 11. You were there.
        MS. LEE: I know.
    BY MR. LEE:
    Q Despite the fact that this is a Kansas statute,
        I don't, sir, intend to ask you for a legal
        interpretation. What I do want to ask you is,
        and I'm just going to read the highlighted part
        of this that says, No water transfer shall be
        approved, and as you can tell from the language,
        this is taken from the Water Transfer Act, No
        water transfer shall be approved unless the
        presiding officer determines that the applicant
        has adopted and implemented conservation plans
        and practices that, (A), are consistent with
        guidelines developed and maintained by the
        Kansas Water Office pursuant to K.S.A. 74-2608.
        And it goes on to say, if the transfer is for
        use by a public water supply system, include the
        implementation of a rate structure which
        encourages the efficient use of water and will
        result in wise use and responsible conservation
        and management of water used by the system.
            Really my only question about that is do
        you understand that obligation under the Water
    Transfer Act?
A Yes.
Q And has Russell achieved those things as we speak?
A Yes, we have a conservation plan that was approved by the Kansas Water Office, our rate
7 structure encourages an efficient use of water and -- yes.
Q And so those plans, those requirements as you understand are built into the Water Transfer Act?
A I'd have to look at the act. From what you're showing me there, yes.
Q Okay. So my question ultimately is the City of Russell, I'm assuming, would continue to do what it has done in terms of representations made as part of the Water Transfer Act application?
A Yes, we will continue to have a water conservation plan that follows the guidelines, the 2007 guidelines, we'll have a rate structure regardless that will encourage the efficient use and continue as we have for many decades to be good stewards of the water supply that we do have.
25 Q Thank you.
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MS. LANGWORTHY: No questions, Your Honor.

PRESIDING OFFICER: All right, thank you. All right. Mr. Cole --

MR. COLE: Thank you.
PRESIDING OFFICER: -- any redirect?
MR. COLE: Just a little.

## REDIRECT EXAMINATION

## BY MR. COLE:

Q Just a few points. During cross, you were asked about the Wilson report that was dated in 1967.
A Yes.
Q And one of the matters that is before this tribunal deals with projections of growth, and it was pointed out in that report that we have at Russell fallen short of that growth projection made in 1967 --
A Correct.
Q -- correct? And you mentioned that oil was a big part of Russell's economy in the past?
A Yes.
23 Q Are you aware of the boom that took place in the
24 City of Russell and the explosion in the
25 population back in the '40s and '50s?

1 A Yes, yes.
2 Q And what was that related to?
3 A Oil --
4 Q Okay.
5 A -- I believe the Carrie-Oswald.
6 Q Okay. Carrie-Oswald is the name of a well
7 drilled in Russell County in, I think, the mid 1930s or so?
A Yes.
10 Q You testified on direct yesterday that the crash of the oil industries had an impact on the Russell economy?
A Yes.
Q And you also indicated that the industries that have found their home now in Russell have had a stabilizing impact on the economy -- on the economy?
A Yes, that's correct.
Q And potential growth of the community?
0 A That's correct.
21 Q And that industry is dependent upon a reliable water source?
23 A Correct.
24 Q The Wilson report also suggested that for a
community to survive and perhaps thrive it needs

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1 industry?
2 A Yes, it did.
3 Q And it suggests that one of the reasons it needs
4 industry is that the children that are raised in
5 the community and leave perhaps for college or
6 other adventures will have something to come
7 back to?
8 A Correct.
9 Q You as city manager, do you think that's a wise idea?
A Yes.
Q Is it part of the City's vision to create an environment where our kids can return?
A We want our children to return.
Q Is water a big part of that?
A Yes, it is.
7 Q There's been discussion, and will probably be a lot more discussion, about whatever -- what reasonable needs are. From your perspective, does your town presently have a secure water supply of all of the water that it needs?
2 A No, it does not.
23 Q And that's why we're here?
24 A Yes.
25 Q Thank you.

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| :---: | :---: |
| MR. TRASTER: Your Honor, I have a <br> few questions but I'm looking for a document or two. If you don't mind taking a break now, that would help me out, but I'm happy to proceed if -- <br> PRESIDING OFFICER: All right. Why <br> don't we take a short break, we'll come back at 10:10 and pick up with Mr. Traster's cross-examination at that time. <br> (Thereupon, a recess was taken; whereupon, the following was had.) <br> PRESIDING OFFICER: All right. <br> We'll go ahead and go back on the record then. If you're ready, Mr. Traster, we'll let you begin your cross. <br> MR. TRASTER: I was born ready, Your Honor. <br> RECROSS EXAMINATION <br> BY MR. TRASTER: <br> Q Mr. Quinday, on cross-examination, you were asked about financing for this project and concerns about financing and rates, and you provided some options and discussed bonds and | Mr. Dougherty's testimony in that regard? <br> A Yes. <br> Q So it seems to me that Russell's going to have to pay for it -- is going to have to pay for its share regardless at some point, isn't it? <br> A Yes. <br> Q And that's -- the options for how to pay for it are on the table and you'll figure that out, but if it -- hopefully it won't increase rates, but if it increases rates, that'll have to be the way it is. Is that a fair way to say it? <br> A Correct. <br> Q Because you don't really have any other options. Is that fair? <br> A That's fair. <br> Q Jami, can I see Exhibit 1-2, please. <br> And this is -- I'm going to show you the Master Order that was issued by the chief engineer, and this is in the reasonable-needs section of the Master Order, and it's in particular paragraph 232 that I want you to look at. And it basically says that the -- that the City of Russell has -- is entitled to a maximum reasonable annual quantity of water for municipal use for all water rights -- for all of |
| different things that could happen. Have -- has the City of Russell done the same kinds of things that the City of Hays and -- has done to look at other sources for -- of a significant quantity of water? <br> A Yes. <br> Q And the City of Russell did that in cooperation with the City of Hays, you -- via the public wholesale water supply district -- <br> A Correct. <br> Q -- at one point? And now they're doing that in cooperation with the City of Hays in this project, right? <br> A Correct. <br> Q Is it fair to say that -- and I believe you testified very clearly that the City of Russell is in significant need of a new source, an additional source of water that is -- that is actually -- that it can actually use; is that correct? <br> A That's correct. <br> Q And this project has been selected because it, as Mr. Dougherty testified, this was the most economical, best option available to both Cities. So is -- do you agree with | the R9 water rights combined with all other municipal rights for which Russell or its immediate vicinity is the place of use is 18 -$1,841.3$ acre-feet of water. Do you see that? <br> A Yes. <br> Q You testified that you have, I think, I don't want to put words in your mouth, but I think I heard 5,000 acre-feet of water on paper? <br> A Yes. <br> Q But they are all limited to -- they are all limited to this quantity, correct? <br> A That is correct. <br> Q So that is a cap on the quantity of water that you can use now? <br> A Correct. <br> Q And it's a cap on the quantity of water that you can use unless and until it's increased? <br> A That's correct. <br> Q And there's a mechanism in the -- in the Master Order for -- to increase those numbers, this quantity, if the City of Russell grows to the point that it needs more than 1841 -1,841.3 acre-feet? <br> A Correct. <br> 25 Q And until you ask for that and until the |

Division of Water Resources actually increases that number, that's the limit from all your sources, including the R9 Ranch, that's all you can use, correct?
A Correct.
Q And that's -- if you could use 1800, that's enough for you right now, is it not?
A Right now it is.
Q Jami, can I see Exhibit 154 -- 1-54 please.
And I would like you to go to page 8 which is the paragraph that Mr. Lee had on the screen earlier, and he had highlighted the first part of this, the first line or maybe part of the second that reads, because the purpose of this study is to help identify a water source adequate to keep the City out of water conservation measures, and then his highlighting stopped. Now, my understanding of your testimony is that those conservation measures that you were talking about aren't -- you went on to testify that you're going to continue to conserve water and have a conservation program?
A Yes.
Q I think you testified yesterday that in the
last, I think 12 but I don't want to -- I don't

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want to mischaracterize it, in the last 10 or 12 years you've been in some sort of restriction, that the folks in town have been under some sort of restriction. In fact, it was Mr. Wagner that testified, I think, that it's been a long time since there was -- the people in -- the residents in Russell could use the full quantity that they might want to use.
A Correct.
Q Is that fair?
A Yes.
Q And tell me a little about that emergency or warning, I mean, what -- we saw the resolutions with some restrictions, but have those been -restrictions been in place for a while?
A They've been off and on for the last 10 or 12 years. The most severe restrictions, like we went over yesterday, was the 25 percent reduction to the industrial customers, you can't wash your car, you can't water your lawn, can't fill the pool, can't water your garden, basically any outdoor use is limited.

But this -- talking about conservation measures, if we had adequate water supply, we would still have a conservation plan, we'd still

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## A Correct.

Q -- fair?
A Fair. They'd still have the rate structure in place that is still going to, to some degree, have conservation. The more you use, the more you pay.
Q So Mr. Lee had a portion of the statute, of the Water Transfer Act up and highlighted, and the last part of that that's highlighted included something to the effect of, and I'll mess it up, but reasonable management.

1 A Uh-huh.
2 Q Is reasonable management of a public water
3 supply in a community like Russell, if forcing
4 people to use less water, if you had it, if it 5 was available, to force them to continue to 6 use -- have the restrictions that have been 7 placed -- in place in Russell for the last 8 several years?

A Not to have the mandatory restrictions but to be cognizant that water is a valuable resource no matter where you are. And, for example, the waste of water, regardless of if we had a long-term, reliable, adequate supply, I don't think the governing body is going to change it to make it illegal to waste water, I don't think the governing body is going to change that you can only water your lawn before 10:00 a.m. and after 7:00 p.m., because it makes sense during the heat of the day and when it's windy, you shouldn't water. So they're still going to be good stewards of their water source as they always have been.
Q I grew up in Ulysses and the wind blows, I guess it blows in Russell too?
25 A Yes, quite a bit.

Q Okay. Thank you. I don't have any further questions.

PRESIDING OFFICER: Mr. Lee?
MR. LEE: Just one question, Your
Honor. And, honestly, I think it is just one question.

## RECROSS EXAMINATION

BY MR. LEE:
Q Mr. Quinday, just to sort of cut to the chase and follow up on Mr. Traster's questions, I don't think that Russell wants to take more water from an outside source than it needs. Is that fair?
A Russell doesn't want to take water from any source more than what we need.
Q Okay. Thank you.
MR. COLE: Thank you.
PRESIDING OFFICER: Thank you, Mr. Quinday, I think you are done with your testimony, then --

THE WITNESS: Thank you.
PRESIDING OFFICER: -- and you may step down. Mr. Traster, I believe you have the next witness.

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MR. TRASTER: Call Jeff Crispin, please.

PRESIDING OFFICER: Mr. Crispin, as you've noticed with everybody else, I need to swear you in here, so would you please raise your right hand.

MR. CRISPIN: Okay.
JEFF CRISPIN, having first duly affirmed or sworn, was examined and testified as follows:

## DIRECT EXAMINATION

BY MR. TRASTER:
Q Will you state your name?
A My name is Jeff Crispin.
Q And I'd like for you to use the mic, but I don't
want you to be right on it, just enough that you
can --
A Okay.
Q -- that everybody can hear.
Jeff Crispin.
Q And what's your business address?
1002 Vine -- excuse me, 1000 Vine, Hays, Kansas 67601.

Q And is that -- what facility is that?
A I'm -- my office is located at the water softening plant on Vine Street in Hays.
Q Okay. Mr. Crispin, what -- you're employed by the City of Hays; is that --
A Yes, I am.
Q And what is your position?
A My current position is the director of water resources.
Q So I'd like to skip back, how long have you lived in Hays?
A This round, moved back to Hays in 2011, but I was born and raised.
Q Did you go to high school in --
A Yep, went to Hays High, graduated in 1993.
Q And then what?
A I actually went to Fort Hays State, graduated in 1999.

Q And your degree is in what?
A Business management.
Q So you're not a hydrologist, you're not a soil scientist, you're not a engineer?
A No. No, sir.
4 Q From when you graduated from Fort Hays State with a business manage -- business management

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1 degree, what did you do next?
A I had been working for Walmart throughout the end of my high school career and into college. And I have some family that works at Walmart, and so at the time I graduated I was promoted in 1999 to assistant store manager, and I started moving to various places around Kansas, one in Nebraska.
Q So in -- you graduated from college in '99 and then where did you move?
A Wife and I got married in '99, graduated and moved to Hutchinson, Kansas, worked there as an assistant manager at their store for about a year and a half.
Q And then what?
6 A Moved to Goodland, Kansas with Walmart, was still an assistant manager. The reason why they moved me there is they wanted me -- at the time, the stores weren't all super centers, they wanted me to get some grocery experience, so I spent a year in Goodland.
2 Q And from there you went to where?
23 A I was promoted to comanager and moved to 24 Lincoln, Nebraska and worked in the Lincoln, 25 Nebraska store as a comanager, high-volume


A Not every single day but $I$ do remember in the early '90s and through high school drought issues, drought being talked about, drought in the news, newspaper, on TV. I recall even staff, I don't know who they were at the time, coming into schools and talking about water -water concerns, water issues and how to conserve so taking shorter showers, not letting water just run, you know, and being -- being careful with the amount of water that you use, I remember that.
Q You were here in the room during Mr. Dougherty's testimony, were you not?
A Correct.
Q And you heard him testify that the 1991 drought was the genesis for the significant conservation programs that the City has -- that were put in place?
A Uh-huh.
Q Is that -- is that consistent with your recollection?
A Correct, yes.
Q So you -- there were -- there was a period of maybe eight or nine years that you, in your formative years, I would say, that you were

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| 1 | living in Hays and dealing with, as a teenager, |  |
| :--- | :--- | :--- |
| 2 | as a young adult, with the need to conserve |  |
| 3 | water? |  |
| 4 | A | Yes. |
| 5 | Q | How was it -- how was your lifestyle -- is your |
| 6 | wife from Hays? |  |
| 7 | A | Yes, she is. |
| 8 | Q | Did she grow up there? |
| 9 | A | Grew up in Ellis, rural Ellis. |
| 10 | Q | And is she about your age? And I'm not asking |
| 11 | how old your wife is. |  |
| 12 | A | She's older. |
| 13 | Q | I -- I didn't -- I didn't ask. I mean, I just |
| 14 | wanted to know if she was kind of in the same |  |
| 15 | age range. So -- but she didn't grow up in |  |
| 16 | Hays, then? |  |
| 17 | A | From time to time she did. She -- she grew up |
| 18 | on a farm outside of Ellis, there was time where |  |
| 19 | they moved into town, so they off and on but I |  |
| 20 | couldn't give you all the dates. |  |
| 21 | Q | And I'm not asking that, I guess what I'm really |
| 22 | kind of thinking about is you got married, you |  |
| 23 | moved to Hutchinson -- |  |
| 24 | A | Uh-huh. |
| 25 | Q | -- at some point you had your son. |

1 A Yep.
Q You know, I'm wondering about how life was different for you and your wife with this baby or this young child in Hutchinson than it was in Hays in terms of water use?
A I don't recall necessarily the water bills or the amount we paid or anything like that, but $I$ don't recall ever having a concern about water in any of the communities that we lived in. And we got cable, we watched the news, we watched the local newspapers, I don't recall any of those communities having a concern or promoting that, hey, we need to conserve water, we need to take shorter showers, brush your teeth with less water, those type things, I don't recall that.
Q No -- no letters in your fliers -- in your bill from the City about how, you know, how important it is to conserve water and that sort of thing?
A Not that I can recall. I mean, I will say probably nationally there was talk about droughts and things like that and those things that are happening, but I don't recall locally any of those communities --
Q There was apparently adequate water for you to live the lifestyle that you wanted without water

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1 restrictions in those communities?
A I believe so.
3 Q When you were city manager -- not city manager, the manager, comanager, assistant manager in any of the Walmarts in Hutchinson, Goodland, Lincoln, Nebraska, or Pratt, did you ever receive a ticket for wasting water?
A No, no, I had not.
Q Did you ever think you might ever receive a ticket for wasting water? I mean, did it ever occur to you?
A No, it really didn't occur to me at all.
Q Have you ever received a ticket as a Walmart manager for wasting water?
A I received a warning between -- it was probably 2012 or ' 13 , it was -- I remember the -- I don't remember the actual date, but I was working as an overnight comanager. And it was, like, 2:00 in the morning and got called up to the front and they said, hey, there's -- there's an officer that wants to talk to you. Basically we had a broken sprinkler head.
Q There was a police officer?
A Yeah, the police officer was there because either the police officer had a report or while
they were on patrol, they noticed that water was escaping the property because of a broken sprinkler head, and they issued me a warning basically because I was the manager on duty for that property.
Q It was a sprinkler head like from a --
A From the irrigation system for the store in Hays. It was along 43rd Street.
Q And what'd you do?
A I asked the officer, why am I getting the ticket?
Q And?
A He said, you're the responsible operator of the property at this time and we have to issue it to somebody.
Q I called it a ticket, it was just a warning?
A It was a warning, yes, it wasn't a fine, and it required me to, in the morning, call our irrigation company and have it quickly repaired.
'Cause it did state what would happen if it continued.
Q What would have happened?
A If it would continue, there is potential for
fine, different levels based on if it -- the next level, I believe, was a $\$ 50$ fine for not

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taking care of it in a certain amount of time.
At that time, I don't recall, I -- just stuck with me that I was not understanding why I got the ticket.
Q So what did you do, did you turn off the sprinkler system?
A Yeah, I went to the back of the store, I shut it off, and then during normal day hours before $I$ went home, I called the irrigation company and then told somebody else that, hey, this needs to be fixed.
Q It was fixed?
A Yes.
Q So after having this little episode, you still
went to work for the City?
A Yeah.
Q Must not have been totally an unpleasant
experience?
A No, no, 22 1/2 years retail.
Q Say that again, what are you saying?
A 22 1/2 years in retail is what $I$ worked.
Q And so -- okay, I see. So what are your -- but now fast-forward to 2017 and you're the director --
25 A Uh-huh.

1 Aquifer Health Index, it's for Big Creek and Smoky Hill wellfields, and it's a letter from Burns \& McDonnell to the City of Hays.
Q And what -- what is the Aquifer Health Index?
A The Aquifer Health Index is a -- it's a tool that we had asked for, the City had asked for them to develop. It's a tool basically for us to be able to operate those two wellfields in a sustainable manner. So we also understand what -- better understand what's going on in both aquifers and we can help continue the life of those aquifers as long as possible. And it also helps us make decisions based on well levels and what is going on within the wells, within streamflow of those -- over those aquifers such as the Smoky and the Big Creek Rivers.
Q Is this the actual Aquifer Health Index?
A No, the -- the actual health index is -- that's the documentation that basically explains it, but it's like a spreadsheet that -- it's a spreadsheet that requires some inputs but some things are already set up, that we can put in streamflow information, we can put in well level information, and then that actually helps us by


A Correct.
Q And it's your job to operate those wells through your employees, right?
A Correct.
Q And these blue dots are?
A I believe those were water rights, other water rights.
Q Private wells?
A Yeah, private wells.
Q And then there's some green triangles here, there's some up here by C33, well C33, there's a green triangle down by C 19 at the bottom of the screen, and there are probably some others. You said there were five?
A Yes, correct.
Q And those are the monitoring wells?
A Yeah, those are -- those are the monitoring wells that are used for determining the health of the aquifer, of the Big Creek aquifer, yes.
Q And it's not very prominent on this -- on this map, but Big Creek flows sort of across the south side of town, right?
A Yeah, that's correct.
Q And the flow in Big Creek is measured where?
25 A Further south, kind of by the legend, I think

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it's in red, to the left.
Q Actually, I don't see that it's --
A No, along 183 there is a dot to the left of the legend. I mean, if you blow it up -- it's right
5 there.
Q Oh, that?
A There's a streamflow gage there, a USGS streamflow gage.
Q So you put the daily readings from the streamflow gage --
A Yeah, there's a historical record, but it's monitored through the USGS.
Q Okay. So you put that information in, the streamflow, you put in the monitoring well levels, and then how much you pump?
A Yeah, then the overall pumping for the entire wellfield.
Q And then the spreadsheet does its magic and it kicks out a score?
A Yes, it does.
Q Let's go to the next page. So -- and this is
figure 2 of Exhibit 255, and what is this showing?
A That shows our Smoky Hill wellfield, that shows our 12 wells, so 183 is north and south there,
that line, and then on the far west and the far east, those are the two USGS streamflow gages.
Q And they're labeled that? They're triangles but they're labeled?
A They're labeled. And I don't recall how exactly the monitor wells are labeled, but they may be in the triangle as well.
Q Well, it looks like to me from here, and it is kind of small, but we got to be able to see the whole thing, that they're red dots.
A Okay.
Q Which, you know, if -- but there are five monitoring wells in that area?
A Correct.
Q And they monitor the --
A The depth -- the depth to water.
Q And that matters why?
A Because if it's dropping, then water's leaving the aquifer or it's being pumped out.
Q What do you mean leaving? If you're not pumping it out, it's right there for you, right?
A But still flows under -- even if there's no flow in the Smoky, there's flow underground, and it could be leaving the aquifer anyway. So it could -- could drop that way.

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1 Q You're telling me that if you don't -- if you stop pumping, the water isn't there for you? Or at least it's less or what?
A Well, it has potential if there's no recharge upstream.
Q Okay. So let's go back to 2625, please. And go back up one page, I think. So there are -there you go, four categories, tell us about those four categories.
A So -- I'm not an engineer, so my understanding, basically, there's a cumulative frequency curve that is created based on historical data.
Q Let's not do those curves, nobody's going to understand them anyway. I'm just looking at the four categories over here and asking you what -what are you --
A The output data, if it's between 61 and 100, tells me we're in good status.
Q What -- what's your current status?
0 A 65 to 70 in both aquifers.
21 Q So they're in, quote, good --
22 A Currently in good status, yes.
23 Q Okay. What's watch?
24 A Watch would be, it would drop to the number of 25 51 to 60 would be the actual score.


A Yes, they do. They can -- we have a tiered structure that --
Q Let's -- let's look at 1762, please. I'll put it up for you so that you can talk about it a little bit. I say I will, Jami will put it up for you. So, Mr. Crispin, this is
Exhibit 1762 --
A Uh-huh.
Q -- and it's section 65-224, rates inside and outside city.
A Correct.
Q Do you recognize this document?
A Yes, I do, correct.
Q And it is?
A It shows the water rate structure for the City of Hays.
Q All right, very good. So in the top paragraph, it talks about, it says, water usage as shown on the January, February, and March billing is averaged to determine a water use average for both residential and business accounts.
A Correct.
Q What's that?
A We use the -- we take the January, February, March water use and we average that, and then

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that's applied to the base usage for the entire year for that resident or that commercial property.
Q So if you have a young couple with no children and they have less -- use less water, or a
retiree, or something, lives alone or a couple, they're going to be -- their base rate -- their usage in January, February, and March is going to be lower than --
A Well --
Q -- the usage by a larger family?
A Absolutely, absolutely.
Q And so that, then, is taken into account in -in the rate structure?
A It is. In that paragraph, it does mention that the water rate average shall be a minimum of 500 cubic feet.
Q Okay. So this person living alone is going to have to pay for 500 cubic feet of water no matter how much they use in January, February, and March?
A Correct, 'cause they pay the base rate.
23 Q Right, okay. So then in that -- about
24 three-quarters of the way down, water usage --
25 use average shall be a minimum of 500 cubic
feet, is that what you're saying?
A Yes, that's -- that's what I'm saying.
Q Okay. Let's scroll down, Jami, to the table at the bottom of that page.

And tell us what this table is telling us.
A That is the water use minimum charge per month by meter size. So on the left side is the meter size, which typically it's a five-eighths or a three-fourths-inch meter for a resident, and it shows what the inside city limit rates are and what the outside city limit rate is per month.
Q So if I have a typical residential use and I
have a five-eighths-inch meter, I'm going to pay \$13 a month --
A Correct.
Q -- if I'm inside the city; I'm going to pay
22.07 outside the city?

A Correct.
Q And the bigger the meter, the --
A Yes.
Q So that -- is that figured in somehow with this base rate that you were talking about?
A That's the minimum charge, and then the base rate's based on 100 cubic foot after that amount.

1 Q Okay.
A Because the first $\mathbf{1 0 0}$ cubic foot is included in that minimum charge.
Q All right. Let's go to the next page, Jami, please.

So this table shows that the first, what you just said, the first 100 cubic feet -- how much is 100 cubic feet in gallons?
A Times 7.48, 7500 gallons.
Q Roughly 7500?
A Uh-huh.
Q 7 -- 7,400 something --
A Yeah.
Q But it's, just for our purposes, 7500 gallons.
So you get the first 7500 gallons free -- or not free, it's included --
A It's included in that charge?
Q -- but there's a minimum. So the base tier is -- the inside limit is $\$ 2.71$ and outside is $\$ 4.59$ ?
A That's correct.
22 Q And so that first 100 cubic feet is included?
23 A Correct, in the $\$ 13$ charge.
24 Q And so you would take -- for somebody who used
25 less than 500 cubic feet, you would just take



| Page 645 | Page 647 |
| :---: | :---: |
| this exhibit will give us a better idea of -- <br> Okay. So circle 3 west by the river, do you have those samples? <br> A Yeah, I have one that's a surface sample and then this one is 20 inches deep. <br> Q And are they significantly different than the samples that you've -- from the other area? <br> A Not really, these are a little bit closer to the color of this one, but they're both somewhat sandy, with a little bit of soil mixed in, a little bit darker. <br> Q Okay. <br> A But one was surface, one was 20 inches deep. <br> Q Okay. So let's go to the next location that makes sense. So sample -- untilled sample surface in jar, it says. Or sample 12, you can -- either one? <br> A They were 12? <br> Q The 12 is fine. <br> A Oh, okay. These are -- this is circle 12, and it's at the surface, and it's -- it's darker as well, but it's quite sandy, with some soil worked in there. And then also this is the same area, but it's $\mathbf{2 8}$ inches deep and it's very similar. | little bit of moisture in it. <br> Q Okay. Very good. <br> A But it looks sandy. <br> Q Let's look at 1705 , please. This might be -does this better depict kind of where those samples were taken? <br> A Yeah, those -- I believe that -- I did not make the map, but I believe the coordinates, the GPS coordinates are the exact locations based on what I provided. <br> Q You provided the coordinates -- <br> A Yes. <br> Q -- the GPS coordinates from your iPhone? <br> A Yes. <br> Q And it wasn't a fancy, you know, $\$ 5,000$ instrument -- <br> A No. <br> Q -- so we're not saying it's precise but it's close? <br> A Yes, correct. <br> Q So of these samples, $31,11 \mathrm{~A}, 12$, and untilled near 12 and circle 3 , those are the sample locations on the ranch that -- that you've just shown us? <br> A Yes, correct. |
| Q Okay. Again, I'm not asking you to classify soils. What about the untilled sample surface in jar, I don't know whether -- how that -- what that exactly means but ... <br> A These -- this is untilled hilly area, it was in a hilly area, I remember where we were because you could kind of look down and see other things, but this one's 26 inches deep. <br> Q Okay. <br> A And then this one was on the surface. They're quite similar. <br> Q Sandy? <br> A Yeah, absolutely. <br> Q Okay. All right. Jami, let's see another location. Okay, that's -- I think we skipped past something. <br> 11A samples? <br> A I have 11A, this one's at the surface. Although it looks to me a little bit lighter, but it is -- looks very porous. <br> Q Very sandy? <br> A Yep. <br> Q All right. <br> A And then I have 25 inches deep, and that one's kind of clumped together; it may have had a | Q And does this map -- this map shows the outside boundaries of the R9 Ranch? <br> A That is correct. <br> Q So each of the samples that you have in front of you are samples, soil samples from various locations someplace on the ranch? <br> A Yes, that's correct. <br> Q Let's go to 2654, please. And, Mr. Crispin, this -- this exhibit, the title of this exhibit includes the text Buller pictures. So I will represent to you that, and you already know, that Daniel Buller took those pictures? <br> A That is correct. <br> Q And he's a lawyer representing the City of Hays? <br> A That is correct. <br> Q And were you with him when he took those pictures? <br> A I was there, yes. <br> Q Are these -- do these -- does this depict a location someplace on the R9 Ranch? <br> A Yes, it does. I don't exactly remember where it was, but it looks similar. <br> Q The pictures he took were someplace on the ranch? <br> A Yes. |

Q Why don't we just skip down one page at a time, there are several of them. And I don't think we need to go through every one of them exactly, but I think that just -- yeah, just give us a few seconds each time, I might stop you at some point. These -- these are typical examples of the contours and the -- the growth of -- on the ranch --
A That was --
Q -- the day those pictures were taken?
A For the day that those were taken. That was before the growing season kicked off.
Q Okay. I want you to slow down just a little bit, but do you recall this area?
A Ido.
Q Okay. And there's -- it looks like there's maybe a -- I think there are better pictures on -- but looks like there's some erosion or that the road level is ...

Let's skip one ahead, Jami, please. And another one.

So this picture is taken right beside the road --
4 A Correct.
25 Q -- you were driving on that day? And it shows
sort of a cross section of the --
A Uh-huh.
Q And is that -- are there other places that are sort of like that on the ranch?
A Yeah, there's numerous places where you can go along the road and see a cross section like that.
Q And, again, you're not a soil scientist and you're not an engineer, but, you know, is this sort of a typical view that you can see from your perspective?
$A$ Even when you get off road.
Q Okay. Let's go one more. One more. Okay, keep going.

So it looks like there's some areas here that are, you know, they're still struggling to get established?
A There are some, yes.
Q And what's going on, are you making progress in that?
A Yeah, we -- we have a consultant that we work with, Dr. Keith Harmoney, he's a rangeland and native grass specialist, and he helps advise us on what areas maybe need replanted and just to help us reestablish native grasses on the
property.
Q Okay. Thank you. I don't know what we're at, looks like we're almost to the end of the series; is that right? Is there one more? Okay.

MR. TRASTER: For the record, Exhibit 1764 and 1765 are just short videos of some -- that were taken that day to show it's a little sandy and, you know, somebody walking through, so that's -- and you can look at them at your leisure. I'd be happy to show them if you want to see them, but I didn't want to take the time, they're not long but --

PRESIDING OFFICER: It's your case to present so however you feel you need to present it.

MR. TRASTER: Okay.
PRESIDING OFFICER: It's already
submitted there so --
MR. TRASTER: What?
PRESIDING OFFICER: Your evidence is submitted, it's admitted to the record there so --

MR. TRASTER: Right, they're

Page 652
1 there --
PRESIDING OFFICER: -- however you feel you need to go about your case.

MR. TRASTER: Yeah.

## BY MR. TRASTER:

Q I don't know where they are, there were some
7 pictures of some blowouts, there are still some areas that are -- that need more work?
A Yes, they are improving, but there are some areas -- anybody could go on Google Earth to see we have a good -- there's one that I stop at almost every time I'm there, and it's about a 5-acre -- 5-acre blowout basically, you can see it in the distance.
Q There it is, back up, I saw it, there it is. Is that the one you're talking about or one like it?
A It's one like it. Within that area there's -you can -- on the horizon, you can see a couple others but ...
Q Sure. Let's look at Exhibit 1718, please, Jami. So let's zoom in to the -- well, back up.

This is Exhibit 1718, can you identify the document?
25 A I believe that is a map that it shows different

| Page 653 | Page 655 |
| :---: | :---: |
| zones in the area, and I believe it shows -- <br> it's an area near the ranch. <br> Q Right. I'll represent to you that it's figure <br> 33 from the Balleau groundwater model report -- <br> A Okay. <br> Q -- that was prepared back in the day. <br> Jami, can you zoom in on -- <br> I'll represent that's the base map; this <br> map is not in the Balleau report but the base <br> map is. <br> Can you zoom in on the ranch area, please. <br> On -- on -- superimposed on the base map <br> prepared by Balleau is the outline of the ranch, correct? <br> A Yes, that's correct, in red. <br> Q And there are two dots, one of them is numbered 16 and the other is 17 , what are those locations? <br> A Those are soil sample locations obtained outside of our property. <br> Q And were they obtained the same day as the earlier soil samples? <br> A No, I don't believe so. <br> Q So if I were to tell you that the earlier samples, you said late April, I'm going to -- if | A Yes. <br> Q Why don't you pull out 16? Were you present when these two samples were collected? <br> A I was. <br> Q Did you -- did you collect them? <br> A I participated in collecting them, yes. <br> Q All right. And tell -- tell us about those. <br> A This -- this number 16 on the point on the map, this is the surface, and it's quite darker than all the other -- all the other samples. <br> Q Okay. <br> A And so you can kind of -- you can tell a little bit when you shake it, it's a lot heavier. <br> Q Could be wet? <br> A Could be wet. And then this one was taken at the same location, but this one was 18 inches deep. <br> Q And is it -- <br> A It doesn't feel -- I don't see really, and, again, I'm not the expert, but I don't see a lot of sand or really anything. To me it's just like just regular soil. <br> Q Okay. So what about the sample at location 17? <br> A Those would be very similar too, they're dark compared to the others. That -- this one is not |
| I said April 24th, 2023, would that -- for the earlier samples? <br> A For the main -- all the main ones, yes, for the ones that you showed earlier, yes. <br> Q And didn't you collect -- did you collect samples at those locations 16 and 17 as shown in this map? <br> A I did, correct. <br> Q And did you collect those samples on the day before or the day of the public meeting that was held in Hays in -- on June 19th or 20th, whatever date? <br> A Yeah, I believe the public hearing, it was -was it the day of? <br> Q It doesn't -- I'm not -- <br> A I would have to -- I would have to go back and look. <br> Q That's fine, I'm just trying to get sort of the season -- <br> A Absolutely. <br> Q -- when they were collected, and it was collected at that -- <br> A Mid June. <br> Q -- in June, day before, the day of that -- okay. And can you -- do you have sample 16 ? | as full as those are. That one was the surface, and then this one was 18 inches deep also. <br> Q Okay. So did you take photographs or record the GPS locations of -- <br> A Yeah, we did -- I did the -- <br> Q Let me finish. Like you did the others? <br> A Yes, correct. <br> Q You were going to go on or not? <br> A I was not happy I was in one of the pictures. <br> Q Oh. Let's look at 1738. And so there are -this is Exhibit 1738, looks like kind of a close-up of what we saw before? <br> A Yes. <br> Q And there are two red dots? <br> A Yes. <br> Q And are those two red dots where 16 and 17 were collected? <br> A Yes, those are correct. <br> Q And, Jami, I think there's a second page to this. <br> Those two red dots, another zoom in? <br> A Yes, that's correct. <br> Q And is 16 in that blue area that's designated as zone 9 ? <br> A If that is -- yeah, if that red dot there is 16, |

yes, it is.
Q And the one on the -- 17 was collected in -- it isn't zone 9 ?
A I think it is outside of the zone, yes.
MR. TRASTER: Just one minute.
PRESIDING OFFICER: Sure.
BY MR. TRASTER:
Q Mr. Crispin, thank you for your time.
A Thank you.
Q Oh, you're not done.
A Oh, I know. I'll stay.
PRESIDING OFFICER: Does that mean you're done with your questions, though, Mr. Traster?

MR. TRASTER: What's that?
PRESIDING OFFICER: You are done?
MR. TRASTER: No further questions, I'm sorry.

PRESIDING OFFICER: Okay, thank you.
MR. COLE: I have no questions, thank you.

PRESIDING OFFICER: Mr. Lee?
MR. LEE: Well, Your Honor, this won't take very long.

PRESIDING OFFICER: All right.

## CROSS-EXAMINATION

## BY MR. LEE:

Q Mr. Crispin, good morning.
A Good morning.
Q My name is Charles Lee, I'm with Lee Schwalb, LLC, which you've probably heard repeatedly as you've sat here. You indicated in your testimony, and just not really the point of it, I don't think, but there was a rate document that you talked about that showed differentiated rates between citizens of Hays and those who live outside the city limits?
A We have a difference between inside and outside city limits.
Q I'm curious about why the City sells water to those outside the city limits?
A There may be some situations where there's no other opportunity or they may have -- honestly, there's not been one that I've been aware of in the last five years, but we have it -- we've had it on there as a possibility.
Q Okay. So the rate document you're referring to is essentially a contingency in the event that you do sell to a customer outside the city limits?

A If we had a resident outside of the city limits.
2 Q That seems a little like an oxymoron.
3 MR. TRASTER: I can't hear, I'm
4 sorry, it seems what?
BY MR. LEE:
Q Seems like -- a little like an oxymoron. The --
7 when you say a resident outside the city limits, what does that mean?
A It could be a homeowner on the outside of our city limits that may be right outside our boundary.
Q Okay. Well, I guess just a couple of quick questions. Are you saying that, to your knowledge, Hays is not selling to any customer presently outside the city limits?
A No, I'm not saying that; I'm just saying I've not known of any new additions in my time.
Q Okay. And so the City would have the authority to quit selling to any customer outside the city limits if it chose, would it not?
A I would have to read the ordinance, I'm not aware.
Q Okay. And how many customers outside the city limits take city water?
25 A I would have to get that information. I don't

Page 660
1 have that.
Q What's the volume, if you know?
A I don't know at this point.
Q Do you know if it's a significant number of folks outside the --
A I do not believe it is, no.
Q Okay. And do you know if it's a significant volume of water?
A I do not know.
Q And are both the -- those questions answerable by reference to your records?
A I'm unaware of that information being within the records.
Q I'm talking about if we were to go to your facility in Hays, is that information --
A Oh, I believe it could be produced, yes.
Q Okay, thank you.
MR. LEE: Nothing else, Your Honor.
PRESIDING OFFICER: Ms. Langworthy?
MS. LANGWORTHY: No questions, Your Honor.

PRESIDING OFFICER: All right.
MR. TRASTER: One moment. No questions, Your Honor.

PRESIDING OFFICER: All right.






Q And what information in a generalized sense, at least, were you providing to the chief engineer?
A We started off, we talked about different models that were available in the area and what would 5 be the best tool, settled on the GMD5 model. We talked about the best way to meet their expectations for showing what the impacts of making these changes would be, talked about different types of data and accuracy of data and where to get data, things along those lines.
Q Was the goal in talking to the chief engineer, Mr. McCormick, to facilitate approval of what your client wanted to do?
A It was to make sure we met the chief engineer's expectations that we would provide the data that he would need to approve it.
Q But you were retained -- when I say you, Burns \& McDonnell was retained in order to develop a plan that would allow transfer of water from the R9 Ranch, were you not?
A We were retained to determine the sustainable yield of the ranch. We were not specifically retained to complete a transfer application for them.
25 Q Did anyone from the City of Hays ever say to you

1 personally that they would like to have the
2 transfer water application -- water transfer
3 application approved?
4 A Yes.
5 Q This goes on to say that during that process, meaning the extensive consultation, that the
7 Division of Water Resources vetted, provided 8 input, and endorsed Burns \& McDonnell's modeling 9 methodology. Was the vetting, Mr. McCormick, 10 was that done in writing or verbally or both?
A I'm honestly not sure that there was something written. We exchanged some emails, so I suspect there was something in there that might have been written, but I don't believe we ever provided a list of this is what we're going to do, do you approve all of this, and they said yes, or something like that.
Q So it sounds as if most of this was conversational. Is that a fair statement?
A I think it's fair to say that a good deal of it was conversational.
Q Okay. If we can look at the next page. Do you know who Dave Romero is?
24 A Ido.
25 Q Have you met him?

1 A Yes.
2 Q Do you respect his opinions?
3 A I do.
4 Q This is taken from a report, testimony that
5 Mr. Romero provided in this proceeding, and he 6 states at page 3-4 of his rebuttal that the

1 Mr. Romero's rebuttal report, that -- that

5 Q And which is -- this is what he is saying about it. And to take up where I left off, to be consistent with this premise when evaluating a transfer, the groundwater recharge on irrigated land must be reduced when that land is no longer irrigated. That's quoting Mr. Larson. And Mr. Romero goes on to say, I agree with Mr. Larson's description. Do you agree with Mr. Larson's description?

MR. BULLER: I'm going to object to this as a mischaracterization of BG -- BGW groundwater model was premised on the concept of increased groundwater recharge from precipitation on irrigated lands. To be consistent with this premise when evaluating -let me back up because really I'm -- this is misleading to you. Mr. Romero was asked to critique Steve Larson's report. quotation is not in Mr. Romero's rebuttal report. If I'm mistaken, please display that report on the screen.

MR. LEE: You don't think that's in the testimony?

MR. BULLER: I'm looking at pages 3 and 4 of Mr. Romero's rebuttal report, and I do not see anywhere where he's -- where that language is there, but if I'm mistaken, please correct me.

MR. LEE: Well, I think we can find that, if you'll indulge us, Your Honor.

PRESIDING OFFICER: Okay. We'll
take a moment here. Rather get everything correct than rush through something.

MR. LEE: And if you can just make that a little larger, Myndee.

Your Honor, this is Dave Romero's rebuttal report, let me read for the record what it says. He's answering a question where he says, Steve Larson writes on page 3 of his report, the $B M c D$ projected future scenario does not account for a reduction in groundwater recharge

being applied and the irrigation is being applied and how it's being applied.
Q So when you have these questions, is it important to have a site specific review?
A It is one of the hardest concepts to quantify, and it needs to -- you need to apply it in the
proper case.
Q So sometimes it would be, I think you're saying?
A Sometimes it would be what?
Q Important to have a site specific analysis?
A I would say it is always important to know what site you're talking about.
Q And would it be important in some cases to have a site specific analysis?
A I would need to know what you mean by a site specific analysis.
Q What do you mean by site specific when you talk about it?
A I mean you need to consider the application that you're using it in.
21 Q I don't understand your answer, I'm sorry?
22 A You need to be cognizant of the area and the conditions in the area that you're applying the concept.
25 Q So in order to be cognizant of those items, then

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you have to understand the area that is in question, correct?
A You need to know where it is being applied, yes.
Q Okay. So if we could look at the next screen.
5 This is a Kansas Geological Survey quote.
6 The -- it's the -- it is authored by those on 7 the left, and the hyperlink to the article is 8 also on the left. And it states that irrigation 9 return flows, the infiltration of irrigation water to the water table has been determined to be a significant recharge component in several studies, which are then listed. This factor includes return flow of the sprinkler or flood irrigation water plus leakage from irrigation diversion canals and ditches. Do you agree with those statements?
A Yes. I would state that the irrigation return flows that they're talking about here are a different thing than what was being discussed in the previous quote.
Q And how are they different?
A Irrigation return flows are a -- when water is applied for irrigation, a portion of it directly infiltrates, you know, you're putting water on the ground, some of it's going to your crop,
some of it's moistening the soil, and some of it's infiltrating, that's what they're talking about when they're talking about irrigation return flows. They're not talking about rainfall precipitation recharge.
Q Well, let's go back to the slide that's highlighted in red. In terms of this concept, Mr. McCormick, that the groundwater recharge on irrigated land must be reduced when that land is no longer irrigated, was that a concept that Burns \& McDonnell took into account when it was doing its work?
A Meaning that -- meaning that the concept of precipitation recharge enhanced --
Q Well, just to be sure we're talking about the same thing, and I apologize for reading this again, but just to avoid uncertainty, the groundwater recharge on irrigated land must be reduced when that land is no longer irrigated. Was that, what I just read, was that incorporated into the analysis and report that Burns \& McDonnell applied?
A In the concept of the irrigation return flows, yes, it was.
25 Q Okay. And do you recall, at least in general,

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1 where in your report it says that?
A It says it several times in my report. When we're talking about the -- describing the scenarios, it says that the irrigation wells were removed, I'm paraphrasing here, it's not word for word.
Q That's okay.
$A$ The irrigation wells and their associated irrigation return flows were removed.
Q And that says that more than once by your recollection?
A It says it several times in the report, yes.
Q Okay. We'll review the report. Are you,
Mr. McCormick, qualified to create a groundwater model?
A Yes, I am.
Q Do you know whether David Barfield is qualified to do so?
A I can't speak to David's qualifications.
Q Have you ever known that he's created a groundwater model?
A I do not know that for sure. I know he's worked with numerous models, in the development of numerous models, but I don't know if he's actually ever created one himself.

Q Okay. Thank you for your time.
2


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| 1 | not developed an alternative methodology or |
| :--- | :--- |
| 2 | reviewed Mr. Larson's analysis at the level of |
| 3 | detail associated with examining the actual |
| $\mathbf{4}$ | input and output associated with the model |
| 5 | simulations. However, my review of his reported |
| 6 | methodology set forth on pages 4 and 5 of his |
| 7 | report are compatible with my expectations. To |
| 8 | that extent, I concur with Mr. Larson's |
| 9 | methodology. |
| 10 | Did I read that correctly? |
| 11 | A |
| 12 | I believe so. |
| 13 | Does it appear to you that Mr. Romero ran the |
| 14 | medel in evaluating Mr. Larson's conclusions and |
| 15 | A |
| 16 | No, I believe he specifically says he did not. |
| What -- why do you say it specifically says he |  |
| 17 | did not? Explain that to those of us who aren't |
| 18 | familiar with modeling -- groundwater modeling |
| 19 | terminology. |
| 20 | And, Jami, if you could scroll back up to |
| 21 | the first -- or the previous page. |
| 22 | A |
| Yeah, it says -- |  |
| 23 | Q |
| 24 | Zoom in just a little bit at line 71, please. |
| 25 | Thank, it's a funny angle for me. At the level |
| of detail associated with examining the actual |  |

1 input and output associated with the model 2 files. Yeah, model simulations.
Q Okay. Let me try that just to clarify, okay? Go back up to the previous page and I'll try to read it and you can tell me which terms --

## A Thank you.

Q -- that you're referring to. Answer, beginning at line 71, I have not developed an alternative methodology or reviewed Mr. Larson's analysis at the level of detail associated with examining the actual input and output associated with the model simulations.
A The input and output would be the files that actually run the model and then come out of the model once it's run. So if he has not examined the inputs and outputs, that would imply to me that he has not run that simulation to verify Mr. Larson's results.
Q So Mr. Larson's results were not verified by Mr. Larson, is that the way you understand this language?
A I believe you misspoke, I'm sure Mr. Larson verified the results of his own runs. It appears to me that Mr. Romero did not verify the results of Mr. Larson's runs.

1 Q Thank you for correcting me, you're right, I did misspeak. You were asked a question about saturated thickness on the ranch by Mr. Lee. Do you recall that?
A I do.
Q Okay, Jami pull up Exhibit 2666. And, Jeff, I'm looking for the cross section of the R9 Ranch. Thank you.

Can you see this okay, Mr. McCormick?
A Yes, I can.
Q And I have Exhibit -- Cities' Exhibit 2666 displayed on the screen and we've got a foam board copy of 2666 in front of you here in hard form, Mr. McCormick. So examining 2666 --

Jami, zoom in a little bit on the top third of the screen with the illustration up there, and -- and, actually, let's go down to the bottom left-hand corner, the image of the -okay.

So that -- in the bottom left-hand corner of the ranch, that is the satellite -- I'm sorry, the bottom left-hand corner of this exhibit, that's a satellite image of the ranch, is that -- is that what you see, Mr. McCormick?
25 A Yes, it is.

Q Okay. And there is a purple line running from left to right across roughly the middle of that image, is that -- is that what you see, sir?
A Yes.
Q Okay. Moving back up to the top portion of this image, okay, and zoom out just a little bit, Jami.

Okay. There is on the top left an indication of west, top right indication of east, back to the top left indication of A, and top right indication of A prime?
A Yeah.
Q Is that what you would say?
A Yeah.
Q And so describe for me, if you would, what the -- what that illustration is showing.
A That's a cross section through the R9 Ranch at the location of that purple line. You can see $A$ and $A$ prime on the aerial image, those correspond with the ends of the cross sections so that you can get an idea of the direction and where things are located. You can see on the cross section the Arkansas River is on the west near $A$, and then the cross section extends across the ranch to the east to the location of

Q And does that cross section indicate the saturated thickness along that line that's running from A to A prime?
$A$ It is illustrated on there, yes.
Q Can you please describe that for the record.
A Near the Arkansas River, on the west side, the saturated thickness is approximately 45 feet, and on the east side near $A$-- the point $A$ prime, the saturated thickness is 140 feet approximately, and the average thickness across there is approximately 100 feet.
Q And that 100-feet average saturated thickness is not reflected on this exhibit, is it?
A It is not written on there, no.
Q Then how do you know what the average saturated thickness on the ranch is?
A That's a calculation that we've done.
Q Okay. And was that figure included in your groundwater model report, sir?
A This cross-section figure is not included in my groundwater model report.
Q Okay. Was the information relating to the average saturated thickness on the ranch of 100 feet included in your groundwater model

Page 700
1 saturated thickness, and I'm not going to go all
2 the way up to 140 , but that's what that is
3 referring to. Is that accurate?
A That is correct, yes.
Q Is that accurate?
A Yes.
Q So let's talk about saturated thickness a little bit more on the ranch.

So, Jami, if you could pull up Exhibit
2827, that's Mr. McCormick's groundwater model report. And go to page 103726 . That should be figure 4-6.

And, actually, do you remember the figure that is the maximum pumping figure, Paul?
A What's --
Q That is the -- not the maximum pumping, that's
the operations. I was looking for --
A It would be 4-5 or 4-4 then.
9 Q Okay. So it would be up a page. Keep going.
20 A Keep going.
21 Q There you go.
22 A Yep.
23 Q Okay. So here when you -- please describe this figure for us, sir.
25 A This is a contour, water level contour map, it's

| Page 701 | Page 703 |
| :---: | :---: |
| showing changes in water level caused by municipal pumping on the ranch as compared to the documented irrigation pumping on the ranch. <br> Q Okay. And in this figure 4-3 down on the bottom right-hand corner states that Model generated difference in water levels, scenario two, historic irrigation pumping versus proposed municipal wells pumping 4800 acre-feet per year, 1991 to 2007 simulation. Did I read that correctly to the best of your ability to see? <br> A Yes, I believe you did. So this would be the short-term -- <br> Q Right. <br> A -- scenario. <br> Q This -- this is the short-term maximum pumping scenario where the Cities are pumping continuously, 24/7/365, year after year their maximal allocated quantity under the 4800 acre-feet per year average quantity limitation, correct? <br> A That is correct. <br> Q Okay. So the Cities can't pump any more than under this scenario for 17 years, that's what this is showing, the water level impacts under that scenario; is that -- | groundwater model report showing the impacts of 51 years of maximum pumping under the Cities' 4800 acre-feet limitation; is that true? <br> A Yes, in reading the title. <br> Q Jami, please zoom in to this area of the ranch over here on this side right there. Okay. And down just a little bit so we can see the contour line. <br> Okay. Mr. McCormick, in this area of the ranch, what does your modeling report show with respect to the decline, and how is that related to the saturated thickness in that area? <br> A My model report shows a decline of .4 feet caused by -- as a difference of -- the change in water level caused by changing from irrigation pumping to municipal pumping, and in that area, the saturated thickness of the aquifer is approximately 140 feet. <br> Q Okay. So about how much of the saturated thickness, if you know, in percentage terms is -- of 140 feet is 0.4 decline? <br> A Just doing really quick math in my head, less than .3 percent. <br> Q I show -- okay, well, I won't hold you to that. So -- but that 0.4 is important related to |
| A That is correct. <br> Q Okay. And what I'm looking for now is the figure showing the 51-year simulation of the maximum irrigation pumping and I'm going -- <br> MR. LEE: Your Honor, objection, this is beyond the scope. <br> MR. BULLER: Your Honor, he asked about saturated thickness, this is relating directly to saturated thickness. <br> MR. LEE: It doesn't sound like it to me, Your Honor, he is talking about a 51-year simulation. <br> MR. BULLER: The 51 year -- sorry. <br> PRESIDING OFFICER: I'm going to <br> overrule the objection, I'll give you a few moments to show me that this is related to that saturation. <br> MR. BULLER: Gotcha. <br> PRESIDING OFFICER: Mr. Lee, you can <br> raise that objection again if he doesn't <br> get there here within a short time. <br> MR. LEE: Thank you, Your Honor. <br> BY MR. BULLER: <br> Q Okay, Jami, page 103726. <br> Mr. McCormick, this is figure 4-6 of your | saturated thickness and explain to us why, when you're looking at the decline in water level, why is reviewing that in the context of saturated thickness relevant? <br> A You -- you try to avoid reducing your saturated thickness; obviously, when pumping it's going to be reduced some. But that's a minuscule amount, it's covered by regular fluctuations in the water table. It is not a significant detriment to the aquifer as a whole. <br> Q And so -- and that's after 51 years of maximum pumping by the Cities, correct? <br> A That is correct. <br> Q So after 51 years of maximum pumping -- so back to the saturated thickness, a 1-foot -- 1-foot decline in saturated thickness would be impactful if you only have 5 feet of saturated thickness; is that true? <br> A That's true. <br> Q But when you have 140 feet of saturated thickness, not so much? <br> A Not so much. <br> 23 Q Not at all really? <br> 24 A Very small percentage change. <br> 25 Q Okay. And, Jami, if you could go to 103722. |


| 1 | Please identify this figure, if you would. |
| :---: | :---: |
| A | This is -- could you scroll down so I could read |
| 3 | the title, please, Jami. This is our predictive |
| 4 | model simulated recharge and pumping scenarios |
| 5 | 3,4 , and 5 , this illustrates what municipal |
| 6 | pumping we estimated in the model scenarios 3 , |
| 7 | 4, and 5. |
| 8 9 | Okay. And this pink line with X's overlaid, that's the 4800-acre-feet-per-year line? |
| 10 A | That's correct. |
| 11 Q | And this is 51 years, this is a 51-year graph? |
| 12 A | That's correct. |
| 13 Q | What is this blue line that begins around 1300 |
| 14 | and increases every decade? |
| 15 A | That is the predicted actual pumping under |
| 16 | operational conditions if we develop the $\mathbf{R 9}$ |
| 17 | Ranch. |
| 18 Q | And what do you mean by operational conditions? |
| 19 A | That's what we -- the anticipated demand in pumping from the ranch. |
| 21 Q | It's not 4800 acre-feet per year? |
| 22 A | No, it is not. |
| 23 Q | In fact, even after 51 years, it doesn't get up |
| 24 | to 4800 acre-feet, does it? |
| 25 A | No, it does not. |

## Page 706

Q Okay. So in the operational scenario, would the impact to the water level be -- cause a water 3 level decline similar to the maximum pump, how 4 would that impact the water level in relation to 5 saturated thickness?
6 A Less pumping would result in less -- draw down less declines.
Q Under the operational scenario, are water levels improved or -- do water levels go up or do they go down when you compare them to the Cities' historic irrigation pumping?
A They actually go up.
Q Mr. Lee asked you a series of questions about meetings with -- meetings that you had in the course of developing your groundwater model report. Do you remember that?
A Yes, I do.
Q Have you had the opportunity to work on other projects as a hydrogeologist for Burns \& McDonnell?
A Yes, I have.
Q Have you -- and have you had an -- in the course of those -- that work, do some of those projects involve regulatory review and approval of the projects?

1 A Yes, they do.
2 Q Okay.
3 A Quite a few of them do.
4 Q Would you say it's common, infrequent, how would
5 you characterize the frequency of that situation
6 when you're meeting with regulatory reviewers
7 relating to those projects?
A It's standard practice for us --
Q Okay.
A -- to meet with the regulators and make sure that our work is going to meet their expectations --
Q Okay.
A -- so that we can get through the permitting process with them.
Q Okay. So we know you've met with members of DWR in the course of developing the groundwater model for the change application proceeding; is that true?
A That is true.
1 Q Mr. Lee asked you about some of those meetings?
22 A Yes.
23 Q Have you met with DWR in the course of other work that you've done?
25 A Often, very often.

1 Q Have you ever met with Kansas Department of Health and Environment in the course of work that you've done when they have review and approval authority?
A Regularly, often.
Q Have you met with any other state agencies in
Kansas or elsewhere in the course of your work?
A I would say we meet with the state regulators in every state that we work. I personally -Wisconsin, Texas, Oklahoma, Idaho, any state that we're working in, we make sure that we're meeting the regulators' expectations and have consultations with them to plan our process so that we can accomplish that.
Q Is that a part -- is that standard operating procedure when you're working on projects that entail regulatory review and approval?
A Yes. Yes, it is.
Q Have you ever worked on a project that involved regulatory review or approval in which you did not meet and collaborate with the reviewing agency?
A I can't think of any. I think there have been occasions where the client preferred to meet directly with them and we advised the client and

document, of your groundwater modeling work?
A I think he agreed with it, he agreed with my conclusions.
Q Okay. Moving on. Mr. Lee asked you a question or quoted a quotation from Mr. Larson's report 6 relating to an argument that the Balleau
7 groundwater model was premised on, I'll call it
8 irrigation enhanced recharge. Do you recall
that?
10 A Ido.
11 Q Do you -- have you had an opportunity to review
Mr. Balleau's groundwater model report?
A I have, I've reviewed it quite a number of times and referenced it several.
Q So you're familiar with Mr. Balleau's
groundwater model report?
A Yes.
Q And I understand you don't have it in front of you, but to your recollection and based on your -- as you sit here right now, do you agree with the statement that Balleau's groundwater model was premised on this notion of irrigation enhanced recharge?
24 A No, I do not.
25 Q Do you recall Mr. Balleau ever using the words

## Page 714

that -- to the effect that his methodology in that groundwater model was premised on irrigation enhanced recharge?
A I do not recall that being in the report anywhere.
6 Q Does anything in the Balleau groundwater model report suggest or imply that the Balleau groundwater model is premised on irrigation enhanced recharge?
A Nothing that I read indicated that.
Q Does the Balleau groundwater model report or the
Balleau groundwater model itself explain or
provide any mechanism for calculating or
quantifying irrigation enhanced recharge?
A No, it does not.
Q Mr. Lee asked you questions relating to irrigation enhanced recharge, and you stated that it can be a factor at times, can you explain that?
A It can be a factor in areas that are, you know, obviously flood irrigation. If you currently got a field that's flooded and rain falls on it, well, more of that's going to run off than is going to infiltrate, that's certainly a factor.
25 Q Would it be your opinion that irrigation

1 enhanced recharge would be a factor on R9 Ranch?
A I would say no.
Q Have you been on the R9 Ranch?
A I have.
Q How many times?
A At least three, probably more that I can think of.
Q Were you present for Mr. Crispin's testimony this morning?
A I was.
Q Did you see some of the photographs taken from the R9 Ranch that were displayed during his testimony?
A I did.
Q Did those photographs comport with your understanding and recollection of the soil composition on the R9 Ranch based on your experience?
A Yes.
Q Would you say that the soil composition on the ranch would have an impact on whether or not irrigation enhanced recharge would be a factor in this case?
A I would say so, yes.
25 Q In your opinion, is irrigation enhanced recharge

Page 716
1 a factor on the ranch?
A No, I do not think it is.
Q And what is the basis for that opinion?
$A$ The ranch is essentially dune sand, it's like
5 being on a beach. Water that falls on the ranch

22 Q Mr. McCormick, as to the question of meetings
23 with the chief engineer, when's the last time 24 you met with him? In relation to this -- in 25 relation to the change ... immediately sinks into the ground, there are not runoff features, there's not retention features where water is ponded, there aren't streams or rills; it's sand, it's just like pouring a bucket of water out on the beach, it goes straight down into the ground.

MR. BULLER: Thank you, I'll pass the witness.

PRESIDING OFFICER: Mr. Cole?
MR. COLE: No questions.
PRESIDING OFFICER: All right.

## Mr. Lee?

MR. LEE: Thank you, Your Honor.

## RECROSS EXAMINATION

## BY MR. LEE:

A It was prior to filing the change applications, I couldn't give you an exact date.
Q Okay.
A But it's been years ago.
Q Like sometime before 2018, I presume?
A Yeah, we -- we published the model report in
2018, so, yes, it would have been 2017 or earlier.
Q Okay. I just want to be sure listening to your responses to Mr. Buller's questions that we're all talking about the same things here, so if we could put the first of those slides up very quickly. I think we agreed a bit ago and seemed like maybe this got a little muddled that if you look at the red highlighting here that says, Groundwater recharge on irrigated land must be reduced when that land is no longer irrigated, I think you said conceptually you agree with that?
A I said in -- it needs to be reviewed depending on what site you're working on and the conditions on that site, but I agree with the concept as a whole that it's something that needs to be considered.
Q Okay. So if we look at the next one of these, which is essentially what the Kansas Geological

Page 718
1 Survey article is saying, at least the way that irrigation return flow.
Q Well, but we're talking about the difference once irrigation stops, you recall that, right?
A We are talking about the difference between irrigation and nonirrigated land, yes.
Q Okay. And so your sense would be that if you go back to the previous slide, and I'll read the entire thing, The BGW groundwater model was premised on the concept of increased groundwater recharge from precipitation on irrigated land. To be consistent with this premise when evaluating a transfer, the groundwater recharge on irrigated land must be reduced when that land

MR. BULLER: No further questions, Your Honor, thank you.

PRESIDING OFFICER: All right. Thank you, Mr. McCormick.

MR. TRASTER: You ready?
PRESIDING OFFICER: I'm ready, Mr. Traster, whenever you are.

MR. TRASTER: Call Daniel Clement.
PRESIDING OFFICER: Mr. Clement.
MR. TRASTER: While he's coming up, we can go off the record for just a moment if you don't mind.

PRESIDING OFFICER: Sure.
(Discussion held off the record.)
PRESIDING OFFICER: All right. We can go back on the record. Mr. Clement, I will get you sworn in here, would you please raise your right hand.

## DANIEL WAYNE CLEMENT,

having first duly sworn or affirmed, was examined and testified as follows:

PRESIDING OFFICER: All right. You may proceed, Mr. Traster.

|  |  | DIRECT EXAMINATION |
| :--- | :--- | :--- |
| 1 |  | MR. TRASTER: |
| 2 | BY MR |  |
| 3 | Q | Mr. Clement, state your name, business address |
| 4 |  | for the record, please. |
| 5 | A | Sure, Daniel Wayne Clement, business address, |
| 6 |  | 800 East First Street, Wichita, Kansas. |
| 7 | Q | And by whom are you employed? |
| 8 | A | Burns \& McDonnell. |
| 9 | Q | And what is your position at Burns \& McDonnell? |
| 10 | A |  |
| 11 |  | McDonnell. |
| 12 | Q | How long have you been in that position? |
| 13 | A | Ten and a half years now. |
| 14 | Q | And what did you do before that? |
| 15 | A | I worked with the Groundwater Management |
| 16 |  | District Number 2 as their hydrologist. |
| 17 | Q | So when you say with, do you mean for or -- |
| 18 | A | For. |
| 19 | Q | You were an employee at GMD2? |
| 20 | A | Correct. |
| 21 | Q | And how long were you in that position? |
| 22 | A | Approximately three years. |
| 23 | Q | How many? |
| 24 | A | Three. |
| 25 | Q | And before that, what did you do? |

A Worked at Kansas State University in their information technology department as I was getting my degree.
Q And what is your degree in?
A I have a bachelor's of science in geology from Kansas State University.
Q And is that -- is geology -- but you're a hydrologist, I mean, how does that work?
A Geology and hydrogeology naturally -- naturally overlap.
Q But you are employed now as a hydrogeologist?
A Correct.
Q In the course of your employment with Burns \& McDonnell, did you work with the City of Hays to develop the attachments to the change applications that were filed with DWR in June of 2015?
A Yes.
Q And were you the principal person who prepared the maps that are -- the maps required to be attached to those change applications?
A Yes.
23 Q Were the -- those change applications were required in part because the Cities were requesting permission from the chief engineer to

| 1 | A | Worked at Kansas State University in their |
| :--- | :--- | :--- |
| 2 | information technology department as I was |  |
| 3 | getting my degree. |  |
| $\mathbf{4}$ Q | And what is your degree in? |  |
| 5 | A | I have a bachelor's of science in geology from |
| 6 | Kansas State University. |  |
| 7 | Q | And is that -- is geology -- but you're a |
| 8 | hydrologist, I mean, how does that work? |  |
| 9 | A | Geology and hydrogeology naturally -- naturally |
| 10 | overlap. |  |
| 11 | Q | But you are employed now as a hydrogeologist? |
| 12 | A | Correct. |
| 13 | Q |  |
| 14 | McDonnell, did you work with the City of Hays to |  |
| 15 | develop the attachments to the change |  |
| 16 | applications that were filed with DWR in June of |  |
| 17 | 2015? |  |
| 18 | A | Yes. |
| 19 | Q | And were you the principal person who prepared |
| 20 | the maps that are -- the maps required to be |  |
| 21 | attached to those change applications? |  |
| 22 | A | Yes. |
| 23 | Q | Were the -- those change applications were |
| 24 | required in part because the Cities were |  |
| 25 | requesting permission from the chief engineer to |  |

1 move certain irrigation wells on the R9 Ranch to new locations. Is that fair?
A Correct.
Q And those new locations would be new proposed municipal wells; is that correct?
A Correct, yes.
Q Those well locations were selected by -- who were they selected by, the locations, were you involved in that process?
A I was involved in that process, yes.
Q Were -- were other people involved?
A At the time, some discussions with the City but largely myself.
Q Okay. Jami, I didn't ask you for this, but what I'd really like to have is 1 -- Exhibit 1-1.

So can you identify this document, Mr. Clement?
A It appears to be a map of the ranch. And we'll have to zoom in a little bit because my eyes aren't that good. A map of the ranch showing the proposed municipal well locations, they're labeled by letter, A, B, C, D, et cetera.
Q And, Jami, why don't you scroll to page 2, I think it's a little easier to see.

Is the data on page 2 of Exhibit 1-1

25

```
Q Okay. So they're not -- they're not -- no
    longer being used for irrigation, but they just
    weren't plugged and abandoned?
    A Correct.
    Q Okay, thank you. The map -- let's go back up to
        page 1 of that Exhibit 1-1, there's some
        semicircles that are in orange. Do you know why
        those semicircles are on this map?
    A In some discussions with the City, we wanted to
        buffer -- even though the spacing requirement
        would have been, I believe, a quarter mile, we
        wanted to buffer the proposed municipal well
        locations by an additional distance, and that
        distance was approximately one-half mile, which
        is what the orange circles are showing is a
        buffer from surrounding water permits, trying to
    maintain that half-mile distance.
    Q So I think I understood what you said, but I
        want to make sure, are you saying that it would
        have been permissible to move some -- some of
        these irrigation wells closer to neighboring
        wells as long as they remained at least a
        quarter mile away from the neighboring well?
    A I believe that was the regulation at the time,
    yes.
```


## Page 726

Q So you put those in orange, but would it be fair to say that they're sort of the blackout area where you're not going to put wells?
A Correct, yeah, in this case, it would be showing -- the red would be showing where we would not locate a well, municipal well.
Q Thank you. Jami, would you please turn -- show
Exhibit 1-12. And if you'd go down to the, I think the easiest way is to look at the bookmarks and go to the amended change -- there you go, and then scroll down to page -- Bates page 1011 and it's a map that -- actually any one of these would be fine. This is the right one.

Mr. Clement, can you see what that is?
A Yes.
Q For the record, it's a concept well site E for file number 21,734, that's the Division of Water Resource file number 21,734, and it's Exhibit X to that -- to Exhibit 1-12, which is a series of change applications that the Cities filed.

Jami, are you able to show us page 1018, Bates number 1018 at the same time or not?

MS. BUCK: One eight or one seven?
BY MR. TRASTER:

Q I want one eight, please. Actually, if you want to just show it to us we can -- we can -- if that's going to be a problem. So, Jami, will you zoom in to the top, show us -- keep zooming it, that section right there.

It might be useful, Mr. Clement, if you could make some notes so that you can remember the numbers and letters here, but I'm not intending to create a new exhibit other than just -- I thought maybe I could show you this side by side.

But this refers to an irrigation well in section 5 that is 2348 feet north and 3,773 feet west of the southeast corner of section 5, and I would note that the rate is 1500 gallons per minute at that location.

And I -- let's scroll down to the next box. And this refers to a present -- present at the time location of an irrigation well, also in section 5 , that is 1,264 feet north and 1,340 feet west of the southeast corner of section 5 , and the rate there is 1,035 gallons per minute. I don't want to misquote that, but I want to -- so do you see that that's -- those are the numbers there in the -- I don't know if
you can see them, but that is 1264 north and 1340 west of the southeast corner and 1,035 gallons a minute?
A Agreed, yes.
5 Q And I -- we can go look at the others, but I'm just trying to -- okay.

Jami, let's scroll back down -- or back up, I guess, to 11, 1011. That's the map where we were at. There you go. So let's zoom in so we can kind of see --

Mr . Clement, I'm going to represent to you that -- that this line here -- you know what, back up, I want to talk -- cover something else first. So when you were preparing these maps, are you aware of the normal distance that someone can -- once a particular well location is established at a particular point, if a person drills a well that isn't in that -- at that precise point, is there a standard distance from that point that they can put the well in? Not a very good question. In a 300 -- you can put a well within 300 feet of the authorized point and it'll be in compliance, right?
4 A Correct, yes.
25 Q In this case, the Cities asked for a larger
circle?
A Yes.
Q And what was the size of that circle?
A 1,000 feet.
Q And in this picture or in this map, is that the red circle surrounding the proposed municipal well?
A It is, yes.
Q So when you were -- and are these maps to scale?
A They are, yes.
Q So when you were preparing these exhibits and you had -- you knew where you wanted the well, you drew a circle, a 1,000-foot-radius circle around that particular location, right?
A Correct, yes.
Q And in this -- and that became the starting point for the request for the location of a new well?
A Yes.
Q And then there are other regulatory limitations as well, aren't there?
A There are.
Q For example, you can move -- we already talked about the fact that you can move a well as long as you stay a quarter mile away, but you can't
move a well more than half a mile, can you?
A In this instance, no.
Q Okay. So it looks -- it looks like to me
that -- that you drew a half-a-mile radius circle around each of these irrigation wells.
Is that a fair -- well, tell me what you did.
A Yeah, to me this is a geographical inter -geographical information systems problem, so it's really geography, taking all of the other things out of it. Really it's a map exercise to understand what the constraints of locating that municipal well are to the regulatory considerations.

The first one we just talked about, let's go from the half-mile circle first, the red triangles represent existing irrigation wells, and if you apply the limitation that we can't move beyond a half mile, we simply drew the kind of orange-dashed lines, buffered those by one-half mile to find the constraints of the gray-hashed area, if you will. And then that gray-hashed area is also further constrained by that 1,000 -foot radius, the red line that we talked about for consideration. And also when we talked about the buffer that we wanted to
maintain to surrounding water rights, the sort of red filled-in area also truncates that hashed area that we would be able to locate the proposed municipal water.
Q So if I understand it, but for the -- the
truncated area in pink, you would have been able
to drill a well in this little -- it's not a
perfect triangle but it looks like one, right?
A Correct.
Q But you -- but the Cities instructed you and you
put together a map to say, well, we're not going
to put our well in that little triangle even though it's within 1,000 foot and we're not going to put it anyplace where the pink semicircle intersected the 1,000 -foot-radius circle?
A Correct.
Q All right. So based on the numbers, the figures that we just discussed, and I will represent to you that I believe, I should say I believe this line here at the east side of the 1,000 -foot-radius circle is the east line, east side of section 5 .
A Okay.
25 Q And if you go up the -- one of the distances I

Page 732
1 gave you and the other, would that be the approximate location of one of the triangles?
A Yes.
Q And would this other well over here be the -- on
the west side of this map be the location of one of the other triangles?
$A$ Yes.
Q And the -- do you -- the combined rate for those two wells is what?
A I have 1500 plus 1035.
Q So 2535?
A Correct.
Q So if I understand it, then, the authorized rate that could be withdrawn from these two wells together would -- would equal $25-2,535$ gallons per minute if they were operating at their full authorized rate?
A Correct, yes.
Q Are you aware of the rate at which the Cities -that Burns \& McDonnell is recommending the Cities divert the new municipal wells?
A Yes, each municipal well is anticipated to operate at approximately one-half million gallons a day or 300 -- approximately 350 gallons a minute.


|  |  |
| :--- | :--- |
| $\mathbf{1}$ | don't have the information really to know |
| 2 | exactly what those -- how that -- how other |
| $\mathbf{3}$ | wells are going to be affected? |
| $\mathbf{4}$ A | I believe the question you're asking is how will |
| 5 | drawdown change because there's a significant |
| 6 | reduction in the rate that these wells will |
| 7 | pump, especially seasonally. |
| 8 | Q |
| 9 | Well, that wasn't my question, but that's where |
| 10 | A |
| 11 | Okay. I don't have the calculations to give you |
| 12 | a number, but because the pumping rate is less, |
| 13 | Q |
| And the drawdown must be less. |  |
| 14 | dramatically less? |
| 15 | It's order of magnitude, yes. |
| 16 | Q |
| Thank you. Looking at the image on the screen, |  |
| 17 | I'll represent to you that this is concept |
| 18 | well G with -- associated with file 21,730, and |
| 19 | it's Exhibit Q to that file, and I just wanted |
| 20 | to point out that there's another factor. You |
| 21 | mentioned distance to -- the half-mile limit on |
| 22 | moving wells, but the -- this -- in this case |
| 23 | this is on the west side of the ranch, and that |
| 24 | blue line, what does that mean to you? |
| 25 | That's -- looks to be the Arkansas River. |

## Page 738

Q So we heard earlier today that there's a limitation you cannot move irrigation wells more than 10 percent closer to the centerline of the creek?
A Correct.
Q And is that -- but for that limitation, there would be -- these two wells could be moved up to the north and basically use the whole half, bottom half -- not half exactly but the bottom half of that radius circle, but -- of that 1,000-foot-radius circle, but that's -- you also truncated these well locations based on other regulations as well?
A Yes, the purple area is also truncated by the limitation of moving no more than 10 percent closer to the river.
Q Okay. I had another map I wanted to show you, but, Mr. Clement, thank you, I have no further questions.

PRESIDING OFFICER: Mr. Cole?

## CROSS-EXAMINATION

## BY MR. COLE:

Q Mr. Clement, as I understand your testimony, the project as envisioned would have less wells

1 producing, is that correct, than it presently does or did under irrigation?
A Yes, there will be less total municipal wells than total irrigation wells that formerly operated.
Q And the rate of production is reduced as well?
$A$ Yes.
Q And in many cases significantly reduced?
$A$ Yes.
Q And the well locations will, in several instances, be further away from adjoining property owners' wells?
A Yes.
Q No other questions. Thank you.
PRESIDING OFFICER: Mr. Lee?
MR. LEE: Thank you, Your Honor.

## CROSS-EXAMINATION

BY MR. LEE:
0 Q Mr. Clement, as you may have heard, I'm Charles
Lee so I won't belabor that. Just really a couple questions. When you were talking about drawdown, you used the phrase order of magnitude, I am assuming you're using that in a conversational sense and not as a ten times

Page 740
1 difference?
A I used order of magnitude relative to the
3 pumping reduction, not the quantifiable amount of drawdown.
Q Yeah, that order of magnitude, if you're going
to be technical about it, is a factor of ten, I
7 am assuming you're not talking about that?
A I'm referring to order of magnitude as, yes, as
9 a factor of ten, yes.
10 Q You are.
A Yeah, order of magnitude in my -- for the purposes of today, yeah, is ten.
Q Okay.
4 A Approximately ten.
5 Q And you were -- you were asked a question or a series of questions about the difference in pumping volume essentially over time. That would be -- that difference would be moderated, would it not, because of the year-round pumping that is contemplated with the municipal use as compared to seasonal irrigation?
A Could you repeat the question?
3 Q Sure. Maybe to break it into more digestible parts, we can agree that pumping for irrigation is a seasonal proposition, correct?

A Yes.
Q So in other words, it doesn't go on year-round?
A Yes.
Q And pumping for municipal purposes is a year-round activity?
A It can be, yes.
Q And would be contemplated here, wouldn't it?
A Sure, yes.
Q So there isn't -- that isn't simply a gross difference in the sense of looking at the rate and making that distinction because during part of the year in irrigation use, the pumps aren't going to be on, right?
A Let me think about that for a second. There is a difference in time, in total operating time that an irrigation well would pump and that a municipal well may pump.
Q So if -- it's more complicated than simply saying that this well pumps at 10 gallons and this well pumps at five to come up with that five difference if there is a difference in how long or what the duration of the pumping is?
A Correct.
Q Okay. Thank you.
MR. LEE: I don't have anything

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else, Your Honor.
PRESIDING OFFICER: Mr. Traster?

## REDIRECT EXAMINATION

## BY MR. TRASTER:

Q Is -- a couple questions. Always means there's
more. The municipal -- are the municipal wells
planned to be pumped continuously year-round, or are they going to be cycled?
A Normal wellfield operations, we recommend cycling of pumps. There are very few wellfields and wells that pump 24/7/365. Redundancy is a must and therefore rotation naturally happens because of that factor.
Q At -- but -- but he's right that -- that the municipal wells are likely to be pumped for a longer period of time than normal irrigation wells are normally pumped?
A Correct.
Q I mean, we're -- there's cycling and there's turning it off, that doesn't mean they're equal?
A Yes.
When you use order of magnitude, sometimes
there's order of magnitude that's absolute
precision, you know, absolutely ten times or
greater than an order of magnitude ten times more, but there's also conversational order of magnitude. You didn't do the math to know whether it was actually ten times or more greater, did you?
A No, I -- I have not calculated decimal dust in this situation, no.
Q It's just simply more, conversationally a lot more?
$A$ Yes.
Q Okay, thank you. Now, one of the things I was trying to get to is the idea that changing from irrigation to municipal is going to have less of an impact on the neighboring irrigation wells, but if -- if it returns to irrigation, it seems to me, I'm not a hydrologist, it seems to me that the impact -- the interference of drilling three wells within -- within a mile of someone else's irrigation well would have a significantly larger impact than one 350-gallon permanent well. Is that fair?
A The seasonal impacts would be different, yes.
Q Well, but the rate -- the rate of withdrawal at, what'd we say, 3435 from three wells nearby would be quite a lot greater than one well at --

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5 Q Quantity matters?
A Yes.
Q All of that matters?
A Correct.
Q So it isn't -- but we're not here to quantify
that precisely, it's just that changing from
irrigation to municipal is going to be less
dramatic of an impact on neighboring wells. Is
that fair?
A Yes, I think so.

MR. TRASTER: Thank you, no further questions.

MR. BULLER: David, I put a comment up here.

MR. TRASTER: Oh, I didn't see it. Oh, the map that I was looking for came up, and I would just like to show it but I've already given the witness --

MR. LEE: That's fine.
MR. TRASTER: Any objection?
MR. COLE: No objection.

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| :---: | :---: |
| PRESIDING OFFICER: I have no <br> objection, go ahead. <br> BY MR. TRASTER: <br> Q So, Mr. Clement, what's this -- have you seen this before? <br> A Yes, I created it. <br> Q You what? <br> A I created this map, yes. <br> Q And does this just basically show the various areas on the ranch within which those wells could be drilled, the various truncated or non-truncated circles? <br> A Yes. <br> Q How come there's no -- what happens on well J? <br> A Well J, it so happens with the geographic constraints that we just talked about, there's a very small potential well relocation area for that footprint. <br> Q Okay. That's all, I just wanted to provide an opportunity to see the global picture. That's all. No further questions. Thank you, Mr. Clement. <br> MR. COLE: No questions. <br> PRESIDING OFFICER: Mr. Lee? <br> MR. LEE: Nothing, Your Honor, thank | so -- <br> PRESIDING OFFICER: We can go ahead <br> and go off the record for this. <br> (Thereupon, a recess was taken; whereupon, the following was had.) <br> PRESIDING OFFICER: We'll go ahead <br> and go back on the record here for just a moment. So parties had some brief discussion about working out some scheduling issues for next week, we will pick up at 1:30 in the afternoon on Monday to resume the hearing. <br> Then there was the motion that has been filed by Water PACK regarding the exclusion of Mr. Barfield's rebuttal testimony, excluding him as an expert witness. I'm going to overrule their objection, Mr. Barfield will be allowed to testify. I think most of the issues there are going to be -- come down to what they've addressed, and I think as Mr. Traster's response addressed there, they are issues of credibility and how much weight should be put on whatever his opinion may be. <br> When you question -- when you have a |
| you. <br> PRESIDING OFFICER: All right. <br> MR. TRASTER: We have no further witnesses ready to go at this time today. <br> PRESIDING OFFICER: Okay. All <br> right. Well, looks like we will end a <br> little bit early today, then, and we will <br> pick up on Monday, start up at 1:30 in the afternoon on Monday. We've been moving a little faster with these last several witnesses, and I think as most hearings or trials go, it's usually those first few witnesses who are the longer witnesses, and I'm hoping that kind of continues along that path given that, what, there's still 13,14 witnesses potentially between everybody that we need to address over the next week and a half. <br> MR. LEE: Your Honor, I might inquire of Mr. Traster, Mr. Buller, we at this point are looking maybe to bring our experts on Wednesday of next week. Does that seem reasonable? <br> MR. BULLER: Well, we plan -- we <br> have experts, at least one flying in, and | chance to cross-examine him, you can question him on any of those issues that you have concerns about. Since this is an administrative proceeding, those rules of evidence are relaxed and a lot of it comes down to just weighing the -- putting the appropriate weight on the testimony offered by the various parties and various individuals who provide that expert testimony. <br> So you can question him what you want on that, Mr. Lee, as far as, you know, how reliable or credible his opinion would be, but he will be allowed to appear as an expert and you can offer his testimony. <br> MR. LEE: Thanks for your consideration, Your Honor. <br> MR. TRASTER: Thank you, Your Honor. <br> MR. BULLER: Your Honor, will you be issuing a written ruling on that? <br> PRESIDING OFFICER: I'm not going to <br> do a written one before the final -- <br> MR. BULLER: Okay. <br> PRESIDING OFFICER: -- order here. <br> I guess technically the initial order that |



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