SUPREME COURT OF THE UNITED STATES
NO. 141, ORIGINAL

STATE OF TEXAS,	)	
	)	
Plaintiff,	)	
	)	
VS.	)	VOLUME VI
	)	
STATE OF NEW MEXICO	)	
AND STATE OF COLORADO,	)	
	)	
Defendants.	)	

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for HEARING before HONORABLE MICHAEL A. MELLOY, SPECIAL MASTER, held REMOTELY via Zoom, on OCTOBER 12, 2021, commencing at 11:01 a.m.;

Proceedings reported by Certified Shorthand Reporter and Machine Shorthand/Computer-Aided Transcription.

R E M O T E A P P E A R A N C E S

FOR THE PLAINTIFF STATE OF TEXAS:

Ms. Sarah A. Klahn
SOMACH SIMMONS & DUNN
2701 Lawrence Street, Suite 113
Denver, Colorado 80205
(720) 279-7868
sklahn@somachlaw.com
-and-
Ms. Theresa C. Barfield
SOMACH SIMMONS & DUNN
500 Capitol Mall, Suite 1000
Sacramento, California 95814
(916) 446-7979
tbarfield@somachlaw.com

FOR THE DEFENDANT STATE OF NEW MEXICO:
Mr. Jeffrey Wechsler
MONTGOMERY & ANDREWS
325 Paseo De Peralta
Santa Fe, New Mexico 87501
(505) 986-2637
jwechsler@montand.com

-and-

Mr. Michael A. Kopp
TROUT RALEY
1120 Lincoln Street, Suite 1600
Denver, Colorado 80203
(303) 861-1963
mkopp@troutlaw.com

FOR THE DEFENDANT STATE OF COLORADO:

Mr. Chad Wallace
COLORADO DEPARTMENT OF LAW
1300 Broadway, 7th Floor
Denver, Colorado 80203
(720) 508-6281
chad.wallace@coag.gov

FOR THE UNITED STATES:

Mr. James J. Dubois
Mr. R. Lee Leininger
U.S. DEPARTMENT OF JUSTICE
999 18th Street, Suite 370
Denver, Colorado 80202
(303) 844-1375
james.dubois@usdoj.gov
lee.leininger@usdoj.gov

-and-

Ms. Jennifer A. Najjar
U.S. Department of Justice
Post Office Box 7611
Washington, DC 20044
(202) 514-3553
jennifer.najjar@usdoj.gov

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JUDGE MELLOY: This is in the matter of Original No. 141, Texas versus New Mexico and the State of Colorado with United States as intervenor. Let me start by asking the parties who are going to be participating with today's witness to enter their appearance. Who is -- who is on for Texas? I don't see anybody on for Texas right now.

MR. DUBOIS: Ms. Klahn is having temporary issues, Your Honor.

JUDGE MELLOY: Okay. Do we need to sign off for a minute or go -- go mute and dark for a minute?

MR. DUBOIS: I'm not sure. I think that she is coming back online. She's having a connectivity issue apparently.

JUDGE MELLOY: There she is. All right. Ms. Klahn, do you want to enter your appearance?

MS. KLAHN: Yes. Sarah Klahn for the State of Texas.

JUDGE MELLOY: Mr. Wechsler?

MR. WECHSLER: Good morning, Your Honor. Jeff Wechsler for New Mexico. For Mr. Balliew, we'll have Michael Kopp.

JUDGE MELLOY: Now, is Ms. Najjar or Mr. Dubois going to be on for the United States?

MR. DUBOIS: Eventually, Your Honor, both of us will be today. Ms. Najjar is going to be responsible for Mr. Rios, and I'm going to be responsible for Mr. Balliew, and I'm also available to talk about the unfortunate situation with Mr. Cortez as we -- you know, to the extent that we need to talk about that this morning, and also Mr. Leininger is on, who is actually the one who has spoken with Mr. Cortez. I did not. So we -- we've got -- I'm not sure where we're going this morning, but Mr. Leininger and I are also on, as well as Ms. Najjar, who's got the witness this morning.

JUDGE MELLOY: Okay. Mr. Wallace?

MR. WALLACE: Good morning, Your Honor. Chad Wallace for the State of Colorado.

JUDGE MELLOY: Well, all right. Let's talk for a minute about the scheduling. I guess I don't -- I mean, it is what it is with Mr. Cortez. It's very unfortunate, and sorry to hear about his personal situation, but as I understand it, none of the parties object to holding him over to the spring; is that right, Mr. Wechsler?

MR. WECHSLER: Yes, that's right, Your Honor. Our only caveat would be if -- if necessary, we would ask that we might be able to recall another

witness if we have to respond to Mr. Cortez. I think that's probably unlikely, but we just reserve the right to ask.

JUDGE MELLOY: All right. Well, I don't know. Is there anything else we need to say about that?

MR. DUBOIS: The only other thing, Your Honor, is that in talking with Mr. Brooks from New Mexico last night and -- and then Mr. Wallace after that, we also discussed the -- you know, the meet-and-confer process on Mr. Cortez's exhibits, I think, would have been tonight, and because he's going to be pushed to the spring, we are at least just wanting to inform you that we'll do the meet and confer on those exhibits later.

JUDGE MELLOY: All right. That's fine. So that leaves us with just Mr. Rios this morning, which I assume we'll get done hopefully easily today, and then Mr. Balliew some -- maybe start later today and probably finish fairly early tomorrow or at least midday tomorrow. Is that essentially where we are?

MS. KLAHN: My understanding is Mr. Balliew will follow Mr. Rios probably by noon and then -- noon Mountain time, and then I guess the extent of cross will determine how long he goes into

tomorrow.

JUDGE MELLOY: And then -- so but once we're done with Mr. Balliew, then we'll be breaking until Monday? You have the experts -- we don't have anybody else between now and Monday; is that right?

MS. KLAHN: Correct.

JUDGE MELLOY: Okay. All right. Then let's get started. Anything else we need to talk about as far as that's concerned?

MR. WECHSLER: Well, it's related to the historians, Your Honor, and that is the deposition designations, we did have the deposition designation of -- of Mr. Kryloff, which was the U.S. historian who will not be testifying live. We had designated the transcript. There were no objections to the transcript. There was, however, an objection to the report of Mr. Kryloff, and if you recall, Ms. Barfield and I had agreed that we would go back and look and see if we could reach an agreement on the -- the -- the report, parts of the reports going in, and after we took a harder look at it, we recognize that the report really wasn't necessary for you to understand the deposition transcript itself so we've withdrawn that request. The reason I raise it now is I do think it would be -- it would make sense to have that

submitted to you in advance of the historians and so I wanted to understand that process, what you would like us to do.

JUDGE MELLOY: Are you talking about Kryloff's report or -- or Texas and your historians' reports?

MR. WECHSLER: I'm talking, Your Honor, about the deposition designation for Kryloff, which has now been agreed it's prepared to be submitted. So some courts will simply accept the submission as a -- as a pleading and review it at the appropriate time. Obviously it's a bench trial. We don't expect to read that into the record. Other courts that we've seen will actually mark a deposition designation as a court exhibit or even a party's exhibit, and so I'm inquiring as to how you would like us to do that and however the -- whatever the process is, we'd like to have that facilitated prior to next Monday so that you have the benefit of that testimony as you're listening to Dr. Miltenberger and Dr. Stephens.

JUDGE MELLOY: Why don't you submit it as a New Mexico exhibit and -- and if you can get it on -- if you can get it to me tomorrow, that'd be great.

MR. WECHSLER: We'll do that. Thank

you.

JUDGE MELLOY: Will there be objections to any of the designations? I don't know if you're on mute, Mr. Wechsler, but I'm not hearing you.

MR. WECHSLER: My apologies. Yeah, I did put myself on mute. My understanding, Your Honor, is that there are no objections to the deposition designation now that we have withdrawn his report as an exhibit to that.

JUDGE MELLOY: All right. Okay. Thank you. So, yeah, if you can get that to me tomorrow, I'll review it before Monday.

MR. WECHSLER: Thank you.

JUDGE MELLOY: All right. Anything else before we start with Mr. Rios?

MS. KLAHN: Well, Your Honor, since Mr. Wechsler raised the issue of how to introduce the -- the designations for Mr. -- Dr. Kryloff, we'd also had some deposition designations, I think. Would you like us to follow a similar procedure at the appropriate time when we'd like those to be considered by the Court?

JUDGE MELLOY: Yes. Is there any reason why you wouldn't want to send in early like Mr. Wechsler?

MS. KLAHN: We could absolutely do that. I mean, I think there's just two at the moment so we'll do that. Okay. Thank you.

JUDGE MELLOY: All right. Just do the same thing and mark those as Texas exhibits. All right?

MS. KLAHN: All right. Thanks.

JUDGE MELLOY: Anything else? All right.

Then, Mr. Rios, would you raise your right hand, please? Do you swear or affirm that the testimony you're about to give will be the truth, the whole truth, and nothing but the truth?

THE WITNESS: Yes.

JUDGE MELLOY: All right. Mr. -- you can put your hand down. Mr. Rios, let me ask you a couple questions, preliminary questions we're asking each of the witnesses. First of all, is there anyone in the room with you at this -- during your testimony?

THE WITNESS: No, Your Honor.

JUDGE MELLOY: Secondly, do you have any notes or other documents to which you will be referring during your testimony other than the exhibit book?

THE WITNESS: No, Your Honor.

JUDGE MELLOY: Then I need to advise you that you're not allowed to have any communication devices available to you during your testimony, including iPhones, iPads, laptop computers with any e-mail, texting, instant messaging capability, anything of that nature. Do you understand?

THE WITNESS: Yes, Your Honor.

JUDGE MELLOY: All right. Then, Ms. Klahn, you may proceed.

MS. KLAHN: Thank you.

ROBERT RIOS,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. KLAHN:

Q. Good morning, Mr. Rios.

A. Good morning.

Q. Are you an employee of the El Paso County Water Improvement District No. 1?

A. Yes, ma'am.

Q. What's your position?

A. I am currently the water master for EP1.

Q. Okay. And how long have you been water master for EP1?

A. When the district took over from the USBR in October, 1980.

Q. Okay. And prior to the District taking over from the Bureau of Reclamation, were you employed by the Bureau of Reclamation?

A. Yes, ma'am. I came to work for the Bureau of Reclamation May the 21st, 1973.

Q. Okay. So that makes it about 48 years of experience you have with operations at EP1?

A. Yes, ma'am.

Q. Okay. Let's talk a little bit about your background. Where did you graduate high school?

A. From Kingsville, Texas.

Q. Did you attend college?

A. Yes.

Q. What did you study?

A. I studied -- I got an associate's degree in education from El Paso Community College.

Q. Okay. And let's talk now about your work for the Bureau of Reclamation and EP1. What did you start out as for the Bureau -- sorry, what position did you hold initially with the Bureau?

A. I came to the Bureau of Reclamation in '73, and I came in from the -- from the -- straight out of the service and got a job as the readjustment program and I came in as what they call at that time a junior ditch rider.

Q. And does -- what did you do as junior ditch rider?

A. I mainly worked under more responsible ditch riders, and they taught me the art of the canals, and what everyday jobs the junior ditch riders would have to do at that time.

Q. What other jobs did you have with the Bureau before the District took over?

A. I was part time two years at dispatch, and then I became a senior ditch rider. I stayed there for a couple of years as a senior ditch rider, and right at the -- the takeover when the Bureau was going to leave the District, I got a job to continue going with the Bureau as the river team with the USBR, but when I went up there, then the District did not take over the year they were planning to so they asked me to come back, and that one year I came back the general manager for -- Edd Fifer for the District asked me if I would consider coming to work for the District, and I accepted that position. I came back as a water master.

Q. Okay. Tell us what the river team did in the Bureau of Reclamation that year that you were with them?

A. They were the very start of what was called

the river team. It was -- it was just a start of it because the Bureau already at that time didn't really have too much flows on the river. They had -- they were in charge of the river, but they didn't do a lot of the metering because they didn't have the manpower, but this time, they established the manpower. They brought in approximately about 15 men to -- to do the metering and stuff and run the river at the same time, manage the river.

Q. So prior to about 1979 or so, you're saying the Bureau didn't have very many meters or measuring devices on the river?

A. No, ma'am.

Q. How about within the EP1 district, were there meters or measuring devices within the EP1 district prior to the 1979?

A. I'm going to say at that time I didn't know much about what the Bureau was doing on the metering part of the headings.

Q. Okay. Fair enough. So, now, you're the water master for EP1, correct?

A. Yes, ma'am.

Q. And have been for 41 years, correct?

A. Yes, ma'am.

Q. And you have some employees. How many

employees report to you?

A. At the present time, I got 45 employees.

Q. Okay. So do you have some dispatchers that report to you?

A. Yes, ma'am.

Q. And what do the dispatchers do?

A. I -- I presently have three, and they're broken into shifts. They come in at 5:00 in the morning to 1:00 and then from 1:00 to 9:00, and their job is to -- to -- to accept calls from the farmers, either by telephone, e-mail, or text -- I mean, not text but e-mail and fax, excuse me, to take the order, and then we're so far away from the dam, we're three days away from the dam, so the dispatcher, when they generate the ticket for the water order, they have to be real careful in how they take the order because if a farmer calls in today, he's going to have to schedule the farmer three days from now to pick up the water. So they generate the ticket and then they give out the ticket to the ditch riders, and then at the same time, they're taking a control -- when the irrigation starts, the ditch rider reports it to ditch -- to dispatcher. The dispatcher writes it down, and then when the irrigation completed, they mark them off, and that shows the ticket is completed at that

time.

Q. Okay. So the dispatcher works closely with the ditch rider to make sure that the water that's ordered gets delivered?

A. Yes, ma'am.

Q. And then when that order is made, when the -- sorry, when the delivery is made, the ticket goes to somebody in water records; is that right?

A. Yes. From there, they go to water records and she gets all the tickets, checks them out to make sure there's no discrepancies. If there's something that chief feels that something is wrong with the charge or the -- anything, she either goes to the ditch rider or she goes to the -- to the operations supervisor on duty.

Q. Okay. And operations supervisor would be you or one of your assistant water masters; is that right?

A. Yes, ma'am.

Q. Okay. Do you also have a river team working for you?

A. Yes. We made our own river team, and right now presently, we got -- we got four of the river team, and then we got one supervisor that oversees the river team to make sure everything is running properly.

Q. And what does your river team do?

A. The river team is the ones that go out every morning gather data and meter -- for instance, all our major headings, like the Franklin, Riverside is one of the major headings, we try to meter them every day to make sure that the shift on those particular canals are being kept accurate and then we got some more ditch riders, some more teams that are also doing metering and -- which is 6A/6B, and then we've got some that goes farther up to Mesilla Dam, Caballo, to make sure everything good. We also got telemetry all the way up to Caballo and to check the telemetry is working properly and to verify that everything is okay working, batteries and everything, solar panels if they're kept clean, and stuff like that.

Q. Okay. And I want to ask you one more question about the water records. You use the term charge that the water records person, Cathey, she makes sure that the charges are recorded. What do you mean by a charge when you use it in that way?

A. Every time a farmer irrigates with the ons and offs, a charge is accumulated. In other words, the farmer uses X amount of water, and she has the running data on all the farmers that once they charge X amount of acre-feet, it goes to the head banker. We

always call it like a bank account. His budget allotment and then it's subtracted and then it shows how much he used, how much he got left, and we try to send out these statements once a month to the farmer to make sure that he knows where he's using with the irrigation that he's been watering.

Q. And the -- but it's more than once a month that you actually take a look at those charge sheets, isn't it?

A. Yeah. Especially Cathey. She keeps an eye on them nearly every day.

Q. Okay. So let's talk about -- if I could have Blair Demo 13 put up. So, Mr. Rios, do you recognize this exhibit?

A. Yes, ma'am.

Q. What is it?

A. It's an order form that I use, EBID, and the Bureau of Reclamation use to order water.

JUDGE MELLOY: Ms. Klahn, let me interrupt you just for a second there. I failed to admit the exhibits, which I should have done at the beginning of Mr. Rios' testimony. This exhibit is identified as an A exhibit, and I think it may already be in, but it's not. It's admitted. Rios Deposition -- Demo Exhibit A is an A and is in evidence. There's

no number -- number on that one.

MS. KLAHN: Which one?

JUDGE MELLOY: Texas Demo Rios. It doesn't have a number. Should it be 01?

MR. WECHSLER: Your Honor, I understood this to be Blair Demo 13.

JUDGE MELLOY: I'm just looking at the list here. There's also a -- but on the list of New Mexico's objection to Rios direct testimony, there is a Texas Demo Rios with no number, which is indicated as an A exhibit, which I think is --

MR. WECHSLER: I think the other two exhibits are a map and the hydrograph that we looked at with Dr. Blair yesterday.

JUDGE MELLOY: I think there's also --

MS. KLAHN: Yeah, I think everything else is already in evidence. There's Blair Demo 3, which is the organizational chart. There's Reyes Demo 4, which is a map, and then Blair -- yeah, Blair Demo 15, which was the hydrograph, and Demo 13, which we're looking at now. I gather, although I haven't had a chance to ask anybody this, I gather that for some reason, some of the Excel spreadsheets may have gotten the numbers cut off or something, so that might be why it doesn't show on there, Your Honor. I think we

might have had a little technical difficulty internally just from some e-mails I saw this morning.

JUDGE MELLOY: Well --

MS. KLAHN: Oops. You're on mute, Your Honor. Your Honor, I think you're on mute.

JUDGE MELLOY: This is Blair 13, which I believe is in evidence, right?

MS. KLAHN: Correct.

JUDGE MELLOY: Okay.

MS. KLAHN: Yeah.

JUDGE MELLOY: All right. So in case I didn't -- in case I was muted, the -- what I said was we'll take -- the sheet seems a little bit confusing so let's just take the exhibits as they're used and --

MS. KLAHN: That's fine.

JUDGE MELLOY: -- we'll see if they're in evidence. If not, we'll take them up as they come. All right.

MS. KLAHN: That's fine.

JUDGE MELLOY: You can go ahead.

Q. (BY MS. KLAHN) Okay. Mr. Rios, we're back. So here's the order form. Can you tell us how you -- are you the person that fills out this order form?

A. Yes, ma'am.

Q. Do you have some help from the water master

at EBID?

A. Yes, ma'am.

Q. Tell me how you derive the numbers that you're putting in for EP1. Do you have a meeting with your ditch riders?

A. Yes, ma'am. We -- we -- the two main days we're trying to order water is on Tuesdays and Fridays. We order Tuesdays for Friday, Saturday, Sunday, and we order Fridays for Monday, Tuesday, and Wednesday. So any time after 8:00 on Tuesday, the gentleman tries to come in here and tries to order for Friday, and the order has gone in. The dispatcher automatically gives them a due date of Monday, but yet this is the way it starts. The first thing I do in the morning on Tuesday, I go talk to my senior ditch riders. The Franklin Canal, will have to see ditch riders, and I talk to them by showing the acres they got, the deliveries they got, and any other irrigation that might still be irrigated during the period of time, and they give me an order, and then they go to -- I ask them to give me a detail how they use the water to make sure we use it as efficient as possible and then from there, I go to the Riverside, and then there's four senior ditch riders there. They give me the numbers there, and we do the same thing. We go

through detail, and then from there, I go to -- to what I call the 6B and the 6 -- and the 4B, which is up in the upper valley, and that was a little bit more technical because not only am I ordering water for Texas, but I'm ordering water for New Mexico on this process. And here's where James kind of gives me a little leeway. I get -- I get to talk to his assistant water master that runs that area because we have to sit down and discuss the time that we're going to -- I'm going to get the water when he says he can deliver it to me, especially along the east and west. It's not a set date. Normally when I'm ordering Tuesday, can you get it to me Friday, and he said, Robert, I can't get it to you until Sunday, which I understand he's got priorities, and it's great. So I can line up my farmers and tell them, you know what, we can't get to you Sunday. Once I get that done, he also goes back and reports to James, then once that's done, then I call James and then we start talking about what's considered the upper valley, and then when James and Mike sit down, he starts getting me a rundown of the Arrey, the Leasburg, the California, the Eastside, the Westside, and the Bypass.

Q. Okay.

A. Once we get all those numbers down together,

we work out a total order and then we discuss the river.

Q. Okay. Let's stop there. What about Mexico?

A. Mexico is -- they always got an order, but Mexico from the very beginning of the season when they give them their allocation, they're able to calibrate their -- their water usage and how they want to use it, and they pretty well set up an irrigation schedule for the whole season unless they're allocated more water during the year where they change it. But once they get their allocation from the Bureau, they pretty well set up the schedule and then the boundary will send me their numbers and they pretty well know how to order their water. We set the numbers automatically.

Q. Okay. Now, just to make sure it's clear from the record, you started out by talking about working with your ditch riders on the Franklin Canal and the Riverside Canal and the entries for those on this order form are in the lower left; is that right?

A. Right.

Q. And then you talked about La Union West and East and the Three Saints, and that's the 6A/6B area; is that right?

A. Yes, ma'am.

Q. Okay. Then you moved onto talking with James

about the upper valley, correct?

A. Right.

Q. Okay. And you were just about to tell us about the river, so how do you -- after you and James have met, what are you looking at in terms of the behavior of the river to figure out what to do?

A. The particular water was done, like, five days after the first release so the river at this time is still misbehaving. It's not showing what we want it to show. We're putting a lot of boost in there because we don't know what it's going to take to get the water to El Paso yet.

Q. Can I stop you and just ask you what you mean by the river misbehaving?

A. I want to call it misbehaving because we don't -- it's such early in the game, it's -- right now, we're releasing it. We're releasing almost 2,500 feet, and we know we need so much in El Paso, but we don't know what it's going to take to get that water to us, so in the past couple of years between Al -- Dr. Al Blair and Dr. King and ourselves, we found out that a very comfortable number to start off the first release is around 2,500 feet, and we know as the days go by how to cut it back because the drop will catch up with the release a lot faster than the release at

the first time because on the first release, it takes so long to get the water to El Paso.

Q. And where's the water going if it's not going directly to El Paso?

A. It's -- the river -- it's seeping back into the Rio Grande.

Q. Okay. So you started to talk about the river boost here. So at this point, you're five days in so you say, did you start this year in 2021? Did you start with 2,500 CFS river boost?

A. Yes, ma'am.

Q. Okay. So, now, what led you to 961 on June 5th? Do you recall?

A. The 961, Sarah, it was done after all the numbers that were figured out what we needed, what James needed on his order, what I needed on my order, and then whatever was left over, that's what we used at the boost to keep the -- the numbers as steady as possible.

Q. Okay. And you just referred to a conversation that you had -- conversations you had with Dr. Blair, Dr. King, James Navares, the EBID water master, and yourself. Do you have those every day at the beginning of the season?

A. Let me back up. After me and James talk

about this order and we try to work it out as much as possible because once we get this done and then at the beginning of season, anywhere from 30 days, we will sit down with Dr. King and Dr. Al Blair to discuss the water order and they oversee the operations for about the first 30 days. They're sometimes pretty hard on us, and the general managers are also listening in because we're trying to conserve as much water coming in at the same time. So one thing the engineers do not let us do on our own, me and James, they don't let us go up, but they let us go down on the release. So after we get -- me and James talk, we go to Al and King and take another 30 minutes to discuss it. Once everybody is in agreement in the order and they give us the okay, then from there, we're ready to send it off to the Bureau of Reclamation.

Q. So I'm looking at the lower right side of this exhibit, and I see East Gate and West Gate. Is that the gate settings that you want the -- that you want the Bureau to set the gates at for the release you've requested?

A. Yes, ma'am.

Q. Do you actually tell them what gate settings you want? You kind of know?

A. Yes.

Q. Okay. And does the Bureau then -- what does the Bureau do when they get the order?

A. We text it off to Larry from the USBR. That's their contact. From there, Larry sends it off in another text to about -- I want to say about 15 different individuals that it goes off to, and those 15, they're everywhere from the Elephant Butte and goes all the way to Albuquerque, but everybody is aware of our release that we've done. And then we get the okay back in the text says the release is done 15 minutes later and everything is a go.

Q. Okay. Now, when you're preparing this order form to submit to Reclamation, what is your goal in terms of the amount of water that you're bringing down?

A. The number one goal no matter what these numbers look like, they look kind of crazy sometimes, is -- the number one goal is we try not to spill whatever, because I see it this way and James sees it the same way, that any spill on -- whether it comes out my -- my tail end, it affects both of us in a way so we generate the order to make sure we try not to spill.

Q. Does that mean you sometimes don't order as much water as you like?

A. I normally will try to keep the order a little bit on the low side to make sure that I can account for any kind of little extra boost, any little extra water that comes down the Rio Grande.

Q. Okay. And yesterday we had testimony that this order form has been used since the implementation of the 2008 Operating Agreement, and you were working for EP1 before 2008. How did you order water before you had this order form?

A. Before this order form, we would just take the numbers that we had here, and we hand them over to USBR. James would do the same thing, give it to USBR. They would put the numbers together, and they would decide what to release.

Q. And did you get your water when the Bureau was doing that?

A. A lot of times, we wouldn't get our water. We would be short.

Q. Do you know why?

A. From working with them a little bit when I was out there with the river team, I saw how they kind of figured out the releases. They would look at the weather and say, well, maybe it's going to rain so we wouldn't have to release. The way they calibrated their release on their Caballo gates was they would

take old meter notes and they would say, okay, we need 2,500 feet released. This was the last time we metered at Caballo was 2,500 feet. We would release, you know, 5.80 -- I mean, 5 point -- they would set up the gates. A lot of times, they were off.

Q. Okay. So previously, you guys -- you folks weren't authorized to tell them what gate height to set it at, right?

A. No. We had no say-so in the boost, but in those early years, it was not a boost. The river had 300 feet of accretion in it, so you had to play with accretion. The river is always playing with you.

Q. Accretions. Another word for that would be gains?

A. Gains, yes.

Q. Okay. So you -- you talked a little bit about your river team and the water measuring that you do. Let's -- let's talk a little bit about where those meters and telemetry are in the district. Do you have meters and telemetry -- meters or telemetry on all the main canal headings?

A. Yes, ma'am.

Q. And how about the laterals?

A. We have them on those, too.

Q. Okay. And does the farmer turnout have a

measuring device?

A. No. The farmers turnout did not have it, but a lot of it started to use telemetry on our main -- on our laterals that don't have turnouts so they monitor their water that way.

Q. So how do you know how much water to deliver to a turnout if it's not measured?

A. Because every turnout in the valley that we have is set up what they call an average CFS, and the average CFS turnout could be anywhere from 2, 3 CFS up to 15, 20, 25 CFS. They all got to carry a different average.

Q. Okay. And the average CFS, was that something that you were involved in establishing for the turnouts?

A. Yes, ma'am. It was -- it was established. 1980, we had a lot of disgruntled farmers on how we did the charging, so we decided at that time to start metering the farmers and started charging them so we started metering them, and they were not ready for the metering, and they were starting to get high charges and then some were getting low charges, but that's how it worked out. So after a while, we took four years of meter readings and we took out the high and low for every year, we averaged the amount, and then we

averaged the amount for the four years that we metered them. We took an average CFS, and we let the farmers know this was going to be the average CFS, and they did not like it, they had the right to protest it. We would go back out there and meter them again for another years and establish them another CFS if they didn't like it.

Q. Okay. So let's go back to what you first said. When you -- when EP1 took over, there was a lot of disgruntled farmers who didn't agree with or like the charges for water usage. How was the Bureau charging water? Did the Bureau measure water at the turnouts?

A. No, ma'am.

Q. How did they charge the water then?

A. They just charged them on a percentage that they set up, and it was set up for many, many years. When I was here, the -- they were there for many years, and the ditch riders make the charges and they would just basically, a farmer would irrigate a hundred acres and they were taking 75 hours and another farmer could irrigate a hundred in 25 hours, they would both get -- they would charge 30 percent so most of them are going to get charged 30 acre-feet, and that was it.

Q. Okay. So the people that were -- the folks that were irrigating for less time were getting charged the same as the people irrigating for more time, but the people irrigating for more time were getting more water? Is that why they were disgruntled?

A. Right. Yes, ma'am.

Q. Okay. So -- so, now, you have a turnout average CFS system, and you can measure the deliveries to the turnouts; is that right?

A. Right.

Q. Okay. And you have a system to challenge -- for farmers to challenge the charges if they don't like them?

A. Yes. And then Cathey, the accountant, would also see a charge to where the charges started to go very low or very high, so she puts out irrigation needs to be metered and read so next time -- every time they water, the river team sees that, and we try to start metering them a couple of times to maybe reestablish their CFS on their turnout.

Q. Okay. Do you feel like your charges are pretty accurate now?

A. Yes, ma'am.

Q. By the same token, would you think charges

from the time when the Bureau was running the Project would have not have been accurate?

A. I would say they were not accurate.

Q. Let's talk about the drains in EP1.

MS. KLAHN: Could I have Reyes Demo 4 put up, please?

Q. (BY MS. KLAHN) Okay. Mr. Rios, were you able to watch the testimony yesterday of Dr. Blair and Mr. Reyes?

A. Yes, ma'am.

Q. So you heard the testimony about drains that both gentlemen gave?

A. Yes.

Q. Okay. So I don't want to rehash -- I don't want to re-plow that ground, but let's just orient ourselves here. What I really want to talk about is that place down at the end of the district that's in the inset in the upper right corner of the map, and the one focus I want is to understand sort of where those drains go. So let's start with that. The river drain and the Mesa drain and the Fabens waste drain all seem to come together there. Can you describe what that relationship is?

A. The Mesa drain pretty well starts way on top of the -- the unit, way what they call 7B area, and

the Mesa is a long drain. But it eventually works its way through 7A, 8A, and it works it way all the way to Fabens, and if you see it right there, the Mesa drain will run under the Riverside Canal, and also will go under the river drain and then it makes a circle and that little land in between the two drains, you see it, that's what we call, also, the Fabens yard. So our Fabens yard there is almost like an island. But the Mesa drain will circle around and -- and join with the river drain.

Q. Okay. So about at the top of the F in Fabens waste drain is where the two drains join?

A. Yes.

Q. Okay. And then if you follow the Fabens waste drain down, which it seems to join with the Fabens waste channel; is that right?

A. Right.

Q. So where is the waste point at the end of the EP1 system? In other words, where would the waste water -- if there was waste water coming out of the system, returns or something, what -- what structure would it be coming out of into --

A. It would be coming out right there when -- the end of the Riverside, the beginning of the Rio canal, what is called the Fabens waste channel, there

would be a spill there, right there. That would be one of our places we would waste. That's the reason back in the Bureau days they put in a Fabens waste drain and a Fabens waste channel.

Q. Why?

A. That way because if the drain is coming down and it's only recording 10 CFS and at the Fabens waste channel, records 30, in other words what we're seeing there is 20 feet of that water at the Fabens waste channel is probably coming from EP1.

Q. Okay. And where's the 10 CFS coming from?

A. It's coming from the drains.

Q. Okay. I see. Okay. And then there's an arroyo, also, that comes into the river drain, it looks like. Does that arroyo ever confuse measurements in terms of -- or confuse sources in terms of what's coming out the end of the Fabens waste channel?

A. It -- it can, Sarah. It can confuse you, but that's the reason, also, the recorder at the Fabens waste drain was put in, to pick up any extra water that was picked up before the waste channel to distinguish the difference between two waters. The Fabens waste channel at that time records. It'll pick up 50 feet, and the Fabens waste channel will pick up

50 feet. It means that water is coming from the drain itself, probably telling you the San Felipe arroyo ran for a couple of hours.

Q. And how would you know if it wasn't arroyo water? What would the measurements be?

A. The basic flows. We have -- we have telemetry on both sides, also. You can see it constantly telling you what's going on.

Q. Okay. So if there's just water in the Fabens waste channel and not in the Fabens waste drain, that's how you'd know that it wasn't arroyo flow?

A. Right.

Q. Okay. Now, in your time with the Bureau of Reclamation, were you aware of or involved with a project called drain to canal?

A. Yes, ma'am.

Q. And what is drain to canal? Can you describe that for the Court, please?

A. When I came to work in -- for the district in 1973, that structure was already in place. At that time it still looked like a -- not a new station but a fairly new station, so what they would do there is they --

Q. Which -- I'm sorry. Which structure were you talking about? I'm sorry. Just to be clear.

A. They put a structure right there at the river drain --

Q. Okay.

A. -- right there where it went under. They put a structure in there of two gates.

Q. Okay.

A. And they use that to build up the water on the river drain because the river drain is a lot lower than the Riverside Canal. So they got those gates. They would build up the water and then -- then they had a gate on the Riverside Canal that would open and they would cause the water from the drain to go into the Riverside drain.

Q. To go into the Riverside Canal?

A. Riverside Canal. Sorry.

Q. So the Bureau's idea was to try to use water in the river drain to increase the supply in the Riverside Canal?

A. Yes.

Q. How did that work?

A. Turned out to be a big flop. In other words, it created a lot of headache for the farmers.

Q. How so?

A. What it started doing when we'd build up the water in the drain and the water had to be almost to

the top to the point that it was even coming out of the drain in some spots. By doing that after about a week of time of building that up -- building it up, the water in the farmers' fields started coming up. In other words, the people that had cotton no longer could go in there and work on their fields because their water in their fields was constantly had over 6 inches of water, and all the pecan fields had 6 inches of water on them and, of course, you know, you don't want this thing happening to your field being full of water, and especially what they thought was -- what they knew was drain water that was backing it up.

Q. Okay. So during your time at the Bureau, that project was operated once but never again?

A. It was operated a couple of times. The first couple of times they tried it, I remember nothing happened, but during -- after a couple of times of them checking it up, they started having the problem. They tried it a couple of more times, Sarah, by building it up, but, now, after that, every time they build it up, it would cause problems in the fields, but not only that, but the farmers in the Tornillo Canal did not like that water either.

Q. Why not?

A. It was too hard of a water. The TDS on those

drains would run over 2,000 to 3,000 TDS, and they said why should we receive this water when we should be receiving allotment water, and they did not want it.

Q. Okay. Okay. Let's shift gears. Let's talk about the district's wells. We've heard a lot of testimony in the last couple days about the district's -- or the last day or so about the district's wells. Under what conditions do you as the water master decide to use the wells?

A. Don't use them much because, again, the farmers don't like them because they're very salty, the TDS, so we mainly use them to help us out when we're short on the water on the Rio Grande.

Q. And yesterday, there was some testimony during cross-examination that seemed to suggest that the TDS associated with the wells in the lower valley was a thousand CFS. What's -- what's your experience with the TDS in the wells in the lower valley?

A. Okay. Can you say that again?

Q. What's your understanding of the TDS in the wells in the lower valley?

A. That they're very high.

Q. Do you know any numbers?

A. I know that we got three that we call them

salty dogs, because when we say salty dogs, they're over 3,000 TDS. The farmers know all our wells. They know which are good and which ones are bad so -- but they all run, Sarah -- they're all running about 2,000 TDS on them. We do not have any in the thousand. Wish we did, but they're not.

Q. Okay. So you say you try not to use them. Let's talk about 2021. Did you use the wells in 2021?

A. We did use them for -- we didn't use them in June, but we used them in July.

Q. How did you -- can you describe the water delivery circumstances under which you decided to use them?

A. Again, when -- when the river -- we leave it alone. Me and James got it under control. It starts behaving pretty well. But then right in the beginning of July when James cut off on us, the -- because he's cutting off his headings. He's not building up water in the Arrey no more. He's not building up water in the Leasburg area no more, so the river starts doing crazy things to you by start maybe giving you water back so -- and then it rained on us and so when it starts raining on us, it will -- I'm three days away from the release to bring the water down so we start making cuts, cuts, cuts, and I cut it down to 300

feet. And I know when we cut it down to 300, we're going to be in trouble. Well, after a couple of days, it happened around July the 4th, it started getting hot on us again so here I am trying to bring the river back up. It's from 300, trying to bring it up to at least 600, but you can't -- you can't overreact and says the 300 goes fast so you try to do it in steps of 150, because you don't want to create a massive wave on the river either and get it down here. So we did 150 and waited three days and it didn't show up. So we did another 150 and mainly -- out of the 150, you're lucky if you got 75, but it wasn't coming in. So I was starting to run through problems so that's where I go to Mr. Reyes and says, Chuy, I'm already seven days behind my deliveries, I need to do something fast. Says what do you mean? I need some wells, and I need them, like, yesterday. Says, well, fire up what we need. We fire them up in sequences. The most that we like to fire up is 20, 25. Any more than that, it starts affecting the TDS too bad to where it starts building it up, up to about 15 to 2,000. So we know what we can do with the wells so we fired up about 20, 25 for a couple of days, then we started -- everything started getting back to normal, then it rains on us again, we shut off. Five days

later, here it comes the river again, to bring it under control, and finally we fired up the wells again, got the river under control, and we sent them off then we were due for them for the rest of the year.

Q. Now, there was some testimony yesterday about metering of those wells. Were the wells metered this year?

A. I want to say right at the end, Sarah, yes, but not at the very beginning.

Q. So do you have meter measurements from the water -- the groundwater that you use this year?

A. The main supervisor, the one that runs the wells, we were able to get a grant and able to put meters on all the wells. Talked to him Monday, he said he still had about five more to go, but after this, all the meters -- all the wells will have meters, and they -- they should have them a little bit more because these meters that I hear were put in, we'll be able to put them into our telemetry to show us when they're running. Instead of going out to check them to see if they're running, you'll be able to see them on telemetry when they're producing, also.

Q. Okay. And what I was really getting at was whether or not you had any measurements, any volumes

of water that you pumped this summer from the wells?

A. No.

Q. Okay.

A. No. They just got -- they're just now putting them in, Sarah. Sorry.

Q. Okay. So what about other years in which you've used the wells; do you remember any other years in which you've used the wells?

A. For some reason, I remember the 2003, but the other years offhand, I couldn't tell you.

Q. Okay. Do you use the wells? Do you have to use the wells every year?

A. If I do, Sarah, it'd be maybe 10, 15 days. When I get in trouble with the river.

Q. Okay. All right. Let's talk a little bit about the City of El Paso effluent. Do you -- there's effluent discharged into the district's canals from the City of El Paso; is that right?

A. Yes, ma'am.

Q. And are you aware of the volumes of effluent that are present in the canal every day?

A. Yes, ma'am.

Q. Are they the same all the time?

A. No.

Q. How do you deal with the presence of that

effluent when you're trying to make your water orders?

A. I don't use it as part of my water orders, because it's not something I could use that's going to be constant so it's more -- I hate to say the words more in a way, I think to me it's because of the way it comes in. It goes from -- two plants will go from 20 to -- sometimes they go 60, sometimes they go 80, and if anybody that runs water will understand, we're just -- try to imagine having 20 feet in the canal one minute for five hours and then have 60. It's very hard to manage. So you've got a roller coaster or a seesaw going up and down.

Q. It becomes a space issue as far as having space in the canal?

A. Yes. You have to be real careful because this water, if you're not careful with it, it'll get away from you.

Q. Could you use the effluent as a primary supply of water for the farmers?

A. No.

Q. Okay. Let's turn to the last topic, which is the Operating Agreement. Are you familiar with the 2008 Operating Agreement?

A. Yes, ma'am.

Q. Could you describe for the Court how your job

has changed since the 2008 Operating Agreement was put into place?

A. The 2008 Operating Agreement, in a sense, to me is giving me more work, but it -- it's more of a challenge because, now, between the two districts, and I'm going to say James and myself, we call the shots, and the only -- the best thing about it is if I call the shots and we're short, I've got nobody to blame but myself. But sometimes that's better than having somebody else call the shots for you and being short. So, now, if I'm short, I'm short, but I've got nobody to blame but myself, so -- and that's where the communication now with James and EBID helps a lot. So to me, I like it better.

Q. Okay. I want to go back to one topic and just clarify a question that we talked about that related to the drain to canal. I asked you if the drain-to-canal project had not operated since you were with the Bureau of Reclamation. Do you recall that I asked you that?

A. Yes. Like I said, it only worked in the early -- I came in '73, and I remember by the middle '70s, it was no longer being used.

Q. And it was because it didn't work?

A. Because it didn't work. In those days, too,

there's a lot of water in the drains. Today, there's hardly any water in the drains to even make the effort. You will never build up 10 CFS in that drain.

MS. KLAHN: Okay. That's all the questions I have at this time. Thank you, Mr. Rios.

THE WITNESS: Thank you.

JUDGE MELLOY: Ms. Najjar, do you have any questions?

MS. NAJJAR: No questions, Your Honor.

JUDGE MELLOY: All right. Then, Mr. Wechsler, you may proceed.

MR. WECHSLER: Thank you.

CROSS-EXAMINATION

BY MR. WECHSLER:

Q. Good morning, Mr. Rios. How are you?

A. Doing good.

Q. Good. Nice to see you again. We heard a lot from Mr. Reyes yesterday about the district so I'm just going to ask you some questions to fill in the gap. We'll start with ordering water from Reclamation. So during the irrigation season, as you just testified, you coordinate with EBID on making orders from Reclamation; is that right?

A. Yes, sir.

Q. It's common for you to talk with someone from

EBID, one of the water masters, two or three times a day?

A. Yes.

Q. And together, you determine the amount of water to release from Caballo?

A. Yes.

Q. And in direct exam, you -- examination, you referred to something called the spill. You said that you were trying to avoid a spill. Do you recall saying that?

A. Yes, sir.

Q. How do you define "spill"?

A. Anything that works its way to the tail end, which is the tail end of the Tornillo Canal.

Q. In other words, you're trying to avoid waste going out of the bottom of the Project?

A. Yes, sir.

Q. And you said that that would affect both you and EBID. Do you recall saying that?

A. Yes.

Q. Why would that affect EBID?

A. Because it's the delivery factor of the Rio Grande. If I'm using extra water and I'm using it wisely, the -- the delivery factor on the Rio Grande goes down, and most of us lose water because we're

using more water to deliver to ourselves, and what we're trying to do is deliver -- deliver our water most efficiently as possible, to not take the releases the best as possible. It only gives both our districts better water.

Q. Then if more water goes out the bottom, there's less for everybody in project storage; is that right?

A. Pretty well.

Q. Now, you were talking about the communication. After you discussed the releases with EBID, then you communicate that release to Reclamation, right?

A. Right.

Q. You described during your direct examination how that's done, right?

A. Right.

Q. Then it takes three days from water to travel from Caballo to the top of EP1, right?

A. Right.

Q. Then it takes another day to get from the top of EP1 to the bottom of EP1; is that correct?

A. Right.

Q. I want to show you a page, Mr. Rios, in the Operating Agreement, which you discussed with Ms.

Klahn, and this is just going to be -- you indicated you're familiar with the Operating Agreement, right?

A. I'm familiar with it. Do I know it by heart? No.

Q. You can let me know. I'm not going to ask you any questions, I think, that you won't know. What we're going to do is turn to Page 17.

A. Okay.

Q. And -- and here, we can see what's called Appendix B, Required Flow Metering Stations. Do you see that?

A. Yes.

Q. You understand that the Operating Agreement contains a list of required flow metering stations?

A. Yes, sir.

Q. And we can see here, the first set that's being highlighted right now for you, Mr. Rios, says, "The following continuous stage recorders shall be maintained by the United States." My first question is: Can you please tell us what a continuous stage recorder is?

A. Continuous stage recorder has become a tool now that used to be a very small little stage recorder where they would have a recorder inside but now, they've become real big where not only the stage

recorder is kept in there, telemetry is kept in there now. So they're -- go ahead.

Q. Oh, no, please finish your answer.

A. The stage recorder now -- the stage recorder, it's a building now almost compared to the old days because -- and those -- those little block houses, whatever you want to call them, we have our equipment, EBID has equipment, USBR has equipment, and there's still, if not three, at least four, even the Boundary, but I'm not too familiar if Boundary has their stuff in there, but I think Boundaries are also in there. But there's three or four using those stage recorders to monitor the information that's needed.

Q. When it says continuous, does that mean it's reading all the time?

A. Yes, sir.

Q. All right. And then if we go a little bit further down, you can see the beginning here. It says, "The following continuous stage recorders shall be maintained in EBID." You understand that there's a number of metering stations throughout EBID, right?

A. Yes, sir.

Q. And we can see here. This is going to continue to Page 18. Let's just take a look at those and see what they look like and then they go to Page

19 and then they go to Page 20 and then here at the bottom is where the EBID ones stop, and you see there, Mr. Rios, then it says, "The continuous stage recorders shall be maintained by EPCWID"?

A. EP1.

Q. EP1. You understand that EP1 also has a number of continuous stage recorders throughout the District, right?

A. Yes, sir.

Q. And we can look here. These also continue for a couple of pages, Page 21 and Page 22. We talked about this at the deposition, but most of these, Mr. Rios, I think you've told me are operational, right, to your knowledge?

A. They are.

Q. And so you use those to monitor the water as it travels down through the system, right?

A. Yes, sir.

Q. Including monitoring water as it travels through EBID?

A. Yes, sir.

Q. And that means that during the irrigation season, you know where the water is located within the Rio Grande Project?

A. Yes.

Q. And then using the travel time to meters, you also know when the water that EP1 has ordered will arrive, right?

A. Yes, sir.

Q. And then here's the important part, EP1 generally receives the water that it orders, right?

A. Yes, sir.

Q. If necessary to ensure that EP1 receives its water, you sometimes do a river boost releasing additional water?

A. Yes. Or sometimes by talking to James on the water order, like he'll -- he's scheduled to pick up extra water at Mesilla Dam and we both discuss how the river is acting and we're running short. He says, you know, Robert, to help you out, I'm going to pick up the 50 feet at Mesilla. Let's wait until tomorrow morning, give yourselves a little shot, and that will cause us not to boost the river, just to leave it alone for 24 hours, see what it's going to do.

Q. Sounds sensible. I want to ask you about a provision in the operations manual. Let's take a look at that. Let's look at the next page. You're familiar with the operations manual, right?

A. You asked me that already one time. Yes, to a certain point. I don't know it by heart.

Q. Well, again, if there's anything you don't know, please let me know, and we'll make sure you don't have to testify to that. I'm actually concerned about one or two provisions. Let's turn to Page 9, Section 4.3. Yeah, you can highlight that. This is called, "Sharing of Shortages." Just generally, Mr. Rios, you understand the operate -- operations manual contains a provision for actually sharing shortages, right?

A. Right.

Q. Which means if there's a hundred CFS or more below the EP1 order, right?

A. Right.

Q. My question is: Has EP1 ever invoked this provision? In other words, have you ever done this?

A. I'm going to say no.

Q. All right. Let's turn --

A. We worked through it.

Q. You worked through it in coordination with EBID?

A. Yes, sir.

Q. All right. We can take that down. We talked again quite a bit yesterday about allotments and so I just want to, again, fill in a couple of gaps. Now, you're familiar with the district allotments, right?

A. Yes, sir.

Q. And as a reminder, every year, the farmers receive an allotment of water, right?

A. Yes, sir.

Q. And that's an amount of water assigned to each acre of land within the district?

A. Yes, sir.

Q. The Board actually sets those allotments?

A. Right.

Q. And during a full supply year, the allotment to EP1 farmers is 4 acre-feet per acre?

A. Right.

Q. You've indicated on direct, you've worked for the District since 1980, and even before that, you were working for Reclamation, right?

A. Right.

Q. And during the period 1979 to 2002, those were full supply years, right?

A. Right.

Q. And this is something that I'm trying to get verify here, Mr. Rios. So we're going to look at New Mexico Demonstrative Exhibit 3. Here you can see the EPCWID -- the EP1 allotment there on the right-hand side. Do you see that?

A. Yes.

Q. Are you able to tell me whether or not these are accurate?

A. No.

MS. KLAHN: Objection; foundation and relevance. This is clearly an exhibit. This is the same exhibit that was shown to Mr. Reyes yesterday. I have the same objection. These numbers are, you know, verifiable, I'm sure, from some public source, and to ask this witness to try and verify them sitting here without his data in front of him -- it also wasn't disclosed for Mr. Rios' cross.

JUDGE MELLOY: Well, he's already said he can't identify them or verify them, so it's kind of a moot issue so I'll overrule it since he's already answered.

Go ahead, Mr. Wechsler.

MR. WECHSLER: Thank you.

Q. (BY MR. WECHSLER) That's the only question I had about this, Mr. Rios. Let's talk about tracking the allotments. As we've heard, you have telemetry throughout the district, right?

A. Yes, sir.

Q. You also monitor the amount of water that comes from the drains?

A. Not really because there 's not much, other

than the Montoya drain.

Q. And, naturally, you're anticipating my point, but let me ask -- back up and say, you do have meters in the drains, right?

A. Yes, sir.

Q. Right. So then you indicate the only drain that consistently delivers water now is the Montoya drain, right?

A. Yes, sir.

Q. But you did indicate in the past, there used to be water in those drains, right?

A. Yes, sir.

Q. Let's take a look at where that Montoya drain is located. We're going to use this Google Earth exhibit that we have, and what we're going to do here is we're going to open the arrow for No. 6, and then we're going to open the arrow for EBID and open the arrow for EBID major conveyances and then open the arrow for other canal laterals and then open the arrow for EBID drains and then just click on the box next to Montoya drain. There it is. Now, double click on Montoya drain?

MS. KLAHN: Your Honor, while we're waiting for this to come up, maybe I could get a point of clarification. I had understood that cross

exhibits needed to be disclosed prior to the cross-examination of a witness, and we've had a couple of exhibits that morning that weren't disclosed as exhibits for Mr. Rios. Is it the Court's intention to allow the use of exhibits that have been previously admitted, whether or not they're disclosed for cross purposes?

JUDGE MELLOY: What's your position, Mr. Wechsler?

MR. WECHSLER: Well, at this point, Your Honor, I think that we would take the position that exhibits ahead of cross should be disclosed, and the reason is we're about to switch to the New Mexico case and so certainly Texas and the U.S. have received that benefit, and we would also like to have that benefit.

JUDGE MELLOY: What about the ones that you haven't disclosed for this witness?

MR. WECHSLER: Yeah. That would be Demonstrative Exhibit 3. Our apologies there. You know, we're just trying to get -- find out --

MS. KLAHN: And this one.

MR. WECHSLER: -- find out if EP1 --

MS. KLAHN: This exhibit was not disclosed nor was the Operating Agreement. So, you know, it's just a sauce for the goose, sauce for the

gander issue, I think. If that's going to be the rule, then we won't have to disclose the cross exhibits that we want to use. I just want to get clarification.

JUDGE MELLOY: I think the clarification is that they should be disclosed and so --

MS. KLAHN: Thank you.

JUDGE MELLOY: -- do you have any other exhibits you're going to be using that you haven't disclosed, Mr. Wechsler?

MR. WECHSLER: No, Your Honor.

JUDGE MELLOY: All right. Okay. Then go ahead.

MR. WECHSLER: Thank you very much.

Q. (BY MR. WECHSLER) Mr. Rios, you're looking now. You see the purple line there?

A. Yes.

Q. Do you recognize that as the Montoya drain, location of the Montoya drain?

A. Being that you run it through me so fast, I have to say that's what you're saying it is, it is.

Q. You don't recognize the location?

A. I recognize it down by the racetrack, but as it goes up, it's hard to tell. But, okay, I'm with you.

Q. You understand that the Montoya drain passes from Texas into New Mexico, right?

A. Right.

Q. And do you generally recognize the yellow line there as the location of the state line?

A. Right.

Q. Yeah. And you recognize the blue line there as the Rio Grande River?

A. Okay. Yes. I'm with you.

Q. So let's -- let's talk -- you mentioned that Montoya drain is the only one with water, so let's look at the location of the other drains, and we're going to do that by opening the arrow further down for EPCWID. There it is. And then open the ones for the EP1 major conveyances and then open the arrow for other canals laterals and then the arrow for EPCWID drains. Hang on. So open the arrow for other canals/laterals and then drains at the bottom, and now double click on the drains button. So looking into this, and I don't want to ask you to verify that, Mr. Rios, but you understand there's drains throughout the EP1 area, correct?

A. Right.

Q. And I'll represent those are shown here in the purple, and if I understood you correctly, these

drains no longer deliver water; is that right?

A. Right.

Q. You also talked about this drain-to-canal project, and I just want to make sure that I understand the time period you're talking about and that time period is generally when you started to work there in the 1970s; is that correct?

A. Yes, sir.

Q. Okay. Let's move to another issue that you were talking about, and that's the effluent. Now, you monitor the amount of water that comes in from those wastewater treatment plants, right?

A. Yes, sir.

Q. And the water from the Haskell wastewater treatment plant goes directly into the American Canal?

A. Yes, sir.

Q. And the water from the Bustamonte Wastewater Treatment Plant can go either into the Riverside Canal or to the drain, right?

A. Right.

Q. But you actually coordinate with the operators of the Bustamonte Wastewater Treatment Plant to determine whether to discharge into the drain or the Riverside Canal, right?

A. Right.

Q. And during the irrigation season, all of that water goes into the canals?

A. No.

Q. You don't recall telling me that during your deposition?

A. No. During the irrigation season from May to the end of September, they're entitled to the combination of 2,000 acre-feet, which is they order it, and they order in a sense, like, 7 CFS per day to feed the Rio Bosque.

Q. The farmers use the effluent from the wastewater treatment plants; is that right?

A. Right.

Q. And, in fact, you told me they use every drop, right?

A. Who's "they," the farmers?

Q. The farmers.

A. They use every drop that the plant will put out, but you understand that they -- the plant's got to give a little bit of water to the Rio Bosque.

Q. Understood. I understand your testimony on that. And then that water is used actually to satisfy the farm orders; is that right?

A. During what, the return flow? During allotment or --

Q. During the irrigation season.

A. Yes. It's in the system. We try to use it.

Q. I understood.

A. As least as possible because you've got to understand that water goes up and down. It's more hard to control than to try to use it.

Q. Understood. But as you just testified, the farmers use every drop that's available, right?

A. Right.

Q. All right. You talked a little bit about those groundwater wells, and we heard at length from Mr. Reyes yesterday, but there's a couple things I wasn't sure of from Mr. Reyes. That is about the salinity. So the typical salinity for those EP1 district wells is approximately 1,500 to 2,000 TDS; is that right?

A. They're more like 2,000. I wouldn't say 15.

Q. You recall having your deposition taken, Mr. Rios? Do you recall having your deposition taken?

A. Yes.

Q. And you recall being asked about the salinity of those wells?

A. Not anymore. I'm sorry.

Q. That's okay. We're going to look at Page 78, Lines 14 to 21. We can see there that you were

asked, "QUESTION: And do you have a typical TDS on the wells or does it vary too much?" You say, "ANSWER: It varies. If you hang around the river, there's -- some are good, but a lot of them hang around the 15 to 2,000 TDS."

"QUESTION: I'm sorry, Mr. Rios. Did you say 50 or 1,500?"

"ANSWER: 1,500 to 2,000."

Do you recall giving that testimony?

A. I'm reading it, yes.

Q. If the TDS on the wells is higher than 2,000 TDS, the farmers don't want the water; is that right?

A. No. They don't want it, but it is what it is.

Q. So your rule of thumb is that if the water is higher than 2,000 TDS, EP1 doesn't use those groundwater wells, right?

A. We say 2,000, they'll use it, but we try -- we only use it -- we don't use it during the non-allotment. We're not releasing. That's what you've got to understood. If we're not releasing, we don't use them during the winter.

Q. One thing that you do to address salinity is you blend or commingle the well water with the project water to help lower the TDS, right?

A. Right.

Q. All right. Let's talk a little bit about district charges. To do this, I just want to point something out to the Special Master. Again, in the operations manual, New Mexico Exhibit 2464. Actually, scroll back out out of that. If you see this as Section 4.5.3, Mr. Rios, this is called an example of EPCWID's monthly water allotment charges report. Do you see that?

A. Yes, sir.

Q. And every month, EP1 provides a -- a tally of its allocation charges; is that correct?

A. Yes, sir.

Q. And it's done on a form that looks a lot like this one, correct?

A. Yes, sir.

Q. Now, we can look below that figure, and we can see there, it indicates that charges to EP1 are made at the following diversion points, and then it lists a number of them. Those are the points at which EP1 is charged?

A. You're talking about La Union East?

Q. Well, I'm just asking you to verify that these are the points at which EP1 is charged?

A. You're talking in the bottom like La Union

East Canal Texas portion.

Q. Right. Do you see that -- do you see --

A. The one -- okay. Yes.

Q. Yeah. I just want to make sure that you're answering the right question, Mr. Rios. Do you see the list of --

A. Yes.

Q. -- diversion points A through G?

A. Yes.

Q. And those are the places that EP1 is charged; is that correct?

A. Yes.

Q. All right. I just have a couple last sort of miscellaneous questions for you, Mr. Rios, and the first has to do with pecans. Do you know how much water pecans require each year?

A. The only thing I can tell you is what they tell me, and most farmers will tell me they need 48 inches.

Q. All right. Well, I don't want to get into that if the basis for your knowledge is just something that somebody else told you; is that right?

A. Yes, sir.

Q. Let's move on then. So I want to talk a little bit about water users within the District. So

one of your jobs is to ensure that farmers are not taking more water than they're allowed to take; is that right?

A. Yes, sir.

Q. We heard testimony yesterday about the contracts with the City that the City has with EP1 and so I want to ask about the water that the City leases from EP1 farmers. So when the City leases water from an EP1 farmer, then the farmer is not allowed to use water on his or her land; is that correct?

A. Yes, that's correct.

Q. And do you monitor to make sure that those farmers are not using that water?

A. Yes, sir.

Q. But sometimes you actually catch some farmers that are using when they're not supposed to, correct?

A. Yes, sir. Well, not farmers. It's mainly the small tracts, the 1 or 2 acres that would be doing that.

Q. So what do you do when that happens?

A. Being they're not our accounts but they're the PSB's, the City of El Paso or the Lower Valley Water District. The Lower Valley Water District has taken a very strong stance on it. If they find the people taking water, they will fine them. First usage

will be -- I'm not sure, but they do fine them. The second time, it's a very high charge. They do fine them.

Q. All right. Finally, again, we talked with Mr. Reyes yesterday about regulation and administration by the State of Texas. Mr. Rios, you're the water master for the district, right?

A. Yes, sir.

Q. But you have not -- you do not ever interact with anyone from TCEQ; is that correct?

A. No, sir.

Q. You do not ever interact with anyone from the Texas Groundwater Development Board; is that correct?

A. No, sir.

MR. WECHSLER: Thank you very much, Mr. Rios. I appreciate your testimony. No further questions.

JUDGE MELLOY: Ms. Klahn -- well, Mr. Wallace, I assume you don't have anything; is that correct?

MR. WALLACE: No questions. Thank you, Your Honor.

JUDGE MELLOY: Ms. Klahn, do you have anything further?

MS. KLAHN: I have about three

questions, but if I could just have about two minutes to put my notes together and collect the sticky notes from the other people in the room, that would be great.

JUDGE MELLOY: All right. We'll take a couple minutes.

MS. KLAHN: Thanks.

(Recess.)

JUDGE MELLOY: Are you ready to go, Ms. Klahn?

MS. KLAHN: Yes, sir.

JUDGE MELLOY: All right. You may proceed.

MS. KLAHN: All right.

REDIRECT EXAMINATION

BY MS. KLAHN:

Q. Hello, Mr. Rios. Let's -- let me just revisit a couple of topics that Mr. Wechsler covered with you. During your testimony with me, we talked about your experience of receiving or not receiving the water you ordered from the Bureau of Reclamation prior to the 2008 Operating Agreement. Do you recall that?

A. Yes, ma'am.

Q. And then Mr. Wechsler asked you under the

2008 Operating Agreement, EP1 does receive the water it orders; is that correct?

A. Right.

Q. So the clarification I wanted to make was that EP1 receives the water it orders since the 2008 Operating Agreement; is that correct?

A. Yes, ma'am.

Q. Okay. Let's talk a little bit about the drains. I think there's some confusion about what drains actually do. Let's take a look at Reyes Demo 4, please, again. That's the map. So yesterday, we talked about the drains within the EP1 boundaries below the American Dam. Let's just take a step back and talk about the drain ability to form a part of the farmers' water supply in EP1. Would you agree that the Montoya drain, which comes in above the American Dam, does form a part of EP1 farmers' water supply when there's water being delivered?

A. Yes.

Q. So the river drain and the Mesa drain and the Fabens waste drain, you testified this morning that those were all located, I think in one case you said far below the level of the canals? Did I get that right?

A. Yes.

Q. So at some point, Mr. Wechsler asked you is it true that the drains no longer deliver water. Did the -- did the -- other than the Montoya drain, did the drains below American Dam within EP1 ever deliver water to farmers in EP1?

A. No.

Q. Okay. And then there was some discussion of the waste out of the end of the system with Mr. Wechsler. My question about that is any waste that gets to the tail end of EP1 is accounted for at the end of the year; is that your understanding?

A. It's -- it's accounted every month, and it -- for the year, the whole year, yes.

Q. Okay. And Dr. Blair does that year-end accounting; is that correct?

A. Yes.

Q. Okay.

A. And it comes off the telemetry river team charts.

Q. Okay. The last question I have is related to your testimony about TDS in the wells, and I understand you testified during your deposition that the TDS in the wells is between 1,500 and 2,000. The question I have is whether that range of TDS numbers was limited to the wells in the lower valley when you

testified about that during your deposition; do you recall?

A. Yes. I think so.

Q. What do you -- you think it was?

A. Yes.

Q. Are you familiar with measurements of TDS in the wells in the lower valley that are higher than 2,000?

A. Yes.

Q. How high have you seen TDS values from the wells in the lower valley?

A. I see them as high as 3,000.

Q. Okay. On multiple wells?

A. Right now, yes. I know we got three that are hitting at 3,000.

Q. Okay. And the last question, sorry, is you had a conversation with Mr. Wechsler about the Operating Agreement Manual, and he called your attention to the shortage sharing provision and asked you if that had ever been implemented. Do you have any recollection of whether that shortage sharing provision was implemented during 2021?

A. Sarah, I'm going to have to say no. We -- we worked it through, me and James, when we were short, but did I go in there -- did I go in there and say you

need to give me water because of this shortage, no. We worked it out, and it worked out pretty good.

Q. So your testimony with Mr. Wechsler about working it out, that related to your efforts this year with Mr. Navares; is that right?

A. Yes.

MS. KLAHN: Okay. I don't have any further questions at this time.

JUDGE MELLOY: Mr. Wechsler, anything further?

MR. WECHSLER: I do have a couple of follow-up questions, Your Honor.

RECROSS EXAMINATION

BY MR. WECHSLER:

Q. Mr. Rios, it has to do with your responses about the drain water. So, again, you started working in roughly 1973 in this area; is that right?

A. Yes, sir.

Q. So when you gave that answer that no water had been delivered in the drains, you're talking about from 1973 going forward; is that correct?

A. Yes, sir.

Q. Are you generally aware that water was delivered in the drain to canal prior to 1973?

A. No, I don't know.

MR. WECHSLER: Fair enough. No further questions. Thank you.

JUDGE MELLOY: Let me just follow up with one thing, and I -- I don't know where we're going with this whole TDS issue, but, Mr. Rios, do you sample water every time you pump for TDS?

THE WITNESS: We sample every time for TDS, and every time we meter the headings, we sample the TDS.

JUDGE MELLOY: And what heading are you referring to?

THE WITNESS: The Riverside heading. Any measurements that we perform in our system, the hydrotech for the river team individual has a meter to take a TDS reading on that particular site.

JUDGE MELLOY: Okay. And do you -- do you have records of what those TDS readings are so if we want -- if we wanted to know the TDS of -- of a particular well, we could go look at a record and show a record of that well?

THE WITNESS: I want to say right now on the wells, the TDS is not very well kept. That's something I've asked the well manager to start doing, to keep records of it. He hadn't been doing that in the past.

JUDGE MELLOY: Okay. All right. Thank you. That's all I have. Any follow-up on that?

MS. KLAHN: No, Your Honor.

JUDGE MELLOY: All right. Thank you, Mr. Rios. You're excused. We appreciate your testimony. Thank you very much.

THE WITNESS: Thank you.

JUDGE MELLOY: All right. Well, since we're a little bit ahead of schedule, why don't we take our afternoon break -- our first break at this point, and why don't we make it a little longer one since it looks like we're, like I said, well ahead of schedule. Let's break until 1:15 my time. That'll be about a 40-minute break, and then we'll come back with -- with I guess will be our final witness before next Monday, right?

MS. KLAHN: That's right.

JUDGE MELLOY: Okay. All right.

MS. KLAHN: All right.

JUDGE MELLOY: Let's break then. Thank you, everyone.

MS. KLAHN: Thank you.

(Recess.)

JUDGE MELLOY: All right. Are we ready to resume? Let me ask the parties to enter their

appearances for this witness. Ms. Barfield?

MS. BARFIELD: Yes, good morning, Your Honor. This is Theresa Barfield on behalf of the State of Texas.

JUDGE MELLOY: Who do we have for New Mexico this afternoon?

MR. KOPP: Good afternoon, Your Honor. This is Michael Kopp for the State of New Mexico.

JUDGE MELLOY: Okay. Mr. Dubois?

MR. DUBOIS: James Dubois for the United States, Your Honor.

JUDGE MELLOY: And Mr. Wallace?

MR. WALLACE: Chad Wallace for the State of Colorado.

JUDGE MELLOY: All right. Before we call the witness, let me mention, there's quite a bit of confusion about the exhibits for Mr. Rios, but there was one exhibit that was on the cross-examination list for New Mexico, New Mexico No. 2058, which was denoted as an A exhibit so that will be shown as admitted. So that we can maybe get right into the testimony of our next witness, Mr. Balliew, let me try to figure out where we are with those exhibits. On the U.S. direct examination -- you're going to go first, is that right, Mr. Dubois?

MR. DUBOIS: Ms. Barfield is.

JUDGE MELLOY: All right. Okay. We have Balliew Demo No. 2 as an A, which will be admitted. Demo No. 3 is an A, which will be admitted. Texas 86, Texas 90 are both A and will be admitted, and New Mexico 458 and New Mexico 1672 are both indicated as A exhibits and will be admitted. For cross-examination, we have Texas -- excuse me -- Joint Exhibit 410, which is A, will be admitted. New Mexico 2287, now, that is also denoted as US-77 and Texas 88. This -- this could end up getting very confusing. Do we want it admitted under all three numbers or --

MR. KOPP: I think I can speak to that, Your Honor. We had exchanged these lists with the other parties before that document was admitted yesterday, as I believe Texas 88, and we're fine using that copy as the exhibit copy.

JUDGE MELLOY: Okay. So that's in as Texas 88. Then there's New Mexico 426, New Mexico 226, New Mexico 427, New Mexico 87. Those are all A exhibits and will be admitted. It looks like New Mexico is going to use -- or may use US-67, which is already in evidence, then New Mexico 2311 and New Mexico 198 are A exhibits and will be admitted. New Mexico 199 will be admitted. New Mexico 7 will be

admitted. New Mexico 235 will be admitted. New Mexico Demonstrative 19 will be admitted, and New Mexico Demonstrative 21 will be admitted. As we previously indicated for all the demonstrative exhibits, whether they're Texas, U.S., or New Mexico, they're admitted for demonstrative purposes only. Any question about any of that?

All right. Then Ms. Barfield, you may call your witness.

MS. BARFIELD: The State of Texas calls John Balliew.

JUDGE MELLOY: Good morning. Mr. Balliew, would you raise your right hand, please? Do you swear or affirm that the testimony you're about to give will be the truth, the whole truth, and nothing but the truth?

THE WITNESS: I do.

JUDGE MELLOY: All right. You may put your hand down. Would you please state and spell your name for the record, please?

THE WITNESS: John Eric Balliew, B-A-L-L-I-E-W.

JUDGE MELLOY: Mr. Balliew, I'm going to ask you a couple preliminary questions, which we've gone over with all the other witnesses. First of all,

let me ask you: Is there anyone in the room with you?

THE WITNESS: No, sir.

JUDGE MELLOY: Do you have any documents or papers that you will be referring to during your testimony other than the exhibit books?

THE WITNESS: No, sir.

JUDGE MELLOY: And I need to advise you that you're not allowed to have any communication devices available to you, including iPhones, iPads, laptop computers that have any type of e-mail, texting, instant messaging capability and that sort of thing. Do you understand?

THE WITNESS: Yes, sir.

JUDGE MELLOY: All right. Thank you. Ms. Barfield, you may proceed.

MS. BARFIELD: Thank you, Your Honor.

JOHN BALLIEW,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. BARFIELD:

Q. Good morning, Mr. Balliew.

A. Good morning.

Q. Where are you employed?

A. I'm employed by El Paso Water Utilities.

Q. What is the business address?

A. 1154 Hawkins Boulevard, El Paso, Texas 79925.

Q. What is El Paso Water Utilities?

A. El Paso Water Utilities is the service provider for water, wastewater, reclaimed water, and storm water services for the City of El Paso and for most of El Paso County.

Q. Is it okay if I shorten that to El Paso Water today?

A. Yes.

Q. All right. Now, in what capacity are you employed with El Paso Water currently?

A. I'm the president of El Paso Water.

Q. Okay. Why don't we take a look at the structure of El Paso Water. Let's look at what's been marked as and admitted as Texas 0086. Mr. Balliew, have you seen this document before?

A. Yes, I have.

Q. What is it?

A. This is an organizational chart for El Paso Water.

Q. All right. So if you could walk us through some of the basic details starting with what's at the top of the organizational chart labeled, "Public Service Board."

A. The Public Service Board is the governing

board for El Paso Water, so it is a board that consists of the mayor of the City of El Paso and appointees that are appointed by city council to run the utility. So I report to the Board and then I have some people that work for me. At the top there, you see a legal services branch and administrative support.

Q. Okay. And then I see also three primary branches that umbrella under that level?

A. Yes. The organization is divided up in three parts, so we have the operational and technical services, which are the people that run the organization, that turn things on and off, treatment plant operators, that sort of thing. That's operations. Technical services would be the engineering section and -- and the engineering technicians, that sort of thing, and then we have a water resources section where we have our water resource manager and some hydrogeology people.

Q. And who is the water resources manager for El Paso Water?

A. Scott Reinert.

Q. All right. Why don't you tell us a little about then the middle section of this chart?

A. The middle section is the business side of

the organization, which we refer to as the strategic financial and land management services and this consists of our land department. El Paso Water differs from many utilities in that we have a lot of land holdings. We have the IT department, information technologies, human resources, and then the -- the finance part of it, which is your basic accounting, budgeting, customer service, and purchasing.

Q. Thank you. And what about the far right or my right of this chart?

A. The far right is our communications and government affairs department. So we have a government affairs department that handles the relationship between us and the city, county, state, and federal government. We also have a water conservation and tech H2O. That's our water conservation department and the learning center where we do education, and then we have, also, the communications department, our media people.

Q. All right. Now, from the structure of this chart, it appears that you have supervisory control or authority rather over all of the aspects of El Paso Water with the exception of the public service board itself; is that correct?

A. That is correct.

Q. All right. You can take that down. Why don't we pull up what's been labeled as Balliew John Demo 3. Mr. Balliew, have you been disclosed in this matter as a nonretained expert by the State of Texas?

A. Yes.

Q. All right. So we've just put up on to the screen Demo No. 3, which appears to be a document that's labeled, "The State of Texas' Amended Third Supplemental Disclosure of Expert Witness Information." I'll reflect that the date is June 10th of 2020. Have you seen this document before?

A. Yes, I have.

Q. Okay. Generally speaking, do you understand what this document does?

A. Yes.

Q. Okay. And what is that?

A. It just indicates that I'm going to be a witness and describes some of the things that I'm going to speak about.

Q. Okay. And were you consulted by the State of Texas before you were identified within this document as a nonretained expert?

A. I was not.

Q. All right. Have you reviewed the portions of the document that are pertinent to your testimony that

you're going to offer here today?

A. Yes, I have.

Q. Okay. And let me direct you and the Court to Page 1 and Page 2. And could we split -- there we go. Okay. So at the lower portion of Page 1, I see that you were named as identified; is that correct?

A. Correct.

Q. Okay. And there's a bit of text that follows. You didn't write this text; is that right?

A. I did not.

Q. But nonetheless, can you briefly describe for us a summary of the nature of the testimony that you will provide today?

A. To talk about the facilities, that is El Paso Water's facilities, what they do and how we operate them, and then when it pertains to surface water, how we get the water rights that we use in those facilities and how they're delivered and what the purpose of that is and then, of course, we also have groundwater resources and so I would be talking about the groundwater resources that are available and how they're used, including the historic use.

Q. All right. And then the paragraph that's set forth or highlighted here, does it accurately reflect the nature in addition to the details you just

provided of the testimony you're going to offer today?

A. Yes, it does.

Q. I note that there's a statement at the beginning referable to the facts and opinions being from the perspective of you as president and CEO. Is it your understanding and do you agree that your testimony today is confined to your perspective as the president and CEO of El Paso Water?

A. Yes.

Q. Okay. Lastly -- and if you could take down this particular blowup. Thanks.

At the end of the paragraph above what we were just looking at, I see a statement that says, "Injuries sustained or damages incurred." To be clear, you have not been retained by the State of Texas to offer any expert opinions on issues of damages claimed by the State of Texas; is that correct?

A. Correct.

Q. All right. I do understand, however, that you will offer testimony today in the form of facts depicting injuries; is that correct?

A. Correct.

Q. All right. And the fact testimony that I just described will include information regarding

certain costs that have been associated with projects that EPW or El Paso Water performed; is that right?

A. Yes.

Q. Okay. Why don't we move on to Texas 0090. Now, does this appear to be a copy of your current professional resume?

A. Yes.

Q. How many pages is it all together?

A. It's about three -- two or three page -- three pages.

Q. All right. Now, did you prepare this?

A. I did.

Q. Okay. And is it a true and accurate representation of basically your educational history and professional career?

A. Yes, it is.

Q. All right. Is it up to date?

A. Yes. It's current.

Q. Okay. Let's talk a bit about your educational background. Where did you go to college?

A. I went to Texas A&M University.

Q. Did you earn a degree?

A. I earned a bachelor of science degree in chemical engineering.

Q. What year did you earn that?

A. 1982.

Q. Now, Mr. Balliew, despite the fact that you've earned a bachelor of science in chemical engineering, you're not here to testify as an expert in chemical engineering today, correct?

A. Correct.

Q. All right. Was there any particular specialization in your degree?

A. Process control.

Q. What does that mean?

A. So process control is a means of automating, in my case, chemical processes. So the obvious example that everybody -- most everybody has in their own home is a thermostat, so it's a device that controls an air-conditioning system based on the temperature that's detected in a room. So there's various types of control systems like that, that will control perhaps a chemical feed point or a pressure.

Q. Okay. Do you hold any professional licenses?

A. I hold a professional engineer's license in the State of Texas.

Q. And similar to what we discussed with regard to your degree in chemical engineering, despite the fact that you hold that license, you are not here to offer expert testimony as a professional engineer; is

that right?

A. Correct.

Q. All right. So let's talk about your professional employment after college. What did you do when you graduated?

A. I started to work for El Paso Water right after graduation.

Q. About what year -- so around 1982; is that right?

A. It specifically was April of 1983 when I started.

Q. Okay. What was your first job at El Paso Water?

A. My first job was working in the laboratory at the -- at the -- one of the water treatment plants.

Q. Now, we understand from your testimony a few minutes ago that you're currently the president and CEO of El Paso Water. Since you started there in 1983 to the present, have you always been employed with El Paso Water?

A. Yes.

Q. All right. And your different roles as you sort of moved up the ladder of El Paso Water, those are all reflected on your professional resume; is that right?

A. That is correct.

Q. Okay. Can you describe for us your current responsibilities in the role of CEO and president of El Paso Water?

A. So I direct the activities of the entire organization, so that includes the three branches that we looked at in the organizational chart, but from the standpoint of what we do, it is the water utility, the wastewater utility, reclaimed water and storm water, and all the employees of the utility.

Q. Okay. How long have you been in the role of president and CEO?

A. More than 38 years -- well, pardon me. Since 2013, I've been the president.

Q. Okay. But you've been employed with El Paso Water more than 38 years, correct?

A. Correct.

Q. Okay. Are there any highlights of the different roles that you have -- well, jobs that you've had at El Paso Water that you'd like to share with us over the course of those 38 years without us going year by year?

A. Yes. So one of the things that I'd like to talk about is when I was a water division manager. So in that role, I was responsible only for the water

system so not the wastewater, not storm water, just the water system, and so there, it was the operation of the water treatment plants, at the wells, and all those associated facilities.

Q. Is there anything else that you'd like to highlight for us?

A. I was in the environmental compliance role, as well, so I handled the regulatory aspects, so that it included the regulatory aspects of water, as well, in terms of the laboratory analysis and reporting of those parameters.

Q. All right. So let's move on and get into some of the substance of your testimony today, and first, I'd like to talk about the City of El Paso water supply generally. So can you describe for us the service area for El Paso Water?

A. The service area includes all of the land in the city limits, so the city of El Paso itself, and then most of the county.

Q. Okay. When you say "most of the county," can you quantify in terms of maybe percentages the portion of the county that El Paso Water services?

A. We think it's about 93 percent. And when I say that, it doesn't mean that the other 3 percent are served by someone -- a different organization. It

just means that they're not served at all, being too remote from the facilities.

Q. Okay. And in terms of numbers, what is the overall population that El Paso Water serves?

A. Approximately 800,000.

Q. And can you quantify for us what percentage of municipal water needs for the county overall that El Paso Water serves?

A. We serve most of the municipal needs, and that includes through -- as direct retail customers and then as well as wholesale customers. So, for example, wholesale might be the Fort Bliss. They are one of our customers.

Q. Now, what about the volume of water supplied. On an annual basis, can you describe the volume of water for the service area that you just told us about?

A. It's about 38 billion gallons during the course of the year.

Q. Over the course of your career with El Paso Water, has the service area expanded over time?

A. Yes, it has.

Q. In what way?

A. Well, when I started, we were serving only within the city limits plus Fort Bliss, but as -- in

the '90s, we started expanding the service area to encompass customers outside the city limits that were in the county that did not have access to potable water.

Q. All right. Do you anticipate any continued expansion of the service area for El Paso Water?

A. Other than a minor little increase here and there, not much, because we at this point in time do provide service to the majority of the county, and that part that we don't supply service to is probably too remote and too spread out from each other to warrant any kind of public investment.

Q. All right. So let's move on, and let's talk a bit about the sources of water for El Paso Water and the -- the water rights that are associated with that. So first, is there a surface water source that's utilized by El Paso Water to serve the municipal needs that you've described?

A. Yes. The Rio Grande River.

Q. And is that the only surface water source for El Paso Water?

A. Yes, it is.

Q. All right. Are there also groundwater sources utilized by El Paso Water?

A. Yes. There are two aquifers. We have the

Mesilla Bolson aquifer on the west side of town. We have the Hueco Bolson aquifer on the east side of town, and both of those aquifers have freshwater and brackish water zones.

Q. All right. Now, generally speaking, are there historical contracts with EP1 and others that provide rights for El Paso Water to utilize the surface water of the Rio Grande?

A. Yes, that's correct.

Q. Okay. And I know that we've had some testimony from other witnesses, including Mr. Reyes, regarding those contracts, but have you had heard of the term water-righted acres?

A. Yes.

Q. All right. And does that apply to Rio Grande Project water rights?

A. Yes. Rio Grande Project, correct.

Q. All right. What is your understanding of that term?

A. What that means is that we have certain land that we own outright that has water rights associated with it and then we have other leases or assignments of water rights where we don't actually own the land, but we have obtained water. So, for example, in the -- in the land that we own, we, of course, purchase it

outright, but the -- the assignments when the city expands and let's say a farmer subdivides, then we obtain the individual assignments for all the little bits and pieces that that farmer, after he divided it up. So we aggregate all those things together, and that's how we obtain surface water from the -- from the Rio Grande. We don't have any direct water right from the Bureau of Reclamation or -- or anyone. We just are a customer or a user, that is, of the El Paso County Water Improvement District No. 1 system.

Q. Okay. So all of these rights derive out of these historical contracts; is that correct?

A. That's correct.

Q. Okay. How many water-righted acres of land does the City own or lease under the contracts with EP1?

A. Well, we -- we own approximately 3,300 acres, and then in terms of the -- of the assignments, it's probably in the -- close to 20,000. So when we total all those together and then you multiply, let's say in a full allotment year, that gives us between 60 and 70,000 acre-feet of water.

Q. Okay. And is that -- how does that translate to the acres themselves, 1 acre-foot? Go ahead.

A. I was using the full allotment so --

Q. Yes.

A. And the full allotment might be different for each one, but approximately 3-and-a-half acre-feet per acre, I would say.

Q. All right. So that constitutes the maximum delivery surface water from the Rio Grande Project that El Paso Water is entitled to under these contracts. Did I understand that correctly?

A. That is correct.

Q. Okay. And on a year-to-year basis, is all of that used?

A. On a year-to-year basis, we typically do not use all of it, and the reason is because the irrigation season has a finite length, a start date and a stop date, and you have a certain amount of demand in the system and so we can only produce what -- currently, that is, we can only produce what is demanded in the system. So there's sometimes at the beginning of the season, perhaps when it's colder weather and there's not a lot of demand, that we're unable to utilize all of the water resource, and likewise, in the fall, there might be a colder fall and so we're unable to utilize all of that water. So the most water we've ever used is about 62,000 acre-feet.

Q. Okay. Are there any restrictions on when El Paso Water may receive surface water from the Project?

A. Yes. We receive water during the season. And so when I say "the season," that is the release period that the system operates under. So at the beginning of the year typically, beginning of the season, there is a meeting conducted with -- with the farmers, Texas, New Mexico, plus IBWC representing Mexico, then they decide on the start date. We're going to start at a particular date, and we're going to end at a particular date. We don't have any say in how that's done, but once that period of time is -- is set, then we operate within that time period.

Q. All right. And El Paso Water is not part of that decision -- decisionmaking process. Am I right about that?

A. Correct. We're not.

Q. All right. So let's talk about the details of the sources and the distribution of the water to the El Paso service area.

MS. BARFIELD: Can we pull up and look at Texas 773? Can we see both pages of that? That's great.

Q. (BY MS. BARFIELD) So I'll represent that this appears to be a two-page document. The left side is

entitled, "City of El Paso, Water Utilities Chemical Analysis-City Water." On the right-hand side, the title appears to be, "El Paso Water Utilities Typical Water Distribution Supply Pattern." Mr. Balliew, are you familiar with this two-page document.

A. Yes, I am.

Q. Who prepared this document?

A. This is something El Paso Water prepares under my direction.

Q. Okay. This is something prepared during the normal course and practice of the business of El Paso Water?

A. Yes. This is something that we have on our Website, and we pass this out to customers who have questions about water quality.

MS. BARFIELD: Your Honor, I would move to admit Texas 773.

JUDGE MELLOY: Any objection?

MR. KOPP: No objection, Your Honor.

JUDGE MELLOY: 773 is admitted.

MS. BARFIELD: Thank you, Your Honor.

Q. (BY MS. BARFIELD) So we're going to spend a little time with this so we can understand how the distribution of the water supply works, so let's start with the chart on the left, Mr. Balliew. What is the

chart on the left intended to provide for El Paso Water customers?

A. So the purpose of this chart is to provide information to our customers about the quality of water. So there's a list of parameters there. That's not an exhaustive list of all the parameters that we test for, but these are the ones that typically we get questions about, and then depending on where the customer lives, they could be receiving water from different sources of supply and so those sources of supply are shown there as the water source locations through those seven columns there.

Q. There's seven water source locations identified all together; is that right?

A. Correct.

Q. Okay. And then real quickly before we talk some more detail about that table, the map on the right, what is that intended to provide in terms of information to the El Paso Water customers?

A. So the map provides a geographic orientation. So a customer can look at this map and see where they live and then that -- that would correlate back to the table so that they could see which source they're receiving water from. Of course, there's a time component to that, depending on whether surface water

is being provided or not.

Q. Now, you mentioned water quality when we were talking about the table on the left. Is there a water quality issue with the available groundwater?

A. Yes. The most common quality consideration that people ask about is the salt content and so that is included in that parameter called total dissolved solids.

Q. Okay. Well, let's go ahead and let's talk about that. In the table in the left-hand side, my left-hand side, there is a column that says, "Parameters Tested." And you've just stated it does include total dissolved solids. Is that the most important parameter that's listed in that column?

A. Yes, it is.

Q. And is -- sorry. I've spoken over you a tiny bit. And is that the parameter that we should be focusing our discussion on?

A. Yes.

Q. Okay. So why don't we take a look at Source 1, which is the first full column to the right of parameter tested. This appears to state at the top, "Upper Valley Well Field." Can you please tell us what the upper valley well field is?

A. The upper valley well field is located in the

northwest portion of El Paso. It's generally known as the Canutillo well field because it is located close to a little community called Canutillo. We refer to it as the upper valley well field because these wells provide water to the upper valley water treatment plant.

Q. Okay. Can you estimate for us a range of how many wells are located in this upper valley well field or the Canutillo well field?

A. Approximately 35 wells.

Q. All right. And can we see from this chart -- well, first of all, what year was this particular table put together that we're looking at?

A. This was put together in 2018.

Q. Okay. So at least in 2018, what was the average TDS of the groundwater from the wells in the Canutillo well field?

A. So with all the wells running, that average is 630 milligrams per liter of TDS.

Q. Now, from your perspective as the president and CEO of El Paso Water and not as an expert in -- in the chemical analysis itself, is that good or bad TDS?

A. That's good TDS. The State of Texas allows up to 1,000 as a secondary standard so this is well below that so we would consider this as good quality.

Q. Okay. And I'd like to differentiate something that we heard a few hours ago from -- during the testimony of Mr. Rios. He offered some testimony regarding some wells, which I believe were in the lower valley, that had TDS's in the range of 1,500 to 2,000 and then on redirect even as high as 3,000. Can you describe for us, if you know, why there's such a difference in the TDS in the Canutillo versus what Mr. Rios spoke of?

A. Yes. So the water quality varies from where you are, let's say east to west, and then also at depth. So the wells Mr. Rios was referring to are shallow wells right in the -- the alluvium close to the river close to their irrigation system and shallow. So that's the reason that it's a higher TDS than these wells here, which we've been looking at in the Canutillo well field, because you have deeper sources of supply that lower TDS.

Q. Okay. Thank you for that. Now, going back to our review of Source No. 1, where does the Source No. 1 generally supply water?

A. Okay. If you look at the -- at the map in the upper left-hand corner of that right-hand map, you'll see a blue dot that says, "Upper Valley WTP." That's water treatment plant. So that is the plant

that receives the water from the Canutillo well field.

Q. Can you describe for us the upper valley treatment plant?

A. The upper valley water treatment plant is a groundwater treatment plant, and the purpose of that is to remove naturally-occurring arsenic that's in the water and so the plant has a capacity of 60 million gallons per day, but we don't have nearly enough well capacity to even make 30 million gallons per day, so it operates less than its capacity.

Q. All right. Now, let's look at the color coding. So we understand from the left side that Source 1 is color coded in light blue, and then when we look at the map on the right-hand side, can you explain to us how the distribution for the Water Source 1 works using the color coding?

A. Yes. So the -- the light blue, as you mentioned, is the water that comes from the upper valley water treatment plant, so it's put into the system so most of the northwest portion of the city is served with the light blue water, the Canutillo well field water, and then there's an interface there that you see between the orange and the blue on the left-hand map of the two maps, and that orange color represents the surface water. So when surface water

is available, that blue water will only go so far. Then if you look at the other map and you see when surface water is not available, that blue area expands to encompass some of that area that was supplied by surface water during the irrigation season.

Q. So in terms of the two maps depicted on the right-hand side, it appears that those are separated by months. Can you give us an overview of why they're separated by months?

A. You asked me about the irrigation season and so the average irrigation season, typically lasts from March to September, so we have a map that's March to September representative of the time when water from the Rio Grande is treated and put into the distribution system. The other map on the right-hand side of that page is the non-irrigation season, which is typically from October through February. So the non-irrigation season, we don't have that surface water going into the distribution system so the water supply has to come from the other source -- the other groundwater sources.

Q. Okay. Thank you for that. I'm going to ask one more sort of orientation question, and then we're going to talk about Source 2. In the map, there's sort of a white area that's to the right of the light

blue and kind of dips into the orange and then it's -- it's book ended by the gray with the vertical lines. What is that white area?

A. Okay. That is -- the white area right in the middle is the Franklin Mountains. So the city of El Paso is split by a mountain range that comes right down through the middle of town and then to the other side over there, you have another white area, and that's the Fort Bliss Military Reservation. So it divides the city up from an east to west and then east side is further divided into a northeast and a southeast side.

Q. Okay. Thank you. So let's go back to the chart on the left, and let's look at Source 2. So that one's in orange, and what is the source of the water here?

A. That is the Rio Grande. So the Robertson-Umbenhauer plant is actually two plants located side by side, which we generally refer to together as an out plant. That treats water out of the -- I'm going to use the term here the Rio Grande. It actually doesn't draw from the Rio Grande directly but from the El Paso County Water Improvement District No. 1 canal.

Q. All right. Can you point out for us on the

map where the Robertson-Umbenhauer 2 plants are?

A. So if you follow the river down, which is the dark line from the upper valley plant down where it goes around the bend, there is the Robertson-Umbenhauer water treatment plant, otherwise known as the canal plant. That's located right in downtown El Paso.

Q. Okay. What is the TDS or total dissolved solids of the surface water that's being treated in the Source 2?

A. So the TDS of that -- of the water here is about 650 milligrams per liter.

Q. Okay. We know from your prior testimony, that's pretty good in your book, right?

A. Yes.

Q. Okay. What is the capacity of the Robertson-Umbenhauer water treatment plant?

A. The total complex treats 40 million gallons per day.

Q. Okay. And then looking to our maps on the right, can you just describe for us geographically how that water is distributed to El Paso?

A. So during that irrigation season, the March through September, you see the orange area so that would represent the extent of the treated surface

water in the distribution system.

Q. And then looking to the far right, from October to February, there's no orange so that tells us that there's no surface water being used during that time frame; is that right?

A. Correct. So the orange completely disappears because there's no surface water entering through the canal plants and so the light blue expands and then the yellow, which is other groundwater sources expands from the east. They come together so all of that area has water throughout the year.

Q. Great. So let's take a look at Source No. 3, which on our chart on the left is identified in red, and what is this?

A. Source No. 3 is the northeast well field. So as the name suggests on the northeast portion of town, we have a number of wells out there. This is also Hueco Bolson water, and those wells are -- are aggregated together to central collection points and put into the distribution system.

Q. So approximately or what's the range of the number of wells that are in play in the northeast well field?

A. It's about 30 wells.

Q. All right. And I notice in the area that's

highlighted right now, it says the water is blended into distribution. What does that mean?

A. Well, it's to contrast having wells that individually go into the system as opposed to wells that are collected together and then the aggregate of that collection in one central point is put into the system. So in this case, that's what that means is that wells are aggregated together and then it's pumped into the distribution system. A little bit further on the column, you'll see some that go directly into the distribution system.

Q. Okay. What's the average TDS, at least in the 2018 time frame, for the northeast well field?

A. 470 milligrams per liter.

Q. And is that good?

A. That's very good.

Q. All right. Why don't we look at the map and see how that water sourced from the northeast well field is distributed in El Paso.

A. Okay. So you see on the right-hand side, on the October through February time frame, all the red triangle, if you will, is supplied by the northeast well water. Now, during the irrigation season, water is supplied to that area treated surface water, so most all of those northeast wells are turned off and

then that becomes, on the March to September side, gray representing the surface water from the Rogers plant.

Q. So when surface water is available, as indicated in the March through September time frame, those wells are turned off, and they're not needed?

A. Yes. Almost all of them.

Q. Okay. So why don't we look at Source No. 4, which is in yellow, and what is that?

A. Okay. Source No. 4 is what we refer to generally as the airport well field, and so the airport well field, as the name suggests, are located in the airport, east and west from El Paso International Airport, and these wells are also aggregated together and blended and then put into the distribution system so none of them individually go into the distribution system. So you can see again in the October through February map, the yellow area represents the extent that that water is being supplied during the non-irrigation season. During the irrigation season, most of those wells are turned off, and then that -- that area is supplied through treated surface water.

Q. Okay. So similar to what we discussed with the northeast well field, when there's surface water

available, those wells are, for the most part, turned off?

A. Yes.

Q. All right. What's the average TDS for those -- for that water that's sourced from the airport well field?

A. 627.

Q. And that's good, right?

A. Still good, yes.

Q. Okay. It's a little higher than from the wells in northeast well field. Do you know why that is?

A. Because it is typically further east. So as I mentioned earlier, when you asked me that question about the wells that Mr. Rios described, as you -- as you move towards the east from -- from the mountain, the water quality tends to deteriorate and becomes more salty and so that's why there's a particular difference there.

Q. All right. So let's take a look at Source No. 5. This one is delineated by vertical lines, for lack of a better way to describe that. So what is Source No. 5?

A. Okay. Source No. 5, geographically they're still in the vicinity of the airport, between the

airport and Fort Bliss. The distinction between these wells and the airport wells is that these wells supply water to the Kay Bailey Hutchison desalination plant.

Q. Okay. Approximately what's the range of the number of wells that are in the Fort Bliss and airport well fields that supply to Kay Bailey Hutchison?

A. So this is about 25.

Q. Okay. What is the average TDS, at least in the 2018 time frame, for those wells?

A. Okay. So this is a little bit different number. This number that you see there, the 454, that's after the desalination treatment.

Q. Okay. That's a great point of clarification. So why don't you describe for us the Kay Bailey Hutchison Desalination Water Treatment Plant, including show us where it is on the map?

A. Okay. On the map, if you look at the March through September side and you see the orange area, it says El Paso International Airport. Just to the right of that, there's a little blue dot, says Kay Bailey Hutchison Desalination Plant.

Q. All right. Tell us a little about the facility itself.

A. The facility is the world's largest inland desalination plant. It is a reverse osmosis plant.

That is, it uses the reverse osmosis technology to separate out the salt from the well water.

Q. Is that technology expensive?

A. It is expensive in the sense that you have to pressurize the water to push it through the -- the membranes in order for them to function effectively.

Q. Okay. And once water is processed through this desalination plant, is it -- is it drinkable at that point?

A. Yes, it is.

Q. Okay. What is the capacity of the Kay Bailey Hutchison Plant?

A. 27.5 million gallons per day.

Q. Okay. And using the vertical dashed lines, why don't you describe for us the distribution for the water that's sourced out of the Kay Bailey Hutchison Plant?

A. The -- the distribution of that -- of that water, so during the irrigation season, some of the treatment plant capacity is utilized. So that -- that plant -- I should have explained this when you asked me about the plant, but the production of that plant goes up and down to balance the demand. So when surface water is available, we turn it down. When less surface water is available, we turn it up. So

the -- the dash -- the vertical hatched lines that you see there represent the part that's served with the water from the desal plant blended with the Rogers plant. So if you're looking at the March through September map and you see how it's gray and then you have the cross hatch in there, that means that that area is a blend of the Kay Bailey Hutchison desalled water, plus the -- the treated surface water. And then when you go over to the October through February, you can see that that area supplied by the Kay Bailey Hutchison Plant shrinks and is confined -- it shrinks and actually moves to the east to reflect the fact that it's no longer being transported out to the northeast to supply any of that water.

Q. All right. So you mentioned the water that's sourced from the Jonathan Rogers Water Treatment Plant. Why don't we go ahead and discuss that for a minute. And so moving back to the left, that's indicated as Source 6 on the chart so why don't you describe that for us, please?

A. Okay. So, again, following the river down from the canal plant, you come to the next blue dot there, which is the Jonathan Rogers WTP or water treatment plant. So it functions to treat Rio Grande water surface water very similar to the canal plant,

except it's a newer plant adds a little bit different type of technology. It is a 60 million gallon per day plant in comparison for the 40 for the Robertson-Umbenhauer.

Q. To be clear, the Jonathan Rogers treatment plant treats Rio Grande surface water; is that right?

A. Correct.

Q. You mentioned there's a little bit of a different type of technology. What did you mean by that?

A. The Robertson-Umbenhauer plant is an older plant, so at the -- at the Rogers plant being newer, we use a different type of primary disinfectant, which is called ozone, which is much more effective, but we -- that's a newer technology that we have not been able to retrofit it as yet into the canal plant.

Q. Okay. You may have already sufficiently described this, but I just want to make sure we covered it. In terms of how the water is distributed that goes through the Jonathan Rogers Water Treatment Plant, is there anything else you wanted to add about that because we did talk about those gray areas?

A. Just to mention the one thing, that the water goes into the system, and there is a pipeline, which you can see on this map, that connects the east side

to the northeast, so water can flow all the way from the Rogers plant out into northeast, and that's the reason why we can turn off the wells in the northeast and supply that with the Rogers plant when surface water is available.

Q. Is there a name for that pipeline?

A. Not a specific name.

Q. Okay. That's fine. So let's talk -- flip back to the -- to the left-hand side there, and let's talk about the final source of water. This one is delineated by the horizontal dashed lines. What is this one?

A. Okay. So the lower valley means the area of town to the southeast of downtown close to the river, and there are a few wells that remain -- at one point in time, there were many wells in this well field, but now, we have perhaps 15 to 20 wells, and these wells, unlike the other wells that we've talked about, these go directly into the distribution system. So each individual well goes directly into the distribution system.

Q. I see.

A. They're not aggregated together.

Q. Okay. And what is the average TDS for the water out of these wells?

A. The average TDS is 862.

Q. Okay. And is this the highest of the sources?

A. This is the highest of the sources, and so we don't -- don't use these if we can help it.

Q. Okay. And similar to the questions before, it appears that from the maps that if there is surface water supply available, that these wells are not used; is that correct?

A. That's correct.

Q. Okay. So why don't we talk about -- well, let's switch gears for just a second. So, Mr. Balliew, as the president and CEO of El Paso Water and having spent almost 40 years of your career serving the El Paso community, can you describe for us the importance of surface water to the city of El Paso?

A. Surface water is very important because it's a renewable source of supply, renewable to the extent that when you have precipitation in northern New Mexico/southern Colorado that gets -- that runs off and gets sent to the Rio Grande Project, that is renewable every year. Of course, that's subject to drought, but it is renewable, as opposed to the groundwater sources that we have available in El Paso,

which are not, so especially the Hueco Bolson aquifer.

Q. All right. Does El Paso Water, in practice, emphasize the use of surface water over groundwater?

A. Yes. So we -- we arrange our system to maximize the utilization of -- of surface water, so we turn off the -- as many Hueco Bolson wells, as many Mesilla Bolson wells as possible to make sure that there is space, if you will, in the system to utilize the surface water to the best of our extent possible.

Q. And has that emphasis of surface water over groundwater changed significantly at all the last few decades?

A. We -- I would say that we just drew an exclamation point around it, so we're -- we're just more cognizant of the need to maximize surface water and to make sure that we have the ability to control the wells to fully utilize the surface water.

Q. And El Paso Water is interested in conservation; is that right?

A. Absolutely. We consider ourselves one of the leaders in conservation.

Q. So why don't we pull up New Mexico 458, and this appears to -- to me to be a document that's titled, "Digital Model for Simulated Effects of Groundwater Pumping in the Hueco Bolson, El Paso Area,

Texas, New Mexico, and Mexico." It's dated back in 1975, I believe. Are you familiar with this document, Mr. Balliew?

A. Yes, I am.

Q. Can you describe for us generally what it is, and then I just have a few questions?

A. Okay. So the Texas Water Development Board engaged the U.S. Geological Survey model, and as far as I know for the first time, to simulate the groundwater pumping in the Hueco Bolson aquifer.

Q. And did this report, which simulated for the first time the groundwater pumping in the Hueco, did this have any influence to El Paso -- on El Paso Water in El Paso Water's conservation efforts?

A. It had a great deal of influence.

Q. Can you tell us about that?

A. Yeah. Before this report came out, there was a lot of uncertainty about how the different well fields work together so you had some wells here, you had some wells over there, they were, you know, reasonably certain that it was all part of the same aquifer, but we were not sure -- we had no way of telling how pumping in one place effected pumping in another place. So this was the first time that there was a comprehensive look at the whole of the Hueco

Bolson, and what it showed was a little bit alarming, that if you continue the rate of withdrawal from the Hueco Bolson at -- at the rate that it was being withdrawn, encompassing the potential population growth in El Paso, then the Hueco Bolson, the freshwater portion of these, would be exhausted much sooner than anybody thought. I don't think anybody even conceived of depletion of the Hueco Bolson until this report came out.

Q. So how did this warning of the depletion rate of the Hueco Bolson influence El Paso Water's conservation efforts?

A. So El Paso Water had a conservation program before this but very limited. One of the things that -- that we did, which many at the time did not do is we meter all the customers, and we had some public education in terms of -- public education and outreach in terms of water conservation, but it was not until this report came out that we really started doing thing. We adjusted our rate system. So before this report came out, we had a flat rate, and that is you -- you pay the same amount of water whether you use a lot or a little on a per-volume basis. So we started increasing watts. So for the additional water use, let's say, that was in the summertime for irrigation,

customers would pay more for them. We redouble our education efforts and then we started -- we greatly expanded our reclaimed water so before this came out about 1959 or so, we supplied one golf course with treated effluent from one of our wastewater treatment plants. After this report came out, we embarked upon what became the Fred Hervey plant where we're taking wastewater, treating it all the way to drinking water quality standards, and then injecting that back into the Hueco Bolson for recharge.

Q. Okay. Now, anything --

MS. BARFIELD: You can go ahead and take that down.

Q. (BY MS. BARFIELD) In addition to the report that you just talked about, was there anything else that precipitated or fostered the conservation efforts for El Paso Water?

A. I think there were other reports that were done about the same -- following this over a period of time up through the '90s when there was similar conclusions that were drawn.

Q. Let's look at one more. This one is New Mexico 1672. This appears to be a report in the 1990 time frame by the Texas Water Development Board. Have you seen this report before, Mr. Balliew?

A. Yes. I've seen this one.

Q. Okay. What is this one?

A. So this was another report that the Texas Water Development Board prepared by themselves, and so it differs a little bit from the previous one that we looked at in that this encompasses more groundwater resources in El Paso County. So the previous report was just focusing on the Hueco Bolson. This focuses on the Hueco Bolson plus the Mesilla and the Rio Grande alluvium, as well.

Q. Okay. So what about this report, if anything, fostered even more conservation efforts on behalf of El Paso Water?

A. So this report, again, had a similar conclusion where they look at how much water is being used by each individual person and then you look at a population projection going forward into the future and so then you can see that in the future, if everybody is using the same amount of water that they were using in the past, then you have tremendous pressure on the groundwater sources of supply that we couldn't keep up so we needed additional sources of supply. So, again this, we embarked upon other what I'll put into a category of water conservation measures, which was the purple pipe system, where we

made available treated effluent primarily for irrigation purposes from the different wastewater treatment plants.

Q. Now, did the conservation efforts that you've been describing to us result in any per capita consumption changes?

A. Yes. So in the early '90s, every person in the system was using more than 200 gallons per day, and we refer to that as gallons per capita per day, and we've been able to drop that significantly where, now, we're at approximately 125, 126 gallons per person per day.

Q. Okay. Now, is one of the ways that El Paso Water conserves water, is it by reusing wastewater discharges?

A. Yes. And we do that in -- in two areas. So number one area is what we refer to as the purple pipe project. That's where we take water from the wastewater treatment plant so it would normally be discharged into the river. We provide a little bit more treatment, and then we have a separate network of pipes, pump stations, and reservoirs where we distribute that to typically large irrigation customers like parks and school playgrounds, that sort of thing, golf courses, and then, also, the Fred

Hervey plant, as I mentioned, where we take that same starting point, the wastewater, but in this case, we treat it all the way to where it meets drinking water quality standards and we inject it back into the Hueco Bolson.

Q. All right. Now, if you can estimate for us, how much of El Paso's wastewater would you estimate is based upon groundwater supplies versus surface water supplies?

A. About half of it.

Q. All right. Does El Paso have any plans to increase its wastewater -- wastewater reuse in the future?

A. Yes. So we do not anticipate that we will expand the purple pipe project at all. It pretty much has reached the end of its cost effectiveness, because as you -- as you get further and further away from the treatment plant, each incremental segment of the pipeline costs more and then as the customers get further apart from each other, it costs more to serve each individual customer. Also, the technology of treatment is much better now than it was in 1980 when the Fred Hervey plant was constructed so we are going to take that same purple pipe water, treat it through a modern four-step treatment system, and put that

directly into the potable distribution system.

Q. All right. How much of its wastewater do you think El Paso Water will reuse in the future?

A. Okay. So of the -- of the wastewater that -- that we discharge, we're going to use what -- what I would say is a little bit more than we're using right now. The reason I say that is because we have certain obligations that we have to discharge that water either into -- the effluent, that is, into the bed of the river or into the El Paso County Water Improvement District No. 1 system depending on the time of year.

Q. All right. Is there anything else that we haven't already talked about as it relates to conservation efforts by El Paso Water that you haven't told us about yet?

A. The most important water conservation tool that -- that we have is rate increases, and as we embark upon regular program of annual rate increases, as the -- as the unit price of the water goes up, the consumption of the water does go down. So that's a very effective tool that we utilize, as well.

Q. Okay. Are you familiar with the matter El Paso versus Reynolds?

A. I am.

Q. Can you describe what your familiarity is

with that matter?

A. Okay. So back in the '80s, when I started with the -- with El Paso Water, there was another period of litigation that was taking place. So at that point in time, El Paso had a plan and approached the State of New Mexico, filed permits with the state engineer's office to drill wells in the State of New Mexico and bring that groundwater into El Paso. The state engineer at the time was Steve Reynolds so that's where the name comes from.

Q. And if you know, how did the State of New Mexico react to the permits that were filed by El Paso?

A. So the State of New Mexico rejected the permits, and there was a lot of litigation over a period of many years in state court and in federal court where New Mexico was vigorously defending their water resources, and ultimately, the parties decided just to end the litigation without obtaining any of the water.

Q. Did the ending of that litigation, did it foster additional conservation efforts by El Paso Water?

A. It did foster additional conservation and some other efforts. So the general principle that --

that was communicated to me at the ending of that period of litigation was that El Paso needed to exhaust all the opportunities and resources available to it locally before we went to New Mexico and tried to get water. So as a result of that, there was more conservation, and we started down the process that ultimately led to the Kay Bailey Hutchison desalination plant.

Q. Okay. We're going to move sections, but I wanted to clarify one thing before we moved onto sections. When we were talking about the different TDS levels in the fields of, like, the Canutillo well field versus others, you had talked about -- and especially as compared to Mr. Rios' testimony, you had talked about well depth, but is there also a difference in TDS or water quality related to the valley that the wells are located in? So with that preface, what valley are the Canutillo wells located in?

A. The Canutillo wells are located in the Mesilla Valley, so that's generally north of El Paso along the Rio Grande.

Q. Okay. And does the location of those Canutillo wells in the Mesilla Valley have any effect on lower or higher TDS?

A. Yes. So if we look just at the Mesilla Bolson, as you go south from Canutillo, the water becomes increasingly brackish. So by the time you reach the populated portion of El Paso, the water is very brackish. So the freshwater extends from the Canutillo well field going north so that's in kind of the north/south direction. In the east/west direction, you have the mountain on one side that kind of constrains the Bolson and then to the -- to the west, you get back into New Mexico relatively quickly.

Q. Go ahead. I didn't mean to interrupt you.

A. And then also at depth. So at the shallow portion, it's very salty. We have an intermediate portion less so and then you have a deep portion that has, like, 200 milligrams per liter TDS. Very low.

Q. Okay. And it's a different aquifer, right?

A. Correct.

Q. Okay. All right. So let's switch gears.

MS. BARFIELD: We can take this down, please, and let's look at Balliew John Demo 1.

Q. (BY MS. BARFIELD) Now, this appears to be a May 31st, 2019, expert report of Dr. Sunding that's shown here for demonstrative purposes only. Have you seen this before?

A. I have seen this.

Q. And have you reviewed this report?

A. I have reviewed it, but I have not thoroughly studied it.

Q. Okay. Can you tell us whatever your limited understanding is of the purpose of this report?

MR. KOPP: Your Honor, before Mr. Balliew gets into this testimony, I'm just going to lodge an objection to this. Mr. Balliew is not the author of this report, and we don't believe he can authenticate it. In addition, even if this is being offered for demonstrative purposes, we believe that without the author of the report, Dr. Sunding, here to testify to its contents, that it's not appropriate to use even as a demonstrative exhibit at this time.

MS. BARFIELD: If I could respond, Your Honor.

JUDGE MELLOY: You may.

MS. BARFIELD: Thank you. As Mr. Wechsler stated yesterday, demonstrative exhibits have no evidentiary value outside of what is actually being said by the witness. The witness is simply using this report as context. He is certainly not going to comment or opine on any of the opinions that Dr. Sunding puts into the report, and if you'll let me just continue and lay the foundation, you'll see that

we're just really going to be looking at a few of his graphics.

JUDGE MELLOY: All right. Well, go ahead, but, Mr. Kopp, if you want to lay further objection as we get through this, you're free to do so.

Go ahead, Ms. Barfield.

Q. (BY MS. BARFIELD) I think we had a question pending. Mr. Balliew, if you could just tell us what your very general understanding is of the purpose of this report?

A. The purpose of this report was to document the effects of the reduced surface water availability on Texas and El Paso particularly.

Q. Who is David Sunding with The Brattle Group, if you know?

A. I believe David Sunding is an economist associated with Berkeley University.

Q. What is your particular involvement with David Sunding and The Brattle Group, if any?

A. Mr. Sunding came and requested some information from us on what projects we had done specifically to deal with, what I'll refer to as the uncertainties in surface water delivered.

Q. Okay.

MS. BARFIELD: Could we flip forward to Figure No. 7? Peder, that is on, I think, PDF Page 29. And could we focus just on the figure itself without looking at the text?

Q. (BY MS. BARFIELD) All right. Are you familiar with this figure?

A. Yes.

Q. Is this a copy of Page 2 of 773 that we just discussed in detail?

A. Yes, it is.

Q. Did you provide what we reviewed as Texas 773 to Dr. Sunding and the Brattle group?

A. Yes, I did.

Q. I notice here at the bottom within Dr. Sunding's report, it says, "Source, the City of El Paso, El Paso Water Chemical Analysis, City Water." That source is the source that we just discussed in great detail; is that correct?

A. That's correct.

Q. Could we also look at Figure 8 in the Brattle report, please, and I think that is on PDF 30. This appears to be a table that's entitled, "EPWU Production By Source Monthly Averages from 1985 to 2012." Have you seen this before?

A. Yes. This is one of the things that we

prepared for Dr. Sunding.

Q. And when you say "we prepared," what do you mean?

A. So this is a chart that is compiled from something that we refer to as the monthly pumpage and operation report. So in this pumpage and operation report by water source, we document every day how much water comes from that particular source, and so this aggregates those daily values into monthly values, and the purpose of this is just to show two things. Number one is the seasonal variation in water demand. So in the month of January, December, let's say colder winter months, you have lower demand for water. In the hot summer months like June or July, that demand goes significantly higher. That's one thing that it shows. The second thing that it shows is how the surface water and groundwater work together. So you can see that the -- that the groundwater supplied into the system is relatively constant, but then the surface water, the Rio Grande water, that is, makes up the difference between the groundwater and the total demand for that particular month.

Q. And you mentioned that this report -- figure, rather, is based upon monthly pumpage and operation reports. Did I get that right?

A. Yes.

Q. Okay. And who prepared the monthly pumpage and operation reports that is the data source for this particular figure?

A. The monthly pumpage and operation report is done by the water production section of the water utility headed currently by Jesus Acosta.

Q. And Jesus Acosta then prepares these reports or the monthly pumpage and operation reports along with the folks in his --

A. Section.

Q. -- section -- along with the folks in his section, but he doesn't pursue it to your direction and under your authority and supervisory control; is that correct?

A. Correct.

Q. Okay. Why don't we look at Figure 16 in The Brattle report, please, and this is on PDF Page 50. And then just focusing on Figure 16, are you familiar with this table?

A. Yes.

Q. Okay. And I see at the bottom under sources, it -- it lists a source. What is the source that's listed?

A. El Paso Water expenditures due to decreased

surface water allocation October 2017, Page 165.

Q. We're going to talk about that in a few minutes, but generally speaking, what is that source for the data on Figure 16?

A. So at Dr. Sunding's request, we created a report, including myself, Scott Reinert, and Fernando Rico, created a report to talk about the -- to describe the added facilities that we did to compensate for the uncertainty in the surface water supply.

Q. All right. And what does Figure 16 depict generally?

A. So, again, the data that is used is from the monthly pumpage and operation report. In this case, it's aggregated by year, so each bar there represents a particular year and so you can see it not only describes how much water is supplied during the course of the year but where it comes from. So if we look at the 2016 bar, for example, we have the medium blue representing the Rio Grande, the surface water. We have the gray bar representing the Mesilla Bolson groundwater, the dark blue representing the Hueco Bolson groundwater, and then you have the light blue, which is the Kay Bailey Hutchison Plant. Now, as I mentioned before when we were talking about that, the

Kay Bailey Hutchison plant is groundwater and it's also coming from the Hueco Bolson aquifer, but it's just the brackish portion. It's derived from the brackish portion of the aquifer.

Q. Okay. So at least from 1985 through 2016, as depicted on Figure 16, this table shows the differences in the total volume of water sourced from the Rio Grande during those years; is that right?

A. Yes.

Q. And then from the two aquifers, as well as Kay Bailey Hutchison?

A. Yes.

MS. BARFIELD: We're going to move onto Texas 0091. Before I do, Your Honor, I would move to admit for demonstrative purposes only Balliew Demo No. 1.

MR. KOPP: Your Honor, we have no objection to the specific images Ms. Barfield shows you, but I would renew my objection that the entire report not be entered as a demonstrative exhibit. This report contains a multitude of information outside of the figures that Mr. Balliew testified to that we don't think is appropriate for admission at this time.

MS. BARFIELD: Your Honor, you're muted.

Still can't hear you.

MR. DUBOIS: You're muted, Your Honor.

MS. BARFIELD: There we go.

JUDGE MELLOY: I was going to say, I will sustain the objection and admit the specific pages. Do you have those numbers available, Ms. Barfield?

MS. BARFIELD: Yes, I do. They are, of course, the cover page and then we have Figure 7 on PDF Page 29. We have Figure 8 on PDF Page 30, and we have Figure 16 on PDF Page 50.

JUDGE MELLOY: All right. Those pages will be admitted. The rest of the exhibit will not be. And that's for demonstrative purposes only. All right. You may proceed.

MS. BARFIELD: Thank you, Your Honor.

Q. (BY MS. BARFIELD) Let's take a look at Texas 0091. Mr. Balliew, is this the document that's referenced that we just discussed at the source of Figure 16 from the Brattle report?

A. Yes, it is.

Q. Okay. Have you seen this document before?

A. Yes.

Q. And what is this document?

A. So this is the document that was prepared by

myself, Scott Reinert, and Fernando Rico to document expenditures related to the decreased surface water availability.

Q. And -- and, again, you -- you told us earlier, but if you could remind us, who is Mr. Reinert?

A. Scott Reinert is our water resources manager, and Fernando Rico was the vice president -- or the chief -- pardon me, chief operations officer at the time. He has subsequently retired, but Scott is still with us.

Q. Okay. And recalling the organizational structure that we discussed at the beginning of your testimony today, do you supervise both of those individuals?

A. Yes, I do.

Q. Okay. And so their work on this report were performed pursuant to your direction and under your supervision, correct?

A. Yes. That's correct.

Q. Okay. They were primary authors on the report?

A. Yes.

Q. Were you also a primary author on this report?

A. I was.

Q. All right. Why was the report prepared, if there's any additional information you want to give us, other than you were providing information to Dr. Sunding?

A. We were providing information to Dr. Sunding on some specific activities that we had undertaken in response to reduced surface water availability, and it was limited in its scope. This was not to really talk about drought or water conservation or other things of that nature, but specifically to certain facilities and activities that we had done.

Q. All right. Let's talk about the components of the report. First of all, how is it generally organized?

A. So it's generally organized that you have a -- a contents and there's nine specific projects that are listed in there and then there's a summary of the ten projects.

Q. Okay. And of the nine specific projects that are listed here, and those are tabbed as Items 1 through 9, do those represent all of the projects undertaken by El Paso Water Utilities over the course of the last few decades to address surface water issues or were there choices made in which items you

included in this report?

A. There were choices made that resulted in us taking a subset of everything that we did. So, for example --

MR. KOPP: Your Honor -- sorry, Mr. Balliew, but, Your Honor, I'd like to object to any further testimony on this exhibit until it's admitted.

MS. BARFIELD: Your Honor, I move to admit the report.

JUDGE MELLOY: All right.

MR. KOPP: And we do object to the admission of this report, and I think, Your Honor, this goes to maybe a disagreement between the parties concerning the Trial Management Order's ruling on bifurcation. As, I think, it's already been made clear, this report contains nothing but a list of expenses that El Paso Water alleges it has incurred. As Mr. Balliew just testified, it does not contain any information about drought or population growth, so we don't think there's anything in here that's relevant to the issues of causation or liability. This really just seems to be relevant to issues of quantification of damages, which we had understood were reserved to the next phase of trial.

JUDGE MELLOY: What's your position, Ms. Barfield?

MS. BARFIELD: Your Honor, in your June 4th, 2021, order, at that time you were addressing a request for clarification of the bifurcation order that you originally included in the Trial Management Order back in April. So the Trial Management Order back in April had read, and I'm paraphrasing, that the Phase 1 trial would be liability and injury. New Mexico and perhaps other parties requested clarification, and your clarification, Your Honor, and I'm reading directly from the order at Paragraph 3 states that, "The purpose of the trial -- this phase of the trial will be limited to liability and whether Texas, as the plaintiff, and New Mexico, as the counter claimant, have sustained more than de minimus damages." What we are offering here today with Mr. Balliew's testimony is a discussion, which we haven't started yet, of certain projects that were undergone by El Paso Water to address surface water insufficiencies. There are costs associated with the projects that were undergone. These are factual issues. He is not going to offer an opinion as to whether or not the costs associated with these projects that we're going to discuss ultimately would

be from a quantitative perspective, included in a damages analysis. That's for Phase 2. That's for Dr. Sunding and The Brattle Group. What we're talking about now is just the facts, the hard facts of they had some projects, they did the projects, they completed the projects, and it cost a certain amount of money. That's what we're offering today, Your Honor.

JUDGE MELLOY: Well, I did indicate that it would be the responsibility of Texas, as part of the case in chief, and New Mexico on its counterclaim to show that they sustained some damages that were more than de minimus. So for that limited purpose only, I will admit the exhibit. I mean, I don't want to spend too much time on it because -- for two reasons. One is I don't know -- I don't know if these are even recoverable by Texas as part of their case. It's the El Paso Water District, and so that's a whole issue that will have to be separately litigated in the second phase of the trial as to what items are -- Texas may recover, assuming that they're successful on liability. And the other -- other reason is I don't, at this phase of the trial, want to get down into the weeds, so to speak, as to specific items of damages. So I'll allow some limited testimony just to show that

there are damages, and I will admit the exhibit. Thank you.

MS. BARFIELD: Thank you, Your Honor.

MR. KOPP: Sorry, Your Honor. Could I ask for a point of clarification on that ruling?

JUDGE MELLOY: Go ahead.

MR. KOPP: Thank you, Your Honor. As I understand the ruling you just made, does that mean that we should reserve our evidence on the appropriateness of the charges listed here to the next phase of trial?

JUDGE MELLOY: Yes.

MR. KOPP: Okay. Thank you, Your Honor.

Q. (BY MS. BARFIELD) Okay. So let's walk through these and get a little understanding of the types of projects undergone --

JUDGE MELLOY: Let me go back a second here. I want to emphasize, at this point, I'm not even making any indication that these are recoverable, even assuming that they are appropriate, reasonable, were, in fact, incurred. I mean, this is something that's a long way down the road as to what damages are -- are recoverable by Texas on its claim or New Mexico on its counterclaim, assuming either party is successful on the liability phase. So as I said, I

will allow some limited testimony just to show that there are damages.

MS. BARFIELD: Thank you, Your Honor. And if -- if I may, just to clarify the purpose of the testimony, as well, Mr. Kopp Is correct that David Sunding does talk about some of these things in his report. We're not going to address that with Mr. Balliew's testimony here today. The purpose is to hear from Mr. Balliew, who is the president and CEO, and who authorized these projects. He's going to tell us about the projects. We're going to simply ask him how much it cost, and we're not going to go into further detail than that. But I want to make sure that the foundation is laid for Mr. -- for Dr. Sunding to rely on later and so we don't have to bring him back again in Phase 2.

JUDGE MELLOY: Go ahead.

MS. BARFIELD: Thank you so much, Your Honor.

Q. (BY MS. BARFIELD) So let's walk through, let's talk about the first item. Turning to Item No. 1, this is labeled, "Drilling New Upper Valley Wells." Could you describe the project for Item 1?

A. Okay. So Item 1, we drilled two wells, a deep well and an intermediate well in the Canutillo

well field to provide additional water that we felt was necessary.

Q. Why did El Paso Water feel that it was necessary to drill these two additional wells?

A. Because of the reduced availability of surface water. The water, if you remember from looking at the map, the light blue water needs to expand down into the central part of town when surface water is not available, and we did not think that we had a sufficient number of wells to make that water available so we needed to drill two additional wells for that purpose.

Q. What was the total cost for El Paso Water to drill these wells?

A. The total capital cost, $1,675,802.

Q. And then there's also operation and maintenance costs; is that correct?

A. Yes. Of $209,516.29.

Q. For a grand total of?

A. $1,885,318.

Q. Okay. And I note with each of the sections for each of the item numbers, there are some attached summaries and invoices of -- and such of that nature; is that correct?

A. Yes. To try to document the cost that's

shown there.

Q. Okay. And I also note that there are several kind of inserts that state, well, the invoices are located in a separate box or aren't included within this total of 176 pages. So what's the purpose of that?

A. To reduce the volume of information in the report. So if we had some summary, let's say, like a bid tabulation that talked about how much it's going to cost for the wells, that wasn't included -- that was included, but we have to backup all the invoices that would lead up to that number are in those boxes.

Q. Okay. And what actions did you personally take, if any, to ensure the reliability of the spreadsheets that -- that tally the invoices?

A. So I talked to our people in our accounting and purchasing department and they assured me that that ties together with the costs that were actually proposed by the driller in this case and then if there were quantity adjustments, those were reflected in those invoices.

Q. Okay. And the actions that you just described, they were -- they were performed pursuant to your direction and under your supervision, the compilation of the spreadsheets; is that right?

A. That's correct.

Q. Okay. Does the process that you just described to us apply to each of these enumerated nine items, not just number one, but to all of them?

A. That is correct, all of them.

Q. Okay. And the actual work that is described in Item No. 1, the drilling of the two upper valley wells, would El Paso Water have decided to drill these wells but for the insecurity in the surface water supplies that you just described to us?

A. We would not have done that.

Q. Okay. And how are you able to say that El Paso Water made this choice on the basis of insufficiency of surface water supplies as opposed to any other reason?

A. Well, in -- in looking at the demand and comparing the demand against the availability, both the availability of surface water and the availability of groundwater, and noting that the availability of groundwater was decreasing, we had to raise the availability of groundwater.

Q. Okay. Let's talk about Item No. 2. It's labeled, "Transmission Line from Canutillo Well Field." Can you describe the Item 2 project for us?

A. So for the two wells that we talked about,

that water has to be transmitted to the upper valley water treatment plant for the arsenic treatment and then from that point, it's delivered on down and ultimately into the distribution system. So this is the cost of that -- that pipeline, which we divided up into three different phases.

Q. What was the total cost or the grand total cost, rather, for building this transmission line?

A. $11,477,291.

Q. Okay. And would El Paso Water have decided to put in this new transmission line if it weren't for the insecurity in the surface water supply that you've described to us?

A. We would not have done that.

Q. Okay. And let's talk about Item No. 3. If you could describe the Item No. 3 project, please.

A. I think this is No. 4. Did we skip one?

Q. It should start on Page 51 of 76.

A. There we go. Okay. So the -- the canal plant -- the same canal plant, the Rogers -- Robertson-Umbenhauer plant that we talked about, in order to deal with certain changes due to the uncertainty of surface water supplies, we had to make some modifications to the plant. So we talked -- we've talked so far about the -- the change in the

quantity of water, but in addition to the change in quantity, there were quality issues, as well, and the higher -- the quality issues resulted in higher silt load, which is the fine particles in the -- on the water, and then in some additional microbial content that we had to deal with. So we put in a UV system to deal with the microbial component, and then we did not specifically have to add a granular activated carbon filtration system, which we already had, but we had to change out that granular activated carbon media more frequently to compensate.

Q. And what did this work accomplish?

A. So this -- this allowed us to continue utilizing that water even at the reduced level that we had with the increased microbial load and the increased silt, we were able to deal with all those things and continue to operate the canal plant.

Q. Okay. What was the grand total cost for the work you just described to us for Item No. 3?

A. $4,489,616.

Q. Item No. 4, can you describe that work for us, please, or that project rather?

A. Okay.

MR. KOPP: Your Honor, sorry to interrupt. Before we go any farther, I'd like to

lodge a foundation objection here. I don't believe Mr. Balliew has testified that there have been any shortages of surface water to the city of El Paso.

MS. BARFIELD: You're on mute, Your Honor. I'm sorry.

JUDGE MELLOY: I seem to be having some problems with my spacer bar here. The -- I'm going to overrule that objection; however, let me go back to my prior ruling and I may have spoken too quickly, Mr. Kopp. As I understand, part of the testimony here today, Ms. Barfield, is that you want to, in essence, lay the foundation for the accuracy of this exhibit because it's going to be used by your expert, Dr. -- I'm sorry. What was his name?

MS. BARFIELD: Dr. Sunding.

JUDGE MELLOY: Dr. Sunding in the live phase of the trial, and you don't want to bring Mr. Balliew back to lay foundation at that time; is that correct?

MS. BARFIELD: Well, that is part of it, Your Honor. The other part is that these are actions and projects undertaken by El Paso Water that actually happened that just have an associated cost.

JUDGE MELLOY: I understand that, but I guess what I'm getting at is if -- if Mr. Balliew

isn't going to be coming back and this is -- and your intent is that this report would form a part of the basis for the expert report of Dr. Sunding, then I think -- I mean, you may have to cross-examine him about it, Mr. Kopp, because this may be incorporated into the expert report.

MR. KOPP: Understood, Your Honor. Thank you.

JUDGE MELLOY: You know, this -- this might -- ask your last question, and then after we finish with this item, we'll take a break, Ms. Barfield.

MS. BARFIELD: Thank you, Your Honor.

Q. (BY MS. BARFIELD) And I think the last question was on Item No. 4 for Mr. Balliew, if you could just please describe the Item 4 project for us.

A. It's a similar project to the No. 3 project, except this is the Rogers plant instead of the canal plant, and at the Rogers plant, we did a different -- we did not use the UV disinfection because for a large plant like this, it would have been very expensive, so we utilized something called chlorine dioxide. It's a different disinfection to deal with the increased microbial load, but then we also had the same need to change out the granular activated carbon more

frequently, and then we had something called the raw water channel. So the raw water channel goes from the canal where we take water from the El Paso County Water Improvement District to the plant itself, and that canal, being an earth-lined tract, had accumulated silt resulting in further cleanup that we had to do. So we had -- we felt it prudent to line that with concrete. And then in addition, once the water goes into the series of five ponds that we have at the plant, that additional silt mode that was coming in, we had to deal with at the end of the season excavate it out and dispose of. So those costs are shown here.

Q. Okay. What is the total cost for the work you just described?

A. $9,458,625.

MS. BARFIELD: Okay. Would Your Honor like to take a break at this point before we move on to the next item?

JUDGE MELLOY: If you're ready to move on, let's break until 3:15 our time.

MS. BARFIELD: Thank you, Your Honor.

JUDGE MELLOY: Thank you, everyone.

(Recess.)

JUDGE MELLOY: All right. Looks like

we're ready to resume. Ms. Barfield, you may continue.

MS. BARFIELD: Thank you, Your Honor.

Q. (BY MS. BARFIELD) Welcome back, Mr. Balliew. I think we were about to get a little information regarding Item No. 5 in the October, 2017, report prepared by El Paso Water. Could you please describe the Item No. 5 project?

A. So Item No. 5, the concept here was to take 11 of the lower valley wells. We talked about this a little bit when we went over the map. These 11 wells, the TDS had already gone over the drinking water standard, but we could put in an individual well head on each one of them, so this represents the cost of doing 11 of those wells adding the reverse osmosis system to that.

Q. All right. Why did the wells require rehabilitation?

A. The TDS was more than a thousand for each -- each well so we were unable to utilize them. These wells go directly into the distribution system, so we need to keep the water quality under a thousand to prevent customer complaints so each well had to be treated individually.

Q. Okay. And setting aside the detail of the

numbers, what is the total cost for this project that you've just described to us in Item No. 5?

A. $8,060,000.

Q. Okay. Would El Paso Water have decided to rehabilitate those lower valley wells and install the reverse osmosis well heads if it weren't for the insecurity in the surface water supply?

A. We would not.

Q. Let's look at Item No. 6, and if you could, please describe that project for us?

A. Item No. 6 refers to the replacement of the Paisano line. So the Paisano in general starts at the Canutillo well field and goes into central El Paso to the Sunset Reservoir. The other end of that system is the canal plant. So the canal plant goes up to the Sunset Reservoir, so that's the point where the Canutillo well field water and the surface water leaked, and there was a 36-inch line existing, and it could not convey enough water, again, to deal with the reduced amount of surface water it had to deal with so we replaced it with a larger 48-inch diameter water line to increase the production of water coming from the Canutillo well field to central part of town.

Q. What was the total cost for this project?

A. Well, the total cost was 18 plus million

dollars, but for the purposes of this report, the only thing that we did was to calculate the difference between the 36-inch and the 48 and so that incremental difference is $3,122,385.

Q. Okay. I understand. And would El Paso Water have decided to build this larger water line that you've described, absent the insecurity in the surface water supply from the Rio Grande?

A. No, we would not.

Q. Okay. Let's go ahead and look at Item No. 7. If you could please describe the Item No. 7 project for us.

A. Item No. 7 is -- refers to incremental increase in the production of the Kay Bailey Hutchison desalination plant, so of that 27.5 million gallon per day capacity that we talked about, we felt that 4 million gallons per day of that capacity was necessary to offset surface water. So the Kay Bailey Hutchison plant has more than one purpose. There's a drought purpose. There's also the purpose of reducing the -- the infiltration of brackish water, but for the purposes of the additional supply, we zeroed down to only 4 million gallons per day of that to replace the surface water.

Q. What's the total cost to operate the Kay

Bailey Hutchison plant?

A. The total cost of operation for this 4 million gallon per day increment, $14,795,429.

Q. Okay. Would El Paso Water have decided to forego construction of Kay Bailey Hutchison but for the insecurity in surface water supply of the Rio Grande?

A. We would not.

Q. All right. Let's look at Item No. 8. Could you please describe the Item No. 8 project for us?

A. Item No. 8 refers to well maintenance and rehabilitation. So the way that we used to do maintenance and rehabilitation for wells was on a corrective basis, so we would wait until there was a problem, then we would do the maintenance to correct that problem, but what that left us in is a position where we would have maybe multiple wells out of service, and because of the uncertainty in the surface water delivery, we needed to be able to call on these wells in an instant, so we switched from a corrective maintenance program to a preventative maintenance program. So we went through sequentially well by well doing preventative maintenance to make sure that all the wells were -- as many as possible were available to start at a moment's notice.

Q. All right. So the expenses that are described within Item No. 8, those are in addition to just typical maintenance costs; is that right?

A. Correct.

Q. Okay. And what's the total cost associated with this project?

A. $1,784,846.

Q. Okay. And then moving on to our last item, which is No. 9, could you please describe the Item No. 9 project?

A. Okay. The wells have a certain rate for electricity power that we purchase from El Paso Electric Company, and that rate is referred to as critical peak pricing, so based on the -- the season of the year and then the time of day, we pay more for that water, and the -- the idea here by El Paso Electric is that their peak is in the hot summer months, and so if you're going to use power in the hot summer months, then you're going to pay a premium for that. The wells that we've talked about normally would not be running in the peak summer months because we would have the surface water available, but to the extent that the surface water decreased, we needed to supply groundwater to meet the demand and so that meant running wells in the time period which the

critical peak pricing applied.

Q. What is the total associated cost for this particular project?

A. $15,959,410.18.

Q. Okay. Thank you for that.

MS. BARFIELD: Now, we can take this down.

Q. (BY MS. BARFIELD) What sort of projects is El Paso Water currently involved in or -- or maybe planning in the near future to address inadequacy or unreliability for surface water supplies?

A. So we have our aquifer storage recovery project. So we talked a little bit about the balance that we have to deal with between surface water availability and when we have demand in the system, so that's the reason that there's always a difference between how much water we have available to treat and how much we can treat, but the -- if we had a place to store water, in other words, we had a period of time where the demand is low and we could produce a higher amount of surface water, if we had a place to store that water, then we could save that for future use, and so that's the basic concept behind the aquifer storage and recovery is that we take that water, that increment, we treat it, put it into the ground, and

store that for future use. That's aquifer storage recovery.

Q. Is this project something that's currently underway?

A. It is -- it is in design right now.

Q. Okay. And do you have an estimate for when this project is going to be done?

A. It will be done in three years.

Q. Do you have a cost estimate for this project?

A. About $13 million.

Q. All right. Is there anything else that El Paso Water is currently involved in or planning to do to address inadequacy of surface water supplies?

A. Yes. We talked about this a little bit, as well. What we refer to as the advanced purified, so it's the next increment in our reclaimed water system where we take the purple pipe water, treat it to drinking quality water standards to put it directly into the distribution system. So that plant, the advanced purified plant, we'll do that, and we estimate that that's about 100, 115 million dollars. That plant is in design right now, also.

Q. How long will it take to be constructed?

A. About three to four years.

Q. All right. Is there anything else that you

haven't told us about yet in terms of future projects?

A. Yes. So we're also in the midst of expansion of the Kay Bailey Hutchison plant. So we have a -- a multiple-phase expansion. So the first phase is already done where we increased the capacity of the pipes in the system to move water into the plant, and then the second phase was we changed out the membranes and we put in something called an interstage booster just to increase the throughput through the reverse osmosis, and then there will be a later stage where we need to drill additional wells. But these first two stages will be done this year, and that'll give us a little bit more capacity to deliver water at the system.

Q. How many years has this project been underway?

A. It's -- this is -- we're finishing up about the third year.

Q. Oh, okay. And what's the cost estimate for the completion of the project?

A. For all of this work together, it's about $12 million.

Q. All right. Is there also a project in the works regarding importing water for Hudspeth County?

A. Yes. So Hudspeth County, which is the next

county over, we were able to purchase some land in an area where there's no renewable groundwater supply, and so we purchased that -- that land, and we also purchased in some form or fashion the right of way so that we would be able to run a pipeline from there approximately a hundred miles into El Paso. So the idea is that we would get all the land bought and paid for, secure the water right, before it was necessary to put in the wells, the pipeline and the pump station to deliver the water to El Paso, which might not be until 2030 or 2040.

Q. Do you have a cost estimate for this plan?

A. That's about an $800 million project.

Q. Okay. Mr. Balliew, would increased reliability and availability of surface water be a better solution than all of these expenditures you've described to us?

A. Yes, it would.

MS. BARFIELD: Your Honor, I have no further questions for this witness at this time.

JUDGE MELLOY: All right. Mr. Kopp, before you start, let me ask -- I want to talk to Ms. Barfield about something. What I was discussing earlier of Mr. Balliew's testimony concerning these cost items laying foundation for Dr. Sunding's

testimony, are you planning to call Dr. Sunding in the spring?

MS. BARFIELD: Yes, Your Honor.

JUDGE MELLOY: And since we're not going to be getting into damages, what is the purpose of his testimony in the spring?

MS. BARFIELD: Your Honor, he would lay a foundation for injury to Texas. There's a lot of just -- just factual explanation for the basis of the injury without any quantification of the damages. We will -- we will hold all quantification of damages that Mr. -- that Dr. Sunding opines on.

JUDGE MELLOY: Well, I'll leave it up to you, Mr. Kopp, as to how you want to handle the cross-examination, but if you want to reserve your cross of -- of -- of this witness until we get to a damages phase and we actually get to quantification of damages, I would -- I would certainly give you that opportunity to do so, but if you want to do it now, that's -- that's -- that's fine, too. I think we're really getting pretty far into the weeds of actual numbers at this point, and -- and I -- I just have to tell Mr. Balliew that he may have to come back at some point a couple years down the line if we get to that -- if we get to a trial on damages, but -- but I'll

leave that up to you, Mr. Kopp. Before I turn it over for cross -- I should ask, Mr. Dubois, do you have any questions?

MR. DUBOIS: No, Your Honor, no questions for Mr. Balliew. Thank you.

JUDGE MELLOY: Okay. All right. Mr. Kopp, you may proceed then.

MR. KOPP: Thank you, Your Honor. Based on your ruling just now, I think I may have a few high-level questions for Mr. Balliew on the Texas Exhibit 91, but we will reserve the detailed examination of that for the next phase of trial.

JUDGE MELLOY: The phase after the next phase.

MR. KOPP: Right. Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. KOPP:

Q. Hello, Mr. Balliew. I know we've met before. My name is Michael Kopp. I'm representing the State of New Mexico. I just have a few more questions for you. Starting off, I would like to ask you a little bit about the City of El Paso's use of groundwater. So during your direct testimony, we heard a lot of testimony about the different sources of water

available to the city. My question is from the early 1900s until at least around 1940, the city's water supply came solely from groundwater; is that correct?

A. In general, that's correct. In the very early days, there was only water out of the Rio Grande, but once they discovered that you could drill a well, then the -- then from that point on up until 1943, we were completely dependent upon, correct.

Q. Once the well drilling began, did the city move away from using surface water; is that correct?

A. Yes.

Q. Okay. Approximately when did that well drilling start?

A. It was probably in the 1903. I think that's the general consensus of when that began.

Q. Okay. In this early period, that groundwater the city used came solely from the Hueco Bolson; is that correct?

A. That is correct.

Q. Okay. Even after 1940, at least through the '90s, groundwater remained the primary source of supply for the city of El Paso, correct?

A. Correct.

Q. Mr. Balliew, I want to pull up an exhibit now. Let 's pull up New Mexico 2112.

JUDGE MELLOY: Mr. Kopp, let me interrupt you for just one moment. When we were going through the exhibits before, I apparently missed New Mexico Exhibit 2286 as an A exhibit, and so that exhibit is also in evidence. I don't want to forget to do that.

MR. KOPP: Thank you, Your Honor.

MS. BARFIELD: And, Your Honor, if I may, Texas does have objections noted in the objection matrix to New Mexico 2112 on the basis of foundation. There are additional hearsay and relevance objections, which --

MR. KOPP: Your Honor, if I may lay a foundation.

MS. BARFIELD: -- we'll see how it goes if he wants to lay a foundation.

JUDGE MELLOY: Go ahead.

MR. KOPP: Thank you.

Q. (BY MR. KOPP) Mr. Balliew, I'm showing you what's been marked as New Mexico 2112. Do you see that on your screen?

A. I do see it.

Q. Okay. This document is titled, "Groundwater Management of the Hueco Bolson Aquifer in El Paso County, Texas." Do you see that?

A. I do see that.

Q. If you turn to Page 2, towards the middle of the page, this indicates this was prepared for the El Paso Public Service Board, El Paso, Texas, December, 1998. Do you see that?

A. I do see that.

Q. And El Paso Public Service Board, that's another name for El Paso Water, correct?

A. Correct.

Q. Okay. Mr. Balliew, does El Paso Water keep this document in its records?

A. I've never seen the document.

Q. Okay. Does El Paso Water typically keep reports that it commissions from consulting firms like this in its records?

A. Yes. We typically do.

Q. Okay. And you are not familiar with this report?

A. I am not familiar with it, no.

Q. Okay.

MR. KOPP: Well, Your Honor, I would like to try to submit this into evidence.

MS. BARFIELD: Your Honor, objection on the basis of foundation. The witness has clearly testified he does not have any familiarity with the

document itself.

JUDGE MELLOY: Well, I guess without further foundation, I'm going to have to sustain that objection.

MR. KOPP: That's fine. We can call up a document that is in evidence to get at the information I want. Can we pull up New Mexico 1672, please?

Q. (BY MR. KOPP) You are familiar with this report, correct, Mr. Balliew?

A. Yes, I am.

Q. Okay. Can we turn to Page 5, please? So in Paragraph 1, this report indicates that it was prepared in response to passage of a bill by the Texas legislature, which called for identification and study of areas in the State that are experiencing or expected to experience within the next 20 years, critical underground water problems. Do you see that?

A. I do see that.

Q. It continues, "This study in El Paso County was conducted to address problems of overdraft and qualify deterioration with respect to the Hueco Bolson, the Mesilla Bolson, and the Rio Grande alluvium aquifers." Do you see that?

A. I do see that.

Q. Okay. Is it correct in your experience that at the time this report was prepared, El Paso County was experiencing problems of overdraft and quality deterioration with respect to the Hueco Bolson, Mesilla Bolson, and Rio Grande alluvium aquifers?

A. Yes. That was going on at that time.

Q. Okay. Mr. Balliew, are you aware that in the late 1990s, the Texas Natural Resource Conservation Commission considered declaring a priority groundwater management area in El Paso County?

A. Yes, I do remember that.

Q. And do you know what a priority groundwater management area is?

A. The -- it's a -- a regulating mechanism which you can use to control groundwater withdrawals by means of implementing a fee system.

Q. Okay. And the Texas Natural Resource Conservation Commission, that was a predecessor agency to the Texas Commission on Environmental Quality; is that correct?

A. That is correct.

Q. Okay. And the Natural Resource Conservation Commission did declare a priority groundwater management area in El Paso in the late 1990s, correct?

A. Well, I don't remember that -- that

happening. My -- my recollection was that it didn't happen, but that's the extent of my recollection.

Q. Okay. But they at least considered it, correct?

A. They did consider it, yes.

Q. Okay. And there has been no groundwater conservation district formed in El Paso County, correct?

A. Not as far as I know.

Q. Okay. So there are no restrictions on the amount of groundwater El Paso Water can pump in El Paso County?

A. Not that I'm aware.

Q. Okay. Would you agree that the majority of the water pumped in the Hueco Bolson aquifer in Texas is from City of El Paso municipal supply wells?

A. I don't have the exact numbers because there are -- Fort Bliss does do considerable amount of pumpage from the Hueco Bolson, and I don't -- I don't have the exact numbers in front of me.

Q. So you don't know whether El Paso Water pumps more or less water than Fort Bliss?

A. I don't know.

Q. Okay. Let's look back at New Mexico 1672, and this is Page 16. In Paragraph 1, it

states, "Historical large-scale groundwater withdrawals, especially from well fields located in the downtown areas of El Paso and Cuidad Juarez, have caused major water-level declines, which have significantly changed the direction and rate of flow and chemical quality of groundwater in the aquifers." Do you see that?

A. Yes, I do see that.

Q. Mr. Balliew, do you know what a cone of depression is?

A. I do.

Q. Is what is being referred to here in terms of major water-level declines, would that qualify as a cone of depression?

MS. BARFIELD: Your Honor, that calls for expert testimony outside the scope of this witness' testimony.

MR. KOPP: I believe Mr. Balliew has been qualified as an expert in El Paso Water's operations, including management of their groundwater system. I would expect he would know the answer to this.

JUDGE MELLOY: I'll let him answer. Go ahead.

A. In general, Mr. Kopp, water-level declines

refers to over a -- a broad area and a cone of depression over a smaller area.

Q. (BY MR. KOPP) So you would not characterize the water-level drawdowns beneath the city of El Paso as a cone of depression?

A. No. The water level in El Paso would -- would be decreasing, that is correct; but in some places, there would be a cone of depression created based on the higher level of pumping at that particular location.

Q. I see. So if I understand you correctly, you're saying a cone of depression is in relation to a particular well?

A. Or a particular group of wells.

Q. Okay. Would you agree, however, that the water level has declined in the groundwater table beneath the city of El Paso?

A. Yes, I would agree.

Q. Has the geographic extent of that decline increased over time?

A. I would -- I would say that the answer to that is no, not the geographic extent.

Q. So the size of the area with a drawdown in groundwater levels has not decreased?

A. Are you referring from the time this report

was written to the present or leading up to this report?

Q. Well, how about since the City of El Paso began drilling wells in, I think you said around 1903?

A. Then the answer would be yes. Since we started drilling wells, then the area has increased.

Q. Okay.

MR. KOPP: Can we pull up a demonstrative exhibit? This is New Mexico Demonstrative 20.

Q. (BY MR. KOPP) Mr. Balliew, have you ever reviewed reports or data on groundwater levels in the Hueco Bolson?

A. Yes. Perhaps not this specific one, but I've seen reports.

Q. Okay. So I'll represent to you this is a graphic showing groundwater levels in both the Mesilla Bolson and the Hueco Bolson, although the Hueco Bolson is shown on the right. Mr. Balliew, is it your understanding that groundwater levels in and around El Paso have declined over the period shown in this demonstrative exhibit?

A. Yes.

MR. KOPP: You can take that down. Let's move back to New Mexico 1672 for just a minute.

Let's go to Page 14.

Q. (BY MR. KOPP) So in the second paragraph on this page, the second sentence in that paragraph states -- actually, no, not the second sentence. Let's do the fourth sentence. "Water quality deterioration due to large withdrawals and declining water levels continues to be a problem in the El Paso area." Do you see that?

A. I do see that.

Q. Do you agree that pumping groundwater from the Hueco Bolson has contributed to a deterioration of water quality in that aquifer?

A. I would qualify my answer by saying depends, again, on the time frame that you're talking about, but for sure from the time that groundwater started to be pumped until some point in time, this was -- this was a true statement. But then based on changes that we made, we stabilized, especially either the Hueco or the Mesilla Bolson, so that it was no longer a problem.

Q. And when did that stabilization occur approximately?

A. So we did it over a period of time. So the Fred Hervey plant was one of the projects that was instrumental so we started taking wastewater,

reclaiming it, and injecting it back into the aquifer, and then the Kay Bailey Hutchison plant was the next component that came along, so there were actually the part of the problem in the water quality deterioration is groundwater movement from areas outside our well fields in towards the well fields so the Kay Bailey Hutchison plant intercepted some of that flow, thus preserving the quality of the wells in the well field.

Q. So do I understand you correctly, Mr. Balliew, that as water was pumped from the freshwater portions of the Bolson, that the change in pressure tended to draw water from the more saline portions of the aquifer?

A. Yes.

Q. Okay. I believe you discussed how as you moved east from the Franklin Mountains, the TDS levels in the groundwater in the Hueco tend to increase, correct?

A. That is correct.

Q. Do they also tend to increase the deeper one goes into the aquifer?

A. Yes. That is also correct.

Q. Okay.

MR. KOPP: Let's pull up New Mexico 243.

Q. (BY MR. KOPP) Mr. Balliew, I'm showing you a

document marked as New Mexico Exhibit 243 titled, "Meeting the Future Water Demands of El Paso." Do you see that on your screen?

A. I do see that.

Q. And your name appears on the first slide, correct?

A. Yes.

Q. Okay. Do you give presentations about El Paso Water as part of your job duties?

A. I do.

Q. Okay. Does El Paso Water maintain records of those presentations?

A. Yes.

Q. Okay. Does this appear to be a document associated with one of those presentations you gave as part of your official duties?

A. It does appear to be the first slide in a PowerPoint presentation.

MR. KOPP: Okay. Your Honor, at this time I'll move to admit New Mexico 243 into evidence.

MS. BARFIELD: Your Honor, I would object to admitting the entirety of the document until we know what questions are going to be asked regarding the entirety of the document.

JUDGE MELLOY: All right. Why don't you

ask a few more questions, Mr. Kopp.

MR. KOPP: Sure. Let's turn to Page 11.

Q. (BY MR. KOPP) The map on this page shows two aquifers, the Mesilla Bolson and the Hueco Bolson, and there is a line through the Hueco Bolson, a dotted -- or dashed, excuse me, yellow line with the designations F to the west and B to the east. Do you see that?

A. I do.

Q. And what do the labels F and B on this map indicate?

A. Freshwater and brackish water.

Q. Okay. So those are the fresher and more saline portions of the aquifer we've been discussing?

A. Correct.

Q. Okay. How do you generally define fresh groundwater at El Paso Water?

A. So, generally, freshwater would be a thousand or less milligrams per liter TDS, and brackish water would be more than a thousand.

Q. Okay.

MR. KOPP: Can we turn to Page 15?

Q. (BY MR. KOPP) So the map on this page shows a few different things. First, there are red dots in and around the city. Do you see those?

A. I do.

Q. And based on the legend, those appear to be the locations of wells drilled into the Hueco Bolson, correct?

A. Correct.

Q. Okay. And appears most, although not all of those wells are in what's labeled here as the freshwater portion of the aquifer, correct?

A. Correct.

Q. For the wells in the brackish portion, were -- was the aquifer in that area brackish when those wells were drilled?

A. In -- in some cases, it was correct. So if you'll -- you see the well that's just below the blue dot that says the Kay Bailey Hutchison plant, that particular well, when it was drilled, was already in the brackish zone, but the other ones for the most part were not brackish when they were drilled.

Q. So is the boundary between these two portions of the aquifer the fresh and the brackish, has that shifted over time?

A. It has shifted.

Q. And that's due to the infiltration of brackish water that we've discussed, correct?

A. Correct.

Q. So in the upper left corner of this map, there are also a series of yellow dots. Do you see those?

A. I do.

Q. And those are wells that are withdrawing water from the Mesilla Bolson, correct?

A. Correct.

Q. And is that the Canutillo well field that you've discussed today?

A. Yes, it is.

Q. So the first wells in the Canutillo well field, those were drilled some time in the 1950s, correct?

A. That's my understanding.

Q. Okay. And the City has pumped groundwater from the Mesilla Bolson since that time?

A. Yes.

MR. KOPP: Let's turn to Page 16 now.

Q. (BY MR. KOPP) So on this page, Mr. Balliew, there's a chart titled, "EPWU Total Water Production." EPWU is El Paso Water, correct?

A. Correct.

Q. And are the volumes labeled on this chart at the bottom as Hueco and Mesilla, does that reflect volumes of water that the City has pumped from those

respective aquifers?

A. Yes.

Q. And similarly, the amounts labeled KBH, which I think start around 2007, does that reflect water that's been produced by the desalination plant?

A. Yes.

Q. So all the water shown on this chart except for the green water, that consists of groundwater, correct?

A. That's correct.

Q. Okay. And the green water, I should add, that's labeled here as water from the Rio Grande, correct?

A. Correct.

Q. And so that would be project water?

A. Yes.

Q. So looking at this chart, it appears that until at least around 1989, a large majority of El Paso's water came from groundwater; is that correct?

A. That is correct.

Q. And even since then, the city still gets a significant portion of its supply from groundwater, correct?

A. Yes.

Q. I believe you testified that even in a full

supply year, when you have your maximum allocation from the project, around 50 percent of the city's water is still sourced from groundwater, correct?

A. That's correct.

Q. Okay. Mr. Balliew, the city of El Paso has grown quite a bit since the 1930s, correct?

A. Yes.

MR. KOPP: Your Honor, I apologize. I'm getting ahead of myself. I would like to reoffer New Mexico 243 into evidence at this time.

MS. BARFIELD: Your Honor, Texas objects to offering the document in its entirety. Mr. Kopp referred to Pages 11, Page 15, and Page 16. Texas does not object to those three pages.

MR. DUBOIS: The United States will join that objection, Your Honor.

JUDGE MELLOY: All right. Basically the same as we did with the Texas exhibit. I'll admit Pages 11, 15, and 16 of Exhibit 243 -- Texas Exhibit 243. You may proceed.

MR. KOPP: Thank you, Your Honor.

JUDGE MELLOY: Let me just ask one question about that last -- the one that's up on the screen right now. Basically, that's the same -- you had an almost identical chart in one of your exhibits,

didn't you, Ms. Barfield?

MS. BARFIELD: That's correct, Your Honor.

JUDGE MELLOY: Okay. So -- all right. Thank you. You may go ahead, Mr. Kopp.

MR. KOPP: Thank you, Your Honor.

Q. (BY MR. KOPP) So, Mr. Balliew, I think I asked you a question, and then I interrupted myself. But the city of El Paso has grown quite a bit since the 1930s, correct?

A. Yes.

Q. Okay. And it's projected to continue growing, too, isn't it?

A. Yes.

MR. KOPP: Can we pull up New Mexico 818?

Q. (BY MR. KOPP) Mr. Balliew, I'm showing you Exhibit New Mexico 818, the Far West Texas Water Plan that's dated January of 2021. This has already been admitted, but I'll just ask you, are you familiar with the Far West Texas Water Planning Group?

A. I am.

Q. Okay. And if we turn to Page 438, about halfway through that table, there are three rows for municipalities, and I'll note that on the middle row

there is Scott Reinert is listed as a committee member for El Paso. Do you see that?

A. Yes, I do.

Q. And you are listed as an alternate member for City of El Paso?

A. Correct.

Q. So did you participate in the development of this report marked as Exhibit New Mexico 818?

A. Yes, I did.

Q. I'd like to direct your attention now to Page 5, and specifically to the second paragraph on the page. The first sentence states, "El Paso, one of the fastest-growing cities in Texas, is the largest city in the region, with a year 2020 projected population of 734,031." Do you see that?

A. I do see it.

Q. Would you agree that the city of El Paso is one of the fastest-growing cities in Texas?

A. I don't have any knowledge of the growth rates of the cities in Texas.

Q. Would you agree that the city of El Paso has grown quickly since the time you've been at El Paso Water?

A. Yes.

Q. Does it continue to grow?

A. Yes, it does.

Q. Okay. Does the population cited here for the year 2020, does that appear correct to you?

A. Yes.

Q. Okay. So let's zoom back out to the main page here. So in the fourth paragraph, it states, "The regional population is projected to increase to 1,551,438 by the year 2070, which is an increase of 597,403 citizens. Most of this increase, 563,305, is projected to occur in El Paso County." Do you see that?

A. I do see that.

Q. Does EPWU -- El Paso Water, excuse me, conduct its own population growth estimates?

A. No, we don't.

Q. Do you rely on the estimates that are produced in this report?

A. We rely upon the estimates from the Texas Water Development Board which go into this report.

Q. Okay. Mr. Balliew, we've discussed how El Paso Water will sometimes use groundwater as its primary source of supply, correct?

A. Yes.

Q. And of that groundwater, a fair amount was from the Hueco Bolson. Would you agree with that

characterization?

A. Yes.

Q. And I think you mentioned in your direct testimony that El Paso Water realized some time ago perhaps starting in the 1970s that it could not meet its water supply needs indefinitely using groundwater from the Hueco Bolson, correct?

A. Correct.

Q. Okay.

MR. KOPP: Let's pull up Exhibit New Mexico 458. Actually, never mind.

Q. (BY MR. KOPP) I'm not going to ask you questions about this, Mr. Balliew. El Paso Water was not just concerned with the quantity of groundwater it was withdrawing, but also how pumping impacted water quality, correct?

A. Correct.

Q. And I think you testified that El Paso Water determined it needed to decrease the amount of freshwater it pumped in the Hueco Bolson, correct?

A. Correct.

Q. Okay. And the plan has not been to reduce pumping from the Hueco to zero; is that correct?

A. Correct. We don't feel that that is possible.

Q. So, Mr. Balliew, I --

MR. KOPP: Let's pull up Exhibit New Mexico 253.

Q. (BY MR. KOPP) So, Mr. Balliew, I'm showing you what's been marked for identification purposes as New Mexico 253. Do you see that on your screen?

A. I do see it.

Q. This document indicates it's an e-mail from you to Ed Archuleta, and that's dated July 30th, 2012. Do you see that?

A. Yes, I do see it.

Q. Mr. Archuleta, he was your predecessor as the president of El Paso Water, correct?

A. Correct.

Q. Okay. And I believe at the time this e-mail was sent, you were the vice president of operations and technical services; is that correct?

A. That's right.

Q. And did you send this document from your official work e-mail?

A. Yes.

Q. Okay. You sent it in your capacity as vice president?

A. Yes.

Q. Okay. Does El Paso Water maintain

work-related e-mails as part of its records?

A. Yes.

Q. Okay.

MR. KOPP: Your Honor, at this time I'd like to submit New Mexico's Exhibit NM 253 into evidence.

JUDGE MELLOY: Any objection?

MS. BARFIELD: Yes, Your Honor. On the basis of relevance. It's not clear what Mr. Kopp intends to use the document for.

MR. KOPP: The document contains information on pumping from the -- pumping groundwater by the city of El Paso, reclaimed water use, river allotments. I think there's a lot of relevant information in here.

JUDGE MELLOY: All right. Objection is overruled. Exhibit 253 is admitted, Texas 253 -- excuse me -- New Mexico 253.

Q. (BY MR. KOPP) Mr. Balliew, in this e-mail, you indicate you're providing answers to questions from someone named Dr. Bonart. Do you see that in the subject line?

A. I do see it.

Q. Who was Dr. Bonart?

A. Dr. Bonart is a local veterinarian, and at

the time of this e-mail if memory serves me correctly he was one of the members of the public service board.

Q. I see. So the first line states -- keep that blown up for just a second.

"Here are my answers for some of Dr. Bonart's questions. I can adjust them. I tried to make them more general unless the numbers are precise." Do you see that?

A. Yes.

Q. And below that in the document, I see some lines are in black and some are in blue. Do you see those?

A. I do see that.

Q. From that, it seems that your responses are the blue text in Exhibit NM 253; is that fair?

A. I think that is correct.

Q. Okay. If you look down the e-mail, let's get rid of that, do you see a line that reads, "Hueco Bolson sustainable equals 45K acre-feet per year"?

A. Yes.

Q. Okay. Is it correct that El Paso Water considers pumping from the Hueco in an amount less than 45,000 acre-feet per year on average to be a sustainable amount?

A. At the time that this was written, that's

probably correct statement.

Q. Does El Paso -- sorry. I didn't mean to interrupt you, Mr. Balliew.

A. It may still be correct. I just haven't looked at that number in a while.

Q. Okay. So just after that, you stated, "This number is an average number. During droughts, the number can go up. During the last ten years, we have pumped less than 45,000 in eight years. We can also increase the recharge of the Bolson from the Rio Grande during full allotment years." Do you see that?

A. I do see that.

Q. This e-mail was sent in 2012. Is the ten-year period you're referring to in this e-mail from 2002 to 2011?

A. Plus or minus one year, yes.

Q. Okay. So during this period in eight of the ten years, is it correct that you pumped from the Hueco Bolson at what EPW -- El Paso Water considered to be a sustainable level?

A. Yes.

Q. Okay. And there were several years of surface water shortage during this period. Do you agree with that?

A. So we're ending this period at 2012, so that

means the beginning of the period was 2000, so there was at least one period of shortage in there, the 2002 year, yes.

Q. Okay. But it's your recollection that the other years during that period, you generally had full surface supplies?

A. Yes.

Q. Okay. Let's get rid of that. Looking a bit farther down this e-mail, do you see the line reading, "Full river allotment, 58K per acre-feet per year"?

A. Yes.

MR. KOPP: Go ahead and blow up the text below it, too.

Q. (BY MR. KOPP) Below that, you state, "We have water rights for 70,000 acre-feet per year. The most we have treated is 61,000 acre-feet per year." Do you see that?

A. Yes.

Q. Okay. And I think you stated earlier that the most you treated was around 62,000. Is it somewhere in that ballpark, correct?

A. Yes, that's correct.

Q. Okay. Is it still the case that the most surface water you have the capacity to treat is around

61 or 62,000 acre-feet?

A. When -- I'm going to give you a little bit of a qualification there because demand is a part of that equation. So we have the capacity, being the treatment plant capacity, to treat more than that, but in general, the demand in the system will restrict us to the 62,000 acre-feet unless we have the water storage system that I talked about.

Q. Sure. So perhaps once the aquifer storage and recovery system is in place, you could treat more than 62,000?

A. Yes.

Q. Okay. And then I'm just curious. It says there, "Full river allotment, 58K acre-feet per year." Does El Paso Water consider 58,000 acre-feet per year to be its full allotment for planning purposes?

A. For planning purposes right now, I think that we would use the number 60, 62,000, somewhere in there.

Q. Okay.

MR. KOPP: All right. Let's pull that down.

Q. (BY MR. KOPP) Mr. Balliew, I'd like to ask you a little bit now about El Paso's use of surface water. So I believe you testified earlier that El

Paso Water has approximately 70,000 acre-feet of surface water rights from the project, correct?

A. Well, that was -- that was in that document that we just looked at, but somewhere, depending on -- every year we add a little bit of increment in terms of the leased water, the water rights assignments that we get, so it's probably fairly close to that number.

Q. Okay. And I believe you also testified that El Paso Water has acquired those rights by purchasing project lands or leasing the right to use water from those lands, correct?

A. Correct.

Q. And I think you also testified that El Paso has signed contracts with the United States and EP1 that allow these purchases and leases, correct?

A. Did you say that I said that?

Q. Well, maybe I'm getting confused. Has El Paso signed contracts with the United States and EP1 to allow it to purchase and lease project lands and project water?

A. We have a number of contracts, yes, and I think that -- that that is a correct statement. Not sure about all of them, but at least some of them.

Q. Does El Paso Water use any surface water from the project for which it does not have a contract?

A. No.

Q. Okay. And I believe the City of El Paso began to use surface water around 1941 when it signed its first contract, correct?

A. Correct.

Q. Okay. I want to go through several of these contracts now. I'll try to do this rather quickly.

MR. KOPP: Can we pull up Texas 88?

Q. (BY MR. KOPP) Okay. So, Mr. Balliew, I'm showing you what's been marked as Texas 88. This is titled, "Contract between The United States of America and The City of El Paso and El Paso County Water Improvement district," dated February 18, 1941. Do you see that?

A. I do see that.

Q. Are you familiar with this agreement?

A. I am familiar. If you allow me to make a little bit of correction. This date is 1941. You mentioned that was the first date that we started utilizing the water, but the Robertson plant was actually not constructed in 1943 so --

Q. Oh, okay.

A. But, yes, the contract came first and then the water treatment plant.

Q. Okay. Thank you for the clarification. I

believe this contract has already been testified to by a few witnesses that it generally allows the City to purchase a certain amount of project lands and use the water associated with those lands, correct?

A. I'm not familiar, as I told you in my deposition, with the -- with the contracts themselves. From my stand point, what we have is a system where all of these contracts get boiled down to a spreadsheet, and that spreadsheet then shows how much water that we are able to get. Each contract has a little line item in there with -- with the fine print and then how much money we pay for the water at the end of the day. So I couldn't tell you what's in each individual contract because these contracts have been around for a long time and so, now, what we have is a very simple way of looking at it that we can take water, and there's a simple spreadsheet that shows how much we can take in each contract and what the total amount we pay the district is for that water.

Q. Okay. Fair enough.

MR. KOPP: Well, let's go ahead and take this down. Let's pull up Exhibit New Mexico 202.

Q. (BY MR. KOPP) So, Mr. Balliew, I'm showing you what's been marked as Exhibit New Mexico 202. This document states -- it is a letter from Dr. Al

Blair. I believe he's the consultant and district engineer for EP1, to Fernie Rico. You mentioned him earlier. He's listed here as the chief operating officer for El Paso Water. Do you see that?

A. I do see it.

Q. It's dated January 23rd, 2018. Do you see that?

A. Yes.

Q. Okay. And it states it's in regard to final charges for 2017 under the 2001 implementing contract. Do you see that?

A. Right.

Q. And if you look at the CC line, it appears you were copied on this letter, correct?

A. Yes.

Q. Okay. And is this document part of El Paso Water's records?

A. Yes. I'm sure we would have it.

MR. KOPP: Your Honor, at this time I'd like to submit Exhibit New Mexico 202 into evidence.

JUDGE MELLOY: Did you say 202?

MR. KOPP: Yes.

JUDGE MELLOY: This says 141. I might be getting it mixed up here.

MR. KOPP: I'm seeing 202 on my screen,

Your Honor.

JUDGE MELLOY: Just a second.

MR. KOPP: Is anybody else seeing 141?

MS. BARFIELD: No. I have 202 on my end, as well.

JUDGE MELLOY: All right. I have -- oh, I'm sorry. My screen is cutting off the bottom. I was -- I saw that Texas versus NM No. 141, and then -- okay. I'm -- what's the 141 refer to?

MR. KOPP: I believe, Your Honor, that's just the case number in the Supreme Court docket.

JUDGE MELLOY: Oh, okay. All right. I'm sorry. Ms. Barfield, do you have an objection?

MS. BARFIELD: No, Your Honor.

JUDGE MELLOY: All right. New Mexico 202 is admitted.

Q. (BY MR. KOPP) Mr. Balliew, you were just discussing a spreadsheet that you have that shows the different El Paso Water contracts for Project water and the amount of water you can receive. Is this the spreadsheet you were referring to?

A. No. It's not the one I was referring to. This is -- this is the spreadsheet that's -- that's maintained by the District. We have our own spreadsheet. So this is -- this is what we refer to

as the invoice so the bill, how much we have to pay the District for the water. So we compare this against our own spreadsheet to make sure that the numbers jive, and then we would issue the payment to the District.

Q. I see. But you're familiar with the document shown here as New Mexico 202?

A. Yes.

Q. Okay. Does El Paso Water receive a letter like Exhibit New Mexico 202 from EP1 every year?

A. Typically, yes.

Q. Okay. So I was just asking you a question about the 1941 contract. If you look on the leftmost column, the one labeled "contract," do you see the first line there says 1941 PSB contract owned lands?

A. Yes.

Q. And the next column to the right is labeled irrigable acres. Do you see that?

A. Yes.

Q. So in the row for the 1941 PSB contract, it shows that there are 2,000 acres of irrigable land. Do you see that?

A. Yes.

Q. And is that the volume of lands that -- the number of acres -- excuse me -- that El Paso Water has

purchased pursuant to this 1941 contract?

MS. BARFIELD: Objection; lacks foundation.

Q. (BY MR. KOPP) Do you know whether this is the number of acres that El Paso Water has purchased pursuant to this contract?

A. Well, when you say El Paso purchased, the -- my understand -- my recollection of the 1941 contract was that this was a pot of land that was put together that was funded by the United States Army ultimately to piece together the water that would be used for the Robertson-Umbenhauer plant, which they also financed. So I'm not sure El Paso purchased that land or whether it was the federal government, but somehow the land did end up in our inventory.

Q. El Paso does own that land today, correct?

A. Yes.

Q. The next column over from irrigable lands is labeled, "Allocation, acre-feet per acre." Do you see that?

A. I do see that.

Q. Below that, it lists the number 3.5. Do you see that?

A. Yes.

Q. Is it your understanding that 3.5 acre-feet

per acre is the maximum allocation that these 2,000 acres can receive from the project?

A. Yes.

Q. Okay. So in this particular -- in this particular year, the allocation to those lands was 7,000 acre-feet in the next column over. Do you see that?

A. Yes.

Q. Okay. I'm going to just leave this exhibit up, but let's move down to the next line. On the left it says, "1949 Excess Water." Do you see that?

A. Yes.

Q. Mr. Balliew, are you familiar with a 1949 contract between the City of El Paso, EP1, and the Bureau of Reclamation that allows the City of El Paso to use excess and flood waters?

A. I'm not generally familiar with it.

Q. Are you aware that such a contract exists?

A. Well, I see that line on this -- on this report, so I presume that it does exist, but I don't think I've ever seen it.

MR. KOPP: Okay. Can we pull up really quickly US-79, and can you move to the next page?

Q. (BY MR. KOPP) Mr. Balliew, this exhibit was previously admitted, but I'll represent to you that

this is the contract I was just discussing. You're not familiar with this agreement?

A. No.

Q. Okay.

MR. KOPP: Can we go back to New Mexico 202?

Q. (BY MR. KOPP) So looking, again, at the row for 1949 excess water, I will note that the columns to the right of that either say N/A or have no values in them. Do you see that?

A. Yes.

Q. Have you ever seen any positive values in this row on these invoices, I think you called them, from EP1?

A. I do not recall having ever seen any numbers in that row.

Q. Okay. So the best of your knowledge, El Paso Water has never used any project surface water that's been charged under this particular agreement?

A. Not to the best of my knowledge.

Q. Okay. Let's look now at US-80. So, Mr. Balliew, I'm showing you what's been marked as Exhibit US-80, which says it's also a contract permitting the City of El Paso to acquire additional water supply for municipal purposes, and this is dated

December 20th, 1962 at the top. Do you see that?

A. I do see it.

MS. BARFIELD: Excuse me. I need to object. In as much as this is not on the witness' cross-examination list. Mr. Kopp, if I'm wrong, please let me know, but I'm flipping through very quickly trying to -- I do not see it.

MR. KOPP: My apologies, Theresa. I think we sent this to you before this particular exhibit was admitted. We had this on our list as New Mexico 427, but then it came in yesterday as US-80.

MS. BARFIELD: Thank you for the clarification.

Q. (BY MR. KOPP) I'm sorry, Mr. Balliew. Are you familiar with this agreement?

A. I know there is a 1962 contract, yes.

Q. Okay.

A. As far as the details, I'm not familiar, and I don't look at it.

Q. Okay. Are you generally aware, I think Dr. Blair testified this agreement allows El Paso Water to lease water from project lands and use that water for municipal purposes?

A. I do have that general understanding.

Q. Okay. Do you understand the tracts the City

leases have to be 2 acres or less under this agreement?

A. Yes.

Q. And I believe they also need to be within city limits of El Paso; is that correct?

A. Yes.

Q. Are you aware of any limitation on the number of acres El Paso Water can lease water from under this agreement?

A. I am not aware of a limitation.

Q. Okay. And the City has leased water from Project lands that meet these criteria, correct?

A. Yes.

Q. Okay.

MR. KOPP: Can we go back to New Mexico 202?

Q. (BY MR. KOPP) So looking back on the left side again, I think the third row down under contract, it says, "1962 PSB Contract Leases." Do you see that?

A. Yes.

Q. And the next column over to the right, it says 6,022.61. Is that the approximate number of acres El Paso Water has leased as of the date of this letter?

A. Yes.

Q. Okay. And that number changes pretty regularly, though, correct?

A. Yes. That should go up every year.

Q. Okay. And did I understand you correctly to testify earlier that El Paso Water has around 20,000 acres of land leased now; is that correct?

A. No. What I was referring to there was the total of the leased purchased for the lower valley in all those pieces that put together the amount of water that we withdraw through our surface water treatment plants.

Q. I see. So that 20,000 figure referred to lands that were leased by the Lower Valley Water District, as well?

A. And the owned lands, the whole --

Q. Sure.

A. -- land that we're able to obtain water from.

Q. Okay. Thank you for that clarification. so back on Exhibit 202, I believe next to that 6,022.61 figure, in the allocation acre-feet per acre column, it says 3.5. Do you see that?

A. Yes, I do.

Q. Is it correct that that is the maximum allocation these leased lands can receive per acre?

A. I -- yes. That's my understanding.

Q. Okay.

MR. KOPP: Let's pull up New Mexico 87.

Q. (BY MR. KOPP) Do you recognize this document, Mr. Balliew? I'll represent to you that it was previously admitted.

A. Yes.

Q. Okay. This says it's a contract regarding delivery of water to the El Paso County Lower Valley Water District Authority, correct?

A. That is what it says.

Q. Okay. So I believe yesterday, Mr. Reyes from EP1 testified that Lower Valley Water District is a water district in the southeastern portion of El Paso County; is that correct?

A. Yes.

Q. Okay. And El Paso Water diverts and treats water -- surface water, I should say, on the Lower Valley Water District's behalf and delivers it to the lower valley water district, correct?

A. Yes.

Q. And El Paso Water also treats lower valley water district's wastewater, correct?

A. Yes.

Q. Okay. I believe Mr. Reyes also testified that the lower valley water district leases water from

Project lands; is that right?

A. I don't have any direct knowledge of that.

Q. Okay. Let's look back at New Mexico 202 then for a moment. So on the left side under the row 1962 PSB contract leases, do you see the row that says, "1988 LVWD contract owned lands" --

A. Yes.

Q. -- and then below that, "1988 LVWD contract leases"?

A. I do see that.

Q. Okay. So in the owned lands row, the next column over states that there are 1.25 acres of irrigable land that appear to be owned by the lower valley water district. Do you see that?

A. I do see it.

Q. Is that correct in your experience?

A. I don't really have any recollection of that.

Q. Okay. Fair enough. The next row down reflects that there are 3,729.92 acres owned by the lower valley water district; is that correct?

A. That is what it says there, yes.

Q. Sure. So if we add all those totals up together, it's reflecting at this time, and this is excluding the 2001 contract lands, which we haven't covered yet, there were 11,753.78 acres owned or

leased between the two entities; is that what's shown here?

A. Yes.

Q. Okay. And your testimony is that that number has increased since that time, correct?

A. Yes.

Q. Okay. Mr. Balliew, for any of these contracts we've just been discussing, do you know whether any studies were conducted of impacts to project return flows from transferring this water to municipal use?

A. I'm not aware of any such studies.

Q. Okay.

MR. KOPP: All right. Let's pull up US-116. Can you turn to Page 3?

Q. (BY MR. KOPP) Mr. Balliew, this document that I've pulled up, US-116, was previously admitted. This is -- says it's a contract, implementing third-party contract among the Bureau of Reclamation, EP1, and the City of El Paso Public Service Board for conversion of Rio Grande Project water to municipal use. Do you see that?

A. Yes.

Q. And are you familiar with this agreement?

A. I am familiar that the agreement exists, and

I generally am aware of this sewage effluent exchange, but, again, not the details of the contract specifically.

Q. Fair enough. And by, "sewage effluent exchange," you're referring to the fact that this contract requires the City of El Paso to deliver certain amounts of sewage effluent to EP1, correct?

A. Yes.

Q. Okay. I want to just really touch on a few subjects in here. I know this is a long, complicated contract, but can I direct your attention to Page 12. So this is actually Paragraph 7A(1), where it starts at the bottom of the previous page, Page 11. But four lines down on Page 12, it refers to the fact, says, "During calendar year 2002 and each calendar year thereafter, in addition to the water supplied to the city pursuant to the existing contracts, subject to applicable law, subject to availability, subject to Section 7A(2) below, the District shall sell and deliver to the city at the point of delivery and the City shall purchase from the District not more than 28,116 acre-feet of district water." Do you see that?

A. Yes.

Q. I believe yesterday, Mr. Reyes testified that this 28,116 acre-feet figure, that's the amount of

water that El Paso Water can purchase under this agreement. Do you agree with that?

A. Looks like that's what it says.

Q. Fair enough. And this is in addition to amounts that El Paso Water receives under the prior contracts we've discussed, correct?

A. I would assume so.

Q. Okay. Let's turn to Page 18 now, and let's look at the first sentence under Paragraph 8A. So this states, "From February 15 through October 15 each year, the City shall deliver into the American Canal Extension not less than 12,000 acre-feet of usable sewage effluent from the Haskell Street Wastewater Treatment Plant." Do you see that?

A. I do see that.

Q. WWTP, I should say that means wastewater treatment plant, correct?

A. Correct.

Q. Okay. Does El Paso Water, in fact, discharge its treated sewage effluent from the Haskell Street Wastewater Plant into the American Canal Extension?

A. Most of the time, yes.

Q. Okay. Under what circumstances would El Paso Water not discharge water into the American Canal Extension?

A. I think at the direction of the El Paso County Water Improvement District No. 1. For example, if they were going to do some sort of canal maintenance or something like that, we would discharge directly into the river.

Q. I believe that appears here in Paragraph 8A a little farther down.

MR. KOPP: Can you zoom out for a minute?

Q. (BY MR. KOPP) I believe that's the third sentence here beginning, I think, five lines down. It says, "Notwithstanding anything to the contrary herein, the District reserves the right to refuse to accept any effluent and to require the City to discharge the same directly into the Rio Grande." Do you see that?

A. I do see that.

Q. To the best of your knowledge, you mentioned -- let me back up there. You mentioned the District might tell you to discharge effluent to the Rio Grande if they were doing canal maintenance, correct?

A. That is just one example. There would be other reasons why they would do that.

Q. Sure. In your experience, though, have they ever directed the City of El Paso to discharge water

from the Haskell Street plant to the Rio Grande because of quality concerns?

A. I don't recall anything of that nature.

Q. Okay. Let's turn to Page 20. And I want to look at the first sentence under Paragraph 9A(1). This is kind of a long sentence, but it refers to each acre of land owned by the City, but in no case more than 1,000 acres -- I'm skipping the parenthetical. "During the term hereof the district shall provide annually to the city and the city shall purchase from the district the total quantity of district water which in such calendar year the owner of the lands listed on Exhibit B would have been entitled to receive from the District." Do you see that?

A. Yes.

Q. Mr. Balliew, is it your understanding that this contract authorized the City of El Paso to purchase additional acres -- more Project lands, I should say, than it had purchased prior to 2001?

A. Yes.

Q. And is that the 1,000 acres shown here?

A. Yes.

Q. And it states down there at the very bottom that, "Such quantity shall never exceed 4 acre-feet of district water per acre of land." Do you see that?

A. I do see that.

Q. Do you know if the City of El Paso does, in fact, receive up to 4 acre-feet per acre of district water for this thousand acres of land?

A. I think that does correspond with the invoice.

Q. Okay. But to the best of your knowledge, for the prior contracts that we discussed with the 3.5 acre-feet per acre limitation, that's still in place, correct?

A. Yes.

Q. I want to just highlight one more provision from this agreement.

MR. KOPP: Can we turn to Page 28? And let's highlight Paragraph 12A.

Q. (BY MR. KOPP) So this refers in Line 9 here to the obligation of City to deliver other usable sewage effluent. Do you see that?

A. Yes.

Q. And then it states, "In addition to any usable sewage effluent, the City shall annually deliver to the Rio Grande upstream of American Diversion Dam to the American Canal or its extension, to the Riverside Canal, or to the Riverside Intercepting Drain, other usable sewage effluent." Do

you see that?

A. Yes.

Q. And I'm not going to continue on. There's a fairly lengthy recitation here of a formula, but is it your understanding that El Paso Water generally delivers treated sewage effluent to EP1 besides the effluent from the Haskell Street plant?

A. Yes.

Q. Okay. And is this effluent generally delivered between February 15th and October 15th of each year?

A. Well, I think the -- I think the delivery does not -- is not restricted to that time frame. I think that time frame is the requirement.

Q. I see. So do you deliver sewage effluent year round to EP1?

A. Yes.

Q. Okay.

A. Or to the river, again, depending upon where they want it delivered.

Q. Sure. I'm sorry. I misspoke earlier when I said this was the last question. I do want to look at one more paragraph here. Let's next look at Paragraph 12B(1), which is at the bottom of the page. So there's kind of a lot to unpack in this paragraph, but

I want to start with this first sentence that refers to, "The underflow of the Rio Grande upstream of the American Diversion Dam captured each year during the term hereof by the City." Do you see that?

A. Yes.

Q. Do you know what's referred to here as "the underflow of the Rio Grande captured each year during the term by the City"?

A. No, I don't.

Q. The Canutillo well field is located upstream from the American Dam, correct?

A. Correct.

Q. And are you aware whether there's any requirement that the City offset the impacts of pumping from that well field?

A. Yes. That is -- yes, I do recall that.

Q. Okay. Can we look very quickly at the top of the next page here. So this states that, "Sewage effluent must be delivered in a quantity not less than 160 percent of such underflow in addition to the quantity of other usable effluent required under Section 12A above." Do you see that?

A. Yes.

Q. Is that requirement the -- that the City deliver not less than 160 percent of such underflow,

is that the offset requirement that I just asked you about regarding the Canutillo well field?

A. Now that I see this, I think that's correct.

Q. Okay. The amount of underflow that the Canutillo well field captures, that's determined using a model, correct?

A. Yes. It's my understanding that that is done by the Bureau of Reclamation.

Q. Okay. And is it correct that EP -- El Paso Water typically is not able to discharge enough effluent in this area to meet or exceed that 160 percent requirement?

A. Yes.

Q. And when El Paso Water does not meet this discharge requirement, it gets charged for the shortfall as the surface water delivery; is that correct?

A. That is my understanding.

Q. Okay. And the Canutillo well field, I think we established, was first -- let me rephrase that.

The Canutillo wells were first drilled in the 1950s, correct?

A. Yes.

Q. Okay. Let's pull up New Mexico -- Joint, excuse me, 410. Mr. Balliew, I'm showing you what's

been marked as Exhibit Joint 410. This states it's a memorandum of understanding between El Paso Water Utilities and El Paso County Improvement District No. 1 regarding other usable sewage effluent under the 2001 contract. Do you see that?

A. Yes.

Q. This document was admitted earlier, but I just want to look at Page 3 here, and your signature appears on that page. Do you see that?

A. Yes.

Q. Are you familiar with this MOU?

A. I am familiar with it.

Q. Okay. So on Page 1, the second paragraph states, "The district and EPWU staff agreed that under the 2001 contract, the following amounts of treated sewage effluent are either obligated to the District or available to EPWU, as shown in the table below." Do you see that?

A. Yes.

Q. We just looked at a -- a couple of provisions in that 2001 contract regarding sewage effluent that El Paso Water provides to EP1, and I just want to try to understand that a little better. Do you know if the 2001 contract referred to here is the -- the same 2001 contract we were just discussing?

A. I'm sure it is, yes.

Q. Okay. So if you look on the left, the first five rows, those are under the heading, "February 15 to October 15, 242 days." Do you see that?

A. Yes.

Q. Okay. In the bottom half of the table under the heading, "Annual 365 days," I believe that shows El Paso Water's annual obligations to provide effluent to EP1; is that correct?

A. Yes.

Q. Okay. To the right, there are two columns, one labeled "2014 obligation," and one labeled "full allocation year obligation." Do you see that?

A. Yes.

Q. I'm going to highlight the "full allocation year obligation" column. Looking at this column, Mr. Balliew, does this accurately reflect how much effluent El Paso Water generally has available in a full supply year?

A. I don't recall specifically the numbers. I would have to have that converted from acre-feet to million gallons per day which is what I normally think about when I think about wastewater discharges.

Q. Sure. Do you have any reason to believe the numbers on this document are incorrect?

A. No.

Q. Okay. Currently, El Paso Water provides much of its effluent to EP1, correct?

A. Yes.

Q. And that includes the amounts that it's required to provide under contract, correct?

A. Yes.

Q. And even for amounts in excess of the contractual requirements, EPW -- El Paso Water, excuse me, provides most of that effluent to EP1, as well, correct?

A. Yes. Most of it.

Q. Okay. You discussed reclaimed water earlier, though. It sounds like El Paso Water has plans to use some of this additional effluent for some new reclaimed water projects; is that fair?

A. Yes. So when -- one of the little caveats I want to make in here is that Mr. Rios also mentioned that the Rio Bosque wetlands. So there is some of this effluent that is put on the Rio Bosque wetlands, and there is a timetable that's associated with that. But having said that, for the increased usage, there is a small amount of increased usage, but there's additional flow that comes into the system. We're talking specifically about the Bustamonte plant.

That's the one that's in question here. When we build our advanced purifying plant, we're going to take a portion of that Bustamonte effluent, treat it, and put it into the system as potable water, but from the time this document here was created, there's additional flow that's going in to the Bustamonte plant. So the general idea is that we're not going to take any of the effluent that we're obligated to supply to the district, that it would be from additional effluent that comes into the plant.

Q. I understand. Thank you. Does El Paso Water want to increase its use of reclaimed water so long as it's not violating those contractual requirements?

A. We want to be open to the possibility. That advanced purified plant that we talked about is the only one at this point in time that we're foreseeing in -- in the future. That doesn't mean that there won't be some point where we might want to do that, but at this point in time, that's the only plant.

Q. I understand. But if you did increase your other uses of reclaimed water, perhaps expanding the advanced purification system that you mentioned, you would have less water to give to EP1 overall, correct?

A. When we say less water, that's -- we need to compare one point in time to the other, because every

year when we have more customers, we're delivering more water to those customers, there's more effluent that's created. so there's more effluent that goes into the plants, more effluent that goes out of the plants. We may retain a portion of that additional effluent, but in general, our -- our idea is that other than the advanced purifying plant, that that effluent would continue into the District's system.

Q. But beyond the -- the contractual requirements, you would not be required to continue giving that effluent to EP1, correct?

A. Correct.

Q. Okay. And we just discussed how the Haskell Wastewater Plant -- the Haskell Street Wastewater Plant can discharge to the American Canal Extension or to the Rio Grande, correct?

A. Yes.

Q. Before the American Canal Extension was built, the Haskell Street Plant discharged all of its effluent to the Rio Grande, correct?

A. I think that's correct.

Q. Okay. Mr. Balliew, would you agree that the quality of the surface water you receive from the Project through EP1 is generally pretty good?

A. Generally, yes.

Q. And the quality of the effluent you provide EP1, specifically in reference to its TDS levels, is generally poorer than the quality of the Project surface water you receive, correct?

A. Yes.

MR. KOPP: Let's pull up Exhibit New Mexico 198.

Q. (BY MR. KOPP) Mr. Balliew, I'm showing you a document that's been marked as Exhibit New Mexico 198. It's titled, "Interim Agreement Regarding Forbearance." It's between the Bureau of Reclamation, EP1, and the City of El Paso Public Service Board. Do you see that?

A. No. If you'll give me just a minute, the video seems to be frozen here.

Q. Oh, sure.

A. Just hang on one second.

Q. Mr. Balliew, do you see the document marked as Exhibit NM-198 now?

A. Yes.

Q. Okay. And this states it's, "An interim agreement regarding forbearance between the Bureau of Reclamation, El Paso County Water Improvement District No. 1, and the City of El Paso Public Service Board." Do you see that?

A. Yes.

Q. Are you generally familiar with this agreement, Mr. Balliew?

A. Yes, I am.

Q. So let's turn to Page 4 on this, and I want to look at the sentence in Paragraph 4A. It's kind of a long sentence so I'm not going to read the whole thing, but generally at the beginning it says, "The City shall have the right to enter into contracts defined as forbearance contracts with owners of District Water Rights Land by the terms of which the landowner agree to forbear all or a portion of the district water which the landowners are entitled to receive from year to year from the District and to assign to the City the right to receive all or a portion of that District Water." Do you see that?

A. Yes. I see that.

Q. Do you agree that a forbearance contract, as described here, appears to be short-term agreement with Project landowner to allow El Paso Water to use that landowner's project water?

A. Yes.

Q. Did El Paso Water ever execute any forbearance agreements with El Paso landowners?

A. No. Practically speaking, there was a

difficulty that arose, and that difficulty has to do with how the water is delivered. So in a drought situation, let's say that normally it would be 4 acre-feet allotment, and let's say that it was 2, but the time period was the same, from mid March to mid October, then something like this would make sense where we can all plan out in advance and be able to take advantage of this, but practically speaking, what's happened in the drought is that that time frame is compressed so you have -- might have only 35 days instead of 210 days. So then you would go through all this trouble to execute this forbearance contract. You would only have a limited window of time to -- to execute it, but during that 35 days, we have the whole allotment to treat at that point in time. So we have enough surface water to treat during that short time frame that we can't take any of this additional forbearance water, so just practically speaking, didn't work out.

Q. Understood. Thank you for that explanation. So it's correct then that the El Paso Water does not have any forbearance contracts active today?

A. Correct.

Q. Okay. I do want to ask you one more question about this before we move on. From where the

highlighting stops, the sentence continues down a couple of lines, and then you see the next line down, it says, "Subject to the reservation by the District of 15 percent of the District water forborne by such owners, such reservation by the District being made to insure mitigation of any adverse impact on the District." Do you see that?

A. I see that.

Q. Okay. Do you know what's meant here by mitigation of any adverse impact on the District?

A. No.

Q. Okay.

MR. KOPP: All right. Let's pull up New Mexico 199. Can you go to the next page? The next page. Okay. This is what I want.

Q. (BY MR. KOPP) So, Mr. Balliew, I'm showing you what's been marked as New Mexico Exhibit 199. Do you have that on your screen?

A. Yes.

Q. Okay. This states it's an amendment to the 2001 -- excuse me -- the first amendment to the Rio Grande project implementing third-party contract between the Bureau of Reclamation, EP1, and the El Paso Water. Do you see that?

A. I see that.

Q. And this is in reference to, I think it says in the second line down, under this amendment it's in reference to the June 11, 2001, contract between those parties, correct?

A. Yes. I see that.

Q. Okay. Do you recognize this agreement?

A. I'm not generally familiar with this particular agreement.

Q. Okay. Are you aware that the 2001 contract was amended at a later date?

A. Yes.

Q. Okay. Turn to Page -- actually, no, this is the correct page. Just need to zoom out. So let's look at that paragraph there up under 9A(1). So this says it replaces Paragraph 9A1 of the 2001 contract with the following, and this is a long sentence, but in the fourth line down, it refers to 1,250 acres. Do you see that?

A. Yes.

Q. Okay. Mr. Balliew, is it your understanding that the 2001 contract was amended to allow the City to require an additional 1,250 acres of project land as opposed to the original 1,000?

A. Yes. Up to 1,250, yes.

Q. Sure. Let's look back at New Mexico 202

again. So on the left-hand side here below the first subtotal line, it says, "2001 contract city-owned land" towards the middle. Do you see that, Mr. Balliew?

A. Yes.

Q. And that reflects I think the -- to the left under irrigable land acres, it shows the 1,000 acres there, correct?

A. Yes.

Q. Okay. And then if you look down four lines on the left, you can see 2010 amendment of the 2001 contract. Do you see that?

A. I do see that.

Q. And to the left of that, it shows 132.6 acres. Do you see that?

A. Yes.

Q. Okay. So it appears that the City of El Paso or at least the El Paso Water Utilities has purchased the maximum number of project acres that are allowed under the existing contracts. Do you agree with that?

A. I believe so.

Q. Mr. Balliew, do you know when this 2001 contract was signed, was there any study done of the impacts to Project return flows of transferring that water to municipal use?

A. I'm not aware of any study of that nature.

Q. And similarly, when this 2010 amendment was executed we just discussed, are you aware of any studies evaluating the impacts to Project return flows of the City purchasing that additional land?

A. I'm not aware of such.

Q. Okay. The Project lands that you purchase -- excuse me -- that El Paso Water has purchased or leased water from are not supposed to be irrigated, correct?

A. That is correct.

Q. Okay. Are they allowed to be irrigated with groundwater?

A. It is a very rare set of circumstances, and I think it all revolves around something called Gallegos Park where that takes place, but, yes, that's the answer on a very limited set of circumstances.

Q. So on Gallegos Park, that is -- consists of lands that are purchased or leased from the project -- excuse me -- consists of project lands that are purchased or leased by the City of El Paso?

A. Purchased specifically, yes.

Q. And that amount of acreage is irrigated?

A. Yes.

Q. Is that with groundwater or surface water?

A. Groundwater.

Q. Okay. So are the -- setting aside Gallegos Park, are the other Project lands that El Paso Water has purchased or leases water from, are those currently fallowed?

A. I'm going to give you another caveat, so I think that there may have been some pecan trees on one of those parcels, and I remember having a discussion about it that I don't know whether those were allowed to go fallow or not, but for the most part, again, the aggregate of all this land that we're talking about is fallowed.

Q. Okay. Do you know approximately how many acres were planted with pecans?

A. No, I don't know. Small.

Q. Okay. Does El Paso Water routinely check its leased and owned lands to ensure they're not being irrigated?

A. Okay. So, yes, so on the land that we own, we do have to do maintenance. We have to cut the grass and the weeds and -- and whatnot. So we do have a regular program where that takes place. On the leased acreage, that's a more complicated situation, because we have thousands of these small tract leases. So we might have a stretch of ditch a couple of blocks

long, and there might be 35 or 40 homes on it at which we've leased all of them except maybe four. So we do have to do maintenance to make sure that the ditch is clear so that water can run down to irrigate those customers that retain their water rights, but there are people who take advantage of the system and steal water for irrigating these small tracts after that they have leased the land to El Paso Water so it does take place. And so we do have what we refer to as code compliance officers, so based on a complaint that we receive, which is typically from one of the neighbors that doesn't like it that somebody is stealing the water, then we go out there and attempt to bring the owner into compliance, and if necessary, we have the capability, the authority, that is, to issue a citation.

Q. Do I understand your answer correctly that you monitor these lands perhaps incidental to other maintenance you're performing or in response to a complaint, but you don't necessarily have a formal program to go out and check these leased lands to make sure they're not being irrigated?

A. Correct.

Q. Okay. Do you keep records when you do discover a violation?

A. I don't know the answer to that question.

Q. Okay. Do you report any violations of this non-irrigation provision that you discover to EP1 or to the Bureau of Reclamation?

A. I do not believe that we report it to the Bureau of Reclamation, but we do discuss it with the irrigation district.

Q. Okay.

A. And sometimes we do get referrals from the irrigation district, as well.

Q. Okay. I want to ask you a little bit, Mr. Balliew, about your conservation efforts. You testified to a number of steps that El Paso Water has taken over the last 30 years or so to reduce water use, correct?

A. Yes.

Q. Does El Paso Water, has it also developed a drought management plan?

A. Yes. We have something called a drought -- I think the name is drought and water emergency management plan.

Q. I believe that plan has three phases, correct?

A. There's three stages of activation, yes.

Q. Okay. And the first stage of -- of drought

restrictions, that would be the first that would be implemented to conserve water in the event of drought, correct?

A. Or -- or a water emergency, yes.

Q. Sure. And that stage calls for voluntary reductions in water use, correct?

A. Yes. But remember one thing, Mr. Kopp, that El Paso, in our current water conservation program, absent any drought or water emergency, we already have certain things implemented. So we have a time of day, day of week watering restrictions, which apply all the time. So by the time you get to that Stage 1, they're already water conservation measures in place, so it's just additional voluntary conservation measures.

Q. Sure. And is it correct, Mr. Balliew, that El Paso Water has never implemented mandatory drought restrictions?

A. By "mandatory," you're referring to the Stage 3?

Q. Is that what Stage 3 would require?

A. Yes.

Q. Okay. Have you ever implemented Stage 3 restrictions?

A. No. But we have implemented, as best I recall, the Stage 2 restrictions.

Q. And what do those consist of?

A. I don't really remember, but there's some mandatory things in there.

Q. Okay.

JUDGE MELLOY: Let me ask you, Mr. Kopp, are you going to be much longer?

MR. KOPP: I will have more questions, Your Honor. I -- I can't say that I'm going to wrap up in the next 15 minutes or so, so if you want to go ahead and stop for the day, that's fine.

JUDGE MELLOY: I think we will. I think we're all of our energy is lagging a little bit. I'm sure Mr. Balliew would rather be done today than come back tomorrow, but I think we -- I think it's probably time to take a break, so -- so we'll adjourn for the day and reconvene tomorrow morning. Thank you, everyone.

MR. DUBOIS: Your Honor, one minor point. You -- when you were entering exhibits earlier, you referred to entering Joint Exhibit 243. It was actually New Mexico 243.

JUDGE MELLOY: All right. Thank you for that clarification. Anything else? If not, we'll see everybody in the morning. Thank you, everyone.

(The proceedings adjourned at 4:57 p.m.)

CERTIFICATE

I, HEATHER L. GARZA, a Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the facts as stated by me in the caption hereto are true; that the foregoing pages comprise a true, complete and correct transcript of the proceedings had at the time of the hearing.

I further certify that I am not, in any capacity, a regular employee of any of the parties in whose behalf this status hearing is taken, nor in the regular employ of any of the attorneys; and I certify that I am not interested in the cause, nor of kin or counsel to any of the parties.

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