SUPREME COURT OF THE UNITED STATES
NO. 141, ORIGINAL

STATE OF TEXAS,	)	
	)	
Plaintiff,	)	
	)	
VS.	)	VOLUME v
	)	
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 11, 2021, commencing at 11:01 a.m.;

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

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JUDGE MELLOY: All right. Are we ready to get started, everyone? This is in Original No. 141, Texas versus the State of New Mexico and Colorado with United States as intervenor. Let me start by asking the counsel who will be appearing this morning with this witness. Ms. Klahn, want to enter your appearance?

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

JUDGE MELLOY: And Mr. Wechsler?

MR. WECHSLER: Good morning, Your Honor. Jeff Wechsler for the State of New Mexico.

JUDGE MELLOY: Mr. Dubois?

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

JUDGE MELLOY: And Mr. Wallace?

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

JUDGE MELLOY: Is there anything we need to discuss before we start with the witness? If not, then let me ask the witness -- it's Dr. Blair, correct?

THE WITNESS: Yes.

JUDGE MELLOY: Okay. Let me get there. If you'd raise your right hand, please. Do you

solemnly 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. Would you state your name and address for the record, please?

THE WITNESS: My name is Allie Blair, and my address is 3809 Duval Street, Austin, Texas.

JUDGE MELLOY: All right. Dr. Blair, let me just start by asking you standard questions I've asked the other witnesses. First of all, is there anyone in the room with you during your testimony.

THE WITNESS: No, there is not.

JUDGE MELLOY: Do you have any documents available to you that you will be using during your testimony other than the exhibit binders.

THE WITNESS: I have the exhibit binders you said and I have a blank pad of paper with a pen.

JUDGE MELLOY: I want to remind you you're not allowed to have any communication devices in use during your testimony, including cellphones, iPads, laptop computers that have any type of e-mail, texting, or other types of capability. Do you understand?

THE WITNESS: Yes.

JUDGE MELLOY: All right. Before we begin the examination, let me just go over the exhibits. There are a number of A exhibits, Blair Demonstrative Exhibits 1 through 16 are designated as A exhibits and will be admitted. Demonstrative Exhibit 17 is objected to so we'll take that up when it's used. Exhibits -- Demonstrative Exhibits 18 through 24 are A exhibits and will be admitted. 25, 26, and 27 are objected to so we'll take those up at a later point. Blair Demonstrative Exhibits 28 through 37 are admitted and then King Demonstrative Exhibit 16, which I think is already in, but in case it's not, that's admitted. Texas Exhibit 0088, that's 0-0-8-8, Texas Exhibit 126, Texas Demonstrative Exhibit 780, Texas Demonstrative Exhibit 785, Texas Demonstrative Exhibit 786, U.S. Exhibit 079, U.S. Exhibit 080, New Mexico Exhibit 0087, U.S. Exhibit 282, and U.S. Exhibit 116 are all identified as A exhibits and will be admitted at this time. I should also mention that -- I alluded to this, I think, last week, Texas, as I understand it, had a demonstrative exhibit prepared and delivered to my chambers. It's basically a 2-by-8 map of the relevant portion. On the north end, it's the Elephant Butte Reservoir, and at the southern end,

it is what's called N rectification project underline begin preservation project. I assume counsel have all been furnished a copy of this, maybe not in this big of form, but just so everyone knows, that is -- that is here, and I have it available to me. Any question about the exhibits before we start the examination? All right. If not, is -- is Dr. Blair your witness, Ms. Klahn?

MS. KLAHN: Yes, sir.

JUDGE MELLOY: You may proceed.

MS. KLAHN: Thank you.

ALLIE BLAIR,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. KLAHN:

Q. Good morning, Dr. Blair.

A. Good morning.

Q. Are you employed by the El Paso County Water Improvement District No. 1?

A. Yes.

Q. In what capacity?

A. I'm the district engineer and a consulting engineer.

Q. Could we have Exhibit 126, please -- I'm sorry -- Blair Demo 2 is a -- basically a photocopy of

Exhibit Texas 126. What is this, Dr. Blair?

A. That's my vitae.

Q. And is it -- did you create it?

A. Yes.

Q. Is it accurate?

A. Yes.

Q. Is it current?

A. Yes.

Q. All righty. Let's -- let's go through your educational background. Where did you go to college?

A. I went to college at -- I got a bachelor's of science from University of Arizona at Tucson in agricultural engineering specialized in irrigation, a master's of science at Texas A&M University in agricultural engineering, specializing in irrigation, and a PhD in civil engineering from University of Texas at Austin specializing in water resources.

Q. And the bachelor's degree in ag engineering was entered -- when did you get that, what year?

A. 1980.

Q. And your master's from College Station?

A. 1982.

Q. And your PhD, what year?

A. In 1985.

Q. Okay. Could we have Slide 3, please? So

this pulls out some of your employment history. Let's take a look at the bottom one there, 1992 to 1994, Blair and King Engineering. Tell us about your work with that company, and tell us who Dr. King is.

A. During that time period, I was a professor -- a associate professor at New Mexico State University. Dr. King was also a professor there and the university allowed us to do one day of consulting a week and that was the company we set up to conduct that consulting work.

Q. And that's Dr. Phil King, who we heard from last week; is that right?

A. That's correct.

Q. Okay. And then we have two different kind of versions of Blair Engineering, 1996 to 2008, 2009 to present. Can you tell us about the work you did for Blair Engineering, just in general terms? I think we'll get into some specifics here in a minute.

A. Yes. After -- in 1994, I moved to Austin, Texas, and I started my own firm at that time and then I went to work for a consulting -- we formed a partnership -- a limited partnership with another -- with Axiom Engineering that lasted about five years and then I went back to my sole proprietorship in 2009.

Q. Could we have Slide 3, please -- or Slide 4? Thank you. Dr. Blair, let's talk a little bit about some of your consulting experience that would be particularly relevant to this case. Do these, the highlighted activities on this slide, do those -- those related specifically to some of the things that you're going to testify about in this case?

A. Yes.

Q. All right. So let's talk about the first one, operation and control of surface water irrigation districts. What kinds of work have you been doing for surface irrigation districts?

A. I've worked for numerous districts in Texas and EBID and New Mexico and several districts in California primarily dealing with the design and operation of control of the delivery system, the canal system, and the structures that allow that control.

Q. Okay. And you mentioned your work with EBID. What years was that?

A. That would have been probably from -- I'm not sure the exact years, but it was some time around 1985 to 1992.

Q. Okay. And how long have you been with EP1?

A. Since 1991.

Q. Okay. Let's talk about design and

construction management of the Riverside Canal Project. Tell us about that.

A. That's a -- it's a long-term conservation project. That's the largest canal within EP No. 1. Its design capacity is 800 CFS, and we started that project quite a few years ago and are continuing it as we receive funding or have funding available every year to -- to line that large canal and -- and provide better operation and safe water.

Q. How many -- what's the capacity of the canal? How many CFS can it carry?

A. It's -- the design capacity is 800 CFS.

Q. The next one there is listed as a de-watering system for the All American Canal. Tell us, where is the All American Canal?

A. That's the canal that supplies water to Imperial Irrigation District in California running from Yuma, from the Colorado River near Yuma to Imperial Valley.

Q. And what did you do with the groundwater de-watering system? What project did that involve?

A. I was the design engineer and managed construction -- assisted in construction management of the de-watering system. The new -- a new concrete lined canal. This canal is one of the largest canals

in the world. It has the capacity of about 10,000 CFS, and it was -- a new one was being constructed under a conservation project to supply water to the City of San Diego and other municipalities and so that canal was parallel to the older canal, which was a earthen-lined canal. Water had seeped out of the earthen canal and created a ponding or an aquifer adjacent to it, and that water had to be removed. We had to capture any leakage from the old canal while we were constructing the new canal, so it consisted of hundreds of wells that were drilled and operated with the purposes of de-watering the new canal and preventing any -- capturing any water that would seep out of the old canal and -- before so that it could not harm the construction of the new canal.

Q. Okay. Let's take a look at your district engineer entry there for El Paso County Water Improvement District No. 1. I think we've been referring to that as EP1 so far during this examination. Is it okay if we keep referring it to in that way?

A. Yes.

Q. And what is your -- what sorts of tasks do you do as district engineer?

A. The district engineer for EP No. 1 is a

statutory designation so it's limited to the facilities, so a typical example would be that if the party -- if the Texas Department of Transportation or someone else wanted to build a bridge across one of our canals, I'd be responsible for reviewing the design of that bridge, making sure that that bridge didn't harm the functions of the canal and that was compatible with the operations of the district.

Q. Okay. And you've already referred to your consulting work for EP1. Distinguish for us the difference between those district engineer functions and your consulting engineer functions.

A. So the district engineer functions are -- are specific to the facilities, the canals, the drains, the system, diversion facilities in the river and things of that nature. The consulting work has to do with the -- with the -- generally with the hydrologics and hydrology special projects where I'll do analysis, where I'll become the engineer of record so, like, the Riverside Canal lining project where I'd prepare drawings. And so those involve also administrative, and I think we have another slide that shows a list of -- of various things I do as a consultant engineer.

Q. Yeah, that's coming next. Let's go ahead and move to that.

MS. KLAHN: Thank you, Peder.

Q. (BY MS. KLAHN) So we've got your work from 1991 to present for EP1, and some of these things you've touched on a little bit, but let's start with that first one up there, "Assisted takeover of operations focusing on flow measurements." What else was happening in 1991? Why was the district taking over operations focusing on flow measurements in 1991?

A. Well, starting in 1980, with progress made every year all the way up to -- probably we had completed that task some time around 1996, fully completed it, but definitely majority of it by '92. I was really brought in to take over the last part of that, and that had to do with taking over the flow measurement stations that Reclamation had managed before or designed and designing new systems and designing telemetry to go on the priority flow measurement stations. So in '91, that was part -- a task that was part of a bigger task that had already been ongoing since 1980.

Q. And in 1980, that's when the transfer contract was signed that transferred operations from the Bureau to the District; is that right?

A. That's correct.

Q. Okay. So in -- then the next thing we have

is 2004, "Designated district engineer in charge of" blank.

A. We left that blank. Yeah. That was left blank because we already talked about the district engineer quite a bit in the previous slide.

Q. Okay. So that's the year you were designated district engineer was 2004?

A. Right.

Q. Okay. Then let's take a look at some of these entries under 1994 to present. We've talked a little bit about your engineer of record for canal improvement projects. That was, for example, Riverside, would that be right?

A. Yes.

Q. Okay. The second entry there, "EP1 member of the Rio Grande Project Allocation Committee." Tell us about that.

A. I was appointed by the board of directors from EP No. 1 to be the first Rio Grande Project Allocation Committee member from EP No. 1 and have continued in that role to the present.

Q. When did that start?

A. In 2008.

Q. Okay. After the adoption of the Operating Agreement; is that right?

A. Yes.

Q. Okay. Next entry, "Analysis and support for all river operations, Caballo to American." Tell us what you do under this heading.

A. So this has to do with the day-to-day and sometimes hour-to-hour operations of releasing water from Caballo and conveying it to the American Dam, the last diversion point on the river that water is taken to El Paso Valley at EP No. 1's facilities.

Q. Okay. The last one I'd like to focus on, on this slide, is the design and programming support for flow measurement telemetry system. What is a telemetry system?

A. There's -- there's two types of telemetry systems. The simplest telemetry system is one that just transmits information. It typically may have two-way communication, but it's really just sending information like the -- what the flow is at a given metering station, and those -- those systems can be very -- very rapidly so we can get information every 5 minutes and typically every 30 minutes at a site depending on its priority. There's a secondary one, which can sort of be lumped into the general telemetry. That's two-way telemetry and that's called supervisory control and data acquisition. That's sort

of a mouthful for basically saying that not only can we -- for example, our automatic gates, we can send them commands to tell those gates to -- to make operations and to change the setting of the gate. That's also a form of telemetry, but that one's a little more sophisticated.

Q. And are you involved with both of those types of telemetry on behalf of EP1?

A. Yes. They're all integrated into one physical system that's capable of doing both.

Q. Okay. Let's go on to Slide 6, please. Actually, can you just take that down for a second? Sorry about that.

Dr. Blair, where did you grow up?

A. I was born in Arizona.

Q. What business was your family in?

A. Ranching and farming.

Q. Were your farms irrigated?

A. Yes.

Q. With what sources of water?

A. The first farm that I worked on was irrigated from the Salt River project with surface water from the Salt River, and it had groundwater wells.

Q. Okay. What types of crops did your family grow?

A. Primarily forage. There was -- that farm had a feed lot on it, also, so we grew alfalfa, silage, corn silage, corn for harvest, winter wheat, and occasionally on some of the other farms, we did some truck crops such as cantaloupes and watermelons.

Q. Were you involved with working on the farm? Sounds like you were?

A. Yes. I don't think any discussion ever came up that I would not work on a farm.

Q. Wasn't an option, huh?

A. Right.

Q. Were you involved with irrigating?

A. Yes.

Q. Okay. So how long would you say you've been involved with farming?

A. 50 years.

Q. All right. Let's take a look at Slide 6. Now, Dr. Blair, were you disclosed as a non-retained expert by Texas and by the United States?

A. Yes.

Q. Do you recognize the photocopies of the exhibits there, Texas 780, Texas 785, and the US-119?

A. I do.

Q. Okay. Do these disclosures reflect opinions that you've disclosed in this case?

A. They do.

Q. All right. Will you be testifying about any of these opinions today?

A. No.

Q. Okay. That's for the spring setting; is that right?

A. That's correct.

Q. All right. So let's go on to Slide 7, please. Does this slide reflect the scope of your planned testimony for today?

A. It does.

Q. All righty. So for the first topic, I understand you'll be testifying about Rio Grande Project Infrastructure and Project Operations as they relate to EP1; is that right?

A. Yes.

Q. Okay. And the second topic then will be basically EP1 infrastructure and operations below the American Dam; is that right?

A. It's below American Dam, and we have infrastructures -- internal infrastructure operations in the southern Mesilla Valley, also.

Q. Okay. Thank you for that correction. All right. So let's -- you can take that down. Let's talk a little bit about EP1. What would you describe

as EP1's primary purpose?

A. Its primary purpose is to deliver irrigation water to authorize irrigable land.

Q. And who are EP1's major water users?

A. The largest user is the owners of the irrigable land, and the second-largest user would be pursuant to ownership of irrigable land and leasing of irrigable land would be the City of El Paso.

Q. So in your answer when I asked you what the purpose was is to -- was that EP1 delivers irrigation water to authorized irrigable land. Tell us how that works with regard to the City of El Paso.

A. The City of El Paso, through -- coordinated through contracts with Reclamation, with the United States, and with the District, has a long history of participation in the Project by ownership of -- of irrigable land and by leasing land that typically has been developed lots, 2 acres or smaller, and they pay for all the assessments and delivery fees, just as if they were -- I think the language in one of the contracts is they were the shoes of the irrigator or irrigable landowner, and they are the irrigable landowner. So to my knowledge, they've never farmed any of that. There may be some situations where there is some turf irrigation that the water is used for

instead of directly to the treatment plant, but it's been primarily to go to water treatment plants for treatment for drinking water.

Q. Okay. And you testified, I think, during the introduction about your involvement with the Rio Grande Project Allocation Committee. That's the same Allocation Committee that Ms. Estrada-Lopez and Dr. King described in their testimony last week, correct?

A. That's correct.

Q. So rather than rehash that discussion of how the Allocation Committee works in a sort of objective fashion, can we talk a little bit about the allocation process in 2021?

A. Sure.

Q. Tell us how the -- first of all, can you characterize what kind of water year 2021 was for the Project?

A. 2021 was an extreme drought year. If we had not had water left in storage conserved from the previous year, there would have been -- it is fully possible we would not have had any irrigation in 2021.

Q. So how did the Allocation Committee go about allocating that limited amount of water in the Project?

A. So approximately -- or a little less than half of the final amount of usable water that was in storage in Elephant Butte and Caballo was there from the previous year. That wasn't sufficient to start the year to make an allocation. In other words, the numbers were so low and so dire, just with the amount of storage, that the committee did not take any action to try to allocate and convey that water. We felt that that was -- was going to be very difficult until we received in excess of a hundred thousand acre-feet of inflow during the January to May time period. Once we had accumulated a larger amount of water, it was sufficient to make an allocation and make a release, we did so, and that was in May.

Q. So you didn't quite say it, but is it -- is it accurate that in a more normal or average water year, you would have made an allocation sooner than May?

A. Typically, if there had been, let's say, 800,000 acre-feet of usable water in storage, we would have made allocation in December or January, but as I said earlier, there was a very small amount of water in storage at that time.

Q. And over the course of 2021, did that allocation change at all?

A. No. The inflows were -- were not sufficient to increase allocation.

Q. Has New Mexico ever been involved in Project water allocations?

A. Not to my knowledge, no.

Q. Has New Mexico ever been involved in Project operations?

A. No.

MR. WECHSLER: Objection; foundation.

Q. (BY MS. KLAHN) Do you know if New Mexico has ever been involved in Project operations?

A. I do. I have no knowledge of them ever being involved in Project operations.

Q. How about Texas, has Texas ever been involved in Project water allocations?

A. No.

Q. Or Project water operations, to the best of your knowledge?

A. No, they have not.

Q. Now, a term that Dr. King and Ms. Estrada-Lopez both touched on at least briefly was this term allotment, and we've talked this morning already about allocations.

MS. KLAHN: Could we have Slide 8, please?

Q. (BY MS. KLAHN) And you're involved in the Allocation Committee, but could you remind us what the difference is between a diversion allocation and an authorized allotment?

A. Yes. The previous slide we had shown that had my two areas I was going to testify on, this is an example of that. The diversion allocation is a Project-level decision and action, as whereas the authorized acreage is a district level. One's internal to the district and not -- does not involve the allocation committee. The allotment. We use those two different words so that we don't get confused. The allocation occurs at the diversion from the river level, and the allotment occurs where we deliver to the authorized acreage, typically at the farm turnout.

Q. Okay. So, for example, what was EP1's allocation in 2021?

A. You know, I'd have to look up the -- the total amount, but it would have been in acre-feet. The number is left as an acre-foot number for the accounting charges at the river and as the diversions are accounted for from the American Canal and American Extension. The --

Q. Does 121,000 ring a bell as far as EP1's

allocation this year?

A. That sounds correct, yes.

Q. Okay. 121,000 acre-feet, so that's the amount the District had to provide to its constituents and then explain --

A. You know --

Q. -- what --

A. I want one caveat. We haven't finalized the allocation, so we're still waiting for the official numbers for the releases on Caballo and for deliveries to Mexico so that's not the final number, but that's approximately the magnitude that we discussed.

Q. Okay. That's fair. I was thinking about it more from the operational perspective, and so at the -- at the beginning of the season, which this year started late, 121,000 acre-feet or so was what the District had to work with. Do you recall what the constituent allotments were, what each authorized acreage was authorized -- was allotted? Sorry.

A. So that's the allocation from the Project at the river so the -- you know, they're completely -- obviously that's the single-biggest input that goes into determining the authorized acreage allotment, but there's a lot of additional calculations going to that, and that ended up being 18 inches.

Q. Okay.

A. Per acre.

Q. 18 inches per acre. Okay. We'll come back to that, I think, a little bit later, but those two terms are important. Are you involved with the allotment decision making with the EP1 board?

A. Yes. I make the recommendation to the Board.

Q. Okay. Could we have Slide 10 and Slide 11 put up next to each other, please. So, Dr. Blair, I'd like to look at the key Project features. Again, we've looked at the key Project features with a couple witnesses so let's try and focus in on a few things that I'll highlight for you. First of all, on the left is a diagram. Did you -- did you modify this diagram from a previously-existing schematic?

A. Yes. This is a revised from a schematic that was part of a consulting report for the City of El Paso.

Q. Okay. And just to orient us again quickly, we see a number of different symbols on here. Let's just talk through them. The black triangles, what are those?

A. The two large black triangles at the top are the reservoirs, the two storage reservoirs for the Project.

Q. Okay. And then we have some rectangular-colored bars across a blue line. What's the blue line?

A. The blue line symbolizes the Rio Grande.

Q. Okay. And what are the rectangular boxes across that I see one at Percha, Leasburg, and so on?

A. Yeah. Those are the six diversion dams. The one at the very end, Riverside, is not operational.

Q. Okay. Then we see some red circles, red and white circles. What are those?

A. Those are a selected few of the river gages. There's gages for almost -- I believe for all of these, all the arrows that are on here, but those are sort of from the operation of the river, some of the critical gages we have on the river.

Q. Okay. And then we have the arrows pointing into the river, mostly drains, and the arrows pointing away look like they're canals. What's the significance of the direction the arrow is pointing as far as river water?

A. So away from the river would be diversions, and those are canals, and then to the river, in this case, there was -- the solid line is agricultural drains that would be returning water to the river.

Q. Okay. Let's talk about those drains for a

minute. What are -- again, we've had some testimony on drains, but from an operational perspective, what are drains?

A. Drains are long -- they are groundwater-control devices. Their primary function was that they're dug below the ground, below the -- the ground level, the surrounding ground level, so down into the -- into the soil. Some are as deep as 20 feet. They probably range around 10 to 15 typical. They're engineered systems highly engineered to keep them on grade and to the depth that they're dug. These are designed in a very precise manner to intercept the groundwater and convey that groundwater like a horizontal well back to the river, and they do that such with the idea that, for example, in between two drains, that the water table, the groundwater table does not get so high as to be damaging to the crops so that an irrigated system, such as this valley, is necessary to have a drainage system. Secondarily, they provide an historically -- it continues from time for any runoffs, agricultural runoff from the field, they'll collect that and return that, for example, if they over irrigate a field, then there would be a -- a drainage point where they could drain that back into the drain and convey that back to

the river.

Q. So the drains return water to the river, correct?

A. Yes.

Q. And let's look at the drains upstream of -- of El Paso, the El Paso gage, which is the red circle there at the state line. Of the drains upstream of the El Paso gage, to the extent they have water in them at any time during the irrigation season and that water gets into the river, is that water then going to -- that drain water then going to be part of EP1's available diversions at American Dam?

A. Yes. That water would be commingled, if there was water being released at that time and be part of all the diversions that occur below where that water was commingled.

Q. And in your experience with EP1, have you seen water in the drains in all of -- well, have you seen water in any of the drains upstream of the El Paso gage?

A. Numerous of these drains -- well, they're ephemeral now. Some of them will have water for a short period of time. Others have been -- have not flume water for several years. The only one that hasn't been ephemeral has been the Montoya drain and

part of the West and Nemexas that is in the lower end of the valley. That's sort of the end of the bathtub right there before you get -- so the ground -- the aquifer comes up, and it's the lowest point in the system. So those continue to drain today.

Q. Okay. Now, they're not shown on this diagram, but are you familiar with any drains that arise inside of the El Paso No. 1 District below the American diversion dam?

A. Yeah. I'm familiar with all the drains throughout the El Paso District below the American --

Q. So there are -- and my question just was are there drains below the American Dam within El Paso?

A. Yes. There's a system of drains throughout El Paso Valley.

Q. And are those drains also built in the same way as the drains in the New Mexico part of the Project, in other words, below grade, below the canal level to drain into the river?

A. Yes, they are.

Q. Are -- is any of the drain water that might appear in the drains in the EP1 water that can form part of EP1's project diversions?

A. Well, our last project diversion is at American Dam from the river, last diversion from the

river, and all those drains are downstream, so none of those drains -- we don't have any more -- if they return to the river, there's -- the first one that I know that returns to the river would be near Fabens Waste Channel almost towards the -- the end of the district, and there's no possibility to divert that water into any of our canals. It's -- at that point, the canals are much higher than the river and -- and it's just not -- has never been done at the -- at the -- since the rectification project.

Q. Okay. All right. And then I'd also like to --

A. Let me clarify that.

Q. Go ahead.

A. It's never been done by gravity since the rectification project.

Q. Okay. The last thing I want to focus on with regard to the schematic on Slide 10 there is the dotted lines in the lower quarter of the screen that are Settling Basin WW, Leon Street WW. What are those?

A. The dotted lines you'll see are primarily returning to the river, and they are indicated in the legend above that they're wastewater treatment plant flows, so the water that's treated -- sewage water

that's treated and then returned to the river. There's really just two of those that are of significance. There's quite a few smaller ones, but of any -- any magnitude that are the Las Cruces Wastewater Treatment Plant and the Northwest -- City of El Paso's Northwest Wastewater Treatment Plant. Both of those waters are commingled with release water and drain water and diverted. Of course, Northwest can only be diverted at American from Mexico or for EP, but it is commingled. Down below farther, you see the second designation, which those are wasteways, and the American Dam, which we're going to talk about -- I'll talk about in more detail is -- has a unique configuration. So below that, we have a series of very large wasteways. These are not typical throughout the entire district. These are ten times typical in size of the typical wasteway, and they're designed for various reasons throughout time on how the system, the river and the canals, were configured over time.

Q. So you say they're ten times the size of what?

A. Of a typical wasteway. They have --

Q. Okay.

A. -- ten times the flow capacity, and they have

the -- they're fairly massive and expansive devices, primarily because of floodwater, they have the ability to handle large quantities of floodwater.

Q. Okay. And I think we have some photographs later in the presentation about distinguishing floodwaters and wasteways, so we'll wait for those. Let's -- let's take a look at the slide on the right, which we haven't talked about yet. Maybe you could take down Slide 10 so we could see the whole of Slide 11, please. So, Dr. Blair, we just talked about that schematic. We had to focus on the drains and the wasteways, but help us link the -- connect the dots between the schematic and what we're seeing here in Slide 11. Could you start by telling us, what's control volume?

A. So the -- as you saw in the schematic, that's a one representation of the main features that we're trying to control, specifically between Caballo, the point of release, and the last diversion from the river at American. So this control, this operation control is of a volume. It's of a volume of water that is in the river. So we -- we are -- we have an extensive monitoring of this, as you saw all those -- in the schematic, all those gages are realtime gages. And this picture -- this photograph is a typical

picture of a location within that volume. In the center of it, you see the Rio Grande. But that's a channelized, a canalized river at this point. In other words, it's manmade. That was happened in the rectification projects in the 1938 time period. On either side, you have levees to restrict the flow, and then you have what we call floodways so when we go into flood stage, it comes out of the commands channel. That's the one we try to stay in during operations, and it would use the area between the levees and the commands channel to convey floodwater. There's a -- you can see a very small, to the left -- upper left corner of the photograph, a picture of an antenna and a solar panel. That's one of our typical telemetry systems that is monitoring the water and the flow at this point and reporting that back to -- to all the people involved in the operation on a realtime basis. This particular site reports back every 15 minutes.

Q. Okay. So in talking about your involvement with project operations, are there some definitions that would be helpful to us?

A. Yes.

Q. Could we put up Slide 12 next to Slide 10, please? Thank you. So let's talk about -- if we

could start through this slide, could you start with releases and help us understand that particular term of art in your world?

A. Sure. All six of these are critical nomenclatures used in the -- and by purpose. We've narrowed the definition of these so we understand exactly what we mean when we talk between districts and with Reclamation and with Mexico. So the release is the easiest to understand and the simplest to define. It's simply the amount of water that has been or is being released from Caballo Reservoir for a time period, so it's water released from Caballo.

Q. Okay.

A. The diversion, we've talked about -- excuse me. Some of this has been in previous testimony. So diversion is the water being diverted from the Rio Grande. We're trying to control. That's part of that control volume. We're very deliberate in trying to set the gates. All the gates are on telemetry, and it controls how much water is being purposefully taken out by operations at different points along the Rio Grande. The delivery, we reserve that word primarily for delivery to farms. That's not at the river level, except in one case, and that is really to Mexico. The wastewater treatment plants divert a diversion from

the American Canal and American Extension Canal and the Riverside Canal, but those -- those are truly deliveries to that occur all right at one large equivalent of a farm turnout to these treatment plants at the two plants that are within those canal systems. So that is really an internal -- the delivery is an internal word for the district. Bypass is an -- is a -- an amount of water that's ordered that you're ordering specifically to divert water with the intended purpose of returning that water to -- at a specific location downstream, and it has a -- it's an operational device that we use to improve the efficiency of the diversions and of the operation of the project.

Q. Okay. Let's take down Slide 10 and put up Slide 13, please. But keep up the -- keep up the definition slide, if you would, Slide 12. Thanks. Slide 12. There we go. Could you pop out the diversion orders spreadsheet so we can see a little better? Thank you.

Okay. So you just mentioned bypass, and I thought this Slide 13 might help illustrate your testimony. What are we seeing in Slide 13 on the right-hand side there?

A. Well, so the right side of it --

Q. Just identify the document first.

A. Yeah. This is the -- this is an order form that the two districts and Mexico participate in and submit to Reclamation to -- for their review and consideration to make the release from Caballo.

Q. Okay. And then you just finished talking about bypass. On the left-hand side there in the upper valley, there's some entries in the rows below upper valley for bypass. Explain how those work in terms of water ordering.

A. Okay. So the -- there's three entries for bypass, one for the Arrey Canal, for the Leasburg Canal, and then for the Westside Canal. The -- at this particular order sheet, the bypass of Arrey and Leasburg are set to zero. The only one that's active is that there's a 30 CFS order for the Westside Canal. So you see 300 -- the current order is 300 CFS. Out of that 300, 30 of that CFS would be bypassed, and that's shown that at this particular location, Wasteway 32, which is -- is about an hour's travel time -- I mean, an hour -- excuse me, about a day's travel time from where the water is diverted at the west side to where 32 is. So it takes the water a day to travel to get to 32. So that water, 30 CFS, is going to be returned to the river at that point for a

diversion downstream.

Q. Why would you do that? Why not just order 30 CFS more at the top?

A. So that water is -- in the canal -- Westside Canal has capacity to handle the bypass, is first consideration, it does in this situation, and it's used to convey sediment, to remove sediment from the canal system. We have a large sediment boat, so we can -- we use the word sluice, that means to take water off the bottom of canal through a sluice gate, a gate that culls water. The sediment tends to travel and flow along the bottom and so we pull water off the bottom so it'll be highly concentrated in sediment and we bring that sediment back to the Rio Grande to get it out of the canal. The other use of it is that knowing that at this location, Wasteway 32, where travel from the Caballo is more than three days, in other words, the water that exists as we're talking during the operations season at 32 was released three days prior. So if there's a huge shortage, then the water masters can make a decision, an operational decision, to not use that water for -- for carrying sediment but to use it for deliveries, and they can switch that water by changing the order sheet and agreement, you know, without the travel time. In

other words, they can address that acute shortage in the upper valley in a matter of hours instead of days.

Q. Okay. All right. Could we go on and talk about gains and losses? I think those are all shown on the right side of the order sheet so if you can -- if you want to use that to help your definition, that'd be great.

A. Yes. So I think these losses cover many things, but the concept here is that you look at the -- at the difference, the gains minus the losses, and you -- because we need to know, this is an indication of the conveyance efficiency of the river, the ability to get water from Caballo to American, and we have to know that number. So we look at these gaging stations that we've talked about in the schematic, and we try to calculate for every order sheet what -- how much either -- if it's a positive number, that means we can release less water from the -- from the reservoir because we're getting -- our gains are greater than our losses. If it's a negative number, it means the losses are greater than the gains. So in this case, around June 5th of this year, the total river boost, which is the next term, is the sum of those gains and losses for the different reaches. You can see that there's -- the first one on there is a minus 300 from

the Caballo to Leasburg reach, and then 308 from the Leasburg to Mesilla, and then 353 from Mesilla to American. This is all total to the next definition, which is the river boost. So that means that the losses won, in this case, the losses are greater than 961, but the net losses, the net difference between gains/losses is 961, so we need to put another 961 acre-feet into the river to balance.

Q. So in river boost, if you can highlight that header, it's in the top right of the -- top line almost of the -- there you go, yep.

So as I understand it then, the -- an order for the water reflected on this order sheet, I mean, the order is for a total of how much water, 300 CFS?

A. Well, the release -- the order for release, which is -- this is a -- you know, this is a sheet that is like a balance sheet. We're trying to match the demand at the river, the orders that come from the districts and Mexico with the operations, the control of that volume of what we're releasing and what's flowing in downstream. So the order for the -- the release under this sheet is 2,490, but the specific diversion orders you can see are distributed out throughout the sheet.

Q. So the 2,490 release, how much -- that's --

first of all, 2,490 CFS is the release that was ordered, and that unit is CFS, not acre-feet, correct?

A. That's correct.

Q. Okay. And then if we go up to the river boost, that's 961 CFS of that 2,490 CFS order that is what? What does that represent?

A. That represents the amount of additional water we would have to release above the orders to make up for the losses -- for the net losses, the gains. So you take the total losses, and in this case, we do have still gains, for example, the wastewater treatment plants, and you add those in to get the net number, this river boost number. So that's how much, in addition to all the orders we have to release, to make sure we have enough water to divert at all the locations.

Q. And if you didn't release the river boost, along with the demand order, what would happen?

A. Well, the Mexico and El Paso Valley would have no water.

Q. Okay. Let's -- let's move on to talk a little bit -- oh, well, let me first ask you one final question on this Slide 13, the river order -- or the diversion order sheet. Can you tell us how the order form relates to the allocation that we talked about

earlier?

A. So -- so these numbers come from internal operations within Mexico, EBID, and EP No. 1, so that's a different process. That's the allotment and, you know, making deliveries. But they -- they come up with -- they think that the -- "they" being the water masters and Mexico, the numbers that they need to divert into their canals at these specific times, and -- and I'm not sure I -- can you ask me the question again. I'm not sure I answered it.

Q. It's much simpler than that. This 1,529 CFS demand, does that get debited somehow from the allocation?

A. These are just orders, so then we -- once this water is released, remember in the control, we're trying to make this happen. So -- so we have to do the accounting. We measure all these locations and just because you have an order for so much water doesn't mean that that -- that that exact amount will show up and there's some precision in setting the gates. For example, we cannot set the gates. Depending on the structure, there's only so much we can hit these numbers probably within a few percent most of the times, but easily within 5 percent. So there's going to be some variation, and that's all

taken up in the accounting process. So I think of this as more at the budgeting process. This is what we want to happen. The water master has to make sure he's got the water to do it from his allotment, but the -- the next phase, to answer your question, is what occurs when you do the allocation charges, when you see based on the measurements, what actually happened for this order.

Q. So is it accurate, just to think in qualitative terms, not engineering terms, lawyer terms for the moment, is it accurate to think about allocation that the district gets as a budget for its water use for the year?

A. Yes. That's --

MR. WECHSLER: Objection. I'm going to object as vague. I'm not sure what "thinking in lawyer terms" is.

MS. KLAHN: Okay. I'll take that out.

Q. (BY MS. KLAHN) Let me just ask the question without the qualifier. Is it accurate to think about the allocation to each of the districts as the budget for their water use for the year?

A. It's the budget for their diversions from the river.

Q. Okay. Thank you. So let's talk about river

measurement and how that informs your operational recommendations and activities. Could we have Slide 15, please?

So what is -- Slide 15 is titled hydrographs. What's a hydrograph, Dr. Blair?

A. The hydrograph is a record of the amount of flow at any given metering station over time.

Q. And this hydrograph appears to be from what date or dates?

A. This was for 2020. This was during a loss study. We were evaluating the losses in the river for the initial release in 2020 in March.

Q. So down at the bottom, are those the dates on the X axis?

A. Yes. The dates and the time.

Q. Okay. So March 13th to March 19th, correct?

A. That's correct.

Q. Okay. And then on the Y axis, what do we see?

A. So that's the amount of measured flow. The telemetry system measures flow every 15 to 30 minutes at these sites, and that's -- we see the -- on the graph is that information, and then you see inter dispersed with that calibration points where we send a river team group of people, typically some of these

sites there are two people, and they physically go out and measure the flow to make sure that the telemetry is accurate.

Q. Do you do a loss study every year before you turn on the system?

A. This one was -- we calculated losses almost every day throughout the -- every year, but this was a special system where we were, on purpose, trying to control any diversions not to have any diversions that we were making upstream of American Canal heading so that we'd have a quasi steady state situation where we could evaluate mathematically the loss relationships.

Q. Okay. So -- and I see there's a blue -- well, there's a line on the left that starts on March 13th and goes from about 180 CFS, it looks like, up to about 2,000 plus CFS, and that's titled, "Below Caballo." Can you talk us through what that line is showing us?

A. Sure. That's the -- the release. That's the amount of water released from Caballo, and that is a -- a typical release pattern that's designed to -- to -- you'll see the very first part of the design is down early in the day that you'll see a little plateau around 600 right to the left, to the far left of the graph. Yes, right there. So we -- we opened the

gates up at a fairly low amount of water because there's state parks downstream of these gates, and we do have rangers in the parks making sure everybody is out of the river at that time, but we try to start off with a small amount of water that would not -- would not harm someone, that they'd have the time to get out of the river when they saw the water coming. Once we get confirmation that there's nobody in the river below, then it's increased to a -- the 2000 CFS, and the purpose, you see that sort of little rectangle there, the period of time of about 24 hours that we have a lot of water going in. The purpose of that is a slug of water to fill up the storage that occurs in the river. The river obviously has water of a given depth in it at the conveyance channel. You saw the picture earlier. We have to put a quantity of water that we can calculate into that to make up for bringing the river back online, and there was going from a dry condition to a flowing condition. So that's what that first slug is intended to do. Then you'll see that it drops off when we take it to a steady state of around 1,300 CFS, and we hold that until we can get a series of measurements of losses downstream.

Q. So the blue line all the way across from

March 13th to the 19th is -- is all the -- the measurements being collected by telemetry at the gage below Caballo; is that right?

A. That's correct.

Q. Okay. And then we have a second curve there from below Leasburg, and -- and then another one below Mesilla and Anthony and Canutillo, and each time looks like the curve goes down. What's happening there?

A. Well, as water is -- it's conveyed downstream, initially in many of these locations, the bed is very dry. So not only do we have to fill the surface part of the Rio Grande, the part of the river, we have to fill that up, but it also, the water infiltrates at a very rapid rate into the ground and into the groundwater. So if you're looking at that, you can see for the reach between Caballo and Leasburg, that the difference between those curves is about 100 CFS, that there is a difference of about 100 CFS. So that would be the net losses, you know, the gains plus the losses for -- for between -- for that section of the river. The differences, as we go on down, show those, and that's what we're trying -- from operations, we're trying to get a handle on is how these losses occur and what magnitude they are and so that we can make that river boost prediction accurate.

If you get down to the very bottom, there's two gages very close together, the El Paso Gage and the American Canal Heading gage. Those two gages are right on top of each other, and they should be. There is the Northwest Treatment Plant comes in there and Montoya Drain, which is upstream, so that's a wetter part of the river. It's at the bottom of the Mesilla Valley. We would expected those two. Canutillo is upstream of that a good distance. It does show some initial loss but not a significant amount, but then as we go between Canutillo and Anthony, we see more and, of course, the distances between Anthony and below Mesilla is the largest gap, the largest amount of loss in any given reach. So these numbers are all used in the operation of the project.

Q. I'm sorry you don't have a laser pointer, but can you just be a little bit clearer? The distance between, for example, the below Leasburg line on March 16th and the below Mesilla line on March 16th, are those -- that distance would show you the loss in the river between Leasburg and below -- in those -- between those --

A. Yeah. Between those two metering stations.

Q. Okay.

A. So we're not -- at this point, we're not

trying to divert any water. There's no authorized diversions and so the loss -- it's a net loss of any returns to the river, but you can see that the losses are -- are dominating here and between those lines, it's approximately 300 CFS that's being lost.

Q. Okay. And then if you get down to the Canutillo to El Paso, that distance on March 16th also, it's -- how much would you estimate that is just eyeballing it?

A. Well, that -- that looks to be in the neighborhood of 20 to 100 -- well, I don't think it's -- it's fairly small. It's -- it's a little -- the other thing is that the distance between these stations is not the same.

Q. Sure.

A. So you have to -- you have to go -- there's -- there's -- you know, this is not part of my testimony at this time, but there's a lot of -- this is just the facts, the measurements that we're looking at. There has to be a lot of analysis that goes into this to actually determine the proper loss.

Q. Okay. So during Dr. King's testimony, we heard him testify a little bit about D2. Tell us -- remind us again what's the D2 curve?

A. Well, the D2 is a line, regression line, for

measured diversion ratios from 1951 to 1978, 28 years, and that -- that period is a -- was a -- is a significant period, in fact, that went through many, many extreme drought years like we're experiencing now and wet years, too, so it has a good range of conditions to evaluate the measured diversion ratio and then the regression is the D2 curve or the D2 line.

Q. So let's take a look at Slide 16. So what are we seeing here on Slide 16?

A. So this is the -- the D2 curve. Again, the curve was -- was just legacy notation from -- from, I believe, an appendix or a discussion by Reclamation. It is a linear equation, Y equals MX plus B where Y is the diversion so on the vertical axis, the diversions you can see on the left, and then on the bottom is the amount of release. So we're trying to find the relationship with how much water is being released, that's the X in the equation, and predict how much we could divert. So you can immediately see the value of this equation to operations that helps us try to understand the relationship between the releases and the diversions.

Q. Okay. Let's go to Slide 17, and I believe there was an objection -- I think this is the one

there was an objection to. Can you tell us about Slide 17?

MR. WECHSLER: Your Honor, do you want to resolve the objection?

JUDGE MELLOY: I assume that Ms. Klahn was going to lay some foundation for it before we -- she moves its admission so why don't you get some explanation what it is, and then we'll just handle the objection.

MS. KLAHN: All right. Thank you.

Q. (BY MS. KLAHN) What are we seeing here on Slide 17, Dr. Blair? We've got diversion ratio equals diversions divided by release. What does that --

A. So this -- this is the D2 equation derived in terms of example if you take the D2 equation on the previous slide -- let's go back to the previous slide. So that's Y equals MX plus B. If you divide both sides by release, so you divide the left side, which is the diversion, and then you divide it by release, that's the diversion ratio. So this equation shown on this graph and equation on the next page are the same information. They're the same axiomatic relationship. In terms that is -- there's no -- it's just showing the D2 representing the D2 as an equation solved for diversion ratio, to show the relationship between

diversion ratio, and the D2 equation solved for diversion, but it's the same information. There's no difference.

Q. So let's go back to 17. So what you're -- your testimony is that this is -- if we go back to 8th grade algebra, this is just the same information with the equation rearranged to solve for X; is that right?

A. That's right. We've solved Y. Now, what we're looking at is the diversion ratio predicted by the D2 equation, so it's the same -- there's no more information here than there was in the previous one. It's just an algebraic adjustment to this new equation. And it's important to understand what D2 represents.

Q. Okay.

MS. KLAHN: Your Honor, we'd offer Blair Demo 17.

MR. WECHSLER: My objection, Your Honor, is this represents an undisclosed expert opinion. I recognize we've already had testimony this morning basically verging on expert testimony, but -- but that information had been fairly disclosed. This slide is now introducing something in terms of the diversion ratio. It's unclear whether Dr. Blair is relating that to the diversion ratio as it's known in the 2008

operating agreement or something different because we know that the D2 curve contains different data than the diversion ratio, and we haven't seen this kind of solving of an equation in any of the disclosures, expert disclosures that were provided to us by Texas or the United States and -- and so we're simply unprepared to be able to handle a new expert opinion based on this slide.

MS. KLAHN: Your Honor, may I speak to that?

JUDGE MELLOY: You may.

MS. KLAHN: If we were live in the courtroom, I could have Mr. Blair -- Dr. Blair go up to a white board and plot this. This is math -- or, actually, it's algebra. There's no hidden opinion in here. It's simply another way of looking at the D2 equation, and it's provided for the background information that will come in useful in the spring when Mr. Wechsler's witnesses testify about this issue and when Dr. Blair testifies again. So it's just setting the foundation for what's to come, just like the other things in this testimony.

MR. WECHSLER: Well, and, Your Honor, conducting equations and plotting in the way that Ms. Klahn is referencing is exactly expert opinion --

expert testimony, which is not allowed without being disclosed.

MS. KLAHN: I think --

JUDGE MELLOY: Well --

MS. KLAHN: Sorry. Go ahead, sir.

JUDGE MELLOY: Let me make sure I understand the D2 equation, to begin with. Go back to the prior slide, if you would. So do I understand, Dr. Blair, that if you go along the X axis, so let's say we go to 500,000 acre-feet released per year, so that's 500,000 acre-feet that's released from Caballo; is that correct?

THE WITNESS: That's correct.

JUDGE MELLOY: And then if you go up to the Y axis and you go straight up from that line, you get a number that's just below 600,000, maybe 590; is that correct?

THE WITNESS: That is correct.

JUDGE MELLOY: So is that telling us that if you release 500,000 acre-feet from Caballo, that just under 600,000 acre-feet will be delivered to the Project?

THE WITNESS: Yes. That the diversions -- let's assume, for simplicity now, that that release of 500 in this equation produces 600,000 diversions.

So the net gains and losses are a hundred thousand, so that means that the river is gaining, the gains are greater than the losses, and that the release of 500 would be augmented with a net gain loss of another hundred thousand for this condition.

JUDGE MELLOY: So if you know that in a given year, you can release 500,000 acre-feet, do you then allocate just under 600,000 acre-feet to the two districts for diversion?

THE WITNESS: To the two districts and Mexico.

JUDGE MELLOY: Two districts and Mexico. Right. Take out the 60,000, assuming it's a full allocation, then you have 540,000 to be allocated to the two districts; is that correct?

THE WITNESS: That's correct.

JUDGE MELLOY: And similarly, if we're at 600,000 released, it's just over 700,000 that's able to be diverted to the -- to the two districts and Mexico; am I reading that correctly?

THE WITNESS: You are. So this, the diversion ratio -- so the 600 over the 500 is the predicted diversion ratio for the D2 equation for that release of 500. So that ratio being 1.2. So the math that we're doing here is just -- is just calculating

606 over 5. So each one of these circles represents a measured diversion ratio for that year for the conditions of that year. The regression line is a lease squares. It's a statistical procedure to try to come up with a straight line that minimizes the air that occurs between all of these measurements and a line. You can see in some years that the measured diversion ratio is significantly off the predicted D2 equation.

JUDGE MELLOY: But the line itself, is it a constant 1.2? If I look at 300,000 and do 1.2 times 300, would I get -- would I get the -- would I get the amount available for diversion?

THE WITNESS: No. That's -- that's what my next slide is trying to explain by -- by dividing both sides of this line by the release so -- so that we could look at the relationship that the diversion ratio, same information. It's the word that -- that I have to refer back to because it's such a powerful word, and it is appropriate. It 's axiomatic. It's 3 plus 2 equals 5 and 2 plus 3 equals 5. So we're just looking at the same information to show that the diversion ratio predicted by the D2, not the measured diversion ratio, but the predicted diversion ratio of the D2 equation changes. In fact, it goes to zero at

approximately 90,000 acre-feet of release. And you can see that this particular graph doesn't extrapolate on the left, but if you calculate -- let's do an example similar to the one you did earlier. If we release 200,000 acre-feet, and you go up to the curve and you go across, you can see that the amount that could be diverted is less than 200,000. So that means that the diversion ratio is less than one at 200,000, and that -- if you look at the graph, it shows that.

JUDGE MELLOY: So -- all right. So that's -- so 17 is -- is a line that shows the -- the -- that number, for instance, again going back to the one I used, which was 500,000. So at 500,000, it's just under 1.2. All right. Okay.

THE WITNESS: So that -- I could take each one of these points along the line, and we could solve for this -- this line here. There's no new information. It 's just -- just an algebraic rearrangement so that we can look at -- the D2 -- this is all based on the same measured data so it -- it -- and the same regression equation. There's nothing new, other than we divided both sides of the equation by the release so that we could look at it, and it -- it tells -- I think it's informative in that -- we look at that 280,000 release. That's at the point

that it predicts that the gains equal the losses. So that's very -- you know, this is very important to me in the operation of the district that I understand these things and that for this particular D2 regression, this line is fundamental to a lot of the discussions we've been having, that it says, hey, you know, to get into this, it -- to make any significant deliveries, that this line would tell you that you need to start with the release above 90,000 acre-feet. And so it explains some of the actions of allocation committee.

JUDGE MELLOY: Does anybody want to speak further about the exhibit?

MR. WECHSLER: Well, Your Honor, in light of -- of that discussion, we'll withdraw that objection to Blair Demonstrative 17 so that the Court can understand that discussion in context.

JUDGE MELLOY: All right. Exhibit 17 is admitted. Thank you.

You may proceed, Ms. Klahn.

MS. KLAHN: Thank you.

Q. (BY MS. KLAHN) Well, Dr. Blair, that was a pretty thorough explanation of Blair 17. Is there more to be said or should we put up Blair 18 and talk about them together perhaps?

A. Yes. I think Blair 18 and the D2 equation together would be appropriate.

Q. Okay. There we go.

A. Yes.

Q. So tell us what we're seeing here.

A. So from the same -- again, this is another axiomatic relationship that you can say, okay, if you know the relationship for the diversion ratio, you know the gains -- relationship for the gains and the net gains and losses. You don't know how much gain, and you don't know how much loss. You just know gains minus losses, the difference of those two. So that's built in to D2 so that's part of the same information. This is, again, no new data, no new measurements, same measurements, same linear equation, just algebra at this point. So it's looking at it a different way. So you see that at that same point, around 290,000, that's where the diversion ratio is one, and that's -- on this chart, says that's, you know, gains equal losses, zero. So you can look at it and say from this chart, same information, say, hey, how much water do we expect the gains to be greater than losses of when we release and what -- what situation when it's less. So this -- this goes back to show that in the '51 to '78 periods, that during extreme drought, that the

losses always, at least from their regression analysis, are always going to be greater than the gains at this -- at this pivot, at this point where the diversion ratio equals one. And then for releases above that amount, we would expect to see that the gains would be greater than the losses. So that's very important in terms of the allocation for the diversion, the diversion allocation calculation.

Q. Okay. Thank you. We've been talking about gains and losses and we've talked about it in the context of D2. I have a more practical question to ask you about the order sheet, which I think I forgot to ask. Could you -- could we have Slide 13, please? Let's go back to this for a minute. We talked extensively about the river boost of 961. I wanted to put this in context for the Court given the discussion about gains and losses. Wanted to have you put it in context. The date of this order form is June 5th, 2021. So that was this June, correct?

A. Yes.

Q. How long had the Project been in operation as of June 5th?

A. Well, over a hundred years.

Q. For 2021. When did you turn on in 2021? I'm sorry.

A. Okay. The water was released, I believe, on the 30th or 31st of May.

Q. Okay. So it was still very early in the season, correct?

A. Right. It's still -- we're still on the wetting phase of that -- trying to make up for all the void that is underneath the bed of the Rio Grande.

Q. So what's a more standard river boost in the middle of a season?

A. You know, that -- it -- these numbers are instantaneous for the time period of the order, so that's what was going on to the -- from the 5th to the 6th, from the change from the 5th to the 6th. There may have been a change, if it was significant in the boost, that occurred on the 7th, and that would have gone through. So literally, during these time periods when we're first getting the river up and running, we're on -- you know, we -- we go 24/7 in the operations, and Dr. King and myself and Michelle and other people that are looking at the river, it's the last thing we see when we go to bed and the first thing we see when we get up, and we have alarm systems on from the telemetry to wake us up in the middle of the night if something is going on. So I can't really answer your question, but each year is different and

the losses, I believe, this year even towards the end of the year were close to 300 CFS. There could be a rain event that temporarily the gains would outweigh the losses and you'd see that that number would go to zero because of the rain, but in general, my recollection is that we ended up with about a negative 300.

Q. Okay. Thank you. All right. Let's go to -- let's look at Slide 19 if we could. Could we have Slide 21 put up next to that? Yeah. If you could pop that out, that'd be great.

Okay. So, Dr. Blair, you've -- how many years experience do you have working with the Rio Grande Project roughly?

A. 30. 30 years.

Q. And have you become familiar with some things that make it difficult to predict what the river is going to be doing from time to time?

A. Yes.

Q. So let's take a look at the schematic on the left here. This one looks just like the one we started with in Slide 10, but now it's got an oval around the lower Mesilla Valley. Why have you highlighted that?

A. Well, the -- the complexity of operations

gets more complex as we go downstream. One of the -- the difficulties in the lower Mesilla Valley, the southern Mesilla Valley, is that the state line is the old bed of the Rio Grande back in the 1890s, whereas in the 1930s, the Rio Grande, as we know it today, was rectified or canalized, it was made into that picture of where you have a conveyance channel of floodway and then levees and so it shows that the state line and the Rio Grande are not coincidental anymore, haven't been since the rectification, and that the canal system in both EBID and EPCWID go in and out of the state line many times. The river goes in and out and New Mexico extends all the way to American Dam.

Q. Let's just go ahead and put up Slide 21 and take down the schematic for now so you can focus on -- illustrate some of what you just said. In that Slide 21 on the -- the black line, what is the black line that winds from the top of the screen down?

A. That's the Texas/New Mexico state line.

Q. Okay. And then where is the river?

A. The river is, for the most part, to the east, and it's the -- the segments of straight line, the rectified conveyance channel that's now the river.

Q. Okay. And when you get to this part of the Project, what kinds of impacts do you see from this

complicated geography and then the activities that are going on in that area?

A. So not only do we have the need for more complex operations at the district level because the deliveries to Texas now are made internal to EBID, in other words, water is converted in Mesilla and conveyed, but the fact that some irrigated fields have most Texas land and New Mexico land so requires special consideration. It's also the southernmost part of the Mesilla Valley so the geology changes, and it's also location of significant urbanization in both New Mexico and Texas, so as you can see by the well fields that are supplying municipal water from the groundwater. So we get a -- a confluence of complexity as we move into this area.

Q. Okay. Let's look at Slide 22, I think. Oh, I'm sorry. Let's look at Slide 20. I apologize.

MR. RUDLING: Sarah, I need just a minute.

MS. KLAHN: Apparently we're having a few technical difficulties with the PowerPoint, Your Honor.

JUDGE MELLOY: I know the observers don't have the hard copies, but I think the -- the parties do. Okay. Here we go.

MS. KLAHN: So let's go to 20, if we

could, Peder.

Q. (BY MS. KLAHN) So I just -- this is, I think, a quick question, Dr. Blair, but is this the area that's known as Unit 6A and 6B?

A. Yes, it is.

Q. And tell us -- remind us again, I think we might have heard a little testimony about this previously, what's unique about Unit 6A and 6B in the Project?

A. It is that the -- that the lands, the irrigated fields and the conveyance systems are between Texas and New Mexico.

Q. Okay. And so on the left, what do we see?

A. On the left, we see just topographic maps showing the New Mexico/Texas state line near Anthony, Texas, Anthony, New Mexico, and the start of the southern portion of the Mesilla Valley. The circled part is enlarged in the photograph, and that's the primary location. There's -- there's a secondary location, but this is the primary location where water is bifurcated coming from the Westside Canal, and that goes into the La Union East canal. The eastern part is operated by EP No. 1, and the western part is operated by EBID. The eastern part makes deliveries primarily to Texas, but there is New Mexico deliveries

in that canal, as you can see, because of the state line meandering, and then the La Union West is primarily EBID lands that's irrigated, but there are portions of Texas land. So this -- this bifurcation requires, for accounting purposes, a significant amount of work to make sure that we are accounting for the water properly between EBID and EP No. 1.

Q. And it requires a great deal of cooperation between the districts; is that right?

A. Yes. And a long -- long time -- you know, this goes back to the 1980s, so there's -- there's -- this is effectively the process that was come up with at that time, the one that's adopted in the process that we use today.

Q. Okay. Let's -- if we could go on to Slide 23, please. So so far in your testimony, we've basically taken the water one way or another from a release from Caballo down towards American Dam, and I have the wrong slide.

A. 22 is the slide.

Q. Yeah. That's fine. So what are we seeing here? This is, I think, just orientation, is it --

A. Yeah.

Q. -- for the location of the American Dam?

A. 22 and 23 are the same looking at it

differently. So that's -- as we -- you saw the complexity of the southern Mesilla Valley, and as we move down into the El Paso Canyon and -- and past the gage is where the -- the American Dam exhibits -- right near the Gadsden Monument, the intersection of Mexico, New Mexico, and Texas, then we go on to the next slide and will continue.

Q. Let's look at -- if we could, look at 23 -- let's look at Slide 23. What are we seeing here?

A. This is the American Dam that was constructed at the same time and part of the same projects for the rectification. We can see a location map that is right there at the Gadsden Monument and two aerial photographs, one oblique at the bottom and one vertical at the top. So this is a unique dam. This dam is different by purpose, by the Act of Congress that created this dam, and the purpose for which this dam was created to be entirely located in the United States, that the order for Mexico is passed through the dam. So the diversion from Mexico is made not to the left or the right of the dam, but it's made through the dam and then conveyed approximately 2 miles to the -- to the point where Mexico takes delivery. The remaining amount of water, whatever that may be and may be changing from hour to hour, is

diverted and allowed to flow into the American Canal. So this configuration was on purpose.

Q. And it was to solve a problem related to issues with deliveries to Mexico previously?

A. It was to solve -- it was to prevent Mexico from over -- from diverting more water than was -- than they were entitled to under the treaty.

Q. Okay. So let's go to Slide 24. So this takes us back upstream a couple miles. What's the significance -- from your operational perspective, what's the significance of the Rio Grande at El Paso gage?

A. So this is -- is one of the oldest -- or the oldest gage in the Project. It goes back before the 1890s. It is -- it has been continuously operated in that time, and it's maintained and operated by the Boundary Commission, and it is for the operations for EP1 and for Mexico, extremely critical because it tells us are we on order, are we getting the water that we expected from the 110 miles upstream that was released plus the appropriate gains and losses that occur between the release and this location. So this is -- this is a -- a narrowing of the valley to where there's bedrock on both sides. You know, it's a canyon. We're coming into El Paso Canyon. So it's a

pinch point, and it's a change in valleys, a change in hydrology, and a change in operations. We have two sister gages, one that's in the American Canal that measures the amount that is there, and then one below the American Dam that measures how much is being conveyed for diversion by Mexico, for delivery to Mexico.

Q. Okay. All right. So I think we've covered sort of the first topic of your testimony today talking about the allocation and operation -- your involvement with operation of the project upstream of American Dam. Let's -- let's talk about what happens below American Dam involving --

JUDGE MELLOY: Excuse me. Could I ask -- I'd like to ask a question about that gage. There's been some discussion about it before, and let me ask Dr. Blair. So if a certain amount of water flows through that gage, what is either diverted or augmented between that gage and the American Dam that would result in more or less water reaching -- reaching the American Dam?

THE WITNESS: So it's only -- it's about 2 miles, and it's -- and there's no -- there's no significant aquifer there. In other words, if you were to dig a hole at this location, you'd hit fairly

shallow. So the only inflows that we really have are the Northwest Treatment Plant, and that's very predictable and measured, and so we know that -- that flow, and the storm water, there's an arroyo or two that drain the urban area in this part of El Paso and so really we have primarily inflows here. The water you see there is primarily from the Montoya drain, which discharges just maybe a quarter mile upstream of this gage. So the -- the flow balancing between those three gages is -- is very accurate. In other words, the three gages match up with the northwest gages so we can -- we understand the flow in detail in this area.

JUDGE MELLOY: So between El Paso gage and the American Dam, there's no diversions, but there's inflow from the water treatment plants, which is measured, and then storm water?

THE WITNESS: That's correct.

JUDGE MELLOY: Is the storm water measured?

THE WITNESS: Not directly, but because we have these gages, we can calculate the storm water fairly accurately as the difference between the gages.

JUDGE MELLOY: Okay. Thank you.

THE WITNESS: That bridge, by the way,

that's Courchesne bridge, so sometimes this site is known as Courchesne.

Q. (BY MS. KLAHN) We see that on maps sometimes, don't we, Courchesne instead of El Paso gage?

A. Instead of El Paso, but I believe the USGS designates the Rio Grande at El Paso.

Q. Okay. So let's -- in your work for EP1 regarding operational decisions about the distribution of Project water, are there statutes and contracts that you refer to regularly to guide your decision making?

A. Yes.

Q. Dr. Blair, are you a lawyer?

A. No.

Q. Why would you be looking at statutes?

A. The -- the operation of the project is problematic. In other words, at -- at numerous Acts of Congress and the associated and the required contracts under those acts govern the day-to-day activities that I -- administration and calculations I have to do.

Q. Okay. Could we have Slide 26, please? And I believe there was some objection about this, but I'm not sure if that's been withdrawn?

MR. WECHSLER: It has not been

withdrawn.

JUDGE MELLOY: Why don't you lay some foundation then.

MS. KLAHN: Yeah.

Q. (BY MS. KLAHN) Let's talk a little bit about Slide 26. So we have -- what do we have on this slide, Dr. Blair? Just explain the content.

A. There's two classifications of statutes that we were talking about a minute ago that to have information that I -- that are essential to my daily operations.

Q. Okay. So let's work with the structural statutes first. Can you explain to the Court what types of operational decision making would require you to consult, for example, the American Dam Act?

MR. WECHSLER: Now, Your Honor, this seems like we're going beyond foundation. We're just offering substantive testimony about the slide. I'm happy to describe our concern with the slide if that would be helpful.

JUDGE MELLOY: Go ahead.

MR. WECHSLER: Yeah. Again, this is verging into areas of expert testimony. Here, you can see it's characterizing types of statutes into how to and accounting statutes and structural statutes. I

don't have a problem, if Mr. Blair just says, you know, on -- on a regular basis, I have to consult X statute, and here's how I do that, but to be characterizing these in some way, I really have no idea what that means or -- or certainly don't think it's appropriate for a witness, particularly a non-legal witness, to be testifying to that. It amounts to an expert opinion.

MR. WALLACE: Your Honor, for the record, the State of Colorado joins in the objection to this exhibit on the grounds that it is offering a legal opinion and the opinion being given on this is misleading and contrary to deposition testimony provided by the witness.

JUDGE MELLOY: All right. I'm going to allow the witness to testify as to the statutes that he refers to and contracts for that matter that he refers to on a daily or regular basis in performing his duties, but I will sustain the objection as to -- to the extent that it characterizes the statutes as described by Mr. Wechsler.

All right. You may proceed.

MS. KLAHN: Thank you.

Q. (BY MS. KLAHN) Dr. Blair, do you understand the limitation?

A. Yes.

Q. Okay. So -- and I think this question fits within the limitation. Can you give the Court an example of how you would refer to -- why you would find it necessary to refer to the American Dam Act during the course of your regular work for the District?

A. So the -- the configuration of the dam -- so is described in that Act, and we use that dam to divert water to El Paso Valley.

Q. Okay. What about the American Canal Extension Act, is there particular activities you do on a regular basis that require you to refer to that?

A. The -- the Act sets forth responsibilities and contractual -- prescribes contractual development for the operation of that canal.

Q. Okay. Can you just say a little bit more about that to be a little clear about what types of contractual requirements it might set forth?

A. Well, the -- it required us to -- that Act required the EP No. 1 and the U.S. IBWC to enter into an operations and maintenance agreement as to how the canal would be operated and how it would be maintained.

Q. Okay. Now, let's look at the how to and

accounting statutes. Let's start with the Miscellaneous Purposes Act. What relation or what role does that statute have in your regular day-to-day activities?

A. It's the statute that's cited to or referenced to in numerous contracts we have for delivery of municipal water.

Q. Delivery of municipal water to El Paso Water Utility?

A. Yes.

Q. And the Lower Valley Water District?

A. Yes.

Q. Let's leave the Compact for now. What about the 1992 Transfer Act, how does that statute relate to your regular duties?

A. So that act -- actions were taken prior to that act that relate to it, and it's probably all the contracts that are associated with that act are probably both as district engineer and as a consultant or ones I have to -- have to refer to on a daily basis. So there's just a -- a tremendous amount of other actions that are contained in -- in everything from accounting for and metering stations and canals and easements and third-party uses that are all covered in that -- in that Transfer Act.

Q. What is the Transfer Act? What did it accomplish to the best of your understanding?

A. It's the culmination of -- initially without congressional action, the contracts were entered to for the operational transfer, not the physical transfer, once the repayment contracts were paid off, and this now set up the requirements for additional contracts, specifically the 6A and 6B contract. Previous requirements that were in the other ones was example for an operating agreement and then actually the deed authorized Reclamation to issue a deed to EP1 and to EP -- EBID for the land that was within -- in the facilities within the two districts.

Q. Okay. So let's go onto Slide 27, which relates to the Compact.

MS. KLAHN: Does your objection, Mr. Wallace, cover -- have you stated your objection with regard to this one, as well?

MR. WALLACE: Yes. This one, Your Honor, I want to note, I believe, that Colorado's objections were miss noted. Our objections are to Demonstrative Exhibits 26 and 27, not to Exhibit 25. So we would have the same or similar objection to this one. It's giving a legal opinion, and it's also construing the Compact by paraphrasing and, in fact,

the definitions are not verbatim but are paraphrased, which seems to be offering a legal interpretation of the Compact and that the witness is not capable of doing that.

MS. KLAHN: We'd offer it as the same purpose for the other side, just to reflect his operational -- his operational understanding of how the Compact interfaces with this project operations.

JUDGE MELLOY: Well, it's a demonstrative exhibit, and I'll admit it for demonstrative purposes only to show his operational understanding, so to speak.

Ms. Klahn, we're getting pretty close to the break time. Let me know if this is a good point or do you want to finish up with this exhibit and then maybe we'll do it after that?

MS. KLAHN: I think -- let's just do this slide and then, yeah, I think that would be a great time to take a break.

JUDGE MELLOY: All right. Thank you.

MS. KLAHN: Thank you.

Q. (BY MS. KLAHN) So, Dr. Blair, we're looking at Slide 27. Can you talk us through your understanding of the relationship with the Compact to your involvement with Rio Grande Project operations?

A. Yes. It's very limited. The Article 1, determination of the usable water, is done by Reclamation, and that's provided to the Allocation Committee. The contracts that I administer with the City of El Paso and other municipal lower valley water district have language that address that the release -- that the water being provided to them under those contracts for them, their lease or ownership of irrigable land has to be made in accordance with irrigation demand so that carries over into those contracts, that part of it. And then my -- the articles that mention 790,000 acre-feet, the operating agreement does use that number as a limit as a maximum amount that could be allocated new allocations in any given year based on that amount of release.

MS. KLAHN: Okay. Thank you. I think now would be a good time for a break, Your Honor.

JUDGE MELLOY: Let me just clarify what Dr. Blair said. You do not have any role in determining the amount of usable water. Is that exclusively within the province of Reclamation?

THE WITNESS: Yes.

JUDGE MELLOY: All right. Thank you. All right. We'll break for 20 minutes. Thank you, everyone.

(Recess.)

JUDGE MELLOY: Ms. Klahn, you may proceed.

MS. KLAHN: Thank you.

Q. (BY MS. KLAHN) All right. Dr. Blair, let's take a look at some of the contracts that you consult regularly in your work for EP1. Could we have Slide 28, please?

All right. So, Dr. Blair, would you tell us -- did you create this slide?

A. Yes, I did.

Q. And can you summarize what it's showing us?

A. Shows five categories of contracts that -- that I -- that I have to refer to for administration and operations.

Q. Okay. Let's start with municipal water supply. I see a list of contracts there by date.

MS. KLAHN: And, Your Honor, I think the 1941, '49, and '62 contracts were admitted without objection today, and then the 2001 contract, I think, was admitted during Ms. Estrada-Lopez's testimony.

Q. (BY MS. KLAHN) Dr. Blair, could you talk to us about how you use these various contracts in your daily work? For example, what would a 1941 contract have to do with your day-to-day work for EP1?

A. That contract is -- has to do with the land that was purchased by the City of El Paso, irrigable land with authorized acreage, for which they get an allocation for.

Q. Okay. And what about the --

A. Excuse me. They get an allotment for. They get an allotment for that.

Q. Okay. Thank you for that correction. What about the 1949 contract?

A. That has to do with excess flow, so it's a fairly -- during flood times or -- or periods when there's no requirement for any project users for the water.

Q. How about the 1962 contract, how do you use that?

A. That's -- I believe that is used almost daily for -- because of leases. We have a significant number of leases with the -- that we administer -- the City has entered into with irrigable landowners.

Q. So the City not only owns land within EP1, it has leases for irrigable lands within EP1?

A. For use of the water associated with the land.

Q. Okay. And let's skip over to the -- well, is there something significance for the 1988 or 1998

contract you'd like to draw the Court's attention to?

A. No. The -- the '88 contract is -- the City acts as the agent for the lower valley water district in that, and we do leases there, too, so we do have daily administration, but -- and the '98 is sort of a parent contract to the 2001.

Q. Okay. And what is the 2001 contract, is that important to your day-to-day work?

A. Yes. It's -- it's the most complex of any of those contracts, and that covers a multitude of -- of issues with the City.

Q. Related -- can you give us some examples?

A. It has permissions that amended the '41 contract so they could own additional land. It has conditions regarding the Haskell sewage water, the American Canal Extension and Canutillo well field, to name a few.

Q. Okay. Let's look up at Project authorized acres. And this is -- this relates to the 1938 contract between EP1 and EBID. I believe we have Joint Exhibit 426, if we could put that up.

MR. RUDLING: I apologize. I need another minute?

Q. (BY MS. KLAHN) All right. Dr. Blair, this is Joint Exhibit 426, and it was admitted, I believe,

during Ms. Estrada-Lopez's testimony.

MS. KLAHN: I'm going to tell the parties and the Court, this should have been on his exhibit list. I'm not sure if it was. We'd like to use it even though it wasn't on the exhibit list. So just going to put that out there in case there's concern.

JUDGE MELLOY: Any objection?

MR. WECHSLER: No objection.

JUDGE MELLOY: Go ahead.

Q. (BY MS. KLAHN) Joint Exhibit 426, do you recognize this, Dr. Blair?

A. I do.

Q. What is it?

A. It's the contract between EP No. 1 and EBID regarding authorized acreage within the Project.

Q. Okay. And is this one of the contracts that you have occasion to consult during your day-to-day work for EP1?

A. Well, it's the basis of the day-to-day -- of the relationship in the allotments between the two districts.

Q. How so?

A. It established the amount and the ratios of authorized acreage subject to construction charge. It

provided an increase in that by 3 percent, and it discusses that in event of a shortage, how the distribution of supply would occur.

Q. Okay. Let's take a look at Slide 29, please. Dr. Blair, you're seeing what's been identified as Blair Demo 29. Did you create this?

A. Yes, I did.

Q. And what is it?

A. It's just demonstrating the -- as going into a '38 contract, that there was 155,000 acres that were irrigated and subject to construction charges and then the -- the agreement, the '38 contract, increased those by 3 percent cushion. Primarily my understanding had to do with the term roads and farm roads and things that were within a given plat that weren't irrigated to allow for the tax to be calculated on the entire land and the ratio didn't change so the contract went in with this ratio and came out with the same ratio.

Q. Okay. And you mentioned when we were looking at the contract that it -- the contract also provides for splitting up the -- splitting up water between -- during a shortage?

A. The available -- the available supply in a year with storage.

Q. What water does that project or does that contract relate to?

A. That's the -- the supply for the Project is the usable water in storage and the -- any returns -- any usable -- any water that returns to the river that we discussed in -- in the allotment process that could be diverted for the districts downstream. It only discusses the distribution of that supply in regard to the two districts, not in regard to Mexico.

Q. Okay. And when you say "that supply," do you mean Project supply?

A. Yes. Project supply.

Q. Okay. Let's talk a little bit about -- we're getting close to the end here. Let's talk a little bit about the EP1 internal operations and structural changes. You've described -- could we have Slide 30, please? Now, this is a schematic we've seen before. It's now got an oval in the lower third of the -- lower quarter of the -- of the schematic. What are we looking at here, Dr. Blair?

A. So we've already discussed part of the complexities of the El Paso to International Dam region, but this is the -- you know, the transition point between the Mesilla and the El Paso Valley and the key operation point, and it's changed over the --

over the decades in terms of how that facilities were configured.

Q. Okay. Before we get into the changes in the facilities, I want to pause briefly to talk about the implications for EP1 to be at the bottom of the system. Does that mean that you have to deal with flooding?

A. The flooding occurs throughout the Project, but obviously, as in most watersheds, the magnitude of the floods increases significantly as you get downstream because it's draining a larger share of the watershed below Caballo. So -- so, yes, we -- we have -- this year as an example, it's a -- I laugh at it, but it's not -- it's a serious matter. So we had a flooding that was occurring from upstream runoff at the same time that we had dry conditions downstream in the El Paso Valley that we were trying to make irrigation deliveries of and so you -- you basically can be at both under standard operating procedures and emergency operating procedures at the same time.

Q. How does that work? How do you continue to deliver Project water if you're trying to deal with floodwaters?

A. Well, there -- there's two components to that. One is -- is the quantity of water so and that

obviously through emergency procedures depend -- what procedures you do depend how big the flood is. As we discussed before, we have a series of flood control gates, wasteways, that serve a purpose primarily for flood control and to be able to trim hydrographs so that we can -- flood hydrograph can come into our system but we can trim and get it out of the system before it gets into our delivery system, into the canals that we're using to deliver water.

Q. Let's look at Slide 31. Does this illustrate what you're talking about?

A. Yeah. We talked about this in terms of the size. So the -- the top part is an aerial photograph of Wasteway 32 where we do that bypass, and that wasteway is designed and built for 150 CFS for the maximum capacity, typically operated at much lower than that, but that's the maximum. As we go downstream and we get to the first wasteway in the El Paso American Dam area, you can see the photograph of this structure is much bigger, you know, maybe 100 to $150,000 to construct the wasteway at the top and multimillions of dollars to construct the one at the bottom. It is designed to be able to handle ten times the flow.

Q. Okay. So let's go back to 30, Slide 30, and

just focus on the -- down at the bottom there. Can you identify the flood structures that are at the bottom of the --

A. Sure. We were just looking at the Settling basin Wasteway, so that takes -- as we talked before, the American Dam has an unusual configuration. It was designed to divert all the water into the American Canal and bypass the ability making it impossible for Mexico to divert that water at International Dam on purpose. The amount that they're to divert is passed through the dam and delivered to them at International and then right below that, so if we get floodwaters, our first shot at that is at the Settling Basin. We try to -- it also has to protect downtown El Paso so it's a key flood control spot in the Project.

Q. Okay. I see there's an American Canal Extension on the kind of vertical, if you will, on the right-hand side. Is that a relatively new structure?

A. Yes. It was built in the late 1990s.

Q. Okay. Let's look at how the structural orientation of -- of the American Canal and related structures has changed.

MS. KLAHN: Could we have Slide 33, please? Oh, Slide 32. Sorry.

Q. (BY MS. KLAHN) So did you create this table,

Dr. Blair?

A. Yes.

Q. And what's it showing us?

A. It's showing three periods in time that there was significant change to the facilities, Project facilities, in the American Canal and below.

Q. Now, let's just focus on Riverside Dam for a minute. I think one of the slides you showed early on indicated that Riverside Dam is no longer -- diversion dam is no longer used. Tell us about the Riverside Dam.

A. So the Riverside Dam, prior to 1928, the diversions -- really, prior to 1938, they're all related. The diversions were routed. The American Canal didn't exist. I think it says it was routed through that, but it was -- had to be routed through International Dam, and down to -- to various structures, some of which were temporary in nature, to make diversions from the river. In fact, down towards Fabens, there was actually a pumping plant at that time. So in '28, it normalized that and brought the Riverside Dam so that it could be used. So after that, water could flow through -- the American Dam didn't exist, it could flow through the International Dam and down to Riverside Dam to be diverted for El

Paso. That was the limitation was that all of our water was targeted for -- and say "our water," I mean EP No. 1's would have to flow through the International Dam before it could be delivered to Riverside Dam at that time.

Q. Okay. The next entry has some references to Caballo, American, and River Rectification. What does that refer to?

A. So that was a major project, a work program project for the depression that had to do with the flood control and rectification of the river. We discussed that a little before in the -- in the maps I showed for the southern Mesilla, but the -- the Caballo Dam was a very significant one. All these projects were conservation projects and flood control projects that made more water available to the project, significantly more water with the addition of Caballo Dam, and we're intended to protect the Project authorized acreage from flooding.

Q. Okay. So let's go on to American Canal Extension and just tell us generally what that is and then I think we have some diagrams to show how -- how it's changed.

A. So -- so the problem that we discussed for the reason American Dam was built was to be able to

route the water around the International Dam. At that time there had been discussions of continuing the American Canal all the way to Riverside. Riverside was built at that time. But there was land disputes with Mexico that hadn't been solved and weren't solved until the 1960s, and so the route of that canal and use of that canal and the funding for that canal was not approved until much later. That canal was discussed in the 1930 engineering reports actually became what exists today now as the American Canal Extension, which was operational in '99.

Q. Let's take a look at the Slide 33, please. So Slide 33 says pre 1936. Can you just describe what we're seeing here?

A. Yes. So no American Dam. There's no American Cam, no American Canal, no Extension. The water for the Franklin Canal was diverted at the International Dam, and the water from Mexico was diverted to International Dam. The water for the Riverside Canal was allowed to flow through the International Dam and go downstream to Riverside.

Q. How did that work?

A. So this configuration allowed Mexico to take unauthorized amounts by gravity. In other words, they could -- could just open their gates on the Mexican

side and take what they wanted to take and then we would be shorted at the Riverside or the Franklin, depending -- we'd get to make the decision which one we would -- would typically we would take, you know -- it would make common sense that we would take our full order at Franklin Canal, as much as we could, and -- and hope that Mexico would allow our water to pass to Riverside.

Q. Okay. Let's look at Slide 34. So this looks like the time after the -- is this after the authorization of the American Dam?

A. Yes. So the American Dam is built, and at this point, you know, it's got that unique configuration where only water from Mexico is passed through the dam, so all the orders for El Paso Valley are -- the diversions are made there into the American Canal, but we don't have the American Canal Extension so we can't -- we don't have a canal that can go all the way to Riverside so the water has to be returned, and Leon Street Spillway, it's a large spillway capable of flood control, but it was primarily used to control and regulate the order going to Riverside Canal -- Riverside Dam/Riverside Canal.

Q. So you take water at the American Diversion Dam down the American and Franklin Canals and put it

into the Leon Street Spillway to get water into the Riverside?

A. Yeah. The -- that's correct. And then that water would flow downstream in the Rio Grande to Riverside Dam and be diverted. The difficulty with that was that now while it's not as convenient or as easy for Mexico to take that water, they established, at various locations, pumps where they could pump that water primarily to irrigate land in Mexico, and there was one location that if the narrow Riverside where they could divert by gravity, it was a fairly small canal, but nonetheless, they would -- they would try to divert by gravity or because we were backing the water up from Riverside or they would use a pump.

Q. Okay. Let's look at Slide 35. So this the current orientation of the structures that deliver water to EP1?

A. Yes, it is.

Q. And what's changed here?

A. Well, now, at this point, Leon Street Spillway no longer has to be used except for emergency operation, so it's not used at all hardly. We keep it operational in case we have problems at Settling Basin, we have floodwater that we need to do that. We added a third spillway closer to Riverside Dam so that

if water got past the first two and we needed to get rid of it, we could. But now, effectively, the river is dry below International and so there's no opportunity anymore for Mexico to make any unauthorized diversions.

Q. Okay. Thank you. So I want to --

MS. KLAHN: You can take that down for the moment. Thanks.

Q. (BY MS. KLAHN) So I want to -- in getting ready for our wrap up, I want to take you back, Dr. Blair, to the contracts that we discussed a minute ago. Is the 2008 Operating Agreement one of the contracts that's important to your day-to-day work for EP1?

A. Yes.

Q. Do you have an understanding of why the Operating Agreement was adopted?

A. There was a requirement to enter into part of the transfer of operations and maintenance and lands between the federal government and the districts.

Q. So that transfer contract that I think we heard about from Dr. King required an Operating Agreement?

A. 1980, yes.

Q. Okay. I don't want to get into the technical

details of how the Operating Agreement works, but I want to ask you to explain, from an operational perspective, how did water allocation methods from the Project change?

A. So the -- the 1980 was the start of discussions, and those continued for those 28-year periods, and many -- many of the -- the discussions in the proposed drafts, many of the process -- we discussed one, for example, the La Union Canal, those procedures were incorporated into the agreement, the 2008 agreement, but the -- at a high level, what the agreement provided for was sustainability of the Project. It's a robust agreement that's adaptable. We've made provisions that as we go through changes in the water supply and changes in climate, that it can adjust to those. The ability -- the sophistication that's incorporated in it in terms of the solution work to keep both EBID and EP No. 1 operational, to keep us capable of running this project for the three entities that receive water from that from full allocation to extreme drought, as illustrated by this year, and it provides the -- the language, the specific language that the employees of the two districts and of the United States and the Boundary Commission need to be able to efficiently operate the

Project so that we know, for example, if we have a -- a situation of shortage and we can't -- and we have to figure it out, we know what procedures to follow under that. We know how to precisely order water at Caballo now and how to make sure that that amount of water is released and metered. So all of those detailed, some very minute details, provide that level of sophistication.

Q. So prior to 2008, you were -- you were working for EP1, correct?

A. Yes.

Q. And prior to 2008, how was water allocation done? First of all, who was in charge?

A. It was the Reclamation was -- prior to 1980, it was all done by Reclamation.

Q. Right.

A. During the transition, there was a -- a multi, what, almost 30-year period of negotiations starting right around when the 1980 contract was signed and the requirement for an operating agreement was done. So every year, what was fortunate for that time period, as previous people have testified from, is that we were in a time of abundant water supply, that the snow pack and the runoff into Elephant Butte was significantly high. We had too much water during

the mid '80s. One of my first jobs in the Hudspeth District south of El Paso was because of flooding issues, in other words, the -- there were -- there was as much as a million acre-feet of floodwater that -- that had to be disposed of that was harmful to the Project. So the hydrology changes significantly during that time period. It was a wet hydrologic time period starting in 2003. We've transitioned to an extremely dry time period.

Q. Okay. Let's take a look at Slide 36, which is our -- our last slide for today, I think. Dr. Blair, when you look at Slide 36, you've talked today about some of the differences between the upper valley and the lower valley. Does this slide summarize your conclusions about those differences?

A. Yes.

Q. Could you just briefly talk us through this? I don't think you have to go through every line in it.

A. I think just an overview is good. I mean, obviously operations are effected by geography because I think a simple example is that the Arrey Canal at Percha Dam is located approximately 2 miles below the release point, and if -- if the Project needs to make an adjustment at the Arrey Canal with flow rate, it can adjust at Caballo, and within a few hours, that

adjustment can be made at Arrey. So to remain efficient and to not waste water and not over release water. It rains in the Rincon Valley so we can make adjustments very quickly up at that post. The opposite is true as you get down to American. At American Dam, the water that is in American Dam on one day was released three days prior. So three days of activity within the Project, rainfall, storms, flooding, whatever it may be, changes in demand because of impacts on farms because of rainfall on the farms down to as far down as to the county line in El Paso all make it much more difficult for us to keep a steady supply there, whereas Arrey sees a steady supply at all times. It's right at the top. So that matter of degree changes as you go down. It gets much -- it gets unsteadier as you move down and harder to adjust for. The geology changes significantly, a huge difference, not only at the bottom of the system and we get the storm water and the waste and the bulk of the sediment flow that we have to deal with in the regular flows, but when we transition to El Paso Valley, the geology is different that our wells are saline. We're basically recycling the irrigation water that's applied to the fields. If I drilled and I'm responsible for drilling and supervise the

drilling of those wells, that if I were to penetrate -- to make the well too deep, I would hit a brackish aquifer underneath that -- that perch shallow aquifer. So in our case, the shallow poor quality water, even though it was saline, was better than if we were to go deeper into the Hueco aquifer and hit the brackish. So I was careful never to penetrate through that confining layer. You know, that makes a big difference in times of shortages on doing that. The same thing is true of water quality from the reservoir. The water quality diminishes, not just by salt content, but it diminishes by the amount of sediment. If you look at the water coming out of Caballo and flowing into Arrey and you were -- to look into the canal, you could see the bottom of the canal easily. The water is clear enough to do that. If you put your hand in the water at American Dam, you probably can't see it a few inches under the water. It -- that's because it has so much suspended sediment from the arroyos and the -- and the hills that are in between Caballo and American. So all these things make a profound difference on the operation and what the El Paso Valley District must address as opposed to farther upstream.

MS. KLAHN: Thank you. I don't think I

have any further questions at this time for Dr. Blair.

JUDGE MELLOY: Thank you, Dr. Blair. As I understand, there will be no cross-examination of Dr. Blair at this time. Unless anybody has something to say, I will excuse Dr. Blair. We thank you for your testimony. Thank you, Doctor.

THE WITNESS: Thank you.

JUDGE MELLOY: Let's take a five-minute break, and we'll get ready for the next witness. In connection with the next witness, it appears that the United States and Texas are not on the same page as to cross-examination exhibits. I don't know. Is -- was that intentional, Ms. Klahn and Mr. Dubois? There's something -- some are objected to by one and not the other.

MS. KLAHN: I'll let Mr. Dubois speak for the United States.

MR. DUBOIS: Yes, Your Honor. We didn't necessarily agree with all of the objection analysis, and we are -- we are not a proponent of Mr. Reyes and Mr. -- I mean, we did not call them. They were not on our witness list so, you know, the -- the primary issue should be Texas' objections. There were a few less that we objected to than Texas objected to.

JUDGE MELLOY: All right. Well, let's

get Mr. Reyes ready to go, and we'll look at the objections and see what can be admitted out of the box and which ones we have to wait on. All right. Thank you, everyone.

(Recess.)

JUDGE MELLOY: All right. Are we ready to get started? I see we've had -- Ms. Najjar, you're going to be filling in for Mr. Dubois?

MS. NAJJAR: Yes, Your Honor.

JUDGE MELLOY: We're changing -- not filling in. That's probably not the right term. But you're -- you're going to be taking this witness; is that correct?

MS. NAJJAR: Yes. I believe Ms. Klahn will be asking the questions.

JUDGE MELLOY: Okay. All right. Are we ready to go?

MS. KLAHN: Yes, sir.

JUDGE MELLOY: Is it Mr. Reyes? Am I pronouncing that correctly?

THE WITNESS: It's Reyes.

JUDGE MELLOY: Reyes. Okay. Mr. Reyes, 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, sir.

JUDGE MELLOY: All right. Mr. Reyes, let me just tell you a couple of things or ask you a couple questions we've been asking all the witnesses. First of all, is there anyone in the room with you during your testimony?

THE WITNESS: No, sir, there is not.

JUDGE MELLOY: Where are you testifying from, by the way? Looks like you have the same background as our prior witness.

THE WITNESS: Yes. We're actually in Denver at the attorney -- or the U.S. Attorney's Office.

JUDGE MELLOY: Oh, all right. Okay. Thank you. And do you have any papers or documents with you that you will be using during your testimony, other than the exhibit book?

THE WITNESS: I have one sheet of paper, Your Honor, that there's going to be some pictures that will be offered for evidence. All I have is documentation of the dates they were taken and who took those pictures.

JUDGE MELLOY: All right. Well, if there's any question about that, I'll let the parties

ask that. Then finally, I wanted to advise you that you're not allowed to have any communication devices with you during your testimony, including cellphones, laptops, computers that have any type of e-mail, texting, instant messaging capability, et cetera. Do you understand?

THE WITNESS: Yes, sir, I understand, and I have none.

JUDGE MELLOY: All right. Thank you. All right. Well, let's take a moment now to talk about the exhibits. As I understand it for Texas' direct examination, Reyes Demonstrative Exhibits 1 through 9 are not objected to and will be admitted as demonstrative exhibits. The other three exhibits Texas plans to use have already been admitted, that's Joint Exhibit 426, US-458, and US-512. Assuming we've correctly reconciled the two objection lists of the United States and Texas to the cross-examination exhibits that New Mexico intends to use, the following exhibits are jointly agreed to as being admitted: New Mexico 201, New Mexico 226, New Mexico 427, New Mexico 630, New Mexico 639, New Mexico 2243, New Mexico 2287, which is also US-77 and Texas 88, New Mexico 2358, New Mexico Demonstrative Exhibits 1, 2, and 3, New Mexico Demonstrative Exhibit 18, Texas 279, US-116, and I

think -- I think that is it. Any other exhibits that New Mexico intends to use will have to be offered and admitted during the course of the testimony.

All right.

MR. WECHSLER: Your Honor, are those exhibits that you just identified then admitted?

JUDGE MELLOY: They are admitted. I'm sorry. Yes, they are admitted.

MR. WECHSLER: And also, I'll just note for the record, many of those were already admitted when New Mexico was providing you with that. We'll try and identify that for you. And I -- I'd also ask just the parties if it's possible, I understand the two United States and Texas have different objections, but if they could be reconciled in a single list, that would be very helpful for us so that we understand what people are objecting to?

JUDGE MELLOY: Why don't we do this. In the future, whoever is the proponent of the witness, why don't you send the list to Texas' case to U.S. for this witness or vice versa, and then Texas or the other party can indicate which ones they don't agree with, because it did take some time to reconcile the two lists so it would be a lot easier if we just had one list.

MR. DUBOIS: Your Honor, I have to apologize. That was an error on our part to send the separate one.

JUDGE MELLOY: All right. Thank you. Ms. Klahn, is this your witness?

MS. KLAHN: Yes.

JUDGE MELLOY: You may proceed.

MS. KLAHN: Thank you.

JESUS REYES,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. KLAHN:

Q. Good afternoon, Mr. Reyes.

A. Good afternoon.

Q. Mr. Reyes, what's your current professional position?

A. I am general manager for the El Paso County Water Improvement District No. 1.

Q. And where did you grow up?

A. I grew up in the upper valley area of the Canutillo area.

Q. And that's close to the Canutillo well field that we've seen on some maps and heard about?

A. That's correct, yes.

Q. Okay. How long has your family been in the

upper valley?

A. Since the early 1920s.

Q. Were they farmers?

A. Yes. They were my grandparents, my parents, my uncle.

Q. Okay. And they farmed with water made available to them by EP1?

A. Yes, ma'am.

Q. Were you involved in farming when you were a youngster?

A. Yes. There was ten of us, six brothers and four sisters. The oldest three of which I was the third one, we were very involved with helping our father in any -- any way we can, in any assignment that we would get. At a young age, we learned how to operate a tractor, a truck, and how to assist in irrigating.

Q. Do you still have any farmland that you manage?

A. Yes. My wife and I have 3 acres of land with our home, and I have 40 pecan trees on those 3 acres.

Q. Do you still irrigate with water from EP1?

A. Yes, ma'am, I do.

Q. All right. Did you go to college?

A. Yes, ma'am. I attended some college at the

community college there in El Paso and the University of Texas at El Paso. I don't have a degree, though.

Q. What areas did you study in?

A. At the time I was working law enforcement so I took a lot of law enforcement classes.

Q. And did you have any -- what was your professional -- what was your profession before you joined EP1?

A. I worked for the El Paso County Sheriff's Department there in El Paso.

Q. How long did you work there?

A. 15 years.

Q. What was your -- what was the last job you held with the El Paso County Sheriff's Department?

A. I held the position of chief deputy, the assistant to the sheriff.

Q. Prior to becoming general manager for EP1, did you have any other association with EP1 prior to that official association?

A. Yes, ma'am. I ran for the board of directors, and I served on the board of directors for three years.

Q. Okay. And how long have you been general manager?

A. 18 years. I started September 3rd of 2003 to

present.

Q. Could you just -- we're going to get into this in a little more detail, but in a couple sentences, could you tell us the general duties of the general manager at EP1?

A. Yes. Yes, ma'am. Well, I'm responsible for -- for operating and supervising the irrigation district. I have 105 employees. I have six assistant managers that I rely a lot on, and I try and meet with them on a daily basis to get an idea of what's going on, what they're working on, and anything that I need to be briefed on.

Q. Okay. Let's take a look at Reyes Demonstrative Exhibit 1, please -- oops, 3, sorry. Mr. Reyes, do you recognize Reyes Demonstrative Exhibit 3?

A. Yes, ma'am. That's the latest organizational chart for the EP No. 1 district.

Q. Okay. Could you start with the water master and operate -- operations manager and sort of walk us through what the people that report to you do?

A. Okay. The water master, he handles all the operations for bringing down the irrigation water, taking the orders from farmers from El Paso City, water utilities. He handles all the supervision of

the water records, handles our dispatch office, our river team, and all our ditch riders, and he also has five assistant supervisors that -- that assist him. During irrigation, we operate 24 hours, 7 days a week.

Q. Okay. What about the maintenance manager?

A. Our maintenance manager is in charge of up keeping all our maintenance, whether it be canals, drains. He also supervises the mechanics shop and any repairs that need to be done to the system, whether it be replacement of turnouts or repairing banks on -- on the canals. He'll do -- he'll do all that. He's also in charge of our mechanics and welders, and we manufacture almost all the gates that we utilize now there locally in our shop, and we also do probably about 99 percent of the mechanic work, anything from tune ups to oil changes to overhauls and so on.

Q. So the maintenance manager is also responsible for maintaining the canal and the delivery system that the District operates?

A. That's correct. He's -- he's got a number of -- of employees, and he's got -- also has five assistant managers that -- that assist him with the supervision of the men, but he'll do everything from mowing canals, supervising that to rebuilding structures and so on.

Q. How many miles of canals does he have responsibility for?

A. We have 350 miles of canals, 250 miles of drains, and 30 miles of laterals that -- that we own and operate.

Q. Okay. What does the licensing manager do?

A. The licensing manager, he takes care of our engineer section of -- of our office. He handles anything from people wanting to cross our canals or drains to put in streets or just any type of issue that comes up. Sometimes we -- we get requests to put in water lines and so on so he handles all the licensing issues.

Q. All right. Then we get to the chief administrative officer. What does that person do?

A. Yes. The chief administrative officer assists me with communication with the other managers. She's also in charge of our IT section, our HR section, and -- and really handles a lot of the duties that -- that I give her. She also supervises our grant writer.

Q. And we'll hear more about grants later, correct?

A. Yes, ma'am.

Q. All right. What about the office manager/tax

collector, what does that person focus on?

A. Our office manager/tax collector, she handles nothing but the taxing part of the irrigation district, collecting taxes, sending out notices, and keeping records of -- of the taxing part of it.

Q. Why is that -- why is that an important function for EP1?

A. It's an important function from the start, we -- we would collect taxes to repay the -- the debt that we had with -- with the Bureau of Reclamation.

Q. And what happens if someone doesn't pay their taxes?

A. Well, the -- if someone doesn't pay their taxes, they don't receive Project water, and if it's a delinquent account past two years, then we refer to an attorney for -- for an attempt to collect.

Q. Okay. Do you -- do you supervise Dr. Blair?

A. Yes, I do.

Q. And what -- I see chief financial officer up there. Is that someone else who you work closely with?

A. Yes. The chief financial officer actually reports directly to the Board, but the Board gave me also the authority to -- to supervise, and I work very closely with her on -- on different issues on -- on

funding, on grants, on keeping track of -- of our budget and so on.

Q. Okay. So we -- and then as far as another area in which you have some responsibility, this morning we heard some testimony from Dr. Blair distinguishing between allocations from the Project and allotments for the individual users within the District. Do you agree that the volume of water made available to the District's water users can be referred to as an allotment?

A. Yes, ma'am.

Q. And are you involved in that process?

A. Yes, I am. When Dr. Blair meets with the allocation committee, he'll keep me briefed on -- on what their discussions have been, what they're looking at, what the water levels are at the -- at the dams and what they expect -- what -- what the snow pack is and -- and so on, and then he'll -- he and I will jointly do a presentation to our board of directors where then they, at the recommendation of -- of Dr. Blair, they'll -- they'll issue an allotment to our water users.

Q. And are you involved in the farmer meetings when the allotments are announced each year?

A. Yes, ma'am. I try and meet with farmers

three or four times a -- during the irrigation season to keep them abreast of -- of what the allotment is looking like, what -- if -- if we started off with -- with a low allotment, then as -- and if it's possible to increase, I keep them abreast of the increases when we increase the allotment.

Q. Okay. Now, sometimes I think the terms allotment and allocation get used interchangeably by the Board and -- and in your office. Does that happen sometimes?

A. Yes, it does.

Q. So during this examination, I'm going to try and ask you to stick to water allotments being that which is the amount or the volume that's provided to the constituents each year. Does that sound okay?

A. Yes, ma'am.

Q. Okay. Now, Mr. Reyes, have you received any awards as general manager?

A. Yes, ma'am, I've been fortunate. I -- I received the blue legacy award in 2017 from the Texas Water Development Board. They recognized me and recognized our district on -- on the upgrades of our system, of our concrete lining of canals and replacement of head gates and upgrading our telemetry system.

Q. How often does the Texas Water Development Board give that award?

A. On a yearly basis.

Q. Did you also receive an award for innovation from AT&T?

A. I did. I received an AT&T award in 2020 on the upgrading of our telemetry system, the utilization of solar panels and -- and upgrading of -- of some of our gates, making them automatic.

MS. KLAHN: Okay. Could we have Reyes Demo Exhibit 1, please?

Q. (BY MS. KLAHN) Were you -- have you also been recognized by Irrigation Leader?

A. Yes. That's a national magazine. I was recognized in June of 2017 with the magazine. They recognized some of the projects, did an interview with me on what I was doing to upgrade our system, actually came out and physically toured our district and took pictures of -- of us constructing gates and replacing gates and -- and some of the projects that we've completed.

Q. Okay.

MS. KLAHN: And let's have Reyes Exhibit 2, please.

Q. (BY MS. KLAHN) Were you also recognized by

the same publication in 2020?

A. Yes. They recognized a group of us managers, irrigation managers, throughout the United States, and for our accomplishments, so they recognized me again in that magazine.

Q. Okay. Pretty nice. Let's talk a little bit about the history of the district.

MS. KLAHN: Could we have what's been marked and admitted before as U.S. Exhibit 458, please?

Q. (BY MS. KLAHN) Mr. Reyes, you're being shown the Rio Grande Project Contract November 10th, 1937, El Paso County Water Improvement District No. 1. Do you recognize this exhibit?

A. Yes, ma'am, I do.

Q. What is it?

A. It's the repayment contract that we signed with the Department of Interior on repaying the debt for the construction of -- of the Project and our portion of it, our ancestors committed to it early on, and we followed through until that debt was paid off.

Q. Okay. What was the purpose of the -- I'm sorry. You just explained what the purpose of the repayment contract was. Did EP1 repay the Bureau of Reclamation?

A. Yes, we did.

Q. Okay. Let me show you what's been marked as U.S. Exhibit 512 and also previously admitted. Mr. Reyes, this is U.S. Exhibit 512. It's a contract between the United States of America and El Paso County Water Improvement District No. 1, transfer of the Operation and Maintenance of Project Works. Have you seen this before?

A. Yes, ma'am, I have.

Q. What is it?

A. This is the contract, there again, when the Department of Interior, when we took over all operations and maintenance of -- of the Project.

Q. What did the transfer contract accomplish after you paid off your debt?

A. Well, it accomplished a lot. We were able to take over the Project, and the water master, the ditch riders and so on came under our jurisdiction and then this -- this agreement also called for us to come up with an operating agreement.

Q. Okay.

A. Between the Bureau of Reclamation, EBID, and ourselves.

Q. Okay. And did you -- what's the date of this contract; do you know? We can look at --

A. It was 1980.

Q. Okay.

A. March 14th of 1980.

Q. Okay. And when was an operating agreement finally entered into?

A. It was finally in 2008.

Q. Okay. All right. Let's take a look at Reyes Exhibit 4, please. Okay. Mr. Reyes, could you please identify what we're seeing on this map?

A. Yes. That's a map of our irrigation district from the New Mexico state line down to the Hudspeth County line, and it shows our different units, our different divisions. It starts up in the -- in the north in the Canutillo area and then works its way down south all the way to the Hudspeth County line.

Q. Okay. And the individual water units are colored different colors?

A. That's correct. We have the first one 6B that's -- it's located on the west side. Our district is divided by the Franklin Mountains and by downtown El Paso, and -- and then it continues below downtown El Paso, and then we have Unit 7A, 7B, 8A, 8 B, 9A, and 9B, all the way down to the Hudspeth County line.

Q. Okay. And did the Bureau of Reclamation create those units?

A. Yes, they did.

Q. Okay. As general manager, how would you describe EP1's primary function?

A. Our primary function is to efficiently and most economically bring Project water down from Caballo Dam and deliver it to our water users.

Q. What are water-righted acres?

A. Water-righted acres are those acres that -- that are in good standing with the District that actually are within our -- our irrigation district and can actually receive water through our canal system into our laterals and -- and into the community ditches or farm ditches.

Q. Are -- are all the acres within EP1 water-righted acres?

A. No, they're not.

Q. How many water-righted acres do you have?

A. 69,010.

Q. Okay. Let's talk about the categories of water users in the district. You have, I think, two categories of irrigation water users; is that right?

A. Yes. Actually, three with the City of El Paso.

Q. Okay.

A. The small tract water user, that's 2 acres or

less, and then the farm tracts, that's 2 acres or more.

Q. Okay. And then the City of El Paso, which also owns or leases water-righted acres?

A. That's correct.

Q. Okay. So let's talk about the -- let's start with the larger farm parcels, those over 2 acres. Can you describe, generally, how the farmers order water through the District?

A. Yes. They -- they can either call our dispatch office on the phone or fax their water order or get online and -- and -- and e-mail in a water order or we still have a lot of farmers that prefer to come in personally and place their water order.

Q. So if a farmer were to come in today -- well, not today. If a farmer were to come in, in the middle of June, for example, and the Project was operating, would they be able to order water for the next day?

A. It would depend. If we had water in that canal and we could deliver to them the next day, then we would, but when they place their water order, they -- they give us a due date. That due date consists of when the farmer is going to be ready, when he'll have his field prepared and ready to be irrigated, and we try and meet that due date. Sometimes it's a few days

before. If we have water in the area and they're ready, we go ahead and deliver it early, and sometimes it's a few days afterwards, if there's been some type of issue or somebody hasn't finished irrigating above stream from them, then they'll have to wait their turn.

Q. Okay. So does the system work the same for the small tracts, those under 2 acres?

A. No, ma'am. The small tracts, we schedule them the whole irrigation season. We'll -- we'll come out with -- with a schedule. Once we know what the allotment is, we'll come out with a schedule by date. So the small tracts irrigators will know exactly what date they will receive the water throughout the irrigation season.

Q. And small tract irrigators, are those mainly sort of large suburban lots or are there actually some small farm operations?

A. There's -- there's small -- they're a lot of small farm area that have vegetables or have -- like I have 40 pecan trees. There's different type -- type of products that are -- that are grown.

Q. And why is it more efficient to -- is it more -- do you -- do you do the small tract operations that way because it's more efficient?

A. Yes. Because we have so many of them. There are large number of small tracts so -- so anyway, we do them jointly by neighborhoods so that way -- the other way, if they were -- we allow them to -- to call for their water, they would call for the water, bring it down, irrigate, and maybe their neighbor wouldn't want to irrigate until two or three days later, and we'd have to do the same thing again. So we would lose a lot of water through seepage and evaporation. So irrigating the -- by neighborhood has -- has worked out great, and we conserve and it's very efficient.

Q. How long have you been doing that type of procedure for the small tracts?

A. Actually, this procedure started right after when we took operations a year or two after that, they started with small tract irrigators.

Q. In the early 1980s?

A. Yes.

Q. Okay. Now, let's talk about the City of El Paso. We've -- we've heard from Dr. Blair that the City owned some water-righted acres, they leased some water-righted acres. How did they -- how did they place their water orders?

A. They place them the same way. They'll fax in or e-mail in their -- their water order to our

operation office, to our dispatch office, and then from there, Mr. Rios, our water master, will -- will coordinate their -- their delivery.

Q. Are deliveries to the El Paso Water Utility charged to EP1 the same as the other deliveries to other EP1 users?

A. Yes. They get the same type of allotment that everyone else does.

Q. Okay. What is the maximum amount of Project water that EP1 -- sorry -- that El Paso Water Utility could get in a given year?

A. They could get up to 60,000 acre-feet.

Q. So there's another municipal water supplier, I believe, in the lower valley. Is it -- are you familiar with the Lower Valley Water District?

A. Yes.

Q. Do they also receive Project water?

A. Yes, they do. Under the 1920 Act, they can also -- they entered into a contract in 1988 that they -- they get -- go out and seek leases. They don't own any -- any land, but they do go out and get leases and -- and then that water is delivered to El Paso Water Utilities where it -- it's treated and then they deliver it into Lower Valley Water District's lines.

Q. And just looking at Reyes Exhibit 4, can you

just describe generally which water units the Lower Valley Water District operates in?

A. Yes. Lower Valley Water District is located outside the city limits in the Lower Valley area of El Paso County, and it's roughly where the -- the end of Unit 7B ends and -- and the other divisions start, and then it'll go all the way down to the little town of Fabens.

Q. So if -- if folks down there that can access that water then don't have to be on a well; is that right?

A. That is correct. We still have unfortunately a lot of people that have wells for their residence, and if they have wells, then that means they don't have sewer system either, and they have what's called a septic tank. So it poses a lot of issues, a lot of health issues, and so the more people that can -- can be hooked up to potable water, the better off for everybody in the community.

Q. All right. You can -- let's just leave the map up there for now.

As general manager, what do you consider to be the main source of water for EP1's constituents?

A. Definitely the Project water that comes out of --

Q. Why?

A. Because we know exactly how much water is available after the Allocation Committee meets, and -- and it's -- it's a secured amount of water that -- that's going to be delivered to our constituents, during full allocations, then we -- or full allotments, we have plenty of water to deliver to them up to 4 acre-feet.

Q. Does -- does the El Paso Water Utility also discharge some effluent into EP1's canals?

A. Yes, ma'am.

Q. Could you generally locate where that effluent gets discharged by -- just by -- maybe by water unit?

A. Yes. The Haskell Water Treatment Plant delivers just south of -- of downtown El Paso when -- where our Lower Valley District starts more or less, right in that area right there, and that -- that water is -- is delivered into the American Canal Extension, and then the Robert Bustamonte Water Treatment Plant delivers water into our Riverside Canal.

Q. Okay. Now, let me ask you a couple questions about the availability of the effluent from El Paso Water Utilities. I want to first ask you about availability on a 24-hour period and then on an annual

period. So first, is the -- is the effluent from Haskell and Bustamonte, is it discharged into the canals at a constant rate over the course of 24 hours?

A. No. It's actually like a roller coaster. After 5:00 p.m. in the afternoon, water levels that are discharged rise, and after midnight, they go down. As people are utilizing water in their homes and it's being sent to the water treatment plants, that's what's available. During the -- the -- the long year, we receive effluent water during the winter months. During the summer months, that water goes into what's called the Rio Bosque Park under agreements with El Paso Water Utilities.

Q. So it's used for irrigation in Rio Bosque Park?

A. Yes. It's a 400-acre park that receives water into their -- their ponds and into all their cottonwoods and so on that -- all the vegetation that they have.

Q. Sure. So during -- as comparing the irrigation season with the non-irrigation season, which of those receives more -- in which of those do you receive more effluent?

A. During the winter months, we receive more.

Q. Okay. What about the quality of the

effluent, can -- could -- if it was available, could all EP1 farmers make use of the El Paso Water Utility effluent?

A. No. Because you -- you shouldn't use that water, like, if you have vegetables or you're growing onions or any type of edible project that you might have, you cannot use effluent water.

Q. Could you use the effluent as a replacement for Project water?

A. No.

Q. Because of the limitations we've been discussing?

A. Yeah. It's so low, and the -- just depends on when you get it and the hours that -- that you get it in.

Q. With that said, does the District sometimes make use of the effluent if it is available during the irrigation season?

A. Yes. If it's being discharged into our Riverside Canal and we have Project water in there, also, it'll mix with our Project water.

Q. Okay. Maybe stretch the Project water a little further?

A. That -- that gives us more water for our constituents, yes.

Q. What about -- let's talk about groundwater. Does the District have some groundwater wells?

A. Yes.

Q. And do you have some in the upper valley?

A. Yes. We have three in the upper valley just south of Canutillo.

Q. Okay.

A. And the rest are in the lower valley, and all those are located, oh, below Unit 7B at the start maybe of 7A.

Q. Okay.

A. So not all our constituents could receive that well water.

Q. Let's talk about them in two groups. Let's talk about the upper valley wells first.

A. Okay.

Q. Do you use the upper -- do the upper valley wells produce an adequate quality of groundwater?

A. Yes. It's very good quality water.

Q. And if you pump the wells in the upper valley, are they charged against your project allocation?

A. They are.

Q. Is that because they're connected to the river?

A. They're close to the river so we get charged for it.

Q. Okay. Do you use those wells from time to time?

A. We do. Our water master will sometimes utilize it if he needs them to push Project water for delivery, he'll go ahead and turn them on.

Q. Okay. Let's talk about the groundwater in the -- or the wells, rather, in the lower valley. Is -- what's -- is the quality of the groundwater in the wells in the lower valley good?

A. No. If -- like, Dr. Blair said earlier, it's water that's recovered from our irrigation system, mostly drain water that's at a certain level. Our wells are only at -- between 90 and 100 feet deep, and it's very poor quality water. There -- we have wells that are 1,200 TDS, but they -- and then we have some wells that rise all the way up to 3,200 TDS, which is a lot of salt.

Q. Do the farmers object when you turn on the wells in the lower valley?

A. Yes. Yes, they do.

Q. Do you sometimes have to turn on the wells in the lower valley at all?

A. Yes, we do. There again, if -- if the river

-- if the Project water that's coming down the river is dropped and Robert needs to turn on some wells to utilize them as push water to deliver Project water, he will. He'll notify me and then he'll turn on whatever wells he needs for a short period of time.

Q. Could they be replacement -- could the lower valley wells be replacement for Project water?

A. No. No. Because of the poor quality and -- and then the -- the amount of -- of acre-feet that they would deliver is not ample enough to -- to satisfy everybody.

Q. Okay.

A. And then -- then they're not located where they could -- they could deliver water to -- to all our constituents.

Q. Okay. Let's talk about -- let's change gears a little bit. Are you familiar with the term primary irrigation season?

A. Yes, ma'am.

Q. What does that refer to?

A. The primary irrigation season is when we have -- when we release Project water out of the -- out of Caballo Dam.

Q. And generally, when is primary irrigation season?

A. Well, during a full allocation, it would be between March to mid October.

Q. And in a dry year like this, what was the primary irrigation season?

A. We started June 1 and ended up September 4th.

Q. Okay. Is there a secondary irrigation season?

A. Yes. There is.

Q. Is that also known as winter?

A. Yes.

Q. Does water get released from the dam during the secondary irrigation season?

A. No, ma'am. The -- we utilize return flows, any -- any effluent water that we might be receiving for secondary.

Q. And do many farmers take delivery of irrigation water during the secondary irrigation season?

A. No. There is very few that -- that utilize it.

Q. Does EBID have a secondary irrigation season?

A. Yes, they do.

Q. Do you know what the source of water for farmers is for their secondary irrigation season in EBID?

A. Yes. They're groundwater wells.

Q. I'd like to ask you about the Hudspeth County Conservation and Reclamation District. Are you familiar with -- I'm going to abbreviate that for Hudspeth. Are you familiar with Hudspeth?

A. Yes, ma'am.

Q. Can you just point out on Exhibit 4 where the Hudspeth District starts?

A. Yes, ma'am. It's at the tail end of our district where our district ends where you see Tornillo Canal, just a little bit further is the Hudspeth County line, and that's where Hudspeth County starts.

Q. Okay. That's where the district line is, as well, Hudspeth District line, as well?

A. Yes, ma'am.

Q. Okay. During opening statements, New Mexico counsel emphasized that there was a contractual relationship between Hudspeth and EP1, and I'd like to explore that with you from a factual perspective. Is that an accurate statement, are there contracts currently between Hudspeth and the El Paso District?

A. No, ma'am, there is not.

Q. For any kind of water, no current contracts; is that right?

A. That -- that's correct.

Q. Okay. Now, have there been contracts in the past between EP1 and Hudspeth?

A. Yes, ma'am. There was a contract. Prior to me coming on as general manager, there was a contract to deliver effluent water to them.

Q. And so this would have been effluent from the El Paso Water Utility, correct?

A. That's correct.

Q. And that effluent would potentially have had some Project water as the source of the effluent, correct?

A. Yes, ma'am.

Q. And if El Paso had taken Project water into their system, the El Paso District would have been charged for it, correct?

A. That's correct, yes, ma'am.

Q. Okay. So in the 1990s, was that when those contracts were that you're familiar with?

A. Yes.

Q. And remind us when you started as manager.

A. In September 3rd of 2003.

Q. Okay. So based on your time as manager, have you ever run across any records of whether there was any water or any effluent delivered to Hudspeth during

that time frame in the 19 --

A. Yes. I have seen some records of some water was delivered to them in the '90s.

Q. Okay. Now, there's -- there was a contract entered with Hudspeth during your tenure, wasn't there, in 2010?

A. Yes, ma'am. In 2010, there was a ten-year contract that was signed between EP No. 1 and -- and Hudspeth County.

Q. Why?

A. I guess it was wishful thinking that we were going to come out of drought and maybe we could start delivering effluent water to them again. They were in dire need of -- of water for their crops.

Q. Are they still in dire need of water?

A. Yes. It's a constant battle for -- for them. They -- they receive whatever goes down our drains and out our -- our system or any storm water that comes down off the arroyos and into their canal system.

Q. So were there ever any deliveries of water made to Hudspeth during the time that 2010 effluent contract was in place?

A. No, ma'am.

Q. Okay. Let's talk about the District's relationship to Mexico. Does the District coordinate

with Mexico regarding deliveries of Project supply?

A. Yes, ma'am. We do International Boundary and Water Commission call for a joint meeting once a month between EBID, ourselves, EP No. 1, and -- and Mexico and the Bureau of Reclamation. In there, we discuss if it's prior to the irrigation season, we -- Mexico relies a lot on us as to when we're going to release, because the 1906 Treaty says they cannot receive any water unless it's in the El Paso vicinity, which would mean we would have -- EP No. 1 would have to order water and bring it down and -- and have it in our system where they could start taking their water.

Q. What are the benefits of this kind of coordination?

A. Well, we feel that by coordinating together, we can conserve, not only us, but -- and Mexico, but also EBID. We try and coordinate as much as we can where we can release -- release together and -- and have water and have ample water for everybody if -- if we have it.

Q. Okay. I'd like to turn to the District's water management and conservation efforts. Does EP1 have a water management conservation program?

A. Yes, ma'am, we do.

Q. Why is that?

A. Well, it -- it gives our water master an idea of -- of what water is available, what's coming down by -- by us having telemetry from the time the water is released at Caballo and on down the river. We've got several telemetry sites where we monitor the water and so he knows exactly what water is coming down, and if he needs to order more push water, then -- then he will, or if he needs to -- if he's had push water and he needs to cut down on it, he will do that. He coordinates very closely with -- with EBID's water master, also, on that.

Q. Let me just take a step back. I think you're -- you may be describing some of your water management efforts when you're talking about your telemetry and water measurement program; is that right?

A. Yes, ma'am.

Q. And I -- and I just wanted to ask sort of a threshold question, which is why do you have a program that specifically focuses on water management and conservation? What's -- what are the benefits?

A. Well, the benefits is we're trying to conserve and deliver more -- as efficient as we can water down to our -- our constituents, the City of El Paso and our small tract water users or our farmers.

Q. Okay. So let's put up Reyes Exhibit 7,

please. The photograph we have here, is this an example of some of the telemetry you were talking about a minute ago?

A. Yes, ma'am. We have telemetry not only along the river when the water is released at Caballo, we start monitoring the water once it's released at Caballo and it's brought down the river and it makes its way to the American Dam and Mesilla Dam and then we monitor and we have telemetry along some of our main canals and in a lot of our laterals. We have a little over 200 telemetry sites now that we have installed.

Q. Okay. And when was this picture taken?

A. This picture was taken -- and I'll refer to my -- my one sheet of -- this picture was taken April of 2019. This is the I-57 lateral.

Q. Who took the picture?

A. It was taken by Omar Martinez.

Q. Okay. And he works for you, right?

A. He works for us, yes. And he's our --

Q. Is he your grant writer?

A. -- grant writer and keeps track of all the work we're doing and documentation that -- because we need to send in reports if it's grants that we receive from Texas Water Development Board, there's several

things that we have to comply with to keep delivering reports to them or if it's the Bureau of Reclamation, we do the same thing for them. And then we give a monthly report to our board of directors, also, because they fund some of these projects.

Q. Okay. So I think it may have gotten a little bit mixed up just because of the order that I asked the questions, but let me just go back. So I think you talked a couple times about having telemetry and measurement devices in New Mexico. So I just want to make sure that I'm clear. So EP1 maintains measurement devices and telemetry on structures within the Project in New Mexico; is that correct?

A. That -- that is correct. From the time the water leaves the dam at Caballo.

Q. Okay. So let's turn and talk about conservation for a minute. Can you tell me what types of projects your conservation program focuses on?

A. Yes. We're doing a lot of reshaping of our canals and making them more efficient, narrowing them, and then concrete lining them and replacing head gates along the way, modernizing. These are head gates that have existence since the early 1950s in some areas, so they need a lot of upgrading.

Q. Okay. Let's take a look at photos of some of

the projects that you've either completed or are in the process of.

MS. KLAHN: Would we have Reyes Exhibit 5, please?

Q. (BY MS. KLAHN) Mr. Reyes, could you describe what we're seeing here?

A. Yes. This is our -- our Riverside Canal, and just -- just at the bottom is -- is our -- what we call our partidor structure. It's Hispanic word for the parting of the water, because it parts it into the Riverside Canal that continues on, and you'll see a picture further down, and then it sends water into our Franklin feeder, also. But this is a Riverside Canal. This is a mile and a half of concrete lining that we just completed this last winter, and if you'll look, that's the Franklin Mountains at the top of the photograph, and then to your left, you can barely see the Jonathan Rogers Water Treatment Plant and the Robert Bustamonte Sewer Treatment Plant.

Q. So the red -- kind of the red stacks that you can barely see there?

A. Yes. That's Jonathan Rogers Water Treatment Plant.

Q. Okay. And behind the Rogers Water Treatment Plant, is that the border wall we're seeing?

A. That's correct. That's -- that's just a little further down is where the American Canal Extension ends and our Riverside Canal starts and then that's the intake where Jonathan Rogers takes water into their plant from our Riverside Canal.

Q. Okay.

A. And that's part of the tour that we did.

Q. Part of the basin tour?

A. We went to that location.

Q. Okay. Could you tell us who took this picture?

A. Yes. This picture was taken, again, by Omar Martinez, and it was taken June 1 of 2021.

Q. Okay. Let's have Reyes Exhibit 6, please. Mr. Reyes, looking at Exhibit 6, what are we seeing here?

A. This is a continuation of our Riverside Canal. This is just downstream of the partidor that I talked about. That brown fence that you see there, that's the border fence, so our Riverside Canal runs parallel with that border fence. We concrete lined close to a mile this last year in this section, and we're scheduled to concrete line about 2 miles this -- this winter. As a matter of fact, our men have already started reshaping the -- the canal channel

it's onto -- to start their concrete lining.

Q. Okay. Did Omar Martinez take this picture?

A. He did. He took this picture April 9th of 2021.

Q. Okay. Let's take a look at Reyes Exhibit 8. What are we seeing here?

A. Okay. This is our Riverside Canal, but this is the earthen portion of it. You can see it's much wider. There's green vegetation on both banks growing. When you have earthen canals, you have that issue that constantly have to mow the banks to keep the vegetation down. This is a -- the bridge that you're seeing there is a telemetry site. This is water being monitored as to the flow and how much water is in -- in the channel, and then the bridge there further back, that's a border patrol bridge that -- and you see the gates that go into the -- towards the river.

Q. So this -- so this is a -- this is a part of the Riverside Canal that's not been concrete lined, correct?

A. That's correct. This is part that's targeted to be concrete lined this winter.

Q. So seepage from the Riverside Canal currently in this section, part of it would go to Mexico,

wouldn't it?

A. Yes. The -- the flows of water, once -- once it goes underground, it flows towards -- towards the river and towards Mexico.

Q. Okay.

A. And this is -- this is a huge problem area for us in this canal. It's very porous. We lose a lot of water by seepage and evaporation.

Q. Okay. So conservation -- I'm sorry. What is -- just for the record, why don't you explain what concrete lining does that is beneficial?

A. Okay. Well, concrete lining, I'll tell you what some of the projects that we've done, it has conserved a little over 3,200 acre-feet of water. 3,200 acre-feet of water could irrigate 800 acres of land with a full allocation. So the more that we concrete line, the more efficient our -- our system gets, and we're able to deliver water a lot faster and lose less water. Any time we apply for a grant, we have to comply with it, whether it be Texas Water Development Board or the Bureau of Reclamation. They want to know exactly what we estimate how much water we are going to conserve. So that's one of the requirements.

Q. So do you just estimate how much water you're

going to conserve or do you actually do any studies to measure?

A. We actually do what's called the seepage test that are different canals and -- and submit the results to whether it be the Bureau of Reclamation or Texas Water Development Board. So that's how we estimate more or less how much water we're going to conserve.

Q. Okay. Let's take a look at the last picture, which is Reyes Exhibit 9. This project looks a little different. I see some houses back there. Can you tell us about this conservation project?

A. Yes, ma'am. This -- this is -- this picture was taken by Omar Martinez, also. This was taken January 11th of 2019. This is the east lateral. It's a smaller lateral, but we targeted it because we have homes -- in some areas, we have homes on both sides of that lateral, and in some areas, we have homes on one side and businesses on the other and there's always a concern when you have an earthen canal that you're going to have a ditch break, kids will go mess with your gates or people will go and throw different things, tires or we've even fished out refrigerators and so on that could block a culvert and back up the water and you'd have an overtopping and cause a ditch

break. Certainly it's -- it's -- it's a nightmare when those things happen because you never want to flood somebody's home.

Q. So about how much money have you spent on your conservation program since you started?

A. We have received a little over $12 million of grant funding, whether it be from the state or -- or the federal government, and -- and then we've also had our board of directors put in a little over $2 million to continue our projects in areas that we did not receive grant funding and -- and we need to work on. So it's -- it's been a work in progress, but it's -- it's been paying off.

Q. So is there -- are there more projects on your list for the future?

A. We actually, we have a five-year plan that we worked on between our water master, our maintenance manager, our -- our district engineer and myself on planning the next five years and -- and we actually have funding scheduled for the next five years. We have a little over $5 million already that we've been awarded, whether it be from Texas Water Development Board or the Bureau of Reclamation to continue concrete lining and upgrading our system.

Q. So what is the next big project that you have

on this drawing board?

A. We -- we have a section of the -- I mentioned the Franklin feeder from the partidor to Socorro Road. It's about a mile and a quarter that we need to -- that finish concrete lining. Once we do that this year, we'll be completely finished with the Franklin feeder. It'll be completely concrete lined. And then we have the continuation of the Riverside Canal. We're going to do another two miles this year, and we have a million dollars already awarded to us that we'll be able to -- to concrete line in 2022 and continue on with the concrete lining. So we are about 7 miles of concrete lining that canal, the Riverside Canal, and then we're -- we have a -- a canal that's called the island main where we concreting lining. We did about half a mile last year. That was funded by our board of directors, and we're going to continue doing that, and then we also have -- if -- if everything goes right, special earmark from one of our U.S. representatives that we were awarded close to $900,000 to finish concrete lining that island main canal.

Q. Okay. So you've talked a lot about what the district does for purposes of conservation. Do you do anything to encourage or assist the farmers with

conservation?

A. Yes. We -- we were always looking at what -- what funding is available for them to upgrade their turnouts, concrete line their -- their farmers' ditches or laser levelling their fields. So as we meet with them, we try and pass on information to them. A lot of them have taken advantage of -- of -- of applying for some of that grant money, but we work very close with a farmer. If they want to replace a turnout or increase the volume of a turnout, then we -- we work with them by -- they fund buying the -- the equipment that we need for the turnout, and we'll do the installation. That saves them money.

Q. Okay. So I want to take a step back and ask you, for purposes of planning your conservation and water management programs, do you plan on a year-by-year basis or for the long term?

A. No. We -- we're always planning for the long term.

Q. Why is that?

A. Well, if things aren't getting -- they're not looking any better with, you know, climate change and less water to work with and so on so we're always looking at the future, what -- what can we do to secure that we'll be able to continue delivering water

to our -- to our constituents and to the City of El Paso.

Q. Okay. Are you familiar with the 2008 Operating Agreement?

A. Yes, ma'am, I am.

Q. Why -- why are you familiar with it?

A. I -- I sat on a lot of the meetings with -- with Dr. Blair helping him answer any questions that I could at the time, but it was something that we worked on for some time to get it finished out.

Q. Do you consider the 2008 Operating Agreement a conservation and water management measure for the district?

A. Oh, most definitely.

Q. Let's start with conservation. How is the operating agreement a conservation measure for the district?

A. Well, we -- we really wanted to -- to be able to carry over if we conserved any water and -- and carried it over from one year to the next, we really wanted that, I really wanted that, because that gives me the opportunity early on if we conserved water to be able to tell our constituents early on, this is how much water we -- we have for our conservation efforts, not only the district but the farmers and all our

water users, and -- and this is what we estimate we are getting allocated this year, so this is how much the allotment will be to begin. That's number one. Number two, I'm also able to tell John Balliew at El Paso Water, this is how much water we're -- we have, and he can plan. His budget starts March 1, so he can plan on budgeting what he needs to do. If there's ample water, then he doesn't have to pump from -- pump his wells during the irrigation season. If we're not going to have any water past two or three months, then he'll have to pump his wells. So he can adjust appropriately, also.

Q. Prior to the operating agreement, you did sometimes leave water in the reservoir that you didn't use, though, didn't you?

A. Yes, ma'am, we did.

Q. What happened to it at the beginning of the next irrigation season of the volume that EP1 had left in the reservoir?

A. It was split. 57 percent of it went to EBID and 43 to us. So we lost more than half of it.

Q. Okay. But if you had water in the reservoir, why wouldn't you take it all? Why wouldn't you allocate and use all of it?

A. Well, we do. We try and utilize -- you know,

the water does not belong to the District. It belongs to the constituents, to the water users. They place their water orders, and we deliver it as efficient and as fast as possible to them. You know, they -- we -- we try and conserve as much as we can, but it's hard to go out and tell your constituents, hey, you know, practice watering and saving as much as you can when you're going to lose 57 percent of it. It was tough to convince them of that.

Q. Was carryover an important part of your -- of your allocation this year in 2021?

A. Yes. Without carryover, we -- we probably wouldn't have opened up -- we wouldn't have had an irrigation season.

Q. Okay. And -- and how did that water get carried over? Was 2020 an especially good year?

A. I'll go back to 2019. 2019, we started irrigating June 1, also, and -- and -- but we had a lot of runoff that came in late, but a lot of our cotton farmers didn't plant that year. They laid out a lot of their land, so we carried over a lot of -- a lot of water. We carried over, over 232,000, which is our max cap, but we transferred over 82,000 acre-feet to EBID under the operating agreement, and so that placed us in better position for the following year.

We had ample water. We gave a full allocation. But then we didn't have the runoff that we thought we would have, and we fell back into the hole and -- and without the carryover that we had, we wouldn't have opened up this year.

Q. So in 2019, you said that you started late, in June, I think, and then there was some late runoff.

A. Yes.

Q. And -- and you made a comment about the cotton farmers laying out a bunch of ground. What did you mean by that? What -- when did -- when would a cotton farmer have to make that kind of a decision at EP1?

A. Well, they've got to make it early on. That's why we release in March. They have to wet their fields in March where they can plant their seeds in April, and in order to make a -- a yield of -- of cotton in October, and if -- if they don't do that, then it's too late for them to -- to get a good yield of -- of cotton.

Q. So a June 1st start date means a lot of people can't plant cotton in EP1?

A. If -- if they don't have wells, then they don't even attempt it.

Q. Do you remember how many acres of cotton were

-- are -- would -- would be planted in a good year, like a 2020 year, in EP1?

A. Close to between 24 and 25,000 acres of cotton land.

Q. About how many were planted this year, Mr. Reyes?

A. This year, we didn't have 5,000 acres.

JUDGE MELLOY: All right. It's about 3:00. I think we've been going for quite a while. Why don't we take our break at this point for 20 minutes, and then we'll come back. All right?

MS. KLAHN: Thank you.

JUDGE MELLOY: Thank you.

(Recess.)

JUDGE MELLOY: All right. Are we ready to get started again, Ms. Klahn?

MS. KLAHN: Yes, thank you, Your Honor.

Q. (BY MS. KLAHN) Mr. Reyes, I think we just have one more question. You were saying before the break about the impact of late start to the Project on cotton farmers. During 2021, did you -- did you completely empty your carryover account?

A. Yes, ma'am, we did.

MS. KLAHN: That's all the questions I have for this witness at this time.

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

MS. NAJJAR: The United States does not have any questions for Mr. Reyes at this time.

JUDGE MELLOY: Okay. And Mr. Wechsler?

MR. WECHSLER: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. WECHSLER:

Q. Mr. Reyes, before I start, I just want you to know I have your hat with me. I'm not going to wear it because it doesn't go with my suit, but thank you again for that. Nice to see you again. Good afternoon. I'm going to cover with you, I think, five general topics, some of which you covered with Ms. Klahn. I want to talk to you about the district itself and its infrastructure, the district's water supplies, the process for ordering and receiving project water, operations within the district once water arrives, and then a little bit about state regulation of water. So -- so let's start just with the district, and I'm going to show you U.S. Exhibit 066, and I'm going to use this as a demonstrative but let's make sure you recognize this. Go to Page 1.

JUDGE MELLOY: Excuse me. Is this New Mexico 066?

MR. WECHSLER: I believe it's U.S., Your Honor. US-66.

JUDGE MELLOY: Okay.

Q. (BY MR. WECHSLER) Mr. Reyes, you recognize this document?

A. Yes, I do.

Q. This is a presentation you actually gave, right?

A. Yes.

Q. And we can see it has the official stamp there of EP No. 1, and you gave that as part of your duties as the general manager?

A. Yes, sir.

Q. And this is also kept in the files of EP1 or in the electronic files, I should say; is that right?

A. Yes, sir.

MR. WECHSLER: Your Honor, I move U.S. Exhibit 66.

MS. KLAHN: Your Honor, could I have a minute? There are so many New Mexico cross exhibits. I just need to kind of find this in the list and see what our objections were and then I'll be able to generate a reaction.

I am -- looks like we had a hearsay objection, and I will withdraw that.

JUDGE MELLOY: All right. Exhibit -- U.S. Exhibit 66 is admitted.

Q. (BY MR. WECHSLER) All right. Let's turn to Page 4 now. And, Mr. Reyes, the EP1 is organized as a Texas entity, right?

A. Yes, sir. We're formed under Chapter 55 and 59.

Q. Of the Texas Constitution?

A. That's correct.

Q. It's also a political subdivision of the State of New Mexico -- of the State of Texas? My apologies.

A. Yes, sir.

Q. It's a direct beneficiary of the Project, correct?

A. I didn't understand the question.

Q. My question is: It's a direct Project beneficiary of the Rio Grande Project? You're aware of that?

A. Yes.

Q. In fact, it's the only direct Project beneficiary in the State of Texas, right?

A. I am not sure on that.

Q. From your -- from its share of Project water, EP1, as you testified on direct, supplies

approximately 69,000 acres of Project land in El Paso County, Texas, right?

A. 69,010, yes, sir.

Q. And all of those lands are located in the state of Texas?

A. Yes, sir.

Q. Let's turn to Page 6 of this document. This is US-66. There's a variety of crops that are grown within EP1, right?

A. Yes.

Q. They include pecans; is that right?

A. Yes.

Q. And then moving to Page 7, cotton?

A. Yes.

Q. Next page, corn and wheat?

A. Yes.

Q. And the next page, chile and onions?

A. Yeah. Although it's very rare. You mostly don't find that anymore.

Q. I think you told me in your deposition, onions are actually sometimes grown in the winter; is that right?

A. That -- that's correct.

Q. And the next page, and you also have alfalfa in -- in the district, right?

A. Yes. We have some.

Q. Each of these crops is irrigated with different irrigation amounts, right, different amounts of water?

A. I don't understand your -- by different amounts.

Q. Each crop that we just talked about requires a different amount of water?

A. What we -- we -- the board allots to the farmer what water is available, and -- and then they determine when to call for it and -- and what their -- their crops need.

Q. I understand that, Mr. Reyes. I think that's an answer to a different question. My only question is -- we just went through a number of different crops, and my question is: Each of those types of crops requires a different amount of water, right?

A. Yes.

Q. And some of them are irrigated with different irrigation techniques?

A. Meaning Project water in wells or Project water --

Q. Well, I mean, the farmers might use a different technique. In other words, you -- you are going to irrigate alfalfa differently than you might

cotton?

A. Yes. Probably.

Q. But we heard from Mr. Ivey's testimony that it's actually up to the farmers, the crops that they want to grow, right?

A. That's correct.

Q. And it's also up to the farmers what irrigation method they use, in other words, flood or sprinkler or drip?

A. Yeah, but we don't have any drip or any sprinkler, because of our -- because of all the sand that we get in the water.

Q. Ultimately, that's up to -- that's up to the farmers?

A. I don't -- I don't know of any sprinkler or drip system in our valley.

Q. Again, my only question is, it's up to the farmers how they irrigate once they're given water?

A. Yes. It's up to them to -- to call for their water and -- and know how many times they -- or what the balance is and what -- how many times they can irrigate.

Q. Over the years, the crop mix in EP1 has changed, right?

A. Yes.

Q. For example, the percentage of pecans has grown in EP1 since 1997?

A. Yes.

Q. Today, there's close to 16,000 acres of pecans grown in EP1?

MS. KLAHN: Objection; foundation.

JUDGE MELLOY: I'll overrule it. He's the general manager. He's familiar with the Project. You may answer.

A. Yes.

Q. (BY MR. WECHSLER) Even the amount of acreage that's irrigated has changed, right?

A. Yes.

Q. So today only 49,000 acres approximately of land is irrigated in EP1?

A. I'm not sure on that figure.

Q. Are you aware that approximately 10,000 acres of EP1 has been assigned to EPWU, to the City?

A. I don't know exactly how much they have.

Q. Does that sound ballpark correct?

A. More or less.

Q. One of the principles for the Compact baseline proposed by New Mexico is that the Project should be operated as a single unit, so let me ask you a couple questions about that. First, one of the

diversion points for EP1 is in Mesilla is at Mesilla Dam in New Mexico, right?

A. Yes.

Q. And next, EP1 uses numbers, as you explained, and Units 6A and 6B are located in the northern part of the district closest to New Mexico, right?

A. Yes.

Q. And in that area along the New Mexico/Texas state line, the state line meanders between Units 6A and 6B, right?

A. That's correct.

Q. As a result, EBID delivers some water to EP1 users in Texas, right?

A. Yes.

Q. And vice versa, EP1 actually delivers some water to EBID users in New Mexico, right?

A. Yes.

Q. And that led you to remark actually as part of this case in an affidavit that the Rio Grande Project cannot be operated as independent units based on the state line; do you recall saying that?

A. Yes.

Q. You think that's true?

A. Yes.

Q. Another theory that's been discussed in this

case is whether the Compact intended to lock in conditions as of 1938, so let's talk about some of the changes that have occurred. Now, we already talked about the changes in crops that can occur on a yearly basis, right?

A. Yes.

Q. You're familiar with the canalization or rectification project?

A. Yes.

Q. What is that -- what was that project?

A. It was -- it was a project by the Bureau of Reclamation to upgrade the system.

Q. As part of that Project the United States changed the location of the Rio Grande River, right?

A. I am not sure.

Q. Do you know when that project was completed?

A. No, I don't.

Q. Turning to the diversion points, EP1 currently diverts water from the Mesilla Dam and the American Dam; is that correct?

A. Yes.

Q. But in the past, EP1 use to divert water from Riverside Dam?

A. Yes. Until it failed.

Q. EP1 actually no longer uses that Riverside

Dam, right?

A. No.

Q. Instead, you use the American Canal Extension?

A. That's correct.

Q. We can look at a picture of that at US-66 again, Page 21. We looked at it earlier, as well. How many miles was the American Canal Extension?

A. I believe it was 17 miles.

Q. Do you know when it was completed?

A. In the late '90s.

Q. And, now, the American Canal Extension is actually the primary conveyance for water in the lower valley, right?

A. Not necessarily. The Franklin Canal also carries a lot of water.

Q. Fair enough. So you have the American Canal and the Franklin Canal in the lower valley?

A. Yes.

Q. The American Canal Extension was not present in 1938, will you agree?

A. Yes.

Q. All right. So turning to some more recent channels that you -- changes that you talked about earlier, so EP1 has been converting some open channels

to underground pipes, right?

A. Very little. We -- we've done very little of them. Mostly in front of schools.

Q. Is that right? So let's take a look at Page 19 of this document. We can see one of those. Is that a picture of one of these pipes in front of a school?

A. Yes.

Q. And how many miles have you actually converted?

A. Probably not even a mile.

Q. And you've also, as you testified earlier, and we can look at Page 14 here, you've been lining some of your canals, as well, right?

A. Yes.

Q. And lining the canals limits the amount of seepage, right?

A. Yes.

Q. So whereas that water used to go into the aquifer, now it's remaining in the canal, correct?

A. That's correct.

Q. Which means the amount of the water that's seeping from a lined canal is different now than it was in 1938?

A. If it's concrete lined, do you mean?

Q. I do.

A. Okay. Yes.

Q. Okay. So, now, you've been working on on-farm projects, as well, right? And let's look at 32 for that. Is that correct, you've been working on some on-farm projects?

A. Yes.

Q. And those include laser-controlled land grading at Page 33, right? That's on the farm?

A. That -- that's the farmers doing that, yes, not the District.

Q. But you've been -- well, it's within EP1, right?

A. Within our irrigation district, yes.

Q. There's also been minimum tillage, which is shown on Page 34; is that right?

A. I'm not sure about that.

Q. Okay. And then you talked about concrete lining, which is the next slide.

A. Okay.

Q. And that's happening in the district, as well, with support from EP1?

A. Yes. Well, if it's a farmer's ditch, it's on -- you know, it's up to them. We just do our -- our canals and laterals, just canals and laterals that EP1

owns. We -- we try and provide the farmer with information as to where they can seek grant funding for concrete lining and laser levelling.

Q. That's helpful. Thank you. Let's just take a look, generally, at the District. So if we go to New Mexico Demonstrative Exhibit 1 is -- is this Google Earth, and I'm going to show you something here, Mr. Reyes. And what I want to do is we're going to click on six. It looks like we're there. And then you're going to, under EPCWID, open the arrow. There it is. Now, just click on major conveyances there on the box next to EPCWID. There you go. And then double-click on -- yeah. So this should show us, hopefully, Mr. Reyes, the -- the district. You recognize that as showing EP1 and its canals and laterals?

A. Yes. It's not a complete photograph of it, but -- but, yes, it shows some of the -- the canals and so on.

Q. Yeah. I think that's right. We could click in the rest of it if we wanted, but for my purposes, what I really just wanted, as we're looking at this, can you tell me what percentage now of -- of your conveyance system is concrete lined?

A. Probably, maybe 35 percent.

Q. So, now, that's a long way of saying that a lot has changed in EP1 since 1938; is that right?

A. As far as concrete lining, yes.

Q. Well, we talked about some other things, too, right, crops and whatnot, correct?

A. Yes.

Q. All right. Let's talk about sources of water, which you also talked about with Ms. Klahn. As general manager, it's important for you to understand the sources of water that are available for the District?

A. Yes.

Q. And you've discussed previously that EP1 generally has three sources of water, you have Project water, groundwater, and municipal effluent, right?

A. Yes.

Q. All right. Let's take those one at a time. We're going to talk about surface water first, and EP's surface water supplies generally the Project supply that's allocated to the District, right?

A. That's allocated by the Allocation Committee, yes.

Q. Let's look at Joint Exhibit 436. You recognize this document?

A. No.

Q. Back out. You don't recognize this document?
A. The adjudication document, yes.
Q. Correct. Yeah. You do recognize it? And you can see from the stamp that it's a Texas Commission of Environmental Quality document, right?
A. Yes.
Q. And, in fact, you can see that it also was -- was filed there in the County of, looks like, Travis, right?
A. I believe so.
Q. You see that, Mr. Reyes?
A. Okay. Yes.
Q. TCEQ is the Texas agency that's responsible for adjudicating water rights?
A. Yes.
Q. And -- and this document, you understand, applies to the surface waters of EP1?
A. Yes.
Q. And this is also a document that's kept on file at the District, right?
A. Yes.
Q. In fact, you were manager of the District when this document was issued?
A. Yes.
MR. WECHSLER: Your Honor, I offer Joint

Exhibit 436.

JUDGE MELLOY: Any objection?

MS. KLAHN: Your Honor, we object on the basis of relevance. The relevance of a Texas adjudication certificate to a case that's an Original Action is not clear and it's likely to just lead to some confusion. There's also a foundational objection to the extent depending on what he asks about it, I guess, and so we'd object to its admission.

JUDGE MELLOY: Where are you going with this exhibit, Mr. Wechsler?

MR. WECHSLER: Yeah, Your Honor, this is the amount of water that the State of Texas, the party to this case, has determined EP No. 1 is entitled to take. As to the foundation for the document, it's been laid, and as to the relevance, I think that it should be obvious, but as to any confusion, to the extent that the -- the Court is confused, they should have that document before them. I mean, we are talking about the Supreme Court of the United States and not a jury.

MS. KLAHN: The Texas apportionment is not limited by a Texas state adjudication certificate and so producing this and asking a bunch of questions about it just leads to a whole rat's nest of things

that don't have anything to do with the dispute in this case.

MR. WECHSLER: Certainly they can address that, Your Honor, but, again, this is the amount of water Texas is determining they are entitled to take.

JUDGE MELLOY: Well, I'm not sure where we're going with this, but I'll admit 236.

Q. (BY MR. WECHSLER) All right. Turning then to Page 5, which you can see on the right-hand side there, Mr. Reyes, the -- you can see it indicates, "Now, therefore, this certificate to appropriate waters of the State of Texas is issued to the United States of America and EP No. 1." You understand, again, that this applies -- that this certificate applies to the EP No. 1 district, right?

A. Yes.

Q. And then if we turn then to Paragraph 1B. There we go. You can see that it authorized EP1 to use an aggregate amount of water from the Rio Grande not in excess of 376,000 acre-feet per year, right?

MS. KLAHN: Objection; relevance.

JUDGE MELLOY: Overruled.

Q. (BY MR. WECHSLER) Did you understand my question, Mr. Reyes?

A. Yes, I did. And the -- it says the Rio Grande not in excess of 376,000 acre-feet per year.

Q. And you understand that that then represents the limit of the amount that EP No. 1 can take from the State of Texas, right?

MS. KLAHN: Objection.

JUDGE MELLOY: I'm going to sustain that. I think that's a legal conclusion. The document speaks for itself.

Q. (BY MR. WECHSLER) Mr. Reyes, we've seen that number, 376 acre-feet, a number of times in this litigation. Are you familiar with the term D2?

A. Yes. I'm familiar with it. I can't explain it, but I'm familiar with it.

Q. I'm not sure I could explain it either. You're aware that approximately 376,000 acre-feet is the full supply amount for EP1 under the D2 curve?

MS. KLAHN: Objection; foundation.

He said he doesn't even understand it well enough to explain it.

JUDGE MELLOY: Well, but he uses it every -- all the time. I'm going to overrule that objection.

Q. (BY MR. WECHSLER) Mr. Reyes?

A. Ask your question again.

Q. Happy to. Are you aware that approximately 376,000 acre-feet is the full supply amount for EP No. 1 under the D2 curve?

A. No, I really couldn't answer that.

Q. All right. Before we turn to groundwater, let's talk about the project allocations. You're aware that project allocations are determined through that Allocation Committee, right?

A. Yes.

Q. And the project water is generally allocated to project lands based on the irrigable lands in New Mexico and Texas; is that right?

A. Yes.

Q. Let's turn to New Mexico Exhibit 818. That's 818. I think you recognize this document; is that right, Mr. Reyes?

A. Yes.

Q. What is it?

A. It's the Far West Texas Water Plan that's prepared for by Texas Water Development Board.

Q. And this was issued January, 2021; is that right?

A. Yes.

Q. It says that it was prepared by the Far West Texas Water Planning Group. What is the Far West

Texas Water Planning Group?

A. It's a group -- there -- there's 18 water planning groups in the State of Texas. The Far West Texas Water Planning Group is -- is that one that you're seeing there in bold colors that represents those -- those areas.

Q. And it includes El Paso County, right?

A. Yes.

Q. This document also indicates it was prepared for the Texas Water Development Board. Can you please tell us what the Texas Water Development Board is?

A. Yes. It's a funding agency for the State of Texas. They fund different irrigation projects, different water projects.

Q. Among other things, they have responsibility for water planning throughout Texas?

A. Yes.

Q. Let's turn to Page 438 of this document, and let's just call out that table. We can see, Mr. Reyes, there on the second column towards the bottom, it actually identifies you as a committee member, right?

A. Yes.

Q. And then we can also see a couple other people in this case that are worth looking at in the

next, we can see Mr. John Balliew. You see that?

A. Yes.

Q. And you know who that is?

A. John Balliew, yes, I do.

Q. I think he's our next witness; is that -- well, maybe after Mr. Rios; is that right?

A. I'm not sure.

Q. Yeah. Fair enough. And then we can see Mr. Johnny Stubbs there at the bottom, too. Who's Mr. Johnny Stubbs?

A. He's our board president.

Q. Let's turn to the next page, Page 439. And let's call out that Table 10-3 in the middle down at the bottom. There you go. And here, this says the officers and executive committee members, and that's for this plan, right?

A. Yes.

Q. And you actually were chairman of the -- this effort?

A. Yes.

MR. WECHSLER: All right. So, Your Honor, I move New Mexico Exhibit 818. Its authenticity has been stipulated, and it qualifies as both a public record and the business exception to hearsay.

MS. KLAHN: Our objection remains, relevance.

MR. WECHSLER: Well, do I need to address the relevance?

JUDGE MELLOY: No. I'll admit 818. Go ahead.

MR. WECHSLER: Thank you.

Q. (BY MR. WECHSLER) Mr. Reyes, if you'd turn to Page 169, we were talking about Project allocations, and I want to look at the fourth paragraph here. Here, it says -- it's talking about deliveries of Project -- of Rio Grande Project water. You agree those deliveries are based on irrigation requirements?

A. I'm reading.

Q. Please take your time.

A. Okay.

Q. Yeah. So my only question was: Do you agree that Project water is based on -- Project deliveries is based on irrigation requirements?

A. Not necessarily, no.

Q. You understand the Rio Grande Project was established to -- to allow for irrigation in EBID and EP1?

A. Yes.

Q. And under the Enabling Act -- well, are you

familiar with the Enabling Act for the Rio Grande Project?

A. No. I'm not.

Q. All right. Let's look at the fifth paragraph, and this time, we're going to look at the last sentence. It says, "Total diversion allocations are 495,000 acre-feet to EBID, 376,000 acre-feet to EPCWID No. 1, and 60,000 acre-feet to Mexico during years of full supply." Here's that number we saw in this certificate, right, the 376,000 acre-feet, and that's the same number we saw in that previous exhibit?

A. Yes.

Q. You agree that this sentence is accurate?

A. Yes.

Q. Let's turn to New Mexico Exhibit 2280. At the beginning of the year, Mr. Reyes, you will typically receive an initial allocation letter from Reclamation; is that right?

A. I don't recall.

Q. Well, I'm just asking generally, Mr. Reyes. At the beginning of each year, do you receive an allocation letter with an initial allocation from the Bureau of Reclamation?

A. Not that I can recall, no.

Q. Okay. Well, let's just take a quick look at this third page of this. You can see that, actually, you're copied here. You're the first CC on this. Do you see that?

A. Yes.

Q. You understand that to be you?

A. Yes. That's a number of years ago.

Q. Fair enough. But you don't remember that each year, you receive an initial allocation letter, Mr. Reyes?

A. Not -- not since the -- the Operating Agreement went into effect, no.

Q. All right. Let me ask you this then: The EPCWID allocations, we heard testimony in this case previously that during the years 1979 to 2002, the districts received a full supply, and I think you agree with that, right?

A. From '79 to what year?

Q. 2002.

A. I'm not sure. Without looking at the records, I couldn't tell you.

Q. Let's just have a look at your 2020 deposition. Do you have that in front of you?

A. No.

Q. Unfortunately it's not loaded here, so I'm

going to read a section to you and see if you recognize it. This is -- I'm reading from -- for other attorneys -- Page 53, Line 23 to Page 54. And here you're asked, "QUESTION: We've heard testimony in this case that the years from 1979 until 2002 were full supply years. Do you agree that those years were full supply years?"

"ANSWER: Yes."

Do you recall giving that testimony, Mr. Reyes?

A. I don't recall, but I'll take your word for it.

Q. Turning then to the Operating Agreement, which you discussed with Ms. Klahn, just a couple of questions about the Operating Agreement before we leave the subject of allocations, you understand that Project allocations are made based on the 2008 Operating Agreement?

A. Yes.

Q. You talked with Ms. Klahn that you actually were involved in the negotiations, right?

A. Yes. I sat and assisted Dr. Blair, yes.

Q. That agreement was negotiated in 2007 and 2008, right?

A. Yes.

Q. You were general manager of EP1 during that time period?

A. Yes.

Q. And then ultimately, that agreement was adopted in 2008, right?

A. Yes.

Q. At the time the Operating Agreement is negotiated, the Rio Grande Compact Commissioner for Texas was Pat Gordon, right?

A. That's correct.

Q. In fact, he was the Texas Rio Grande Compact Commissioner until earlier this year?

A. Yes.

Q. Commissioner Gordon played a key role in reaching the Operating Agreement?

A. Yes.

Q. In fact, I think you've previously said that Commissioner Gordon helped you address issues such as Mexico's allocations, the maximum allocation based on a release of 790, and carryover; is that right?

A. I'm not sure if I said that or not.

Q. Well, let me refresh your recollection. Let's take a look at New Mexico Exhibit 2046. And that's a picture of you, right, Mr. Reyes?

A. Yes, it is.

Q. And we can see, it indicates this is -- it has your name in the middle, right?

A. Yes.

Q. And you recall talking to the WRRI, W-R-R-I, conference about the Operating Agreement?

A. I don't really recall it. It's been a number of years ago. I can tell by our old address, it was prior to us moving to our new offices.

Q. All right. Well, let's see if you -- this helps your recollection. Let's look at Page 2, and we're going to look at the third paragraph that starts, "Gary is absolutely correct." If you take a look at that and see if this refreshes your recollection. Again, I'm asking: Did Commissioner Gordon help you address issues such as Mexico allocations, the maximum allocation based upon a release of 790,000 acre-feet, and carryover?

A. I believe Gary is the one that was quoted, and I said -- I said that I agreed with Gary, he was correct that Pat Gordon did play a part in getting that operating agreement done.

Q. In 2007 and 2008, the Rio Grande Compact Commissioner for New Mexico was John D'Antonio. Are you aware of that?

A. I know he was the commissioner, but I don't

know what years.

Q. Was the New Mexico Compact Commissioner involved in negotiating the Operating Agreement?

A. No.

Q. Let's look at New Mexico Exhibit 287. You recognize this as minutes of a board meeting for EP1?

A. Yes.

Q. And you can see the date is July 11th, 2007, right?

A. Yes.

Q. Which we just talked about is during the time period either during or immediately before the operating agreement was negotiated, right?

A. Yes.

Q. You can see you were present, and it's your habit to attend board meetings, right?

A. It's not my habit. I like to stay informed, and, yes, I did play a big part in the board meetings.

Q. We can -- if you turn to Page 6 of this document, you can see that it's signed by -- do you pronounce his name Singh or Singh?

A. Indar Singh.

Q. Thank you. Who is that?

A. He used to be our secretary. He's passed away now.

Q. It's the habit for the secretary to sign the board minutes, right?

A. Yes. It's his obligation.

Q. I think the board minutes also get filed with the El Paso County, right?

A. Yes. With the county clerk's office.

Q. And they're kept on file at EP1?

A. Yes.

MR. WECHSLER: Your Honor, I'd move the admission of New Mexico 287. Its authenticity has been stipulated. It satisfies the business record exception for hearsay.

JUDGE MELLOY: Any objection?

MS. KLAHN: No objection.

JUDGE MELLOY: New Mexico 287 is admitted.

Q. (BY MR. WECHSLER) Mr. Reyes, EP1 regularly attaches relevant documents to its minutes, right?

A. Yes.

Q. Let's turn to Page 44 of this document. Here we can see in the re line is what's a professional services contract for legal services. Do you see that?

A. Yes.

Q. And the date is August 15, 2007?

A. Yes.

Q. Now, if we -- well, you can see it's addressed to Mr. Stubbs, and he was the president of the Board in 2007?

A. That's correct.

Q. If we turn to Page 48 of this document, you can see that it's signed both by Mr. Stubbs and a representative of the law firm, right?

A. Yes.

Q. And, now, let's turn to Page 45. Under the third paragraph, "Responsible Professionals," we can see that one of the people responsible for providing services under this contract was a Mr. Patrick Gordon. Do you see that?

A. Yes.

Q. You understand that to be Patrick Gordon, the Texas Compact Commissioner?

A. Yes. It's his law firm.

Q. All right. Let's turn to allotments. We can take that down. Once the Project allocation for EP1 is known, the District sets the allotments; is that right?

A. Yes. Our board of directors does.

Q. And that's the amount of water for each acre of district land?

A. Correct.

Q. And every member gets an allotted -- an equal amount per acre, right?

A. Correct. That includes the City of El Paso. Everybody is treated the same.

Q. Right. Everyone who owns land; is that correct?

A. Irrigable land, yes.

Q. Understood. Yeah, you did make that distinction during your direct. And let's go ahead and look at New Mexico Exhibit 2269A, which I understood was not objected to, but maybe I'm wrong. Let me ask you this, Mr. Reyes: Did you -- do you recognize Exhibit 2269A?

A. Yes.

Q. What is it?

A. It's a memo to all our employees within the District, EP No. 1, El Paso Water Utilities, the PSB, the U.S. Bureau of Reclamation, and IBWC.

Q. And --

A. And it's from me.

Q. Those are your initials there, right?

A. That's my signature, yes.

Q. And -- and this is, again, kept in the files at EP1?

A. Yes.

MR. WECHSLER: Your Honor, I offer Exhibit New Mexico 2269A.

MS. KLAHN: No objection.

JUDGE MELLOY: Any objection?

MS. NAJJAR: No objection.

MS. KLAHN: No objection.

Q. (BY MR. WECHSLER) All right.

JUDGE MELLOY: Excuse me a second. New Mexico 2269A is admitted.

MR. WECHSLER: My apologies, Your Honor.

Q. (BY MR. WECHSLER) And here you're indicating that the allocation was being increased to 48 inches, right?

A. That's -- that's correct. We started off with a lesser allocation, and we increased it as we went along as the water came into the dam.

Q. And so you inform the stakeholders when that happens?

A. That's correct.

Q. You testified earlier 48 inches or 4 feet is the maximum allotment that EP1 awards; is that right?

A. That's correct.

Q. That's true today, too, right? In other words, this -- we're looking at a document from 2008,

but currently 4 acre-feet per acre allotment is the amount that's given during a full allocation; is that right?

A. That's correct.

Q. So in those years when EP1 gets an allotment of 4 acre-feet per acre, is it fair to understand that that's a year in which the District had a full allocation of water?

A. Like I explained, it might be that we started off with a much lower allocation -- allotment, and then we increased it as -- as we went along.

Q. So that if you get to 4 acre-feet, that's the maximum amount, and you have a full allocation?

A. Correct.

Q. All right. Let's take a look at Demonstrative Exhibit 2, New Mexico Demonstrative Exhibit 2. I want you to just confirm some of these numbers for me. I think it's Page -- I think it's No. -- maybe it's Demonstrative 3, Page 2. My apologies. There we go. I just want you to look, Mr. Reyes, at the right-hand column, which is the E P1 allotment. Do these numbers look accurate to you?

MS. KLAHN: I'm going to object on foundation. This is obviously a -- a document produced by New Mexico's -- one of their consultants,

and I'm sure the data associated with allotments must be publicly available. I don't know that Mr. Reyes has the ability to recall the allotments for all these years.

MR. WECHSLER: Your Honor, demonstrative exhibits have no evidentiary value outside of what is actually said by witnesses, which is precisely why I'm asking Mr. Reyes if he's able to, to verify the data in the right-hand column.

JUDGE MELLOY: All right. I'll let the witness answer.

MS. KLAHN: I was objecting to foundation about the question, not the exhibit.

JUDGE MELLOY: The witness can answer.

A. I'm not sure on all those dates at all. You failed to include EBID's groundwater pumping, though.

Q. (BY MR. WECHSLER) Well, that's right. You understand that the allocation that comes from the Project is a surface water allocation, right?

A. Yes. It comes from the Project, yes.

Q. Yeah. So what I'm putting here -- what we're putting here are that allotment that comes from the Project, and so you don't know whether or not this is accurate?

A. No, I don't.

Q. And when you were talking about groundwater there, when EP No. 1 does allotments, does it include the amount of groundwater that's pumped from private wells from EP1 farmers?

A. No. I have no control over that.

Q. All right. So am I correct that 4 acre-feet was not always the full allotment in EP1?

A. That's correct. It was less.

Q. Let's take a look at the document that'll help us understand that. This time, I want to turn to Exhibit 491, New Mexico 491, and we can see this is entitled, "Water Operations Department Operations Guide." You understand this to be a document produced by EP1?

A. No. It was prior to my time.

Q. You don't recall being shown this document during your deposition?

A. You might have showed it to me.

Q. Do you recall at that time which was -- your deposition was taken in 2020; is that correct?

A. Yes.

Q. And at that time, do you recall remembering this document?

A. I might have remembered it, yes.

Q. This time I'm going to read to you from Pages

-- Page 50, Lines 4 through 13 of the 2020 deposition. Let's see. "QUESTION: I'm going to show you another exhibit, which I'll mark as Deposition Exhibit 6" --

MR. WECHSLER: And I'll represent that's this document, Your Honor.

Q. (BY MR. WECHSLER) -- "do you recognize this document?"

"ANSWER: Yes. It's an old operations guide."

"QUESTION: Is there a more recent operations guide?"

"ANSWER: No."

"QUESTION: Is this document still used for any purpose by EP No. 1?"

"ANSWER: I believe our water master still uses some of it."

Do you recall that question and answer from your deposition, Mr. Reyes?

A. Yes.

Q. And so does that help you recall this operations guide?

A. Yes. But since then, I found out our water master does not use it here.

Q. Understood. But you recognize the document; is that correct?

A. Yes.

Q. And it's -- at one point in time, this was the relevance operations guide for EP No. 1; is that right?

MS. KLAHN: Objection to the extent it characterizes as relevance. He doesn't know.

MR. WECHSLER: It's a foundational question. I'm asking him, Your Honor.

JUDGE MELLOY: The witness can answer.

A. I'm not sure.

Q. (BY MR. WECHSLER) Do you know if this document is kept in the normal course of business at EP1?

A. No, it's not.

Q. You -- you don't -- you think this document is not kept at the El Paso County Water Improvement District No. 1 office?

A. We might have it there, but it's not used in the course of operations.

Q. I understand. Maybe we'll ask Mr. Rios about this. Do you know what the allotment was in the -- in previous years -- you can take down the exhibit -- for EP1?

In other words, let me back up. We talked about the fact that currently, the maximum allotment

is 4 acre-feet per acre, right?

A. Yes.

Q. Has it been 4 acre-feet per acre since you became general manager?

A. Yes.

Q. You mentioned that some time before you became general manager, the maximum allotment in EP No. 1 was something less than 4 acre-feet. Do you know what it was before it became 4 acre-feet per acre?

A. No. It was 3 point something, but I don't recall exactly what the number was.

Q. Do you know what year it changed?

A. No, I don't.

Q. Do you know why it was changed?

A. Because the efficiency in our operations improved and because of the -- the district's percentage on deliveries increased, and we were able to save more water and deliver more water to our constituents, so we decided to raise it to 4 acre-feet per acre during a full allocation.

Q. Once they received their allotment, the farmers are given discretion on how to use those allotments, right?

A. That's correct. It's their farm. They call

for it as they feel they need it.

Q. Let's turn to the subject of groundwater. So groundwater is another element that we talked about in New Mexico's baseline, so I want to talk about two kinds of wells with you, district-owned wells and operated -- district-owned and operated wells, and private wells. Do you understand the distinction between those two types of wells?

A. Yes.

Q. What is the distinction?

A. District-owned wells are EP No. 1 wells, and privately-owned wells are owned by whoever drilled them and paid for them.

Q. Let's take a look at New Mexico Exhibit 66, Page 15. You recognize this as -- looks like a drilling rig at the time the wells were being put in; is that right?

A. Yes, sir. That's drilling rig. That's a company that we hired to -- to drill some of our wells.

Q. Those wells were drilled some time in 2002/2003 time frame; is that right?

A. Yes.

Q. At the time you initially drilled 62 of them; is that right?

A. Yes.

Q. I understand only 58 are functional today; is that still accurate?

A. Yes.

Q. If I understood you correctly from your direct testimony, those wells were drilled to somewhere between 90 to 100 feet deep?

A. That's correct. The drilling method that this company uses, they can only go as deep, I believe, to 100 feet.

Q. Now, you mentioned three of these wells are in the upper valley, right?

A. Yes.

Q. I think you said that you're charged for water that's pumped from those wells in the upper valley. Did I hear that correctly?

A. That's correct.

Q. But you're not pumped -- you're not charged for all of the water that's pumped; is that right?

A. Out of those three wells, yes.

Q. All right. Well, we heard testimony from Ms. Estrada-Lopez that it wasn't the entire amount of the wells. Do you recall that?

A. No.

Q. All right. Fair enough. Now, the remainder

of the district wells are located in the lower valley of EP1; is that right?

A. That's correct.

Q. And those wells are generally located along the canals?

A. Yes. Within our property, yes.

Q. And those wells pump directly into the canal system, right?

A. Yes.

Q. Let's look at New Mexico Demonstrative Exhibit 18. We're going to look at Page 2. Do you recognize this as a picture of one of the district wells?

A. Yes.

Q. And this is along the Franklin feeder?

A. Yes.

Q. Let's look at another picture because I like pictures, New Mexico Demonstrative Exhibit 2, Page 59, and you recall traveling along the Riverside Canal during the basin tour?

A. Yes.

Q. You recognize this as one of the wells located along the Riverside Canal within EP1?

A. Yes.

Q. Now, during the winter, you perform

maintenance on the EP1 wells to make sure they're prepared and ready for the following season; is that right?

A. That's correct. We've been relieving some of our wells because originally, they were -- they were built to last ten years, so they're not -- now going on 20 something years.

Q. Understood. And you use those wells when needed to supplement Project water; is that right?

A. Yes. Only when Project water is released in the canal system.

Q. In other words, when Project supply is low, that's when you use these wells?

A. Yes. But only when we've released Project water from the dam, and there's Project water in the canals.

Q. Understood. Now, if you pump the wells continuously, they would produce 30,000 acre-feet of water?

A. I don't think they can produce that much now, but I'd say safely maybe 24,000 acre-feet. If we were to pump them all -- all of them, which we never do, I mean, that's probably what they could produce.

Q. Let's look at U.S. Exhibit 66 again, this time Page 18. You've estimated that the cost of

pumping the wells is approximately $32 per acre-foot; is that right?

A. It's probably more with the cost of diesel and everything else.

Q. What would you estimate it is now?

A. I have -- I have no idea.

Q. $32 was whenever you gave this presentation?

A. Yes. And I don't know -- it doesn't have a date. I don't know when that was given. I know it was -- let's see. It was our old offices so more than ten years ago.

Q. You moved to your new offices ten years ago?

A. Yes.

Q. Turning to the issue of private wells then, so away from district wells. So during the drought, a number of farmers refurbished their wells; is that correct?

MS. KLAHN: Objection; foundation.

MR. WECHSLER: Your Honor, you're on mute. You're still on mute.

JUDGE MELLOY: There we go. I'll overrule the objection.

Q. (BY MR. WECHSLER) Do you recall the question, Mr. Reyes?

A. State it again, please.

Q. Certainly. During the drought, a number of farmers refurbished their wells; is that correct?

A. Yes.

Q. And those -- that refurbishment made those wells operable again; is that right?

A. Well, I couldn't answer that. I would think so, but I'm not sure.

Q. You don't actually know how many private wells there are within EP1, do I have that right?

A. That's correct.

Q. Let me show you a document, New Mexico Exhibit 2243, and this document had no objection. Let me just get you to -- ask you: Do you recognize this document, Mr. Reyes?

A. Yes, I do.

Q. And, in fact, if we turn to Page 4, we can see that as part of -- well, while we're looking at that, can you tell us what this document is?

A. It's a grant application for -- for a project that we did with five farmers, and it was a project that we didn't continue on because it was so expensive to fund.

Q. We can see your signature there verifying that the statements within this document are correct, right?

A. Yes.

Q. If we turn to Page 17, and, again, we're talking about these private wells here, and there's something in here that's relevant to that. We're looking at the -- yeah, if you highlight that whole -- it says -- the third sentence says, "A significant portion of the agricultural irrigated land within El Paso County has access to private irrigation wells of which a majority of the wells produce water with total dissolved solids greater than 1,000 milligrams per liter with significant sodium content and poor sodium absorption ratios." Do you see that?

A. Yes, I see it.

Q. Is that accurate?

A. I am not sure. I think this was prepared by our district engineer.

Q. When -- with regard to these individual wells, the individual farmers with EP1 decide on how to use those wells; is that right?

A. Yes.

Q. Those -- to your knowledge, those private wells are not required to have meters?

A. That's correct.

Q. And you don't know whether the data -- the district collects data on how much water is pumped

from the private wells?

A. No. I can tell you that we don't collect any.

Q. You don't? So you do know, and the fact is you don't collect that information. And EP1 has not evaluated the impacts of groundwater pumping on -- in Texas on the Project supply; is that right?

A. Not to my knowledge, no.

Q. And EP1 also has not evaluated the impact of groundwater pumping in New Mexico on the Project supply; is that right?

A. Not EP1, no.

Q. Let's go back to New Mexico Exhibit 818, which we admitted earlier. This time, I want you to look at Page 116. Let's -- you can see this is talking about Juarez. Do you see that? We can scroll up -- we can blow up the first half. Yeah.

A. Yeah, if you would, please.

Q. Can you see that, Mr. Reyes?

A. Yes.

Q. And -- and so my question here is: You understand that there is groundwater pumping within Mexico in the vicinity of EP1; is that right?

A. Yes.

Q. And this particular document is talking about

pumping within the City of Juarez; is that right?

A. I guess so. I don't know where they -- who got the numbers.

Q. Are you aware that there is pumping done by the City of Juarez?

A. Yes. From what I've been told, yes.

Q. And then I -- I just want to show you another image on the New Mexico Demonstrative Exhibit 1, which you recall that's the -- the Google Earth. So this time, if we click on No. 9 and open that up and then click -- click the box for the well legend. Now, go to No. 11, Mexico, and -- and then click on Mexico wells, and let's let those populate for a moment. You can see at least in this demonstrative -- yeah. Can you click -- can you un-click all the other wells, please? It's just taking time so un-click No. 9. There you go. Go ahead and double-click that Mexico wells.

So here, I'll represent to you, Mr. Reyes, that this is just populating the Mexico wells, and if you click once more on well legend up at the top there, just the well legend, there you go. You can see the orange wells, at least in this, are representing irrigation wells, and the brown ones are representing Juarez municipal. I'll just ask you:

Are you aware that there are also irrigation wells within Mexico in the vicinity of EP No. 1?

A. No, not that I've ever seen, no. I couldn't answer that.

Q. That's not something that EP No. 1 pays attention to?

A. No.

Q. All right. Let's turn to the third source of water that you indicated, and that's effluent. So the City of El Paso is the largest water user by volume in the district; is that right?

A. Yes.

Q. During the irrigation season, at least 50 percent of the water utilized by the City of El Paso comes from the Rio Grande Project?

A. During full allocations, that would be correct.

Q. There is effluent that comes from the wastewater treatment plants that returns to EP1 canals, right?

A. Yes.

Q. Including effluent from Haskell Wastewater Treatment Plant?

A. Yes. Haskell and Robert Bustamonte.

Q. That water can be used by EB1 farmers, right?

A. Yes.

Q. In fact, when the District is factoring the amount to order from Caballo Reservoir, it considers the amount of effluent available?

A. From --

MS. KLAHN: Objection; foundation. He's testified he doesn't do the water ordering from the reservoir.

JUDGE MELLOY: I'm not sure if he testified to that or not, but if you know, you can answer.

A. And I don't know.

Q. (BY MR. WECHSLER) I'm going to ask you, again, about a portion of your deposition, Mr. Reyes. This is the 2020 deposition at Page 75, Lines 5 -- 5 through 13 for those following along at home.

"QUESTION: So does the district factor in that effluent in evaluating how much to order from Caballo?"

"ANSWER: Yes. Yes, we can. We can factor in the -- what to order. We -- Robert calculates how much sewer-treated water we're getting at that particular time from the water treatment plants, and he can adjust to that."

Do you recall giving that testimony,

Mr. Reyes?

A. Yes. That's done by our water master.

Q. That reference to "Robert" is Robert Rios; is that right?

A. Yes.

Q. All right. Let's look at a quick picture again of the Haskell outfall. This is New Mexico Demonstrative Exhibit No. 2. You recognize this as effluent at the Haskell outfall?

A. Yes.

Q. And you recall stopping there at the -- on the basin tour with the Special Master?

A. Yes.

Q. EP1 is not charged for the effluent from the Haskell Wastewater Treatment Plant; is that right?

A. That's correct.

Q. And that's because EP1's actually given a credit in the Project accounting for the Haskell effluent?

A. I don't know. I think that would be a better question for Dr. Blair to answer.

Q. I'll ask him. Now, we talked about Bustamonte, and EP1 is also not charged for the effluent from the Bustamonte Wastewater Treatment Plant; is that right?

A. That's correct.

Q. And that's because the effluent discharged from the Bustamonte Wastewater Treatment Plant is below the gage for the Riverside Canal, right?

A. It is below the -- the gage.

Q. So, in fact, EP1 never gets charged for that water?

A. It's not Project water.

Q. But EP1's not charged for it; is that right?

A. That's correct. It's not Project water.

Q. Let's look at New Mexico Exhibit 201. And this is another exhibit that there was no objection to. You recognize this document, Mr. Reyes?

A. Yes.

Q. And what is it?

A. It's a -- it's a document that's put together by Dr. Blair that goes to El Paso Water, and I'm copied on it.

Q. Yeah. There's actually one of these memos that's -- that's sent every year; is that right?

A. Yes.

Q. And it shows the final charges to EPWU for the year, and this one happens to be for the year 2014; is that right?

A. I believe so. You'd have to probably ask

Dr. Blair. I couldn't be sure.

Q. Okay. Well, I -- what I do want to ask you about is just sort of your general understanding of some of these contracts that are listed in that summary of water allocations, and if you don't know the answer to this, please just let me know. The first one is that 1941 PSB contract. Are you familiar with that contract?

A. It's a few years before my time, but I'm not that familiar with it.

Q. All right. How about the 1949 excess water contract, are you familiar with that one?

A. Same thing.

Q. Are you familiar with any of these contracts?

A. Just the -- the ones I'm familiar with would be the '62 that allows the leases and -- and then the '88 that allowed Lower Valley Water District to -- to go to seek leases, also.

Q. Okay. Let me just ask you quickly about those ones then. That 1962 contract, my general understanding is that the City's utility may lease water rights for district owners whose tracts are less than 2 acres in size under that contract; is that right?

A. That's correct.

Q. Is there a limit to the total acreage that the City can lease under that 1962 contract?

A. No.

Q. Turning then to the 1988 contract, and I understand this contract permits the Lower Valley Water District Authority to acquire Project water either by purchasing lands or purchasing water right assignments; is that right?

A. They -- they have the right to water, although they do not own any -- any land, any irrigable land.

Q. All right. Let's take a quick look at that 2001 contract. I understand it's complicated. I'm not going to ask you a lot of details, but there's a few things I want to understand. And this is U.S. Exhibit 116. We've previously looked at this before. If you look at Page 3, I think you can see this is the cover page to that implementing third-party contract, and you're familiar with this contract, right?

A. Yes.

Q. If we look at Pages 11 to 12, I'm looking at Section 7A1. In here, it's under the heading, "Quantities." Do you see that at the bottom of the page?

A. Yes.

Q. And this contract requires EP1 to sell water to the city utility in addition to the other contracts we just looked at; is that right?

A. Yes.

Q. And then if we go to Page 12, Line 9, we can see that the maximum amount of water to be sold under this contract is 28,116 acre-feet; is that right?

A. I believe so. I'm not reading the whole thing, but it says 28,116 acre-feet of district water.

Q. Understood. And then looking at the next sentence, it says when the allocation -- basically it says when the allocation is less than 4 acre-feet per acre, then the amount required under the contract is also reduced; is that right?

A. That's what it says, yes.

Q. Was that your understanding?

A. Yes. But I tell you, Dr. Blair could probably answer this one better.

Q. Understood. I will ask Dr. Blair in -- in the spring, but there's just a few basics I wanted to establish in the fall.

If we then turn to Page 116. This is Section 11. Page 116. There's no Page 116. It may not have the attachments in this version. Let me just ask you this, Mr. Reyes. We can take that down, and we'll

double-check and see if there's portions of this particular document missing. Are you aware that under the contract, the City can take up to the maximum amount allotted per acre of EP1 water? Do you understand that question?

A. No, I don't understand your question.

Q. Yeah. My question is just: The amount of water that the City can take is based on the -- the allotment, right?

A. Yes. And everybody's allotted the same, like I answered before.

Q. Right. So -- so, in other words, if the maximum allotment for a year is 4 acre-feet per acre, then that's the amount that the City can take, right?

A. Correct.

Q. Okay.

A. On City-owned land, yes.

Q. Understood. All right. So let's talk a little bit about ordering water. We can take that down. And to determine how much of the EP1 allocation is needed, the District takes the orders of the farmers, right?

A. Yes.

Q. And you talked about the ways that -- four ways that gets -- that happens, but a number of

factors can impact the amount of water that the farmers order, like temperature and precipitation, right?

A. Correct.

Q. And also the crops that are being grown?

A. Yes.

Q. Now, turning to the process, based on the orders from the farmers, the District determines how much is needed from the Project to satisfy those farmer orders, right?

A. Yes.

Q. And the orders are made based on the conditions on the ground within EP No. 1?

A. Correct. That's done on a daily basis during irrigation season.

Q. And, actually, during -- on that daily basis, the districts are coordinating with each other to order that water?

A. Yes. With each other and with Mexico and the Bureau of Reclamation.

Q. In fact, EP1 participates in daily -- at least daily conference calls with Reclamation; is that right?

A. And EBID.

Q. And those -- we talked about him earlier, but

those conference calls are actually attended by the district water manager; is that right?

A. By the water master, that's correct.

Q. Water master. I'm sorry. Yes. And, again, that's Mr. Rios, who we will hear from next, but it is Mr. Rios, right?

A. Yes. And I attend some of them.

Q. One of the water master's duties, so one of Mr. Rios' duties, is to ensure that the water that is ordered arrives at the District; is that right?

A. Yes.

Q. So Mr. Rios provides information about how much water to release, the timing of releases, and when and where the water is needed, right?

A. That's correct. He coordinates with EBID's water master.

Q. And so then the gates of Caballo are set every day in response to those needs, those orders; is that right?

A. Yes.

Q. And then it takes two to three days to travel from Caballo to get to EP1?

A. Yes.

Q. And as you talked about, there's meters in both EBID and EP1, right?

A. Correct.

Q. And you consider -- you consider the metering that's in EP1 and EBID to be accurate?

A. Yes. We keep up with it. We have a river team that keeps up with our telemetry system, our metering.

Q. So you track those meters because you want to make sure that the water that you order arrives at EP1, right?

A. Yes.

Q. All right. So, now, let's talk -- let's talk about a few questions about operations within the District once the water arrives there. So let me ask you first: Are you familiar with the term stacking, as in you can stack a water right?

A. I'm familiar with the term, yes.

Q. What do you understand that term to mean?

A. That means that some -- someone could stack water above their -- their allocation, their allotment.

Q. So, for example, if a farmer owns 100 acres, he can stack all of the water on 50 acres, as long as he doesn't increase the overall amount; is that right?

A. As long as he doesn't go over his allotment, he can utilize call for the water as he sees fit.

Q. And he can stack water on his acreage; is that right?

A. I'm not sure if there's stacking or if they've laid out half of it and -- and they're making sure that -- that the half that they did plant will survive.

Q. And then farmers within EP1, they're also allowed to lease water; is that right?

A. To lease water?

Q. To each other. In other words, one farmer can lease water from another farmer?

A. If -- if they're not utilizing it?

Q. Correct.

A. Yes. They can do that. They can work that out on their own.

Q. All right. Let's talk about the use of winter flows. So, now, during the winter, the district delivers some water to farmers; is that right?

A. Yes.

Q. And that water is used to, for example, wet alfalfa?

A. It's mostly used for winter wheat and barley. The alfalfa -- during the winter year, alfalfa does not -- it goes dormant.

Q. Understood. But do you wet the ground to prepare for alfalfa, say, in February?

A. If there's water available and -- and the farmer wants to do that, yes.

Q. All right. And return flow water in the winter is almost always available?

A. Not necessarily, no.

Q. All right. We'll move onto a different subject, and that is combining sources. So we talked earlier about the three sources of water for EP1, and you talked about how the sources of water have different salinities; is that right? In other words, I understood you to be saying that water from the wastewater treatment plant effluent is more saline, for example, than Project water. Did I have that correct?

A. That's correct.

Q. So one way you address that is by blending water from, say, the effluent with Project water, right?

A. Mixing water, yes.

Q. Yeah. And you can mix water with the groundwater, as well, right?

A. If there's Project water being pumped in the canal, then -- and Mr. Rios feels he needs the -- the

wells, then yes, he can do that.

Q. All right. And then let's -- let's turn to Hudspeth. You talked with Ms. Klahn about Hudspeth. Let's take a look at Joint Exhibit 449. You actually talked about a contract from 2010, so let's go to the last page of this document, Page 7. Let's see if this is the contract you're talking about. You see there, this is from 2010, right?

A. Yes.

Q. And, again, it's signed by Mr. Singh and Mr. Stubbs on behalf of EP1, right?

A. Yes.

Q. And you can see it's got a couple signatures there from Hudspeth County Conservation and Reclamation District; do you see that?

A. Yes.

Q. Then if we go back to the first page, you indicated with Ms. Klahn you were talking about a term of ten years, right? So if you look at the term there in Paragraph 2, you can see it's for a ten-year period, right?

A. That's correct.

Q. Is this the contract that you discussed with Ms. Klahn?

A. Yes.

MR. WECHSLER: Your Honor, I move Joint Exhibit 449.

JUDGE MELLOY: Any objection?

MS. KLAHN: No.

MS. NAJJAR: No objection.

JUDGE MELLOY: Exhibit 449 is admitted.

Q. (BY MR. WECHSLER) And I think you indicated that -- well, let's first look at Page 2, Section 3A. You can see here that it says, "Provided that HCCRD shall in no event be required to purchase more than 20,716 acre-feet," right? You see that?

A. Yes.

Q. And I think you indicated with Ms. Klahn that no water was actually sold under this contract. Did I have that right?

A. That's correct.

Q. And that was because of the drought, you didn't have sufficient water for the District; is that right?

A. That's correct.

Q. But water was sold under a previous contract in the 1990s?

A. Yes. Before my time, yes.

Q. Do you know how many years it was sold?

A. I do not.

Q. Do you know how much water was sold?

A. I do not. All I know is there was effluent water, so it wasn't that much.

Q. There's certain maximum amounts of water that comes from the wastewater treatment plant; is that right?

A. Yes.

Q. Yeah. Okay. So, finally, we can take that down. Let's talk about -- well, before we leave that, let me ask you one last question. Do you know what year -- the first year that an agreement was signed between Hudspeth and EP No. 1?

A. I do not.

Q. All right. So, now, let's turn to regulation and administration of water in EP1, and let's start with surface water. So to your knowledge, TCEQ does not monitor the amount of water that's delivered to each acre of land in EP1, right?

A. Not that I know of, no.

Q. And --

JUDGE MELLOY: Excuse me a second. Did you say TCQ?

MR. WECHSLER: TCEQ, Your Honor.

JUDGE MELLOY: Texas --

MR. WECHSLER: Texas Commission on

Environmental Quality.

Q. (BY MR. WECHSLER) Do I have that right, Mr. Reyes?

A. Yes.

JUDGE MELLOY: All right. Thank you.

Q. (BY MR. WECHSLER) So then, Mr. Reyes, to your knowledge, neither TCEQ nor anyone from the State of Texas has ever limited the amount of water that EP1 can divert from the Rio Grande River; is that right?

A. That's correct.

Q. And you're not aware of any rule or law that limits the amount of surface water that can be applied to each acre of land in EP1, right?

A. Just by board direction that their allotment is 4 acre-feet per acre.

Q. But nothing from either TCEQ or the State of Texas?

A. That's correct.

Q. Okay. Let's turn to the subject of groundwater regulation. To do this, I want to go back to New Mexico Exhibit 818 because this feels more complicated to me. And here, you can see this Paragraph 1.1.4, and there's a reference here to, "Groundwater Conservation Districts." I'm just going to read this to you, Mr. Reyes, and then I'm

going to look at a map on the next page. It says, "The Texas legislature has established a process for local management of groundwater resources through Groundwater Conservation Districts, GCDs." Are you familiar with the concept of groundwater conservation districts?

A. No, I'm not.

Q. Let's look at the next page. This is Figure 1-2, Page 75. You can see in this figure, El Paso is -- doesn't -- it's indicated that there isn't a groundwater conservation district, so let me ask you: Are you aware of a groundwater conservation district anywhere within El Paso County?

A. No, I'm not.

Q. All right. And then let's turn to Page 77. This whole area within this document is discussing groundwater. But here, this is saying -- you can see being highlighted. There's, "An overview evaluation," and then if you look in the sentence before, it's talking about 1990. "Recognized that the Hueco Bolson aquifer had a long history of water-level decline and water-quality deterioration and the expected life of the aquifer, under then current understanding, was about 60 years at best." Were you aware of the water-level decline issues in the Hueco Bolson?

MS. KLAHN: Objection.

JUDGE MELLOY: Just a second. What's your objection?

MS. KLAHN: Relevance. He hasn't established what the Hueco Bolson even is.

MR. WECHSLER: Sounds like foundation. I'm happy to lay a foundation.

JUDGE MELLOY: Well, I'll let the witness answer. You can answer.

A. I am not aware. This would be a question you might want to ask Mr. Balliew.

Q. (BY MR. WECHSLER) I'll do that. Let's see. Let's look at one more thing. If you look at the last paragraph here, and, again, this page is a long discussion of this whole section about groundwater regulation in the area. Here, it's talking about that eventually El Paso County was declared a primary priority groundwater management area. Are you familiar with the term priority groundwater management area?

A. That was back in '98. That was before my time.

Q. All right. And then if we turn to the next page, Page 78, and this time, I want to actually highlight the whole top part down to -- there we go.

And -- and here it says, "El Paso has clearly demonstrated a significant effort toward regional cooperation, planning, and voluntary implementation of actions to address water supply problems, and that is not clear -- it is not clear that creating a groundwater conservation district for the El Paso County overlying the Hueco Bolson aquifer would be in the public interest, meet a public need, or benefit the property therein at this time."

MS. KLAHN: I'm going to object to foundation and relevance again, Your Honor.

MR. WECHSLER: I haven't even asked a question.

JUDGE MELLOY: All right. Go ahead and ask your question.

Q. (BY MR. WECHSLER) Then it says at the end, "Since the conclusion of this action, El Paso County Commissioner's Court has not promulgated any water availability requirements within the County." My question for you, Mr. Reyes, is: Are you aware sitting here today of any water availability requirements within El Paso County?

A. I am not aware of it, no.

Q. All right. So -- but turning to today, meters are not required on groundwater wells in El

Paso County, right?

A. On the farmers' wells or our wells, no.

Q. And so to your knowledge, there's no Texas state agency that monitors groundwater pumped in El Paso County?

A. I'm not -- I'm not sure of that, no.

Q. You're just not -- you're not aware of one? To your knowledge, you don't know?

A. I don't know.

Q. And to your knowledge, there are no limitations on the amount of groundwater that can be pumped in El Paso County?

MS. KLAHN: Your Honor, I'm going to object to this reference to El Paso County. I believe the witness is certainly able to testify about El Paso No. 1, but looking at the map, as we did earlier, it's clear El Paso No. 1 doesn't cover El Paso County.

MR. WECHSLER: I'm happy to limit it to EP1.

JUDGE MELLOY: All right. With that limitation -- with that limitation, I'll let the witness answer.

A. State your question again.

Q. (BY MR. WECHSLER) Happy to. To your knowledge, there are no limitations on the amount of

groundwater that can be pumped in EP1?

A. That's correct.

Q. All right. And finally, one last short subject, and that is you're aware that in New Mexico, there's an opportunity to protest an application such as a groundwater application; is that right?

A. I'm not really familiar with how they operate, no.

Q. But, in fact, EP1 has protested a groundwater application in New Mexico in the past; is that right?

A. For a mining company, I believe, yes, we joined EBID.

Q. Yeah. That was for a copper mine, right?

A. Yes.

Q. And are you aware that there was a hearing on that application?

A. No, I'm not.

Q. Are you aware of the outcome of that application?

A. No, I'm not.

MR. WECHSLER: With that, Mr. Reyes, Your Honor, thank you very much. I appreciate it. No further questions. Oh, Your Honor, I'm being told that we just want to be clear that it was Joint 436 and not Joint 236 that was admitted I referred to

earlier.

JUDGE MELLOY: All right. With that understanding Joint 436 is admitted.

MR. WECHSLER: Thank you.

JUDGE MELLOY: Did you have anything, Mr. Wallace?

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

JUDGE MELLOY: All right. Ms. Klahn, do you have any redirect?

MS. KLAHN: I have a couple. Could I have, like, three minutes to get organized and then I think we can finish this today?

JUDGE MELLOY: All right. We'll take a short break.

MS. KLAHN: Thank you.

(Recess.)

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

MS. KLAHN: Yeah. We just need the witness. We're both in the Department of Justice offices, and the witness room is all the way around the building from the attorney room, so I think he went to the restroom.

JUDGE MELLOY: So how long do we think

Mr. Rios will be?

MS. KLAHN: Well, I guess it all depends on Mr. Wechsler.

MR. WECHSLER: I am crossing Mr. Rios. I don't expect that cross-examination to be very long, Your Honor.

MS. KLAHN: The direct will be a little bit over an hour, Your Honor.

JUDGE MELLOY: Well, then we should be able to get to at least one more witness tomorrow.

MS. KLAHN: I think we should be able to get to Mr. Balliew.

MR. WECHSLER: Yeah, I'm certain of it.

JUDGE MELLOY: What is his role again?

MS. KLAHN: Mr. Balliew?

JUDGE MELLOY: Yeah.

MS. KLAHN: He's the utility director for El Paso Water Utilities.

JUDGE MELLOY: Okay.

MS. KLAHN: And I see the witness is back.

JUDGE MELLOY: Okay. All right. I think we're ready to go. Ms. Klahn, you may proceed.

MS. KLAHN: Thank you, Your Honor. After having a chance to compile my notes, I don't

have any redirect for Mr. Reyes.

JUDGE MELLOY: All right. I think you're done then, Mr. Reyes. Thank you for your testimony. You're excused, and --

THE WITNESS: Thank you, Your Honor.

JUDGE MELLOY: Is there anything we need to take up with counsel before we adjourn for the evening?

MS. KLAHN: Not that I'm aware of.

JUDGE MELLOY: All right. If not then we'll see everybody in the morning. Thank you, everyone.

MS. KLAHN: Thank you.

MR. WECHSLER: Thank you, Your Honor.

(The proceedings adjourned at 4:53 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.

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