

SUPREME COURT OF THE UNITED STATES  
NO. 141, ORIGINAL

STATE OF TEXAS,                    )  
  )  
          Plaintiff,                )  
  )  
VS.                                 ) VOLUME XVII  
  )  
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 NOVEMBER 8, 2021,  
commencing at 11:01 a.m.;

Proceedings reported by Certified Shorthand  
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1                   **JUDGE MELLOY:** Good morning, everyone.  
2 Looks like we have everyone together so let's get  
3 started. This is in Original No. 141, Texas versus  
4 New Mexico, Colorado, and the United States. Let me  
5 ask the parties to enter their appearance so we'll  
6 start with Ms. Klahn.

7                   **MS. KLAHN:** Good morning, Your Honor.  
8 Sarah Klahn for the State of Texas.

9                   **JUDGE MELLOY:** Mr. Wechsler?

10                  **MR. WECHSLER:** Good morning. Jeff  
11 Wechsler for New Mexico.

12                  **JUDGE MELLOY:** And Ms. Coleman?

13                  **MS. COLEMAN:** Good morning, Your Honor.  
14 Judith Coleman for the United States.

15                  **JUDGE MELLOY:** And Mr. Wallace.

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

18                  **JUDGE MELLOY:** Is there anything we need  
19 to talk about before New Mexico calls its next  
20 witness?

21                  **MS. COLEMAN:** Yes, Your Honor. I have  
22 two issues to raise for the United States if I may.

23                  **JUDGE MELLOY:** Go ahead.

24                  **MS. COLEMAN:** Okay. So the first one is  
25 last week, we heard some testimony -- quite a bit of

1 testimony going to the equities of how a judgment  
2 would affect water users in New Mexico, and at one  
3 point, it was suggested that the United States had  
4 asked for an immediate injunction of the summary  
5 judgment stage of this case and perhaps was looking  
6 for a ruling to that effect out of this phase of the  
7 trial. We want to be very clear on this. The United  
8 States did not request an immediate injunction, either  
9 at the summary judgment stage or at this phase of  
10 trial. At summary judgment, we requested a ruling  
11 that equitable remedies were warranted to -- but to be  
12 determined in the remedy phase of a trial. We also  
13 made clear that our preference would be a negotiated  
14 remedy with New Mexico, if possible, and I guess we'll  
15 see if that comes to fruition later this winter. But  
16 it's our understanding from the April 9th Trial  
17 Management Order and subsequent status conferences  
18 that this phase of trial was about liability and  
19 existence of damages. It was not about the balancing  
20 of equities for an injunction so, you know, the scope  
21 of this trial is not congruent with our summary  
22 judgment motion. It's our understanding that evidence  
23 going to our entitlement to equitable or injunctive  
24 relief is to be presented at the remedy phase of  
25 trial, which at this rate will probably be in 2023.

1 So we'd like to confirm that understanding just before  
2 we get on to these next witnesses and reserve our  
3 right to put on any testimony we deem necessary to  
4 address the United States' equities and the public  
5 interest and the injunction factors in that later  
6 remedies phase of trial.

7 **JUDGE MELLOY:** Does anyone disagree with  
8 anything that Ms. Coleman just said?

9 **MR. WECHSLER:** I disagree, Your Honor.

10 **JUDGE MELLOY:** Go ahead. Tell me how.

11 **MR. WECHSLER:** This -- this phase of the  
12 trial deals with liability and entitlement to  
13 remedies, and it's necessary to put on all evidence to  
14 show your entitlement to remedy. That's the way other  
15 cases in the original jurisdiction have been handled.  
16 So, for example, on a Compact claim, you have to show  
17 there was a violation of the Compact and essentially  
18 the amount, and then in the remedies phase, you're  
19 addressing how to remedy that. On an injunctive  
20 relief claim, what you're showing is an entitlement to  
21 injunctive relief. In other words, there has been a  
22 violation, the other elements, and then the crafting  
23 of the scope of that remedy comes in the next phase.  
24 That's why it's called a remedies phase.

25 **MS. COLEMAN:** That's all very well --

1                   **JUDGE MELLOY:** Just hold on a second.  
2                   Hold on a second. But are you saying we are  
3                   determining the amount of damages in this phase of the  
4                   trial?

5                   **MR. WECHSLER:** Not damages, Your Honor.  
6                   If I said that, then I misspoke.

7                   **JUDGE MELLOY:** Well, what is it you --  
8                   what is it you disagree with as far as Ms. Coleman's  
9                   concerned?

10                  **MR. WECHSLER:** Well, if I understood Ms.  
11                  Coleman, she's suggesting that the elements of the  
12                  remedy of injunctive relief would be presented in a  
13                  remedies phase, and I don't think that that's right.  
14                  I think that the elements showing an entitlement to  
15                  injunctive relief would come during this phase, and  
16                  then in the remedies phase, we would be talking about  
17                  what exactly that remedy would look like. So, for  
18                  example, if you were to say, yes, I think that  
19                  injunctive relief is warranted for this claim, there  
20                  has been a violation, once we got to the remedies  
21                  phase, you likely would be hearing expert testimony as  
22                  to exactly what a decree should look like, any  
23                  provisions that would help that decree be enforceable,  
24                  ensure that New Mexico or Texas is using water in the  
25                  way that it's entitled to be using water, all of those

1 kinds of issues, and that's what -- that's that clean  
2 division between liability and remedies.

3 **JUDGE MELLOY:** Well, I'm not sure  
4 there's really a dispute, but go ahead. What do you  
5 think, Ms. Coleman?

6 **MS. COLEMAN:** Well, I think your Trial  
7 Management Order from April 9th of this year says  
8 liability and damages -- or liability -- questions  
9 going to liability -- I don't have it right in front  
10 of me -- questions going to liability with the amount  
11 of damages and remedies to be determined in a later  
12 phase of trial, and Mr. Wechsler's experience in other  
13 original actions doesn't trump the Court's order on  
14 the notice to the parties in subsequent status  
15 conferences.

16 **JUDGE MELLOY:** Well, I'm not sure we're  
17 really talking about two different things. We're  
18 going to determine liability in this case, and to some  
19 extent, if there's no liability, there's no grounds  
20 for an injunction. So to the extent that United  
21 States has to prove that there's a -- a violation, I  
22 think that has to be done in this phase of the trial.  
23 Whether that leads to injunctive relief, whether it  
24 leads to remedies are based on money damages or  
25 compensatory water deliveries or however that's



1 ultimately -- the scope of that remedy, I think, is  
2 for the next phase. But as I say, if there's no  
3 violation, there's no -- I mean, we're not going to  
4 get to our remedies phase. I mean, does anybody  
5 disagree with that?

6 **MS. KLAHN:** No, Your Honor. And I think  
7 Texas' position is that Ms. Coleman has a right, and  
8 if the Court finds otherwise, we're going to find  
9 ourselves in a place where we have to put on  
10 additional witnesses in the spring, and I'm concerned  
11 that that may be what Mr. Wechsler is actually looking  
12 for is to expand that. So we think the way you  
13 characterized it and the way Ms. Coleman's  
14 characterized it is correct.

15 **JUDGE MELLOY:** What do you disagree  
16 with, Mr. Wechsler? I guess I'm still not sure what I  
17 understand you're disagreeing with.

18 **MR. WECHSLER:** I believe that I agree  
19 with what you just articulated, Your Honor. I mean,  
20 you just said that the scope of the remedy would be in  
21 the next phase. We agree with that so -- so this  
22 phase is about are you entitled to a remedy, meaning  
23 are you entitled to -- have you shown sufficient  
24 damages, et cetera, to -- for in the remedies phase to  
25 be quantifying those damages, have you shown for

1 injunctive relief and entitlement to injunctive  
2 relief, have you shown for declaratory relief and  
3 entitlement to declaratory relief, and then in the  
4 subsequent phase, as you said, you'd be talking about  
5 the scope of the remedy and all of those things that  
6 you're talking about. So what would an injunction  
7 look like, what would declaratory relief look like,  
8 how do you quantify the damages?

9 **MS. COLEMAN:** May I respond, Your Honor?

10 **JUDGE MELLODY:** You may.

11 **MS. COLEMAN:** My point of disagreement  
12 with Mr. Wechsler, and just to make this very  
13 practical, to put this in practical context, we're  
14 going to see briefs after the end of trial, and New  
15 Mexico is going to say the United States didn't meet  
16 its burden to show irreparable injury, to show that  
17 the balance of the equities favors an injunction, and  
18 the United States didn't meet its burden on the public  
19 interest. And we're going to say, well, we didn't  
20 think those issues were part of this phase of trial  
21 because they're fundamentally equitable, fact  
22 specific, have nothing to do with Compact  
23 interpretation and so on. So we need to know now --  
24 you know, we don't want to be, you know, sandbagged on  
25 that at the last minute. So I think we -- we would

1 like some clarity, and we didn't think clarity was  
2 necessary until these most recent witnesses about  
3 whether we have to show our four factors now.

4 **JUDGE MELLOY:** Well, I guess I had  
5 always understood and what I intended was that United  
6 States need only show that there was an entitlement to  
7 some remedy because there was a violation. The scope  
8 of that remedy, whether it's -- whether it's  
9 injunction or money or water damages would be left for  
10 the next trial -- next phase of the trial, and so I do  
11 not believe that the United States needs to show  
12 irreparable harm in this phase of the trial, nor need  
13 it show the balance of equities in this phase of the  
14 trial. This is not an equities phase of trial, as I  
15 look at it. That's the next phase. I don't know if I  
16 can say anything more than that.

17 **MS. COLEMAN:** That is our understanding,  
18 Your Honor. Thank you.

19 **JUDGE MELLOY:** I mean, I guess I always  
20 assumed that -- that if there was no -- I mean, if  
21 there's no violation, that's the end of the case. If  
22 there's a violation, then we figure out, okay, what's  
23 the remedy, is it injunction, is it money, is it  
24 water, or is it some combination of all three? And --  
25 and to me, that's in the next phase. Do you disagree

1 with that, Mr. Wechsler? I'm not sure where we are.

2 **MR. WECHSLER:** Yeah, I'm not sure I  
3 fully understand the scope of -- of what Ms. Coleman  
4 is suggesting. I do think that the -- it is necessary  
5 in this phase to show your entitlement to equitable  
6 relief and so I would say that, you know, if we're  
7 going to talk about the various elements of -- I think  
8 she just listed the elements of a preliminary  
9 injunction, but some of those are applicable to a  
10 permanent injunction, and certainly, you would show --  
11 you'd have to show an equitable entitlement to  
12 permanent injunction in this phase of the case because  
13 it is an element, it is a substantive element of an  
14 entitlement to relief, and then from our perspective,  
15 the next phase would be exclusively about remedies so  
16 what exactly does that remedy look like, what would  
17 that injunction look like if New Mexico or Texas is  
18 entitled to an injunction.

19 **JUDGE MELLOY:** Well, and -- well, let me  
20 think about this a little more, but you are right in  
21 one respect, Mr. Wechsler. I don't think the four  
22 factors you listed, Ms. Coleman, are necessarily going  
23 to be the -- the determining factors when it comes to  
24 a final injunction.

25 **MS. COLEMAN:** You're right. I'm sorry.

1 I think in that rule too much in this job. I'm sorry.

2 **JUDGE MELLOY:** So it may be that we're  
3 not really talking about something different because  
4 if my mind, once we determine there's a violation,  
5 there's probably a pretty good chance there'll be an  
6 injunction of some kind. What it'll say, I guess, is  
7 difficult to articulate at this point, but probably  
8 going to say something like don't violate it any more,  
9 I mean, and so -- and hopefully it'll be a little more  
10 specific than that because, as I said, as I think we  
11 talked about at summary judgment phase, an injunction  
12 that says obey the law is not really an injunction,  
13 but -- so it'll probably be a little more specific  
14 than that, but -- but if -- if somebody is doing  
15 something that is -- is resulting in either Texas or  
16 New Mexico not getting the water they're entitled to,  
17 there's probably going to be an injunction against  
18 continuing that practice. All right. Was there  
19 something else, Ms. Coleman?

20 **MS. COLEMAN:** Yes. Hopefully -- one  
21 hopes a little bit less contentious. So also last  
22 week and continuing this week, we're hearing testimony  
23 that kind of gets at the Lower Rio Grande adjudication  
24 and the process and the protocols and what orders have  
25 been issued and the status of different things, and

1 we're getting into percipient witness testimony that's  
2 kind of on the edges, and really it's the lawyers and  
3 the Court itself that would be -- you know, who tells  
4 you the status of the adjudication. That's going to  
5 come up today with Mr. Longworth, and you'll see that  
6 we objected to some of those exhibits based on risk of  
7 confusion because you're looking at court orders and  
8 -- and Mr. Longworth's involvement in some of that but  
9 not all of it, and I'm sure most people on this call  
10 have been involved in that proceeding in one way or  
11 another. So we want to try to find a way to make a  
12 clear record for the Court, and we think all parties  
13 would have an interest in there being a clear record  
14 for the Court on what the process is in the state  
15 adjudication as a matter of state law and that court's  
16 orders, the status of the orders themselves and the  
17 different stream system issues. I mean, there's a  
18 whole terminology of this adjudication, which is  
19 foreign to the Federal Rules of Civil Procedure, which  
20 I apparently still need to learn. So -- so we would  
21 propose at this point, and certainly are open for  
22 discussion, some sort of request for judicial notice  
23 that -- that kind of creates a clear record for the  
24 court about the state adjudication and, you know,  
25 again, we're happy to discuss alternative means or

1 hear from Your Honor about what would make sense. It  
2 just strikes us that percipient witness testimony on  
3 the fringes doesn't really get us the record that the  
4 Court would want.

5 **MS. KLAHN:** Could I be heard on that for  
6 a second?

7 **JUDGE MELLOY:** Just a second. I want to  
8 make sure I understand what Ms. Coleman's asking me  
9 for, and then I'll get you to speak, Ms. Klahn.

10 **MS. KLAHN:** Sure.

11 **JUDGE MELLOY:** So what you're suggesting  
12 is a representation by counsel that the other parties  
13 could -- other counsel could either supplement or  
14 object to as to what is the procedure and status of  
15 the Lower Rio Grande adjudication process? Is that  
16 what you're basically suggesting?

17 **MS. COLEMAN:** Yes.

18 **MS. KLAHN:** And -- and my concern, Your  
19 Honor, would be simply that the orders of the  
20 adjudication court simply are what they are, and there  
21 are physical effects from those orders. And I'm --  
22 normally, we're totally in lockstep with the United  
23 States, but on this one, I think I'm a little bit more  
24 wobbly on it. We're not sure that it's good to throw  
25 this into state law procedural context because that's

1 kind of where New Mexico wants us to be. They would  
2 love for the New Mexico adjudication court be the one  
3 that decides all of these issues, including what the  
4 State of Texas is entitled to. So -- so I think -- I  
5 guess -- I guess I'm curious about exactly what this  
6 would look like and how it could avoid being just a  
7 deluge of briefs or something like that.

8 **JUDGE MELLOY:** Well, do you have any  
9 thoughts, Mr. Wechsler?

10 **MR. WECHSLER:** Well --

11 **JUDGE MELLOY:** Before I express my  
12 opinion?

13 **MR. WECHSLER:** Yeah, I do. I'm not sure  
14 about this idea that somehow it's -- it's confusing.  
15 I mean, we are before the United States Supreme Court.  
16 Certainly the Justices are capable of understanding  
17 the impact and import of a state adjudication  
18 proceeding on a Compact proceeding, and so it would be  
19 one thing if we're before a jury. We're not. It's  
20 clearly relevant what it is the State of New Mexico  
21 has done in the adjudication because it leads directly  
22 into water administration and the way water is  
23 administered in the state. So, for example, you'll  
24 hear today from Mr. Longworth about two important  
25 aspects of the -- that water administration, which is



1 Stream System Issue 101, which is already in the  
2 record, and he'll explain how that's used in a water  
3 administration context and why it's important, and  
4 then you'll hear about the definition of the Project  
5 right in Stream System Issue 104. And, again, he  
6 won't be offering any interpretation of what that  
7 means. That's for you and for the Court. But he will  
8 be explaining how that order is used in a water  
9 administration context, which is clearly front and  
10 center as part of this case.

11 Now, as to judicial notice, I just don't  
12 think that that's -- quite gets to where we want to  
13 go. These are exhibits. Most of them are joint  
14 exhibits. Exhibits that ought to be before the Court  
15 so that they're easily accessible by the Court, and  
16 then the Court can decide how to use those orders and  
17 -- and that seems to be the normal and efficient way  
18 to handle this issue.

19 **JUDGE MELLOY:** Well, I think there's  
20 some value to what Ms. Coleman is suggesting. I or  
21 the Supreme Court may be able to figure out exactly  
22 what an adjudication court is doing, but I don't think  
23 it would hurt to educate us a little further. One  
24 thing I am concerned about, and I don't know if a lay  
25 witness can testify to this, is are these all final

1 orders at this point? Are any of them on appeal?

2 **MR. WECHSLER:** Well, so --

3 **JUDGE MELLOY:** What's the status of  
4 these records, I guess, is one of the questions I  
5 think is important to consider?

6 **MR. WECHSLER:** Yeah. The witness will  
7 be able to handle those questions, which are factual  
8 in nature as you're suggesting. The -- the Stream  
9 System Issue 101 order, which you heard some about  
10 last week, is final. There was already an opportunity  
11 to appeal. None of the parties, including the parties  
12 present in this case, appealed.

13 **JUDGE MELLOY:** Texas is not a party to  
14 those orders, though, correct?

15 **MR. WECHSLER:** That's true, Your Honor,  
16 but EP1 and the City of El Paso, which are Texas  
17 entities, are either parties or participate as amici.  
18 The other Stream Issue 104 has been determined by the  
19 adjudication court. It has not yet had an opportunity  
20 for appeal, but what you'll -- and this goes to the  
21 testimony that -- part of the testimony Mr. Longworth  
22 will be able to give, and that is it doesn't need to  
23 be final in order for the state engineer to be able to  
24 use it for water administration purposes, so that's  
25 the focus of our testimony is how is New Mexico using

1 those elements. Now, if ultimately the outcome  
2 changes by the court of appeals, the New Mexico  
3 Supreme Court, or this court, the point that  
4 Mr. Longworth is making is the same, and that is it's  
5 available, and the State of New Mexico has the ability  
6 to do water administration based on those elements.

7 **JUDGE MELLOY:** Well, let's do this.  
8 Let's go ahead, and we'll get Mr. Longworth's  
9 testimony, and then at the end, Ms. Coleman, if you  
10 think there's some things that need to be supplemented  
11 by way of judicial notice or just statements by  
12 counsel, I'll give you an opportunity to do that at  
13 that point. We'll figure out where we are then.

14 **MS. COLEMAN:** Thank you.

15 **JUDGE MELLOY:** Anything further?

16 **MS. KLAHN:** One issue, Your Honor. EP1  
17 is not a party to the Stream System 101. I'm not sure  
18 they're a party to anything in the adjudication, and  
19 I'm not sure the City of El Paso is either, so I just  
20 want to --

21 **JUDGE MELLOY:** I think what Mr. Wechsler  
22 said is they were amici, but I don't know.

23 **MR. WECHSLER:** The witness will be able  
24 to testify to that, Your Honor.

25 **JUDGE MELLOY:** All right. Then,

1 Mr. Longworth, I need to swear you as a witness. You  
2 need to turn your microphone on. You're muted. All  
3 right. If you raise your right hand, please. Do you  
4 swear or affirm that the testimony you're about to  
5 give will be the truth, the whole truth, and nothing  
6 but the truth?

7 THE WITNESS: I do.

8 **JUDGE MELLOY:** Would you state your name  
9 and spell your name for the record, please?

10 THE WITNESS: My name is John William  
11 Longworth. It's J-O-H-N, W-I-L-L-I-A-M,  
12 L-O-N-G-W-O-R-T-H.

13 **JUDGE MELLOY:** All right.  
14 Mr. Longworth, I need to go over a couple ground rules  
15 that we've discussed with each of the witnesses.  
16 First of all, is there anyone in the room with you  
17 while you are testifying.

18 THE WITNESS: No, sir.

19 **JUDGE MELLOY:** Secondly, do you have any  
20 documents or other items available to you during your  
21 testimony other than the exhibit book?

22 THE WITNESS: Your Honor, I only have  
23 the exhibit books.

24 **JUDGE MELLOY:** All right. And then I  
25 need to advise you that you're not allowed to have any

1 communication devices, such as iPhones, iPads,  
2 laptops, et cetera, that have communication capability  
3 during your testimony. Do you understand?

4 THE WITNESS: I do understand, and I do  
5 not have any of those devices.

6 JUDGE MELLOY: All right. Thank you.  
7 Mr. Wechsler, you may proceed.

8 MR. WECHSLER: Thank you, Your Honor.  
9 And I do want to clarify, as part of our exhibit  
10 books, he does also have copies of his depositions. I  
11 just want to make that clear. Do you want to address  
12 exhibits before I begin?

13 JUDGE MELLOY: Oh, I'm sorry. You're  
14 correct. All right. Joint Exhibit 0448 and 451 are  
15 both A and will be admitted. New Mexico 540 is an A  
16 and will be admitted. New Mexico 664, 666, 764, and  
17 772 are all A and will be admitted. New Mexico  
18 Demonstrative 52 is an A exhibit and will be admitted.  
19 New Mexico 2386 is an A exhibit and will be admitted,  
20 and I think that's it. There's quite a few B and C  
21 exhibits, but those are the only A exhibits.

22 You may proceed, Mr. Wechsler.

23 MR. WECHSLER: Thank you.

24 JOHN LONGWORTH,  
25 having been first duly sworn, testified as follows:

## 1 DIRECT EXAMINATION

2 BY MR. WECHSLER:

3 Q. Good morning, Mr. Longworth.

4 A. Good morning.

5 Q. Let's start with your professional  
6 background. Turning to New Mexico Demonstrative  
7 Exhibit 52.

8 A. I have that in front of me.

9 Q. Is -- I'll give a second to share our screen  
10 so that everybody can see it. Is this a copy of your  
11 CV?

12 A. Yes, it is.

13 Q. Is it accurate and up to date?

14 A. Yes, it is.

15 Q. Turn to Page 6. Using Page 6 as a guide  
16 there in the middle, what is your education?17 A. I have a bachelor's of science in civil  
18 engineering with a concentration in environmental  
19 engineering from the University of Buffalo, and I have  
20 a master's of science in civil -- excuse me --  
21 environmental engineering from New Mexico State  
22 University.

23 Q. Are you a licensed engineer?

24 A. I am. I'm licensed in the state of New  
25 Mexico.

1           Q.    Turn to Page 3.  Shortly after you received  
2 your master's degree, you joined the New Mexico  
3 Interstate Stream Commission; is that right?

4           A.    That's correct.

5           Q.    You --

6           A.    Well, one modification there.  I received my  
7 master's while I was working at the agency.

8           Q.    Between 1998 and 2004, you went through a  
9 couple of different positions.  Can you please walk us  
10 through what those positions were and what your  
11 responsibilities were up through 2004, the position  
12 we're looking at here?

13          A.    When I was hired by the Interstate Stream  
14 Commission, my initial duties had to do with the Pecos  
15 Basin and the Rio Grande Basin.  I was responsible for  
16 hydrologic studies in both of those basins, and I also  
17 participated in engineer advisors meetings for the Rio  
18 Grande Compact as a support staff helping to develop  
19 data for my engineer advisor.  And then I moved onto a  
20 position in the Pecos Bureau, and that first position  
21 was -- had many duties.  I was responsible for  
22 hydrologic investigations, responsible for working  
23 with many federal, state, and local groups in terms of  
24 water management on the -- excuse me -- on the Pecos,  
25 and I was also responsible for assisting my bureau

1 chief and my director in developing a settlement  
2 agreement that became a major part of the management  
3 of the Pecos River. And then I finally -- I was  
4 promoted, again, and where my principal obligations  
5 were related to being a leader in the -- in the  
6 Bureau. I was responsible for implementing settlement  
7 that was arrived upon between the parties on the  
8 Pecos, and one of those critical elements was the  
9 purchase of agricultural lands throughout the basin.  
10 I -- I set up and developed that program. I'd say  
11 that's my principal job. I also was responsible for  
12 ensuring that the State of New Mexico was in  
13 compliance with the United States court amended decree  
14 on the Pecos. I also had opportunities to work on  
15 NEPA projects and other projects as they arose.

16 **Q. Turning to Page 2, in 2004, you were promoted**  
17 **to be chief of the Water Use and Conservation Bureau**  
18 **at the Office of the State Engineer; is that right?**

19 A. That's correct.

20 **Q. Before I ask you about your duties there,**  
21 **please describe what the Water Use and Conservation**  
22 **Bureau is.**

23 A. It's a technical division bureau that has a  
24 number of different responsibilities. In no  
25 particular order, one of the responsibilities doing



1 conservation outreach, targeted mostly at  
2 municipalities. The Bureau was also responsible for  
3 the statutory requirements of state engineer review of  
4 subdivisions in the state of New Mexico. The Bureau  
5 is also responsible for compiling and publishing the  
6 water use inventory reports by the state engineer.  
7 The Bureau is also responsible for assisting in an  
8 adjudication in developing irrigation water  
9 requirements, and the Bureau is also responsible for  
10 assisting water rights division in evaluating  
11 applications for water use and conservation.

12 **Q. What were your responsibilities as the chief**  
13 **of that bureau?**

14 A. I would divide my responsibilities into two  
15 parts. With regards to the education outreach,  
16 subdivisions, and the water use inventory reports, my  
17 role was supervisory and to direct staff and review  
18 staff's work, and then for permit -- assisting water  
19 rights division in permit evaluations and also in  
20 determining irrigation water requirements, I'd be the  
21 principal expert for those for the Bureau.

22 **Q. In 2015, you became the director for the**  
23 **water resources allocation program technical division;**  
24 **is that right?**

25 A. That's correct.

1           **Q.     What is the Water Resources Allocation**  
2 **Program, sometimes referred to as WRAP, W-R-A-P?**

3           A.     It's a program that provides for a number of  
4 different activities for the state engineer. It has  
5 our water rights division encompassed in it, and at  
6 the time I was there, the technical bureaus were  
7 separated from water rights in and of itself. So we  
8 had Dam Safety Bureau, Hydrology Bureau, Water Use and  
9 Conservation Bureau. Those are under my direction.  
10 And I was also responsible for administering our admin  
11 program.

12           **Q.     What were your responsibilities as the**  
13 **director of that program?**

14           A.     Specifically the admin program or the --

15           **Q.     Just generally what we call -- what we refer**  
16 **to as WRAP, the technical division.**

17           A.     My responsibilities were to oversee the  
18 activities of the individual bureaus and program,  
19 interact with legislature related to activities of  
20 those bureaus, work with the state engineer to provide  
21 direction to those bureaus based on questions the  
22 state engineer may have had, and just overall  
23 direction as the division director.

24           **Q.     Turning to Page 1, from June of 2017 to May**  
25 **of 2019, you served as director of the New Mexico ISC;**

1     **is that right?**

2           A.     That's correct. I had probably two titles  
3     there, acting director and actual director, so it was  
4     a mix.

5           Q.     We've heard about that position and about the  
6     ISC from Mr. Schmidt-Petersen. Can you briefly  
7     summarize the work that you did as director of the  
8     ISC?

9           A.     My principal role and the principal role of  
10    every director is to coordinate the implementation of  
11    policy set by the New Mexico Interstate Stream  
12    Commission with staff and implementing that policy  
13    direction with staff. I'd say that's the high-level  
14    responsibility for the director.

15          Q.     And then looking at the top of Page 1, after  
16    serving as the director of the ISC, you became special  
17    assistant to the New Mexico state engineer. Please  
18    summarize the work that you've been doing in that  
19    position?

20          A.     So when the state engineer came -- came to  
21    office, I was directed to work directly for him on  
22    critical projects for the State of New Mexico.  
23    Currently I'm working on a few projects. Obviously  
24    I'm working on the Texas v. New Mexico project. I  
25    also work on Colorado River issues. I also work on

1 Indian water rights settlements, and then there's a  
2 couple smaller projects that I work on, and then I --  
3 probably one of the projects is taking the -- most of  
4 my time over the past 18 months is a groundwater  
5 conservation pilot program that is being tested in the  
6 Lower Rio Grande.

7 Q. Turning to Page 6, just a couple other  
8 features of your previous experience, under the  
9 heading, "Expert Testimony," you have served as the  
10 State of New Mexico's expert on consumptive irrigation  
11 requirements in a number of stream adjudications; is  
12 that right?

13 A. That's correct.

14 Q. Consumptive irrigation requirements are  
15 sometimes referred to as CIRs; is that right?

16 A. Yes, they are.

17 Q. When did you first become involved in working  
18 on CIRs for the State of New Mexico?

19 A. I was hired in 2004, I think as we previously  
20 stated, and that initiated my work with regards to  
21 formulating consumptive irrigation requirement --  
22 requirements, excuse me.

23 Q. Although you've testified as an expert  
24 several times, you're not being offered as an expert  
25 witness in this proceeding; is that right?

1           A.     That's my understanding, yes.

2           Q.     Instead, you're being offered to talk about  
3 work that you had previously done?

4           A.     Yes. That's correct. That's my  
5 understanding.

6           Q.     And then if we go to Page 7, one last  
7 question about your CV. Here, we see recent  
8 publications. Looking at your publications, you've  
9 been published in some peer-reviewed publications on  
10 the subject of irrigation water use and consumptive  
11 use; is that right?

12          A.     That's correct. I've been a coauthor.

13          Q.     All right. Let's turn to some of the work  
14 that the Water Conservation Bureau has done. And  
15 specifically, I want to talk about a couple of the  
16 water use by categories reports. We're going to talk  
17 about three different years, 2005, 2010, 2015, because  
18 those are years covering -- that are being covered in  
19 this year extensively. To explain them, I want to  
20 start with just New Mexico 666, which is the 2010  
21 report, which is -- was admitted just a moment ago.  
22 You're familiar with this document?

23          A.     Yes, I am.

24          Q.     And what is this document?

25          A.     This is the New Mexico Water Use by

1 Categories 2010 Technical Report 54.

2 Q. If we turn to Page 7, under the top part  
3 there of the executive summary, it indicates that  
4 water here is tabulated for nine categories. Let me  
5 ask you first: What's the basis for selecting these  
6 nine categories?

7 A. So these nine categories come out of historic  
8 work related to these -- this inventory project -- or  
9 these inventory reports. It started as a regular  
10 routine for the -- a state engineer in 1975.

11 Specifically, it was not only just categories -- or  
12 inventory water use in the state of New Mexico, it was  
13 also a collaborative effort with the United States  
14 Geological Survey as part of their national effort to  
15 catalog water uses for the nation. At that time, we  
16 had a -- I think we had 12 or 13 different categories  
17 that were based on standard industrial code  
18 considerations or SIC codes. We coordinated those  
19 uses pretty closely, I would say through -- through  
20 maybe 2000. Over the years, certain categories got  
21 combined, and then before I -- my first publication  
22 was in 2005, those SIC codes got substantially changed  
23 and no longer were easily adapted to water use  
24 inventory. At that time, we brought together like  
25 kind of uses and concluded with this -- these nine

1 categories.

2 Q. Is the methodology for calculating water use  
3 for each of these nine categories described in the  
4 report?

5 A. Yes, it is.

6 Q. You can see there in the last little section  
7 of language that we're looking at, it refers to tables  
8 in appendix B. What's contained in those tables in  
9 Appendix B?

10 A. Those tables have the results of the  
11 methodologies that are described in the text of the  
12 report. They also have some summary tables related to  
13 uses by category basins, uses by category by county,  
14 and I believe uses by category on the state, but the  
15 important -- sort of two important tables are the  
16 discrete uses of our principal areas of use in the  
17 state, and those are the results of the work of myself  
18 and my bureau.

19 Q. If we turn to Page 17, in the top paragraph  
20 under, "Introduction," it says that, "Inventorying  
21 water use has long been a necessary activity." Why is  
22 that?

23 A. In my experience, the principal -- principal  
24 purpose of inventorying water use is planning. One  
25 needs to understand when water planning, what is --

1 what are existing uses and what are past uses to help  
2 make policy decisions going forward. These -- this  
3 report is also used, again, in coordination with the  
4 U.S. Geological Survey for the national inventory of  
5 uses. We also use this report as a matter of business  
6 with our hydrology bureau. They refer to this report  
7 -- these reports, excuse me, for assistance in  
8 evaluating water right applications, and in our  
9 district offices that are doing actual water right --  
10 you know, doing kind of the frontline water right  
11 application reviews, they use these reports to assist  
12 in their evaluation.

13 **Q. If we go down to the bottom section, 1.1 here**  
14 **on the same page, 17 of New Mexico 666, it talks about**  
15 **the history of water use inventories. You talked**  
16 **about some of that history. Is the water use by**  
17 **category report produced every five years?**

18 A. Starting in 1975, became a regular practice  
19 to inventory uses every five years starting in '75,  
20 '80, '85. The amount of work that goes into compiling  
21 the use data is, you know, pretty data intensive. It  
22 takes about two-and-a-half, three years to incorporate  
23 that data process and publish the reports, so we're  
24 inventorying uses every five years starting in '75 and  
25 then the reports come out at about the two-and-a-half,



1 three years after the year under consideration.

2 Q. We can see your name listed here under the  
3 2008 version, and were you an author in 2008, which  
4 was, I think, categorizing the 2005 water use?

5 A. Yeah. I was responsible and directed the  
6 water use inventory reports for 2005 and 2010.

7 Q. If we turn to the second paragraph on this  
8 same page, and here it talks about it confirms what  
9 you just testified to about planning and also says  
10 that it can be used for tracking changes. Why is it  
11 helpful to track water uses?

12 A. It provides the state engineer information on  
13 any kind of increase or decrease of use in any of the  
14 categories that are identified. So we do pattern  
15 assessments as directed for whatever purposes the  
16 state engineer has. So that is one of the important  
17 understandings of these reports is that we try to keep  
18 the methodologies similar from -- really from '75 on.  
19 There's minor changes throughout -- throughout time,  
20 but that when we're comparing one report to another,  
21 we're comparing methodology apples to apples.

22 Q. Can you give an example of use of this data  
23 for tracking trends or tracking water use that you've  
24 been involved in?

25 A. There was time when we were working with the

1 New Mexico legislature, and we were presenting use  
2 data both in two major categories, one, irrigated  
3 agriculture use, and we noted that there is a distinct  
4 decline in withdrawals from agriculture. Also, in  
5 conjunction with that, we looked at municipal uses  
6 over time, and we're presenting that data for the  
7 legislature's consideration.

8 **Q. Turn to Page 18. Here at the top of the top**  
9 **paragraph, it talks about that this report is**  
10 **evaluating withdrawals. What are withdrawals?**

11 A. One of the -- the way we categorize use is  
12 looking at the withdrawals from the system that was  
13 under consideration, hydrologic system that's under  
14 consideration. And so we're essentially calculating  
15 an FDR, farm delivery requirement, or a project  
16 diversion requirement, depending on the kind of system  
17 we're evaluating. So it's just how much water is  
18 taken out of that hydrologic body.

19 **Q. And you used the term FDR, and quickly**  
20 **defined it as farm delivery requirement. If we use**  
21 **that term, FDR, that's what that stands for?**

22 A. Yes. Farm delivery requirement, generally  
23 speaking, is the amount of water that's necessary to  
24 divert at the head gate to be able to meet the  
25 consumptive irrigation requirements on -- on the --

1 the farm, and in this report is -- we're looking at  
2 basin wide -- basin-wide uses. So it's a general  
3 evaluation of a specific area. It's not farm  
4 specific, specific I guess is what I'm getting at.

5 **Q. While we're defining term, I'll get you to**  
6 **also explain to us what evapotranspiration or ET is.**

7 A. Evapotranspiration is kind of what it says.  
8 It's a term to describe usually an agriculture, the  
9 amount of water that's either evaporated or transpired  
10 by a crop in the course of irrigating that crop.

11 **Q. If you turn to Page 21 of this document, what**  
12 **does Chapter 21 cover?**

13 A. Chapter -- I'm sorry. Chapter 2?

14 **Q. 2. Thank you. Yeah, Page 21 of New Mexico**  
15 **666.**

16 A. The title of that chapter is, "Public Water  
17 Supply and Self-Supplied Domestic."

18 **Q. Is that what it's categorizing here?**

19 A. Yes. This is the methodologies -- describing  
20 the methodologies used in the efforts to inventory the  
21 uses for the -- those categories.

22 **Q. One feature of this Chapter 2, if we look at**  
23 **Page 26, we've heard from the City of Las Cruces about**  
24 **their 40-year plan. Does the Office of the State**  
25 **Engineer provide guidance to cities and municipalities**

1     **on the 40-year planning process?**

2           A.     Working at the Water Use and Conservation  
3     Bureau, we would interact both globally and then  
4     specifically with municipalities on how best to  
5     incorporate best management practices into a water  
6     development plan and also provide notice as to, you  
7     know, kind of things that we're looking for from a  
8     regulatory standpoint, but also areas where the unique  
9     characteristics of an individual public water supply  
10    could be described. We have a variety of those kinds  
11    of situations in the state of New Mexico.

12          **Q.     The section we're looking at here deals with**  
13    **GPCD, or gallons per capita per day, and does the**  
14    **state engineer provide guidance on how the GPCD should**  
15    **be calculated?**

16          A.     Yes. It's -- the GPCD calculations standard  
17    for the state of New Mexico was developed under my  
18    direction in the Bureau that's applied to permit  
19    applications, so when we can use that information in  
20    the water use reports, we do; otherwise, we'll do a  
21    general GPCD calculation.

22          **Q.     If we turn to Page 35, we'll look at another**  
23    **chapter here. This chapter is entitled, "Irrigated**  
24    **Agriculture," on Page 35 of New Mexico 666. What does**  
25    **this chapter cover?**

1       A.    It includes an overview of the methodologies  
2    used in determining withdrawals from -- from the  
3    hydrologic systems for irrigated agriculture.  It  
4    touches on a couple of other notable areas of  
5    consumptive use.  You know, it's more or less what  
6    this chapter is about, describes the methodologies.

7       **Q.    Let's go to Page 38.  Here, you're -- you**  
8    **begin a discussion under 3.4 of a procedure for**  
9    **quantifying irrigation withdrawals.  In the second**  
10   **paragraph there under "note," it indicates that, "The**  
11   **final CIR vary as a function of the crop species and**  
12   **cropping pattern."  Do you see that?**

13      A.    Yes, I do.

14      **Q.    What does that mean?**

15      A.    Well, the cropping pattern would be the  
16    information related to how many acres of each crop  
17    were grown in the area of interest and then the crop  
18    species is important.  At a very high level, you have  
19    basically two kinds of crops.  One is an annual crop  
20    so there's very distinct start and stop dates of the  
21    consumptive use.  Then you have perennial crops that  
22    have either a latitude initiation of consumptive use  
23    or a temperature-specific initiation of consumptive  
24    use.  So that could differ from year to year so that's  
25    a different kind of, you know, physiological aspect of

1 the species.

2 Q. Now, if we back out of here, we can see the  
3 next several pages, you can see there on Page 38 is  
4 Step 1, and you walk through a series of steps here  
5 for calculating the CIR. I won't ask you to walk  
6 through those, but can you please summarize the  
7 process that you use for making these calculations?

8 A. The initial step in going through these  
9 calculations is gathering the data throughout the  
10 state of irrigated acreage and the sources for that  
11 irrigated acreage. That's a very comprehensive effort  
12 where we go into each county and -- you know, it's  
13 previously been identified where the irrigated acres  
14 are. It's more of a -- just an effort to understand  
15 if there's been any significant changes in the --  
16 either the irrigated acreage or the kind of crop  
17 types. Moving on, we'll look at climate data that's  
18 necessary to initiate and run our consumptive use  
19 calculations, then we will go into the process by  
20 which we take the consumptive use calculations and in  
21 the instances where we do not have metered data, we --  
22 we use that consumptive irrigation data to back out to  
23 what a withdrawal or an FDR or PDR would likely have  
24 been. Once we've done that, we will work on any  
25 potential adjustments that are necessary based on the

1 data that we collect. We'll make any adjustments  
2 related to -- we have an adjustment for -- potential  
3 adjustment for alfalfa and a potential adjustment for  
4 pecans. We'll also look at supplies in terms of  
5 seeing if there's any shortages. So while we may  
6 calculate a withdrawal requirement, we will look at  
7 supplies to see if the water is available to meet that  
8 requirement and so we may adjust the withdrawal  
9 calculations if there are shortages. And so that's  
10 basically kind of the -- it sounds easy, but it --  
11 it's pretty intensive. We go through a lot of that  
12 iteration for every county and then sub basins within  
13 those counties.

14 Q. Let's turn to New Mexico 772, which is  
15 another exhibit that was just admitted, and this is  
16 the 2005 version. I want to start with Page 35 to  
17 cover a couple things you just mentioned about alfalfa  
18 and pecans. You can see there under that Section  
19 3.5.1 on Page 35 of New Mexico 772, the description of  
20 an adjustment you're doing for alfalfa. My question  
21 is more general. Does the state engineer have a  
22 general understanding of the amount of water consumed  
23 by various crops?

24 MS. KLAHN: Your Honor, I would object  
25 to this line of testimony as being expert testimony.

1                   **MR. WECHSLER:** Do you want me --

2                   **JUDGE MELLOY:** He just asked if he has  
3 an understanding based -- as the state engineer. I'm  
4 going to overrule it. Go ahead.

5           A.     It'd be helpful if you could reiterate the  
6 question, please.

7           **Q.     (BY MR. WECHSLER) Happy to. My question was:**  
8 **Does the state engineer have a general understanding**  
9 **of the amount of water consumed by various crops?**

10          A.     Either the state engineer or his staff, yes.

11          **Q.     Then if we go down to the next section having**  
12 **to do with pecans in 3.5.2 on Page 35, we heard**  
13 **testimony from Mr. Salopek about pecans and the amount**  
14 **of water that they use. We can see here in the -- the**  
15 **first paragraph under 3.5.2, that you're indicating**  
16 **that, "Consumptive use for pecans ranges from 39.36 to**  
17 **51.24 acre inches per acre." Do you see that?**

18          A.     Yes, I do.

19          **Q.     Based on the work that you did in these**  
20 **reports, what's the basis for the range? Why the**  
21 **difference?**

22          A.     In the technical reports that are cited,  
23 those investigators identified that there's a range,  
24 depending on a number of different factors, the range  
25 of consumptive use. Excuse me.



1           **Q.     Those factors being agricultural practices?**

2           A.     Agricultural practices, for example, spacing  
3 of trees, you could see a difference of that. Age of  
4 tree, can also make it be important. If it's a  
5 non-bearing tree, then you're going to likely see less  
6 consumptive use. So those are the kinds of factors  
7 that -- that the researchers identify.

8           **Q.     I want to use these reports to walk through**  
9 **some of the uses that you categorized over the last**  
10 **ten years, and in three categories, the summary of**  
11 **withdrawals, public water supply, and irrigated**  
12 **agriculture. So we'll start in 2005 for each of**  
13 **those. We'll walk through each of the reports. So if**  
14 **we start on -- this document is 772 at Page 66. We're**  
15 **looking at Table 5 here, Mr. Longworth. What is Table**  
16 **5 categorizing?**

17          A.     Table 5 is a summary of the withdrawals in  
18 acre-feet by New Mexico Counties.

19          **Q.     And then we can see there that County 13 is**  
20 **Dona Ana County; is that right?**

21          A.     That's correct.

22          **Q.     And this is data for -- this is calculating**  
23 **the withdrawals in 2005, right?**

24          A.     Yes. That's what this table represents.

25          **Q.     Yeah. If -- if you -- if you back out and**

1 capture the county total there at the bottom, what was  
2 the total withdrawals in Dona Ana County in 2005?

3 A. I believe that -- I can't see the top there,  
4 but the totals would be on the far right-hand side,  
5 and that'd be 531,151 acre-feet.

6 Q. Let's look at the same number in 2010. So  
7 we'll go to New Mexico 666. We'll go to Page 73. We  
8 can see on New Mexico 666 at the top there, it  
9 says, "Table 5." Is this the same table?

10 A. I'm sorry. What page was that again? 73?

11 Q. It's 73. Correct.

12 A. All right. I'm at that point. So on Page  
13 73, again, what -- you've asked me to look at?

14 Q. Well, I'm asking you if this is the same  
15 table? Is this covering the same information?

16 A. Yes. This is the, as I described earlier, a  
17 summary table in this case. It's by category. It's  
18 the same -- I don't want to say the same table, but  
19 it's the same type of table that's in the previous  
20 report that we looked at.

21 Q. We saw in 2005 that number for total  
22 withdrawals was 531,000 in change acre-feet. What was  
23 it in 2010?

24 A. Total withdrawals were reported at 449,996.  
25 For ease, if it's okay, I'll just round, it's 450,000

1 acre-feet.

2 Q. Let's go ahead and take a look at 2015, so  
3 that's New Mexico 764, which has also been admitted,  
4 at Page 75. And is this the same Table 5 we've been  
5 looking at, Mr. Longworth?

6 A. Yes, it is.

7 Q. What were the total withdrawals for Dona Ana  
8 County in 2015?

9 A. Just over 382,000, just over that, acre-feet  
10 for that year.

11 Q. So we talked about trends earlier so we're  
12 seeing a general trend from 2005 through 2015 of a  
13 downward total withdrawals from Dona Ana County; is  
14 that right?

15 MS. KLAHN: Again --

16 A. That's correct.

17 MS. KLAHN: -- objection; expert  
18 testimony. He can't testify about trends.

19 JUDGE MELLOY: I'm going to overrule.

20 Q. (BY MR. WECHSLER) Did you finish your answer,  
21 Mr. Longworth?

22 A. Looking at those three tables and the values  
23 from those tables, each year is less than the  
24 previous.

25 Q. We're going to take a look at public water

1 supply and irrigated acreage, as well, so let's go  
2 back to New Mexico 772, Page 81. We're going to look  
3 at public water supply. Can you tell us what Table 7  
4 on New Mexico 772, Page 81, is showing?

5 A. This is, again, output from our efforts, and  
6 this is the public water supply and self-supplied  
7 domestic summary tables.

8 Q. We're going to use Las Cruces Municipal Water  
9 System, since we've heard from them in this case.  
10 They're the largest supplier there. So in 2005, what  
11 was the population served by the Las Cruces Municipal  
12 Water System?

13 A. In this report, it's reported at 74,300.

14 Q. What's the gallons per capita per day?

15 A. 229.

16 Q. And what were the total groundwater  
17 withdrawals?

18 A. Approximately 19,000 acre-feet.

19 Q. Turn to 2010, New Mexico 666, Page 90. And,  
20 again, Mr. Longworth, this is the same Table 7 that we  
21 were looking at for this time for 2010; is that right?

22 A. Yes. It's the same summary table.

23 Q. Here, Las Cruces Municipal Water System, what  
24 was the population?

25 A. It was reported at 94,000 -- just over

1 94,000.

2 Q. So the population had gone up from 2005 as  
3 reported in this document?

4 A. Yes, it had.

5 Q. The gallons per capita per day, what was  
6 that?

7 A. It was 186.

8 Q. So it had gone down from 2005?

9 A. That's correct.

10 Q. And what's the total groundwater withdrawals?

11 A. Just under 20,000 acre-feet.

12 Q. Finally, if we turn to 2015, that's New  
13 Mexico 764, Page 90. And is this still the same  
14 table, Mr. Longworth, the Table 7, but this time  
15 showing data from 2015?

16 A. Yes. It's the same kind of summary table.

17 Q. Just, again, to take a look at those same  
18 categories, the population, again, has grown; is that  
19 right?

20 A. That's correct. It's reported at just over  
21 105,000.

22 Q. And the gallons per capita per day have gone  
23 down again to 165; is that right?

24 A. That's correct.

25 Q. And the -- what were the total groundwater

1       withdrawals?

2           A.     Approximately 19,500.

3           Q.     Finally, let's talk about irrigated  
4       agriculture, which we've done a lot of in this case.  
5       So New Mexico 772 shows us 2005. Page 98 of 772. And  
6       what does Table 8 show, Mr. Longworth?

7           A.     This is the summary of the calculations that  
8       are conducted in development of this report related to  
9       irrigated agriculture, and it's broken down by county  
10      and by basin and by source and by type of irrigation.

11           JUDGE MELLOY: Excuse me a second,  
12      Mr. Longworth. Would you move the microphone a little  
13      closer? You're starting to fade out at times.

14           THE WITNESS: Sorry about that. I have  
15      an exhibit there. Thank you. Is that -- that's  
16      better?

17           JUDGE MELLOY: Yes.

18           Q.     (BY MR. WECHSLER) For this Table 8, we're  
19      going to look at the final two columns there,  
20      Mr. Longworth, and you can see at the bottom there the  
21      TPWSW stands for total project withdrawals surface  
22      water, and the final column, TPWGW stands for total  
23      project withdrawals groundwater. Do you see that?

24           A.     Yes, I do.

25           Q.     What was the total project withdrawals

1 surface water in Dona Ana County in 2005?

2 A. It's approximately 320,000 acre-feet.

3 Q. And what is the total project withdrawals  
4 groundwater in 2005 in Dona Ana County?

5 A. Approximately 150,000 acre-feet.

6 Q. Again, going to New Mexico 666, which is the  
7 2010 data, we'll turn to Page 117, and, Mr. Longworth,  
8 is this the Table 8 from 2010 showing the same data  
9 but for a different year?

10 A. That's correct. It's substantially in the  
11 same form.

12 Q. Yeah. And we're -- just to be clear, we're  
13 looking at the County 13, which we saw earlier was  
14 Dona Ana County; is that right?

15 A. That's correct.

16 Q. What were the total project withdrawals  
17 surface water in Dona Ana County in 2010?

18 A. Just over 271,000 acre-feet.

19 Q. And we're -- and do you see it, again,  
20 Mr. Longworth?

21 A. Yes. I have -- there was a little blip  
22 there, but I have -- just to verify, this is 2010?

23 Q. Correct.

24 A. Water use by categories, 666?

25 Q. Right. So my question then is we're looking

1 at irrigated agricultural withdrawals for Dona Ana  
2 County in 2010. What were the total project  
3 withdrawals for groundwater?

4 A. For groundwater, it is just under 122,000  
5 acre-feet.

6 Q. All right. And finally, to complete this  
7 loop, we'll go to New Mexico 764, 2015, and this time  
8 we're going to go to Page 119. This time,  
9 Mr. Longworth, we see that it's labeled Table 12. Do  
10 you see that at the top?

11 A. I do.

12 Q. Is this covering the same information as the  
13 previous Table 8s that we saw in 2005 and 2010?

14 A. It appears so, yes.

15 Q. And what was the total project water surface  
16 withdrawals in 2015 in Dona Ana County?

17 A. Just over 136,000 acre-feet.

18 Q. What were the total project withdrawals  
19 groundwater in that same year?

20 A. Essentially just under 200,000 acre-feet.

21 Q. All right. And I won't belabor the point  
22 with other statistics, but these water use by  
23 categories contain a lot of information about  
24 withdrawals in those years; is that right?

25 A. Yes, they do.



1           **Q.    Let's turn to the subject of adjudications**  
2           **and the LRG adjudication specifically. As part of**  
3           **your professional responsibilities, has it been**  
4           **necessary to understand the way that adjudications**  
5           **work in New Mexico?**

6           A.    Yes. It has been part of my duties.

7           **Q.    Have you worked directly on adjudications?**

8           A.    I've worked in two different aspects with  
9           regards to adjudications. I've worked as an expert  
10          developing irrigation water requirements, or as we've  
11          been referring to them, CIR, FDR, and project  
12          diversion requirement. I've also been involved in  
13          Indian water rights settlement work, which is a bit  
14          broader than just looking at the expert -- expert  
15          reports that I've provided in a number of  
16          adjudications. So it looks at more overall elements.

17          **Q.    Based on that work, what's your understanding**  
18          **of the purpose of an adjudication?**

19          A.    Purpose of an adjudication is to get a court  
20          order defining the elements of water right for an  
21          individual --

22          **Q.    Does that include defining the elements for**  
23          **all of the water rights within a basin?**

24          A.    Could you repeat that? That's a broad  
25          question. Generally speaking, you'll break it down by

1 types of use, and each type of use would have separate  
2 elements, but the predominant amount of -- of an  
3 adjudication in New Mexico would be related to  
4 irrigated agriculture, and they have specific elements  
5 that need to be identified.

6 Q. And my question, Mr. Longworth, was for each  
7 water right, for each claim of water use within a  
8 basin, does the adjudication go through and identify  
9 the elements of each of those water rights?

10 A. Yes. Part of the adjudication needs to  
11 identify the necessary elements to describe the water  
12 right.

13 Q. Let's turn to New Mexico 1389. Do you  
14 recognize this document?

15 A. Yes, I do.

16 Q. What is it?

17 A. This is a subsection of the hydrographic  
18 survey for the Lower Rio Grande Basin. It's  
19 titled, "Southern Mesilla Valley Section Volume IV."

20 Q. Is this a document that's created by the  
21 Office of the State Engineer?

22 A. Yes, it is.

23 Q. Is this a document that you've used as part  
24 of your work?

25 A. Yes. The majority of my work with this

1 document is more or less in the database. So these  
2 values and information in this document are housed in  
3 databases and this is the report of that database and  
4 I've spent extensive time looking at the Lower Rio  
5 Grande adjudication databases.

6 **Q. Is the state engineer required to create a**  
7 **hydrographic survey as part of an adjudication?**

8 A. Yes.

9 **Q. Is this an official publication of the state**  
10 **engineer?**

11 A. Yes, it is.

12 **Q. Is it kept on file in the normal course of**  
13 **business?**

14 A. Yes. It's on file for public identification  
15 and water rights administration in the district  
16 office, as well as just as a general matter at -- in  
17 Santa Fe in the adjudication program.

18 **MR. WECHSLER:** Your Honor, I'd offer New  
19 Mexico 1389.

20 **JUDGE MELLOY:** Any objection?

21 **MS. KLAHN:** May I voir dire, Your Honor?

22 **JUDGE MELLOY:** You may.

23 **MS. KLAHN:** Mr. Longworth, my name is  
24 Sarah Klahn. I represent the State of Texas. We met  
25 at your Zoom deposition last year. I would like to

1 have you take a look at, for example, Page 100 -- I'm  
2 sorry -- 129 in New Mexico 1389.

3 **MR. WECHSLER:** I'm sorry. Did you say  
4 129?

5 **MS. KLAHN:** Correct. Yeah.

6 **THE WITNESS:** I was grabbing something.  
7 Could you, Ms. Klahn, describe that again, please?

8 **MS. KLAHN:** You bet. Page 129, please.

9 **THE WITNESS:** And this is Exhibit 1389?

10 **MS. KLAHN:** Correct.

11 **THE WITNESS:** Page 129. I'm at that  
12 point, I believe.

13 **MS. KLAHN:** Okay. In -- when we deposed  
14 you, your testimony was that you didn't have any  
15 involvement with the sub-file orders, so this looks  
16 like a sub-file record for a particular water user and  
17 a particular amount of irrigated acres and a water  
18 source. Is it your testimony today that you did use  
19 this information in your work on the adjudication?

20 **THE WITNESS:** My testimony today is that  
21 I've done general work with this report on a database  
22 level. I believe I understood your question in my  
23 deposition was related to the specific sub-file order  
24 proceedings, and I believe I testified at that point  
25 in time that I did not work directly with the sub-file

1 order proceedings. That's my recollection of my  
2 testimony.

3 **MS. KLAHN:** I think that's right. So  
4 when you say you referred to a database in order to do  
5 your work or to do the work you did for the  
6 adjudication, is this information among the  
7 information you would have considered in that  
8 database?

9 **THE WITNESS:** I believe so, yes.

10 **MS. KLAHN:** Okay. We can explore this  
11 on cross. No objection from Texas, Your Honor.

12 **JUDGE MELLOY:** All right. Then Exhibit  
13 1389 is admitted.

14 **Q. (BY MR. WECHSLER)** In the general sense,  
15 **Mr. Longworth, what's the purpose of a hydrographic**  
16 **survey?**

17 **A.** The hydrographic survey is intended to  
18 identify uses -- all uses within the areas of the  
19 adjudication under consideration.

20 **Q.** We can see that this report is dated 2000.  
21 **Does the state engineer continue to work on the**  
22 **hydrographic survey and the information on water**  
23 **rights even after the hydrographic survey is**  
24 **published?**

25 **A.** Yes. The -- yes.

1           Q.    If we turn to Page 3 of New Mexico 1389. In  
2 the second paragraph here, there's a discussion of --  
3 it says the report includes 3,968 sub-files, which  
4 represent the total of 8,451 owners. Although,  
5 Mr. Longworth, you didn't directly work on the  
6 subfile, are you aware of what a sub-file is?

7           A.    I believe so.

8           Q.    What's a sub-file?

9           A.    Sub-file is an identification of individual's  
10 or entity's water right as indicated in the  
11 hydrographic survey.

12          Q.    Then are you familiar with the term offer of  
13 judgment as that's used in an adjudication context?

14          A.    Generally, yes.

15          Q.    What is an offer of judgment in that context?

16          A.    My understanding is that the offer of  
17 judgment is a analysis that's done by adjudication  
18 staff that is then presented to the individual or  
19 entity for consideration to move forward to get a  
20 sub-file order.

21          Q.    If an offer of judgment is not accepted or  
22 agreed upon, what happens?

23          A.    Typically, my understanding is that the  
24 adjudication staff will meet with a individual or  
25 entity that at that point, the claimant, let's say,

1 has an opportunity to present additional information  
2 if they do not agree with what's provided in the  
3 offer. If there cannot be resolution at that point in  
4 time, my understanding is that the next step would be  
5 go to a mediator to see if the issues can be resolved  
6 at that point and then if they cannot, then it would  
7 go in front of the -- a hearing in front of the  
8 adjudication court.

9 **Q. Let's turn to Page 4. What does Page 4 show,**  
10 **Mr. Longworth?**

11 A. It's a Figure 1 Area Map, Lower Rio Grande  
12 Basin, Hydrographic Survey. That's the title of the  
13 figure.

14 **Q. And this particular Volume 4 is covering the**  
15 **area that has the dark hash marks; is that right?**

16 A. Yes. In the overall shaded area, the lower  
17 right-hand corner of that is darker hash marks, and  
18 that's this volume's information.

19 **Q. We could look on the table of contents and**  
20 **see the other volumes. I'll simply represent to the**  
21 **Court, I just selected one of the volumes of the**  
22 **hydrographic survey randomly in order to allow you to**  
23 **explain it. If we turn to Page 17, here it's -- has a**  
24 **discussion through these pages of the hydrographic**  
25 **survey. Under the heading, "Delineation of irrigated**

1     **acres," what does it mean to delineate irrigated**  
2     **areas?**

3         A.     The end result is to be able to have a parcel  
4     description for a claimant that requires research at  
5     the county clerk's office and then we'll require field  
6     investigations where there will be surveys of the  
7     identified irrigated activity, identification of  
8     wells, if they so exist, and then those two data sets,  
9     generally speaking, are brought together to provide a  
10    information and offer of judgment.

11        **Q.     Here it says that the delineation of**  
12    **irrigated areas is a primary concern. Why is that?**

13        A.     In my mind, there's two reasons. One, this  
14    is the most intensive effort within an adjudication --  
15    within a hydrographic survey, excuse me, because of  
16    the -- generally, the agriculture is the most  
17    predominant water use in the state of New Mexico  
18    within an adjudication, and it takes an effort -- a  
19    notable effort to be able to go and do those  
20    hydrographic surveys. So the second reason I just  
21    kind of hinted at is that this is -- the irrigated  
22    agriculture is generally the greatest use of an  
23    adjudication by far.

24        **Q.     Turn to Page 19. Under the heading, "Field**  
25    **Inspections," there, as part of the process, does the**



1 Office of the State Engineer either conduct or cause  
2 to be conducted field inspections of the various water  
3 uses?

4 A. Yes. It's my understanding.

5 Q. Why?

6 A. There needs to be experts who understand how  
7 to delineate property lines from irrigated --  
8 irrigated land. Those don't always necessarily match  
9 up and so that field inspection is very important to  
10 understand what the actual irrigation is with any  
11 given parcel.

12 Q. Let's take a look at a couple of these  
13 sub-files to see how this works. We're going to turn  
14 first to Page 58. I'm going to let you blow that up.  
15 If you look at the comments here and whatever other  
16 part you find helpful, Mr. Longworth, what did the  
17 field inspection find on this particular water right?

18 A. I just want to be clear. We're looking at  
19 1389, Page 58?

20 Q. Correct.

21 A. So the owner identified in this sub-file  
22 number is El Paso Natural Gas Company and Environment  
23 Department. The description here is titled, "No use  
24 of right or point of diversion, POD." It's identified  
25 as groundwater only. As you go through that, it

1 appears that the -- that there's no -- if you go  
2 particularly to the purpose of use, no use of right or  
3 point of diversion. As you move through this  
4 description, I think it's important to get down to the  
5 comments section. The declared use of this right was  
6 industrial use; however, in the field inspection, one  
7 well was found to be used for irrigation, and others  
8 were not in use at all. It's reported, also, that  
9 there were eight wells originally of which only three  
10 were located, and of those three, it describes the two  
11 were capped.

12 **Q. In the adjudication process, what would the**  
13 **next steps on a sub-file like this be?**

14 A. The claimant would be notified with the  
15 information identified in the sub-file number, and at  
16 that point, the claimant would have an opportunity to  
17 present any information they may have to supplement  
18 the information from the hydrographic survey.

19 **Q. Let's take a look at one more page -- I**  
20 **guess, two more pages, one more right in this**  
21 **hydrographic survey. The first is at Page 105, and**  
22 **you look at the top there. I picked this sub-file**  
23 **because it has the owner, Mr. Salopek, who we've heard**  
24 **from this this case. Are the elements of the water**  
25 **right shown on this sub-file number here?**

1           A.     For irrigation elements are described, yes.

2           **Q.     So what are those elements that are**  
3 **described?**

4           A.     So this sub-file identified that -- is  
5 identified as irrigation. The first element is  
6 priority date, the second element is source, the third  
7 element is purpose of use, the fourth element is point  
8 of diversion or in this case, points of diversion, the  
9 next element is amount of irrigated acreage or place  
10 of use, and the last element is amount of water, and  
11 it's described as to be determined.

12          **Q.     What does that mean, to be determined?**

13          A.     My best understanding is at the time of the  
14 hydrographic survey, there was not a determination on  
15 amount of water that was associated with either  
16 surface and/or groundwater. There was no rate of use  
17 identified at that time.

18          **Q.     And at that point, there had been no**  
19 **determination of the CIR and FDR; is that right?**

20          A.     Yeah, that's what's reported here, yes.

21          **Q.     We look at the priority date here on the**  
22 **groundwater. It indicates it's a 1955 priority date.**  
23 **Does that come from the date of drilling of the well?**

24          A.     Yes. That's my understanding.

25          **Q.     And then I want to get you to look at the**

1 identifying numbers here because we're going to go  
2 take a look at the map. So if you look in the  
3 right-hand corner here, we see the sub-file number is  
4 LRS-280 -- I think this is the important part --  
5 120058, and then if we look under the Office of the  
6 State Engineer file number, it's LRG 00507, and that  
7 corresponds to the wells; is that right?

8 A. I would have a little different explanation  
9 of that.

10 Q. Please.

11 A. In this instance, the Office of the State  
12 Engineer file number would relate to the file  
13 associated with this parcel or -- or sub-file, however  
14 you want to look at it. That's the file number that  
15 you would look up to find information related to this  
16 file number. It's a common practice in -- in the  
17 state to identify points of diversion, in well  
18 numbers, specifically if we go down to about the  
19 middle of the document where it says points of  
20 diversion, you'll note that it says LRG-00507, which  
21 is the same, obviously, name as that's given for the  
22 file. So well numbers, generally speaking, will be  
23 identified by the file number, but here we can see  
24 there's two other wells. One has a dash S and one has  
25 a dash S2. S usually connotes supplemental, so those

1 wells would be supplemental to the original well -- to  
2 the well described above. So sometimes there's  
3 confusion between file number and well number, and  
4 this is how the state engineer typically will  
5 administer a file versus a point of diversion.

6 Q. Appreciate that explanation. Let's go look  
7 at the map, which is on Page New Mexico 871. And we  
8 can blow up maybe the center part of that map. Go up  
9 a little bit further. Now, go down. Keep going.  
10 Keep going. Keep going. Now, make it narrower.  
11 That's good.

12 Are you able to see that, Mr. Longworth?

13 A. Generally. I would suggest the font is a bit  
14 small to read.

15 Q. Fair enough. Are you able to identify  
16 Mr. Salopek's property in that sub-file here using  
17 this page of the hydrographic survey?

18 A. So those parcels that are delineated with the  
19 green number and the -- the operative part of the  
20 sub-file number is 120058, so there's a number of  
21 parcels in there with that designation. There are  
22 also parcels designated as 10059. That would be a  
23 different sub-file. The points of diversion LRG-00507  
24 there in red, and then S and S2 also identified in  
25 that area. So generally speaking, this would give a

1 reference from on-the-ground investigations to the  
2 data that's included in the, what's been titled --  
3 what was spoken to as the sub-file number and the  
4 elements of the water right. So this is the spatial  
5 distribution of that, what's described here, the map.

6 **Q. All right. We can put away the hydrographic**  
7 **survey. A couple other questions before we turn to**  
8 **Stream System 101.**

9 **JUDGE MELLOY:** Can I ask a question for  
10 clarification? Well, two questions. One, on the map  
11 that you have currently up, are the gray lines that  
12 divide up the parcel, are those laterals?

13 **THE WITNESS:** Your Honor, those could be  
14 irrigation facilities within the -- within the areas  
15 under -- described here. They can also be farm roads,  
16 but the -- the -- what the parcels that are spelled  
17 out is where the irrigation activity has been  
18 identified. Where the areas that are not within those  
19 parcels, irrigation activity has not been observed,  
20 and typically speaking, those would be farm roads  
21 and/or irrigation facilities, such as canals/laterals.

22 **JUDGE MELLOY:** And then the other  
23 question I had for clarification is each of these  
24 sub-files contain a determination that's been made by  
25 the state engineer; is that correct?

1 THE WITNESS: Yes, that's correct.

2 JUDGE MELLOY: And have all these been  
3 accepted by the adjudication court? Maybe I'm getting  
4 ahead of Mr. Wechsler on that, but what is the status  
5 of these sub-files, as far as you know?

6 THE WITNESS: My understanding, having  
7 worked in the office for some time, is that this is an  
8 ongoing process to take the sub-file, develop an offer  
9 of judgment, meet with the claimant, and go through  
10 the process that I described before. I would -- it  
11 would be outside my knowledge area of what the  
12 percentage is, but it's certainly not complete.

13 JUDGE MELLOY: So not every -- so not  
14 every sub-file that's contained in this book has  
15 necessarily gone all the way through the adjudication  
16 process is what you're saying?

17 THE WITNESS: Your Honor, I believe  
18 that's correct.

19 JUDGE MELLOY: Okay. But you don't know  
20 what percentage has and has not?

21 THE WITNESS: Your Honor, that's  
22 correct.

23 JUDGE MELLOY: All right. Okay. Just  
24 so I understand. All right. Thank you.

25 Mr. Wechsler, you may proceed.

1                   **MR. WECHSLER:** Thank you. And we can  
2 take down the hydrographic survey.

3           **Q. (BY MR. WECHSLER)** Just a couple other  
4 questions about the adjudication, again, before we  
5 move to 101. Is the United States a party to the LRG  
6 adjudication?

7           **A.** Yes.

8           **Q.** Is EBID?

9           **A.** Yes.

10          **Q.** Is the City of El Paso?

11          **A.** I believe the City of El Paso has irrigated  
12 acreage they own and then, therefore, they would be  
13 parties to the adjudication -- irrigation that they  
14 own within EBID, and, therefore, they would be part of  
15 the party to the adjudication.

16          **Q.** Now, EP1 is not a party to the LRG  
17 adjudication; is that right?

18          **A.** That's my understanding, correct.

19          **Q.** Are they an amicus?

20          **A.** That's my understanding.

21          **Q.** We -- a couple other things that are helpful  
22 to understanding this overall administration, we've  
23 heard about the declaration of the basin in 1980 and  
24 1982. Are you aware of any new groundwater  
25 appropriations allowed in the LRG after the



1 **declaration of the basin?**

2 A. Nothing substantial. There may be some de  
3 minimus appropriations that have occurred that -- I'm  
4 not aware of specifically where they are, but I've  
5 understood from talking with staff that there may be a  
6 small amount. I think Mr. Serrano will be talking  
7 more specifically about that. But in general, no,  
8 there would not be an identification by the state  
9 engineer that water was available for appropriation  
10 after 19 -- groundwater was available for  
11 appropriation after 1982.

12 **Q. And I'm going to talk about another use of**  
13 **the term declaration this time as that term is used**  
14 **with regard to the declaration of a water right. Are**  
15 **you familiar with that term, declaration of a water**  
16 **right?**

17 A. Yes, I am.

18 **Q. What is the declaration of a water right?**

19 A. Individual entity or entity would use a  
20 declaration, particularly after a basin has been  
21 declared to notify the state engineer of their  
22 understanding of their water right that had been  
23 developed at the time of the declaration. So they  
24 usually have some editing such as pictures of their  
25 fields, for example, they generally have maybe an

1 affidavit describing the use. They may provide  
2 drilling records. From that state engineer personnel  
3 and/or adjudication personnel -- well, state engineer  
4 water right personnel, excuse me, and adjudication  
5 personnel would go out and field check those  
6 affidavits to see if they comport with conditions on  
7 the ground.

8 **Q. At some point in the adjudication, was there**  
9 **a deadline imposed for declaring pre-basin water**  
10 **rights?**

11 A. My understanding of the process of the  
12 adjudication court is in the mid 2000s, there was an  
13 effort -- an order, excuse me, given to the Office of  
14 the State Engineer to, what I understand, is enjoin  
15 all parties that sought to be recognized in the  
16 adjudication, that, in working with the counsel that  
17 worked on the adjudication was an extensive effort to  
18 a number of years to find all the parties, and at that  
19 point there would be public notice given to an area  
20 that if you had a claim, you needed to file a  
21 declaration in order to be incorporated into the  
22 adjudication case. There was a point -- the point in  
23 time where that period closed, and at that point, it's  
24 my understanding that would be the population of -- of  
25 claimants associated with the adjudication in the

1 Lower Rio Grande.

2 **Q. Turning to the stream system issues and**  
3 **eventually to Stream System Issue 101, are you**  
4 **familiar with that term, stream system issue?**

5 A. Yes. I believe the -- my experience is that  
6 the stream system issue is tied to what the judge  
7 ordered in terms of enjoining all the parties or  
8 interested parties, and the purpose was a stream  
9 system issue was an issue that was designated by the  
10 Court that had the potential to impact many or, you  
11 know, had -- impact many people or give notice to the  
12 people that are enjoined to the case that there was  
13 this issue going on so that they'd have an opportunity  
14 to participate. The stream system issue itself would  
15 be designated by the court.

16 **Q. What is Stream System Issue No. 101?**

17 A. Generally speaking, the 101 proceeding was  
18 related to the consumptive irrigation requirement and  
19 farm delivery requirement for irrigated agriculture on  
20 a basin wide basis.

21 **Q. As we lead up to discussion of Stream System**  
22 **101, when did you begin investigating consumptive use**  
23 **in the Lower Rio Grande?**

24 A. When I became chief of the Water Use and  
25 Conservation Bureau, I believe I started working on

1 analyses of consumptive irrigation requirement  
2 analyses during 2005.

3 Q. And in 2005, had the Stream System Issue 101  
4 been initiated yet?

5 A. I do not believe so.

6 Q. So why were you investigating consumptive use  
7 in 2005?

8 A. I was investigating consumptive use based on  
9 the direction from the state engineer in terms of  
10 asking for analyses in assistance with his  
11 policymaking efforts.

12 Q. As part of your evaluation in 2005, did you  
13 examine the current state of understanding on the  
14 issue of consumptive use?

15 A. I'm not sure I understand the question.

16 Q. Yeah. It was a bad question. Did you work  
17 with any other entities or experts in evaluating  
18 consumptive use in New Mexico in 2005 and shortly  
19 thereafter?

20 A. I believe shortly thereafter -- well, I take  
21 that back. I think we started working on consumptive  
22 use or ET, evapotranspiration efforts, in 2004. I  
23 worked with the previous bureau chief at that point to  
24 go through and work on irrigation water requirement  
25 reports for adjudications, in that instance, something

1 in the upper Pecos, and from there, I was able to have  
2 the opportunity to work with other staff within the  
3 agency but also to work with academic -- noted  
4 academic professionals where we would -- you know, my  
5 staff -- myself and my staff would go through  
6 training. I think we have one specific training on  
7 understanding the state of the art of the science with  
8 regards to determining irrigation water requirements,  
9 and from there, we worked closely with two  
10 researchers, specifically one from NMSU, and one, I  
11 believe, from the University of Idaho on state of the  
12 art of the science with regards to estimating basin  
13 wide evapotranspiration.

14 **Q. As part of your evaluation, did you**  
15 **investigate cropping patterns?**

16 A. Yes, I did.

17 **Q. How did you investigate cropping patterns?**

18 A. My efforts revolved around two distinct types  
19 of evaluations, one I would describe as a desktop  
20 evaluation. This would be where we would collect  
21 information that was generated from the Bureau of  
22 Reclamation or generated by the Elephant Butte  
23 Irrigation District and provided to the Bureau of  
24 Reclamation of crop -- crop patterns that were  
25 observed in a particular irrigation season. We also

1 -- or I also oversaw a comprehensive effort to  
2 identify crops in the Lower Rio Grande, and that was  
3 initiated in around 2004, and in that effort, we're in  
4 the field looking at parcels, and I think our base  
5 layer was derived from the hydrographic survey, and we  
6 visited every field -- when I say "we," I believe we  
7 had about eight teams or so that went out so that we  
8 could get a point in time understanding of what the  
9 cropping pattern was in the Lower Rio Grande. It also  
10 coincided with high-resolution aerial photography that  
11 was taken and so we had -- we did that -- we did that  
12 visit and the aerial photography, I believe, in the  
13 spring of 2008, then we did another visit in the  
14 summer months of 2008. We did a spot check visit in  
15 the fall of 2008, and then we did another complete  
16 visit in the spring of 2009. That, to my  
17 understanding, is one of the more comprehensive  
18 efforts of understanding the cropping patterns in any  
19 basin, but notably, the Lower Rio Grande. So that  
20 information really -- was really kind of the best  
21 understanding of cropping at that point in time.

22 **Q. We looked at some of your publications**  
23 **earlier. Did that work that you're describing lead up**  
24 **to those published journal articles?**

25 **A.** That work was incorporated in some of the

1 academic papers. It was also in my publications, I  
2 believe it was listed -- it was an expert report I  
3 prepared in the 101 proceeding.

4 Q. And staying on the subject of consumptive  
5 use, we heard last week from Mr. Salopek that the New  
6 Mexico pecan growers engaged in negotiations with the  
7 state engineer in 2007 and 2008 on water irrigation  
8 requirements for pecans. Did you play a role in the  
9 technical evaluation in the consumptive use of pecans  
10 in connection with those discussions?

11 A. Yes, I did.

12 Q. What was your role?

13 A. The state engineer directed me to attend  
14 meetings with the Pecan Growers Associations with the  
15 responsibility of overseeing the technical evaluation  
16 related to the irrigation of water requirements that  
17 the pecan growers were purporting to -- to have  
18 evidence for. During those discussions, the Pecan  
19 Growers Association provided a number of peer-reviewed  
20 journals -- excuse me -- peer-reviewed articles that  
21 describe water use for pecans from some of the  
22 research that was done in the Lower Rio Grande. We  
23 also did our own desktop review of available  
24 information that existed to the best of our ability.  
25 We also contacted -- I had the opportunity to work

1 under Dr. Zohrab Samani, who is a noted agricultural  
2 engineer. He had an experiment ongoing with  
3 Dr. Bawazir in the Civil Engineering Department at  
4 NMSU where they were attempting to measure directly  
5 what the evapotranspiration was. So through that  
6 process, I had the opportunity to see and learn about  
7 what it meant to measure directly the  
8 evapotranspiration and how that work would relate to  
9 information published in some of the articles that  
10 were presented by the pecan growers and others. So I  
11 was just fortunate to have that connection and ability  
12 to be able to learn more about what was going on. So  
13 there was pretty sophisticated measurements going on  
14 with regards to what I would term the actual ET from  
15 the areas under study. The papers that were provided  
16 utilized that station, study station, but I believe  
17 there was another study station that was used. I  
18 never had a chance to visit that one, but data was  
19 generated from that. My understanding from the  
20 reports is they used a very similar method.

21 **Q. Let's turn to Joint Exhibit 474, which has**  
22 **already been admitted. You recognize this as the**  
23 **final judgment in Stream System Issue 101,**  
24 **Mr. Longworth?**

25 **A. Yes, I do.**



1           Q.    And I want to get you to turn -- look with me  
2   at Page 3, Paragraph 7.  There's a reference here,  
3   Mr. Longworth, to a report on the methodology for  
4   determining irrigation water requirements.  Do you see  
5   that?

6           A.    Yes, I do.

7           Q.    Did you work on this report before it was  
8   filed with the adjudication court?

9           A.    Yes, I did.  I worked with counsel who  
10   ultimately submitted it, but I worked with counsel to  
11   describe the methodologies.

12          Q.    Let's take a look at New Mexico Exhibit 604A,  
13   as in apple.

14                   MR. WECHSLER:  I'll represent, Your  
15   Honor, that in the meet-and-confer process, the  
16   original version was missing the Exhibit A, which is a  
17   technical report called TR-21, and I'm not sure if it  
18   was the United States or Texas asked us to submit a  
19   separate copy of this exhibit with that attached, so  
20   that's attached now.

21          Q.    (BY MR. WECHSLER)  Mr. Longworth, do you  
22   recognize New Mexico 604A?

23          A.    I do recognize it, yes.

24          Q.    Is this a methodology report that we were  
25   just discussing?

1           A.    Yes.  It's my understanding that this -- the  
2   Court had ordered this investigation to occur, and  
3   this was our response -- the State's response.

4           Q.    And as you just testified, you actually  
5   worked on this; is that right?

6           A.    Yes.  I provided technical information to  
7   that.

8           Q.    Is this a document that was ultimately filed  
9   with the Court?

10          A.    That's my understanding, yes.

11          Q.    And is it kept on file in the normal course  
12   of business with the state engineer?

13          A.    It is.

14                   MR. WECHSLER:  Your Honor, I offer New  
15   Mexico Exhibit 604A.

16                   JUDGE MELLOY:  Any objection?

17                   MS. KLAHN:  Not from Texas.

18                   JUDGE MELLOY:  604A is admitted.

19                   Now, just for clarification, you're not  
20   offering 604; is that right, Mr. Wechsler?

21                   MR. WECHSLER:  Yes, Your Honor, that's  
22   correct.

23                   JUDGE MELLOY:  Okay.  All right.  604A  
24   is admitted.

25          Q.    (BY MR. WECHSLER)  Mr. Longworth, turning to

1 Page 2 under the heading, "Introduction," can you  
2 explain why the State has utilized in past  
3 adjudications the modified Blaney-Criddle Method for  
4 determining irrigation water requirements?

5 A. Yes.

6 MS. KLAHN: Your Honor, I'm going to  
7 object on the basis of this requires expert testimony.  
8 I assume your response will be the same, but I wanted  
9 to register my objection.

10 JUDGE MELLOY: You may answer. Go  
11 ahead.

12 A. So my understanding of the question was the  
13 -- I'm sorry. If you could repeat that.

14 Q. (BY MR. WECHSLER) I'm happy to. My question  
15 was -- we can see here in the adjudication -- or in  
16 the -- in the introduction that there's a reference to  
17 Modified Blaney-Criddle and that that is the method  
18 that has been used in adjudications throughout New  
19 Mexico, and my question is: Why is that the method  
20 that has been used in past adjudications?

21 A. So my experience working at the Water Use and  
22 Conservation Bureau is we had on file many different  
23 determination and irrigation water right -- irrigation  
24 water requirements from my predecessors. Those  
25 efforts went back, I think I identified in my work

1 going back to late '50s, early '60s. In that time  
2 frame, we initially as the state engineer in the state  
3 would utilize a method called Original Blaney-Criddle.  
4 That was a methodology that was developed. Blaney and  
5 Criddle were researchers, and they developed a  
6 methodology for determining basin wide consumptive  
7 use. We used that methodology for quite a while.  
8 It's my understanding that there were some appeals,  
9 both in terms of our process, where we would identify  
10 the cropping patterns, and there was also, I believe,  
11 litigation revolving -- involving the actual  
12 methodology Original Blaney-Criddle. The courts  
13 provided decisions from those -- from those to direct  
14 the state engineer on what the Court decided. We  
15 modified our approaches to match those orders from the  
16 courts. I think one was a state court, and that had  
17 gone up to the New Mexico Supreme Court, and, of  
18 course, we modified our methodology for that. Another  
19 one was in, I believe, a federal district court  
20 related to an Indian water right adjudication, and  
21 that court ordered the specific methodology, and that  
22 was the SCS methodology, as described here, and we've  
23 used that in adjudications since that point.

24 **Q. Let's turn back to Joint Exhibit 474, which**  
25 **was the Stream System 101 Final Judgment. Was there**

1     **discovery, Mr. Longworth, in Stream System Issue 101?**

2         A.     Yes, there was.

3         **Q.     As part of your work on that case, did you**  
4     **prepare expert reports?**

5         A.     Yes, I did.

6         **Q.     Do you recall how many?**

7         A.     I believe I prepared four reports.

8         **Q.     Were you deposed?**

9         A.     Yes, I was.

10        **Q.     Did you testify?**

11        A.     Yes, I did.

12        **Q.     Did you complete your testimony?**

13        A.     The stage of my testimony when the trial went  
14    into recess, I had completed my direct, and one of the  
15    defending parties had completed their cross. I  
16    believe there was at least two remaining parties that  
17    needed to -- were scheduled to do cross, but the court  
18    went to recess and there was discussions of a  
19    settlement during that time and so when the court  
20    resumed the trial, my testimony -- I was not called  
21    back to testify in those proceedings.

22        **Q.     We take a look at Page 5, Paragraphs 18 and**  
23    **19. I think this gets to what you're describing,**  
24    **Mr. Longworth, and we also heard about this from**  
25    **Mr. Salopek. We can see here that Dr. Phil King**

1 provided testimony at that point, and is that the  
2 point at which you're describing a moment ago?

3 A. On Paragraph 18, yes, it describes that the  
4 Court reconvened the trial and that Dr. King provided  
5 testimony. That's my understanding.

6 Q. Was Dr. King cross-examined?

7 A. In my preparation for this, I believe he was  
8 -- I'm not sure to be honest. I don't know if he got  
9 crossed, but I know there was an opportunity provided  
10 for him to get crossed.

11 Q. Do you know if EBID participated in that  
12 evidentiary proceeding?

13 A. Yes, they did.

14 MS. COLEMAN: Objection, Your Honor, a  
15 lack of foundation. He wasn't there for this  
16 proceeding.

17 MR. WECHSLER: Your Honor, he --

18 JUDGE MELLOY: I'll let him answer. Go  
19 ahead.

20 Q. (BY MR. WECHSLER) Did you -- my question,  
21 Mr. Longworth, was whether EBID had participated in  
22 this proceeding?

23 A. Yes. I can recall in my deposition, counsel  
24 for the Elephant Butte Irrigation District did take my  
25 -- was one of the parties that took my deposition, so

1 that's my recollection, at least in part, of their --  
2 that they were participating as an active party.

3 Q. And did the United States participate in the  
4 proceeding in which Dr. King presented testimony?

5 MS. COLEMAN: Objection, Your Honor,  
6 lack of foundation.

7 JUDGE MELLOY: He can testify as to  
8 facts that -- or events that he observed.

9 MS. COLEMAN: May I voir dire him on  
10 this then?

11 JUDGE MELLOY: Well, let's wait and see  
12 what he says, and then I'll let you -- go ahead.  
13 What's the answer?

14 Q. (BY MR. WECHSLER) Mr. Longworth?

15 A. If we could just restate the question,  
16 please.

17 Q. Sure. My only question was: Did the United  
18 States participate in the evidentiary proceeding  
19 involving Dr. King?

20 A. My understanding from reviewing documents in  
21 preparation for this trial that the United States was  
22 part of this proceeding, and they participated  
23 telephonically.

24 Q. Turning to the final judgment itself, which  
25 is -- go to Page 6. I think up until this point,

1 we've been looking at background. Is this final  
2 judgment used by the state engineer as part of its  
3 water administration in the Lower Rio Grande?

4 A. Is this part of the administration in the  
5 Lower Rio Grande currently? Is that -- was the  
6 question?

7 Q. That is the gist of the question, yes?

8 A. So the final judgment provides what the  
9 elements related to the FDR and CIR for water rights  
10 that are covered by this judgment, so the water rights  
11 division would incorporate these determinations by the  
12 Court into their day-to-day administrative efforts.

13 Q. We'll hear more about those administrative  
14 efforts from Mr. Serrano, but just a couple of  
15 questions about each of these sections.

16 JUDGE MELLOY: Well, maybe this would be  
17 a good -- is this a good point to take a break,  
18 Mr. Wechsler?

19 MR. WECHSLER: It is, Your Honor.

20 JUDGE MELLOY: All right. Why don't we  
21 break until 1:15. Thank you, everyone.

22 (Recess.)

23 JUDGE MELLOY: Are we ready or do you  
24 need to make another adjustment?

25 MR. WECHSLER: As far as I know, we're



1 ready.

2 JUDGE MELLOY: All right. You may  
3 resume, Mr. Wechsler.

4 MR. WECHSLER: Thank you.

5 Q. (BY MR. WECHSLER) Mr. Longworth, we were  
6 about to look at parts of the final judgment and  
7 understand how those are used for water administration  
8 purposes. Looking at Section 1, Surface Water-Only  
9 Rights, how is Section 1 used for water administration  
10 purposes?

11 A. Can you hear me okay just before I go on?

12 Q. Yes.

13 A. Okay. The surface water-only right in terms  
14 of an administrative process is the water master and  
15 his team would know what lands those are and that they  
16 would not be allowed to have groundwater used on those  
17 lands unless they had come forward to the state  
18 engineer for a permit. So they would be monitored to  
19 ensure only surface water was applied to those lands.

20 Q. And we can see there's a limit to the amount  
21 of water that can be applied to those lands; is that  
22 right?

23 A. Yes.

24 Q. That number is the 3.024 acre-feet per acre  
25 per year?

1           A.     Yes.

2           Q.     Turning then to Section 2, which is  
3     entitled, "Combined surface and groundwater rights,"  
4     for water administration purposes, is it important to  
5     understand the sources of a water user, in other  
6     words, the sources of a water right?

7           A.     The source of water, yes, it's important,  
8     very important.

9           Q.     Why?

10          A.     It's one of the elements of a right.

11          Q.     It's only by knowing that, that you can know  
12     whether a water user is using too much water; is that  
13     right?

14          A.     With this order, yes.

15          Q.     How does Section 2 work from a water  
16     administration purpose?

17          A.     So in my understanding of this section,  
18     there's a couple of important points. First, the  
19     combined surface and groundwater shall not exceed  
20     4-and-a-half acre-feet per acre per year. The next  
21     point or section here indicates that in the event that  
22     EBID's annual allotment exceeds 3.024, the 4.5 FDR  
23     within lands on EBID irrigated surface water and  
24     groundwater may not exceed -- be exceeded to allow the  
25     full allotment -- full annual allotment to be

1 delivered. I read that to indicate 4.5 remains the  
2 cap, so would limit the amount of groundwater pumped  
3 relative to 4.5. It provides for what's described as  
4 an in situ consumptive irrigation requirement for all  
5 acreage, and which is defined as the 4.0 acre-feet per  
6 acre per year. It also notes that that can only be  
7 transferred for irrigation purposes, and then finally,  
8 it describes the amount of 3.024 -- the amount not to  
9 exceed 3.024 of the groundwater component of a  
10 combined surface and groundwater right shall be  
11 supplied by supplemental to the surface water right  
12 FDR of 3.024 and the amount not to exceed 1.476  
13 acre-feet per year -- acre-feet per acre per year as a  
14 primary right, and then here we've defined  
15 supplemental is the groundwater that is, when combined  
16 with the allotment, is a difference between the  
17 allotment and 3.024. So going through that step by  
18 step, what this provides for is if there is an  
19 opportunity on a day-to-day run of the mill farm, it's  
20 4.5. Within that 4.5, there's two elements, there's a  
21 supplemental ground -- well, there's three elements,  
22 excuse me, there's surface water element, there's the  
23 supplemental groundwater element, and that's  
24 calculated by subtracting the annual allotment from  
25 3.024 and the remaining can be pumped as a

1 supplemental right and then lastly there's a primary  
2 right of 1.476 that can be pumped up to 4.5. There's  
3 some other conditions in here, as I described, but  
4 that -- that's the, I think, important understanding  
5 of the section.

6 Q. If we look at Section 3 then, which is  
7 groundwater-only rights, again, from a water  
8 administration perspective, how is this Section 3  
9 used?

10 A. The groundwater-only rights would be acreage  
11 that is not served by Elephant Butte Irrigation  
12 District so they would only be diverting from the  
13 source of groundwater.

14 Q. And, again, this allows the water master to  
15 control the amount of water that's put on any acre of  
16 land in the Lower Rio Grande?

17 A. Yes. For those acreages that are identified  
18 as groundwater only would give the water master the  
19 ability to track the groundwater diversion and  
20 intercede if there is an excessive amount -- amount of  
21 diversion over the amount identified in this order.

22 Q. Section 4 of this final judgment starts on  
23 Page 7. It's entitled, "Establishment of FDR in  
24 excess of 4.5 acre-feet per acre per year." Is the  
25 state engineer responsible for implementing this

1     **Section 4?**

2           A.     It is my understanding that the state  
3 engineer is responsible for implementing this section.

4           **Q.     And is that done by the water master,**  
5 **Mr. Serrano?**

6           A.     Section 4 -- let's see here.  There's a  
7 number of provisions in Section 4, and I believe it  
8 involves the water rights staff in the district office  
9 that -- and then that would include the water master,  
10 and I believe it would also include the adjudication  
11 personnel in the Las Cruces office.

12          **Q.     And I'll just represent that Mr. Serrano will**  
13 **be testifying to that, so I won't ask you any more**  
14 **specific questions about it.  Staying on Page 7,**  
15 **though, if you back out here and go to the top**  
16 **paragraph, C, we can see there's a reference here to**  
17 **in situ CIR, and I think you just referred to that,**  
18 **Mr. Longworth, and I want to compare that to something**  
19 **that's shown on Page 9.  So if we go to Page 9 and**  
20 **look at Paragraph A, and here it says, "For future**  
21 **transfers to non-irrigation purposes of use, a CIR of**  
22 **2.6 acre-feet per acre per year shall apply."  My**  
23 **question to you is, again, from a water administration**  
24 **perspective, what's the difference between the 2.6 for**  
25 **transfer purposes and the 4.0 for irrigation purposes?**

1           A.     Starting with the 2.6, that was a calculation  
2     provided by the state in this case or this portion of  
3     the case. That was a report I prepared, and what that  
4     is a representation of the -- I would describe as the  
5     average -- under average climatic conditions with the  
6     best information with regards to cropping patterns,  
7     what the expected yield of consumptive use would be in  
8     the basin, and I believe that to be important when  
9     transferring out of agriculture because that could be  
10    relied upon as an expected supply for municipal uses  
11    or other non-agricultural uses. We contrast that with  
12    the in situ CIR for agriculture. The 4.0 provides the  
13    flexibility for a increase in consumptive use. It can  
14    be either for a specific crop or for a cropping  
15    management effort by the producer, the farmer, and so  
16    that is what's in the ground and what's associated  
17    with the agriculture, and -- does that answer your  
18    question?

19           Q.     It does. One last provision that we see in  
20    here in this document, New Mexico 474, and this is a  
21    part of the settlement agreement, which is attached as  
22    Exhibit A, so if you look at Page 12, so here's the  
23    settlement agreement, Mr. Longworth, and then there's  
24    a provision on Page 15, and this is a provision under  
25    the heading, "Priority date," and then this

1 Subparagraph B here indicates that there was an  
2 agreement amongst some of the parties that the  
3 priority date for primary groundwater rights shall be  
4 date of drilling. Are you familiar with that  
5 provision?

6 A. Yes, I am.

7 Q. Is it important from a water administration  
8 perspective?

9 A. Yes. It's important because this agreement  
10 provides that in the event of a priority call, we now  
11 have agreement as to what the priority dates are for  
12 wells with a primary groundwater right, and that would  
13 be date of drilling. That is on record with the state  
14 engineer, and so those two -- understanding the date  
15 of drilling and that that would be the part of the  
16 priority right, we now have a very definitive way of  
17 identifying if we had to make a priority call, how  
18 much that would be, in other words, how many acres,  
19 what priority, how far back, where those acres are, et  
20 cetera.

21 Q. Turning to Page 6, Paragraph 28, we've  
22 discussed the fact that the final judgment allowed  
23 combined use of surface and groundwater and an FDR  
24 with a 4.5 with an opportunity to prove up to a 5.5.  
25 We can see what the judge said here about this being

1 an appealable order. Do you know if the United States  
2 appealed this final judgment?

3 A. It's my understanding that this final  
4 judgment was not appealed by the United States. They  
5 may have made comments. I believe, in reviewing  
6 documents in preparation, the judge, I believe,  
7 ordered a period of comment -- ordered an allowance  
8 for a period of comment for the Court to consider. I  
9 believe the United States may have submitted  
10 something, but ultimately, this has not been appealed.

11 Q. And I will represent or refer the Court to  
12 New Mexico Exhibit 1055 at Pages 10 to 11. That's the  
13 U.S. response to a request for admission on this  
14 issue. Before we move on to Stream System Issue 104,  
15 Mr. Longworth, can you explain, is Stream System Issue  
16 101 and the final judgment we were looking at  
17 important for water administration in the LRG and New  
18 Mexico?

19 A. Yes, it is.

20 Q. Why?

21 A. The court has identified what the diversion  
22 -- farm delivery routes are, and that provides the  
23 state engineer information to be able to administer  
24 the waters in the State of New Mexico, both ground and  
25 surface, and ensure that there isn't an over



1 diversion. I think that's the critical part. My  
2 experience working with the river master in the LRG is  
3 -- has been that there are -- there have been times  
4 when over diversions have been identified, and we  
5 would not have been able to do that prior to this  
6 order, and those -- I think, again, Mr. Serrano will  
7 testify to this, but we have had to take  
8 administrative action in order to ensure that those  
9 rights -- that that was pumping primarily was  
10 rectified. Again, with a court order, that provides  
11 the state engineer a very -- it provides him a tool to  
12 be able to bring anybody who's over diverting to an  
13 administrative hearing, if necessary.

14 **Q. I wanted to turn now to the subject of Stream**  
15 **System Issue 104. Are you familiar with that stream**  
16 **system issue?**

17 A. In preparation for this testimony, I've  
18 reviewed documents associated with the Stream System  
19 104.

20 **Q. It's also something that you were involved --**  
21 **you had to understand as part of your normal job**  
22 **duties; is that right?**

23 A. Yes. I was part of a team -- an advisory  
24 team to the state engineer during this period of time  
25 based -- due to my work related to 101.

1           Q.    And then for water administration purposes  
2   and -- in the state engineer office, is that something  
3   that is also important for water administration of the  
4   Lower Rio Grande?

5           A.    The 104 proceeding and potential result?

6           Q.    Correct.

7           A.    Yeah. That's very important.

8           Q.    What is Stream System Issue 104? I'm not  
9   sure I asked you that.

10          A.    My understanding of Stream System 104 was  
11   quantification of the right for the United States,  
12   specifically the project.

13          Q.    Was it quantification, was it also defining  
14   the other elements of the project right for New Mexico  
15   administration purposes?

16          A.    Yes. The intention of 104 was to conclude  
17   with a description of the appropriate elements of the  
18   water right for the project.

19          Q.    Turn to US-417. Do you recognize US-417?

20          A.    Yes, I do.

21          Q.    What is it?

22          A.    Excuse me. It's a sub-file offer of judgment  
23   to settle the United States of America's Rio Grande  
24   Project rights, and that's been submitted by the  
25   Office of the State Engineer to a court.

1           **Q.**     This was New Mexico's offer to the United  
2           States; is that right?

3           **A.**     Yes, it was.

4           **Q.**     And just to confirm what you just said, if we  
5           turn to Page 5, we can see here the signature and date  
6           of the New Mexico Office of the State Engineer  
7           attorney, and this was actually submitted to the  
8           adjudication court; is that right?

9                   **MS. COLEMAN:**   Objection; lack of  
10          foundation.

11          **A.**     Yes, that's my understanding.

12                   **MS. COLEMAN:**   The objection is lack of  
13          foundation. Mr. Longworth testified in his deposition  
14          that he had, quote, only a minimal role in this  
15          document.

16                   **MR. WECHSLER:**   Whether he had a minimal  
17          role or not does not change his understanding, Your  
18          Honor. He certainly has foundation and understanding  
19          of these documents.

20                   **MS. COLEMAN:**   I don't know that he's  
21          established his understanding of anything with 104  
22          yet.

23                   **MR. WECHSLER:**   Your Honor, you're on  
24          mute.

25                   **JUDGE MELLOY:**   The only issue present is

1 whether it was submitted, and so I'll let him answer  
2 that question.

3 Q. (BY MR. WECHSLER) Mr. Longworth, do you know,  
4 was this document submitted to the adjudication court?

5 A. Yes. It's my best understanding that it was  
6 submitted and that is due to that there was  
7 proceedings afterwards that went to some issues  
8 identified with -- with this offer.

9 MR. WECHSLER: Your Honor, at this  
10 point, I'd offer US-417.

11 JUDGE MELLOY: Well, what's the  
12 Government's position?

13 MS. COLEMAN: The Federal Government's  
14 position is that the document could be admitted, but  
15 Mr. Longworth should have -- lacks foundation to  
16 testify about anything it contains.

17 MS. KLAHN: We'll join that -- Texas  
18 will join that.

19 JUDGE MELLOY: All right. I'll admit  
20 417. And maybe you're going to get to this,  
21 Mr. Wechsler, but has this been accepted by the United  
22 States and -- and is it -- has it been adopted by the  
23 adjudication court?

24 MR. WECHSLER: I'll let the witness  
25 answer, if that's okay, Your Honor.

1                   Did you understand the question,  
2                   Mr. Longworth?

3                   THE WITNESS: My understanding of the  
4                   question is has this offer been adopted by the  
5                   adjudication court? This offer went through a series  
6                   of proceedings in front of the adjudication court  
7                   where the elements at times were challenged, at times  
8                   were not challenged, and there was one element that  
9                   was litigated in front of the adjudication court, and  
10                  there was a decision rendered.

11                  MS. COLEMAN: Your Honor, I'm going to  
12                  move to strike that whole paragraph of testimony. The  
13                  witness's foundation to talk about what happened in  
14                  the docket of Stream System Issue 104 has not been  
15                  established, and the docket would be a much better  
16                  source for determining what actually happened with  
17                  this document.

18                  JUDGE MELLOY: Well, I'll leave it in  
19                  for now. He participated. I guess I'm just -- what  
20                  bothers me is that we're -- I don't want to have a lot  
21                  of testimony about an offer that hasn't been accepted  
22                  and so I guess I -- I don't know the relevance of what  
23                  an offer has to this proceeding.

24                  MR. WECHSLER: I think it's -- I think  
25                  it's minimal, Your Honor, and, in fact, the reason for

1 us putting in there is just to show the initiation of  
2 the proceedings, so let me just confirm with  
3 Mr. Longworth.

4 Q. (BY MR. WECHSLER) Mr. Longworth, the United  
5 States did not accept this offer; is that right?

6 A. That's my best understanding, yes.

7 Q. So then let's turn to some of the proceedings  
8 that you just testified to that did occur. So once  
9 that offer of judgment was declined, did the parties  
10 litigate the elements of the project right?

11 A. Yes. There was litigation. There was also  
12 procedural efforts within the adjudication court.

13 Q. Let's look at those orders.

14 A. Let me rephrase that. Procedural challenges  
15 to the offer.

16 Q. And I just want to point out the main orders  
17 that the Court has entered here on the project right.  
18 Let me ask you as a preface to that, Mr. Longworth,  
19 those orders on the project right from the  
20 adjudication court in Stream System 104, are those  
21 used by the state engineer as part of its water  
22 administration responsibilities?

23 A. Yes.

24 Q. And so all of these orders of the  
25 adjudication court, are they digested, considered,

1 evaluated by the state engineer and the state  
2 engineer's office?

3 A. Yes.

4 Q. Including by you?

5 A. From an advisory standpoint, yes.

6 Q. So if we look at Joint Exhibit 472, do you  
7 recognize this document?

8 A. Yes, I do.

9 Q. What is it?

10 A. You have to excuse me. I'd like to try to  
11 find the paper copy here.

12 Q. Please.

13 A. This document is an order that grants the  
14 State's motion to dismiss the United States' claims to  
15 groundwater and then denies the United States' motion  
16 for summary judgment.

17 Q. Does this order relate to the project water  
18 right?

19 A. Yes, it does.

20 Q. In the upper right-hand corner here of Page 1  
21 of Joint 472, you can see the file stamp. This is an  
22 order that was actually issued by the adjudication  
23 court; is that right?

24 A. Yes. That's correct.

25 Q. If we turn to Page 8, we can see there signed

1 by the Court -- by the judge; is that right?

2 A. Yes. It's been ordered and signed by the  
3 judge.

4 Q. And if you look at the next page, it was then  
5 served; is that right?

6 A. Yes. There's a certificate of mailing, and  
7 it is signed.

8 Q. And is this a document that's kept on file at  
9 the Office of the State Engineer in the normal course  
10 of business?

11 A. Yes, it is.

12 Q. Is this a document that you're familiar with  
13 and have used as part of your responsibilities?

14 A. It's a document I used to prepare for this  
15 trial testimony. In my normal course of duties, it  
16 would be used as an advisory tool for any advice I  
17 might give to the state engineer.

18 Q. Including on issues having to do with water  
19 administration in the Lower Rio Grande?

20 A. Yes, that's correct.

21 MR. WECHSLER: Your Honor, move Joint  
22 Exhibit 472.

23 JUDGE MELLOY: Any objection?

24 MS. KLAHN: I'll -- I'll voir dire.

25 JUDGE MELLOY: Go ahead.



1                   **MS. KLAHN:** Mr. Longworth, you just  
2 testified that this document is one that -- the  
3 question you were asked is whether it was a document  
4 that you've used as part of your responsibilities. Is  
5 that -- can you answer that question? Have you ever  
6 used this document as part of your responsibilities?

7                   **THE WITNESS:** Yes, I have.

8                   **MS. KLAHN:** When?

9                   **THE WITNESS:** In preparation for this  
10 testimony and also discussions with the state engineer  
11 about potential administrative actions in the Lower  
12 Rio Grande.

13                   **MS. KLAHN:** And in your preparations for  
14 testimony today, let's just reiterate, you're not  
15 being offered as an expert, correct?

16                   **THE WITNESS:** That's my understanding,  
17 yes.

18                   **MS. KLAHN:** Your Honor, we'd object. I  
19 don't think there's foundation for this through this  
20 witness.

21                   **MR. WECHSLER:** Again, Your Honor, he  
22 testified that he has used this in discussing and  
23 evaluating potential administrative actions in the  
24 Lower Rio Grande. I don't understand the objection.

25                   **JUDGE MELLOY:** Well, I'm going to admit

1 it. It's a little questionable about business records  
2 exception, but it'd be clear that it would be  
3 admissible as an official document if you got it  
4 certified by the clerk. So I think to avoid going  
5 through a lot of needless hoops, I'm going to admit  
6 it. 472 is admitted. No one's questioning its  
7 authenticity. Go ahead.

8 Q. (BY MR. WECHSLER) Mr. Longworth, turning to  
9 Page 6, Lines 3 through 23. Here, this is a  
10 discussion of the source of water. Remind us, is it  
11 important from a water administration standpoint to  
12 understand the source of water for the project right?

13 A. Yes, it is.

14 Q. Why?

15 A. If the United States, under this right, was  
16 to notice the state engineer of injury, the state  
17 engineer would need to know the source so as to be  
18 able to remedy the injury.

19 Q. Further down on this same page, we're going  
20 to look at Lines 24 through 32, and specifically you  
21 can see there at Lines 30 and 31, it says -- "The  
22 Court represents that the parties do not appear to  
23 dispute that reuse of Project water is an inherent  
24 component of the Project operation." Let me just ask  
25 you, is that right that the state engineer does not

1 dispute that the Project is entitled to reuse or  
2 return flows as --

3 A. Yes.

4 Q. -- defined?

5 A. Yes, that's correct.

6 Q. If we turn to Page 7, this time Lines 1  
7 through 19, particularly at Lines 14 and 19, the Court  
8 talks about surface water that seeps into the ground  
9 and becomes part of the aquifer. I understand you're  
10 not a lawyer, and I'm not asking a legal  
11 interpretation, so this question is intended purely  
12 from water administration perspective, and in  
13 administering water in New Mexico, how is seepage  
14 treated once it reaches an aquifer?

15 A. Once it's intercepted by an aquifer, it would  
16 be characterized as groundwater.

17 Q. If we turn back to Page 4 of this document,  
18 here I'm looking at the paragraph at Lines 6 through  
19 18. There's some discussion here about administrative  
20 remedies. Can you please summarize the administrative  
21 remedies that might be available for purposes of  
22 protecting the Project right?

23 MS. COLEMAN: I'm going to object to  
24 this -- this for lack of foundation. Mr. Longworth  
25 was asked to testify about this in his deposition, and

1 the State of New Mexico represented that someone else  
2 was supposed to talk about this.

3 **MR. WECHSLER:** So, Your Honor, I think  
4 what Ms. Coleman is referencing is the 30(b)(6)  
5 designations for Mr. Longworth, and it is true that I  
6 think at the 30(b)(6) we had designated somebody else  
7 to talk about things like a priority call; however,  
8 Mr. Longworth has already established his foundation  
9 for this -- these issues, and certainly the United  
10 States and Texas were -- could have deposed  
11 Mr. Longworth in his witness capacity and his personal  
12 capacity. They chose not to do that, so we can't be  
13 responsible for the choices -- discovery and  
14 litigation choices that the United States makes.

15 **JUDGE MELLODY:** Well, who was it -- who  
16 was represented to be the person to talk about this  
17 issue?

18 **MR. WECHSLER:** I think the question  
19 generally -- the issue generally had to do with  
20 something like water administration in the Lower Rio  
21 Grande, and there were a couple of people. I think  
22 there was -- Dr. Barroll was one of them, and it may  
23 have also included Cheryl Thacker, but, of course, we  
24 also have the state engineer himself, who will be  
25 testifying later in the proceeding. That's not

1     dispositive for whether or not a witness can testify  
2     to an issue.

3                 **JUDGE MELLOY:** All right. Well, I'll  
4     allow some brief testimony. If we're going to have  
5     the state engineer, let's keep this pretty -- pretty  
6     brief. Sounds like that'd be the better person to  
7     maybe talk about this.

8                 **MR. WECHSLER:** I'm happy to do that,  
9     Your Honor. In fact, this is my only question on this  
10    subject.

11                **Q. (BY MR. WECHSLER)** So we were looking at this  
12    language at Page --

13                **JUDGE MELLOY:** And I don't want him  
14    quoting from the order. The order speaks for itself.  
15    If he has independent knowledge of the administrative  
16    process, aside from what's in the order, that's one  
17    thing, but if he's just going to read from the order,  
18    I think that the order speaks for itself.

19                **MR. WECHSLER:** Yes, I agree. That is  
20    why I very rarely have witnesses read from a document.

21                **Q. (BY MR. WECHSLER)** My question was we were  
22    looking at this language, 6 through 18, and,  
23    Mr. Longworth, my question is: In New Mexico, what  
24    are the administrative remedies that would be  
25    available to protect the Project right?

1           A.     My experience, the United States could  
2     petition the state engineer with understanding this  
3     language if they felt that there was injury to their  
4     water right or their right. I believe that this kind  
5     of action did occur. Maybe Mr. Serrano will speak  
6     specifically to it, but there was a concern raised by  
7     the United States relative to river pumpers  
8     interfering with the right of the United States and so  
9     this is -- that's an administrative remedy that is  
10    available with the state engineer for the United  
11    States relative to any potential injury.

12           **Q.     Let's look at some of the other elements that**  
13    **have been recognized by the Court in Stream System**  
14    **Issue 104. To do that, turn to New Mexico Exhibit**  
15    **808. Do you recognize New Mexico Exhibit 808?**

16           **MS. COLEMAN:** Your Honor, I object --

17           A.     Yes, I do.

18           **MS. COLEMAN:** Excuse me. This document  
19    was not disclosed as an exhibit for this witness.

20           **MR. WECHSLER:** We certainly have -- we  
21    certainly intended it to be, and I -- I had --

22           **JUDGE MELLOY:** It's on the list.

23           **MS. COLEMAN:** It is?

24           **JUDGE MELLOY:** It's on the list.

25           **MS. COLEMAN:** Oh, I'm sorry. I missed

1 it. I'm sorry. Apologies.

2 JUDGE MELLODY: Go ahead.

3 Q. (BY MR. WECHSLER) I think the only question  
4 on the table, Mr. Longworth, was do you recognize  
5 Exhibit 808?

6 A. Excuse me. I have read this document and am  
7 familiar with it.

8 Q. Is this also a document that you use in the  
9 same way that you described on the previous exhibit?

10 A. Yes. In my capacity as special assistant to  
11 the state engineer, information contained in this  
12 document would be important for my -- any kind of  
13 advisement I would have with the state engineer.

14 Q. Does this order relate to the Project right?

15 A. In part, yes, I believe so.

16 Q. If we look up again at the right-hand corner,  
17 you can see that has the file stamp from the court.  
18 Do you see that?

19 A. Yes, I do.

20 Q. If you turn to Page 6, and you can see the  
21 judge's signature. Do you see that?

22 A. Yes, I do.

23 Q. And then again on Page 7, it's a certificate  
24 of service, and I think you testified that all of the  
25 adjudication documents are kept at the state engineer;

1 is that right?

2 A. Yes, they are.

3 Q. Used as part of water administration?

4 A. Yes, they are.

5 Q. In fact, some of these documents, maybe all  
6 of these documents, are on the state engineer Website;  
7 is that right?

8 A. I believe the state engineer has on his  
9 Website orders related to adjudications. For the  
10 purposes of my preparation here, I did not go to the  
11 Website to see if these specific orders were there.

12 MR. WECHSLER: Your Honor, I offer New  
13 Mexico Exhibit 808.

14 JUDGE MELLOY: Any objection? New  
15 Mexico 808 is admitted.

16 Q. (BY MR. WECHSLER) Page 2, Mr. Longworth,  
17 Lines 1 through 7, we can see that the Court grants  
18 summary judgment for a storage capacity of the  
19 2,638,860 acre-feet. Again, for water administration  
20 purposes, is it important to understand the amount of  
21 water that is allowed to be stored and otherwise used  
22 by the United States?

23 MS. KLAHN: Your Honor, I'm just going  
24 to object to this line of questions. The document  
25 speaks for itself.



1 JUDGE MELLOY: I'm going to sustain  
2 that.

3 Q. (BY MR. WECHSLER) Turning, Mr. Longworth, to  
4 Page 2, Lines 14 to 19, in here you can see that  
5 there's three diversion points, Percha, Leasburg  
6 diversion -- Mesilla Diversion Dams. Do you see that?

7 MS. KLAHN: Your Honor, same objection.  
8 The document speaks for itself.

9 JUDGE MELLOY: Well, go ahead and ask  
10 your question.

11 MR. WECHSLER: Thank you.

12 Q. (BY MR. WECHSLER) In your experience, are  
13 those the primary diversion dams in the LRG and New  
14 Mexico?

15 MS. KLAHN: Document speaks for itself.

16 A. Yes, they are.

17 MR. WECHSLER: That question -- Your  
18 Honor, did you want to address the objection?

19 JUDGE MELLOY: I didn't hear the  
20 objection. Go ahead. The answer is in.

21 Q. (BY MR. WECHSLER) Page 4, Mr. Longworth,  
22 Lines 1 through 11, here in particular on Lines 3  
23 through 5, there's a reference to whether or not the  
24 state of New Mexico is recognizing Project deliveries  
25 as an essential element of the Project. Does the

1 State of New Mexico recognize Project deliveries to  
2 Texas as an essential element of the Project?

3 MS. COLEMAN: Objection; lack of  
4 foundation.

5 A. Yes, it does.

6 JUDGE MELLOY: Just a second. I'll  
7 overrule. The witness may answer.

8 A. Excuse me. Could you re-ask the question?

9 Q. (BY MR. WECHSLER) I -- my question was: Does  
10 the State of New Mexico recognize Project deliveries  
11 to Texas as an essential element of the Project?

12 A. Yes, it does.

13 Q. Let's talk about the priority date, and we  
14 can see in the remainder of this document, that the  
15 Court found there was an issue of material fact on  
16 that issue. Was there a trial on the issue of the  
17 priority date for the Project?

18 A. Yes, there was.

19 Q. Let's look at Joint Exhibit 473 so we can  
20 close this record. Do you have that before you?

21 A. That was Joint Exhibit 0473?

22 Q. Correct.

23 A. Yes, I have that in front of me.

24 Q. Do you recognize Joint Exhibit 473?

25 A. Yes, I do.

1           **Q.    What is it?**

2           A.    This is a order or ruling from the Court  
3 related to the priority date of the Project.

4           **Q.    Is this another document that you use in your**  
5 **capacity as special assistant to the state engineer?**

6           A.    Yes, it is.

7           **Q.    Does this order relate to the Project water**  
8 **right?**

9           A.    Yes, it does.

10          **Q.    We can see, again, it's filed with the court**  
11 **with the stamp in the upper right-hand corner. Do you**  
12 **see that?**

13          A.    Yes, I do.

14          **Q.    And if you go to Page 55, you can see the**  
15 **judge's signature. Page 56, we see the certificate of**  
16 **service. Is this another document that is used as**  
17 **part of water administration by the state engineer?**

18          A.    Yes, it is.

19          **Q.    And it's kept on file in the normal course of**  
20 **business?**

21          A.    Yes, it is.

22                   **MR. WECHSLER:** Your Honor, I move Joint  
23 Exhibit 473.

24                   **JUDGE MELLOY:** Any objection? 473 is  
25 admitted.

1           Q.     (BY MR. WECHSLER) Turn to Page 55. Looks  
2 like we are there. We are going to look at Paragraphs  
3 28 to 30. Do you know what priority date the United  
4 States requested as part of this proceeding?

5           A.     My understanding is the United States  
6 requested the priority date on or around March 1st,  
7 1903.

8           Q.     And is that, in fact, the priority date that  
9 the court adopted?

10          A.     Yes, it is.

11          Q.     So looking at -- we just looked at a number  
12 of orders from the court defining the elements of the  
13 project. Has there been an opportunity to appeal  
14 these orders yet?

15          A.     Not to my knowledge.

16          Q.     Even though there's still the opportunity for  
17 an appeal, is the state engineer able to use these  
18 orders that we just looked at to administer the  
19 Project right?

20          A.     Yes.

21          Q.     Please explain.

22          A.     The series of documents that we just went  
23 through touched on all of the elements necessary for  
24 the state engineer to understand the United States'  
25 right. The administrative practices for the state

1 engineer allow for the state engineer to utilize these  
2 rulings to assist in determination of a administrative  
3 action in the event one comes from the claimant, here  
4 the United States.

5 Q. One final topic I'd like to discuss with you,  
6 Mr. Longworth, is what's become known as the  
7 groundwater conservation pilot program. Are you  
8 familiar with that pilot program?

9 A. Yes, I am.

10 Q. What is it?

11 A. The pilot program is part of a broader effort  
12 by the state of New Mexico and water users in the  
13 Lower Rio Grande to look at opportunities to provide  
14 management of the aquifer for purposes of  
15 sustainability in the future.

16 Q. What is sustainability as it refers to an  
17 aquifer?

18 A. In this instance, I'm using the word  
19 sustainability in a contrast to a mined aquifer. The  
20 concerns raised by -- excuse me -- the water users and  
21 the concern from the state engineer is that mining an  
22 aquifer provides a short-term -- relatively short-term  
23 ability to have a source of water, and the goal of  
24 this pilot program and the overall -- the project was  
25 to assess different ways to try to keep the aquifer

1 from going into a mine situation, which in my mind is  
2 that you would divert groundwater to a point where the  
3 quality and quantity of groundwater would be diverted  
4 to extinction.

5 **Q. Are you involved with the groundwater**  
6 **conservation pilot program?**

7 A. Yes, I am.

8 **Q. What's your role?**

9 A. I was assigned by the state engineer, I  
10 believe it was in the spring of 2002 -- excuse me --  
11 2020, to set up a program whereby the state would  
12 enter an agreements with willing participants for  
13 groundwater conservation purposes.

14 **Q. Look at New Mexico Exhibit --**

15 A. Excuse me. I'd like to amend that answer.

16 **Q. Please.**

17 A. There's also -- there's a couple other  
18 elements of this project. Another element that's  
19 being worked on is working with the local water users  
20 to think through how there may be a local component of  
21 being able to manage these kinds of projects. I think  
22 we identified the pilot program groundwater  
23 conservation, but other projects are being  
24 contemplated so that the local water users would have  
25 direction to be able to institute policies and/or

1 projects that they agreed upon.

2 Q. Now, let's turn to New Mexico Exhibit 884.

3 Do you recognize Exhibit 884?

4 A. Yes, I do.

5 Q. What is it?

6 A. This is a document that was prepared by  
7 myself and under my direction as -- that was put on  
8 our Website when we started to set up this program to  
9 provide people who are interested in the program some  
10 of the frequently-asked questions that had arose both  
11 internally and then questions that came up from  
12 members of the agricultural community are interested  
13 in the program.

14 Q. Why does it have a draft watermark?

15 A. At this point in time, when we had this  
16 document, I did not have the confidence that it was  
17 complete.

18 Q. But it nonetheless went on the Website in  
19 this form?

20 A. For the first cycle, yes. That's my best  
21 recollection.

22 MR. WECHSLER: I move New Mexico Exhibit  
23 884.

24 JUDGE MELLOY: Any objection?

25 MS. COLEMAN: Your Honor, I'm going to

1 object. We haven't established what point in time  
2 we're talking about with this document. It has a date  
3 on the exhibit list, but the witness hasn't testified  
4 about that date.

5 **JUDGE MELLOY:** Why don't you lay some  
6 more foundation, Mr. Wechsler.

7 **MR. WECHSLER:** Happy to.

8 **Q. (BY MR. WECHSLER)** Do you know when this --  
9 approximately when the document was drafted,  
10 Mr. Longworth?

11 A. This document was drafted in the time period  
12 between July, 2020, through some time in November --  
13 early November, 2020. There was a document that is,  
14 you know, revised at various times as additional  
15 information became available.

16 **Q. And is -- is that the time period that this**  
17 **was on the Website, as well?**

18 A. Once we had the Website up and going, this  
19 was on the Website. I want to say that that was in a  
20 time period after September of 2020 and through --  
21 through -- through the end of this cycle, so would  
22 have gone into 2021.

23 **MR. WECHSLER:** Again, Your Honor, I'll  
24 renew the offer of New Mexico Exhibit 884.

25 **JUDGE MELLOY:** Any objection?



1 MS. COLEMAN: No objection.

2 JUDGE MELLODY: 884 is admitted.

3 Q. (BY MR. WECHSLER) Turning to Page 1, Question  
4 No. 1, Mr. Longworth, here it indicates what's the  
5 purpose of this program, and I think you identified  
6 the purpose earlier. Is there anything you want to  
7 add to your answer about the purpose of the pilot  
8 program?

9 A. Not at this time.

10 Q. I do want to get you to look at Page 5,  
11 Question and Answer No. 21. We can see that Q and A.  
12 Was this program developed in response to this  
13 particular litigation?

14 A. No, it was not.

15 Q. I want to turn to another exhibit, New Mexico  
16 877, and get you to talk about the eligibility. Do  
17 you see New Mexico 877, Mr. Longworth?

18 A. Yes, I do.

19 Q. What is New Mexico 877?

20 A. This is an information sheet that was also on  
21 our Website for the initial first round. It provide  
22 -- provided basic information in a manageable format  
23 for anybody who's interested in participating in the  
24 program.

25 Q. Is the reason this has a draft watermark the

1     **same as what you described for New Mexico Exhibit 884?**

2           A.     Yes.   Since this was our first -- you know,  
3     we're setting up the program, we wanted to be careful  
4     about putting out documents that were final.   I'd  
5     contrast that with our current efforts where documents  
6     are finalized, and we have a much higher confidence  
7     that those documents are true and accurate.   There's  
8     nothing on here that strikes me as not being true and  
9     accurate, but we wanted to just be cautious and to  
10    alert anybody who's reading this that there may be  
11    changes forthcoming.

12          **Q.     And I'll represent that the reason we're**  
13    **using this version to the Court is because this is the**  
14    **version that was disclosed in discovery, but since**  
15    **that time, you've updated your Website; is that right?**

16          A.     Yes.   The Website has been updated a number  
17    of times for the second cycle that occurred after this  
18    grant opportunity.

19          **Q.     And was this document also up during the**  
20    **first cycle in the say same way you described for New**  
21    **Mexico Exhibit 884?**

22          A.     Was that the frequently asked questions  
23    exhibit?   I apologize.

24          **Q.     It was, yes.**

25          A.     Yes.   This was on the same Website.

1                   **MR. WECHSLER:** Your Honor, I move New  
2 Mexico 877.

3                   **JUDGE MELLOY:** Any objection? Hearing  
4 none, 877 is admitted.

5           **Q. (BY MR. WECHSLER) Mr. Longworth, using 877 as**  
6 **a guide, can you describe for us the eligibility who**  
7 **was eligible for the pilot program?**

8           **A.** In our establishment of this -- setting up  
9 this program, we needed to think through what would be  
10 effective, what would be administratively feasible.  
11 In our internal discussions, when we thought about  
12 what size land parcel would be reasonable to be able  
13 to identify that it had been compliant with the grant  
14 agreements, we concluded ten acres in size, and  
15 subsequently, we said ten continuous acres. Some  
16 parcels may have been represented in the counties  
17 smaller, but they are managed as one unit. So it was  
18 ten contiguous acres. We also were concerned about  
19 the use of groundwater on these parcels, so we entered  
20 into a procedure where we developed a database that  
21 provided evidence of use for all the parcels that  
22 could be considered under this program, and the  
23 evidence of use it to be at least four out of five  
24 past years, and in this instance, this was -- would  
25 have been through, I think, 2015 to 2019. Then

1 finally, there were other due diligence contingencies  
2 that came up as we went through this standup process.  
3 I think one of the notable ones was ensuring that the  
4 water right was in good standing. We did have, on  
5 occasion, where elements of the water right, for  
6 example, over diversion, had not been complied with  
7 and so those water rights were not considered in good  
8 standing and the Commission directed that those types  
9 of situation, we would not accept as an eligible  
10 application.

11 **Q. How much money was appropriated for this**  
12 **project?**

13 A. Initially, there was in a first session, in  
14 -- I can't remember if it was -- started in January,  
15 2020, there was \$17 million of special appropriation  
16 made to the Interstate Stream Commission for the  
17 purposes of implementing the Project. In June of that  
18 year, there was a special session. In that special  
19 session -- it was a budgetary matter special session,  
20 that special appropriation was reduced to \$7 million.  
21 That appropriation has remained unchanged since that  
22 point.

23 **Q. And are you in the second, and it the final**  
24 **cycle of the pilot project?**

25 A. That's my understanding. There's no

1 additional appropriations. In my conversations with  
2 the state engineer, at this point, we consider this  
3 pilot program on its way to completion. We will be  
4 entering into agreements starting this January that  
5 will run for 18 months, and that's the extent of the  
6 appropriation. So at this point in time, yes, that's  
7 -- it will end, and I'm not aware of any specific  
8 requests for additional money to either expand or  
9 otherwise continue to have this program in place.

10 **Q. Finally, if we turn back to New Mexico**  
11 **Exhibit 884, Page 23, and look at one more of those Q**  
12 **and As, No. 23 here, you can see there's a discussion**  
13 **of other actions. Are there other actions that are**  
14 **being evaluated by the state engineer toward the goal**  
15 **of a sustainable aquifer?**

16 **A.** This describes other activities that have  
17 been contemplated, but I would not describe them as  
18 have been fully matured. There's been casual  
19 conversations with some of the water users in the  
20 Lower Rio Grande specifically about aquifer recharge,  
21 but the two areas that we focused on were groundwater  
22 conservation, grant agreements, and working in trying  
23 to establish local governance to effectively take over  
24 the kind of activities that the Interstate Stream  
25 Commission is currently administering.

1                   **MR. WECHSLER:** Thank you, Mr. Longworth.  
2                   I have no further questions, Your Honor.

3                   **JUDGE MELLOY:** Who's going to go first,  
4                   Ms. Coleman or --

5                   **MS. KLAHN:** I'm going to go first, Your  
6                   Honor.

7                   **JUDGE MELLOY:** Okay. Go ahead.

8                   **MS. KLAHN:** Thank you.

9                                   CROSS-EXAMINATION

10                  BY MS. KLAHN:

11                  **Q.** Good afternoon, Mr. Longworth.

12                  **A.** Good afternoon.

13                  **Q.** Now, you testified with Mr. Wechsler about  
14                  your work on various stream adjudications around New  
15                  Mexico. Do you recall that?

16                  **A.** I believe so, yes.

17                  **Q.** And today you've testified extensively about  
18                  your understanding and experience with the Lower Rio  
19                  Grande adjudication; is that right?

20                  **A.** Yes, I believe that's correct.

21                  **Q.** Now, as far as the hydrographic survey that  
22                  the Office of the State Engineer put together, it's  
23                  fair to say there's no sub-file in the hydrographic  
24                  survey for the Texas apportionment; isn't that right?

25                  **A.** I believe that's correct. It would be

1 inappropriate for the State of New Mexico to  
2 adjudicate a water right for to be used in the State  
3 of Texas.

4 Q. And Texas was not a party to Stream System  
5 101, correct?

6 A. That's my understanding, correct.

7 Q. But the fact of the orders you testified  
8 about today with Mr. Wechsler, talked about 101, you  
9 talked about 104, you talked generally about the  
10 Court's determinations down in the Lower Rio Grande.  
11 The administrative effect of those orders is the state  
12 engineer now has authority over the water in the Lower  
13 Rio Grande to administer; is that right?

14 A. The effect of it, I think the state engineer  
15 always had the authority over administrating the  
16 waters in the state of New Mexico through his broad  
17 supervisory powers. I don't think that the  
18 adjudication changed that.

19 Q. Did those orders give him additional  
20 direction, however?

21 A. It gave him more precise tools to be able to  
22 administer water in that -- in the Lower Rio Grande,  
23 yes.

24 Q. So if the Supreme Court finds that New Mexico  
25 is liable for failing -- failing or interfering with

1 the delivery of Texas' apportionment, these orders  
2 provide a foundation for the state to take control  
3 over water that may be being used in New Mexico that  
4 shouldn't be used in New Mexico; isn't that right?

5 A. I believe that's correct. The orders that  
6 we've gone through, again, as I testified earlier,  
7 define elements both of water users that are diverting  
8 groundwater and then it also defines the Project right  
9 and the elements of the -- of the -- of that -- of the  
10 Project, and those -- the current status of those  
11 provide tools for the state engineer to administer if  
12 the Court were to find that -- that there was some --  
13 that we had to make extra deliveries or whatever the  
14 Court wants to define. It's hard to think through,  
15 you know, how that may be. I mean, it's a complicated  
16 issue.

17 Q. Sure. So in your experience with the Office  
18 of the State Engineer, have you heard of a case called  
19 Hinderlider versus Lower Cherry Creek?

20 A. I've heard of it, yes. When we worked on the  
21 Pecos settlement, we were in a situation there where  
22 we had a United States Supreme Court amended decree  
23 that determined that the State of New Mexico was  
24 obligated under the Compact -- Compact to divert --  
25 excuse me -- to deliver a certain water based on



1 indexing. Part of my job in the Pecos Bureau was  
2 being responsible to ensure that we were compliant  
3 with that. During the discussions of how we would  
4 continue compliance with that, the Hinderlider case  
5 did come up.

6 Q. So I'd like to turn to your reports that  
7 Mr. Wechsler referenced when you were talking with him  
8 about Stream System 101, and you -- you did -- as you  
9 testified with Mr. Wechsler, you did submit a number  
10 of reports to the Lower Rio Grande Adjudication Court  
11 in the context of that litigation, correct?

12 A. Yes. I submitted, you know -- I think you're  
13 asking overall as an adjudication report, but the  
14 Stream System 101 is where I specifically had reports.  
15 I believe I testified --

16 Q. And I did intend to limit my question to  
17 Stream System 101. I apologize if I wasn't precise  
18 enough.

19 And you were asked to develop opinions on the  
20 consumptive irrigation requirement and field delivery  
21 requirement using that Modified Blaney-Criddle process  
22 that you talked about a little bit with Mr. Wechsler  
23 in the context of your water inventory documents.  
24 It's the same process, correct, Modified  
25 Blaney-Criddle?

1           A.    I wouldn't -- I'm not -- I think I know what  
2   you're asking, but I would be careful about talking  
3   about adjudication work with water use inventory work.  
4   Those have separate objectives.

5           Q.    And I wasn't trying to connect it to -- I was  
6   only trying to connect it for purposes of just making  
7   the connection that you talked about Modified  
8   Blaney-Criddle as an engineering and analytical method  
9   at one point today, and I guess your testimony is you  
10  used that method in your Stream System 101 reports,  
11  but you used it differently than you would have used  
12  in the inventory documents; is that right?

13          A.    That's correct.

14          Q.    Okay.

15          A.    Actually, if I -- if I could add.

16          Q.    Sure.

17          A.    The general process in the inventory is to  
18  use Original Blaney-Criddle, not modified.

19          Q.    Okay. I apologize. I misunderstood that.  
20  Okay. So let's pull up New Mexico 346, please. Okay.  
21  And Mr. -- hold on. I've lost the screen here. I  
22  apologize. So, Mr. Longworth, do you recognize this  
23  document?

24          A.    Yes. I do recognize it.

25          Q.    Okay. And would you identify it, please?

1           A.     This is a report titled, "Lower Rio Grande  
2 Basin" -- "Lower Rio Grande Basin Consumptive  
3 Irrigation" -- excuse me. "Lower Rio Grande Basin  
4 wide Consumptive Irrigation Requirement Analysis."

5           Q.     Okay.

6                   MS. KLAHN: Could we turn to Page 10 in  
7 this, please?

8           Q.     (BY MS. KLAHN) And this is the summary of  
9 your opinions, I believe, and if we could just  
10 highlight the last sentence there. So your opinions  
11 were that for basin wide CIR, multi-cropping and  
12 fallow land -- with multi-cropping and fallow land  
13 adjustments, CIR it would be 2.5 acre-feet per acre,  
14 and field delivery requirement would be 4.0 acre-feet  
15 per acre; is that right?

16          A.     That's correct.

17          Q.     Okay. And then --

18                   MS. KLAHN: You can take that down.

19                   And I believe -- I believe, Your Honor,  
20 that we didn't go through the cross-examination  
21 exhibits, and --

22                   JUDGE MELLOY: I thought we did, but  
23 just a second. Well, the only cross-examination  
24 exhibit that was an A exhibit was New Mexico 2386. I  
25 think that is admitted.

1 MS. KLAHN: Okay.

2 JUDGE MELLOY: This is not an admitted  
3 exhibit.

4 MS. KLAHN: All right. Well, let me lay  
5 a little bit more foundation. Could you put 346 back  
6 up again, please? Could we go to -- let's go to Page  
7 3.

8 A. I'm at that point.

9 Q. (BY MS. KLAHN) Okay. And Page 3 is an  
10 introduction that describes the -- we don't need to  
11 break anything out, I don't think, but this describes  
12 the general processes you used and the data and  
13 procedures that you followed; is that correct?

14 A. I believe that's a fair characterization.

15 Q. And we can go over to Page 7, and let's pop  
16 out the consumptive use calculation, Part 5 there at  
17 the top, two paragraphs. This is the calculation that  
18 you used in this report in order to determine  
19 consumptive irrigation requirement; is that correct?

20 A. I mean, I get -- yeah. I might phrase it a  
21 little differently, but, you know, semantics, yeah.

22 Q. What semantics are you hearing?

23 A. This just outlines the -- the way I would  
24 describe it is this paragraph briefly summarizes the  
25 consumptive use calculation based on the Modified

1 Blaney-Criddle Method that was published by the U.S.  
2 Department of Agriculture Soil Conservation Service in  
3 1970. It's generally referred to as TR21 or Technical  
4 Report 21, but it goes through a description of the  
5 basic elements of an equation and how that equation  
6 works. That's just -- the engineer in me would be  
7 more specific.

8 **Q. That's fine. But it's fair to say, also,**  
9 **that this is the method that you used in this report,**  
10 **correct?**

11 **A. That's correct. Generally, the way I would**  
12 **describe it, is we use the TR21 or the SCS TR21**  
13 **method.**

14 **Q. Okay. Now, the last paragraph down**  
15 **there, "Pecan crop coefficients were derived and**  
16 **described in Longworth's 2011." Do you see that?**

17 **MS. KLAHN:** Yeah, if you could highlight  
18 that.

19 **A. Yes, I see that.**

20 **Q. (BY MS. KLAHN) Is that another report that**  
21 **you submitted in Stream System 101?**

22 **A. Yes, it is.**

23 **MS. KLAHN:** Your Honor, I would offer  
24 New Mexico 346 at this time.

25 **JUDGE MELLOY:** Any objection?

1                   **MR. WECHSLER:** Your Honor, our  
2 objection, and I'll just short circuit it for all of  
3 these expert reports, we have no objection to these  
4 exhibits, such as the one we're looking at, coming in  
5 for non-hearsay purposes, such as to show the position  
6 of Mr. Longworth and the position of the parties, but  
7 we've heard from Mr. Longworth already that his  
8 opinion wasn't accepted in Stream System Issue 101, so  
9 our concern is that this comes into the record without  
10 any limitations and -- and we don't think that that  
11 should happen.

12                   **JUDGE MELLOY:** Well, I think that's  
13 probably fair.

14                   **MS. KLAHN:** May I be heard, Your Honor?

15                   **JUDGE MELLOY:** Go ahead.

16                   **MS. KLAHN:** The -- the -- it wasn't that  
17 his -- his work was rejected by the Court. We don't  
18 know what the Court would have done. The Court  
19 settled -- the Court accepted a settlement, and as I  
20 understand it, Mr. -- Mr. Longworth participated in  
21 the settlement. We'll get to that. But for purposes  
22 of what was submitted by the State and the difference  
23 between what the State submitted in this Stream System  
24 101 and what was accepted by the Court in the  
25 settlement, from a physical supply standpoint is

1 substantial. So I don't understand the limitation as  
2 far as truth of the contents, because this truly is  
3 what he submitted, and I think he stands by it from an  
4 engineering perspective, at least that's what he told  
5 me in his deposition.

6 **JUDGE MELLOY:** I'm not sure that's  
7 necessarily different than what Mr. Wechsler just  
8 said. It's being admitted to show what the State's  
9 position was and to show what this witness' expert  
10 opinion was, and for that purpose, it will be  
11 admitted. It was never, as I understand it, neither  
12 accepted nor rejected by the Court because there was a  
13 settlement so we don't know what the Court -- as you  
14 say, we don't know what the Court would have done with  
15 it so it's not Court accepted -- well, let me ask  
16 this: Was it actually admitted into evidence?

17 **MS. KLAHN:** That's my understanding.

18 **MR. WECHSLER:** I don't know the answer  
19 to that actually. I'm not sure that Judge Valentine's  
20 position on hearsay because some judges will allow  
21 expert reports. Others consider them hearsay, and I  
22 just don't recall.

23 **MS. KLAHN:** Well, I believe --

24 **JUDGE MELLOY:** And for the limited  
25 purpose indicated, which is to show the State's

1 position and to show Mr. Longworth's opinion as a  
2 member of the Office of the State Engineer, this will  
3 be admitted.

4 MS. KLAHN: Thank you.

5 Q. (BY MS. KLAHN) Could we go to Texas 221?  
6 Could you identify this, please, Mr. Longworth?

7 A. Yes, I can. If you can give me a minute.

8 Q. Sure.

9 A. This is one of the reports that I submitted  
10 during the proceedings for 101. It's titled, "Lower  
11 Rio Grande Pecan Consumptive Irrigation Requirement  
12 Analysis."

13 Q. And then New Mexico 346, we talked about a  
14 sentence that referred to another report about pecan  
15 consumptive use that was anchored by the citation  
16 Longworth 2011. Do you recall that?

17 A. I do.

18 Q. Is this the report that was being referred to  
19 in New Mexico 346?

20 A. Yes.

21 Q. Okay. Could we go to Page 8 to the summary  
22 paragraph, please? So, Mr. Longworth, we can  
23 certainly go through this entire report. I'm not  
24 meaning to shortcut that if that would be helpful to  
25 you, but the summary here is your opinion for mature



1     pecan orchards was a CIR 4 acre-feet per acre, and the  
2     bases for that are listed there, 1, 2, and 3, and then  
3     a 72 percent on-farm efficiency is within the range of  
4     the values identified in this report. Was that your  
5     opinion expressed in this report?

6         A.     I believe that's correct, yes.

7         Q.     And the other -- the New Mexico 346 referred  
8     to CIR of 2.6 and a field delivery requirement of 4  
9     acre-feet per acre. Here, we have a CIR of 4  
10    acre-feet per acre, but then it says a 72 percent  
11    on-farm efficiency. Can you connect the dots for us  
12    about what on-farm efficiency is in relation to field  
13    delivery requirement?

14        A.     So I believe what you're referring to is  
15    field delivery requirement, the farm delivery  
16    requirement. The farm -- sorry. Semantics, I guess.  
17    What that value is, is there is an estimation of the  
18    efficiency by which water would be released from a  
19    farm head gate to be able to serve as the consumptive  
20    irrigation requirements for a given crop, and the  
21    purposes of these reports, what I think is important,  
22    is we were not looking at specific fields. We were  
23    looking at a basin wide analysis.

24        Q.     Okay. So a farm delivery requirement of 4.0  
25    and a consumptive irrigation requirement of 2.6, are

1     **those mathematically related in some way, the CIR and**  
2     **the FDR?**

3         A.     Are you referring -- just if we could -- is  
4     that --

5         **Q.     Sure. We're talking about New Mexico 346.**

6         A.     That's 346. Okay.

7         **Q.     Page 10.**

8         A.     The question, I believe, was effectively how  
9     did we get to 4 for an FDR?

10        **Q.     Yeah. What's the mathematical relationship?**

11        A.     Yeah. So the way we calculate this is after  
12     there's a determination in the consumptive irrigation  
13     requirement, we divide that by the on-farm efficiency,  
14     and that would give us the result that's provided in  
15     Exhibit 346.

16        **Q.     Do you recall what on-farm efficiency you**  
17     **were using in New Mexico 346?**

18        A.     The report states we were using an efficiency  
19     of 64 percent, and we obtained that value from a  
20     report that was entered into 101 from Jean Franzoy.

21        **Q.     Okay. And so for the -- for Texas 221, the**  
22     **on-farm efficiency that you assumed for pecans was**  
23     **higher; is that right? And, again, I'm on Page 8 of**  
24     **Texas 221, but you're free to look at any place in the**  
25     **document.**

1           A.     72 is higher than 64, of course, and in this  
2 report, I state -- let me -- I don't need to read from  
3 the report, but it states that 72 percent is what we  
4 used to determine the FDR in this report.

5           Q.     Did Mr. Franzoy endorse that number, too; do  
6 you recall?

7           A.     Not that I'm aware of.

8           Q.     Okay. Now, you also submitted a rebuttal  
9 report in April of 2011 in the Stream System 101  
10 matter; isn't that right?

11          A.     I'm sorry. I was looking for the exhibit  
12 number. Rebuttal report, yes, I did submit an opinion  
13 in the rebuttal report.

14          Q.     New Mexico 582, I think, is what we're  
15 looking for. If we could pull that up. And let's  
16 see. So as I understand it, please take a minute to  
17 look through it if you need to refresh your memory,  
18 but as I understand it, this rebuttal report was  
19 responding to criticism from some of the other experts  
20 in the case; is that right?

21          A.     I appreciate letting me take a moment to look  
22 at that. The rebuttal report, in my opinion, served  
23 two purposes. One was, I think as you described, some  
24 of the concerns that I had with the information that  
25 was provided by the adverse parties as evidenced

1 during the discovery, and, also, there was a critical  
2 piece of information there related to the cropping  
3 pattern that we used to determine the consumptive  
4 irrigation requirement in my case in chief report.  
5 And so we also took that into account and recalculated  
6 the consumptive irrigation requirement and the farm  
7 delivery requirement. I believe that captures what  
8 that report refers to.

9 Q. Okay. And could I have you -- could I have  
10 us turn to Page 20, please? And maybe pull out No. 11  
11 there, farm delivery requirement. Now, Mr. Longworth,  
12 in the New Mexico 346, your January report we looked  
13 at, you also had a CIR of 2.6, but you had a slightly  
14 higher farm delivery requirement. Do you recall that?

15 A. I believe that's correct, yes.

16 Q. This was your final opinion that you went to  
17 trial on, 2.6 CIR and 3.8 FDR; is that right?

18 A. Yes. That's correct.

19 Q. And then I just had a question about -- if  
20 you could turn -- if we could turn to Page 19, please.  
21 So as I understood your opinions about pecans that  
22 were reflected in Texas 221, you had a CIR for pecans  
23 of 48 inches, and I'm looking at Table 7 on Page 19,  
24 and I see you have pecans at 36.35 inches. Can you --  
25 can you explain that difference?

1           A.     My recollection is the difference based on  
2     the methodology. I'd have to -- can we go back to the  
3     pecan -- I'll say on this report, we used a climatic  
4     average data set and then applied SCS. I would have  
5     to go back and look to be able to -- can we go back  
6     and look at the --

7           Q.     Absolutely. Let's look at Texas 221. I  
8     think maybe -- well, my impression from looking at  
9     this, Mr. Longworth, was you came up with a higher  
10    number in Texas 221 because you had relied on some of  
11    the scientific journal articles you testified about  
12    with Mr. Wechsler, and I'm looking at Page 8  
13    specifically.

14          A.     I believe that's correct. We certainly did  
15    rely on information that we identified that described  
16    the consumptive use and gave a range of on-farm  
17    efficiencies in 221; is that right? 221.

18          Q.     Okay. Thank you. Okay. Now, in the course  
19    of the litigation in Stream System 101, there was also  
20    some reports put in by Dr. Peggy Barroll. Do you  
21    recall that?

22          A.     Yes. I recall she submitted reports.

23          Q.     And Dr. Barroll is also going to be a witness  
24    in this case. Are you aware of that?

25          A.     That's my understanding, yes.

1           Q.    So let's talk about New Mexico 475, which is  
2   the April, 2011, report Dr. Barroll submitted in  
3   Stream System 101.

4                   MS. KLAHN:  Your Honor --

5           A.    475?

6           Q.    (BY MS. KLAHN)  Yeah, 475.

7                   MS. KLAHN:  Your Honor, while he's  
8   pulling that up, I'd like to move to admit Texas 221  
9   and New Mexico 582 with the limitations we discussed  
10  previously.

11                  JUDGE MELLOY:  Any objection?

12                  MR. WECHSLER:  No objection.

13                  JUDGE MELLOY:  221 -- Texas 221 and New  
14  Mexico, is it 582?

15                  MS. KLAHN:  Yes, sir.

16                  JUDGE MELLOY:  Are admitted.

17           Q.    (BY MS. KLAHN)  So did you --

18                  JUDGE MELLOY:  One second, Ms. Klahn.  I  
19  can follow along with the testimony because I've got  
20  the exhibit book.  At least on my screen what's coming  
21  up is very fuzzy.  I don't know if anyone else can --

22                  MS. KLAHN:  I'm experiencing the same  
23  thing.

24                  JUDGE MELLOY:  Go ahead.

25                  MS. KLAHN:  Does it kind of get better,

1     though, as it sits up there a little while? Mine sort  
2     of --

3                   **JUDGE MELLOY:** I haven't been watching  
4     the screen.

5                   **MS. KLAHN:** Okay.

6           **Q.**     **(BY MS. KLAHN)** New Mexico 475, could we pull  
7     out the top two paragraphs there? I don't think we  
8     need to belabor this, but Dr. Barroll did put in a  
9     January, 2011, report approaching the consumptive  
10    irrigation requirements analysis a little bit  
11    differently but coming up with a similar answer. This  
12    April report, I believe, simply repeats that analysis  
13    with the 2008 crop mix that you testified about a  
14    minute ago, and so I'm just pulling out the  
15    introduction here so you can take a look at that and  
16    see if you agree that that was kind of the difference  
17    between the two reports. We can certainly pull the  
18    other report up, but I just don't know that we need  
19    to.

20           **A.**     I understood your question to suggest that  
21    Dr. Barroll did a Modified Blaney-Criddle analysis. I  
22    don't -- that's not what this report reflects.

23           **Q.**     **No. Dr. Barroll --**

24           **A.**     I may have misunderstood the question.  
25    Excuse me.

1           **Q.     That's okay. Let's break it down.**

2                   **MS. KLAHN:** So could you pop that back  
3 in, please?

4           **Q.     (BY MS. KLAHN) So Dr. Barroll's report here**  
5 **used well-metering data from the Lower Rio Grande to**  
6 **provide a different approach to calculating**  
7 **consumptive irrigation requirements and farm delivery**  
8 **requirements; is that your understanding?**

9           **A.     If you could bear with me for a second.**

10          **Q.     I think the second full paragraph might help.**

11          **A.     Where I'm getting stuck is I don't -- I**  
12 **haven't looked at this in a long time. I gave it a**  
13 **brief review. I'm not sure that Dr. Barroll is**  
14 **directly looking at the consumptive irrigation**  
15 **requirement, rather, I think she was doing an analysis**  
16 **on the FDR and then relating -- and then essentially**  
17 **back calculating into a consumptive irrigation**  
18 **requirement. So from that aspect, yes, she was, but I**  
19 **think the -- I mean, obviously it's going to be best**  
20 **to ask her, but I think she was looking at metering**  
21 **data and what the metering data was showing. That's**  
22 **my understanding.**

23          **Q.     Let's go to Page 2 to the last paragraph**  
24 **there, farm delivery per acre. Could we go to the**  
25 **last -- sorry, yeah. Actually, could you include the**



1 title and the -- there we go, sorry, that section.

2 Okay. So this appears to be a farm delivery  
3 analysis calculated by acres and divided by the  
4 metering data; is that right? I may have said that  
5 wrong.

6 A. I'm just trying to understand what  
7 Dr. Barroll meant here.

8 Q. Well, you know, let's go on.

9 A. I'm not --

10 Q. Let's move on. It's okay. So we've talked a  
11 couple times about this crop mix issue. I think you  
12 talked about it with Mr. Wechsler that originally, you  
13 had used Bureau of Reclamation reports --

14 MS. KLAHN: And you can take down New  
15 Mexico 475.

16 Q. (BY MS. KLAHN) You'd started out with your  
17 Modified Blaney-Criddle analysis by using Bureau of  
18 Reclamation records for the crop mix piece of the  
19 analysis, but then you moved to using a 2008 crop mix  
20 field study that you testified about; is that correct?

21 A. Generally, yeah, I think that captures the  
22 essence, yes.

23 MS. KLAHN: Could we take a look at New  
24 Mexico 476? Maybe you could pull out the top part of  
25 that.

1           Q.    (BY MS. KLAHN) Is this the cropping pattern  
2 report that would reflect your efforts related to  
3 that?

4           A.    I believe so, yes. This has the exhibit  
5 number from the 101 case. I would be confident that  
6 this is the report that was submitted.

7                   MS. KLAHN: Could we go to Page 4, and  
8 in the second full paragraph there, maybe pull that  
9 out?

10          Q.    (BY MS. KLAHN) Now, this is pretty similar to  
11 your testimony that you gave earlier -- take a minute  
12 and review it, but I think it's pretty similar to the  
13 testimony you gave earlier about the process of the  
14 field work that you did?

15          A.    I agree.

16          Q.    Okay. And you testified that you  
17 participated in a 2008 field effort, correct?

18          A.    That's correct. I participated, I would say,  
19 two different levels. One, it was performed under my  
20 direction, and then two, I was a team member that went  
21 out and looked at, you know, how to -- we broke this  
22 up into teams. I think we had eight or nine teams.  
23 We each had a section that we were responsible for,  
24 and I was involved in one of the teams.

25          Q.    Okay.

1           A.     So there's kind of two aspects of that.

2           Q.     Okay.  And so this 2008 crop survey would  
3 reflect the historical -- I'm sorry -- would reflect  
4 the crop mix as of 2008, correct?

5           A.     Yes, it would.

6           Q.     Okay.  But in your experience with the Office  
7 of the State Engineer, has the crop mix changed over  
8 time in the Lower Rio Grande?

9           A.     I believe it has, yes.

10          Q.     Okay.  Now, let's talk a little bit about the  
11 climate data that you used in your analyses in this  
12 Stream System 101 case.  I think at your deposition,  
13 we talked about your climate data.  The period of  
14 record you used was from January of 1938 to, I think,  
15 December of 2009.  Does that sound right?

16          A.     That sounds right.  You know, I've got to be  
17 honest, I can't remember if we stopped in '08 or we  
18 stopped in '09, but effectively, yes.

19          Q.     Okay.  And the Rio Grande Compact was signed  
20 in 1938, correct?

21          A.     That's -- yeah, that's my understanding.

22          Q.     And although the Compact was signed in 1938  
23 and that was the start of your weather period --  
24 weather data period of record, you testified at your  
25 deposition that that analysis in Stream System 101 did

1     **not consider Compact at all, correct?**

2           A.     That was my testimony.  If I recall, you  
3     pointed out in my report that I did mention that there  
4     was -- that we correlated the crop -- the climate data  
5     with the 1938 signing of the Compact.  Good  
6     observation.

7           Q.     I'd like to move now and talk a little bit  
8     about the settlement, which you talked about with  
9     Mr. Wechsler.  The settlement --

10           MS. KLAHN:  Let's put up Joint Exhibit  
11     474 because we're going to be talking about that.

12           Q.     (BY MS. KLAHN)  So the settlement, did the  
13     settlement take the Compact into consideration at all  
14     to the best of your understanding?

15           MR. WECHSLER:  I'm going to object to  
16     the extent that it calls for settlement negotiations.  
17     I mean, certainly she can ask about the document  
18     itself and what the Court did.  I'm not sure that Rule  
19     408 has been waived.

20           MS. KLAHN:  I'm not looking for anything  
21     that's confidential.

22           MR. WECHSLER:  Well, what they  
23     considered would be confidential.

24           MS. KLAHN:  I think you're on mute, Your  
25     Honor.

1                   JUDGE MELLOY: It's limited to what's in  
2 the document.

3           Q.     (BY MS. KLAHN) Based on your familiarity with  
4 the final judgment here in the settlement, which is  
5 attached, would you agree there's no consideration of  
6 the Compact, Mr. Longworth?

7           A.     Excuse me. I believe that to be correct, but  
8 I'll preface that with I understand our deposition,  
9 you have a keen eye for picking up on the Compact  
10 issues so maybe you've identified one, but I don't  
11 recall that.

12          Q.     I haven't picked up on anything like that. I  
13 was just confirming. Now, the settlement, this  
14 settlement applies basin wide across the Lower Rio  
15 Grande, correct?

16          A.     Yes. That's my understanding, for irrigated  
17 ag.

18          Q.     For irrigated agriculture. Is it -- is it  
19 your understanding that for the most part, the  
20 irrigated agricultural areas in the Lower Rio Grande  
21 are within the boundaries of EBID?

22          A.     I believe that's a correct statement, yes.

23          Q.     So let's go to Finding of Fact 22, please.  
24 Oops, sorry.

25          A.     What page?

1           **Q.     Page 5.**

2           **A.     And that was 22?**

3           **Q.     Uh-huh. I think you talked about this with**  
4 **Mr. Wechsler at length.**

5           **A.     Yeah, I see that.**

6           **Q.     Okay. So this 3.024 acre-feet per acre, is**  
7 **that -- do you know, is that a full allotment for**  
8 **EBID?**

9           **A.     My understanding is that the Bureau of**  
10 **Reclamation, at a point in time, came up with what an**  
11 **appropriate amount to deliver to the -- to the farm**  
12 **head gate, they did a brief analysis, and so that is**  
13 **the, quote unquote, allotment, and, yeah, I believe**  
14 **that's what the Elephant Butte Irrigation District**  
15 **uses as a standard for full allotment.**

16          **Q.     Okay.**

17          **A.     The only modification I'd say, you know, in**  
18 **times of plenty, which we are certainly not there,**  
19 **there may be changes to that, and I don't know how**  
20 **they would characterize that in terms of if that's a**  
21 **full allotment or not. But in the normal course of my**  
22 **experience, that's the -- that would be considered a**  
23 **full allotment.**

24          **Q.     But -- and Stream System 101 actually takes**  
25 **that -- takes that potential climate condition into**

1 account, doesn't it? It allows for the diversion of  
2 more than 3.024 acre-feet per acre if it's available  
3 from surface water sources, right?

4 A. I think that's generally the language.  
5 That's why I just put that. I wanted to include that  
6 in my answer, so yeah.

7 Q. Yeah. Then if we could go to -- sorry. If  
8 we could go next to Paragraph -- sorry. I have too  
9 many papers here. Let's go next to Paragraph 21.

10 A. Again, that's on Page 5?

11 Q. Correct. Page 5. Just the prior paragraph.

12 A. Okay. Got it.

13 Q. So we have a limit for surface water acres  
14 only of 3.024 and a limit of 4.0 for surface water and  
15 groundwater, correct? And with groundwater only?  
16 Sorry.

17 A. So the -- not to be redundant here, but I  
18 think you've described it basically okay. The FDR  
19 described in 22 is 3.024. That's the surface water  
20 allotment, as we've discussed, and then in 21, it  
21 describes a 4.0 acre-foot per acre per year as a  
22 reasonable consumptive irrigation requirement  
23 representative historical --

24 JUDGE MELLOY: Slow down. Slow down.

25 THE WITNESS: Sorry. Excuse me. Should

1 I restart?

2 JUDGE MELLOY: Well, why don't you  
3 re-ask the question?

4 MS. KLAHN: Okay. I will.

5 Q. (BY MS. KLAHN) So I started by asking about  
6 the FDR for surface water, because I don't see a CIR  
7 specifically for surface water. Is that correct or  
8 does the CIR in Paragraph 21 of 4.0 acre-feet per acre  
9 apply to all ground within the Lower Rio Grande?

10 A. It's my understanding that 4.0 would apply to  
11 all ground. If it was surface water only, to the  
12 extent that they would be able to bring in additional  
13 water from the 3.024, they could have that  
14 consumptive, but obviously, you know, it's the basin  
15 -- the in situ CIR is 4.

16 Q. Okay.

17 A. It's obviously greater than 3.

18 Q. Okay. So -- and -- and the -- you've talked  
19 about administration under Stream System 101.  
20 Administration would be limited to the farm delivery  
21 requirement; there's no administration of the CIR,  
22 right?

23 A. In terms of in situ use, that's correct. CIR  
24 would come into play in the event -- you know, because  
25 there's -- there's the 48 inches and then there's



1 another reference to, I believe, 2.6 acre-foot per  
2 acre per year, I think we discussed that would be a  
3 transfer out. So there's two operative CIRs here.  
4 But we don't -- there's not what I would refer to as  
5 depletion administration approach in LRG. It's a farm  
6 delivery requirement, that's correct.

7 Q. Okay. And that farm delivery requirement  
8 would be administered by looking at the amount of  
9 allotment, which EBID farmers get if they have surface  
10 water, assuming that -- and assuming that they use it  
11 all, and then looking at the metering records for  
12 groundwater, correct?

13 A. That's correct. I believe there's a  
14 provision that encourages or -- or requires that the  
15 surface water be taken first before diverting  
16 groundwater, but yes, there's -- I'm sorry. I lost  
17 the question, but I think the answer is yes.

18 Q. Yeah. I think the -- I believe you're  
19 correct. I think it is yes. And all I was asking is  
20 if that -- those are the places where administration  
21 would -- administrators would look; they would look  
22 first at surface water and assume EBID farmers are  
23 taking all their surface water, correct?

24 A. That's correct.

25 Q. And then they would look at metering data and

1 look to see if the metering data exceeded 4.5 or  
2 whatever interval between 4.5 and 5.5 acre-feet per  
3 acre if they had groundwater, correct?

4 A. Yeah. That's basics, how you would do it,  
5 yeah. That's how you determine an over diversion.

6 Q. Okay. And so the -- so you could -- I mean,  
7 if you're an administrator, I guess, you could take  
8 that F -- farm delivery requirement, because you know  
9 what it is for all the acres, and multiply it by acres  
10 and come up with a total farm delivery requirement for  
11 the basin, couldn't you?

12 A. I mean, that could be done.

13 Q. Now, this 4.0 acre-foot per acre CIR that  
14 we're seeing here in Paragraph 21, that applies to all  
15 the acres in the basin regardless of the crop that's  
16 being grown, correct?

17 A. Yeah. For the in situ purpose, that's  
18 correct.

19 Q. And based on your understanding as an  
20 engineer and your role at OSE, would you agree that  
21 not all the crops grown in the Lower Rio Grande  
22 require 4 acre-feet per acre per year CIR?

23 A. I would suggest that in any given year,  
24 there's going to be parcels that do not consume 4.0  
25 acre-foot -- acre-foot per acre per year. You know,

1 in our internal discussions, we look at longer-term  
2 trends of what the FDRs are and as a measured matter,  
3 and overall, we see trends that indicate -- I mean,  
4 there's highs and lows, but indicate that generally  
5 speaking, there's a 4.0 FDR and this just allows for  
6 those instances if an agricultural producer was to  
7 plant and manage his field, say, where alfalfa, that  
8 if it depleted -- and it's not unreasonable in this  
9 particular area that that could deplete 4 acre-feet,  
10 that that would be consistent with the order.

11 Q. Well, and I think maybe I -- maybe my  
12 question wasn't clear, but I simply was asking if you  
13 would agree that all the crops grown in the Lower Rio  
14 Grande do not require 4 acre-feet per acre per year  
15 for consumptive irrigation requirements, and when you  
16 answered me, you started talking about the farm  
17 delivery requirement. So I'm just talking about  
18 purely based on your understanding about what crops  
19 require, if you would agree that not all crops require  
20 4 acre-feet per year?

21 A. I would agree with that. Just the 4.0 would  
22 be the upper end of --

23 Q. Okay.

24 A. -- what would likely be consumed.

25 Q. And then, in fact, that's the number you came

1 up with for your pecan analysis in Texas 221 that we  
2 talked about for the Stream System 101 adjudication,  
3 correct?

4 A. In that, and we spoke a little bit about  
5 looking at the research that was associated with that,  
6 and that -- we took, you know, a hard look at that  
7 and, you know, it was just good work, and that's what  
8 they found.

9 Q. Would you think that alfalfa would be another  
10 crop that would require around 4 acre-feet per acre  
11 per year?

12 A. A well-managed and not short of water to be  
13 disease free, those kind of caveats, yeah.

14 Q. Okay. Now --

15 JUDGE MELLOY: Would this be a good  
16 breaking point, Ms. Klahn?

17 MS. KLAHN: You bet.

18 JUDGE MELLOY: All right. Why don't we  
19 take 20 minutes. We'll take our afternoon break.

20 MS. KLAHN: Thank you.

21 (Recess.)

22 JUDGE MELLOY: All right. Looks like we  
23 have everyone back. Let's get started again.

24 Ms. Klahn, you may proceed.

25 MS. KLAHN: Thank you.

1           Q.     (BY MS. KLAHN) Welcome back, Mr. Longworth.  
2     Just a few more areas of questions. Let's put up New  
3     Mexico Exhibit 474 again, please, and if we could go  
4     to Page 15. I see you're ahead of me. Thank you.

5                     So we're on Page 15, Section Roman 6,  
6     Paragraph G.

7           A.     New Mexico 474?

8           Q.     Correct.

9                     MR. WECHSLER: I think maybe it's Joint  
10    Exhibit 474.

11                    MS. KLAHN: Oh, I'm sorry. Thank you  
12    for that correction.

13          A.     I have it.

14          Q.     (BY MS. KLAHN) Okay. Mr. Longworth, do you  
15    recall at your deposition, we talked a little bit  
16    about owner management plans?

17          A.     I do remember we spoke about that, yes.

18          Q.     And isn't it true that one of the items in  
19    the settlement in the Stream System 101 provides for  
20    this ability to administratively transfer groundwater  
21    rights to other lands so long as the combined amount  
22    of groundwater pumping isn't exceeded?

23          A.     I believe that's correct, yes.

24          Q.     Okay. And is Section Roman 6, Paragraph G on  
25    Page 15 of Paragraph 4 is that the portion of the

1 settlement that you refer to that described -- that  
2 provides for the owner management plan concept?

3 A. Could I take a moment just to go back and  
4 look at that because I -- I'm not sure that's the  
5 owner management provision. I'm not finding another  
6 section that would refer to owner management, but I --

7 Q. I'll just represent to you that that was what  
8 you told me in your deposition --

9 A. Oh, okay. Yeah.

10 Q. -- and we can --

11 A. That's correct. I apologize. I just wanted  
12 to be sure.

13 Q. Okay. And at the time of your deposition,  
14 you described for me how the owner management plans  
15 work. Do you recall that?

16 A. I believe I described it in a general sense,  
17 yes.

18 Q. Could you explain that in a general sense to  
19 the Court, please?

20 A. The owner management plans provide for  
21 opportunities for irrigators in the Lower Rio Grande  
22 to, for lack of a better word, petition the state  
23 engineer where they would demonstrate their farm  
24 management practices, which would include farms that  
25 they own and farms that they manage under lease and

1 being able to continue existing practices where they  
2 manage water supplies across both leased farms and  
3 their own farms so that they could best manage their  
4 water supply. I believe that's pretty consistent with  
5 what I testified to.

6 Q. You used the word petition the state  
7 engineer, and I'm certainly happy to refer you to your  
8 deposition transcript, but it sounds when you  
9 say "petition the state engineer," that sounds to me  
10 like a public process, but there's no public notice  
11 related to obtaining an owner management plan,  
12 correct?

13 A. Yeah. I -- I didn't mean to -- mean to say  
14 that there's going to be a public process. This is  
15 something that you apply for with the state engineer.  
16 The state engineer reviews that application and then  
17 makes a determination.

18 Q. And the actually --

19 A. But it's not a public notice issued.

20 Q. And then the state engineer actually -- when  
21 you say "the state engineer," do you mean the Lower  
22 Rio Grande Office of the State Engineer, Mr. Ryan  
23 Serrano?

24 A. Yeah. Oftentimes, we'll refer to the  
25 districts or other decisions. I mean, they're all

1 done under the state engineer's signature, but it is  
2 done locally by Mr. Serrano. That's correct.

3 Q. Okay. And I think you told me at the  
4 deposition that once these applications are made, the  
5 standards applied by the local office there to  
6 authorize an owner management plan is whether there is  
7 an appropriate water right on the acres sought to be  
8 included in the owner management plan; do you recall  
9 that?

10 A. I think so, yeah. I haven't looked at that  
11 -- I haven't studied that provision of my deposition,  
12 but that sounds -- I think that sounds right.

13 Q. And by appropriate water right, you just mean  
14 there actually is a water right on the acres sought to  
15 be included in the owner management plan that has the  
16 qualities in terms of the flow rate or location and so  
17 on that are reflected in the application?

18 A. Yeah. I'm not sure I used this term in my  
19 deposition, but I would describe it and ensure there's  
20 a water right in good standing that's being  
21 considered.

22 Q. That's fair. And then you also said, I  
23 think, that the owner has to come in and sign some  
24 documentation that they actually own the water rights  
25 they're seeking to combine with someone else's water



1     **rights, correct?**

2           A.     I believe that's what I testified to.  
3     Because it's -- I mean, if it's all the same lands  
4     under the persons applying, I suppose there doesn't  
5     need to be an affidavit, but because you're likely  
6     talking about lands that are being leased, I think as  
7     I suggested to my deposition, that there needed to be  
8     an affidavit filed by the actual owner understanding  
9     that there would be, you know, these kinds of  
10    conditions and, you know, that they would be -- that  
11    they would be responsible for any over diversions or  
12    otherwise. I think that's what I testified to, and I  
13    still believe that.

14          **Q.     Sure. And I think you also testified that**  
15    **there's no hydrological evaluation or engineering**  
16    **evaluation conducted as part of an owner management**  
17    **plan application, correct?**

18          A.     That's my understanding, yes.

19          **Q.     And the Lower Rio Grande is the only region**  
20    **of the State of New Mexico that has owner management**  
21    **plans as an option for their water users, correct?**

22          A.     I'm not aware of anywhere else in the state,  
23    but I would just say any time you've got -- from my  
24    perspective, my experience, any time you say a blanket  
25    statement like that, always something comes up say we

1 did it over there. Generally speaking, I'm not aware  
2 of any kind of administrative scheme that's like that.

3 Q. And otherwise in other parts of the state --

4 A. Could I just interrupt? I apologize. You  
5 know, I was going to talk about administrative issue.  
6 That's not related to this. My bad. I'm sorry.

7 Q. Okay. So, Mr. Longworth, we had some  
8 testimony from you towards the end of your direct  
9 testimony with Mr. Wechsler about the importance of  
10 sustainability in the context of the Lower Rio Grande.  
11 I don't remember what the technical name is. I'm  
12 going to call it the fallowing program, but that's not  
13 the right name, is it, that you testified at the very  
14 end?

15 A. I prefer to refer to it as the groundwater  
16 conservation program, but other people refer to it as  
17 a fallowing program, because a part of it involves the  
18 state putting a negative easement on the land, which  
19 has the effect of fallowing so, I mean, just for  
20 conversation --

21 Q. Okay.

22 A. -- purposes, but technically, we were looking  
23 at the groundwater.

24 Q. Okay. And this -- my purpose for asking is  
25 just to raise the issue of sustainability, and I'm

1 wondering if you know whether there was any  
2 sustainability analysis done before the settlement of  
3 the Stream System 101 matter?

4 A. I don't believe so.

5 Q. Would you agree --

6 A. Not -- I'm sorry. I didn't mean to speak  
7 over you. I just want to -- I paused.

8 Q. Finish your answer.

9 A. Yeah. You know, from the pilot program  
10 perspective, we're, I think, looking at something kind  
11 of unique, and I don't recall -- and what I mean  
12 by "unique" is that there were not very many programs,  
13 if any, in the western United States that have taken  
14 this kind of approach to look at groundwater and --  
15 and trying to work with the local agricultural  
16 community to come up with ways to manage the aquifer  
17 in a way that keeps it from being mined. I'm  
18 responsible for that program, training some staff to  
19 take over that program, but during the preparation of  
20 this trial, I've been pretty involved with this trial  
21 since the beginning, I've had contact with my staff,  
22 and this is just an example of how it's sort of unique  
23 is --

24 Q. Can I just interrupt you there? Can I just  
25 interrupt you there? I'm sorry to interrupt you, but

1 my question was different and it was whether there was  
2 a sustainability analysis done before the settlement  
3 was proposed to the Court in the Stream System 101  
4 matter?

5 A. Oh, okay. I'll be brief. So with regards to  
6 the way we looked at sustainability in the pilot  
7 program, that kind of analysis was not done to my  
8 knowledge in the 101 proceedings.

9 Q. Okay. And would you agree as a state  
10 official of the Office of the State Engineer that a  
11 sustainability analysis would be an important effort  
12 to inform regulatory decisions regarding the farm  
13 delivery requirement or crop irrigation requirements  
14 that would be adopted in the Lower Rio Grande?

15 A. That was a long question, but let me try this  
16 and see if I -- if I can capture the essence. A  
17 sustainability program is something that the State is  
18 piloting, and there's -- the courts have established  
19 certain limits, as we've talked about quite a bit  
20 today, and so the effort for the sustainability would  
21 be within the boundaries of those either settlement  
22 agreements or court rulings.

23 Q. Okay. I'd like to turn to New Mexico 764,  
24 which is the 2015 water inventory document that you  
25 talked about with Mr. Wechsler.

1           A.     Okay.

2           Q.     And I'm going to -- I'm going to ask you to  
3     turn to Page 43.

4           A.     I'm there.

5           Q.     And at the bottom of Page 43 and the top of  
6     Page -- well, let's start with the bottom of Page 43,  
7     under "pecan orchards," could we highlight that? Now,  
8     when we talked about your analysis in Stream System  
9     101 that you submitted in your reports to the Court,  
10    you -- and then I tried to connect it back to the  
11    water inventory document, this is the sort of -- of  
12    consideration you were talking about, isn't it, in the  
13    water inventory context for how you think about pecan  
14    consumptive use?

15          A.     This section describes how we -- well, let me  
16    back up a little bit.

17                 Prior to 2005, there's a certain approach  
18    with pecans that was developed by my predecessor, then  
19    when I -- when we came in, we started looking at  
20    pecans a little bit closer, and what we noticed was  
21    that for Original Blaney-Criddle, the coefficient was  
22    being used, the crop coefficient or coefficient that  
23    my predecessor used, we didn't -- I personally didn't  
24    agree that that was the proper approach, given the  
25    evidence from these two papers. So this section just

1 describes how we determined the frost free period  
2 coefficient for pecans.

3 Q. Oh, okay. So it's just sort of -- but it's  
4 within the range of what you found for pecan  
5 consumptive use in your reports for the Court, for the  
6 adjudication court, correct?

7 A. That's my recollection, yes.

8 Q. And then if we could turn to Page 30. Oh,  
9 sorry, Page 46. Sorry about that. So could we pop  
10 out -- this is Table 3.3, and it's a table that shows  
11 surface water shortages, I guess, in different basins,  
12 and just like to draw your attention to the Dona Ana  
13 County entry, zero surface water shortage offset by  
14 supplemental well pumping, and this was a report that  
15 you authored, correct?

16 A. I did not author this report, but I think the  
17 -- this was the 2015 assessment. I authored the '05  
18 and '10 report, and I think we probably had a similar  
19 type of table.

20 Q. And a similar type of entry for Dona Ana  
21 County?

22 A. That would be my recollection, yes, without  
23 going back and being sure. I think when I went back  
24 and reviewed them, I think that was the value that we  
25 put in.

1           **Q.**     **Okay.**

2           **A.**     I would add one -- one thing -- well, let's  
3 move on.

4                   **MS. KLAHN:** I don't have any further  
5 questions for this witness at this time. Thank you.

6                   **JUDGE MELLOY:** Ms. Coleman?

7                   **MS. COLEMAN:** Yes.

8                               CROSS-EXAMINATION

9 BY MS. COLEMAN:

10           **Q.**     **Good afternoon, Mr. Longworth.**

11           **A.**     Good afternoon.

12           **Q.**     I know it's been a long day. So I just want  
13 to briefly go back to your professional experience.  
14 Am I right that you've been employed by the Office of  
15 the State Engineer either directly or via the  
16 Interstate Stream Commission since September, 1998?

17           **A.**     Yes. I think that -- yeah, I started with  
18 the agency in September, 19 -- September -- it's been  
19 a while. Yeah, I think that was right, 1998, yeah.

20           **Q.**     And for most of that period, until you were  
21 appointed to be director of Interstate Stream  
22 Commission in 2017 you were working as an engineer or  
23 supervising engineers; is that right?

24           **A.**     I think that's correct, yeah.

25           **Q.**     And then in -- in 2017, were you appointed

1     **acting director or -- or actual director of the ISC?**

2           A.     So there was a phase before I was formally  
3     appointed where I was designated as acting director,  
4     then there was a phase where I was appointed as the  
5     director. Towards the end of that stint, there was a  
6     new administration coming in, and that's an appointed  
7     position and so we had established a method -- an HR  
8     approach, so that I could go back into my job that I  
9     had prior to being the director.

10          **Q.     And --**

11          A.     Oh, I'm sorry. The point of that is then in  
12     some point in there, they called me acting so...

13          **Q.     We have that in the federal government, too.**  
14     **Don't worry. So in your capacity as director and**  
15     **acting director of the Interstate Stream Commission,**  
16     **you were working on Compact administration; is that**  
17     **correct?**

18          A.     Yes. That's correct.

19          **Q.     Okay. And in your current capacity, you also**  
20     **advise on matters relating to Compact administration;**  
21     **is that right?**

22          A.     Yes.

23          **Q.     Okay. And when you were doing your direct**  
24     **testimony with Mr. Wechsler, you described your role**  
25     **as -- as director as involving coordinating the**



1 implementation of policies set by the Commission and  
2 implementing that policy direction with staff. Do you  
3 remember that?

4 A. Yes.

5 Q. Okay. So that implementation might involve  
6 state-to-state communication; is that right?

7 A. Generally, yes. Sometimes the -- the  
8 Compacts will have specific provisions that may not  
9 directly involve the Commission, but part -- as part  
10 of my job and when I was responsible, either as a  
11 technical advisor or alternate in some of the  
12 Compacts, that I would -- I think it probably would be  
13 in my staff report, advise the Commission on Compact  
14 matters.

15 Q. Okay. And you would also be dealing with the  
16 legislature, correct?

17 A. Yes, I did.

18 Q. Okay. So that's -- that's a different skill  
19 set from -- from your engineering skill set, right?

20 A. In terms of the working with the  
21 legislature --

22 Q. Well, in terms of your role --

23 A. -- or Compact -- I'm sorry. I spoke over  
24 you. Excuse me.

25 Q. In terms of your role in implementing the

1 policy direction of the Commission on -- on Compact  
2 administration, that's a different set of skills than  
3 your engineering skills, right?

4 A. I wouldn't agree with that characterization.

5 Q. Okay. But it's more like people skills,  
6 right?

7 A. I mean, of course, it -- you know, when  
8 you're an alternate, for example, in the Upper  
9 Colorado Compact Commission, certainly, there is a  
10 measure of people skills because you're working with  
11 other states trying to resolve issues, but at the same  
12 time, you're also working on technical issues and so  
13 there would be instances on -- in my role, since I was  
14 not the -- representative commissioner where I might,  
15 you know, use my engineering skills on technical  
16 matters and then advise my commissioner on those  
17 matters for his deliberation with the Compact  
18 commissioners. That's just one example of the Upper  
19 Colorado Compact Commission.

20 Q. Is there -- are there training programs for  
21 interstate Compact administration?

22 A. I'm not quite sure what a training program  
23 is, but in my experience, you -- in my experience, you  
24 learn on the job, but you also learn from going to  
25 various conferences related to vary Compacts to

1 further your continuing ed on issues that are  
2 pertinent to that stream system that the Compact may  
3 be on. So, you know, there's not Compact  
4 administration 101. Every Compact sort of has its  
5 unique characteristics, and you learn that through  
6 experience.

7 Q. Okay. So today, we're talking a lot about  
8 your work on adjudication matters, and those -- those  
9 are different from your Compact administration  
10 responsibilities, right?

11 A. Yes, that's correct.

12 Q. And you looked at a number of orders from the  
13 adjudication, and -- and so if we wanted to know what  
14 New Mexico said or did at any point in the  
15 adjudication, we would need to look at the actual  
16 court documents, right?

17 A. With regards to representations to the Court,  
18 I believe there would be transcripts. That's -- or  
19 that would be where I would go for understanding what  
20 was the State's discussions in front of the Court.

21 Q. So I just want to make sure that we -- we  
22 have a clear chronology on the adjudication and the  
23 administrative system proceeding it quickly, so I  
24 might cover some territory we've been on, but we'll  
25 try to be quick.

1           A.     Okay.

2           Q.     So before 1980, there were wells drilled in  
3     the Lower Rio Grande, but there wasn't a requirement  
4     to declare them to the state engineer; is that  
5     correct?

6           A.     There wasn't a requirement. You could  
7     declare one if you desired.

8           Q.     So you'd have, say, 1,100 wells drilled  
9     within the Elephant Butte Irrigation District of 1940s  
10    and 1950s, but that doesn't mean that all 1,100 of  
11    those wells would be documented by the state engineer,  
12    right?

13          A.     I believe that to be correct, yes.

14          Q.     So then we reached the early '80s, and the  
15    state engineer declares the Lower Rio Grande  
16    Underground Water Basin, right?

17          A.     Yes. I think others have testified it was --  
18    the first one was '80 and the second one was '82.

19          Q.     So that's the closure of the basin, right?

20          A.     I'm not -- wouldn't necessarily describe it  
21    as a closure. What the declaration initiates is the  
22    state engineer is -- has given notice and that anybody  
23    who wanted to develop waters in the -- underground  
24    waters that the basin was declared would have to go to  
25    the administration to file an application and then the

1 state engineer would act on those applications. So I  
2 -- I don't -- I don't know that that's -- that's  
3 different in my mind from a closure.

4 **Q. Have you heard the word closure used in**  
5 **connection with the basin declaration?**

6 A. I've heard people use that term. I -- I  
7 don't -- I don't -- I don't use that term.

8 **Q. Okay. Well, we -- we talked a lot about**  
9 **terminology here, so I just want to be clear on how**  
10 **you're using it and how others might use it.**

11 A. Maybe I can add as to why I don't -- closure  
12 is an odd term for me is the process -- once the basin  
13 is declared, the state engineers then -- you have to  
14 go to the state engineer with a permit, and in the  
15 permit administration process, it's a two-prong  
16 process. The first part is the state engineer has to  
17 determine if there's water available for  
18 appropriation, and that's distinct step then from  
19 processing the application to determine if there's  
20 other entities, you know, potentially impaired or if  
21 it's conservation, et cetera. What I understand in  
22 this basin is that the state engineer has -- the state  
23 engineers have determined that there was no new water  
24 available for appropriation, and so I think some  
25 people may call that it's closed. I just look at it a

1 little bit differently, but they may have the same  
2 effect.

3 Q. So when you said "permit" there, you meant  
4 that's a permit for a new appropriation, right?

5 A. The -- -- the application for an  
6 appropriation in a basin, that's the title of the --  
7 of the application, and then, again, state engineer  
8 will make a determination, is an appropriation  
9 available. If there is a determination there is, then  
10 it will go to a process of evaluation. In the Lower  
11 Rio Grande --

12 Q. I'm just going to cut you off. I just meant  
13 when you use the word permit, you're talking about the  
14 type of document that would be given to someone  
15 applying for a new appropriation, correct?

16 A. Yeah. That's a better way of putting it. It  
17 would be the document that if the state engineer would  
18 determine there was an appropriation and found that  
19 there was -- it met the criteria as spelled out in the  
20 statute, the permit would be issued, yes.

21 Q. And if there was -- let's -- you might also  
22 have to apply to change an existing appropriation; is  
23 that correct?

24 A. There's opportunity to change, you know, to  
25 move points of diversion, places of use, but those

1 wouldn't be described in an appropriation manner.  
2 Those would just be administrative terms. I mean,  
3 we're looking at the applications, that's what they  
4 say, change in place of use, change in purpose of use,  
5 those kinds of things. But there's distinct  
6 applications speaking to appropriations.

7 **Q. Okay. And in this period after the 1980s**  
8 **basin declaration, what -- were there, you know,**  
9 **written rules or regulations that governed how permits**  
10 **would be reviewed?**

11 A. Well, certainly I don't think there was any  
12 rules promulgated relative to that, and I -- I'm  
13 hesitant to speak as to what the state engineer admin  
14 -- you know, staff direction was prior to the late  
15 1990s. There -- in the '90s, there was -- and this is  
16 a common practice -- guidelines submitted to the  
17 districts as it instructs the districts as to how to  
18 evaluate applications. I don't know if that was done  
19 verbally prior to those written down or if there was  
20 others. I haven't seen additional guidelines prior  
21 to, I think it was late '90s some time. But generally  
22 speaking, the state engineer would provide direction  
23 to area offices as to how to man -- how to evaluate  
24 applications as they came in. That would be a common  
25 practice.

1           Q.    All right. Well, let's pull up New Mexico  
2 Exhibit 25. So this document was admitted, I think,  
3 earlier. It's previously admitted actually. So this  
4 is a document entitled, "Mesilla Valley Administrative  
5 Area Guidelines for Review of Water Right  
6 Applications," and we see at the bottom, the date  
7 January 5th, 1999. Is this one of the guidelines  
8 documents that we're talking about?

9           A.    Yes, it is.

10          Q.    Okay. Are you familiar with this document?

11          A.    I've read it over the years in the course of  
12 my duties. I reviewed it briefly once it was  
13 submitted as an exhibit so I'm familiar with it, and  
14 I've gone through it. I have gone through this --  
15 it's curious to me -- a fair amount when I was working  
16 at Wharton's Conservation. We had some permits in the  
17 Lower Rio Grande, and I would refer to this just out  
18 of -- for my roles in water use and conservation, if  
19 there was any instructions provided by the state  
20 engineer for how to process applications in areas  
21 where my expertise was necessary.

22          Q.    Are these guidelines still in effect?

23          A.    I'm unaware that they have been -- that state  
24 engineers directed that they no longer be used, so I  
25 would then conclude that they would be still in



1 effect, but I would recommend that personnel from the  
2 district be asked that same question. They'll have an  
3 intimate understanding of that.

4 Q. Okay. We'll go for less than intimate right  
5 now and just go to a few points. Let's go to Page 2  
6 of this document. Okay. We see Heading  
7 A, "Administrative Objectives" --

8 JUDGE MELLOY: Excuse me a second. Just  
9 to keep the record straight, we're actually talking  
10 about Page 5 of the exhibit.

11 MS. COLEMAN: Oh, I'm sorry. Thank you,  
12 Your Honor.

13 A. I'm confused. I was looking at Page 2, the  
14 table of contents.

15 Q. (BY MS. COLEMAN) There's administrative  
16 objectives on the table of contents, too, I imagine,  
17 but we'll look at Page 5 of the exhibit. So looking  
18 at number one there, focusing on the second sentence  
19 actually, it says, "The primary aquifer within the  
20 MVAA is recognized as a stream-connected system in  
21 which groundwater withdrawals will ultimately result  
22 in depletions of surface water sources." In that  
23 sentence, MVAA refers to the Mesilla Valley  
24 Administrative Area; is that right?

25 A. Yes, that's correct.

1           Q.    Does the state engineer still recognize the  
2           aquifer as a stream-connected system in which  
3           groundwater withdrawals will ultimately result in  
4           depletions of surface water sources?

5           A.    I believe the state engineer still believes  
6           that.

7           Q.    Let's go to the next page, and we'll look  
8           under No. 6 there. "The existing drains system will  
9           not be impaired," it says there. Is not impairment of  
10          the drains system still an objective for state  
11          administration in the Lower Rio Grande?

12          A.    I apologize. I think -- could you re-ask the  
13          question, please? Thank you.

14          Q.    So under, "Administrative Objectives," No. 6  
15          is, "The existing drains system will not be impaired."  
16          My question is, is non-impairment of the existing  
17          drains system still an administrative objective of the  
18          state engineer?

19          A.    My understanding is that is correct, yes.  
20          Again, these are for applications.

21          Q.    Okay. Let's look at the next page. And we  
22          see Heading C, "Administrative Criteria," and No.  
23          1, "Offset of surface water impacts." And it  
24          says, "Applications within the MVAA for groundwater  
25          appropriations that impact the surface waters beyond

1 acceptable depletions, see B.1, must offset 100  
2 percent of the surface water depletions caused by the  
3 appropriation." Do you see that?

4 A. Yes, I do.

5 Q. Is that a reflection of the objective we saw  
6 a moment ago, that the groundwater system is connected  
7 to the stream system?

8 A. I believe that's correct, yes. This is  
9 providing further guidance.

10 Q. Okay. Let's go to Page 10, which is internal  
11 Page 7. I'm trying to find where it is now, but we're  
12 looking for -- okay. Right in the middle of the page  
13 there, we're going to highlight it for you. It  
14 says, "The aquifer depletion for irrigation is the  
15 product of the irrigated acreage and recognized  
16 average consumptive irrigation requirement." Do you  
17 see that?

18 A. I apologize. I wasn't looking up on the  
19 screen. I turned away.

20 Q. Oh.

21 A. Are we in the middle of the --

22 Q. We're in the middle of the page. You see the  
23 underlined Frenzel Kaehler --

24 A. Yes.

25 Q. -- and then few underlined down from there.

1           A.     Okay.

2           Q.     "The aquifer depletion for irrigation is the  
3     product of the irrigated acreage and recognized  
4     average consumptive irrigation requirement." So this  
5     is talking about groundwater only, not surface water,  
6     right, this document that is?

7           A.     It's my understanding that this document is  
8     groundwater only. I apologize. I -- it's getting  
9     late in the day. I couldn't follow which lines you  
10    were speaking to, but this document is certainly a  
11    direction regarding permits issued for underground  
12    declared basin.

13          Q.     In your -- in your experience, would you  
14    agree that aquifer depletion for irrigation is the  
15    product of the irrigated acreage and recognized  
16    average CIR?

17          A.     I believe that's correct. There's obviously  
18    timing issues and whatnot, but if you assume a one to  
19    one, however much you consume would ultimately impact  
20    the surface water system.

21          Q.     Okay. We'll turn to Page 11 of the exhibit,  
22    New Mexico Exhibit 25, and we'll look at No. 8 there.  
23    This is, "Diversion and consumptive use rates for  
24    irrigation wells, brackets, reserved." Do you see  
25    that?

1           A.    I'm getting there.  No. 8.  Yes, I see that.  
2  Sorry.

3           Q.    Is that where --

4           A.    Took me a minute to -- apologize.

5           Q.    Is that where Stream System Issue 101 comes  
6  in?

7           A.    I would believe so, yes.

8           Q.    So then we'll skip ahead two pages, so New  
9  Mexico Exhibit 25, Page 13 of the exhibit.  Okay.  We  
10 see at the top there.  "If surface water rights are to  
11 be transferred long distances downstream or upstream,  
12 river losses or gains may be considered."  Do you see  
13 that?

14          A.    I do.

15          Q.    Okay.  So how would river losses or gains be  
16 used in figuring out consumptive use?

17          A.    Without reading the whole thing, I think this  
18 is talking about if something -- if a surface water  
19 right is being transferred, there -- depending on how  
20 that transfer is being, you know, going upstream or  
21 going downstream, the impacts from the characteristics  
22 of the surface water, you know, the river, would have  
23 to be contemplated so that if -- let's just say we're  
24 going downstream, acre-foot upstream, and takes 25  
25 percent loss downstream, you could only claim .7, you

1 know, 75 percent of that -- that right. So that -- I  
2 believe that's what that's referring to is adjusting  
3 the amount of impact based on the distance between  
4 where the impact may be felt from where the move from  
5 location is.

6 Q. Okay. So, now, we're almost done on this  
7 document. We'll go ahead two more pages, so New  
8 Mexico Exhibit 25 at 15. This is internal Page 12.  
9 We're looking at No. 16 there. "Applications  
10 associated with pre-basin water rights." So skipping  
11 that first paragraph, and it says, "When  
12 characterizing the amount of declared water right  
13 recognized, considerations will be given to," and then  
14 we see sub little A, little B, little C. Do you see  
15 that?

16 A. I do.

17 Q. Okay. And I'm sorry. I should have backed  
18 up and done the first paragraph first. So this  
19 paragraph is talking about applications for pre-1980  
20 water rights, correct?

21 A. Yes, that's correct. Yeah. Pre-basin --

22 Q. And it's discussing the application that  
23 would need to be filed for a supplemental well,  
24 replacement well, change of point of diversion, et  
25 cetera, right?

1           A.     Yes.   That's the first sentence.

2           Q.     Okay.   So -- and then at the last sentence  
3   there, "At the time of the action on the application,  
4   the State Engineer may characterize the amount of  
5   declared water rights recognized."   So do I understand  
6   that correctly that when there's an application for a  
7   change or replacement, the state engineer may  
8   characterize the amount that is the volume of the  
9   right before granting that application; is that  
10   correct?

11          A.     Yes.   That's an important step in having a  
12   pre-basin right is that there has to be -- the state  
13   engineer has to be convinced, if you will, that that  
14   declaration is -- is adequate and provides proper  
15   information for the state engineer to identify that  
16   that right has been established and then that could be  
17   considered further in the administrative process.

18          Q.     Okay.   So we see there at the bottom, the  
19   little A, little B, little C, and those say, "Date of  
20   commencement of works relative to the date of  
21   declaration of the basin; B, capacities of diversion  
22   works and source of supply; C, existence of a water  
23   development plan," et cetera, and then we go to the  
24   next page -- when it flips to the next page, we'll see  
25   that the list continues for a number of bullets.

1 It'll probably flip to the next page in the middle of  
2 my next question.

3 But so -- so in quantifying the volume of the  
4 declared right, these other little -- these other  
5 considerations that we just saw might be considered by  
6 the state engineer, right?

7 A. Yeah. I mean, I think these are critical  
8 aspects of looking at a declaration and, you know, as  
9 I previously said, the state engineer has to be  
10 satisfied that that declaration is not frivolous.

11 Q. And if we could just go back -- I'm sorry --  
12 to Page 15 of the exhibit. We see that this is  
13 actually, "When characterizing the amount of the  
14 declared water right recognized." So these criteria  
15 are specific to characterizing the quantity of the  
16 water right, correct?

17 A. I believe this is a little bit broader than  
18 that. I think that it -- it goes to is there an  
19 existence of a pre-basin water right, and then from  
20 that point, there's tests effectively done by staff to  
21 determine what the volume of that water right is and  
22 then to get to your question, then that would be, I  
23 think, as you asked, the amount that would be  
24 associated with that declaration.

25 Q. Okay. Well, the document says what it says



1 so we'll -- we can leave it there for now. But the  
2 idea of this paragraph that we're looking at is that  
3 it's a case-by-case analysis, right?

4 A. Yes, it would be.

5 Q. Okay. So we have, as we see, this state  
6 administration of groundwater rights under these  
7 guidelines or under the basin declaration, and that's  
8 separate from the adjudication, correct?

9 A. I apologize. My bad. Could you repeat that  
10 question, please?

11 Q. Within the state engineer, there's one set  
12 of, you know, employees who are doing the  
13 administration work with the applications and the  
14 permits, and then there's another set of employees who  
15 are doing the adjudication work, right?

16 A. That's correct, yes.

17 Q. And until things sort of take form in the  
18 adjudication, those -- those employees are -- you  
19 know, they're basically on separate tracks, right?  
20 They have no reason to talk to each other; is that  
21 right?

22 A. That has not been my experience.

23 Q. Okay.

24 A. I mean, it's been my experience that indeed  
25 there will be coordination usually between the

1 adjudication staff and water rights staff, and I think  
2 that was one of the considerations when the  
3 adjudication bureau was established in the Lower Rio  
4 Grande, not only so that they would have readily -- be  
5 readily be able to access the area, but also to work  
6 with water rights staff. That's my understanding.  
7 So, yeah, there's coordination.

8 Q. Okay. So, now, again, I just -- we talked --  
9 we've had a lot of terminology and very New Mexico and  
10 Lower Rio Grande specific discussion today so I want  
11 to make sure we have that clear. Mr. Wechsler showed  
12 you the hydrographic survey or one volume of it for, I  
13 believe it was the Southern Mesilla. Do you remember  
14 that?

15 A. Yes.

16 Q. Okay. And we saw that there's an inventory  
17 of -- of water uses and wells and each one of those  
18 rights, or I suppose wells is called a sub-file; is  
19 that right?

20 A. Well, I think the -- when we look at the  
21 pages, all the information on that page is considered  
22 in the sub-file.

23 Q. So --

24 A. It's not just one element.

25 Q. Is the sub-file the water right or the well?

1       A.    The sub-file describes the elements of a  
2   water right.

3       Q.    Okay.  And --

4       A.    For the purposes of an offer of judgment.

5       Q.    Okay.  And when you say "elements of a water  
6   right," Mr. Wechsler walked you through the different  
7   sort of bolded things on the page, but what -- what is  
8   -- just in the context of water administration, what  
9   does an element mean?

10      A.    Statutes describe what an element of a water  
11   right is and so those are the elements that are  
12   necessary to establish to understand the water right.

13      Q.    Okay.  So we have sub-files that identify the  
14   elements of a water right, and then there are sub-file  
15   orders, right, and those -- that's a different thing?

16      A.    That's correct.

17      Q.    And the sub-file order is something that's  
18   issued by the adjudication court; is that correct?

19      A.    Yes.

20      Q.    Okay.  So as you've discussed with  
21   Mr. Wechsler, the state engineer's office makes an  
22   offer of judgment to the various water -- to each  
23   water right holder that is essentially -- is it  
24   essentially in the form of a draft sub-file order; is  
25   that correct?

1           A.    I believe that'd be correct.  You mean --  
2   it's been a while since I've seen one, but there's a  
3   formal communication for an offer of judgment that  
4   would have the elements in it for sure.

5           Q.    And so then if the -- if the water right  
6   holder agrees or, you know, negotiate and reach  
7   agreement on the offer of judgment, that gets filed  
8   with the court, correct?

9           A.    Yes.  The claimant and the state offer that  
10  proposed order to the adjudication court, that's  
11  correct.

12          Q.    And that's called a stipulated sub-file  
13  order, right?

14          A.    That sounds right, yes.

15          Q.    Okay.  And as you discussed earlier, if the  
16  state engineer didn't get a response or you didn't  
17  reach agreement with the water right holder, the state  
18  engineer just files the offer with the court, correct?

19          A.    I don't believe it's that direct.  I think  
20  various instances where mediation may become involved  
21  to see the differences can be settled without going to  
22  the adjudication court.

23          Q.    But if the differences can't be settled, the  
24  offer just gets filed with the court and it's taken  
25  for what it is, which is the state engineer's view of

1 the sub-file, right?

2 A. Well, I believe that the claimant would have  
3 an opportunity to dispute that in the hearing.

4 Q. So there would be a hearing on the offer of  
5 judgment?

6 A. Yeah.

7 Q. Okay. And then the adjudication court would  
8 make a determination on the sub-file order based on  
9 that hearing, correct?

10 A. That's my understanding of the process, yes.

11 Q. Okay. Now, one phase of the adjudication we  
12 didn't hear about in your direct was the inter se  
13 process, that's I-N-T-E-R, space, S-E, so it's not  
14 interstate, Inter se, and what is the Inter se phase  
15 of the adjudication?

16 A. That's a great question. Inter se, that's a  
17 legal term, and I want to be careful about  
18 interpreting the legal term, but in essence, what that  
19 is, is the process after the state engineer has  
20 concluded and that the court has concluded the initial  
21 determination of the water rights under consideration  
22 and adjudication. After that, claimants had an  
23 opportunity to contest other claimants' rights  
24 identified by the Court or adopted by the Court, and,  
25 I mean, that's what it is. So how that -- at that

1 point, the State is not involved. That's between  
2 claimant and claimant and so it's -- it's a way for  
3 claimants who disagree with another claimant's  
4 determination in the adjudication court, means they  
5 have the opportunity to contest that.

6 Q. So that's -- so there might be -- so  
7 basically after all the sub-file orders are determined  
8 and the stream system issues are resolved, at some  
9 point in the future, you have an Inter se phase of the  
10 adjudication, right?

11 A. I'm taking some time to think about that  
12 because there's different kinds of Inter se. You can  
13 have expedited Inter se, as well as standard Inter se,  
14 but I would -- this is kind of getting beyond my  
15 comfort because these are legal determinations or the  
16 use of legal evaluations of what an expedited Inter se  
17 is versus regular Inter se, and what I provide is my  
18 understanding of what the Inter se process is, but for  
19 me to go beyond that, I think that kind of starts  
20 wandering into legal testimony.

21 Q. And I would agree with you on that as a  
22 matter of fact. But just -- just in a general way,  
23 the sub-file orders that are, you know, either entered  
24 as stipulations with the state engineer or entered  
25 after a hearing, they might be subject to additional

1     **litigation contest in this Inter se process, right?**

2         A.     They might be, yeah.  It's -- yeah, they  
3     might be.  But I think it's -- it's generally when  
4     working with entities and groups, there's -- trying --  
5     the state engineer tries and groups try to come to a  
6     combination so that there isn't some drawn out Inter  
7     se process, but it does exist, and until those  
8     agreements are reached, then that would be the next  
9     phase in the adjudication.

10        **Q.     Is there a document that explains all of this**  
11     **to say the average New Mexico water user?**

12        A.     There may be, but I don't have it in recall  
13     right now.

14        **Q.     Okay.  So let's -- just to round out here, we**  
15     **talked about stream system issues.  What is a stream**  
16     **system issue?**

17        A.     It's a designation by the Court of an issue  
18     where notice needs to be provided to those who are  
19     enjoined to the adjudication for their -- to ask them  
20     if they want to participate in that issue.

21        **Q.     So -- so those -- is it fair to say that**  
22     **those are issues of kind of basin wide interest?**

23        A.     They would be of interest to -- they have the  
24     potential to be interest to those who are parties to  
25     the -- who have been enjoined to the adjudication.  So

1 when you say "basin wide," certainly there's basin  
2 wide issues, but there may also be very distinct  
3 issues that come into play.

4 **Q. Okay.**

5 A. So I don't know that they were all basin wide  
6 like 104 and 103 -- 104 and 101. Excuse me.

7 **Q. How many stream system issues are there?**

8 A. That's a really good question, and the last I  
9 heard, I think we were at seven. I'm not sure if it's  
10 gone up from there. I'm not involved in that. That's  
11 not something I would be aware of.

12 **Q. And other than 101, how many of them have a**  
13 **final judgment?**

14 A. I believe -- let's see. I forget what 102  
15 is. I think 103 was EBID's claim to groundwater  
16 rights. That may have a final judgment, but I  
17 couldn't recall. And there may be some others, but I  
18 -- I couldn't recall the individual ones that have  
19 final judgments.

20 **Q. I'm sure Ms. Barncastle is very eager to come**  
21 **off of mute and interject, but I'll ask her to stay**  
22 **quiet.**

23 Okay. Now, in these adjudication, you talked  
24 about the farm delivery requirement and the  
25 consumptive irrigation requirement so we won't go over



1 those again, but in the adjudications the state --  
2 generally statewide, the state engineer's office  
3 typically uses a basin wide CIR and FDR, correct? And  
4 you understand what I mean by those abbreviations,  
5 right?

6 A. Yes, I do. Broadly speaking, that's what the  
7 adjudication provides, you know, throughout the state.

8 Q. And so the state engineer's office doesn't do  
9 a detailed farm-by-farm analysis of the CIR and FDR,  
10 does it?

11 A. To the extent that they're in the  
12 hydrographic survey identifies obviously each parcel,  
13 and oftentimes in a hydrographic survey, they'll  
14 identify the crop. That information will be compiled  
15 into the cropping pattern. I think that's the extent  
16 of a farm-by-farm assessment for adjudication. But,  
17 yeah, that's -- that's the process.

18 Q. And the reason for -- for doing a basin wide  
19 CIR and FDR instead of a farm-by-farm analysis is lack  
20 of resources?

21 A. My understanding and my experience is that  
22 the administrative process provides for having a  
23 similar value in that it is administratively efficient  
24 to have that kind of approach, that way applications  
25 can be processed -- processed in a reasonable amount

1 of time, and, also, there can be surety in terms of  
2 the applicant knowing what kind of consumptive use  
3 could be asked for in an application. Takes away the  
4 uncertainty.

5 Q. Unlike the process we saw described in the  
6 Mesilla Valley guidelines that involve the  
7 case-by-case analysis, in the adjudication, the state  
8 engineer's office does basin wide analysis?

9 A. That's correct.

10 Q. Are you aware of any basin other than the  
11 Lower Rio Grande where the FDR is greater than 4  
12 acre-feet per acre?

13 A. I don't believe so, no. I'm not -- I'm not  
14 aware of one -- a basin that I've been involved with  
15 where the FDR is greater than 4. I would just -- the  
16 one area that I would really have to go back and  
17 investigate is in the San Juan. That is pretty much a  
18 straight surface water system, and there are the  
19 potential for large FDRs because of the supply in that  
20 area, but I can't identify specific ones so, you know,  
21 I'm not aware of specific adjudications that I can  
22 come up with a FDR for.

23 Q. Are you aware of any basin other than the  
24 Lower Rio Grande and potentially the San Juan where  
25 the FDR is greater than 3 acre-feet per acre?

1           A.     Yes.

2           **Q.     Which basins are those?**

3           A.     The two that come immediately to mind is the  
4     Pecos Artesian Basin, that would be 3.5, and if memory  
5     serves me, the Carlsbad Irrigation District might have  
6     more than 3. I can't remember if it's 3.2 or 3.7.

7           **Q.     That's also in the Pecos, right?**

8           A.     Yes, it is. It's the project on the Pecos,  
9     one of the projects.

10          **Q.     But the Lower Rio Grande is different, right,**  
11     **because there are pecans?**

12          A.     The Lower Rio Grande is different. I will --  
13     will -- will agree with that statement.

14          **Q.     Stipulated.**

15          A.     And that -- excuse me.

16          **Q.     Go on.**

17          A.     And that relates more to the development of  
18     irrigation practices in that valley. This valley has  
19     been under irrigation for a very long time. You have  
20     the NMSU, which is an agricultural school centered in  
21     that area, and there's long been research going on,  
22     I'm thinking back to the joint investigation report on  
23     various agricultural practices and those get  
24     instituted in the Lower Rio Grande pretty readily. In  
25     fact, in a lot of instances, there may be

1 relationships between researchers and farmers in the  
2 area. So it is a dynamic area in terms of the amount  
3 of agricultural activity that occurs. I'm trying to  
4 think for a second. In my recollection from the order  
5 use inventory, we identify just as a comparative way  
6 throughout the state, Lower Rio Grande is one of the  
7 areas that has the most intense agricultural activity  
8 in the state. Not -- not to suggest there aren't  
9 other areas, but in terms of acreage and in terms of  
10 crops and in terms of consumptive use. And, also,  
11 it's in the southern part of the state so more  
12 opportunity with incoming radiation that provides the  
13 energy for evapotranspiration to work so it generally  
14 would have a longer growing season, which provides  
15 more opportunity for different time for crop  
16 management that we may not see elsewhere in the state.

17 **Q. Then there's the pumping of project water,**  
18 **right?**

19 A. There's pumping of water throughout the state  
20 of New Mexico in relation to agriculture. I don't  
21 think the Lower Rio Grande is unique in that aspect.

22 **Q. Okay. So let's just look at New Mexico**  
23 **Exhibit 604A. If we go to the second page and look at**  
24 **Paragraph 2, this is referring to the pecan settlement**  
25 **agreement, right?**

1           A.     That's how I read that, yes.

2           Q.     Okay.  So it says, "The settlement agreement  
3     specified that, subject to final Court approval, the  
4     CIR for mature pecan orchards would be 4.0 acre feet  
5     of water per year per acre, and the FDR for mature  
6     pecan orchards would be 5.5 acre-feet per acre."  Do  
7     you see that?

8           A.     Yes, I do.

9           Q.     And that's become the CIR and FDR for the  
10    Lower Rio Grande Basin, correct, regardless of crop?

11          A.     I believe the numbers in the final order from  
12    the -- from the Court are -- I wouldn't say it's just  
13    those numbers.  There's distinction between types of  
14    water rights.  There's distinction of whether or not  
15    you're moving water out of the agricultural -- out of  
16    the agriculture, but what they are consistent with are  
17    the in situ consumptive amount that's identified later  
18    in the order and the ability to prove up to 5.5 if  
19    evidence of beneficial use can be provided to the  
20    state engineer.

21          Q.     Okay.  So do you know what in situ means?

22          A.     My understanding of the word in this context  
23    is that it was -- in situ is meant to mean in  
24    agriculture.  It remains in agriculture.

25          Q.     Do you know what it means in Latin?

1           A.    I do not speak Latin so I do not.

2           Q.    Well, Professor Google informs me it means in  
3   the same place. So in situ is used in the joint -- in  
4   the final judgment in Stream System 101. It's  
5   actually not about the CIR for -- for you staying in  
6   place, it's about the CIR for a right that's staying  
7   in the same use; is that correct?

8           A.    I believe, in essence, that could be correct.  
9   The -- there is a provision, if I recall correctly,  
10   that allows for transfer amongst agricultural users at  
11   -- at those levels, but -- or at those conditions, so  
12   depends how you interpret in situ. Sorry I don't  
13   speak Latin.

14          Q.    Neither do I. So we were talking about the  
15   right being transferred from place to place within  
16   agricultural use. Does the judgment in Stream System  
17   Issue 101 account for river losses and gains,  
18   depending on the distance of the transfer?

19          A.    I don't believe the order contemplates what  
20   type of analysis would be done in a transfer.

21          Q.    Except to the extent that 4.0 is used for ag  
22   use, and 2.6 is used for non-ag use, correct?

23          A.    The -- yes. I mean, well, kind of. I think  
24   the 4.0 is more intended as in agriculture that would  
25   be a cap, if you will, that agriculture has an ability

1 to work within. So that's my understanding of how  
2 that 48 inches is intended to be used, whereas the 2.6  
3 would be actually a value that you would transfer out  
4 of agriculture.

5 Q. And if we wanted to actually understand this  
6 difference between 4.0 and 2.6, we should look at the  
7 transcript for that hearing on June 24th, 2011, right?

8 A. Said that a little fast. Can you say that  
9 again? I apologize.

10 Q. If we want to understand the basis for the  
11 4.0, quote unquote, in situ CIR for ag transfers, and  
12 the 2.6 CIR for non-ag transfers, the place to look  
13 would be the transcript of that hearing on June 24th,  
14 2011, right?

15 A. If that's the date of the continuation of the  
16 trial, there was testimony given related to those  
17 numbers so -- if that's what you're asking, yes.

18 Q. Okay. So I'm sticking again here before I  
19 get ahead of myself with New Mexico Exhibit 604A. We  
20 talked about the 5.5 FDR is something that you could  
21 prove up to. Do you know how many water users in the  
22 Lower Rio Grande have proved up 5.5 acre-feet per  
23 acre?

24 A. I don't know the exact amount. That would be  
25 something that I would defer to Mr. Serrano so, you

1 know, to be honest, I -- I don't think it's a lot. My  
2 discussion -- my experience has been that most -- a  
3 lot of the community down there accepted 4.5 and  
4 didn't see a need to go to get 5.5.

5 Q. You said you were pretty involved with this  
6 litigation from the beginning. Do you remember saying  
7 that?

8 A. Sounds consistent with my testimony, yes.

9 Q. And you're special assistant to  
10 Mr. D'Antonio, correct?

11 A. Currently, yes.

12 Q. Did you read the declaration he filed in this  
13 lawsuit in the summary judgment phase?

14 MR. WECHSLER: Objection; relevance.  
15 I've been trying to be very patient here, Your Honor,  
16 but it seems like we're getting far afield from both  
17 his testimony and anything that he could possibly  
18 testify to. I mean, reading a declaration, I don't  
19 see the relevance.

20 MS. COLEMAN: We read an awful lot  
21 earlier.

22 JUDGE MELLODY: Go ahead. You can  
23 answer. Go ahead and ask your question. You can  
24 answer.

25 Q. (BY MS. COLEMAN) Are you aware that



1 Mr. D'Antonio attested that 956 notices of intent were  
2 filed by the deadline to approve the 5.5 acre-feet per  
3 acre?

4 A. If that's what the state engineer attested, I  
5 wouldn't have any reason to doubt that.

6 Q. Okay. I assume Mr. Serrano will get into  
7 that tomorrow then.

8 A. I would note that just filing something is  
9 not the same as approving something. We are aware  
10 that a lot of people were encouraged to file, even  
11 though they did not have sufficient evidence to prove  
12 up beneficial use.

13 Q. But isn't it true that the water master  
14 allowed people to divert up to 5.5 just because they  
15 had a notice of intent on file?

16 A. That could be.

17 Q. Okay. So let's -- just quickly one other  
18 thing you mentioned. We talked about Blaney-Criddle  
19 earlier. Do you remember that?

20 A. I believe we discussed it a number of times,  
21 yes.

22 Q. We discussed a lot about Blaney-Criddle, and  
23 I won't discuss it that much more except that I just  
24 want to look quickly at New Mexico Exhibit 582, which  
25 is your rebuttal report, subject to the caveats that

1 we discussed earlier. And if you have it in front of  
2 you, we're going to look at Page 3 of New Mexico  
3 Exhibit 582. And we see there, we have Blaney-Criddle  
4 Method underlined, and the second paragraph under that  
5 says -- starts, "The Original Blaney-Criddle Method."  
6 Do you see that?

7 A. That's the second paragraph?

8 Q. Yes.

9 A. Yes. I have that.

10 Q. And then it -- it goes on to say it was,  
11 "first documented in the Rio Grande Joint  
12 Investigation, NRC 1938." Do you see that?

13 A. Yes, I do.

14 Q. Okay. Did you look at the crop -- sorry.  
15 Did you look at the Blaney-Criddle analysis,  
16 such as it was, in the Rio Grande Joint Investigation  
17 in preparing this report?

18 A. So I believe Blaney was involved in the  
19 investigation. I believe that reference is to the  
20 actual peer-reviewed publications that were produced  
21 by Blaney -- Dr. Blaney, and I believe Dr. Criddle,  
22 and in that, there is discussion of utilizing the  
23 joint investigation on the Rio Grande as well as  
24 others to assist in developing the equation. Is that  
25 what you're asking?

1           **Q.    Well, I'm asking, does this report indicate**  
2 **in any way what the joint investigation found about**  
3 **crop consumptive use?**

4           A.    Let me see something.  So if I understand  
5 your question, did this report in any way call out the  
6 joint investigations.  I would believe, based on my  
7 references, that it did not specifically.  We relied  
8 on a Blaney Hansen report to assist us in  
9 understanding what the Blaney-Criddle Method is, but  
10 my experience, and I've had the opportunity to  
11 research this multiple times in my work, in  
12 determining irrigation water requirements over the  
13 years, that the joint investigations were part of the  
14 analysis provided by Blaney-Criddle supporting their  
15 methodology.

16           **Q.    But you're aware that there's a section in**  
17 **the Rio Grande JIR that includes consumptive use**  
18 **estimates for --**

19           A.    Yeah.  It's --

20           **Q.    -- the lower valley, correct?**

21           A.    Yeah.  It's -- it's pretty dense, sure.  
22 Refers to experiments at NMSU to determine use of  
23 crops, for example.  I think it has some conclusions  
24 on what the anticipated use for crops may be.  Yeah,  
25 there's -- it's -- it's -- I mean, I must say, it's a

1 pretty extraordinary piece of work at the time --  
2 well, not even for the time, just period.

3 Q. But it wasn't considered in the state  
4 engineer's analysis of crop consumptive use in the Rio  
5 Grande, was it?

6 A. Indirectly, it was.

7 Q. Through the Blaney-Criddle equation?

8 A. Yes.

9 Q. Okay. Going back to that concept of aquifer  
10 depletion that we saw in the Mesilla Valley  
11 guidelines, we talked -- it referred to aquifer  
12 depletion being a product of the irrigated acreage and  
13 the average CIR. Do you remember that?

14 A. I'd have to go back to look to be sure, but  
15 that sounds right.

16 Q. Okay. So in your -- you know, your report,  
17 which advised a 2.6 acre-foot per acre CIR basin wide,  
18 if you -- if there was a 3 acre-foot per acre surface  
19 allotment from EBID, we'd be assuming that 2.6  
20 acre-feet would be consumed by the crop, and then what  
21 would happen to the rest of that water? Where do the  
22 other four tenths go?

23 A. So typically in an administration where  
24 you're taking water out of agriculture and putting it  
25 into other uses aside from agriculture, it's long been

1 the policy -- my understanding is that you just  
2 transfer the consumptive use, and you leave the  
3 remaining of the water in the system. I also would  
4 note that in that transfer, it's -- there's direction  
5 that the groundwater and surface water right need to  
6 be transferred together, and in that instance, the  
7 groundwater right potentially would be eliminated from  
8 consideration. In other words, you couldn't -- you  
9 couldn't split the two rights when you went to  
10 transfer.

11 Q. So I wasn't really talking about transfers  
12 there. I was asking just the way that, you know, FDR  
13 and CIR work -- CIR work is that the -- if the FDR in  
14 this case for a surface water right is 3 acre-feet per  
15 acre or 3.024, we'll round, and, you know, the  
16 basin-wide -- under your assumption in your original  
17 reports, a basin wide consumptive irrigation  
18 requirement of 2.6 acre-feet, so the difference  
19 between 3 and 2.6 is .4. So where is that four tenths  
20 of an acre-foot going?

21 A. It would be left in the system.

22 Q. Okay. Now, under Stream System Issue 104 --  
23 101, excuse me, the final judgment, you have -- and  
24 let's say you have a combined surface and groundwater  
25 right, so you get 3 acre-feet from your surface water

1 allotment in this hypothetical, but now, you have a  
2 CIR of -- you're assuming a CIR of 4 acre-feet per  
3 acre. So we have -- and the rest is made up by  
4 groundwater, right? I'm sorry. Let me strike that  
5 question.

6 Okay. So you have --

7 JUDGE MELLOY: Why don't you just ask  
8 the question instead of going through the long lead up  
9 to the question.

10 Q. (BY MS. COLEMAN) Well, I just want to make  
11 sure the math is right. If you have 3 acre-feet from  
12 EBID and your crop is consuming 4 acre-feet, that's --  
13 3 minus 4 is what?

14 A. 4 is what's included in the order.

15 Q. Okay. 3 minus 4 is negative 1 as a  
16 mathematical --

17 A. I'm sorry. I couldn't understand. It  
18 blurred. Apologize. I'm doing my best here.

19 Q. So that's a negative 1 to the aquifer, right?

20 A. I don't understand that. I apologize.

21 Q. Okay. We'll leave it there.

22 MS. COLEMAN: I don't know if the  
23 Special Master wants to take a break for a minute or  
24 we can keep going. I --

25 JUDGE MELLOY: Let's keep going.

1 MS. COLEMAN: Okay.

2 JUDGE MELLOY: How much longer are you  
3 going to be?

4 MS. COLEMAN: A little while.

5 JUDGE MELLOY: All right. Let's keep  
6 going.

7 MS. COLEMAN: Okay.

8 Q. (BY MS. COLEMAN) So as -- at the time you  
9 were preparing your -- I withdraw that.

10 So we talked about the trial being recessed  
11 and the hearing on the settlement agreement occurring  
12 on June 24th, 2011. Do you remember that?

13 A. Yes, I do.

14 Q. Okay. And at that time, New Mexico had not  
15 yet filed suit to challenge the operating agreement;  
16 is that right?

17 A. I don't know.

18 Q. Okay. And you testified earlier that part of  
19 that hearing was -- well, in fact, that counsel for  
20 the United States participated telephonically; do you  
21 remember that testimony?

22 A. I do.

23 Q. And that was Mr. Leininger?

24 A. I believe so.

25 Q. Okay. Do you know why he was appearing

1     **telephonically?**

2           A.     I can't speak for the United States'  
3     motivations, but I would assume given the nature of  
4     this proceeding, that they would have an interest in  
5     it.

6           **Q.     But he wasn't the only one participating**  
7     **telephonically, right?**

8           A.     From the United States or just in general?

9           **Q.     Well, you weren't there so you don't know,**  
10    **right?**

11          A.     I looked at some of the supporting  
12    information, so I know others were -- other parties  
13    were telephonically part of that proceeding.

14          **Q.     Was counsel for the City of Las Cruces**  
15    **involved in that hearing on June 24th, 2011?**

16          A.     I don't recall specifically seeing that, but  
17    in my experience, the City of Las Cruces would have  
18    been. They're very interested in that portion of the  
19    -- they're very interested in the overall stream  
20    system adjudication.

21          **Q.     And you testified earlier, I believe, that**  
22    **there was an opportunity for comments or something to**  
23    **be filed relating to the proposed final judgment. Do**  
24    **you remember that?**

25          A.     Yes.



1 Q. Okay. Do you recall who submitted comments?

2 A. No.

3 Q. Okay. You'd need to look at the document for  
4 that, right?

5 A. Perhaps.

6 Q. Okay. So under the judgment in Stream System  
7 Issue 101, any irrigator who's using groundwater,  
8 either supplementally or exclusively, is assigned a  
9 farm delivery requirement of 4.5 acre-feet per acre  
10 unless they prove up, right?

11 A. I believe that's the basic determination,  
12 yes.

13 Q. Okay. And they are entitled to that 4.5  
14 acre-feet per acre farm delivery requirement without  
15 consideration of the capacity of the diversion works,  
16 the commencement of works, whether there's a water  
17 development plan, any of those criteria?

18 A. At this point in the adjudication, we're  
19 determining what the farm delivery requirement would  
20 be we would not be looking at it from the standpoint  
21 of a declaration, which is some of the items that you  
22 have identified. This would be merely looking at the  
23 amount of water that would be available for the  
24 claimant and overall for the agricultural community to  
25 be able to divert.

1           Q.    Okay.  So in the application context under  
2   the 1999 guidelines, these -- those various factors we  
3   saw, little A, little B, little C, would be  
4   considered, but under the Stream System Issue 101  
5   judgment, they are not considered; isn't that right?

6           A.    I think you'd need to back up.  What the  
7   administrative guidelines were speaking to would be  
8   the -- would be a review of someone who's transferring  
9   a right that is sourced in a declaration.  The  
10  processes that went through for the evaluating the  
11  declaration are similar to the processes that go  
12  through an adjudication.  Once you're in adjudication,  
13  you will have had to make a claim in adjudication  
14  court and state engineer, hydrographic survey, et  
15  cetera, will look at those claims, and then ultimately  
16  the Court will make a decision.  I view those as very  
17  separate processes.

18          Q.    So you're leaving it to the Court to make the  
19  case-by-case determination and not have the state  
20  engineer do it, right?

21          A.    I don't believe that's what I said.

22          Q.    Okay.  Well, we'll -- we'll leave that for  
23  some discussion of what the court process is.

24                Let's look at the final judgment.  There's  
25  just a few more provisions I just want to go through

1 quickly. So if we look at -- this is Joint Exhibit  
2 474, Page 14, Section 5, if you have it in front of  
3 you. Okay. So this section is entitled, "Priority  
4 Date." And we see little A there, "The priority date  
5 for supplemental groundwater rights as described above  
6 is not determined herein and is subject to  
7 determination by the adjudication court." Do you see  
8 that?

9 A. Yes, I do.

10 Q. Okay. So at the time of this judgment, you  
11 know, the priority date associated with the various  
12 rights that would be covered by this judgment is still  
13 an open question, correct?

14 A. That's something the Court will have to  
15 determine.

16 Q. Okay. Then let's go to Page 16 of Joint  
17 Exhibit 474. At the very top -- so we're looking here  
18 in the settlement agreement part of this, which is  
19 distinct from the judgment itself. So it says there  
20 right at the top of Page 16, "To meet his obligation,  
21 the State Engineer will, as necessary, implement  
22 priority administration or a system of alternative  
23 administration in the Lower Rio Grande, in accordance  
24 with the law." Do you see that?

25 A. I do.

1           Q.     Okay.  So what -- how does the state engineer  
2     determine whether it's necessary to implement priority  
3     administration or a system of alternative  
4     administration under this paragraph?

5           A.     I believe that's referring to if someone  
6     provides notice or otherwise alerts the state engineer  
7     that they want -- they are seeking a priority  
8     administration.  I believe that's what that's looking  
9     to.

10          Q.     And in this case -- well, for example, the  
11     United States would have to seek priority  
12     administration of its rights for the Project, right?

13          A.     Under state law, that's correct.

14          Q.     So there's been no priority administration in  
15     this basin, right?

16          A.     Not on a grand scale, right.

17          Q.     What about on a smaller scale?

18          A.     I was just thinking about the situation with  
19     the river pumpers, if that was a priority issue or if  
20     it was a illegal diversion issue, and I think it -- it  
21     came down to that there was -- it kind of fell into  
22     both categories.  There were illegal diversions, and  
23     those are stopped, and then there was investigation of  
24     some of the other ones that showed that there was a  
25     priority date senior to the Project, and so there was

1 a mix of both. That's why I paused there.

2 Q. And Mr. Serrano is the person to ask about  
3 that, right?

4 A. I believe he'd be able to provide a good  
5 detail on that, yes.

6 Q. So you're familiar with the Active Water  
7 Resources Management Statute, correct?

8 A. I'm familiar with it, yes.

9 Q. Okay. And state engineer has promulgated  
10 what are called framework regulations pursuant to that  
11 -- that statute; is that right?

12 A. Yes. That's correct.

13 Q. Okay. And in turn, the statute contemplates  
14 or the regulations contemplate district-specific  
15 regulations for the Lower Rio Grande; is that right?

16 A. I don't know if it specifically states Lower  
17 Rio Grande, but the purpose of the framework regs was  
18 to provide guidance on how to craft district --  
19 district-specific rules around the state so it wasn't  
20 just for the Lower Rio Grande. So I don't know that  
21 it cites it specifically.

22 Q. And the district-specific regulations --  
23 actually, I'll just withdraw that for now.

24 So no district-specific regulations have been  
25 promulgated for the Lower Rio Grande, correct?

1           A.     That's my understanding.

2           **Q.     Okay. Has there been any step taken towards**  
3 **alternative administration in the Lower Rio Grande?**

4           A.     Given that there is -- it's unknown what to  
5 administrate for, no.

6           **Q.     Why is it unknown what to administrate for?**

7           A.     There's no call on the river.

8           **Q.     So alternative administration is another way**  
9 **to do priority administration?**

10          A.     That could be one way to look at it. My  
11 experience in other parts of the state is it's -- for  
12 example, this is an example, might be a senior water  
13 right holder or, for example, an Indian tribe. They  
14 have a prior empowerment rights, and there may be --  
15 there's junior users beyond that same system, and they  
16 may enter into an agreement for shortage sharing so in  
17 that instance, that would be, you know, described as  
18 alternative for -- I forget what the phrase is, but  
19 alternative administration. So if there's agreement  
20 amongst the parties within the basin as a way to share  
21 shortages, my experience has been more or less that --  
22 well, actually, I never had an experience where a  
23 senior water right holder sought to extinguish other  
24 rights for their benefit, rather they prefer to -- my  
25 experience has been is the preference is to share in

1 those shortages. So that would be alternative  
2 administration.

3 Q. So the state engineer will not do alternative  
4 administration unless an aggrieved party asks for it  
5 or the water users voluntarily agree to share  
6 shortages; is that a fair summary?

7 A. I'd look at it a little differently. I think  
8 the state engineer's authority ends at his ability --  
9 the state engineer's ability -- you know, the blunt  
10 hammer is the priority call. If there's an  
11 alternative administration considered, that would need  
12 to come from the users that may be impacted by that,  
13 and the state engineer would have to evaluate that to  
14 see if it would meet the needs of whatever  
15 administration was necessary. But I believe the state  
16 engineer's authority stops at the ability to make a  
17 priority call.

18 Q. Okay.

19 A. In other words, the state engineer doesn't  
20 have the ability to come up with an alternative  
21 administration. He merely could evaluate it and see  
22 if it meets the same objective that's necessary.

23 Q. Okay. I have just a few more questions about  
24 101. So other than the -- the filings on the court  
25 docket in Stream System Issue 101, did the state

1 engineer's office provide public notice of the  
2 settlement agreement at any point prior to the final  
3 judgment?

4 A. My best recollection is the notice would have  
5 been through the stream system --

6 Q. Okay.

7 A. -- information dispersion process.

8 Q. Did the state engineer notify the Rio Grande  
9 Compact Commission about the settlement agreement  
10 prior to signing it?

11 A. I wasn't part -- I don't know, but I do not  
12 recall any -- I do not recall that there was a  
13 presentation to the stream -- excuse me -- the Rio  
14 Grande Compact Commission, but I wasn't necessarily  
15 intimate with what the Compact Commission was doing at  
16 that time. It wouldn't surprise me if there was some  
17 description of that given, but given that this was a  
18 localized -- relatively local adjudication, I'm not  
19 sure, within state law, that there was any requirement  
20 to bring in front of the Rio Compact Commission.

21 Q. And there was no environmental review or  
22 assessment done by the State of New Mexico pertaining  
23 to the settlement agreement, correct?

24 A. If you could help me with Environmental  
25 review. I don't know what that means.



1           Q.    You're familiar with the Federal National  
2 Environmental Policy Act, right, NEPA?

3           A.    Yes, I am.

4           Q.    Is there a New Mexico state equivalent of  
5 NEPA?

6           A.    Not that I'm aware of.

7           Q.    Okay. So I just want to pull up U.S. Exhibit  
8 417. So this was the sub-file -- well, this is the  
9 sub-file offer of judgment that you looked at with  
10 Mr. Wechsler, and can we -- can we go to the signature  
11 page? Okay. So I can't quite clearly see the middle  
12 date there, but it looks like it's signed and dated  
13 August 26th, 2011. Do you see that?

14          A.    Yes, I do.

15          Q.    Okay. And then with Mr. Wechsler, you also  
16 looked at Joint Exhibit 472, which is the 2012 order  
17 in Stream System 104. Do you remember that?

18          A.    I remember that. What -- what -- what  
19 exhibit are you referring to?

20          Q.    I was referring to -- to Joint Exhibit 472?

21          A.    472. Thank you.

22          Q.    Okay. Now, I want to just pull up quickly  
23 New Mexico Exhibit 2386. Have you seen this document  
24 before? For the record, we're looking at a document  
25 with a docket stamp at the top that says Case

1 1:11-CV-00691-CG, et cetera, and it says filed  
2 08/08/11. Do you see that at the top there?

3 A. I trust that you've read that properly. I'm  
4 looking for the exhibit in my books.

5 Q. Thank you. So we agree this is the complaint  
6 that New Mexico filed challenging, among other things,  
7 the 2008 Operating Agreement?

8 A. Pardon for my delay. I do now have it in  
9 front of me. Is the question have I seen this?

10 JUDGE MELLOY: I think the question --  
11 is there any dispute that this is the operating  
12 agreement -- I mean, this is the complaint? Can we  
13 just stipulate to that and cut to the chase?

14 MR. WECHSLER: Yeah. I think that's  
15 right, Your Honor. We don't dispute that. I think  
16 it's already admitted, isn't it?

17 JUDGE MELLOY: So let's ask -- ask your  
18 question.

19 MS. COLEMAN: Okay.

20 Q. (BY MS. COLEMAN) So prior to the settlement  
21 agreement being submitted in Stream System Issue 101,  
22 the operating agreement hasn't been challenged,  
23 there's no offer of judgment filed with the Court on  
24 the -- on the United States interest in the Project  
25 water right, and the United States claims to

1 groundwater have not yet been addressed in the  
2 adjudication; isn't that right?

3 A. I mean, I'd have to go through the sequence  
4 of dates just for efficiency.

5 Q. Okay.

6 A. It looks kind of right.

7 Q. Okay. So my point here is if the operating  
8 agreement lawsuit, the proposed -- the offer of  
9 judgment to the United States, and the State's motion  
10 to dismiss the United States' claims to groundwater  
11 all came fairly soon after the settlement agreement  
12 and final judgment were filed in Stream System Issue  
13 101; does that sound right to you?

14 A. There's a lot of information in that  
15 question.

16 Q. Okay.

17 A. My understanding --

18 Q. We'll let --

19 A. -- of the question --

20 Q. -- speak for itself.

21 Okay. And as far as we know, not one of  
22 these things, the settlement agreement, the operating  
23 agreement lawsuit, or the offer of judgment were shown  
24 to the Rio Grande Compact Commission or as far as you  
25 know, right?

1           A.     That's correct, as far as I'm aware.

2           Q.     Okay. Just going quickly here, we'll go to  
3 Joint Exhibit 472. Okay. And we're going to go to  
4 Page 7. Actually, I'm sorry. Let's go to Page 6.  
5 Okay. So we see that heading there in Lines 24 and  
6 25, "The state engineer will perform a technical  
7 evaluation of seepage and return flows if required by  
8 future administrative proceedings." Have you seen  
9 that? Do you see that?

10          A.     Yes, I do.

11          Q.     Okay. Has the state engineer performed a  
12 technical evaluation of seepage and return flows in  
13 connection with this order?

14          A.     I'm not aware of any administrative  
15 proceedings after this point that required that  
16 analysis.

17          Q.     So -- so the answer is no?

18          A.     I guess aside from -- from -- from this  
19 proceeding, of course.

20          Q.     Right. So the modeling agreement in this  
21 lawsuit is -- is the state engineer's technical  
22 evaluation of seepage and return flows; is that your  
23 understanding?

24                   MR. WECHSLER: Objection; foundation.

25                   JUDGE MELLOY: Let's move on. Actually,

1 this is probably as good a time as in. I'll sustain  
2 the objection, and probably as good a time as in to  
3 break for the evening. How much more do you think you  
4 have?

5 MS. COLEMAN: Five minutes. I have five  
6 minutes.

7 JUDGE MELLODY: All right. Well, let's  
8 try to finish yours and then we'll do any redirect in  
9 the morning. Let's go ahead.

10 Q. (BY MS. COLEMAN) Okay. I just want to talk  
11 about the groundwater conservation program very  
12 quickly. So you were shown some documents from, I  
13 think, what you referred to as the first cycle of the  
14 grant program, and there's a second cycle as you said,  
15 right?

16 A. If I may interject. Yes, there's one that we  
17 did advertise in November of 2020, and then we had  
18 another advertisement this past August and this past  
19 October so that's how aggregating the cycles or the  
20 phases.

21 Q. And the reason that you said you have -- the  
22 reason that you had another advertisement in October  
23 is that you extended the application deadline,  
24 correct?

25 A. Well, wouldn't quite describe it as extended.

1     What we had in place is the results of our initial  
2     efforts, and we were able to take those lessons  
3     learned and apply them for the August period, and it  
4     went very well. We had a very smooth process intaking  
5     applications, great, you know, communications with the  
6     community that was interested in that, and at the end  
7     of that first advertisement, there was a positive  
8     decision to continue and open up a second  
9     advertisement. So that's -- that -- that was the  
10    sequence of events.

11       **Q.     Okay. And your budget for this program is \$7**  
12    **million, correct?**

13       A.     In essence, that's what the adjusted  
14    appropriation was, yes.

15       **Q.     And the appropriation was adjusted because**  
16    **the state legislature cut \$10 million off the budget,**  
17    **right?**

18       A.     That's one way of putting it, yeah.

19       **Q.     Okay. And so the fact that you extended the**  
20    **application deadline, can we take from that, that that**  
21    **means you had space in the budget to enroll some more**  
22    **applicants?**

23       A.     We had a budget for that, yes.

24       **Q.     Okay. Or stated differently, the**  
25    **applications you had received up until that point**

1 didn't use up all the money that you had budgeted for  
2 those payments, correct?

3 A. That's -- well, I mean, it didn't use up the  
4 appropriation. That's correct.

5 MS. COLEMAN: Okay. That's all I have.

6 JUDGE MELLOY: All right. I think we'll  
7 break then for the evening. We'll come back at --  
8 well, I should ask, I assume you have -- do you have  
9 redirect, Mr. Wechsler?

10 MR. WECHSLER: Well, Your Honor, I would  
11 ask that I be allowed to do it now because I think I  
12 can do it in five minutes. I'll forego anything else.

13 JUDGE MELLOY: If you can do it in five  
14 minutes, I'll let you do it.

15 MR. WECHSLER: All right. Thank you.

16 REDIRECT EXAMINATION

17 BY MR. WECHSLER:

18 Q. If we could turn first to New Mexico Exhibit  
19 25. These are the Mesilla guidelines. Do you recall  
20 that, questions about that from Mr. -- Ms. Coleman,  
21 Mr. Longworth?

22 A. Yes. I recall that we had some questions on  
23 that.

24 Q. And Ms. Coleman walked you through a number  
25 of different provisions and all of those provisions

1 are actually used in evaluating applications; is that  
2 right?

3 A. I believe that's correct, yes.

4 Q. If we turn to Page 20, just to give an  
5 example of that, here you can see a couple of  
6 conditions. At the end of permits, there are  
7 conditions of approval; is that right?

8 A. Yes. That's the standard conditions of  
9 approval of most permits that are given.

10 Q. So Condition of Approval No. 1, for example,  
11 says the permit can't be exercised to the detriment of  
12 valid existing water rights, and that's the standard  
13 condition of approval, right?

14 A. Yeah. I believe that's given to all permits  
15 in the State of New Mexico.

16 Q. If you look at Condition No. 4, in here it  
17 talks about water shall not be diverted until there's  
18 a certain amount transferred to offset the anticipated  
19 surface water depletions. That's another condition of  
20 approval that can be given in the Lower Rio Grande,  
21 right?

22 A. That's correct.

23 MR. WECHSLER: We can take that down.

24 Q. (BY MR. WECHSLER) Turning to the few  
25 questions about the Inter se proceeding, I want to



1 first clean up one thing, and that is in an  
2 adjudication, Mr. Longworth, is it your understanding  
3 that it's actually the State of New Mexico who was the  
4 plaintiff?

5 A. That's correct.

6 Q. And then there was some discussion about the  
7 various Inter se proceedings, but I want to be clear,  
8 the state engineer can administer given the orders in  
9 Stream System 101 and 104 right now, right, using that  
10 as a basis?

11 A. That's correct.

12 Q. Turning to the question of FDR, and there was  
13 some questions about has there been an FDR in any  
14 other basins of 4.0, you recall those questions?

15 A. Yes, I do.

16 Q. Do you know how much water EP No. 1 --  
17 surface water EP No. 1 provides in a full supply  
18 condition?

19 A. My understanding from the Texas adjudication  
20 that they're entitled to 4 acre-feet per acre per  
21 annum.

22 Q. And that's for surface water only, right?

23 A. That's my understanding. I don't believe the  
24 State of Texas has that kind of adjudication in that  
25 part of the interstate.

1           Q.    In other words, are there any limits on the  
2 amount of groundwater pumping that you're aware of in  
3 the State of Texas?

4           A.    I'm not aware of any limits.

5           Q.    And finally, you were asked some questions  
6 about priority administration. Taking out the river  
7 pumper issue, which you've talked about a couple of  
8 different times today, has there ever been a priority  
9 call to protect the project right in the Lower Rio  
10 Grande?

11          A.    Not that I'm aware of.

12               MR. WECHSLER: Thank you, Your Honor.  
13 No further questions.

14               JUDGE MELLOY: Ms. Klahn, did you have  
15 anything further? You're on mute.

16               MS. KLAHN: No, Your Honor. Thank you.

17               JUDGE MELLOY: Okay. Ms. Coleman?

18               MS. COLEMAN: No, Your Honor.

19               JUDGE MELLOY: All right. I think we're  
20 done with this witness.

21               MS. COLEMAN: You forgot Mr. Wallace.

22               MR. WALLACE: For everyone's benefit, I  
23 have no questions, Your Honor.

24               JUDGE MELLOY: I have been given a note,  
25 New Mexico 25, which was quite a bit of examination

1 about, I don't think is in evidence. Did you want it  
2 to evidence? I can't remember who used it. I think  
3 you used it, Ms. Klahn.

4 **MS. COLEMAN:** We used it, and I have it  
5 on my list as admitted.

6 **MR. WECHSLER:** We agree.

7 **JUDGE MELLOY:** You agree it's admitted?  
8 Okay. If it's not previously, then it is now.

9 All right. Then I will see everybody  
10 tomorrow morning. Thank you, everyone.

11 **MR. WECHSLER:** Thank you.

12 **JUDGE MELLOY:** And our witness is free  
13 to go. Thank you.

14 **MS. KLAHN:** Thank you.

15 **THE WITNESS:** Thank you, Your Honor.

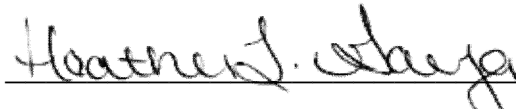
16 (The proceedings adjourned at 5:06 p.m.)  
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I, HEATHER L. GARZA, a Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the facts as stated by me in the caption hereto are true; that the foregoing pages comprise a true, complete and correct transcript of the proceedings had at the time of the hearing.

I further certify that I am not, in any capacity, a regular employee of any of the parties in whose behalf this status hearing is taken, nor in the regular employ of any of the attorneys; and I certify that I am not interested in the cause, nor of kin or counsel to any of the parties.

GIVEN UNDER MY HAND AND SEAL OF OFFICE,  
on this, the 16th day of December, 2021.



HEATHER L. GARZA, CSR, RPR, CRR

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