

SUPREME COURT OF THE UNITED STATES
NO. 141, ORIGINAL

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

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for HEARING before HONORABLE MICHAEL A. MELLOY, SPECIAL MASTER, held REMOTELY via Zoom, on OCTOBER 4, 2021, commencing at 11:02 a.m.;

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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

FOR THE PLAINTIFF STATE OF TEXAS:

Mr. Stuart L. Somach
SOMACH SIMMONS & DUNN
500 Capitol Mall, Suite 1000
Sacramento, California 95814
(916) 446-7979
ssomach@somachlaw.com

-and-

Ms. Sarah A. Klahn
SOMACH SIMMONS & DUNN
2701 Lawrence Street, Suite 113
Denver, Colorado 80205
(720) 279-7868
sklahn@somachlaw.com

FOR THE DEFENDANT STATE OF NEW MEXICO:

Mr. Jeffrey Wechsler
MONTGOMERY & ANDREWS
325 Paseo De Peralta
Santa Fe, New Mexico 87501
(505) 986-2637
jwechsler@montand.com

-and-

Mr. Hector H. Balderas
NEW MEXICO ATTORNEY GENERAL
POST OFFICE DRAWER 1508
Santa Fe, New Mexico 87501
(505) 239-4672
hbalderas@nmag.gov

FOR THE DEFENDANT STATE OF COLORADO:

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

FOR THE UNITED STATES:
Mr. James J. Dubois
U.S. DEPARTMENT OF JUSTICE
999 18th Street, Suite 370
Denver, Colorado 80202
(303) 844-1375
james.dubois@usdoj.gov

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX

	Page
OPENING STATEMENTS	
By Mr. Somach	16
By Mr. Dubois	36
By Mr. Wallace	46
By Mr. Balderas	46
By Mr. Wechsler	49
MICHELLE ESTRADA-LOPEZ	
Direct Examination by Mr. Dubois	80
REPORTER'S CERTIFICATION	210

1 **JUDGE MELLOY:** All right. We'll get
2 started here. This is in United States Supreme Court
3 Original No. 141, and Texas versus the State of New
4 Mexico and State of Colorado with United States as
5 intervenor. I would ask that we -- well, let me just
6 start with a couple of the ground rules that we talked
7 about in the last few hearings. I would ask that
8 anyone who is not going to be participating in the
9 proceedings this morning, that their camera should be
10 turned off, and I would ask anyone who is not speaking
11 to have their microphones muted until they actually
12 are speaking, with the exception, of course, of the
13 witness who will be examined. As I said earlier, I'm
14 only going to take the appearances today of those
15 folks who are going to be appearing on the hearing, so
16 we'll start with Mr. Somach. Do you want to enter
17 your appearance?

18 **MR. SOMACH:** Yes, Your Honor. My name
19 is Stuart Somach. I am the counsel of record for the
20 State of Texas in this case. Part of the day, Sarah
21 Klahn from my office, also representing the State of
22 Texas, and who is currently in Denver at the
23 Department of Justice -- at the Department of Justice,
24 she'll pick up, and I'll -- I'll go ahead and -- and
25 drop off in terms of the picture at that point in

1 time.

2 **JUDGE MELLOY:** All right. Mr. Dubois?

3 **MR. DUBOIS:** Good morning, Your Honor,
4 James Dubois for the United States. I will be -- as
5 far as I know, I think I will be the only one speaking
6 today.

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

8 **MR. WECHSLER:** Good morning, Your Honor.
9 Jeff Wechsler on behalf of the State of New Mexico,
10 and also with your indulgence, we'll ask that Attorney
11 General Hector Balderas be allowed to give a portion
12 of New Mexico's opening statement, and that's why he's
13 appearing on the screen.

14 **JUDGE MELLOY:** Happy to have you,
15 Mr. Attorney General. Mr. Wallace?

16 **MR. WALLACE:** Good morning, Your Honor.
17 This is Chad Wallace representing the State of
18 Colorado.

19 **JUDGE MELLOY:** All right. Well, I think
20 probably we need to start with a little discussion
21 about the status of the exhibits and Mr. Wechsler's
22 e-mail yesterday evening. As I understand it, the
23 issue is who is -- when -- when New Mexico designates
24 exhibits for cross-examination that are either United
25 States exhibits or Texas exhibits, who is supposed to

1 supply those exhibits to the court? Is that -- is
2 that the gravamen of the dispute, Mr. Wechsler?

3 **MR. WECHSLER:** I think that's right,
4 Your Honor, and I wouldn't say it's a dispute. It's
5 simply something that we recognized was an issue after
6 we saw that the United States and Texas would not be
7 providing copies of their exhibits that we had
8 designated.

9 **JUDGE MELLOY:** Well, let me ask you
10 this: Under the protocol, you are to exchange --
11 well, Texas is to designate its exhibits five days
12 before a witness is called, and then you have, what,
13 is it one day, Mr. Wechsler, to respond and designate
14 your cross-examination exhibits?

15 **MR. WECHSLER:** That's correct.

16 **JUDGE MELLOY:** Okay. Mr. Somach or
17 Mr. Dubois, would you have any objection to including
18 your exhibits that are designated by New Mexico in
19 your packet that you would then send to the court?

20 **MR. DUBOIS:** Your Honor, this is Jim
21 Dubois. I mean, the -- the packet that we sent to the
22 court was the exhibits that we designated, and we sent
23 that before we ever saw New Mexico's list, and so what
24 we would have to do is on very short order, send out a
25 new package of exhibits with the ones designated by

1 New Mexico. I guess it could be done, but it's not
2 going to be on the same time frame. We send out the
3 exhibits to Your Honor in a folder -- or a notebook, I
4 should say, when we send out our exhibit list, which
5 is five days before testimony. Since we don't get
6 their list until a couple of days later, it would
7 actually be a second submission to Your Honor in a
8 separate notebook that would arrive, you know, shortly
9 before trial. Can it be done? Yes, Your Honor. Can
10 it be done when we send out our set of exhibits? No,
11 Your Honor.

12 **JUDGE MELLOY:** Well, let me ask you
13 this: One of the things I have been wondering about
14 as we start this process is, is five days the right
15 number? Do -- should that be pushed back maybe to
16 five business days, so that when we have a weekend in
17 there, if it's -- if it's the Monday witness, like
18 today, then you'll be designating exhibits Monday
19 previous. Is -- would that -- would that be a burden
20 on the parties? And maybe -- maybe this whole process
21 is a little too compressed when we talk about five
22 actual days as opposed to five or six working days.

23 **MR. SOMACH:** I don't -- I don't think
24 it's the five days that's the problem. I think
25 generally, we're working seven days a week, and so as

1 a consequence, whether they're calendar days or
2 business days somewhat gets blurred in the
3 distinction. I do think it's a burden on the party
4 that's providing the direct evidence and testimony to
5 also have to compile all these cross-examination
6 materials. I will tell you that I received -- I mean,
7 we sent out a binder with direct evidence for one of
8 our witnesses, and the cross-examination binder when I
9 finally compiled it was twice as large. I just think
10 the party that's going to cross-examine and who
11 discloses these materials ought to be responsible for
12 providing you with -- with the hard copies of the
13 materials. That's the least burdensome way of doing
14 it. Otherwise, when we get the list, we then first
15 have to go back. We have to pull all those documents.
16 We have to compile all those documents, and then we
17 have to Federal Express them, when -- when the
18 cross-examining party already has the documents, they
19 already know what the documents are. They can send
20 those out, quite frankly, at the very same time that
21 they send it to -- to the party that's doing the --
22 the direct examination, and that's the most efficient
23 way of doing it.

24 **MR. WECHSLER:** So, Your Honor, in terms
25 of the most efficient way of doing it, it's the way

1 you had originally conceived, and that is all of the
2 parties simply provide a full set of the exhibits to
3 the court. In every other virtual hearing, that is
4 the way it was done, and in terms of efficiency, this
5 is exactly the kind of thing that New Mexico was
6 looking to avoid. We're -- we're not interested in
7 having to, every day, be determining what packet to be
8 FedExing or putting in the mail and then having
9 problems with delivery. That's why we thought it
10 better if all of the parties provided a full set of
11 their exhibits and then you can simply have your
12 assistant pull those at the time it makes sense. In
13 terms of whether or not New Mexico should be
14 responsible for U.S. and Texas exhibits, that doesn't
15 seem fair.

16 **JUDGE MELLOY:** Well, what is your
17 response, though, to the argument that you know what
18 you're going to be using for cross-examination and
19 then if you -- if you -- if we don't -- if you don't
20 designate those exhibits until one day after the
21 witness lists are -- I mean, exhibit lists are
22 exchanged, they have to scramble to pull them and --
23 and copy them and send them? I guess it goes back to
24 my question, is this whole process too compressed?

25 **MR. WECHSLER:** Well, I don't think it

1 would be too compressed if Texas and the United States
2 simply provided a full set of exhibits to Your Honor
3 and then you have a full set of everything that we
4 have. Again, we shouldn't be responsible for pulling
5 United States and printing United States and Texas
6 exhibits, and we certainly shouldn't be responsible
7 for then sending those to Your Honor.

8 **MR. SOMACH:** These are not --

9 **JUDGE MELLOY:** The ones --

10 **MR. SOMACH:** Sorry, Your Honor.

11 **JUDGE MELLOY:** I was going to say, the
12 one problem with getting a full set is, you know, we
13 received the set that you sent to us, Mr. Wechsler. I
14 mean, it's I don't know how many volumes, 50 or 60 at
15 least -- or notebooks, at least, and not all those
16 exhibits are necessarily going to be admitted, are
17 they?

18 **MR. WECHSLER:** Certainly not, no.
19 Certainly not, Your Honor. And had this been an
20 in-person trial, what we would imagine is that there'd
21 be, each day, someone pulling exhibits and providing
22 those to the witness and Your Honor. So, again, in
23 other virtual hearings that we have participated, a
24 full set is provided to the decision maker and then
25 before each day, the parties alert that judge as to

1 what exhibits will be coming the next day, and they
2 simply have their clerk or their assistant pull all of
3 those exhibits. And so when Texas and the United
4 States, we were quite surprised they decided not to
5 provide you a full set of exhibits and wanted to be
6 doing this daily mailing process. That was not -- we
7 were very concerned about the potential implications,
8 the cost, the burden on our team for doing that. We
9 didn't object because we decided, well, if that's what
10 they want to do with their own exhibits, they ought to
11 have that discretion, but now that we have learned
12 that they're not intending to provide copies of the
13 exhibits that we have identified, we recognized that
14 there was that gap where you would not have a copy of
15 their exhibits for cross-examination.

16 **MR. SOMACH:** They're not --

17 **JUDGE MELLOY:** Are you -- go ahead. Go
18 ahead.

19 **MR. SOMACH:** I just want to correct
20 something. They're not our exhibits. The point
21 being, these are exhibits that New Mexico is going to
22 be using on cross-examination. The first time we even
23 are aware of what exhibits they intend to use on
24 cross-examination is after we send our exhibits to the
25 court. That's not a problem. It also avoids, quite

1 frankly, the Court having to go through all those
2 boxes to pull the -- the exhibits. We will -- we've
3 done that for the Court by providing exhibits that we
4 are going to use. All we are suggesting is if New
5 Mexico intends to use exhibits on cross-examination,
6 it ought to be New Mexico that provides the Court with
7 their exhibits for cross-examination.

8 **JUDGE MELLOY:** All right. Well, let me
9 give this some thought, and I'll let you know what I
10 decide to do.

11 Let me take up a few other matters
12 before we get into the opening statements. The
13 parties have filed a joint submission of stipulated
14 facts. I will order that to be filed, and those
15 stipulated facts will be binding upon the parties for
16 all further purposes in this trial.

17 There is the question of this
18 evidentiary stipulation as to authenticity of exhibits
19 with extraneous annotations that was filed this
20 morning. So what I understand that to mean, and I --
21 correct me if I'm wrong, is that if there is such a
22 historical document that has annotations on it, that
23 the document will be admitted with the understanding
24 that the annotations will be ignored unless there is a
25 further submission or authenticity -- authentication

1 of the annotations; is that what I understand the
2 stipulation to be?

3 **MR. DUBOIS:** Yes, Your Honor. This is
4 Jim Dubois for the United States. Yes, Your Honor,
5 that's exactly correct. There are historical
6 documents. Obviously, these have been pulled from
7 various files from -- from Reclamation from the State
8 of Texas, and there are markings on some of them of
9 basically unknown origin. For the most part, those
10 documents are, I think, being relied on for the
11 underlying historical document, and unless there is
12 some authentication of -- of where those markups came
13 from, those markups are basically to be ignored.
14 That's correct.

15 **JUDGE MELLOY:** Okay. All right.
16 Anybody disagree with that understanding of the
17 stipulation?

18 (No response.)

19 **JUDGE MELLOY:** All right. I had
20 indicated or we had discussed at the last hearing, I
21 believe, whether at the opening of the trial, we would
22 just admit all the joint exhibits. At this time, I'm
23 not going to do that for a couple reasons. One is I'm
24 not sure they're all agreed to is the first problem;
25 but secondly, I'm also now, I think, a little bit more

1 appreciative of Mr. Dubois' concern that there may be
2 some documents that may be irrelevant, so at least at
3 this point in the trial, the joint exhibits will only
4 be admitted as they are used for a particular witness,
5 and at the end, we may have a number of joint exhibits
6 that are not admitted. But at this time as we go
7 through each witness, we will admit the exhibits for
8 that witness. Now, I do have the United States Notice
9 of Exhibit Disclosures and Objections, and when we get
10 to Mr. Esslinger, I will admit all the A exhibits, and
11 we'll go -- go forward from there.

12 I think that covers most of the
13 preliminary matters I wanted to talk about. Oh, one
14 -- going back to submission of the exhibits. United
15 States -- I mean -- well, Texas or United States, I'm
16 not sure which, has submitted a joint exhibit of -- of
17 the flyover of the drone flyover. You have not
18 actually submitted the -- a DVD or thumb drive or
19 anything with the flyover. Is that going -- is that
20 -- is it my understanding we go to Box.com to look at
21 that or how -- how do you anticipate that being
22 provided to me? That's a demonstrative exhibit, I
23 guess, not a stipulate -- not a joint exhibit.

24 **MR. DUBOIS:** Correct. It is a
25 demonstrative exhibit, Your Honor. It is on Box.com.

1 If you would prefer to have it as -- on a thumb drive,
2 we'd be more than happy to send you that, as well, but
3 it was -- it was uploaded to Box.com. It's a,
4 roughly, 23-minute, I want to say, like, 4 gigabyte or
5 something file.

6 **JUDGE MELLOY:** I would -- would you send
7 a thumb drive? I think it'd be --

8 **MR. DUBOIS:** Absolutely.

9 **JUDGE MELLOY:** -- easier.

10 **MR. DUBOIS:** We will overnight that to
11 you, Your Honor.

12 **JUDGE MELLOY:** All right. Any other
13 preliminary matters we need to get into before we
14 start the opening statements? If not, unless there's
15 any objection, my -- what I thought I would do for the
16 order of opening would be Texas, United States,
17 Colorado, and then give New Mexico the last word. Any
18 objection to that? If not, then I guess we'll start
19 with opening statements. Mr. Somach?

20 **MR. SOMACH:** Thank you, Your Honor. I'm
21 mindful of -- of the Court's admonition with respect
22 to having heard it all before, and I -- I recognize
23 that's the case, so I apologize in advance if I -- if
24 I repeat anything, but I've been at this since 2012,
25 and so I can't tell sometimes when I'm repeating

1 something that's been rehashed a million times. It
2 seems to me like it's all been hashed and rehashed a
3 million times. But the purpose of the opening
4 statement that we're going to provide is to give, to
5 provide context to the testimony that Texas, in
6 conjunction with the United States, will introduce in
7 the next few weeks and then in the spring, and what I
8 want to do is do a little linking of what we're going
9 to do now in the next few weeks with what we're going
10 to do in -- in -- in the spring so that we can -- we
11 can kind of bridge the gap a little bit and so you'll
12 know how it'll all fit together when we're all done,
13 hopefully, before summer.

14 The case, from our perspective, the
15 Texas case accepts foundationally the summary judgment
16 order that the Special Master, that you, issued
17 earlier this year and treat it somewhat as law of the
18 case, and the testimony and evidence that we will
19 introduce will, we think, create a solid foundation
20 for your recommendation to the Court, as well as the
21 Court's decision. It'll also do something that the
22 summary judgment order mentions in that it will fill
23 in factual gaps through witness and testimony, and
24 it'll also flesh out the contours of issues that
25 you've addressed and partially decided in the summary

1 judgment order. The case in chief of Texas focuses on
2 New Mexico actions or inactions that have resulted in
3 the interception through groundwater pumping and use
4 of that groundwater in New Mexico of Rio Grande
5 surface water that otherwise was apportioned to Texas.
6 I mean, that's -- that's the fundamental -- that's our
7 case. That's the most concise way I can articulate
8 our case. Conceptually, I think our case can be best
9 understood with reference to a water budget. That is,
10 the Texas case at its heart is one of arithmetic.
11 It's not even mathematics. It's arithmetic. It's
12 addition and subtraction and the accounting of the
13 various elements within that arithmetic. Now, if I --
14 if we were there, I would attempt to do what I'm going
15 to do now by maybe whiteboard illustration, but for
16 illustrative purposes, I'd like to put up a little
17 illustration that we've created to kind of demonstrate
18 what I'm talking about here. So can y'all see that
19 illustration? Again, this is not a -- it's not even a
20 demonstrative exhibit. It's not an exhibit. It's
21 just me trying to illustrate a point that -- that I
22 would have drawn on a board. But in -- in the top
23 part of the -- of the illustration, you'll see what we
24 -- what I characterize as a 1938 Condition. Now, the
25 elements of -- of the addition part of this are what's

1 in the reservoir, whatever is in the reservoir, and in
2 addition to that, the addition includes precipitation,
3 arroyo flows below the reservoirs, as well as return
4 flows. That is the reuse of water that otherwise has
5 been directly released from the reservoir and used --
6 used once. So in the 1938 Condition, there were
7 depletions. There was always the entitlement that New
8 Mexico has pursuant to treaty, and then as you've
9 noted, the remaining supply, what was remaining, was
10 divided 57/43 between the lands in EBID and the Texas
11 apportionment that initially goes to EP No. 1. This
12 little graphic at the top shows return flows. Return
13 flows were used in New Mexico itself. They -- they
14 were part of what EBID got, although the further down
15 you get into the system, the more return flows are
16 used. Dr. Brandes, in the -- who is one of Texas'
17 hydrologist engineer experts, who will testify in the
18 spring, will go over all of this water budget and --
19 and supply real numbers that go in here. But one of
20 the things he'll testify to is the fact that as you go
21 down in the system toward Texas, return flows become
22 more significant. It's not that return flows aren't
23 used upstream. It's just that they become of larger
24 proportion of the water that is -- is delivered. Now,
25 simply after pumping -- and -- and so what you see to

1 the right, except for return flows, are subtractions,
2 and if you stop the equation at EBID, what is left
3 over is what -- what EP No. 1 or what Texas gets. So
4 if you take a look at -- at the after pumping
5 situation, what you get is increased depletions. And
6 we've -- I know we've talked about all of this stuff,
7 but I want to just illustrate it. And that is you'll
8 get increased depletions, which include whatever
9 depletions were analyzed in 1938, but now, you have
10 depletions that are caused by the increased
11 groundwater pumping by the municipalities, by ag
12 within EBID, and then non-EBID ag, and then there's
13 domestic pumping that occurs, also. The Mexico part
14 of this equation is the same, and then what's left
15 over then is allocated 57/43 between EBID and the
16 Texas apportionment. And I note here that the -- the
17 57 percent that EBID gets is of a smaller hole, just
18 like Texas gets, because what we're doing is reducing
19 surface water supply that is available. A lot of the
20 difference in EBID is made up through groundwater
21 pumping, and that's noted in the depletion portion of
22 -- of this thing.

23 Go ahead and take that down.

24 As -- as I think we've indicated in our
25 briefing, we don't argue with the basic concept that

1 usable water, project water, is divided 57 percent/43
2 percent, but as is noted in the summary judgment
3 order, the question to focus on is 57/43 of what?
4 That becomes the critical question. Again, I have a
5 simple graphic. I think you'd recognize how simple
6 these are -- that demonstrates the point. Let's put
7 that up. And that's, you know, I think in our
8 briefing referred to this as the pie example, the
9 hundred percent of a 16-inch pizza versus an 8-inch
10 pizza. Here, I just used a box to describe this. In
11 both the 1938 condition -- excuse me -- in the after
12 pumping, you're dealing with a hundred percent of
13 something. Right? So the first thing you have, and
14 you have this in both the '38 condition and the
15 after-pumping condition is you have what Mexico gets
16 pursuant to treaty. Okay. That -- that exists in --
17 in both the before and the after condition. And so
18 the hundred percent of what you get, gets reduced by
19 -- by that Mexico allocation or diversion.

20 Just go ahead and knock that off.

21 Okay. The next thing you have in the
22 1938 conditions is depletions, which I indicated there
23 were depletions in 1938, but in the after-pumping
24 scenario, you get -- you get increased depletions
25 because of groundwater pumping. You have the surface

1 water being depleted by all of this extra pumping,
2 which fuels consumptive use. So those become
3 subtractions or -- or reductions to -- to the system.
4 So let's take that off if we can. What is left is
5 57/43 percent. And, again, this, I think,
6 demonstrates what we're trying to say is that -- that
7 New Mexico's constant harping that we get 43 percent,
8 we don't quibble with the fact that we get 43 percent
9 of something, but what we're entitled to is 43 percent
10 of the conditions that existed in 1938, not the
11 conditions that have been created by New Mexico
12 groundwater pumping.

13 Take that off now.

14 With respect to actual numbers at play,
15 and there are actual numbers that I avoided putting
16 them in here because I don't want to testify myself,
17 but there are actual numbers at play. The testimony
18 of Dr. Miltenberger, the historian you'll hear from in
19 a few weeks, as well as Dr. Brandes, who you'll hear
20 from in the spring, will explain that the 790,000
21 acre-foot number within the Compact, which you talk
22 about in -- in your order, was derived from exactly
23 the type of water budget that -- that I kind of put up
24 there. That is if you wanted to provide respective
25 entitlements to EBID and Texas, you needed to account

1 for releases from the reservoir, precipitation,
2 including arroyo flows, and -- and return flows from
3 the use of water from EBID lands. That's the --
4 that's the addition part of the water balance. Then
5 you subtract from that quantity the consumptive use of
6 water on EBID lands, as they existed in 1938, and
7 other losses in the system that existed in 1938, and
8 you -- you -- you arrive at a sum, and that sum is
9 what -- what Texas got. If more water is subtracted
10 for use in New Mexico than the Compact intended, then
11 Texas doesn't receive its apportionment. I think the
12 summary judgment order addresses that. Our testimony
13 and evidence is going to fill in, now, factual gaps
14 that were noted in the summary judgment order, as well
15 as flesh out areas that -- that were there but -- that
16 were noted in the order, also, but the 790,000
17 acre-foot number was not an arbitrary number. It was
18 negotiated, but it was negotiated derived from -- from
19 what the Compact negotiators had in mind that focus,
20 first, on the Texas apportionment, along with the EBID
21 and Mexico entitlements, and then it worked backwards
22 to figure out how much water New Mexico had to put
23 into the reservoir in order to achieve the
24 apportionment to Texas and the water that EBID was
25 entitled to, as well as accounting for the Mexico

1 entitlement. The 790,000 acre-foot number that's in
2 the Compact, as well as the index deliveries
3 requirement of New Mexico that are found in -- in
4 Article 4 of the Compact are absolutely tied to what
5 Texas and EBID were intended to get and, in turn, were
6 based upon and relied upon the 1938 depletion
7 condition. I think as you concluded in the summary
8 judgment order, groundwater pumping in New Mexico
9 intercepts return flow, and that has the effect of
10 increasing consumptive use in New Mexico that, in
11 turn, results in more water being subtracted upstream
12 than the Compact intended and allows. This hydrologic
13 condition, this water balance was known, and the
14 analysis was conducted in 1938 as part of developing
15 the Compact. Testimony, again, of Dr. Brandes and --
16 and Dr. Miltenberger will explain and confirm that --
17 and, quite frankly, they'll use various exhibits that
18 will refer to all of this analysis that was done.
19 They include the JIR report, the Joint Investigate
20 Report, that you referred to in your order, the
21 engineering reports for 1937 and 1938 that were part
22 of the Compact negotiations, and they'll also refer to
23 the USGS analysis that took place shortly after the
24 Compact by Conover reports all address and confirm
25 what I'm saying. And much of this was discussed,

1 including reference to many of those exhibits in your
2 summary judgment order.

3 Again, Dr. Miltenberger, and in a few
4 weeks, Dr. Brandes, in the spring, will also directly
5 address the 1938 hydrologic condition. You know, the
6 New Mexico position, which we're going to have to deal
7 with in our -- in our direct case, as we glean it from
8 their briefing and their depositions, in depositions
9 we took of various experts and parties within New
10 Mexico, most specifically Mr. Lopez, who was their
11 30(b)(6) witness, as well as the state engineer,
12 Mr. D'Antonio, is that there is no 1938 condition, and
13 that the only limit on New Mexico's use of water in
14 southern New Mexico is either a limit that was put on
15 -- on the taking of water, the diversion of water, and
16 the pumping of groundwater in permits issued by the
17 State of New Mexico or whatever the crops need in
18 order to be grown, whichever is -- is less. New
19 Mexico recognizes neither a Compact-related limit nor
20 an obligation to Texas, and in that context, New
21 Mexico, we believe, ignores the Special Master's
22 summary judgment order, as it addresses the 1938
23 condition. Now, interestingly, in the New Mexico
24 trial brief, it, instead of recognizing a '38 -- 1938
25 condition, it, and I quote, accedes to the D2 curve as

1 a baseline. Now, you're going to hear a lot of
2 testimony from the Bureau and from the EBID EP No. 1
3 witnesses, and, quite frankly, I know from the New
4 Mexico witnesses about the D2 curve, and as will be
5 described in all of that -- that testimony, the -- the
6 D2 curve derives from project surface water deliveries
7 in the 1951 through 1978 period. It was developed by
8 the Bureau of Reclamation without regard to
9 groundwater pumping and use and focuses on surface
10 water available for the delivery after groundwater was
11 pumped. Because the Bureau can't control New Mexico
12 groundwater pumping, it, in essence, incorporates the
13 effect of groundwater pumping into what had been
14 available to deliver as surface water, but as I'll --
15 I'll mention in a minute, it does not incorporate or
16 -- or agree with or acquiesce to the groundwater
17 pumping itself. It merely takes what is left over to
18 it to divert, to deliver, and -- and that is where the
19 D2 curve was -- was derived from. By necessity, it
20 includes the effect of groundwater pumping, and so it
21 -- it, in a sense, incorporates all of the groundwater
22 pumping that takes place in -- in that 1951/1978
23 period, and so acceding to using as a baseline the D2
24 curve is, in fact, no concession at all because it
25 includes all the groundwater pumping. And it's

1 certainly no guide or -- or -- or no -- no gage of
2 what the 1938 hydrologic condition was that was
3 intended as part of the Compact. I know
4 parenthetically that, of course, this is the second
5 time that New Mexico has acceded to an adverse ruling
6 without admitting that it was wrong or, in fact, that
7 its current views, its D2 view, is something at odds
8 with -- with what actually was determined in the
9 summary judgment order with respect to -- to -- to the
10 1938 condition. The first time they acceded was when
11 they lost the motion to dismiss, and the Court denied
12 that motion.

13 As will be discussed by Drs.
14 Miltenberger and Brandes, the 1938 condition cannot be
15 the D2 curve, which was based upon, as I indicated,
16 the 1951 to 1978 project operations. Those operations
17 took place in a range of from 15 to 40 years post the
18 effective date of the Compact, but as importantly,
19 post all the analysis that went into in terms of
20 developing the Compact. And this idea conflates two
21 issues. It's wrong because it's wrong, but it's also
22 wrong because it attempts to combine two issues in an
23 inappropriate way. New Mexico argues, and the Special
24 Master, your summary judgment order deals with this,
25 argues that they will put on evidence associated with

1 course of performance. What that means -- you know,
2 what course of performance means, of course, is both a
3 legal, as well as factual in nature. Texas, in
4 conjunction with the United States, will present
5 testimony and evidence during the initial stage of
6 trial regarding how the Bureau of Reclamation, how
7 EBID, how EP No. 1 understood what -- what was
8 occurring historically, why they acted as they did or
9 why they didn't act with respect to certain issues.
10 Indeed, I'm -- as a preview on all of the U.S./Texas
11 testimony in the next few weeks to a greater or lesser
12 degree deals with that very issue, that course of
13 performance with respect to the project. But with --
14 but this testimony and related evidence draws a clear
15 distinction between course of performance related to
16 the operation in the project, and course of
17 performance related to groundwater pumping. What
18 occurred and what was known with respect to
19 groundwater pumping and project -- and what was known
20 with respect to project operations are two different
21 things, notwithstanding that groundwater had an effect
22 on project operations, that effect was not clearly
23 understood. What was understood was how the project
24 was to operate. There's little dispute about how the
25 Reclamation project was operated from its inception

1 until today, and testimony will be provided by the
2 Bureau of Reclamation, EBID, and EP No. 1 witnesses
3 about what was known or should have been known about
4 those project operations over time, but project
5 operations deals with what the project, what the
6 Bureau of Reclamation can control. It deals with
7 surface water, including return flows. The pumping of
8 groundwater, which intercepts surface water and return
9 flows was not apparent, as I indicated, and the
10 operation of the project doesn't deal with groundwater
11 pumping at all. What was apparent to the Bureau of
12 Reclamation, EBID, and EP No. 1 is what they had
13 control over, and that was what was left over after
14 New Mexico's groundwater pumping. Texas and the
15 United States will offer testimony that the Bureau of
16 Reclamation and EBID do not have control over
17 groundwater pumping in New Mexico, and that only the
18 State of New Mexico has the authority to address the
19 impact of groundwater pumping on surface flows and on
20 the project and on the Texas apportionment. That's an
21 authority no matter how much they talk about it in
22 their testimony, that to date, they have refused to
23 exercise.

24 We've grappled -- "we" almost meaning
25 you and I, but -- but the parties have grappled over

1 time, and the summary judgment order addresses the
2 question of characterizing the water that EBID gets
3 with respect to its contract with the Bureau of
4 Reclamation, and we accept that the summary judgment
5 determined that it was apportionment to New Mexico
6 that was defined by the EBID contract with the United
7 States. We accept it for the purpose of this trial in
8 any event. The Bureau of Reclamation witnesses, and
9 Mr. Esslinger, who we will put on in -- in a few days,
10 who is the treasurer/manager of the Elephant Butte
11 Irrigation District, will explain the reason for the
12 view that has been expressed with regard to water
13 below Elephant Butte Reservoir being a Texas
14 apportionment. That view is rooted in the historic
15 operations of the project itself. Texas will present
16 testimony that at its inception, the project was
17 wholly owned by the United States and operated by the
18 Bureau of Reclamation. The Elephant Butte Irrigation
19 District and EP No. 1 were formed for the primary
20 purpose of repaying the cost of the construction of
21 the project and to cover the cost of operation and
22 maintenance of the -- of the project. As
23 Mr. Esslinger will call -- will talk about, their
24 primary function at that point was to -- to produce
25 revenue in order to repay the United States for the

1 Reclamation project. It was the Bureau of Reclamation
2 that operated all of the project facilities, and they
3 operated it as a single unit, and it directly derived
4 water and delivered water to farmers within EBID and
5 EP No. 1, not the districts, and they delivered water
6 without regard to the Texas/New Mexico state line. In
7 fact, facilities for the distribution of water were
8 constructed without regard to the state line, and that
9 unified project, for Compact purposes, and regardless
10 of the legal correctness of this conclusion, was
11 considered and had always been considered to be within
12 Texas. That's where the phrase that you've heard
13 Compact Texas comes from. That's the phrase. And
14 you'll see that kind of reference, that -- that notion
15 that the project is a unity. And many of the exhibits
16 that will be produced both by New Mexico, as well as
17 Texas and the United States during the course of -- of
18 this trial, that is the reason for that, and that's
19 the historically -- important historical background
20 behind that. You'll hear testimony from
21 Mr. Miltenberger and Mr. Esslinger about all of that.
22 Indeed, there's evidence that would be introduced that
23 New Mexico should've known that this was the view that
24 they -- and that they took no action to address that
25 view. For example, in early versions, around 1985 of

1 the operating agreement -- or an operating agreement,
2 Texas is defined for Compact purposes to include
3 Sierra and Dona Ana counties in New Mexico, as well as
4 the Texas counties of El Paso and Hudspeth. This
5 unique view is dictated, again, by the logic of making
6 deliveries to Elephant Butte Reservoir -- New Mexico
7 making deliveries to Elephant Butte Reservoir, and
8 treating the Rio Grande project as a unit and
9 effectively Texas, rather than dividing the project
10 artificially in terms of the way it operated at the
11 Texas/New Mexico state line.

12 As noted, the technical case that we
13 will bring and the United States will bring will be in
14 the spring, but in its trial brief, and I -- I want to
15 address this very briefly, and in arguments before the
16 Special Master, before today, New Mexico has often
17 referred to the robustness of their evidence and the
18 robustness of their model of the Rio Grande, and
19 they've denigrated, quote unquote, the simple nature
20 of the Texas model. I believe in its trial brief, the
21 Texas model was described by New Mexico as robotic.
22 In the spring, we'll present testimony and related
23 evidence that addresses these New Mexico contentions.
24 Now, in modeling, as in everything else, there is a
25 rule, the rule of parsimony. And that rule states

1 that a model should be constructed sufficiently to
2 answer the questions being addressed, but not greater
3 or more complex than necessary to answer those
4 questions. As Mr. Coors, who is our expert with
5 respect to surface water modeling, Ms. Moran, the --
6 the United States expert on hydrology, Dr. Hutchison,
7 the creator of the Texas model, Dr. King, the expert
8 consultant, hydrologist, and engineer for EBID,
9 Dr. Blair, the expert hydrologist and engineer for EP
10 No. 1 will explain, the Texas model adheres to the
11 rule of parsimony, and the New Mexico model does not.
12 You will hear testimony from Dr. Hutchison, King,
13 Blair, and Mr. Coors in the spring about all the
14 errors in the New Mexico model that are caused because
15 of the violation of the rule of parsimony. You'll
16 also hear, ironically, that the adverse impact that
17 New Mexico groundwater pumping has on project supply
18 and on the Texas apportionment is so significant and
19 obvious that even the faulty New Mexico model
20 demonstrates this fact. And I think the summary
21 judgment order notes that as part of its
22 determinations. In addition, Dr. Brandes, Mr. Coors,
23 Dr. Hutchison, and Dr. King, and Dr. Blair will
24 testify that the New Mexico model, which was created
25 according to New Mexico to reflect project operations

1 and show that the harm that project operations and
2 accounting has caused to New Mexico, in fact, shows
3 that there has been no harm to New Mexico at all.

4 This leads me to two final points.
5 First, I recognize that I've made this point to you
6 before, but except for the allegations of adverse
7 impact to New Mexico due to groundwater pumping in
8 Texas, none of the New Mexico allegations focus on
9 actions or inactions of the State of Texas. All the
10 actions are related to actions taken by third parties
11 over which Texas neither has control or which are in
12 any way related to -- to Texas at all. As New Mexico
13 testimony in this regard is introduced, it will be of
14 note that New Mexico attempts to avoid what I just
15 said and -- or they either ignore the distinction or
16 they attempt to attribute those actions to -- to
17 Texas. Now, I did pull out groundwater pumping. I
18 just want to say that we recognize that groundwater
19 pumping in the Mesilla groundwater basin does have an
20 effect, and Ms. Estrada-Lopez, shortly, and Dr. Blair
21 and Dr. King will also address the allegations
22 associated with groundwater pumping in the Mesilla
23 portion of Texas and will explain to you what is being
24 done and what has been done with respect to addressing
25 those -- those impacts.

1 There are also allegations by New Mexico
2 that groundwater pumping in Texas in the Hueco Bolson
3 -- that's the groundwater basin underlying the El Paso
4 valley -- has had impact upon New Mexico.

5 Dr. Hutchison, and quite frankly, the New Mexico model
6 itself, will demonstrate that that just simply is not
7 the case.

8 Finally, during this first stage of the
9 trial, New Mexico apparently will attempt to put on
10 testimony focused on the alleged injury that actions,
11 as I've just described, by Texas have had on New
12 Mexico. While we'll object to this testimony, to the
13 extent it's not been revealed before, it will
14 nonetheless be of note that in no case will New Mexico
15 be able to claim that farmers or municipal users of
16 water in New Mexico had insufficient water supply
17 because of actions of Texas or, in fact, at all, other
18 than drought-related shortages. And in the spring,
19 there will be no expert witness that testimony by --
20 by New Mexico that will properly address injury.
21 Texas, in contrast, through the City of El Paso
22 witnesses that you're going to hear shortly in the
23 next few weeks, farmers' testimony, and testimony of
24 EP No. 1, all that testimony will, at least in part,
25 focus on the injury to Texas caused by New Mexico

1 groundwater pumping, and in the spring, Dr. David
2 Sunding, the Texas expert economist, will present
3 expert testimony about Texas' injury that have been
4 caused directly by New Mexico's actions and the
5 shortages in water caused by the shortage in -- in --
6 in water associated with the Texas apportionment.

7 Unless you have any questions, that's
8 all I have for an opening, and I thank you. I can't
9 hear you.

10 **MR. DUBOIS:** You're on mute, Your Honor.

11 **JUDGE MELLOY:** I knew I was going to do
12 that. Thank you, Mr. Somach. I'll turn to Mr. Dubois
13 now. I do have to say, Mr. Dubois, while I was mainly
14 getting ready for this hearing earlier today, I did
15 have the audio of the Supreme Court argument on in the
16 background, and interesting to listen to the justices
17 talk about another original action involving water
18 rights. I don't know if it'll have any impact upon
19 this case or not, but I did note that you were on the
20 brief for -- for the United States in that case, as
21 well, but -- but be that as it may, you're up next,
22 and you may proceed when ready.

23 **MR. DUBOIS:** Thank you, Your Honor.

24 And, yes, I was on the brief, and I did not
25 unfortunately get a chance to listen this morning.

1 I've heard -- I've heard from Ms. Coleman, who was
2 listening, who's also on the briefs in that case, that
3 it was interesting, and particularly, I think if -- if
4 you are from Mississippi.

5 May it please the Court, James Dubois
6 for the United States of America. Your Honor, I will
7 be brief. This case revolves around a single fact,
8 groundwater pumping in New Mexico is impacting the
9 flows of the Rio Grande that were apportioned by the
10 Rio Grande Compact. There's a huge problem. It's
11 interfering with the long-term operation of the Rio
12 Grande project. New Mexico has known it is a problem
13 for years, and they have done nothing to address it.
14 Instead, they're attacking the one action, the 2008
15 operating agreement, that has tried to actually
16 address the problem. In sum, the United States
17 intervened because New Mexico has failed to administer
18 groundwater use to prevent interference with the water
19 supply of the Rio Grande project. The project that's
20 relied upon to effectuate the apportionment
21 contemplated by the Compact. Water from the Rio
22 Grande project also serves to meet the United States'
23 obligations to the county of Mexico under a 1906
24 Convention, and the continued deterioration of the
25 river and the aquifer system poses a potential threat

1 to United States' ability to deliver the obligated
2 water. First, much of the bases for the United
3 States' claim -- claims in this case have already been
4 established by prior rulings. The United States, as I
5 said, intervened in this case because it believes that
6 New Mexico has a Compact-level duty to avoid
7 interference with the programmatic apportionment
8 established by the Compact. United States believes
9 that the historical documents and testimony of the
10 historians this fall, particularly Mr. Miltenberger,
11 will establish that the programmatic apportionment is
12 through the Rio Grande project and conditions akin, as
13 you've put it, akin to 1938 conditions. The evidence
14 presented at trial will show that New Mexico has not
15 fulfilled its duty. The evidence presented by Texas'
16 expert historian will demonstrate that the -- the
17 Compacting states intended to protect the baseline
18 operation condition for the project that includes the
19 availability of return flows undiminished by the new
20 and additional water resource development after the
21 entry of the Compact. Your conclusion on summary
22 judgment that the groundwater and surface waters below
23 Elephant Butte Reservoir are interconnected will be
24 further supported by the testimony of expert witnesses
25 presented by the parties next spring. United States

1 believes that the evidence will show, and I don't
2 think that New Mexico even denies it, that pumping in
3 New Mexico impacts and depletes the surface water
4 supply of the Rio Grande apportioned by the Compact.
5 It simply takes the position that it should not have
6 to account for those impacts against whatever the
7 Compact apportioned. The impact of groundwater
8 pumping on deliveries to Texas, in particular, is at
9 this point undisputed. You've already concluded that
10 in summary judgment, the pumping interfered with the
11 delivery of -- of the Compact apportionment to Texas
12 in the early 2000s. New Mexico has not taken a single
13 meaningful step to address that problem in the two
14 decades sense. Indeed, by New Mexico's own admission,
15 groundwater pumping has continued pace or even
16 increased, threatening the long-term viability of the
17 water supply. The foundation of the United States'
18 claims have been established as a matter of law at
19 summary judgment. On summary judgment, you've made
20 clear that the Compact protects the baseline operating
21 condition for the project and that New Mexico has, of
22 course, Compact-level duty to prevent the capture of
23 surface water, drain return flows, and
24 hydrologically-connected groundwater, to an extent
25 inconsistent with Compact deliveries to Texas or the

1 extent it interferes with the long-term operations for
2 the project. The fundamental question at issue in
3 this case is really pretty straightforward. The Court
4 has to determine the apportionment of the flows of the
5 Rio Grande below Elephant Butte reservoir between
6 Texas and New Mexico. As you framed it, the question
7 is what conditions did the Compact intend to protect?
8 Those akin to the conditions on which the Compact was
9 based and signed, or those in existence 40 years
10 later? The baseline of project supply that's to be
11 protected and how far we are away from that condition
12 are the core issues. Everything else follows from
13 that determination, including whether or not the
14 current conditions are consistent with the
15 apportionment determined by this Court, which leads us
16 to the third, to the operating agreement. Despite
17 what we believe you're likely to hear, this is not a
18 case about the 2008 operating agreement. First, the
19 operating agreement is, as you will hear, simply an
20 agreement among the districts and the United States
21 regarding what the districts believe to be the fair
22 management of water that's available to the project.
23 It certainly does define how water is allocated
24 between the districts. That's true. But the
25 operating agreement itself is -- is part of a long

1 history of Reclamation and the districts trying to
2 adapt the changing conditions and problems, including
3 those caused by groundwater pumping in -- in New
4 Mexico and the impacts of that. In particular, the
5 operating agreement reflects an effort within the
6 project to adapt to the un-relate -- unregulated
7 pumping in New Mexico. While you will undoubtedly
8 hear much about the 2008 operating agreement, it is
9 simply not the threshold issue you have to determine.
10 The operating agreement merely defines where the water
11 is going within the system. Evidence this fall and
12 analyses to be presented in the spring will show that
13 operation of the project has not been static, but has
14 evolved changing circumstances to meet the needs of
15 the project water users, for instance, that the
16 transfer of -- of operation of the project facilities
17 and the need to go from delivering water directly to
18 the farmers by Reclamation to delivering an allotment
19 to the districts to manage to their farmers within
20 each of the districts. So the operating -- the
21 operating -- the 2008 operating agreement is simply a
22 continuation of that evolution.

23 You'll also hear that the Compact does
24 not give New Mexico or the Compact commission roll and
25 control within the Rio Grande project. New Mexico has

1 never been involved in the operation of the project.
2 It's never had a contract with Reclamation for project
3 water, and it's never been involved in water
4 allocation by the project. New Mexico does not use
5 the water delivery, in New Mexico, only Elephant Butte
6 Irrigation District, or EBID, has that relationship
7 with the project, and you've recognized it. New
8 Mexico's apportionment is defined by EBID's delivery
9 under the project. Reclamation alone, or in
10 conjunction with the districts, has always had control
11 over the management and use of the project water and
12 made decisions responsive to changing circumstances
13 and needs, including the operation of transfers, as
14 I've mentioned, as well as hydrologic issues.
15 Reclamation and the districts have made decisions
16 responsive to addressing problems arising from
17 consequences of pumping alone by New Mexico;
18 therefore, even if you determine that current
19 conditions do not meet the Compact apportionment that
20 either you or the Court ultimately determines, it is a
21 matter to be addressed first by the districts of the
22 United States, not by the State of New Mexico. It is
23 -- it is the province of the project to come within
24 the -- the boundaries and the -- the guidelines that
25 you ultimately provide. As the testimony to be

1 presented, this fall, you will be presented testimony
2 establishing a factual overview of the Rio Grande
3 project and its operations starting with Ms.
4 Estrada-Lopez, who later this morning will give you an
5 overview of the project and its current operations.
6 You'll also hear from Mr. Cortez, the past Reclamation
7 manager, about project operations in the recent past,
8 and with Mr. Cortez here, recent spans some 40 years.
9 You will hear from Ms. Spener about the -- from the
10 International Boundary and Water Commission. She will
11 explain IBWC's role in assuring water deliveries to
12 New Mexico, and you will hear from representatives of
13 the two irrigation districts, which are intended to be
14 the beneficiaries of the project. This will include
15 Dr. Phil King, EBID's consulting engineer, and Dr. Al
16 Blair, EP No. 1, the El Paso County Water Improvement
17 District No. 1, their engineer. The evidence
18 presented both this fall through Mr. Cortez,
19 Mr. Esslinger, and others in the spring through
20 technical analyses, will show that the impacts of
21 groundwater pumping have sufficiently interfered with
22 the long-term project operations to cause the United
23 States and the irrigation districts to evolve project
24 operations partially offset that interference. The
25 testimony by witnesses from the irrigation districts,

1 including Drs. King and Blair, will begin to show that
2 groundwater withdrawals sanctioned by New Mexico have
3 adversely impacted the long-term operation of the
4 project and irreparable injury to federal interests.
5 Finally, this fall, you're going to hear from expert
6 testimony from Texas' historian Mr. Miltenberger
7 regarding the history of the Rio Grande Compact. The
8 evidence will show that the Compact negotiators fully
9 understood both the importance of return flows in
10 defining the Compact's delivery schedules and the
11 relationship between groundwater and surface water.
12 The evidence will show that the water supply available
13 to the projects in 19 -- the project, singular, in
14 1938, included water release from the Rio Grande
15 project storage, tributary inflows, and return flows
16 from initial irrigation use undiminished by
17 groundwater and water developments initiated after the
18 time of the Compact. The witnesses this fall will
19 give -- will give you some detail regarding the
20 district's operation and provide context and
21 background for the technical analyses to be presented
22 by Doctors King and Blair and others next spring. In
23 the spring, you will hear from the experts, hopefully
24 live in Cedar Rapids. The testimony -- that testimony
25 will show that the groundwater pumping in the Rincon

1 and Mesilla valleys -- the Rincon and Mesilla valleys
2 in New Mexico deplete and diminish the Rio Grande
3 surface water flows available to the Rio Grande
4 project and materially interfering with the deliveries
5 to Texas and interfering with the long-term operations
6 of the project. Testimony to be presented in the
7 spring by Ms. Moran, expert for the United States,
8 will show that both the Texas and the New Mexico
9 groundwater models demonstrate the groundwater pumping
10 has significant impacts on the apportioned flows of
11 the Rio Grande and the availability of -- of -- and
12 the ability of the project to deliver water to two
13 districts whose contracts effectuate the
14 apportionment. Technical analyses by Drs. King and
15 Blair as well as Dr. Ferguson will support the
16 conclusion in the 2008 operating agreement does not
17 create the windfall for Texas claimed by New Mexico.
18 Indeed their analyses supports the conclusion that the
19 operating agreement has, at best, returned Texas to
20 something close to the project water delivery made to
21 Texas during the 1950s. The United States, therefore,
22 requests the Supreme Court to enjoin New Mexico to
23 exercise its authority under state law to prevent New
24 Mexico water uses from causing ongoing irreparable
25 injury to long-term operations of the Rio Grande

1 project. Thank you, Your Honor.

2 **JUDGE MELLOY:** Thank you, Mr. Dubois.

3 Mr. Wallace, we'll hear from you next.

4 **MR. WALLACE:** Thank you, Your Honor.

5 I'll be brief. Colorado understands that the scope of
6 this trial is going to be limited to issues
7 surrounding the distribution of impacts to water from
8 the Rio Grande project. With that understanding, the
9 State of Colorado does not anticipate any impact to
10 Colorado's water or to its Compact interests.

11 Consistent with our trial brief, Colorado will not be
12 presenting a case in chief, therefore, I really have
13 nothing much more to say in opening statement because
14 we will not be presenting direct witnesses. Thank
15 you.

16 **JUDGE MELLOY:** Thank you, Mr. Wallace.

17 Mr. Wechsler, how do you and General
18 Balderas plan to divide up your argument?

19 **MR. WECHSLER:** Your Honor, General
20 Balderas will take the first portion of the argument,
21 and I will follow after him.

22 **JUDGE MELLOY:** All right. General
23 Balderas, you may proceed.

24 **MR. BALDERAS:** Good morning, Your Honor.
25 May it please the Court. This case is about fairness,

1 fairness as defined by how we all agreed in 1938 to
2 divide the surface water of the Rio Grande below
3 Elephant Butte Reservoir. This case is about making
4 sure that farmers, families, and municipalities below
5 Elephant Butte get what the states collectively
6 thought was fair, regardless of which state or state
7 line they lived on. I know firsthand the struggles of
8 a small community. I'm from a community of 300 people
9 on a good day, and not only the first attorney from
10 that community, but was the first attorney in the
11 entire era of homesteading in that community in many
12 generations, and it's not an exaggeration that many of
13 the small rural communities are not only the backbone
14 of New Mexico's economy, but we are potentially
15 risking New Mexico's entire backbone of that economy,
16 considering that pecan farming, chile farming make up
17 nearly 10 percent of our GDP. Nearly 50,000 jobs in a
18 state of only 2 million in population, that impact
19 cannot be overstated. But this case isn't about those
20 numbers. To really give us a complete picture, you'll
21 be hearing testimony about why this case is so
22 important, meaning those farmers and families that
23 rely on the actual surface water of the Rio Grande for
24 their livelihoods. They make this case important.
25 Later in the trial, you'll hear from several of those

1 New Mexico farmers personally. They've been working
2 that lab in the lower Rio Grande for generations, but
3 families can never farm without water. We are at a
4 critical juncture in our history, and unless New
5 Mexico starts to receive its fair share of water, we
6 may see a situation where New Mexico farmers don't
7 have enough to tend their own fields. You'll also
8 hear from witnesses that describe the impact to the
9 City of Las Cruces, and the City of Las Cruces is the
10 second largest city in New Mexico. They've also been
11 an integral part of the lower Rio Grande for more than
12 a century. Last and finally, this case is important
13 to New Mexico because we really enter into a very
14 uncertain climate future. We know that climate is not
15 changing by itself, but we have seen less and less
16 water as the years go on, and it's critical that this
17 case that we get as a result a clear and unambiguous
18 understanding of the obligations of each state, and
19 also how surface water that remains must be allocated.
20 Oddly enough, this case didn't start when Texas filed
21 a bill of complaint with the court. This case started
22 before that in 2011, when New Mexico sued the U.S.
23 Bureau of Reclamation because New Mexico was not
24 receiving its fair share of water, and I believe
25 during that course, over the course of this trial, you

1 will see that New Mexico is still not receiving its
2 fair share of water. It's not Texas that is being
3 harmed in this case; it is New Mexico. Before I turn
4 it back over to Mr. Wechsler for the remainder of this
5 opening, I want to personally assure you that New
6 Mexico, in this proceeding, is not asking for more
7 than its fair share of water. We are asking only that
8 Texas be bound to its word and that the project be
9 operated in a way that allows New Mexico to receive
10 its fair share. I want to kick it over to
11 Mr. Wechsler, but thank you, Your Honor, for this
12 opportunity to address this Court.

13 **JUDGE MELLOY:** Thank you, General
14 Balderas.

15 Mr. Wechsler?

16 **MR. WECHSLER:** Thank you, Your Honor.
17 With your permission, we'll share our screen to walk
18 through our remainder of our opening statement. May
19 it please the Court, and thank you, General Balderas.
20 As General Balderas just explained, this case is about
21 whether the states have enjoyed the benefit of the
22 Compact by receiving their fair share of project
23 supply. You'll hear throughout the course of the
24 trial that New Mexico has not received that equitable
25 apportionment since 2006. It's a daunting task to

1 summarize the evidence that you'll hear from
2 approximately 55 witnesses spread out over the course
3 of seven months, so today, I will limit my discussion
4 to the evidence related to five issues on which the
5 case depends. The protective Compact baseline, the
6 technical modeling efforts by the parties, the
7 regulatory scheme of the two states, the D3 plus
8 carryover methodology for dividing water between the
9 lands and the two states, and whether Texas or New
10 Mexico have received their equitable apportionment.
11 So the first question, what is the protected Compact
12 baseline? You have rightly focused much of this trial
13 -- this phase of the trial on the baseline or what I
14 would call the test for Compact compliance. Contrary
15 to what Texas suggests, we embrace the summary
16 judgment order, which we think supports our position
17 in this case, and it's helpful in that regard to
18 recall what has already been decided because those
19 principles will guide our trial. First, the Compact
20 incorporated the project as the mechanism by which the
21 Compact apportionment below Elephant Butte is made.
22 As you have found, and as the United States has
23 conceded, it necessarily follows that project
24 operations and allocations must be consistent with the
25 Compact; second, New Mexico is entitled to 57 percent

1 of project supply; and third, unlike the index flows
2 in Articles 3 and 4, the apportionment below Elephant
3 Butte, to use your word, is programmatic, in other
4 words, based on the project operations. So turning to
5 the principles establishing the baseline, Texas offers
6 a theory that's not supported by the Compact, and it's
7 not supported by the evidence. In contrast, New
8 Mexico's theory of the principle of the Compact
9 baseline is based entirely on the evidence. Now,
10 because of the interaction between the Compact and the
11 project, New Mexico enlisted the help of Mr. Estevan
12 Lopez, a former United States commissioner of
13 Reclamation and interstate stream director. He will
14 explain the operational and reclamation principles
15 underlying the project in the Compact, and he is also
16 the only expert offered in this case with expertise in
17 interstate water allocations.

18 So then turning to the principles that
19 define the protected baseline, and I'll discuss four
20 this morning. The first is that the project is
21 operated as a single unit. You've already heard Texas
22 concede this point. I think they called this a
23 unified project in the way it was operated. Now,
24 you'll hear from Dr. Stephens, New Mexico's historian,
25 and Mr. Lopez, as well as the Reclamation witnesses,

1 that in 1938, when the Compact was adopted, the
2 project was operated as a single unit with the same
3 rules applying throughout the project, and that same
4 principle is inherent in the Compact baseline. As an
5 example, the Compact provides for a normal release of
6 790,000 acre-feet and that amount of water is intended
7 to meet irrigation demands for all acreage in both
8 states. That 790,000 acre-feet forms part of the
9 baseline in that it establishes the amount of water on
10 which the -- the division is set.

11 Turning to the second principle
12 underlying the Compact baseline, we know that New
13 Mexico is entitled to 57 percent of project supply.
14 The principle underlying that rule is that every
15 project acre is entitled to an equal amount of water.
16 Now, the evidence on this point is too voluminous to
17 discuss this morning, but I'll point to just a couple
18 of things. You're already familiar with the letters
19 from Texas Rio Grande Commissioner Frank Clayton from
20 the briefing. Dr. Stephens will explain how those
21 letters and other historical evidence show that
22 negotiating states intended to base the apportionment
23 below Elephant Butte on an equal amount of water per
24 project acre. Second is the Convention of 1906. Now,
25 we're looking at a slide here from that Convention.

1 In fact, the article -- the treaty with Mexico formed
2 some of the background principles of the Compact. In
3 fact, Article 16 specifies that the Compact shall not
4 effect the United States' obligations to Mexico. This
5 is important because of the provision of the
6 Convention that is shown here. You can see that below
7 the table, in times of extraordinary doubt -- drought,
8 the amount of water delivered to the Mexican Canal,
9 quote, shall be diminished in the same proportion as
10 the water delivered to lands under said irrigation
11 system in the United States. As you'll hear from
12 Reclamation witnesses, in order to ensure the
13 Convention is followed, every year Reclamation
14 performs a status check to make sure that the amount
15 of water allocated to each project acre is reduced in
16 the same proportion as the water allocated to Mexico,
17 thus supporting that principle. In addition, you're
18 familiar with the 1938 downstream contracts, and we
19 know that the Court has found that these contracts
20 were incorporated by reference into the Compact as the
21 mechanism -- as -- as part of explaining the division
22 of the water. Many witnesses throughout the trial
23 will testify that this contract requires that each
24 acre of project land receive an equal amount of water
25 in times of shortage or at least an equivalent amount

1 in the aggregate. And -- and turning to the project
2 operations from 1938 to 1979, Dr. Barroll, Mr. Lopez,
3 and numerous Texas and U.S. witnesses will explain
4 that from 1951 to 1979, Reclamation operated the
5 project so that every acre was allotted an equal
6 amount of water, and from 1980 to 2005, Reclamation
7 used the D1 and D2 curves that you've heard about to
8 ensure that each district was allocated an amount of
9 water equivalent to -- to that equal amount per acre,
10 up to 3.024, which was considered the full supply, and
11 to this day is considered the maximum amount of water
12 that each acre can receive. On this basis, the water
13 was allocated 57 percent to New Mexico and 43 to
14 Texas, but unfortunately, as the slide we're looking
15 at here shows, the evidence will show that project
16 supply is no longer allocated on that basis or on the
17 principle of an equal amount per acre. You can see
18 here in the orange, the EP No. 1 allotments each year
19 where they max out at 4 acre-feet per acre compared to
20 the amount of project supply that EBID has allotted,
21 which is significantly less -- less than half of that
22 allotted to EP No. 1.

23 So turning to the third principle
24 underlying the baseline condition, and that is about
25 waste. Mr. Lopez will explain that this third

1 principle and that the project should be operated to
2 -- in a way to limit waste. As I said, the project
3 operates as a unified whole. You'll hear from both
4 Reclamation witnesses and Hudspeth representatives
5 that at the end of the project is Hudspeth, and
6 Hudspeth is not a project beneficiary and is entitled,
7 therefore, only to waste. New Mexico experts will
8 explain that limiting waste is an established
9 principle of Reclamation projects, and that principle
10 is particularly important for the Compact because
11 excess waste out the bottom impacts other articles of
12 the Compact, including Articles 7 and 8. But as
13 illustrated in this slide, waste increased
14 significantly once EP No. 1 began operating the
15 project in the 1980s. In fact, you'll hear that EP
16 No. 1 has contracts in place to sell excess water to
17 Hudspeth, meaning they have more water than they think
18 they need. Now, this matters to the Compact because
19 if the water were not wasted flowing out the bottom or
20 sold to Hudspeth, then it would be in project storage,
21 and if it were in project storage, it would be
22 available for division and use in New Mexico and
23 Texas, as well.

24 All right. So turning to the fourth
25 principle underlying the Compact baseline, and that is

1 of conjunctive use and the idea that supplemental
2 groundwater pumping has always been allowed to meet
3 irrigation demands. Now, the evidence will show that
4 supplemental groundwater use has always been a part of
5 the project, and, in fact, the project's very survival
6 depend on it. Supplemental groundwater pumping forms
7 the background principle of the Compact and the course
8 of performance establishes that the states always
9 understood that the Compact did not prohibit
10 supplemental groundwater pumping below Elephant Butte.
11 As what -- as but one example shortly after the
12 Compact was adopted, the first drought arose, and the
13 parties reacted by pumping groundwater as a
14 supplemental supply to meet irrigation demands in both
15 states. Now, at this time, there were people involved
16 who had negotiated the Compact, as you'll hear from
17 Dr. Stephens. But even that was true, no party
18 complained that groundwater pumping was not allowed.
19 In fact, it was encouraged, as we'll see on the next
20 slide. And you'll hear witness after witness testify
21 that the groundwater is an accepted feature of the
22 project. So we know that, and you've heard before
23 that Reclamation actually encouraged groundwater.
24 Witness after witness will explain that that happened,
25 and that the use of groundwater wells was encouraged

1 throughout the project. Now, we're looking at a
2 single exhibit from 1954. This is Joint 227. But
3 it's just one of many documents that you'll see that
4 -- that look like this. Witness after witness will
5 confirm that the states, the districts, and
6 Reclamation all understood that groundwater pumping
7 effected surface flows, and yet you'll see no evidence
8 that any state complained that groundwater pumping
9 constitute a Compact violation until very recently.
10 In fact, you'll hear that the City of El Paso tried to
11 appropriate New Mexico groundwater in the 1980s. Now,
12 Texas -- Texas and the United States' own witnesses
13 will tell you that when Reclamation developed its
14 allocation procedures, it grandfathered in groundwater
15 pumping up to 1978 through the use of the D2 method
16 and even in the 2008 operating agreement, that method
17 is based on the D2 allocation for Texas lands, not New
18 Mexico, but for Texas lands, which incorporates the
19 effects of groundwater pumping in its allocation, as I
20 think Texas and the United States conceded in their
21 opening statements. Now, the operating agreement goes
22 onto specifically reference the Compact, and it says
23 that it, meaning the operating agreement, including
24 its allowance for groundwater pumping, is not
25 inconsistent with the Compact. In short, you'll hear

1 that groundwater pumping has always been a part of
2 farming and municipal use in both New Mexico and in
3 Texas, and the evidence will show that the communities
4 and economies in both states have grown around the
5 mutual understanding that groundwater pumping is
6 permitted by the Compact. So before I -- this slide
7 that we're looking at here illustrates the concept of
8 how groundwater use was used throughout the -- the
9 project, and you can see on the left, the municipal
10 and industrial wells in the El Paso Valley, and on the
11 right, the green line there that you can hardly see is
12 the river, and the reason you can't see it is because
13 of all the blue irrigation wells, again, in the El
14 Paso Valley. Now, New Mexico has modeled multiple
15 aspects of this Compact baseline, and this will allow
16 you to understand the impact of different types of
17 water use. For example, the modeling will show the
18 impact of different infrastructures or levels of
19 groundwater pumping to support your decision. I think
20 Mr. Somach recognized in his opening statement that
21 Texas' model actually doesn't have that ability.
22 Mr. Somach also mentioned that D2 -- New Mexico is
23 willing to accept the D2 method as the standard for
24 Compact compliance, and we did indicate that in our
25 trial brief. Now, the -- the longstanding D2 method,

1 which was utilized from 1980 to 2005, is -- is
2 generally consistent with the baseline principles that
3 I just outlined. It's consistent in that it's based
4 on operation of the project as a single unit. It's
5 consistent in that it allocated water based on an
6 equal amount of water per acre. It's consistent in
7 that during that period, they limited waste, and it's
8 consistent in that it incorporates the effects of
9 groundwater pumping. Given that the states both
10 accepted this D2 division for decades, and given that
11 it is generally consistent with the Compact, New
12 Mexico is willing to accept the D2 curve as that
13 baseline. We think that it's historically
14 significant.

15 Before I move on from the -- the Compact
16 baseline, I do want to say just a word about the Texas
17 1938 Condition. Let me say that the evidence does not
18 support Texas' theory that all depletions were set in
19 1938, their so-called 1938 Condition. Again, the
20 evidence will be abundant and very one-sided on this
21 point. The theory is not consistent, in fact, with
22 the way the project was operated from day one.
23 Instead, there have been a large number of changes in
24 both states that have lasted over many years and that
25 affect the amount of water available for lands in each

1 state. Those, in fact, conditions can change on a
2 regular basis. As just one example, you're looking at
3 the authorized acreage in over the years, and you can
4 see that in 1938, the acreage in EBID wasn't even
5 fully built out, even though the project clearly
6 always intended to have a full build out of the
7 authorized acreage. Again, this -- this completely
8 undercuts the Texas theory of a 1938 Condition. As
9 another example, you'll hear directly from the farmers
10 that they have always been allowed to change their
11 crops and their irrigation methods, something that the
12 Texas condition would prohibit and something that
13 Texas' position on this point is inconsistent with
14 Supreme Court precedent. And the evidence will show
15 that the project and the basin form a dynamic system
16 that demands the flexibility of the programmatic
17 approach that you have said is required.

18 All right. So turning, now, to the next
19 issue that I said I would discuss, is it -- is it
20 necessary to model the impact of project operations to
21 determine whether actions are in compliance with the
22 Compact? We think the answer is clearly yes. The
23 Court and you have both confirmed that the project is
24 the mechanism by which the apportionment is
25 accomplished. It's, therefore, necessary to model and

1 understand these project operations. Texas has
2 constructed a simple model that fails to answer the
3 questions posed in this case. Because it cannot model
4 project operations or the effective changes to those
5 operations, the answers provided by the Texas model
6 are simply not useful. You'll hear even from some of
7 Texas' own witnesses, the flaws in its modeling and
8 its expert analysis. On the other hand, as you can
9 see shown in the model, the -- the New Mexico
10 integrated model simulates the entire project area.
11 It simulates operations from all of the relevant
12 parties. It's rule based. It includes operation of
13 the Elephant Butte and Caballo reservoirs, something
14 that Texas experts initially began to evaluate, but
15 weren't able to complete. It uses a monthly time
16 step, and it's able to evaluate things like changes in
17 reservoir operations and the impact on water users,
18 changes in project water allocations, which is at the
19 heart of the equitable apportionment and irrigation
20 demands. In short, it's a reliable tool on which you
21 can base your decision. Moving to the next issue, do
22 the states have a regulatory scheme in place that are
23 consistent -- that is consistent with the Compact? So
24 let's start with New Mexico. New Mexico has always
25 made every effort to comply with the Compact, and part

1 of that effort is a robust scheme for administering
2 water both above and below Elephant Butte. It helps
3 that the New Mexico state engineer is also the Compact
4 commissioner for the state. He, therefore, has broad
5 authority to monitor and control water use to comply
6 with the Compact, and as part of that control, New
7 Mexico declared the relevant basins, groundwater
8 basins, in 1980 and 1982. You're looking at the front
9 page of the 1980 declaration, which is a trial
10 exhibit. That action was protested by the Texas
11 commissioner at the time, and Texas was arguing that
12 farmers needed unrestricted groundwater pumping, and
13 New Mexico should not limit that groundwater pumping,
14 but that action by New Mexico had the effect of
15 preventing new depletions caused by groundwater
16 pumping in New Mexico, and the timing is also
17 significant because 1980 is approximately the time
18 that the D2 curve was put into place, and as you've
19 heard, D2 incorporates all of that data, including the
20 effects of groundwater pumping, up through 1978.

21 You'll also hear from Rolf
22 Schmidt-Petersen, the director of the New Mexico
23 Interstate Stream Commission. He will explain that
24 the ISC is a unique body charged with ensuring that
25 New Mexico complies with all of its interstate water

1 responsibilities, and he'll describe the work and
2 communications that we had with the State of Texas
3 over the years over Compact issues. And you will hear
4 from Ryan Serrano, the water master in the lower Rio
5 Grande. He will explain how he and his team monitor
6 and regulate all groundwater use in the lower Rio
7 Grande, ensure that all water use, surface and
8 groundwater, is in conformance with the adjudication
9 and applicable rules, and prevent -- and prevent over
10 diversions. So let's turn to Texas then. Now, in
11 contrast, Texas takes the position that nothing
12 happens in the El Paso Valley matters. In fact, we
13 looked at a slide earlier from Mr. Somach that
14 completely ignored Texas. We saw no mention of the
15 Texas district on that slide. They've acted like
16 nothing matters in -- in Texas, but Texas is not
17 correct. You'll hear that actions in Texas impact
18 project supply in the exact same way that actions in
19 New Mexico do, and that's true because the project is
20 operated as a single unit, and so anything that
21 reduces supply or reduces the overall amount in
22 project storage and, therefore, the amount available
23 to be divided. To make matters worse, the operating
24 agreement charges New Mexico water users with
25 depletions caused by Texas water users. So turning to

1 the New Mexico -- the Texas regulatory regime, unlike
2 New Mexico, the Compact commissioner for Texas is not
3 a water official and has no authority over water
4 administration at all, and unlike New Mexico, Texas
5 has no applicable rules and conducts no meaningful
6 water regulation. There's simply no limits on
7 groundwater use in Texas. A Texas water user can pump
8 as much groundwater as she wants without any
9 oversight, and since there's no monitoring in Texas,
10 we don't even have a way to track the amount that's
11 pumped, and the -- the effects can be seen in the
12 slide that you're seeing. We're looking at the
13 groundwater levels in 1938 in the blue area in Texas,
14 but if we click on 2017, we can see that the lack of
15 regulation in Texas has caused significant drawdowns
16 in groundwater levels, some as high as in the hundreds
17 of feet. Now, one of the concerns that New Mexico has
18 with the operating agreement is it has forced New
19 Mexico water users to rely on groundwater pumping. We
20 do not want to mine our aquifer in New Mexico. It has
21 long-term potential impacts. So we're trying to avoid
22 exactly what has happened in Texas.

23 Turning to the next issue, is the
24 current methodology for dividing the project supply
25 consistent with the Compact requirement that New

1 Mexico receive 57 percent? And here, we think that
2 the answer is clearly no. Reclamation ignored
3 unanimous requests from the Rio Grande Compact
4 Commission, and when it's unanimous, that means it
5 also came from the State of Texas, to consult on the
6 project allocation process when it adopted the
7 operating agreement and the D3 methodology. You will
8 hear New Mexico State Engineer John D'Antonio describe
9 the way that the operating agreement turned New Mexico
10 into the downstream state. Now, it did that by
11 adopting a process that awards EP No. 1 its allocation
12 first every year so that EP No. 1 is guaranteed its
13 entire D2 allocation. But the same is not true for
14 EBID. Instead, EBID gets whatever is left over. It
15 allocation is set by using the diversion ratio, which
16 charges all deviations from the D2 curve to New
17 Mexico. Now, what does that mean? It means if you
18 look at this slide, the blue line represents the D2
19 curve, basically the historic operations from 1951 to
20 1978. It was used as the baseline for the division of
21 water until 2005, and it's still used as the basis for
22 EP No. 1's allocation. Now, due to accounting
23 changes, water supply changes, and other activities in
24 the basin, including groundwater in Texas and New
25 Mexico, releasing the same amount of water today

1 results in a little less being delivered. That's
2 referred to as the gap. And you can see the gap
3 illustrated on this slide in that little green arrow
4 there, the difference between the red triangle and the
5 blue line, the blue line being D2 and the red being
6 the amount that can be delivered for those particular
7 years. Now, the assumption in this methodology that I
8 just described is that it is only -- actions in New
9 Mexico and only actions in New Mexico that caused the
10 gap, but Reclamation did not analyze the source of the
11 deviations before adopting the operating agreement,
12 and, in fact, it does not analyze the cause of the gap
13 even today when it does its allocations. Dr. Barroll
14 is the only expert in the case to have analyzed the
15 deviations from D2, and she will show that much of the
16 gap comes from actions that occur in Texas or Mexico,
17 the lack of river maintenance, or sweetheart
18 accounting agreements that benefit El Paso No. 1 and
19 not EBID. So let me give you an example. This slide
20 shows effluent being released from the Haskell
21 wastewater treatment plant. You saw this location on
22 the basin tour. During the irrigation season, much of
23 the water comes from project supply that goes into the
24 treatment plant, and then it's discharged into the
25 American Canal Extension. During the D2 period, that

1 supply, along with the effluent that was discharged,
2 form part of project supply. Now, in New Mexico,
3 there also is effluent from the City of Las Cruces and
4 other entities. In New Mexico, that effluent is
5 charged against EBID's allocation, in other words, it
6 forms part of project supply. But a different rule
7 applies in Texas. Due to a change in the accounting
8 methodology to which New Mexico did not agree, EP No.
9 1 is not charged for this effluent from Haskell, even
10 though it's still being used by EP No. 1 farmers. In
11 essence, that -- that water no longer counts as
12 project supply, and because the water was used during
13 the D2 period, when it was actually charged, it forms
14 part of that curve we looked at, and it -- and -- and
15 then the water not being charged today forms part of
16 the gap that I just mentioned. In other words, New
17 Mexico is -- is essentially charged for effluent --
18 the lack of effluent being charged in Texas, and,
19 therefore, it reduces the EBID allocation. New Mexico
20 bears no responsibility or -- or any connection
21 whatsoever to that effluent, and it is fundamentally
22 unfair to charge New Mexico with depletions that are
23 caused in Texas and Mexico, and more importantly, that
24 whole principle is contrary to the Compact. Now, if
25 you believe that any of the departures from D2 are

1 caused by something other than groundwater pumping in
2 New Mexico, then the only conclusion is that New
3 Mexico is not receiving its equitable apportionment.
4 So let's turn to the equitable apportionment, and I'll
5 separate this discussion into Texas and New Mexico.
6 So are there any years in which Texas did not receive
7 its equitable share of project supply, that 43
8 percent? Well, there's a number of reasons to think
9 or there's a number of reasons that the technical
10 evidence in this case will show that Texas was not
11 harmed. First, the slide you're looking at here goes
12 to show that New Mexico water use has been remarkably
13 stable. What you're looking at here is the amount of
14 water, surface water and groundwater, so it includes
15 groundwater, that has been applied to each project
16 acre in New Mexico. Now, you can see dating all the
17 way back to 1940, that amount has not really changed.
18 That amount is represented by the black line there,
19 and it's a hair over three. It looks like in some
20 years, it might have gone as high as 3.5. Now, that
21 number under four is significant because as you will
22 learn, as part of the trial, EP No. 1 actually
23 allocates, or allots, I should say, 4 acre-feet per
24 acre as a full supply to its water users, but as you
25 can see, New Mexico has never gotten near that, and,

1 in fact, the adjudication prevents that from
2 happening.

3 You can also see from this slide the
4 impact of surface water supply. So in years of
5 abundant surface water, the surface water being shown
6 in the blue lines here, you can see that there's
7 significantly less irrigation pumping shown by the
8 gray. But then in those years where there's less
9 surface water supply, well, now, you have more
10 groundwater pumping, and that is consistent with the
11 Compact's purpose of ensuring that the project
12 survives and that irrigation demands are satisfied.

13 I want to show you another slide here
14 that helps illustrate the impact of the operating
15 agreement on how water was applied in New Mexico, and
16 here you can see the D1/D2 period, the level of
17 groundwater pumping, that actually dropped during that
18 period of 1979 to 2005 because there was, as you'll
19 learn, a full supply during most of those years, but
20 then once the new methodology for allocating water
21 came into place, New Mexico farmers were forced to
22 rely on groundwater, and you can see on the right side
23 of this figure, the increased groundwater that -- that
24 had to occur in the State of New Mexico. This forced
25 farmers, and many against their better judgment, to

1 rely more heavily on groundwater.

2 And, finally, to finish the thought
3 about the stability of water use in New Mexico, Texas'
4 theory about this 1938 depletion limit is based on
5 this idea that there were increased depletions, but as
6 you can see from this slide, New Mexico's annual crop
7 consumption, again, has remained remarkably stable
8 over the years where it's essentially flat there, at
9 least as an average. So other reasons that -- to
10 understand that Texas was not really harmed will be
11 shown in the next slide. So, first, let me talk about
12 the concept of -- of full supply. So project water is
13 divided by Reclamation, and you'll hear that
14 Reclamation sets those allocations every year and that
15 those allocations represent the maximum amount that
16 either district is entitled to in any given year, and
17 based on the 790,000 acre-feet of water that's
18 released in a normal supply set by the Compact,
19 there's a certain amount of water that's allocated
20 each year as a maximum. It's -- it's essentially a --
21 a cap there on the amount of water that each district
22 is entitled to, and that full supply is shown here in
23 the black line on this slide. The yellow lines show
24 the amount of supply for EP No. 1. So you can see
25 from 1985 until 2002, there were full supplies. In

1 other words, the maximum amount that EP No. 1 is
2 entitled to. There's no dispute on that issue.
3 You'll hear from multiple witnesses that those years
4 were full supply. You also see in 2005, there was a
5 full supply, and I'll mention those other yellow bars
6 after 2006. In some of those years, EBID received
7 significantly less than a full supply, but EP No. 1
8 still not more than a full supply, in part because of
9 this methodology I mentioned, and in part because of
10 carryover, which ends up giving significantly more
11 than an equal amount of water per each acre in Texas.
12 The other thing that's interesting about this slide is
13 you can see in the red line here, the amount of water
14 that was actually charged to, so actually taken by EP
15 No. 1, and in a number of those years, you can see
16 that it's significantly less than they had available.
17 Now, they had all of that water available in storage,
18 but they chose not to call for it. In other words,
19 they made a determination unrelated to New Mexico that
20 they basically didn't need that water. Now, it's hard
21 to imagine how Texas could have been injured or had
22 damages in those years. It had a readily available
23 supply of water that it chose not to take. And you'll
24 learn that after 2006, so we can see there a line
25 shown here with the new methodology, Texas has

1 received significantly more than 43 percent of project
2 supply. Now, the -- another thing to illustrate on
3 this slide, before moving on, there's only two years
4 here, 2003 and 2004, in which Texas did not receive
5 either a full supply or significantly more than 43
6 percent of -- of project supply, and so due to project
7 operations, those two years are the only two where
8 Texas supply could have been reduced by New Mexico
9 groundwater pumping. Now, as we've explained before,
10 we'll explain through the course of the trial, we
11 don't think that even in those years, there was a
12 Compact violation, because the states have always
13 allowed groundwater pumping to supplement project
14 supply. But even under Texas' theory, if you accepted
15 Texas' theory, the impact to Texas during those years
16 was only approximately a hundred thousand acre-feet.
17 So let's turn, now, to the apportionment in -- in New
18 Mexico. So were there any years in New Mexico -- when
19 New Mexico did not receive its equitable share? And
20 here, we think the answer to that question is very
21 clearly yes. So this figure that you're looking at
22 has the dotted line set at 57 percent/43 percent for
23 Texas and New Mexico. The green bars are represent --
24 represent EBID's allocation, and the orange bars
25 represent EP No. 1's allocation. You can see here

1 that from 1979 up to 2005, it was, again, remarkably
2 stable. New Mexico received 57 percent of project
3 supply, and I'll tell you that Dr. Barroll will
4 testify, also, that even before the period showing
5 that, that also was true. You had a period 57/43.
6 But as you can see, after 2006, that drastically
7 changes. Now, what we're looking at is the green bars
8 represent significantly less than 57 percent of
9 project supply. The orange bars represent
10 significantly more than 43 percent. You can see it
11 going up above that dotted line there. And as will be
12 explained by New Mexico modelers, Mr. Sullivan and
13 others, since 2006, New Mexico farmers have been
14 deprived of an average of 94,000 acre-feet of project
15 water per year. That's 94,000 acre-feet per year.
16 And that means that during those years, New Mexico
17 received significantly less than 57 percent. Now, we
18 heard from Texas, in its opening statement earlier,
19 that Texas bears no responsibility for this inequity.
20 I guess the argument is that, sure, Texas receives
21 more water and New Mexico less and, sure, this might
22 be a Compact violation, but it's not our fault. But
23 that argument is not true to the court's established
24 rules in this area that hold that Texas is
25 responsible, *parens patriae*, for the actions of its

1 water users, and for Compact compliance, and it
2 doesn't take into account that Texas receive the
3 benefits of all of that extra water. And what's more,
4 it's also true that the operating agreement was
5 negotiated under the careful watch and participation
6 of the Texas Compact commissioner and with the
7 involvement of Texas in some parts of the negotiation.
8 So that -- that argument simply is not valid. And so
9 turning to the next slide, we can see that New Mexico
10 experts have quantified the losses to Mexico in -- in
11 a couple of different ways. First, the -- what you're
12 looking at here represents the paper records, the
13 records from Reclamation, and we've totalled that up.
14 Dr. Barroll will testify to this at length. And as
15 you can see, this -- this is simply showing the period
16 2006 to 2019, and during that period, lands in Texas
17 were -- had available to them 57 percent of project
18 supply. That's based on Reclamation's own records.
19 Meaning New Mexico only had available to it 43 percent
20 of supply. Now, from the modeling, and there's
21 reasons to think that the modeling is more accurate
22 because it takes into the account changes in
23 operations, the total losses into Mexico -- to New
24 Mexico have also been calculated, but those have been
25 calculated at over 1.1 million acre-feet. Now,

1 lawyers are notoriously bad at math, but it's a simple
2 matter of comparison to see that the claimed loss in
3 Texas of a hundred thousand acre-feet is significantly
4 less than the -- the loss to New Mexico of over 1.1
5 acre-feet, and that loss to New Mexico is growing
6 every year. Which takes us to the impact of all of
7 this on -- on New Mexico. Now, New Mexico farmers
8 will explain that being forced to rely on groundwater
9 by Reclamation has resulted in additional costs from
10 pumping costs to well maintenance to adding soil
11 amendments, and those additional costs in the
12 aggregate total millions of dollars, and those costs
13 have been accepted by the U.S. Supreme Court in cases
14 like Kansas versus Colorado, as -- as appropriate to
15 award to a state. Worse yet is what is being shown
16 here in this slide. What we're seeing here are the
17 groundwater levels in New Mexico represented by a
18 couple of monitoring wells in the New Mexico portion
19 of the basin. What you can see in the red line
20 reflects an equilibrium, and that is in times of low
21 surface water supply, the groundwater levels dropped.
22 You see that happening. And then when the surface
23 water rebounded, then so did the groundwater levels.
24 And that created a system, as I said, in equilibrium.
25 But since the operating agreement, what you see on the

1 right-hand side of this figure, is those groundwater
2 levels in New Mexico are not rebounding, and they may
3 never re -- rebound, and if those don't recover, that
4 could have potential long-term implications for the
5 State of New Mexico for which we are very concerned.
6 At the end of the trial, we will ask you to, No. 1,
7 find in New Mexico's favor; No. 2, give clear guidance
8 that the project must be operated in compliance with
9 the Compact so that New Mexico receives 57 percent of
10 project supply; and No. 3, set the remedies phase as
11 quickly as possible so that New Mexico can seek an
12 appropriate remedy.

13 Thank you.

14 **JUDGE MELLOY:** Thank you, Mr. Wechsler.

15 Well, we're -- it's 12:50 my time. I
16 think this is probably a good time to take a break
17 before we start with our first witness, so let's --
18 let's take a 20-minute recess, and when we come back,
19 we'll start with -- and you're going to lead off,
20 Mr. Dubois?

21 **MR. DUBOIS:** Yes, Your Honor.

22 **JUDGE MELLOY:** Okay.

23 **MR. DUBOIS:** I'll be calling
24 Ms. Estrada-Lopez.

25 **JUDGE MELLOY:** All right. We'll come

1 back in 20 minutes and take your witness then.

2 **MR. DUBOIS:** Thank you.

3 **JUDGE MELLOY:** Thank you.

4 (Recess.)

5 **JUDGE MELLOY:** All right. Are you ready
6 to call your witness?

7 **MR. DUBOIS:** Yes, Your Honor.

8 **JUDGE MELLOY:** All right. You may
9 proceed.

10 **MR. DUBOIS:** The United States calls
11 Michelle Estrada-Lopez to the stand.

12 **JUDGE MELLOY:** Just a second. Is she --
13 all I'm getting is a screen with a -- just a second.
14 Now, Ms. Estrada-Lopez is on the camera, right?

15 **MR. WECHSLER:** She is, Your Honor.

16 **JUDGE MELLOY:** All we're seeing is
17 slides. Is she screen sharing?

18 **MR. WECHSLER:** That's likely coming from
19 the tech from the U.S. Jim, you're on mute.

20 **MR. DUBOIS:** Yeah. Sorry about that. I
21 went back on mute. No. The -- Ms. Estrada-Lopez is
22 not running a slideshow. One of our paralegals is
23 running that stuff, and Michelle will just be
24 testifying.

25 We see the PowerPoint from

1 Estrada-Lopez.

2 **JUDGE MELLOY:** I'm not even getting the
3 PowerPoint.

4 **MR. WECHSLER:** There may be, Your Honor,
5 if someone from Worldwide is on --

6 **TRIAL ADMIN:** If you have
7 Ms. Estrada-Lopez please speak, she should pop up for
8 you so you can see her.

9 **THE WITNESS:** This is Michelle.

10 **JUDGE MELLOY:** All right. Okay. All
11 right. If you raise your right hand, please. Do you
12 swear or affirm that the testimony you're about to
13 give will be the truth, the whole truth, and nothing
14 but the truth?

15 **THE WITNESS:** I do.

16 **JUDGE MELLOY:** All right. For the
17 record, would you state your name and spell your name,
18 please?

19 **THE WITNESS:** Michelle Estrada-Lopez,
20 M-I-C-H-E-L-L-E, E-S-T-R-A-D-A hyphen L-O-P-E-Z.

21 **JUDGE MELLOY:** All right. Now,
22 Ms. Estrada-Lopez, we've agreed that we're going to be
23 asking each of the witnesses some preliminary
24 questions, so don't take any offense. You're just the
25 first one up. Let me ask, is anyone in the room with

1 you?

2 THE WITNESS: No.

3 JUDGE MELLOY: Do you have any materials
4 that you will be referring to during your testimony?

5 THE WITNESS: Just the PowerPoint that's
6 being displayed.

7 JUDGE MELLOY: The PowerPoint? Anything
8 else? Do you have any notes or -- or --

9 THE WITNESS: Oh, no.

10 JUDGE MELLOY: -- notebooks or records?
11 All right. We would ask that you not access any
12 computer or any other device that would allow e-mail,
13 texting, or instant messaging or any other form of
14 communication, and that if you do have any
15 communication with the attorneys during your
16 testimony, that those communications would be on the
17 record.

18 Let me ask counsel, anything else you
19 think we should ask Ms. Estrada-Lopez before we start?

20 MR. WECHSLER: Not from New Mexico, Your
21 Honor.

22 JUDGE MELLOY: All right.

23 MR. DUBOIS: Not that I'm aware of, Your
24 Honor.

25 JUDGE MELLOY: All right. Then

1 Mr. Dubois, you may start.

2 **MR. DUBOIS:** Thank you, Your Honor.

3 MICHELLE ESTRADA-LOPEZ,
4 having been first duly sworn, testified as follows:

5 DIRECT EXAMINATION

6 BY MR. DUBOIS:

7 **Q. Good afternoon, Ms. Estrada-Lopez. How are**
8 **you?**

9 A. Fine.

10 **Q. Is it all right if I call you Michelle?**

11 A. Yes, it is.

12 **Q. All right. Thank you. Michelle, who are you**
13 **employed by?**

14 A. By the Bureau of Reclamation.

15 **Q. Which office?**

16 A. The Albuquerque Area Office.

17 **Q. Okay. What's the general subject matter that**
18 **you've been asked to testify about today?**

19 A. An overview of the Rio Grande project and the
20 water operations as related to allocation and
21 accounting of the water.

22 **Q. All right. Have you testified in court**
23 **before?**

24 A. No, I have not.

25 **Q. Can you please tell the Court about your**

1 **educational background?**

2 A. I have a bachelor's of science and master's
3 of science in civil engineering.

4 **Q. From what university?**

5 A. New Mexico State University.

6 **Q. So both your bachelor's and your master's**
7 **were from NMSU?**

8 A. Yes.

9 **Q. What was your undergraduate degree?**

10 A. It was civil engineering, master -- bachelor
11 of science with a focus in water resources.

12 **Q. And did you graduate with any honors?**

13 A. Yes. With highest honors, which is
14 equivalent to valedictorian at NMSU.

15 **Q. Okay. You also got your master's from NMSU.**
16 **What was the emphasis of your master's?**

17 A. It was civil engineering with focus in water
18 resources.

19 **Q. What was the subject matter of your master's**
20 **thesis?**

21 A. It was looking at Caballo Reservoir
22 evaporation rates and comparing it to the
23 evapotranspiration rates of the surrounding
24 vegetation.

25 **Q. Okay. Let's talk about your employment.**

1 When did you start working for Bureau of Reclamation?

2 A. In June of 2009.

3 Q. So essentially right after you finished your
4 master's; is that right?

5 A. Yes, it is.

6 Q. Okay. And have you been with Reclamation
7 ever since you graduated from your master's program?

8 A. Yes, I have.

9 Q. What was your first full-time job with
10 Reclamation?

11 A. I was an intern in the water operations
12 group.

13 Q. And when was that?

14 A. From 2009 to 2011.

15 Q. Okay. What was your first full-time job with
16 -- or permanent job with Reclamation?

17 A. I was converted to civil engineering water
18 operations group in 2011.

19 Q. And how long were you in that position?

20 A. I was in water operations until 2013.

21 Q. What were your responsibilities with the
22 water operations group?

23 A. I did hydrologic data collection and
24 analysis, and my main focus was the Pecos River. I
25 did the water accounting for the endangered species

1 operations on the Pecos River. I did the -- I was the
2 backup for water accounting on the San Juan-Chama
3 Project, and I did daily operations decisions as part
4 of my role for the Rio Chama, the middle Rio Grande,
5 and the Pecos River.

6 **Q. What was your -- your next position at**
7 **Reclamation?**

8 A. I became a project manager.

9 **Q. And what does that mean?**

10 A. I oversaw the program, meaning the budget and
11 implementation of the program work for Reclamation for
12 the Rio Grande Project and the Carlsbad project, and
13 that included --

14 **Q. When did --**

15 A. Oh, sorry.

16 **Q. No, go ahead. Go ahead.**

17 A. That included leaving projects and programs
18 and purchasing all of the water for the endangered
19 species program for the Pecos River and then becoming
20 the allocation committee member for the Rio Grande
21 Project.

22 **Q. And how long were you a project manager?**

23 A. Until last year.

24 **Q. Okay. What responsibilities did the project**
25 **manager position entail?**

1 A. I oversaw the budget and the repayment
2 contracts for the Rio Grande Project and ensuring the
3 implementation of the work each year for the full
4 program, and then for the Rio Grande Project, I became
5 the allocation committee member so the representative
6 for Reclamation under the operations agreement.

7 **Q. Okay. So you were a representative on the**
8 **allocation committee from 2013 until the present?**

9 A. I didn't get assigned to the allocation
10 committee until after 2013. I believe it was 2015.

11 **Q. Okay. And what's your current position at**
12 **Reclamation?**

13 A. I'm the lead civil engineer in the water
14 operations group.

15 **Q. You indicated that you've had that position**
16 **since last year?**

17 A. Yes.

18 **Q. All right. What responsibilities does your**
19 **current position entail?**

20 A. I am still the allocation committee member
21 for the Rio Grande Project. I work as part of the
22 water operations team making decisions on releases for
23 the Rio Grande Project and our reservoirs on the Rio
24 Chama and the Pecos River. I review the water
25 accounting for the Pecos River and San Juan-Chama

1 projects, and then I am responsible for the
2 developments of the reports from our office to the Rio
3 Grande Compact Commission and the Pecos River Compact
4 Commission, as well as doing hydrologic data analysis
5 for our reservoirs for any projects that are ongoing
6 in our office that are assigned to me.

7 **Q. Are you familiar with the facilities and**
8 **operations of the Rio Grande project?**

9 A. Yes, I am.

10 **Q. How did you develop your familiarity with the**
11 **-- with the -- with the Rio Grande project and its**
12 **operations?**

13 A. I grew up in Las Cruces, New Mexico, which is
14 within the Rio Grande project area, then when I was
15 getting my master's degree, I took a course that was
16 solely focused on the Rio Grande project, looking at
17 it from all aspects, including farmers, irrigation
18 districts, the federal government, and wildlife
19 entities. My master's thesis was on Caballo, which is
20 one of two storage reservoirs for the Rio Grande
21 project, then when I joined Reclamation as an intern
22 in the water operations group, I started to do some
23 hydrologic analysis and assignments related to the Rio
24 Grande project, then when I became a project manager,
25 I oversaw the Rio Grande project as a whole and became

1 the allocation committee member, and now that I'm back
2 in water operations, I participate in the decisions of
3 releases from Elephant Butte and Caballo Reservoir.

4 Q. To lay some basic groundwork, I -- I would
5 like you to -- to walk the Special Master and Court
6 through a description of the physical layout of the
7 Rio Grande project. On the screen, you've got in
8 front of you a slide which has been marked --
9 previously been marked Estrada-Lopez Demo, for
10 demonstrative, 01. Do you have that up in front of
11 you?

12 A. Yes, I do.

13 Q. All right.

14 JUDGE MELLODY: Mr. Dubois, let me
15 interrupt for just a second here. One thing I failed
16 to do when we started with Ms. Lopez --
17 Ms. Estrada-Lopez's testimony was I think we had
18 agreed that at the beginning of the -- of each
19 witness, any exhibits that were going to be used by
20 that witness and that are designated as an A exhibit,
21 that is those that can be admitted without further
22 foundation or testimony, would automatically be
23 admitted, and I failed to do that. So since you're
24 going to start using the exhibits now, if -- if I
25 understand the list correctly, all of the

1 Estrada-Lopez demonstrative exhibits 1 through 37 are
2 being offered and can be admitted without objection,
3 so they will be admitted. Estrada-Lopez video clips
4 1, 2, 3, 4, 5, 6, 7, and 8 can be admitted without
5 objection and are so admitted. Texas Exhibit 84 is
6 admitted. United States Exhibit 55 is admitted.
7 United States Exhibit 116, 367, 436, 458, 511, 512,
8 and 661 are all admitted. Then for the New Mexico
9 cross-examination exhibits to which there are no
10 objections, there are three demonstrative exhibits
11 numbered New Mexico Demo 2, 3, and 4. They will be
12 admitted. Colorado Exhibit 214 will be admitted.
13 Joint Exhibit 206 will be admitted, Joint Exhibit 363,
14 391, 395, 402, 409, and 428 will be admitted. Joint
15 Exhibit 439 will be admitted. Joint Exhibit 470 will
16 be admitted. Joint Exhibit 10 -- excuse me, New
17 Mexico Exhibit 1055 and New Mexico Exhibit 1061 will
18 be admitted. New Mexico Exhibit No. 512 will be
19 admitted. New Mexico 697, New Mexico 2270 -- 2270 --
20 New Mexico 2373, New Mexico 2464 will all be admitted.
21 U.S. Exhibit 10, U.S. Exhibit 36, U.S. Exhibit 41,
22 U.S. Exhibit 46, 47, 54 will be admitted. U.S.
23 Exhibit 67, 200, 275, US-380, which I understand is
24 also New Mexico 2265, will be admitted. US-547 and
25 556 will be admitted. US-561, which is also New

1 Mexico 2394, will be admitted. US-563, 564, 565, 595
2 will all be admitted.

3 I think that covers all the ones that I
4 have on the sheets.

5 **MS. KLAHN:** Your Honor, could I ask for
6 clarification? This is --

7 **JUDGE MELLOY:** Yes.

8 **MS. KLAHN:** -- Sarah Klahn on behalf of
9 the State of Texas. Some of the exhibits, perhaps
10 many of the exhibits on New Mexico's cross-examination
11 exhibit list may not actually be used with
12 Ms. Estrada-Lopez. There's a lot of exhibits there.
13 Is it the Court's intention that if there's just zero
14 objections, that all such exhibits would be admitted?

15 **JUDGE MELLOY:** Yes.

16 **MS. KLAHN:** Okay. Thank you.

17 **JUDGE MELLOY:** All right.

18 **MR. WECHSLER:** One last question, Your
19 Honor. For those demonstrative exhibits, I assume
20 it's for demonstrative purposes and not evidentiary
21 purposes?

22 **JUDGE MELLOY:** Correct.

23 **MR. WECHSLER:** Thank you.

24 **JUDGE MELLOY:** All right. Unless --
25 unless somebody wants to move their admission for

1 evidentiary purposes and lay the necessary foundation,
2 but -- but at this point, they're just for
3 demonstrative purposes only.

4 All right. Sorry for the interruption,
5 Mr. Dubois. You may proceed.

6 **MR. DUBOIS:** That's all right, Your
7 Honor. Thank you.

8 **Q. (BY MR. DUBOIS) Michelle, you have**
9 **Demonstrative Exhibit 01 up on the screen in front of**
10 **you?**

11 A. Yes, I do.

12 **Q. All right. Can you first describe the**
13 **general location of the Rio Grande River itself?**

14 A. Yes. If you look at the slide at the inset,
15 if you zoom in here, we can see that the Rio Grande
16 begins in southern Colorado. It travels through New
17 Mexico towards the border with Texas. It crosses the
18 border several times, and then it becomes the border
19 between the United States and Mexico, and then it
20 enters the Gulf of Mexico near Brownsville, Texas.

21 **Q. Okay. So what is the Rio Grande Project?**

22 A. The Rio Grande Project is Reclamation's
23 federal irrigation project.

24 **Q. All right. Expanding back on to the larger**
25 **map, can you explain essentially what the project is**

1 and where it's located indicated on the -- on the map
2 that's Demo 1?

3 A. The Rio Grande Project stores inflow into our
4 project reservoirs and then delivers water to
5 irrigation fields in southern New Mexico indicated on
6 the map in the green cross hatching, and far west
7 Texas indicated in the pink cross hatching and also
8 makes a delivery to the country of Mexico.

9 Q. When was the project authorized?

10 A. It was originally authorized as part of the
11 1902 Act for Reclamation, and then it was expanded
12 into Texas in 1905.

13 Q. What part of the Rio Grande is within the
14 boundaries of the Rio Grande Project?

15 A. We can see on the maps, the Elephant Butte
16 Reservoir starts in the north Sierra County and goes
17 up into Socorro County and then is part of -- the
18 lands are in Sierra County and Dona Ana County in New
19 Mexico and in El Paso County in Texas and stop at the
20 El Paso County line.

21 Q. Why does the map that is up here, this
22 Demonstrative No. 1, go through Fort Quitman, Texas?

23 A. So there's two reasons. The Fort Quitman
24 gaging station is an important gage in the Rio Grande
25 Compact which is in an affected area, and then also

1 Reclamation's drainage and wastewater is rented to
2 Hudspeth County Conservation and Reclamation District,
3 which is in Hudspeth County, Texas, and is indicated
4 in that pea green color cross hatching.

5 **Q. Is Hudspeth County Conservation and**
6 **Reclamation District within the project boundaries to**
7 **the Rio Grande project?**

8 A. It is not.

9 **Q. How many storage reservoirs serve the**
10 **project?**

11 A. There's two storage reservoirs.

12 **Q. And what are they?**

13 A. Elephant Butte and Caballo.

14 **Q. On Demonstrative 2, can you please indicate**
15 **the -- the general location of Elephant Butte**
16 **Reservoir?**

17 A. Yes. You can see on the map, we've bolded
18 the first blue arrow pointing towards Elephant Butte
19 Reservoir, which is in the northern part of Sierra
20 County.

21 **Q. Okay. I'm going to show the Court a short**
22 **video clip that is from the drone flyover commissioned**
23 **by Texas. As we play it, can you describe for the**
24 **Special Master what he is seeing?**

25 A. Yes. Okay. So initially, you can see on the

1 left-hand side of the screen, the yellow arrow
2 indicating the location of where this video clip is
3 starting. So we are far south into the reservoir, and
4 then as the video clip plays, you will pan further
5 towards the dam and then see the actual facility.
6 Play the clip, please.

7 (The video was played.)

8 A. Okay. So it pans up to the north, and we can
9 see that the reservoir is quite low, and we can tell
10 this by the change in color in the surrounding lands.
11 The lighter color indicates where water used to be
12 stored for the reservoir. Now, it's going to rotate
13 slightly, and then we'll be headed towards the
14 facility, which is Elephant Butte Dam. Oh, it's going
15 to pan back north real quick. Okay. As we turn, we
16 can see the Elephant Butte, which is the large land
17 mass there and the marinas here at Elephant Butte,
18 then it turns, and if we can pause here. So this is
19 the upstream face of Elephant Butte dam, which is --
20 we saw on the tour with the Special Master, and we can
21 see that coming out of the dam in this video still,
22 you can see the Rio Grande coming out, and that would
23 be indicated by the vegetation line that's kind of
24 sinuous coming towards the north of the screen.

25 Play the clip, please.

1 (The video was played.)

2 A. Okay. So, now, we've switched to the other
3 side of the dam. This is called the downstream face
4 of the dam, and you can see the marina and Elephant
5 Butte in the background of the reservoir, and we can
6 see our facility and the building in the lower
7 right-hand corner, this is our power plant. This is
8 where the water from Elephant Butte is released
9 through to generate power. Most of the water that we
10 release goes through this power plant.

11 **MR. DUBOIS:** Is that the end of the
12 clip?

13 **MR. ALLISON:** Yes.

14 **MR. DUBOIS:** All right. Thank you.
15 Next slide, please.

16 **Q. (BY MR. DUBOIS) Michelle, on the screen is**
17 **what has been marked as Estrada-Lopez Demonstrative**
18 **No. 3. Can you tell the Special Master, what's the**
19 **source of these photos?**

20 A. These are Reclamation photographs.

21 **Q. All right. And what do these two photographs**
22 **show?**

23 A. These are both aerial photographs of Elephant
24 Butte dam. The one on the left is looking north and
25 east. You can see the Rio Grande coming off to the

1 right-hand side of the still, and then on the
2 right-hand photograph, we're looking at the downstream
3 face of the dam with the reservoir in the background
4 and the Rio Grande in the foreground. If we zoom in,
5 we can actually see in this photograph water is being
6 released to the river, and the white area in the Rio
7 Grande, that is the water coming through the power
8 plant and being released downstream. The concrete
9 structure to the left of the river connected to the
10 dam, that is one of the spillways for the dam.

11 **Q. How big is Elephant Butte Reservoir?**

12 A. It can hold about 2 million acre-feet.

13 **Q. And when was it completed?**

14 A. The initial construction was completed in
15 1916.

16 **Q. Can you describe the functions of Elephant**
17 **Butte Reservoir?**

18 A. The primary function of Elephant Butte
19 Reservoir is to store the water delivered by New
20 Mexico for the Rio Grande Project. We also have flood
21 control storage at this facility, and we can store
22 other types of water, which we call accounts. One of
23 them is San Juan-Chama project water, and the other
24 type is Rio Grande Compact credit water for New Mexico
25 and Colorado.

1 Q. All right. And you've also said that there's
2 a power generation facility in the project?

3 A. Yes.

4 Q. How does the timing and rate of release for
5 power production compare to the timing and rate of
6 release needed for irrigation?

7 A. So irrigation releases need to be quite
8 variable as the crop demand changes and hydrologic
9 conditions change in the basin. As for power
10 production, it needs to be steady so that we can
11 market that power. So when we make releases out of
12 Elephant Butte, they are much more steady than is
13 needed for an irrigation release.

14 Q. And how are the competing demands for the --
15 for the timing of release between power production and
16 irrigation reconciled?

17 A. Reclamation has a storage facility just
18 downstream of Elephant Butte dam, and as the water
19 from Elephant Butte dam is released at a steady rate,
20 it is captured in Caballo dam, and at Caballo dam is
21 where we make the daily or marked adjustments for
22 irrigation releases.

23 Q. Okay. Next slide, please. Going back to
24 what has been marked as Estrada-Lopez Demonstrative
25 No. 4, can you use this map to indicate to the Special

1 **Master where the location of the Caballo dam is**
2 **relative to the rest of the system?**

3 A. Yes. So on the map, we've bolded the second
4 blue arrow pointing towards the location of Caballo
5 Reservoir, and you can see it is just downstream of
6 Elephant Butte reservoir and still in Sierra County,
7 New Mexico.

8 **Q. About how many river miles is Caballo**
9 **downstream from Elephant Butte?**

10 A. I believe it's 15 to 20. I don't recall.

11 **Q. All right. I'm going to have another short**
12 **video clip played. Again, this is from the -- the**
13 **drone flyover commissioned by Texas and taken, I**
14 **believe, in August of 2021. Is -- I believe, isn't**
15 **that what is -- is that what is indicated in the upper**
16 **right-hand corner of the -- of the video?**

17 A. Yes. That's what it says.

18 **Q. Okay. All right. Thank you. So if you**
19 **would describe for the Special Master what he is**
20 **seeing as we play this clip, please.**

21 A. So this clip, we are facing south, and we are
22 starting in the bottom portion of the Caballo
23 reservoir. It's going to fly towards the Elephant --
24 the Caballo dam. Play the clip, please. Thank you.

25 (The video was played.)

1 A. So as we are moving closer to the dam, you
2 can tell that Caballo Lake is much shallower than
3 Elephant Butte because you can start to see some of
4 the land forms beneath the water. As we come closer
5 to the dam, you'll see it's this linear structure that
6 we can start seeing. Can you pause real quick? Thank
7 you. So the body of water is Caballo Lake, Caballo
8 reservoir in the foreground, and in the background,
9 you can see a water feature that is the Rio Grande,
10 and that is the water being delivered to the Rio
11 Grande project entities. As we move closer, you're
12 going to see the water is all diverting to the
13 left-hand side of the upstream, so we'll see where the
14 gates are. We're going to rotate around. So, now,
15 everything is on the top, but when we rotate all the
16 way around, the releases are on the right-hand side of
17 the dam. The concrete structure, that's the spillway,
18 but where the water is coming out for the releases is
19 this triangle-looking area between the concrete
20 structure and the rest of the dam. That's where the
21 releases are being made to the river. The white line
22 at the toe of the dam, that is Bonita Pipe. We saw
23 this on the tour with the Special Master, and this is
24 where water is delivered to the Bonita lateral. If we
25 can zoom in on the lower left-hand part of the screen,

1 so if the Special Master recalls, when we were at
2 Bonita lateral, we saw the concrete structure in
3 Bonita lateral and then we saw part of the structure
4 going back towards the Rio Grande. This is the
5 wasteway, and this is actually showing water being
6 sent back to the Rio Grande in -- at this time is
7 where that white water is coming out from the -- the
8 vegetation area. We can finish the clip if there's
9 any more.

10 Q. (BY MR. DUBOIS) Okay. I believe that's it.

11 A. Okay.

12 Q. All right. Next slide, please. Michelle,
13 you've now got on the screen what has been marked as
14 Estrada-Lopez Demo 05. What's the source of these
15 photos?

16 A. These are Reclamation photographs.

17 Q. And can you explain to the Special Master
18 what these are showing you?

19 A. These are both aerial photographs from the
20 downstream side of the dam and facing the reservoir,
21 so the larger body of water in the background, that is
22 Caballo Lake. The body of water coming out of the
23 dam, that is the Rio Grande. We can see by the white
24 coloring of the water near the toe of the dam, that
25 water is being released at this time for downstream

1 use.

2 **Q. Okay. How big is Caballo reservoir?**

3 A. About 350,000 acre-feet.

4 **Q. And what are the functions of Caballo**
5 **reservoir?**

6 A. Caballo reservoir, as I explained earlier,
7 restores the water that has been released from
8 Elephant Butte for the Rio Grande project. It also
9 collects water from a large amount of arroyos that
10 come into the Rio Grande at this location so it stores
11 that water, and it also has flood control purposes
12 because of those arroyos.

13 **Q. How does Reclamation measure the outflows**
14 **from Caballo reservoir?**

15 A. Reclamation has the Caballo gaging station --

16 **Q. Next slide, please.**

17 A. -- which is about a mile downstream from
18 Caballo dam.

19 **Q. On the screen is what has been marked**
20 **previously as Estrada-Lopez Demo 06. Can you --**
21 **what's the source of these pictures?**

22 A. These are Reclamation photographs.

23 **Q. All right. And can you describe for the**
24 **Special Master what is shown in these photographs?**

25 A. Yes. On the left-hand photographs, both the

1 top and bottom, these are taken from the east side of
2 the bank where the gaging station is. On the lower
3 photograph, you can see our instrumentation that is at
4 the site and where that is stored and housed. The
5 upper photograph, we can see one of our employees is
6 actually taking a measurement of the velocity in order
7 to compare it to the instrumentation that is
8 instantaneously and continuously taking measurements.
9 On the right-hand photograph, we're on the other side
10 of the bank, so the west side of the bank, and this is
11 right near where we stopped on the tour with the
12 Special Master. So we're looking across the river,
13 and you can even see the -- it looks white, but the
14 pipe that's in the left-hand side coming out of the
15 river, we can see it across the way on that side.

16 **Q. Is that the same pipe with the kind of**
17 **conical hat that's in the lower left picture?**

18 A. Yes, it is.

19 **Q. And what is that structure?**

20 A. So we use corrugated pipes to protect our
21 instrumentation and instrumentation that is measuring
22 within that.

23 **Q. All right. And the Special Master did see**
24 **this gaging station on the basin tour?**

25 A. Yes. And he was able to see one of the

1 district employees taking a measurement at that time.

2 **Q. Is this the only gage maintained by**
3 **Reclamation below Elephant Butte reservoir?**

4 A. Yes. Well, the only river gage.

5 **Q. Thank you. Who else has flow measurement**
6 **instrumentation at this site?**

7 A. The irrigation district.

8 **Q. Do each of the irrigation districts have**
9 **measurement instruments at this site?**

10 A. I believe so, yes.

11 **Q. Where's the water released from Caballo**
12 **reservoir delivered to?**

13 A. It is delivered downstream at diversion dams
14 and every diversion points.

15 **Q. What's the difference between a storage dam**
16 **and a diversion dam?**

17 A. A storage dam is quite large with the
18 intended purpose of storing water for at least some
19 period of time, so it can be released later when it's
20 needed for irrigation. A diversion dam is a structure
21 across the river, as well, but it's much smaller with
22 the intended purpose of backing the water up to create
23 pressure or head, so that that water can be diverted
24 off of the river by gravity into the distribution
25 systems for delivery to the farms.

1 **Q. How many diversion dams does the Rio Grande**
2 **project have on the Rio Grande?**

3 **A. We are currently delivering to five diversion**
4 **dams.**

5 **Q. Next slide, please. We've come back to the**
6 **map. This one is marked as Estrada-Lopez Demo 07.**
7 **Can you indicate on this map the northernmost and most**
8 **upstream of the diversion dams in the Rio Grande**
9 **project?**

10 **A. Yes. The bolded green arrow on the map is**
11 **pointing in a location of Percha Diversion Dam, and we**
12 **can see it's just downstream of Caballo dam.**

13 **Q. What part of the basin -- can you show on the**
14 **map what part of the basin is served by diversions**
15 **from the Percha Diversion Dam?**

16 **A. Yes. On the screen, we can see green cross**
17 **hatching indicating the lands for the project in New**
18 **Mexico. The upper portion that starts about the**
19 **location of Percha Diversion Dam and then goes through**
20 **and then pinches back in together, that's Selden**
21 **Canyon, so that's the location that's known as the**
22 **Rincon Valley, and it's in both Sierra County and Dona**
23 **Ana County in New Mexico.**

24 **Q. Next slide, please. Next slide has been**
25 **marked Estrada-Lopez Demonstrative Exhibit 8. Can you**

1 **tell me the source of these photographs?**

2 A. Yes. These are Reclamation photographs.

3 **Q. Okay. Can you explain to the Special Master**
4 **what is shown on these photographs?**

5 A. Yes. The right-hand photograph is taken from
6 the site looking at the downstream face and facing up
7 -- and shooting upstream. You can see water coming
8 through the gates. On the left-hand photograph, we
9 have an aerial photograph, and we can see the -- the
10 dam is spanning the river, and then on the left-hand
11 side of the river, we have two gates. This is where
12 the head or the pressure buildup behind the dam is
13 regulated, that way it can divert water on both sides
14 of the river. To the left, we have the Arrey Canal,
15 which is the main canal for the Rincon Valley for the
16 Percha section, and to the right, we have the Percha
17 lateral. We can also see water coming over the top of
18 the diversion dam and through the gates.

19 **Q. I'm going to show the Court another short**
20 **clip from the Texas drone flyover. Can you explain to**
21 **the Special Master what he is seeing in this video as**
22 **it plays, please?**

23 A. Yes. So in the still right before the video
24 plays, we can already see in the upper left-hand
25 corner of the video is the Arrey Canal. So this is

1 the canal, I guess, indicated on the previous
2 photograph. So when it plays, we are going to be
3 looking downstream, so the Arrey is coming off to the
4 right. We can go ahead and play.

5 (The video was played.)

6 A. Okay. So we can see the gates, and we can
7 see there's no water in the Arrey Canal. All the
8 water is going downstream in the Rio Grande. We can
9 see the Percha lateral off to the left and the upper
10 fields of the Rincon valley are shown in here.

11 **Q. (BY MR. DUBOIS) Does the Percha dam move**
12 **water to both sides of the Rio Grande?**

13 A. Yes, it does.

14 **Q. Does the Arrey Canal move water to both sides**
15 **of the Rio Grande?**

16 A. Yes, it does.

17 **Q. How does that happen?**

18 A. The -- there are siphons for the canal that
19 take it underneath the -- the Rio Grande and over to
20 the other side.

21 **Q. And what is a siphon?**

22 A. It is a structure that takes the water from
23 the canal and then underneath the river and then the
24 canal comes back open on the other side.

25 **Q. Approximately -- approximately how many acres**

1 are irrigated by the diversions from the Percha
2 Diversion Dam?

3 A. There's about 12,000 acres.

4 Q. Next slide, please. Using the next slide,
5 which has been marked as Demonstrative 9, can you use
6 this slide to tell the Special Master what the next
7 diversion dam in the Rio Grande project is and where
8 in the relative location of that dam?

9 A. Yeah. So the second arrow has been bolded,
10 the green arrow, pointing to the location of the
11 Leasburg Diversion Dam, and we can see from the map
12 that this is on the downstream side of Selden Canyon,
13 so this is the northern point of, but is called the
14 Mesilla Valley.

15 Q. Can you indicate on Slide 9 what part of the
16 basin is served by diversions from the Leasburg
17 Diversion Dam?

18 A. Yes. If you can see the purple triangle
19 that's marked Mesilla Diversion Dam and then kind of
20 go across to the green note for the Mesilla valley,
21 from there up to Leasburg Diversion Dam, that's the
22 approximate location of the fields that are served by
23 the Leasburg diversion.

24 Q. I'm going to show the Court another clip from
25 the drone flyover. Would you explain to the Special

1 **Master what he is seeing in this video clip?**

2 A. Yes. So we're starting looking north so
3 towards Selden Canyon, and it's going to pan around,
4 and then we'll see the Leasburg Diversion Dam. So
5 we're coming down the Rio Grande, rotating, now we're
6 facing downstream and we can see the Leasburg
7 diversion structure. You can pause there. Thank you.
8 You can see the entirety of the Rio Grande is shifting
9 over towards the left-hand side of the video clip.
10 That's because this is the location of the gates. The
11 gates to the Rio Grande below Leasburg are on this
12 side, as well as the gates to the Leasburg main canal,
13 which is the body of water we can see coming off and
14 starting to parallel the Rio Grande. You can play the
15 clip, please.

16 (The video was played.)

17 A. Okay. So we can see that there's water going
18 into the Rio Grande below the dam and into the
19 Leasburg main canal, so we're paralleling both of the
20 facilities, the Rio Grande and the Leasburg main
21 canal. As we come further down, we are going to see
22 an interesting structure. We can pause right here,
23 maybe a little further. No, that's probably fine.
24 Okay. So we can see in the main canal, we can see a
25 structure. This is a check structure, and what it

1 does is we can kind of see an indication of water
2 coming back towards the Rio Grande. So at this
3 location, water is backed up, and it can be sent out
4 to the Rio Grande. It's called a wasteway.

5 **Q. (BY MR. DUBOIS) What is the wasteway used**
6 **for at this point?**

7 A. The primary purpose of wasteways is to help
8 with the operation and maintenance of the canal
9 system. So at this location, when we're diverting --
10 when water is being diverted into the Leasburg main
11 canal, it's taking a lot of sediment and debris with
12 it. At this point, they can back the water up and
13 send the sediment with some water back to the Rio
14 Grande, so that reduces the maintenance in the lower
15 part of the canal system.

16 **Q. Michelle, the next slide has been marked**
17 **Estrada-Lopez Demonstrative 10. Can you please tell**
18 **the Court what the source of these pictures are?**

19 A. Yes. These are Reclamation photographs.

20 **Q. All right. And can you explain to the**
21 **Special Master what's shown in these photographs?**

22 A. On the right-hand side we have an
23 on-the-ground photo looking upstream. You can see the
24 large rock on the right-hand side of the photograph
25 and water coming over the top of the dam. The gates

1 are just off of the photograph to the right. In the
2 left-hand photograph, this is an aerial view. We can
3 get a better understanding of the function of the
4 facility. We can see that the facility is scanning
5 the entirety of the river here. On the right-hand
6 side of that large rock, we can see water coming
7 through the gates into the Rio Grande downstream, and
8 then we can see water moving off to the right. It's
9 hard to see because of the vegetation, but that's the
10 heading of the Leasburg main canal.

11 **Q. Did the Special Master see the Leasburg**
12 **Diversion Dam or the Leasburg canal heading on the**
13 **basin tour?**

14 A. No, he did not.

15 **Q. Okay. What canal does the Leasburg diversion**
16 **divert water into?**

17 A. To the Leasburg main canal.

18 **Q. And approximately how many acres are**
19 **irrigated under the Leasburg main canal?**

20 A. There's approximately 30,000 acres.

21 **Q. All right. Moving downstream, next slide,**
22 **please. Can you use what has been marked as**
23 **Estrada-Lopez Demonstrative 11 to indicate the next**
24 **diversion dam in the system and its relative location**
25 **for the Special Master?**

1 A. Yes. The bolded green arrow, which is the
2 third green arrow, and the first pink arrow that is
3 bolded and pointing towards the location of the
4 Mesilla Diversion Dam.

5 **Q. Okay. And backing up to the map a little**
6 **bit, can you explain -- go back to the full map. Can**
7 **you explain to the Special Master what portion of the**
8 **basin is irrigated under the diversions from the**
9 **Mesilla Diversion Dam?**

10 A. Yes. The lower Mesilla Valley is irrigated
11 from here, which starts at approximately the location
12 where the Leasburg Diversion Dam area ceases, which is
13 between that Mesilla Valley and Mesilla Diversion Dam
14 and then all of that land that is in the green cross
15 hatching plus that small amount of land that is in the
16 pink cross hatching, that is the Mesilla Valley, but
17 it is in the State of Texas.

18 **Q. Next slide, please. Can you -- can you -- on**
19 **the screen is what's been marked as Estrada-Lopez Demo**
20 **12, and what's the source of the photographs on this**
21 **slide?**

22 A. These are Reclamation photographs.

23 **Q. All right. And can you describe to the**
24 **Special Master what is shown by these photographs?**

25 A. Yes. On the right-hand side, this is an

1 on-the-ground photograph looking at the downstream
2 side of the Mesilla Diversion Dam, and it's from the
3 west side of the bank or the left-hand of the
4 downstream side. On the left photograph, this is an
5 aerial photograph, and it gives us an indication of
6 how the facility functions. We can see, again, that
7 it spans the river. This one also can divert water on
8 both sides of the river. We can see off to the left
9 of the photograph, that is the west side canal. Off
10 to the right of the photograph is the east side canal
11 and the Del Rio lateral, and what we can't see, which
12 is just north or on the top of this photograph, the
13 Mesilla Diversion Dam can back water up enough so that
14 water can be taken by the California extension, which
15 is the lower portion that is typically watered from
16 the Leasburg Diversion Dam.

17 **MR. WECHSLER:** Your Honor, I have no
18 objection, but I'm wondering if I could ask Mr. Dubois
19 to just ask the witness if she knows when these
20 photographs were taken.

21 **MR. DUBOIS:** I certainly can, Your
22 Honor.

23 **Q. (BY MR. DUBOIS) Ms. Estrada-Lopez, do you**
24 **know when these two photographs were taken?**

25 **A.** All of the aerial photographs from

1 Reclamation were taken, I believe it was in 2018,
2 during a helicopter tour that was specifically
3 contracted for Reclamation to take photographs of its
4 facilities, and the one on the right was taken by
5 myself during one of my trips. I don't recall which
6 one.

7 **MR. WECHSLER:** Thank you.

8 **Q. (BY MR. DUBOIS)** Was that -- was that -- was
9 that helicopter trip to take pictures of the
10 facilities, was that in relation to this case?

11 A. No. We have it done for all of the
12 Albuquerque office projects.

13 **Q. All of the which projects? I'm sorry.**

14 A. The ones under the Albuquerque office.

15 **Q. Oh.**

16 A. It was just for our --

17 **Q. Thank you.**

18 A. -- use.

19 **Q. All right. And am I correct that the -- that**
20 **it -- in the left-hand photo, you've got sort of some**
21 **white areas below the dam in four different places; is**
22 **that correct?**

23 A. Yes.

24 **Q. So it appears that -- does -- is it correct**
25 **that the Mesilla dam has more gates built into it for**

1 releasing water to the Rio Grande?

2 A. Yes. Each of those rectangular dark spots is
3 a gate that can be adjusted.

4 Q. Okay. I'm going to play -- well, a couple
5 more questions, and then I'll play the video clip.
6 What canals does the Mesilla Diversion Dam divert
7 water into?

8 A. The west side canal, the east side canal, the
9 Del Rio lateral, and the California extension.

10 Q. And approximately how many acres are
11 irrigated by the water diverted for the Mesilla
12 Diversion Dam?

13 A. About 40,000 acres.

14 Q. Okay. Next clip, please. I'm going to play
15 another clip from the -- from the drone flyover, and
16 if you would explain to the Special Master what he is
17 seeing as this clip plays, I'd appreciate it.

18 A. Yes. So as we're starting, we are looking
19 downstream, so downstream or south is going to the top
20 of the clip and then north is going to the bottom. We
21 can see on the right-hand side, that is the west side
22 canal, and on the left-hand side, we see the east side
23 canal and Del Rio laterals. You can play the clip.

24 (The video was played.)

25 A. So as the clip moves forward, you just get a

1 better shot of the water that is being passed
2 downstream into the Rio Grande. It's that
3 whitish-colored water that is moving down, and then
4 we're going to travel the west side canal and the Rio
5 Grande, which is on the left-hand side. We just can
6 see that there's vast amounts of acreage that is in
7 this portion of the valley.

8 Q. (BY MR. DUBOIS) Okay. Approximately how
9 many acres did you say were irrigated by diversions
10 from the Mesilla canal -- the Mesilla Diversion Dam?

11 A. About 40,000.

12 Q. Okay. Are the lands irrigated by the Mesilla
13 Diversion Dam located in both New Mexico and Texas?

14 A. Yes, they are.

15 Q. And how -- and are the diversions to each
16 state tracked by the irrigation districts?

17 A. Yes. There's gages on the project facilities
18 that are indication of how much water is delivered
19 across the state line through the distribution
20 facilities.

21 Q. Are the Percha, Leasburg, and Mesilla
22 diversion dams all located in New Mexico?

23 A. Yes, they are.

24 Q. Who operates the Percha, Leasburg, and
25 Mesilla diversion dams?

1 A. They're operated by Elephant Butte Irrigation
2 District, or EBID.

3 **Q. Did the Bureau of Reclamation ever operate**
4 **these diversion dams?**

5 A. Yes, we did.

6 **Q. When did Reclamation stop operating these --**
7 **these three diversion dams?**

8 A. In the late 1980s.

9 **Q. All right. Next slide, please. On what has**
10 **been marked Estrada-Lopez Demo 13, can you indicate or**
11 **-- or the slide to the Special Master the name and**
12 **relative location of the next diversion dam within the**
13 **Rio Grande Project?**

14 A. Yes. The bolded pink arrow, the second
15 arrow, is pointing to the location of the American
16 Diversion Dam, and it is in the -- what is known as
17 the El Paso Narrows, so the Mesilla Valley ends and
18 then we're transitioning to the El Paso Valley.

19 **Q. What part of the Rio Grande Basin is served**
20 **by the American Diversion Dam?**

21 A. The rest of the EP1 lands, or El Paso County
22 Water Improvement District lands, that's indicated on
23 this map by the pink cross hatching, so the larger
24 area is in the El Paso Valley, and that's what's
25 watered by the water that's diverted at American

1 Diversion Dam.

2 **Q. Next slide, please.**

3 **JUDGE MELLOY:** Mr. Dubois, can I get
4 clarification on one thing if I could? Did I
5 understand you to say, Ms. Estrada-Lopez, that there
6 is a gage that measures the amount of water that
7 crosses over into Texas from -- from New Mexico that
8 comes from the Mesilla Diversion Dam.

9 **THE WITNESS:** Yes. We have -- the
10 irrigation districts have gages in the project
11 facilities at certain locations, and it doesn't --
12 because the state line wiggles back and forth a lot,
13 it's not every single crossing, but it has been
14 determined that these three sites are an approximation
15 of the volume of water that is going to the Texas
16 lands.

17 **JUDGE MELLOY:** And do I understand
18 correctly that there are gages also at each of the
19 diversion dams that measure the amount of water that's
20 diverted into the various canals and laterals?

21 **THE WITNESS:** Yes. That's correct.

22 **JUDGE MELLOY:** Okay. All right. Thank
23 you.

24 **MR. DUBOIS:** Thank you, Your Honor.

25 **Q. (BY MR. DUBOIS) Michelle, looking at**

1 **Estrada-Lopez Demonstrative 14, do you know the source**
2 **of these pictures?**

3 A. Yes. These are also Reclamation photographs.

4 **Q. And do you know when these were taken?**

5 A. The one on the right was during the
6 helicopter tour that I mentioned, and the one on the
7 left was taken by myself, and I don't recall which
8 time I took it.

9 **Q. Which time to the American Dam?**

10 A. Yeah. I've been there many times.

11 **Q. Okay. Thank you. All right. Can you**
12 **describe to the Special Master what is shown on these**
13 **two photographs?**

14 A. Yes. On the left-hand side of this is a
15 photograph taken on the ground at American Diversion
16 Dam. It is facing upstream. You can see in the
17 background, the railroad bridge crossing the river.
18 The body of water in the background, that is the Rio
19 Grande coming down into the El Paso Narrows, and the
20 water in the foreground, that is water that's going
21 into the American Canal heading. On the right-hand
22 photograph, we have the aerial photograph so this is
23 the opposite direction so we're facing downstream. So
24 from the north looking south. We can see the American
25 Diversion Dam spanning the Rio Grande. There -- in

1 this -- when this photograph was taken, you can see
2 that there is water in the Rio Grande below the dam,
3 and by the white color indicated near the left-hand
4 side of the Rio Grande, that's telling me that water
5 is going through those gates and being delivered down
6 the Rio Grande. Off to the left, we see a body of
7 water. That is the American Canal, and we can see in
8 the background, that is the country of Mexico. To the
9 left, that is El Paso County in Texas, and in the
10 bottom right-hand corner, that is in New Mexico.

11 **Q. So the large municipality that has sort of**
12 **been the center background of -- of this photograph,**
13 **what city is that?**

14 A. That's Ciudad Juarez.

15 **Q. Thank you. I'm going to show the Court**
16 **another short video clip, and I'd like you to tell the**
17 **Special Master what he is seeing as we -- as we view**
18 **this clip, please.**

19 A. So at the start of this clip, we're looking
20 north. We can see the two railroad bridges that we
21 see in the background of the previous photo. It's
22 going to pan around and start facing the diversion
23 dam. Let's play the clip.

24 (The video was played.)

25 A. Okay. So we're panning around and coming

1 down the Rio Grande. It's going to spin around again.
2 So, now, we're going to be facing downstream, or
3 south, and this is where we can pause. Go back a few
4 seconds.

5 **Q. (BY MR. DUBOIS) Do you need --**

6 A. Thank you.

7 **Q. There we go.**

8 A. So, again, from this vantage point, you can
9 see the diversion dam crossing the entirety of the Rio
10 Grande, water being diverted, and appears at this
11 point in time all of the water in the Rio Grande is
12 being diverted into the American Canal, and no water
13 is being delivered downstream to the Rio Grande.

14 **Q. Is that the end of the clip? Go ahead and**
15 **play the clip.**

16 **(The video was played.)**

17 A. Okay. So we can see the likeness in the
18 water that's indicating the water moving into the
19 American Canal, then the American Canal parallels the
20 Rio Grande in this portion and then we'll see it
21 disappear for us because of the roadway that is in
22 this area.

23 **Q. (BY MR. DUBOIS) What canal does the American**
24 **Diversion Dam divert water into?**

25 A. Into the American Canal, which is eventually

1 going to deliver to the heading of the Franklin Canal
2 and through the American Canal extension to the
3 heading of the Riverside Canal.

4 **Q. The heading -- is the heading of the**
5 **Riverside Canal on the Rio Grande River?**

6 A. No. It is off the river.

7 **Q. All right. And approximately how many acres**
8 **are irrigated by the -- by the American Canal system**
9 **from the -- to American Dam?**

10 A. The rest of EP1, which is about 50,000 acres.

11 **Q. Who operates the American Dam?**

12 A. The International Boundary and Water
13 Commission, or IBWC.

14 **Q. Has Reclamation ever operated the American**
15 **Dam?**

16 A. No, we have not.

17 **Q. And can you please explain to the Special**
18 **Master how diversions at the American Dam operate?**

19 A. Yes. All of the water in the Rio Grande
20 upstream of American Diversion Dam is diverted into
21 the American Canal, except for the water needed to
22 make the delivery to Mexico or if the volume of water
23 is greater than that, that the American Canal can
24 hold, then that water is passed to the Rio Grande.

25 **Q. Is that different than how the prior dams**

1 that you've described operate?

2 A. Yes, it is.

3 Q. In what way?

4 A. At the upstream facilities, the diversions
5 are made related to the orders needed for irrigation.

6 Q. Okay. Does the American Dam divert only that
7 water that EP1 requested from the project?

8 A. No, it does not.

9 Q. Okay. All right. Can you -- next slide,
10 please. Can you indicate on what has been marked
11 Estrada-Lopez Demo 15, the location of the next
12 diversion dam in -- on the -- on the Rio Grande?

13 A. Yes. This is the fifth diversion dam and the
14 last diversion dam that we currently deliver to, and
15 it's located where this darker bolded gray arrow is
16 pointing, and then it is known as the International
17 Diversion Dam.

18 Q. Next slide, please. The next slide I've put
19 up has been marked Estrada-Lopez Demo 16. Can you --
20 what's the source of these two photographs?

21 A. These are Reclamation photographs from the
22 helicopter tour.

23 Q. And the helicopter tour was what year?

24 A. I believe it was 2018, but I'm not sure.

25 Q. All right. And can you describe what's shown

1 **on Demonstrative Slide 16?**

2 A. Yes. So these are both aerial photographs.
3 The one on the left is looking north, and the Rio
4 Grande upstream is in the background, and then we can
5 see on the right-hand side kind of in the center of
6 the photograph, that is part of the American Canal
7 that we saw earlier being diverted into American
8 Diversion Dam instead of parallel the river. Here it
9 comes back out where we can see it again. Then the
10 diversion dam is the structure that's crossing the Rio
11 Grande, and we can see that there are four gates there
12 that can release water downstream into the bed of the
13 Rio Grande, but we can see there's not much water in
14 the Rio Grande at this location. If we look on the
15 American Canal, you can see it's widened in spots.
16 This is how they can manage the sediment in the
17 American Canal before it's being delivered into the
18 Franklin Canal heading and the American Canal
19 extension. The larger concrete structure that crosses
20 American Canal, that is sending storm water from the
21 urban area across the American Canal and into the Rio
22 Grande, and then we can see two gates at the bottom
23 end of this, and that is where we can send our -- they
24 can send water back to the Rio Grande for operational
25 needs from the American Canal.

1 **Q. Okay. We're going to show you -- I'm sorry.**
2 **Go ahead.**

3 A. I was just going to say if we could go to the
4 other slide, so I can show --

5 **Q. Yes.**

6 A. -- the rest of how it works.

7 **Q. Yes.**

8 A. Okay. So, now, we are looking at the
9 diversion dam from the Mexican side, and we can see
10 we're upstream of the dam, and it's crossing the
11 river. What we could see in this one that we couldn't
12 see in the other is if we look in the bottom lower
13 right-hand corner, we can see a body of water. This
14 is the Acequia Madre, which is the main canal for
15 Mexico diversion. It's actually diverted underneath
16 this roadway over near the Rio Grande, and it goes
17 under this roadway, and then now we can see it on the
18 other side of the roadway.

19 **Q. Anything else you'd like to mark on this**
20 **picture?**

21 A. No.

22 **Q. Okay. I'm going to show the Special Master**
23 **another short video clip from the Texas drone flyover.**
24 **As this plays, can you tell the Special Master what he**
25 **is seeing in this clip?**

1 A. Yes. So we're facing upstream, so towards
2 the north. We can see the Rio Grande is the body of
3 water on the left, and the American Canal is the
4 browner body of water on the right. Play the clip,
5 please.

6 (The video was played.)

7 A. Okay. So we are panning around. We are
8 going to try and pause it when we can see a red truck
9 on the Mexican side.

10 **Q. (BY MR. DUBOIS) Pause.**

11 A. Right there. Okay. So what we couldn't see
12 in the Reclamation photographs that we can see here is
13 actually the inlet to the gates for the Acequia Madre,
14 and that is that darker rectangle below that red truck
15 that's in Mexico on the left-hand side of the
16 photograph. Can you play the clip?

17 (The video was played.)

18 A. So that's the American Canal. We can see the
19 storm water crossing and then it's facing downstream
20 towards the city of El Paso.

21 **Q. (BY MR. DUBOIS) What's the function of the**
22 **International Dam?**

23 A. To deliver the water to Mexico.

24 **Q. Who operates the dam?**

25 A. IBWC.

1 Q. And what water is passed through the
2 International Dam to the bed of the Rio Grande?

3 A. Only floodwaters or operational spills.

4 Q. Okay. Are both the American Dam and the
5 International Dam in -- in Texas?

6 A. No. They are partially in Texas and
7 partially in Mexico.

8 Q. Okay. Are there any other structures on the
9 Rio Grande below International Dam that the project
10 releases water to?

11 A. Not anymore.

12 Q. Are you familiar with the Hudspeth County
13 Conservation and Reclamation District?

14 A. I am.

15 Q. Do they have a contract with Reclamation to
16 pay for the use of project wastewater?

17 A. Yes, they do.

18 Q. Okay. Next slide, please. The next slide
19 has been marked -- previously marked Estrada-Lopez
20 Demo 17. Do you have that in front of you?

21 A. Yes.

22 Q. Okay. Can you indicate on Demonstrative
23 Slide 17 where Hudspeth County Conservation and
24 Reclamation District picks up water and where the
25 lands located -- where the lands irrigated by Hudspeth

1 **County are located?**

2 A. Yes. So if we can zoom in to the Hudspeth
3 County area, the golden orange arrows pointing towards
4 Hudspeth County, that pea green cross hatching
5 indicates the irrigated lands for Hudspeth County
6 Conservation and Reclamation District. We can see at
7 the El Paso County and Hudspeth County lines, there's
8 a pinch point. This is where the Rio Grande project
9 facilities are ending, and water is then taken across
10 the state -- county line into Hudspeth County and
11 allowed to be used by them under our contract.

12 **Q. All right. Moving on from the diversion**
13 **storage structures. Are there other structures that**
14 **are project facilities used to convey or move water**
15 **through the irrigation or project system?**

16 A. Yes.

17 **Q. And what kind of structures are those?**

18 A. There are canals, laterals, wasteways, and
19 drains.

20 **Q. All right. Next slide, please. I'm showing**
21 **you what has been marked Estrada-Lopez Demonstrative**
22 **18. Do you have that in front of you?**

23 A. Yes.

24 **Q. What's the source of these two photos?**

25 A. These are Reclamation photos that were taken

1 during the tour with the Special Master.

2 **Q. Did you take these photos?**

3 A. Yes, I did.

4 **Q. Okay. Can you tell the -- the Special Master**
5 **what is shown on the left-hand photo?**

6 A. Yes. On the left-hand side is a canal that
7 we saw on the tour in El Paso Valley.

8 **Q. What is on the right-hand photograph?**

9 A. On the right-hand photograph, this is a
10 lateral that we saw in the Mesilla Valley.

11 **Q. How does the elevation of the canals and the**
12 **laterals compare to the -- to the grade or elevation**
13 **of the surrounding farmland?**

14 A. As we saw on the tour, and we can kind of
15 tell from these photographs, the canals and laterals
16 are at a similar elevation or just above grade.
17 Because this is a gravity-delivered system, they need
18 to be slightly elevated in order to get the water to
19 the farms.

20 **Q. How many miles of canals and lateral ditches**
21 **are there in the project?**

22 A. There is about 140 miles of canals and 450
23 miles of laterals.

24 **Q. Does that include the farm ditches and the --**
25 **and the farm laterals?**

1 A. No, it does not.

2 **Q. Okay. What are wasteways?**

3 A. Wasteways, we saw earlier, are typically
4 connected to a canal, and they're used to help with
5 the operation and maintenance of the delivery system.
6 Mostly it's used to get sediment using the water back
7 to the Rio Grande. Also, they can use it if they need
8 to divert more water at the canal headings to get the
9 water moving because it's a gravity feed system, then
10 they can send that water back to the Rio Grande for
11 delivery elsewhere because it's -- after it gets the
12 water moving, it's not needed for irrigation in that
13 section.

14 **Q. Within the project, are the flows from the**
15 **wasteways measured?**

16 A. Some of them are.

17 **Q. Who measures the flows in the wasteways?**

18 A. The irrigation districts do.

19 **Q. And are the flows from the -- how are the**
20 **flows from wasteways represented in project**
21 **accounting?**

22 A. There are bypass orders, when we get the
23 orders, and then in the allocation accounting, for
24 some of the waste, there is a reduction in the charges
25 to the irrigation district, if it was an ordered

1 bypass, and then we charge them whichever is -- or we
2 reduce their charge by whichever is less, the
3 requested bypass or the measured wasteway delivery.

4 **Q. Okay. And why the difference? Why is it the**
5 **lesser of those two?**

6 A. To encourage efficiency.

7 **Q. All right. Next slide, please. Michelle,**
8 **you referred to orders, and I'm showing you what's**
9 **been marked as Estrada-Lopez Demonstrative Slide 19.**
10 **Can you -- how do the order sheets received from the**
11 **districts reflect the use of wasteways?**

12 A. So we can see on the left-hand side of this
13 order sheet, there's a number of rows labeled "bypass"
14 or "bypass WW" and then the number. That is to
15 indicate water that will be moved through the
16 wasteways.

17 **Q. What does WW32 mean?**

18 A. It means Wasteway 32, and this would be in
19 the Mesilla section.

20 **Q. Okay. What are drains, and how do they**
21 **differ from canals?**

22 A. Drains are not part of the delivery system.
23 They are, as the name indicates, for drainage, and
24 they are much deeper in elevation than the canals and
25 laterals, because they are using gravity to move the

1 water through the root zone of the irrigated acreage
2 into the drains for reuse. They create the return
3 flows to the Rio Grande or they're delivered to canals
4 for use downstream in the project.

5 Q. Next slide, please. Michelle, the slide on
6 the screen is now -- is one that's previously marked
7 as Estrada-Lopez Demonstrative 20. Can you explain to
8 the Special Master what he's seeing in the picture on
9 the left?

10 A. Yes. This is the photograph of the Del Rio
11 drain that I took on the tour with the Special Master.

12 Q. Okay. Now, you were talking about the -- the
13 -- the depth of the drains relative to the surrounding
14 land. Can you explain that using this photograph and
15 -- and what the drains are designed to do?

16 A. Yes. We can see the orchards off to either
17 side of the drain, and the drain is much deeper than
18 the surrounding lands. My understanding is most of
19 them are around 10 feet below the grade. They'd be
20 more in some spots. So in the right-hand bracket, we
21 can see just a small portion of the Mesilla Valley
22 part of the project. The green lines are indicating
23 the location of drains. The blue lines are indicating
24 the location of canals. So you can see we have
25 constructed many drains throughout the system. This

1 is to help move the water, once the farmers are
2 irrigating. The water is going into the root zone for
3 the crop. Not all of it is used by the crop, so the
4 drains are constructed to help move that water more
5 quickly back to the Rio Grande. So we're collecting
6 it at all of these various locations, and it is
7 traveling by gravity downstream. We can see in this
8 bracket, some of the drains are hitting the Rio
9 Grande, and some of them are hitting the headings of
10 other canals and laterals.

11 **Q. Generally speaking, where's the water that**
12 **flows into the drains go?**

13 A. To the Rio Grande for reuse in the project.

14 **Q. Okay. Do these drains tend to cover**
15 **substantial areas?**

16 A. Yes. It covers large areas of the project.

17 **Q. Okay. I'm going to show you one more video**
18 **clip, No. 9, and can you explain to the Special Master**
19 **what is shown in -- in this next video clip? Again,**
20 **this clip is from the Texas drone flyover shot in**
21 **August of this year.**

22 (The video was played.)

23 A. Okay. So as we pause at the beginning part
24 of this clip, we're looking at the Rio Grande. We're
25 facing north upstream, and we can actually see two

1 drains for sure on this video clip. The first one I
2 wanted to point out is on the left-hand side. We can
3 see the drain is actually leaving the Rio Grande, so
4 this would be the terminus of the drain. What we are
5 going to follow is the Del Rio drain, and it's going
6 to be off to the east side of the river, and then
7 we're going to turn and follow it for part of the
8 ways. Play the clip, please.

9 (The video was played.)

10 A. So on the left-hand side, they've highlighted
11 the structure that we're following. So we have the
12 Del Rio drain here, and then we're going to turn and
13 follow the Del Rio drain. You can see how it cuts
14 through lots of the acreage in this section of the
15 project. It's going to turn right here. And we can
16 see it's going through these acres of pecan trees, and
17 eventually, it will go further down, and that water
18 will be reused in the project for irrigation.

19 **Q. (BY MR. DUBOIS) Okay. Do you know why the**
20 **drains are included into the project?**

21 A. Yes. They were not part of the original
22 construction, and there was issues within the
23 farmlands with water logging for the crops and so
24 Reclamation went in and constructed hundreds of miles
25 of drains throughout the project to help the water

1 move through the root zone more quickly.

2 **Q. What's the importance of the drains to the**
3 **project?**

4 A. They are what we -- we create the return
5 flows that come back at a more quick rate after they
6 were constructed, and they also help the crops and the
7 farmers with their irrigation because it moves the
8 water through the root zone more quickly.

9 **Q. About how many miles of drains are there in**
10 **the project?**

11 A. There's hundreds of miles.

12 **Q. Okay. Are the flows -- are all the**
13 **structures you mentioned, the canals, the laterals,**
14 **the drains, are all those considered to be project**
15 **facilities?**

16 A. Yes, they are.

17 **Q. Are all of these facilities currently owned**
18 **and controlled by the United States?**

19 A. No, they are not.

20 **Q. What structures are owned and controlled by**
21 **the United States at this point?**

22 A. United States owns the five diversion dams
23 and the two storage dams. We operate the two storage
24 dams and the -- the two diversion dams in Texas and
25 New Mexico.

1 Q. I've got a few questions about general
2 project operations I'd like to shift to. Does
3 Reclamation require contracts in order to receive
4 water from the Rio Grande project?

5 A. Yes, we do.

6 Q. And are there more than one type of contract
7 that relate to water service -- service or rental from
8 the Rio Grande project?

9 A. Yes, there are.

10 Q. Okay. Next slide, please. Using the next
11 slide, which has been marked Estrada-Lopez
12 Demonstrative 21, can you describe for the Special
13 Master the types of contracts that you deal with that
14 deal with water -- project water delivery?

15 A. Yes. The five types of contracts that we
16 deal with are the repayment contracts, the transfer
17 contracts, the operating agreement, the 1920 Act, the
18 miscellaneous purposes contract, and a Warren Act
19 contract.

20 Q. Okay. Let's start walking through these
21 contracts and describe for the Special Master the
22 various categories of contracts. I'm showing you what
23 has been marked as U.S. Exhibit 367. Have you seen
24 this contract before?

25 A. Yes.

1 Q. Have you had occasion to use it as part of
2 your job or to refer to it as part of your job, I
3 should say?

4 A. Yes, I have.

5 Q. All right. Can you tell the Court what this
6 document is?

7 A. This is what we refer to as the repayment
8 contract for EBID.

9 Q. And what is the repayment contract?

10 A. This contract set forth the terms for the
11 farmers in New Mexico or in Elephant Butte Irrigation
12 District to repay the federal government for the
13 construction of the project facilities.

14 Q. Is this 1937 repayment contract still
15 considered to be in effect?

16 A. Yes, it is.

17 Q. All right. I'm showing you what's been
18 identified next as Exhibit US-458. Can you identify
19 this document?

20 A. Yes. We've referred to this as the repayment
21 contract for EP1.

22 Q. Okay. And, again, what does -- what is -- is
23 this a document that you have referred to and used in
24 -- as part of your job?

25 A. Yes, I have.

1 Q. And, again, is this contract also considered
2 still to be in full effect -- or in effect, I should
3 say?

4 A. Yes, it is.

5 Q. Okay. I'm going to show you next what's been
6 identified as -- so backing up a second. So the
7 US-367 and US-458, are those what you referred to as
8 the repayment contracts?

9 A. Yes, they are.

10 Q. All right. Showing you what's been
11 identified as U.S. Exhibit 511. Okay. Pardon me for
12 -- for -- needed to check tech there for a second.
13 Can you identify what's been -- what is in front of
14 you as US-511?

15 A. Yes. This is what we call the transfer
16 contract for EBID.

17 Q. And is this a full and complete copy of the
18 entire transfer contract for EBID?

19 A. No. It's missing the attachments, which have
20 all of the land survey and physical descriptions of
21 the transferred properties.

22 Q. So what is missing is the individual land
23 description for the, I think you've described it as
24 hundreds of miles of drains and 400 miles or so of
25 laterals and all of -- or at least that portion of it

1 in EBID; is that correct?

2 A. Correct.

3 Q. Have you ever had, as part of your job,
4 occasion to refer to the -- to those legal
5 descriptions?

6 A. No, I have not.

7 Q. Do you use the portion of the -- have you had
8 occasion to refer to and rely on the -- the portion of
9 the contract that is included in US-511?

10 A. Yes, I have.

11 Q. Okay. I'm sorry. So this was the 1979 EBID
12 transfer contract; is that correct?

13 A. Yes.

14 Q. And how -- and I'll point you to US-511
15 underscore 009, what's been Bates labeled as 511
16 underscore 0009. Does -- does this contract relate to
17 and define the United States' obligation with respect
18 to making allocations of water to EBID?

19 A. Yes, it does, under the water control
20 section.

21 Q. All right. And what does that provide?

22 A. This says that the United States will make
23 allocation of available stored project water among
24 EBID, EP1, and Mexico. And then it also states that
25 we will ensure the delivery of the allocated water to

1 the canal headings at other diversion points and then
2 make accounting of that water.

3 Q. All right. Thank you. I'm showing you
4 what's been identified now as Exhibit 512 -- U.S.
5 Exhibit 512. I'm sorry. Can you identify this
6 document?

7 A. Yes. This is the -- what we call the
8 transfer contract for EP1.

9 Q. And what does the transfer contract for EP1
10 do?

11 A. It transfers the canals, laterals, wasteways,
12 and drains in Texas part of the project to EP1 for
13 them to operate and maintain.

14 Q. And is this a full and complete copy of the
15 entire contract?

16 A. No. It's also missing the attachment that
17 describes all of the land survey information.

18 Q. And have you had occasion to review the land
19 survey information as part of your job?

20 A. No, I have not.

21 Q. Have you referred to the portion of the
22 contract that is included as US-512 in relation to
23 your job functions?

24 A. Yes, I have.

25 Q. Okay. And how does -- how does the transfer

1 -- the -- the 1980 EP1 transfer agreement relate to
2 water deliveries?

3 A. It also has stipulations for water control
4 obligating the United States.

5 Q. All right. I'll point you to US-512
6 underscore 0011, and can you point to the paragraphs
7 that you're referring to?

8 A. Yes. 6A and 6B.

9 Q. All right. And does the -- the asterisk in
10 handwriting, do you know the source for that?

11 A. No, I do not.

12 Q. Have you ever relied on that for any
13 information or -- or for any other purpose?

14 A. No, I have not.

15 Q. Okay. All right. Thank you. Now, I'm
16 showing you what's been identified as Exhibit NM-2373.
17 Can you identify this document, please?

18 A. Yes. This is the operating agreement for the
19 Rio Grande project from 2008.

20 Q. Okay. So this is what's referred to as the
21 2008 operating agreement in sort of the common
22 parlance?

23 A. Yes.

24 Q. All right. And what is the 2008 operating
25 agreement?

1 A. It is an agreement between Reclamation, EBID,
2 and EP1, and it's going to be the basis of how we do
3 the allocation and accounting for the Rio Grande
4 Project for the U.S. districts.

5 **Q. Was an operating agreement required by the**
6 **transfer contracts that are previously discussed as**
7 **US-511 and 512?**

8 A. Yes. That was part of the terms.

9 **Q. Okay. How does the 2008 operating agreement**
10 **relate to water deliveries?**

11 A. This is the basis for the allocations for the
12 U.S. districts, and they can only order water based on
13 those allocations, and Reclamation makes delivery of
14 those orders.

15 **Q. Okay. Is EBID the only entity in New Mexico**
16 **with the contract entitling it to demand and receive**
17 **water from the Rio Grande Project?**

18 A. Yes, it is.

19 **Q. Does the State of New Mexico have a contract**
20 **with the United States for under which it can demand**
21 **water from the Rio Grande Project?**

22 A. No, it does not.

23 **Q. Does the State of New Mexico have a contract**
24 **with the United States that allows it to use Rio**
25 **Grande Project water?**

1 A. No, it does not.

2 **Q. Has the State of New Mexico ever had a**
3 **contract with United States under which it could**
4 **demand release or use of project water?**

5 A. No, it has not.

6 **Q. Okay. I'd like to switch to the other kinds**
7 **of contracts that you referred to.**

8 **JUDGE MELLOY:** Mr. Dubois, maybe this
9 might be a good point to take a break. We've been
10 going for a little while now. Why don't we take about
11 a 20-minute break and come back at -- at 3:15 our
12 time. All right?

13 **MR. DUBOIS:** Yes, Your Honor. We will
14 be back at 3:15.

15 **JUDGE MELLOY:** All right. Thank you,
16 everyone.

17 (Recess.)

18 **JUDGE MELLOY:** All right. Are we all
19 back? Can you hear me, Mr. Dubois?

20 **MR. DUBOIS:** Yes. Ms. Estrada-Lopez and
21 I are back, so if --

22 **JUDGE MELLOY:** Before you proceed, let
23 me just mention one thing. I don't know if this is an
24 oversight, but you had Ms. Estrada-Lopez testify about
25 the operating agreement New Mexico 2373, but that has

1 not been -- was it your intent to move that into
2 admission, because that's not one that has been
3 admitted. It's a B objection, and I understand the
4 basis of the objection was completeness.

5 **MR. DUBOIS:** No. I believe that -- was
6 that a B objection? I thought the completeness was on
7 511 and 512. You're right.

8 **MR. WECHSLER:** The list I'm looking at
9 does indicate New Mexico 2373, which is the operating
10 agreement, is an A category with no objection, and we
11 do not object to that. The rule of completeness was
12 on US-511 and 512, and our understanding is the United
13 States has looked. We asked them to go and look for a
14 complete copy. When none could be found, we
15 determined that the -- the exhibit that Ms.
16 Estrada-Lopez identified as missing simply wasn't
17 important enough to keep it out, so we withdraw any
18 objections to those two exhibits.

19 **JUDGE MELLOY:** So 511 and 512 have not
20 been previously admitted, but they can?

21 **MR. WECHSLER:** They can be, Your Honor.
22 We heard this morning that you had included them on
23 the list that had been identified as admitted, and I
24 didn't stop the flow of testimony because we had
25 already made that determination ahead of time that we

1 were not going to object to it, and we didn't think it
2 was worth raising.

3 **JUDGE MELLOY:** All right. Okay. Then I
4 think we're all set then.

5 **MR. DUBOIS:** Yeah. It may be -- it may
6 be just that -- excuse me -- somehow the -- the rule
7 of completeness thing got -- got moved. I -- I don't
8 know exactly how that happened. My apologies if it
9 was on our end.

10 **JUDGE MELLOY:** All right. We know 2373
11 is in evidence, just so there's no misunderstanding.

12 **MR. DUBOIS:** Correct.

13 **JUDGE MELLOY:** Okay. All right. You
14 may proceed, Mr. Dubois.

15 **MR. DUBOIS:** Thank you, Your Honor.

16 **Q. (BY MR. DUBOIS) All right. Ms.**
17 **Estrada-Lopez, we were shifting onto talking about the**
18 **1921 -- 1920 Miscellaneous Purposes Act contracts. Do**
19 **you recall that?**

20 **A. Yes, I do.**

21 **Q. Okay. Can you tell the Special Master what**
22 **1920 Miscellaneous Purposes Act contracts are?**

23 **A. Yes. We enter into contracts under the 1920**
24 **Act to convert water from the original project use of**
25 **irrigation to something other than irrigation, and in**

1 this instance, it would be for municipal and
2 industrial use.

3 Q. All right. So it is -- it is converting a
4 portion of the project water from irrigation to
5 essentially M&I in this particular case; is that
6 correct?

7 A. Yes.

8 Q. Okay. Are 1920 Miscellaneous Purpose Act
9 contracts currently just contracts with the municipal
10 entity wanting to use the water?

11 A. No. They have to be with the original
12 project entity.

13 Q. Okay. Can you explain to me how
14 Miscellaneous Purposes Act contracts work, how does an
15 entity obtain -- how does an entity like El Paso, the
16 City of El Paso, obtain access to the water to be
17 converted to M&I?

18 A. In this case, EP1 got a contract with
19 Reclamation to convert part of their water from
20 irrigation to M&I, then it can be entered into a
21 contract with a third party in order to use that
22 water.

23 Q. All right. What entity has 1920
24 Miscellaneous Purposes Act contracts under the Rio
25 Grande project?

1 A. EP1 and the City of El Paso.

2 **Q. All right. I'm showing you what's been**
3 **identified as Texas Exhibit 0084. Can you identify**
4 **this document?**

5 A. Yes. This is a conversion contract for the
6 1928 contract for part of the water for EP No. 1 to
7 convert it from irrigation to miscellaneous purposes.

8 **Q. All right. Does the actual contract start on**
9 **the next page? Actually, two pages, I believe. Oops.**

10 A. This one starts at the beginning.

11 **Q. Okay. I'm sorry. It does. All right. Have**
12 **you had occasion as part of your responsibilities to**
13 **work with this contract?**

14 A. Yes, I have.

15 **Q. Okay. And what's the function of this**
16 **contract?**

17 A. It converts a part of EP No. 1's allocated
18 water to be used for purposes other than irrigation.

19 **Q. All right. And is there a subsequent**
20 **contract that is necessary to -- to implement the use**
21 **of that converted water by municipality?**

22 A. Yes. We call them the third-party contracts
23 that allows for the implementation of the converted
24 waters use.

25 **Q. All right. I'm going to show you what's been**

1 marked as US-116. Can you identify that document,
2 please?

3 A. Yes. This is the 2001 implementing contract.
4 It actually starts a few pages in.

5 Q. The next page. Is that the contract itself?

6 A. Yes.

7 Q. And have you had occasion as part of your job
8 responsibility to utilize and refer to this contract?

9 A. Yes, I have.

10 Q. And what is this contract -- what is the
11 function of this contract?

12 A. This is the contract between Reclamation,
13 EP1, and the City of El Paso that allows for the use
14 of the converted water under EP1's allocation to be
15 delivered to the water treatment plant in El Paso and
16 the use of sewage effluent by the EP1.

17 Q. Is this the only 1920 Miscellaneous Purposes
18 Act contract that allows El Paso Water Utilities to
19 use converted project water?

20 A. No, it's not.

21 Q. How long -- how long have there been 1920
22 Miscellaneous Purposes Act contracts allowing the City
23 of El Paso to use a portion of the project irrigation
24 water?

25 A. Since 1941.

1 Q. Is the water provided to El Paso Water
2 Utilities part of the EP1 allotment?

3 A. Yes. It comes from the EP1 allocation.

4 Q. Why is it treated as part of the EP1
5 allotment or allocation?

6 A. Because it is the converted portion of EP1's
7 allocation to M&I uses.

8 Q. What is the -- is it based on conversion of
9 water from particular acreage?

10 A. Yes, I believe so.

11 Q. Is El Paso Water Utility the only entity in
12 either state to have 1920 Miscellaneous Purposes Act
13 contract for the conversion and use of irrigation
14 water for non-irrigation purposes?

15 A. Yes. The City of El Paso can use it for
16 that.

17 Q. Is there a 1920 Miscellaneous Purposes Act
18 contract that allows the City of Las Cruces to use
19 project irrigation water for M&I purposes?

20 A. No, there is not.

21 Q. Can Las Cruces use project irrigation water
22 for M&I -- for -- I'm using an acronym, M&I. What
23 does M&I mean?

24 A. Municipal and industrial.

25 Q. Thank you. Can Las Cruces use project

1 irrigation water for municipal and industrial purposes
2 without a 1920 Miscellaneous Purposes Act contract?

3 A. No, they cannot.

4 Q. Okay. You also referred to contracts or a
5 contract held by the Hudspeth County Water
6 Conservation and Reclamation District. Do you recall
7 that?

8 A. Yes, I do.

9 Q. Is that what is referred to as a Warren Act
10 contract?

11 A. Yes, it is.

12 Q. And what is a Warren Act contract?

13 A. A Warren Act contract is a contract that
14 Reclamation enters into for the use of project
15 facilities by non-project entities or for the use of,
16 in this case, renting project water once the project
17 is done with it.

18 Q. And does Hudspeth County Conservation and
19 Reclamation District have a Warren Act contract with
20 the United States?

21 A. Yes, we do.

22 Q. I'm showing you what's been marked as US-436.
23 Can you identify this document, please?

24 A. Yes. This is what we refer to as the Warren
25 Act contract with Hudspeth County Conservation and

1 Reclamation District from 1951.

2 Q. Is this the current contract -- Warren Act
3 contract in effect with Hudspeth County?

4 A. Yes, it is.

5 Q. And does Warren Act contract entitle Hudspeth
6 to demand a release from storage or guarantee a
7 delivery of any set amount of water?

8 A. No, it does not.

9 Q. Does this contract identify the source of
10 water rented to Hudspeth County?

11 A. Yes, it does.

12 Q. Where is that located?

13 A. In the whereas marked 7.

14 Q. And what does it provide as far as what water
15 the -- the Hudspeth County is renting?

16 A. Project return flow, drainage, and
17 operational waste that is available to them at the
18 terminus of the Tornillo main canal, the Fabens Waste
19 Channel, and from the Tornillo Drain outlet.

20 Q. Do you know about how long Hudspeth County
21 Water -- Hudspeth County Conservation and Reclamation
22 District has had Warren Act contracts for the use of
23 project LR?

24 A. Yes. Since 1924.

25 Q. Does the project deliver water to any entity

1 other than those under the contracts you've just
2 described?

3 A. Yes, we do.

4 Q. And to what entity is that?

5 A. To the country of Mexico.

6 Q. Okay. I'm showing you the next slide,
7 please.

8 JUDGE MELLOY: Could I ask just a real
9 quick question?

10 MR. DUBOIS: Absolutely.

11 JUDGE MELLOY: Why do they call it
12 rental of water to Hudspeth County as opposed to sale
13 of water to Hudspeth County?

14 THE WITNESS: I don't know the answer to
15 that.

16 JUDGE MELLOY: Just what they do. All
17 right. Thank you.

18 MR. DUBOIS: And it may be, Your Honor,
19 that it's simply a way of describing that it's not an
20 ownership interest in any amount of water, but just
21 the -- the use of water. But it's -- it's an old set
22 of contract language.

23 Q. (BY MR. DUBOIS) All right. Ms.
24 Estrada-Lopez, we were just talking about the delivery
25 of Mexico. How much water is delivered to Mexico?

1 A. We can deliver up to 60,000 acre-feet.

2 **Q. And is 60,00 acre-feet delivered in each**
3 **year?**

4 A. No, it is not.

5 **Q. In what circumstances can that be reduced?**

6 A. Under the treaty between the U.S. and Mexico,
7 we can reduce the amount of water that we deliver to
8 Mexico if there is an extraordinary drought or serious
9 accident to the irrigation system in the United
10 States.

11 **Q. Is Reclamation the entity that has**
12 **historically determined the allocation to Mexico?**

13 A. Yes, we are.

14 **Q. Is Reclamation the entity that makes the**
15 **releases from storage to meet any obligation to**
16 **deliver water to the Acequia Madre?**

17 A. Yes, we do.

18 **Q. Okay. I'd like to switch gears a little bit**
19 **and talk about operation and maintenance role of**
20 **Reclamation. You listed a number of structures**
21 **previously, the dams, the canal headings, the laterals**
22 **and drains and wasteways. What was the United States'**
23 **responsibility for operating and maintaining project**
24 **facilities prior to 1979?**

25 A. Reclamation operated and maintained the

1 entirety of the project facilities from the storage
2 dams and delivered the water all the way to the farms.

3 **Q. What changed Reclamation's role of**
4 **responsibility for operation and maintenance?**

5 A. The irrigation districts met the terms of
6 their repayment contracts, so the operation and
7 maintenance of the distribution facilities and drains
8 was transferred to the irrigation districts. So that
9 would change our responsibility from delivering water
10 to the farms to delivering water to the irrigation
11 districts.

12 **Q. These are the contracts that we talked about**
13 **before, US-511 and 512?**

14 A. Yes, they are.

15 **Q. In what way did the U.S. responsibilities for**
16 **operation and maintenance of the facilities change**
17 **with transfer?**

18 A. Reclamation was no longer operating and
19 maintaining the canals, wasteways, drains, and the
20 irrigation districts were taking over that and then
21 the irrigation districts also took over taking the
22 order from the farmers and delivering the water from
23 the diversion points to the farmers. So Reclamation
24 was only delivering water to the diversion points.

25 **Q. Does Reclamation have any responsibility for**

1 maintaining any part of the channel of the Rio Grande
2 below -- Rio Grande below Elephant Butte Reservoir?

3 A. Yes, we do.

4 Q. And what responsibility is that?

5 A. Reclamation maintains the channel between
6 Elephant Butte Dam and Caballo Reservoir and from
7 Caballo Dam down to Percha Diversion Dam.

8 Q. Did the transfer to the districts of the
9 operation and maintenance responsibility also affect
10 Reclamation's role in the water delivery management?

11 A. Yes, it did.

12 Q. In what way?

13 A. Reclamation was previously allotting water to
14 the farmers and taking their orders and delivering it
15 to them, and now, we are allocating water to the
16 irrigation districts and taking orders from the
17 irrigation districts for delivery at the diversion
18 points.

19 Q. Does the United States have any
20 responsibility for management and delivery of water
21 below the diversion dams to the two districts?

22 A. No.

23 Q. I'd like to talk about Reclamation's role in
24 the project water operations during the course of the
25 year. Next slide, please. Can you -- using what's

1 **been marked as Estrada-Lopez Demo No. 23, can you walk**
2 **the Special Master through a summary of the**
3 **Reclamation's role through a water year?**

4 A. Yes. We have three distinct roles during a
5 water year, before the releases, during the releases,
6 and after the releases. Before the releases,
7 Reclamation is making an initial allocation to Mexico
8 and the irrigation districts in the U.S., and we are
9 updating that allocation as water is being delivered
10 to the Rio Grande Project. During the irrigation
11 season, we are the ones making the releases from the
12 project storage to the districts in Mexico, and we are
13 doing this by confirming and executing the orders from
14 the irrigation districts in Mexico, and we track the
15 diversion at those delivery points for us. We are
16 continuing to make allocation updates as long as water
17 is coming into the Rio Grande project, and the
18 irrigation season has not ceased, and we are getting
19 preliminary accounting data from the irrigation
20 districts and IBWC and reviewing that, then after the
21 releases have completed for the year, we are working
22 on collecting all of the final hydrologic data and
23 developing the accounting charges and credits against
24 the allocations and determining the allocation balance
25 that will be available for the following season.

1 During the aftertime, we are also developing our
2 reports to the Rio Grande Compact Commission on the
3 operations of the Rio Grande Project.

4 **Q. Okay. Going back to the beginning of the**
5 **season, what do you mean by initial allocation?**

6 A. This is the first allocation that we make to
7 Mexico and the irrigation districts for the upcoming
8 season.

9 **Q. And what is usable water?**

10 A. Usable water is water that's available to the
11 Rio Grande Project for release and delivery to its
12 beneficiaries.

13 **Q. What is Reclamation's role in determining how**
14 **much water is available as usable water in Elephant**
15 **Butte Reservoir?**

16 A. That is Reclamation's role to determine that.

17 **Q. Has the Compact commissioner of New Mexico**
18 **ever had a role in making realtime determination of**
19 **the usable flow available for allocation to the**
20 **irrigation districts in Mexico?**

21 **MR. WECHSLER:** Objection; foundation.

22 **Q. (BY MR. DUBOIS) All right. To your knowledge**

23 --

24 **JUDGE MELLOY:** Do you want to rephrase
25 or do you want me to rule on that, Mr. Dubois?

1 **MR. DUBOIS:** I'll try and rephrase
2 first, Your Honor.

3 **Q.** (BY **MR. DUBOIS**) In your -- in your -- in your
4 experience, has the Compact commissioner of New Mexico
5 ever had a role in making a realtime determination of
6 the usable flow available for allocation to the
7 irrigation districts and Mexico?

8 **A.** No, they have not.

9 **Q.** In your review of allocation records of
10 Reclamation, have you ever found any evidence that the
11 Compact commissioner of New Mexico ever had a role in
12 making determinations of the usable flow available for
13 allocation to the irrigation districts or Mexico?

14 **MR. WECHSLER:** I'm going to object to
15 that, Your Honor. I don't mind the question. I would
16 like to know what review we're talking about. So it's
17 a foundational one until I understand what records she
18 was -- she has reviewed.

19 **MR. DUBOIS:** All right.

20 **JUDGE MELLOY:** All right. Why don't you
21 give us a little more foundation, Mr. Dubois.

22 **MR. DUBOIS:** All right.

23 **Q.** (BY **MR. DUBOIS**) Michelle, can you tell me
24 what -- what records that you've reviewed regarding
25 allocation process -- historical allocation process of

1 Reclamation and determinations of allocations to the
2 districts?

3 A. I have reviewed the allocation documents from
4 the 2008 operating agreement period, and I have
5 reviewed some of the allocation letters from the
6 pre-2008 operating agreement period.

7 Q. And in any of those records, is there any
8 indication that the Compact commissioner in New Mexico
9 ever had a role in making decisions about the usable
10 flow available for allocation to the irrigation
11 districts in Mexico?

12 A. No.

13 Q. And is -- is Reclamation's determination of
14 the amount of water available as usable water in
15 Elephant Butte Reservoir for -- for allocation to
16 irrigation districts the same as Compact accounting
17 for New Mexico's deliveries to Elephant Butte
18 Reservoir?

19 MR. WECHSLER: Objection; foundation.

20 I haven't heard a foundation, Your
21 Honor, for any understanding of the Compact-to-Compact
22 accounting of the Rio Grande Compact Commission.

23 JUDGE MELLOY: Well, I'm going to
24 overrule that objection. I believe that this witness,
25 as the manager, would be qualified to testify to that.

1 I do want to clarify one thing, though,
2 Mr. Dubois. When you were asking about New Mexico's
3 Compact commissioner having a role, I think I heard
4 you say Mexican allocation. Did you mean Mexican or
5 New Mexico?

6 **MR. DUBOIS:** No. Actually, Your Honor,
7 I was -- I was referring to allocation to the
8 districts or Mexico.

9 **JUDGE MELLOY:** Okay.

10 **MR. DUBOIS:** So as we will get to, there
11 is an allocation to the districts and to Mexico.

12 **JUDGE MELLOY:** So you're talking about
13 both?

14 **MR. DUBOIS:** Yes.

15 **JUDGE MELLOY:** Okay. All right. Why
16 don't you restate the question, and the witness can
17 answer.

18 **Q. (BY MR. DUBOIS)** Is the -- is Reclamation's
19 determination of the water available as usable water
20 in Elephant Butte Reservoir the same as Compact
21 accounting for New Mexico's deliveries to Elephant
22 Butte Reservoir?

23 A. No, it's not.

24 **Q. Okay. How is it different?**

25 A. Reclamation is determining the usable water

1 for the project during the release season and prior to
2 the release season, and the Compact is looking at data
3 from the prior year by a calendar year basis.

4 **Q. And how do you know that?**

5 A. Because I have attended Compact commission
6 engineering advisors meetings and Compact commission
7 meetings.

8 **Q. Does the -- does the Compact commission use**
9 **data that is similar to the data that is used by**
10 **Reclamation in making its determination of usable flow**
11 **that's available for allocation?**

12 **MR. WECHSLER:** Foundation.

13 **MR. DUBOIS:** Your Honor, she just said
14 that she's been -- that she has been attending these
15 Compact accounting matters, and she makes the reports.
16 She's familiar with the -- with the general data they
17 use.

18 **MR. WECHSLER:** She hasn't said the
19 latter part, and I've attended many school board
20 meetings, and yet I'm not familiar with their data.

21 **JUDGE MELLOY:** I'm going to overrule.
22 The witness can answer.

23 A. Yes. It's similar data. Reclamation
24 provides our data to the Compact commission.

25 **Q. (BY MR. DUBOIS) All right. What's your role**

1 in determining the usable water available for
2 allocation?

3 A. I'm the one that makes that determination.

4 Q. All right. Next slide, please. Michelle,
5 we've got up on the screen what's been marked as
6 Estrada-Lopez Demonstrative No. 24. Can you please
7 explain, using this slide, for the Special Master, the
8 general process for determining allocations?

9 A. Yes. First, we -- I need to determine the
10 water that's available for release to the project for
11 the allocation, and this is the water that's available
12 for release and what has already been released in the
13 current year, then we determine river conveyance
14 efficiencies. This is going to be based on expected
15 return flows from drains and wasteways above the
16 additional diversion points for the project, and also
17 anticipated river gains and losses, and that is how we
18 can determine an allocation for each irrigation
19 district in the U.S. and for Mexico that will be
20 available to them for them to order and deliver.

21 Q. When's the initial allocation made?

22 A. It's typically in December or January, but it
23 can be later.

24 Q. Do you make that allocation based on
25 projections of inflow and water coming into Elephant

1 Butte Reservoir during the runoff season?

2 A. No.

3 Q. Was the -- what is the -- what is the
4 allocation based on?

5 A. It is based on the water that is in storage
6 at the time the allocation is made.

7 Q. Okay. So you're looking at a point in time
8 for volume of storage?

9 A. Yes.

10 Q. All right. Next slide, please. So can you
11 explain to the Special Master how you make the
12 starting determination of water in storage that's
13 available for release?

14 A. Yes. On the slide, we put the different
15 items that go into the calculation of water available
16 for release. We start with the total water in storage
17 at Elephant Butte and Caballo.

18 Q. And how is that determined?

19 A. This is measured by measuring the water
20 surface elevation at both reservoirs and then
21 determining what volume is being stored at that water
22 surface elevation.

23 Q. How does the water surface elevation tell you
24 the volume of water in storage?

25 A. Reclamation conducts geographic surveys of

1 the land below the Reservoir, approximately every ten
2 years, and we developed a relationship between the
3 water surface elevation and the volume that is being
4 stored at that elevation.

5 Q. So it's a -- a -- a measured elevation
6 multiplied by a measured capacity for that elevation;
7 is that correct?

8 A. Yes.

9 Q. All right. So you first determine the total
10 water in storage. Is there -- and I believe you said
11 earlier that there is more than one account in storage
12 in the Elephant Butte Reservoir; is that correct?

13 A. Yes. There are different accounts.

14 Q. All right. What other accounts are there in
15 storage in Elephant Butte Reservoir?

16 A. Aside from the usable water for the Rio
17 Grande project, there is San Juan-Chama water and
18 Compact credit water for the states of New Mexico and
19 Colorado.

20 Q. What is San Juan-Chama water? Can you
21 explain that for the Special Master, please?

22 A. Yes. San Juan-Chama water is water from
23 Reclamation's project that is run by my office, and
24 this water is diverted from the San Juan River, which
25 is in the Colorado River basin, and it is diverted

1 into tunnels and transported to Heron Reservoir, which
2 is in the Rio Grande Compact basin, and it is
3 delivered via the Chama River, so that is why it's
4 called the San Juan-Chama Project.

5 **Q. Okay.**

6 A. This water is then used by our project
7 beneficiaries for the San Juan-Chama project.

8 **Q. How do you determine the amount of San**
9 **Juan-Chama water that's in storage in Elephant Butte**
10 **Reservoir?**

11 A. Reclamation in my office, we are tasked with
12 tracking all of the San Juan-Chama water in the Rio
13 Grande Compact basin. We do this with an accounting
14 model, and it is a RiverWare model called the upper
15 Rio Grande water operations accounting model or we
16 call it the URGWOM accounting model. This has
17 representation of all of the storage reservoirs and
18 rivers for the delivery of this water. We track the
19 volume and location in each reservoir of the San
20 Juan-Chama water and the non San Juan-Chama water, or
21 native water, and there are set methodologies for the
22 tracking of the evaporation and losses in transporting
23 the water between reservoirs for this type of water.
24 Elephant Butte is in this accounting model, and that
25 is where I get the information for how much San

1 Juan-Chama water is in Elephant Butte.

2 Q. And the output, is the -- is the URGWOM
3 accounting model based on measured data within the
4 system?

5 A. Yes. We take hydrologic data measured at
6 different gages and the reservoirs and weather
7 stations and include that in the calculations in the
8 accounting model.

9 Q. Does the State of New Mexico use that model,
10 as well?

11 A. Yes, they do.

12 Q. Does that model -- so that model tracks
13 evaporative losses from San Juan-Chama water on a
14 daily basis; is that correct?

15 A. Yes, it does.

16 Q. Did the State of New Mexico approve the
17 methodologies in the model?

18 A. Yes. They are part of the team that
19 developed and approved this model.

20 Q. Does the -- does that model, as part of this
21 methodology, also track evaporative losses from any
22 credit water in storage in Elephant Butte Reservoir?

23 A. Yes, it does.

24 Q. Is that determination done on a daily basis?

25 A. Yes, it is.

1 **Q. All right. And you've mentioned Compact**
2 **credit water in storage. What is Compact credit water**
3 **in storage?**

4 A. Under the Rio Grande Compact, the water
5 delivered by Colorado and New Mexico that is greater
6 than that that is required for the year is stored as
7 wet water in Elephant Butte, and that is what I'm
8 referring to as the Compact credit water in storage at
9 Elephant Butte.

10 **Q. And where does your initial assessment of**
11 **Compact credit water in storage come from for purposes**
12 **of your initial calculation of water available for**
13 **release?**

14 A. The Rio Grande Compact provides Reclamation
15 with the volume of water to be stored in Elephant
16 Butte for January 1st.

17 **Q. And if you're making a determination before**
18 **you get that information from the Compact commission,**
19 **where do you obtain the data for the Compact credit**
20 **water?**

21 A. It is estimated based on the calculations in
22 the URGWOM accounting model that is run continuously
23 throughout the year.

24 **Q. All right. So explain then how you move --**
25 **explain then how you move from total water in storage**

1 **to usable water in storage?**

2 A. I take the total water in storage and
3 subtract out the San Juan-Chama water in storage and
4 the Compact credit water in storage, and that is my
5 determination of usable water in storage for the Rio
6 Grande Project.

7 **Q. All right. What other adjustments are made**
8 **to get from the usable water in storage to the water**
9 **available for release?**

10 A. After I've determined the usable water in
11 storage, I subtract out the minimum pools volume for
12 the reservoirs and an evaporation reserve.

13 **Q. And what are the minimum pool volumes?**

14 A. Reclamation has made a determination of a
15 volume of water for each reservoir that we will not
16 release, and that is to protect our facility and our
17 staff. When we get to very low volumes of water, loss
18 of sediment and debris can be transported through the
19 outlet works causing a lot of damage to our facility
20 and possibly causing it so much damage that we could
21 have trouble releasing water in a future year. This
22 also puts our staff at greater risk because they would
23 have to address the problem.

24 **Q. All right. What's the evaporation reserve?**

25 A. The evaporation reserve is a volume of water

1 that I hold back due to the potential evaporation that
2 is greater in the next few months than the inflow into
3 the reservoirs. So when I'm making the initial
4 allocation, it's December or January, and the water is
5 not going to be used until March or later, and so that
6 water will be physically evaporating. And since we
7 don't know exactly how much water will come into the
8 reservoirs during the runoff season, I make a
9 determination of how much water to hold back to make
10 sure that I don't over allocate water that I cannot
11 deliver.

12 **Q. All right. So as the usable water in storage**
13 **is adjusted for minimum pools and evaporative reserve,**
14 **then that leads you to the water available for release**
15 **in this chart; is that correct?**

16 A. That's correct.

17 **Q. So after you determine the amount of water**
18 **available for release, can you explain the next step**
19 **in the initial allocation process? Next slide,**
20 **please.**

21 A. So after I determine the water that is
22 available for release for the allocation process,
23 we're looking at the river conveyance efficiencies to
24 determine the allocations.

25 **Q. What do you mean by -- what do you mean**

1 by "river conveyance efficiencies"?

2 A. I mean, the volume of water that we can
3 release from Caballo will be a different volume that
4 we can then deliver at the diversion points. So we
5 have some methods to estimate how much of the water
6 that we release can be delivered to the diversion
7 points.

8 Q. All right. So how is the efficiency -- is
9 the efficiency of the system for purposes of
10 allocations, is the same calculation of river
11 efficiencies -- river conveyance efficiencies applied
12 to the allocation to Mexico as is -- as applied to the
13 allocations to the irrigation districts?

14 A. No. We have two different methods.

15 Q. Can you describe the -- the method that
16 applies to the allocation to Mexico?

17 A. Yes. We are using the Convention of 1906,
18 which is the treaty between the U.S. and Mexico, for
19 the process to determine the allocation for Mexico.

20 Q. Next slide, please. Can you use what is
21 marked -- has been marked as Demonstrative 27, can you
22 use this slide to explain to the Special Master the
23 process for applying river conveyance efficiencies in
24 determining the allocation to Mexico?

25 A. Yes. As we discussed earlier, under the

1 Convention of 1906, we need to deliver to Mexico
2 60,000 acre-feet or that can be reduced in the case of
3 an extraordinary drought. So I have to answer the
4 question, is it an extraordinary drought? And the way
5 I -- we determine that lately is by looking at the
6 water available for release. If it is greater than
7 600,000 acre-feet, we say no, it's not an
8 extraordinary drought, and we allocate 60,000
9 acre-feet to Mexico. If the answer is yes, then we
10 are going to reduce Mexico's allocation, and the
11 process that we use is called the D1 equation or the
12 D1 curve, and we assign a proportion of that to the
13 allocation for Mexico.

14 **Q. Can you explain -- next slide, please. Can**
15 **you explain the D1 curve to the Special Master,**
16 **please?**

17 A. Yes. On this slide, we have put a graphic of
18 the D1 equation or the D1 curve. From this graphic,
19 you can see that we are using data for the total
20 annual release from project storage, which is the
21 yearly release from Caballo Reservoir, and the total
22 annual delivery to lands in the United States and the
23 heading of the Acequia Madre, which is the Mexican
24 canal.

25 **Q. Why all lands in the United States?**

1 A. Because of the language in the Convention of
2 1906, it refers to a proportionate decrease in the
3 Mexican allocation based on the proportionate decrease
4 to the lands in the United States.

5 **Q. All right. So how do you make the**
6 **calculation for the amount of water owed to Mexico for**
7 **the IBWC based on the D1 curve?**

8 A. So the D1 curve has data from 1951 to 1978.
9 That's indicated by the red diamonds. And then using
10 a regression analysis, we developed an equation called
11 the D1 equation, and that is represented by the blue
12 line. So, now, we have a mathematical formula that
13 relates the total annual release from Caballo to what
14 can be delivered to the lands in the U.S. and the
15 heading of the Mexican canal, the Acequia Madre.

16 **Q. Who did you notify regarding the initial**
17 **allocation calculation for Mexico?**

18 A. I provide that information, first, to IBWC.

19 **Q. Is a report made to both IBWC and Mexico?**

20 A. Yes. Reclamation provides official
21 correspondence to IBWC notifying them of the initial
22 allocation, and then IBWC invites Reclamation to a
23 meeting called the 1906 meeting where we meet with
24 Mexico and provide them the information in a
25 presentation.

1 Q. You said that a different equation is the
2 starting point for allocations between the EBID and EP
3 No. 1; is that right?

4 A. That's correct.

5 Q. All right. Next slide, please. Michelle,
6 I'm showing you what's been marked as Estrada-Lopez
7 Demo 29. Can you use this slide to explain to the
8 Special Master how the river conveyance efficiency
9 estimates are determined in relation to the
10 calculation of allotments to EBID and EP1 under the
11 operating agreement?

12 A. Yes. So we used the 2008 operating agreement
13 as the basis for the development of the allocations
14 for EP1 and EBID. We used a D2 equation and a
15 proportion of that equation for both irrigation
16 districts, and then it's adjusted based on some
17 operating agreement adjustments is what I call them,
18 and that's added to the prior year's allocation
19 balance, and that is how we determine the current year
20 allocation for those districts.

21 Q. All right. Let's start with D2. Can you use
22 the next slide, please, which is Demonstrative 29 --
23 30, excuse me. Can you use this slide to explain what
24 the D2 equation -- to explain to the Special Master
25 what the D2 equation is?

1 A. Yes. You'll notice that this graph looks
2 very similar to the D1 equation that we just
3 discussed. There is similar data that is part of this
4 graph. The data represented in the red diamonds is in
5 relationship between the total annual release from
6 project storage, which is the yearly Caballo release,
7 but on the Y axis, instead of the delivery to the
8 lands in the U.S. and the heading of the Acequia
9 Madre, we have the total annual delivery to the
10 project headings. So that is the difference in the
11 data where D1 was delivery to lands, and this one is
12 delivery to the project headings. Like D1, we did a
13 regression analysis and developed this equation per
14 the relationship between the release and how much we
15 can deliver to the project headings, and that is
16 represented by the blue line. And then --

17 **Q. And --**

18 A. -- there's the --

19 **Q. -- what is a regression analysis?**

20 A. It is a determination of an equation that
21 best fits the data. So in this case, it's a linear
22 equation that best fits the data. So it comes up with
23 algebraic formula that is known as a linear equation
24 that fits the data from the historic data.

25 **Q. All right. Can we return to Demonstrative**

1 29, please? So under the operating agreement, you
2 start with the D2 equation, and then you said that you
3 make operating agreement adjustments. Can you explain
4 what the operating agreement adjustments are?

5 A. Yes. There's two that I put together in that
6 term, one is the drought correction factor. The
7 drought correction factor reduces the D2 output from
8 the historic equation based on extraordinary -- or
9 drought conditions that we're seeing in the project.
10 The other one is based on an adjustment to EBID's D2
11 portion of their allocation, and the difference
12 between the historical D2 portion for EBID and the
13 adjusted D2 portion for EBID is split proportionately
14 between the two districts.

15 Q. All right. Can you explain to the Special
16 Master how the D2 river conveyance efficiency is
17 applied to EP1 in making allocation?

18 A. Yes. We take the volume of water available
19 for release and put it into the D2 equation, then we
20 subtract out the volume that we've allocated to
21 Mexico, and then approximately 43 percent of that
22 answer is allocated to EP1.

23 Q. All right. Now, the -- is the D2 equation
24 directly applied with respect to EBID?

25 A. Yes. And then we adjust it with the

1 diversion ratio.

2 **Q. All right. Explain to me the -- the --**
3 **explain to the Special Master the estimated diversion**
4 **ratio adjustment to the D2.**

5 A. The diversion ratio is a ratio of the total
6 annual charges for the deliveries for the project,
7 divided by the total release for the year. So that's
8 the charges for two irrigation districts in Mexico
9 divided by the release for the entire year. Since we
10 don't know that information at the beginning of the
11 year, we use an estimate for that diversion ratio.
12 That adjusts the volume that is put into the D2
13 equation, and then once we get that answer from the D2
14 equation, then approximately 57 percent of that volume
15 is allocated to EBID.

16 **Q. And who makes the initial calculation of the**
17 **operating agreement adjustments that you referred to?**

18 A. I make the initial allocation for Mexico and
19 then a preliminary initial allocation for the
20 irrigation districts.

21 **Q. And do you -- who does the -- who does the --**
22 **the preliminary initial allocation to the districts**
23 **get conveyed to?**

24 A. I send it to the allocation committee.

25 **Q. And what's the allocation committee?**

1 A. The allocation committee is the technical
2 representatives to the three parties of the 2008
3 operating agreement so that's Reclamation, EBID, and
4 EP1.

5 **Q. And who are the members of the -- of the --**
6 **of the allocation committee at present?**

7 A. I am the member for Reclamation; Dr. Phil
8 King, the consulting engineer for EBID is their
9 representative; and Dr. Al Blair, the district
10 engineer for EP1, is their representative.

11 **Q. How often does the allocation committee meet?**

12 A. We typically meet monthly or more frequently
13 if needed.

14 **Q. And what matters are discussed within the**
15 **allocation committee?**

16 A. We discuss the allocation, the determination
17 of the allocations. We discuss the charges that will
18 be applied to the allocations, and we also discuss
19 hydrologic conditions that will impact either the
20 allocation or the irrigation season.

21 **Q. How are decisions made within the allocation**
22 **committee?**

23 A. By consensus.

24 **Q. And what are your responsibilities on the**
25 **allocation committee?**

1 A. I determine the water available for release
2 from the project, then I'm also responsible for the
3 initial allocation to Mexico and the development of
4 the preliminary allocation for the districts. I send
5 that to the allocation committee. I collect the data
6 from the irrigation districts for their charges under
7 the allocation and review that. As the representative
8 for Reclamation, I'm also responsible for the
9 documentation of the allocation and accounting for the
10 operating agreement.

11 **Q. Does the allocation committee make the final**
12 **determination of allocation to the districts?**

13 A. Yes, it does.

14 **Q. Does the allocation committee make the final**
15 **determinations on the estimated diversion ratio**
16 **applied to EBID?**

17 A. Yes, it does.

18 **Q. You mentioned you start the initial**
19 **allocation determination in December or January**
20 **earlier. Do changes in flow and usable water in**
21 **storage require updating of the allocations to the**
22 **districts and Mexico?**

23 A. Yes, it does.

24 **Q. How often are those allocation calculations**
25 **done?**

1 A. I calculate them monthly. Sometimes more
2 frequently.

3 **Q. After you made those calculations, do you**
4 **convey those to the other members of the allocation**
5 **committee?**

6 A. Yes, I do.

7 **Q. As a general matter, what's the first thing**
8 **that needs to be determined in making an amended**
9 **allocation? Next slide.**

10 A. I need to update the water that's available
11 for release as the conditions have changed at the
12 storage reservoirs.

13 **Q. What inputs the determination of usable water**
14 **available for release vary with time over the year?**

15 A. The total volume of storage and the other
16 accounts in storage change physically over the year,
17 as well as how much we've released.

18 **Q. Okay. Can you go through the boxes**
19 **highlighted on what has been marked as Estrada-Lopez**
20 **Demonstrative 31 and explain how the amounts of water**
21 **in the highlighted boxes have physically changed?**

22 A. The total water in storage at both reservoirs
23 has changed due to inflows from the deliveries from
24 New Mexico, due to precipitation and evaporation, and,
25 also, due to releases. The San Juan-Chama water has

1 changed because it has evaporated, and there might
2 have been additional deliveries into Elephant Butte
3 from the inflow, and there might have been an exchange
4 of water. The Compact credit water has physically
5 evaporated, as well as there might have been changes
6 due to Compact relinquishment or finalized Compact
7 accounting. The --

8 **Q. How's the -- I'm sorry. Go ahead. Finish.**

9 A. The evaporation reserve changes because I
10 have less risk, and the water released to date is just
11 that, how much water we've released to date.

12 **Q. So the evaporation reserve does not really**
13 **physically change; you make a risk adjustment change;**
14 **is that correct?**

15 A. That's correct.

16 **Q. Okay. How is inflow to Elephant Butte**
17 **Reservoir determined? Is there a -- is there a single**
18 **gage to -- to read or record?**

19 A. No, there's not. We have to calculate it.

20 **Q. Okay. So, generally, how is the**
21 **determination of available water in storage adjusted**
22 **to account for inflow?**

23 A. We take the volume of water in storage prior
24 and the volume of water in storage now, and that is
25 the -- and the difference is the change in storage,

1 then we've measured the water released, and we've
2 measured precipitation and evaporation, and from that,
3 we can determine how much water has come into the
4 reservoir as inflow.

5 **Q. If you know the total amount in storage, how**
6 **do you determine the amount available for release?**

7 **Next slide, please.**

8 A. Because there's different accounts in
9 Elephant Butte, we have to make a determination on
10 each of those type of accounts, how much it has
11 changed, in order to determine how much the project
12 water has changed. So for San Juan-Chama water, we
13 have to deduct for its proportion of the actual
14 evaporation at Elephant Butte, and then if there has
15 been any inflow, I would be able to determine that
16 from the URGWOM accounting model for San Juan-Chama
17 water that was delivered from upstream, and there's
18 also the possibility of an exchange of this water in
19 Elephant Butte for water upstream, and that would
20 reduce the volume of San Juan-Chama water and increase
21 the usable project water.

22 **Q. How are changes to the Compact credit water**
23 **account determined? Next slide.**

24 A. Similarly, for the Compact credit water, we
25 need to determine the proportion of the evaporation

1 that occurred on -- from that physical water, and I
2 get that information from the URGWOM accounting model,
3 and then other changes to this -- those accounts would
4 come from a relinquishment under the Rio Grande
5 Compact, and we would be informed of that from the
6 Compact states, and then final accounting would also
7 change the volume of water in Elephant Butte.

8 **Q. Is -- are the results from the URGWOM**
9 **accounting model shared with the State of New Mexico?**

10 A. Yes, they are.

11 **Q. How often are the URGWOM accounting model**
12 **results sent to the State of New Mexico?**

13 A. We send them to our FTP site that they
14 download from every day that we run the model.

15 **Q. And how often do you run the model?**

16 A. We run it on almost every single workday.

17 **Q. Okay. Why does Reclamation determine the**
18 **amount of evaporation that is occurring from the San**
19 **Juan-Chama and the Compact credit water in storage?**

20 A. That is the only way that we can determine
21 the volume of inflow into the reservoir that's
22 available for the Rio Grande Project.

23 **Q. And why do you need to determine that?**

24 A. Because that water is legally available to
25 our customers, and I need to use that in the

1 development of the allocation.

2 Q. And once you have your -- next slide. What
3 is the next step in determining the -- the updated
4 usable water in storage?

5 A. I take the new total water in storage and
6 subtract out the updated San Juan-Chama water at
7 Elephant Butte and the updated Compact credit water at
8 Elephant Butte and that gives me the updated usable
9 water for the project allocation process.

10 Q. All right. So once you have the updated
11 usable water in storage, as shown on Demonstrative 34
12 -- let's go to Demonstrative 35 -- what else goes to
13 updating the total water available for release?

14 A. So as we discussed just a few minutes ago, I
15 changed the evaporation reserve based on the --
16 there's less risk. So time has passed. We are closer
17 to the irrigation season or we are in the irrigation
18 season so we know how much water has come in during
19 the runoff or the runoff to date, and there's less
20 chance of evaporation occurring prior to the release
21 from storage. Then I also have a measurement of the
22 water released to date, and that is added to the water
23 available for release that's in storage, and that
24 gives me an updated water available for release.

25 Q. Why do you add the water released to the

1 water in storage to get an updated water available for
2 release?

3 A. Because the methodologies for the allocations
4 needs the total volume for the year for Caballo
5 release. So that's why we add what we've already
6 released for the year to what's available for the
7 continued release to get the annual release.

8 Q. All right. Next slide. Michelle, I've put
9 up what's been marked as Estrada-Lopez Demo No. 36.
10 How does the calculation of the updated water
11 available for release effect allocations to the
12 districts and Mexico?

13 A. If the water available for release has
14 increased from the last allocation, it would increase
15 their allocations.

16 Q. If you artificially underestimate the actual
17 inflow to Elephant Butte Reservoir, how would it
18 impact the deliveries to Mexico?

19 A. It would under allocate water to them if we
20 were following the D1 methodologies, and, therefore,
21 we would deliver less water than is owed to them.

22 Q. Is there anything you do in updating
23 allocations that is treated differently than the
24 initial allocation?

25 A. Yes. In the following an updated

1 allocations, we update the estimated diversion ratio
2 through the allocation committee.

3 **Q. And how is that update done?**

4 A. Once we are in the release season, the
5 districts have information on how much water has made
6 it to their diversion point, and Reclamation has
7 information on how much we have released from Caballo.
8 So we're making preliminary calculations of how the
9 project is performing, and, therefore, we can make an
10 update to the estimated diversion ratio based on what
11 we're observing in the river.

12 **JUDGE MELLOY:** Excuse me, Mr. Dubois.
13 Could you explain diversion ratio one more time,
14 please?

15 **MR. DUBOIS:** I will let Ms.
16 Estrada-Lopez do that.

17 **JUDGE MELLOY:** I'm sorry. I meant -- I
18 meant Ms. Estrada-Lopez. Could you explain diversion
19 ratio one more time?

20 **THE WITNESS:** Yes. Diversion ratio is a
21 ratio of the total annual delivery charges. So that
22 is the charges for the delivery to Mexico plus the
23 charges for the delivery to EP1 and EBID summed up and
24 then it's divided by the annual release from Caballo.
25 So the actual calculation would be for the entire

1 year, but since we're in the middle of the season,
2 it's an estimate of what it's going to be for the
3 entire year.

4 **Q. (BY MR. DUBOIS) And what's the --**

5 **JUDGE MELLOY:** What's the purpose of the
6 diversion ratio? What does that tell you?

7 **THE WITNESS:** It gives us a ratio of how
8 much water has been delivered compared to how much
9 water was released, and then it is applied in the
10 operating agreement methods to shift the D2 equation
11 for the EBID allocation.

12 **JUDGE MELLOY:** So -- so it's only
13 applied to EBID, as I understand it; is that correct?

14 **THE WITNESS:** Directly, yes. And then
15 in the operating agreement adjustments, the difference
16 between the adjusted EBID D2 allocation and the
17 historic one, that difference, there's the proportion
18 is split between the two districts.

19 **JUDGE MELLOY:** Okay. All right. Thank
20 you.

21 **Q. (BY MR. DUBOIS) So, Michelle, are you**
22 **familiar with how -- to your knowledge, is the Compact**
23 **commission bound by Reclamation's calculation of -- of**
24 **inflows to Elephant Butte Reservoir in their Compact**
25 **accounting?**

1 **MR. WECHSLER:** Foundation.

2 **JUDGE MELLOY:** Why don't you lay a
3 little more foundation --

4 **MR. DUBOIS:** Okay.

5 **JUDGE MELLOY:** -- Mr. Dubois.

6 **Q. (BY MR. DUBOIS)** Are you familiar how -- with
7 how the Compact commission determines the -- New
8 Mexico's actual Compact deliveries to Elephant Butte
9 Reservoir?

10 **A.** Yes, I have reviewed the Compact accounting
11 spreadsheets.

12 **Q.** And are you familiar with Reclamation's
13 monthly determinations of -- or periodic
14 determinations of inflow to Elephant Butte Reservoir?

15 **A.** Yes, I am. I'm part of those determinations.

16 **Q.** Okay. Does the Compact accounting stick to
17 or is bound by your determinations of inflow to
18 Elephant Butte Reservoir?

19 **A.** No, it's not.

20 **Q.** Does the Compact commission do a monthly
21 accounting for New Mexico's delivery into Elephant
22 Butte Reservoir?

23 **A.** No, they do not.

24 **Q.** When's the Compact accounting done?

25 **A.** It is in the following calendar year of the

1 release season, so it's typically in late January and
2 February, and finalized in March.

3 Q. Okay. So the accounting for inflows from New
4 Mexico to the Elephant Butte Reservoir for 2021 would
5 occur in 20 -- in the spring or late winter of 2022;
6 is that my understanding?

7 A. Yes, that's correct.

8 Q. Okay. Let's talk about the role of BOR, of
9 Reclamation, during the period when releases of water
10 are being made from storage. You previously testified
11 that -- that allocation adjustments continue through
12 the -- through the year or at least as long as there
13 are inflows coming into -- into Elephant Butte
14 Reservoir and releases are being made from Caballo.
15 What other responsibilities does Reclamation have
16 while releases are being made from Caballo Reservoir?

17 A. Reclamation is receiving orders from the
18 irrigation districts and Mexico, and we review them
19 and determine a release from Caballo to meet those
20 orders, and we execute that release, then we are
21 tracking the diversions at the diversion points for
22 the project and Mexico, and we are also getting
23 preliminary accounting for those diversions and the
24 charges associated with them from the irrigation
25 districts and IBWC and starting to review those.

1 Q. What triggers the releases of water from
2 Caballo Reservoir?

3 A. An order from the irrigation districts or
4 Mexico.

5 Q. And does Caballo Reservoir make any releases
6 for diversions by the project prior to getting an
7 order from the districts or Mexico?

8 A. No, we do not.

9 Q. I'm going to show you what has been
10 previously marked as U.S. Exhibit 661. Can you
11 identify this document?

12 A. Yes. This is an order form that is for the
13 Rio Grande Project.

14 Q. And is this an order form actually received
15 by Reclamation?

16 A. Yes, it is.

17 Q. And when was this particular order form
18 received?

19 A. This is from July 15th of 2019.

20 Q. All right. Is this the -- the sort of order
21 form or order sheet that you -- that Reclamation
22 receives and that triggers releases from Caballo
23 Reservoir?

24 A. Yes, it is.

25 Q. So how does Reclamation determine what

1 releases to make from Caballo Reservoir based on these
2 order sheets?

3 A. You can see on the order sheet, on the
4 left-hand side, the irrigation districts and IBWC have
5 put in their orders for the diversion points, and then
6 on the right-hand side, there's terms for river boost
7 and then a requested Caballo release is on this order
8 form. So Reclamation is reviewing this, and then if
9 we determine that the requested release for Caballo is
10 accurate, then we will execute the release by making
11 the change at Caballo Reservoir.

12 Q. Who does Reclamation get the order sheet
13 from?

14 A. We get it from EP1.

15 Q. What's EBID's role in creating the order
16 sheets?

17 A. EBID is getting orders from its farmers and
18 determining the flow rate needed at their diversion
19 points to meet those orders, and they provide that
20 information to EP1.

21 Q. What's EP1's role in creating the order
22 sheets?

23 A. EP1 is getting orders from its farmers and
24 from the City of El Paso and they are determining how
25 much flow they will need at their diversion points and

1 they put it into this order form. They are also
2 collecting the order from EBID and from IBWC from
3 Mexico, and they are responsible for collating it into
4 this form and sending it to Reclamation.

5 **Q. You mentioned IBWC. What's IBWC's role in**
6 **the order sheets?**

7 A. They are providing the value for the Mexico
8 order.

9 **Q. And what is Reclamation's role once the order**
10 **sheets are received?**

11 A. We're reviewing the order sheet to see if
12 there might be an error. If there's no errors, the
13 other thing they are reviewing is the requested river
14 boost and determining if that makes sense for the
15 hydrologic conditions that we are seeing at the gages
16 in the river, and then if it does, then we accept the
17 requested Caballo release and make a gate change.

18 **Q. And what is river boost?**

19 A. River boost is a volume of water or flow rate
20 that is needed to get the Caballo release to the
21 diversion points at the volumes requested.

22 **Q. And what causes the need for river boost?**

23 A. Losses in the rivers and system.

24 **Q. All right. Who determines the amount of**
25 **river boost to request?**

1 A. EBID and EP No. 1 coordinate and develop the
2 river boost request.

3 **Q. And what do they base the river boost request**
4 **on?**

5 A. They base it on how much water they are
6 seeing show up at their diversion points.

7 **Q. How often does Reclamation get the order**
8 **sheets?**

9 A. We get them almost daily. Sometimes we get
10 them more than once a day.

11 **Q. Do the districts determine the releases from**
12 **storage needed to meet the allocation delivery**
13 **requests?**

14 A. No. They have an estimated request.
15 Reclamation is the one who makes the determination on
16 what the release will be.

17 **Q. And who manages the releases from Caballo**
18 **Reservoir?**

19 A. Reclamation does.

20 **Q. Does Reclamation coordinate releases with the**
21 **districts?**

22 A. We do in that they provide us an estimated
23 release. If we agree with it, then we execute it. If
24 we have a concern with the requested release, we will
25 call them and confer with them, and then they can

1 release. Once we've made the release and it has been
2 greater than a 100 CFS change, Reclamation will make a
3 measurement of that change at our Caballo gaging
4 station. Once we get that measurement, we provide
5 that information to the irrigation districts. If they
6 make a measurement at the Caballo gage, they provide
7 that information to Reclamation.

8 **Q. Can we go back to --**

9 **JUDGE MELLOY:** While you're thinking
10 Mr. Dubois, let me ask a question to clarify something
11 --

12 **MR. DUBOIS:** Certainly.

13 **JUDGE MELLOY:** -- if I could. On these
14 order sheets and -- and at various points in your
15 testimony today, Ms. Estrada-Lopez, you indicated that
16 you're delivering to diversion points, but is it my
17 understanding that you only have control, so to speak,
18 of the water until it gets to the Percha Dam, and then
19 from that point south, it's up to the irrigation
20 districts to manage the diversions?

21 **THE WITNESS:** I would say operationally
22 speaking, once we make the release from Caballo, we
23 probably still have control over it when it's in the
24 river, but operationally, once the irrigation
25 districts start diverting, we can't and we don't tell

1 them to not divert that unless it is not part of their
2 allocation.

3 **JUDGE MELLOY:** I mean, you monitor it,
4 and if they divert more than they're allocated, you
5 know that, and you may say something to them, but you
6 -- you don't have any real control over it except
7 after the fact to admonish them for doing something
8 they shouldn't have done; is that -- is that the way
9 it works?

10 **THE WITNESS:** Yes.

11 **JUDGE MELLOY:** Okay. That's what I
12 thought.

13 Mr. Dubois?

14 **Q. (BY MR. DUBOIS)** Can we go back to Slide 37,
15 **Demonstrative 36, for a second? I missed a question**
16 **or two here regarding the estimated diversion ratio,**
17 **Michelle. What causes the -- the estimated diversion**
18 **ratio or the recalculated diversion ratio to vary?**
19 **What is causing the changes in the diversion ratio?**

20 **A.** The gains and losses through the river to the
21 diversion points.

22 **Q.** And what sort of things drives the gains and
23 losses to the river -- to the river?

24 **A.** The return flows from the drains and the
25 wasteways, as well as the amount of water from the

1 river that seeps through the streambed into the
2 surrounding groundwater.

3 **Q. And what causes that loss of water from the**
4 **streambed?**

5 A. It's based on gravity, so if the groundwater
6 surrounding the river is lower than the -- than the
7 river, it pulls water out of the river, and the lower
8 the groundwater, the more it will pull to a certain
9 point.

10 **Q. Okay. All right. What's the role of**
11 **Reclamation in accounting during periods when releases**
12 **are being made from Caballo Reservoir?**

13 A. We are collecting preliminary charges against
14 the allocation from the irrigation districts, and we
15 are reviewing it related to the agreed-upon
16 methodologies, which are based in the operating
17 agreement and operations manual.

18 **Q. Okay. I'm going to show you what's been**
19 **marked as New Mexico Exhibit 2464. Can you identify**
20 **this document, please?**

21 A. Yes. This is the 2018 Operations Manual for
22 the Rio Grande Project.

23 **Q. Okay. And what is the Operations Manual?**

24 A. It is a document that provides procedures for
25 implementing the operating agreement.

1 **Q. Okay. Who created -- who created this**
2 **operations manual?**

3 A. The three entities to the operating
4 agreement, so that's Reclamation, EBID, and EP1.

5 **Q. And how do you use this operation manual --**
6 **or operations manual in performing your duties?**

7 A. When I get the preliminary charges for the
8 irrigation districts, I am reviewing them for accuracy
9 and to ensure that the methodologies used in the
10 preliminary charges align with the agreed-upon
11 methodologies that are based upon the operations
12 manual.

13 **Q. Okay. So is this the document you're talking**
14 **about when you said you compared the information**
15 **received from the districts to the -- to the processes**
16 **set forth in the operations manual?**

17 A. Yes.

18 **Q. Okay. Do the districts and IBWC send monthly**
19 **reports to Reclamation?**

20 A. Yes, they do.

21 **Q. What information do they send to Reclamation?**

22 A. They provide us with the gage data for the
23 specified locations that go into the allocation
24 charges for each district and for Mexico's delivery.

25 **Q. So in addition to providing you the**

1 information to verify the process for the information,
2 what else does the operation -- the operations manual
3 define for purposes of accounting?

4 A. It defines the locations, the charges should
5 be taken from. It defines when orders for the
6 allocation should be made and when Reclamation should
7 make the gate changes. It defines the exchange of
8 information amongst the parties. It defines how we
9 can update the operations manual, and then it has some
10 specific methodologies for the accounting of the
11 charges.

12 Q. Is information -- is the data regarding
13 Caballo Reservoir releases shared with the public?

14 A. Yes. Our gaging station takes instantaneous
15 readings, and that is collected by a satellite, and
16 then it is posted to the public via Reclamation's
17 Website, the U.S. Army Corps of Engineers Website, and
18 the IBWC's Website, and I'm pretty sure both
19 irrigation districts also display it on their
20 Websites, so that is the ways I know it goes out to
21 the public.

22 Q. All right. I'd like to talk briefly about
23 Reclamation's role after the end of the -- of the
24 period of releases from storage. Next slide, please.
25 I'm showing you what's been marked as Demonstrative

1 **37. Using Demonstrative 37, can you explain what**
2 **Reclamation's role is after the completion of releases**
3 **and prior to the start of the next water year?**

4 A. Yes. I'm working through the allocation
5 committee to finalize the allocation charges for the
6 year, then calculate the final allocation, and then
7 what's of that allocation is going to be available the
8 following season.

9 **Q. So how are the final allocation charges**
10 **determined?**

11 A. Well, EBID and EP1, again, they send us to
12 the allocation committee their preliminary calculation
13 of the final allocation charges, and IBWC provides
14 Reclamation, who then provides it to the allocation
15 committee, the deliveries to Mexico.

16 **Q. Are there any charges included in the final**
17 **determination of allocation charges that were not in**
18 **the preliminary accounting kept by the allocation**
19 **committee prior to that time?**

20 A. Yes, there are.

21 **Q. And what are those?**

22 A. The final month of deliveries is not included
23 in the preliminary accounting. It was included in the
24 final accounting, as well as a charge for the
25 Canutillo well field.

1 **Q. And what is the charge for the Canutillo well**
2 **field?**

3 A. The Canutillo well field charge is a charge
4 against EP1's allocation for groundwater pumping in
5 the Mesilla Valley in Texas for the City of El Paso,
6 and it is a proportion of the volume pumped during the
7 release season and -- which is decreased by the volume
8 of water returned to the river from the northwest
9 wastewater treatment plant.

10 **Q. Why is that charge only calculated after the**
11 **end of the release season?**

12 A. That's when we have the data for it, and that
13 was the agreed-upon methodology.

14 **Q. What does the allocation committee do with**
15 **the updated data from the districts?**

16 A. We review it similarly to the way I have been
17 through the release season and looking at the
18 calculations for any errors and also comparing it to
19 ensure that it is matching the methodologies that had
20 been agreed to in the operations manual.

21 **Q. Are there set procedures and methodologies**
22 **defined for determining the final allocation charges?**

23 A. All of them have a basis in the operations
24 manual, and some of them are fully described in the
25 operations manual.

1 **Q.** All right. What do you do after -- what is
2 the -- what do you do, and what does the allocation
3 committee do after you finalize the allocation
4 charges?

5 A. Once we have finalized the allocation
6 charges, then we can determine the final allocation,
7 and we take the final allocation charges, and we put
8 them into the calculation for the diversion ratio. So
9 now that the year has concluded, we can actually
10 calculate the diversion ratio for the year, so we take
11 the sum of the final allocation charges and divide it
12 by the total release from Caballo Reservoir for the
13 project. That is put into the allocation process
14 under the operating agreement, and then we also add in
15 the American Canal extension conservation credit and
16 calculate the final allocation.

17 **Q.** What's the American Canal extension
18 conservation credit?

19 A. It is a credit applied to EP1 for a volume of
20 water that is delivered through the American Canal
21 extension to the heading of the Riverside Canal
22 instead of delivering it through the Rio Grande, and
23 it's because there's water saved by doing that through
24 a concrete-lined canal extension instead of the Rio
25 Grande.

1 **Q. How is the American Canal extension**
2 **conservation credit determined?**

3 A. It's determined based on the volume of water
4 that's moved through that canal extension for the year
5 and a proportion of that based on an estimate of how
6 much water was saved is credited to EP1 and included
7 in their final allocation.

8 **Q. And why is that credit only determined after**
9 **the completion of the release season?**

10 A. That's the agreed-upon methodology, and that
11 is going to have the data.

12 **Q. Does the water calculated under the American**
13 **Canal extension conservation credit always go only to**
14 **EP1?**

15 A. No. It -- when it's calculated, it is added
16 to the EP1 allocation, and if the allocation balance
17 for EP1 is greater than the limit called for in the
18 operating agreement, that volume is transferred to
19 EBID.

20 **Q. So maybe the question I sort of missed is how**
21 **-- how is the -- how is the -- the American Canal**
22 **extension conservation credit applied to the**
23 **end-of-the-year accounting?**

24 A. It's included in the determination of the
25 final allocation and added to EP1's allocation for the

1 year.

2 Q. Okay. So it's in addition to the allocation,
3 not -- it's in addition to the allocation?

4 A. Yes.

5 Q. And if EP1 is over its carryover credit, how
6 is the American Canal extension conservation credit
7 applied or accounted for?

8 A. It gets transferred to EBID if they are over
9 the limit for their allocation balance.

10 Q. So that would be then an increase --
11 similarly, that would be an increase in the allocation
12 to EBID for that year?

13 A. Yes.

14 Q. Okay. After the allocation committee has
15 calculated the final allocations to the districts, are
16 there any other end-of-the-season adjustments that are
17 made to the accounting?

18 A. Yes. There is an adjustment for any over
19 delivery to Mexico, and also in the allocation balance
20 transfers.

21 Q. What is the -- what is the adjustment for the
22 over delivery to Mexico?

23 A. When Reclamation is making the determination
24 for the allocation to Mexico, it is based on the water
25 available for release, and that is what we allow to be

1 delivered to them. When we get to the end of the
2 year, we know the actual volume that has been
3 released. We put that into the D1 equation. If the
4 volume delivered to Mexico is greater to the -- than
5 the calculation under D1 using the final data, that's
6 considered an over delivery to Mexico, then that
7 volume is charged proportionately to EBID and EP1.

8 **Q. Okay. And what is the -- what is the**
9 **allocation of balance transfers?**

10 A. Under the operating agreement, there is a
11 limit to the allocation balance that each irrigation
12 district can carry into the next season, so if the
13 balance is greater than the limit called for under the
14 operating agreement, that volume gets transferred to
15 the other district and available for them in the
16 following season.

17 **Q. How does the end-of-the-year accounting**
18 **affect the allocation balances available to the**
19 **districts in the following year?**

20 A. We take the final allocation and subtract the
21 allocation charges, and we do the end-of-year
22 adjustments, and then using the math of that, we
23 determine their allocation balance, and that is going
24 to go into their allocation for the following year.

25 **Q. Does the final accounting for the project**

1 occur before the Compact accounting by the Compact
2 commission is done?

3 A. Typically, yes.

4 Q. When does Compact accounting occur? I think
5 you -- you covered this earlier. Is it -- am I
6 correct that -- that Compact accounting, or what
7 you've testified as Compact accounting occurs in
8 February or March?

9 A. Yes, it does.

10 Q. All right. And why does it occur after the
11 end of the reservoir release and diversion period?
12 Why does it occur in the next year?

13 A. Under the Rio Grande Compact, accounting is
14 for a calendar year, which would be going through
15 December 31st, so they need data for the entire
16 calendar year in order to calculate their accounting.

17 Q. And does Reclamation have a role in Compact
18 accounting?

19 A. Yes. We provide data to the Compact
20 commission.

21 Q. Okay. I'm going to show you what's been
22 previously marked as U.S. Exhibit 55. Michelle, can
23 you identify what has been previously marked as US-55?

24 A. Yes. This is a slide deck that was used by
25 Reclamation to present to the engineer advisors to the

1 Rio Grande Compact. This one is from March of 2020.

2 Q. Okay. Does this -- is this part of the data
3 that -- or the information that you provide to the
4 Compact commission through the -- through the
5 engineering advisors?

6 A. Yes, it is.

7 Q. And is there data that accompanies this
8 report to the engineering advisors?

9 A. Yes, there is.

10 Q. What data is supplied to the engineering
11 advisors?

12 A. Reclamation provides hydrologic data for all
13 of our reservoirs and gages that we are in charge of
14 within the Compact basin, so that include elevation
15 and storage for our reservoirs, weather data,
16 including evaporation at our reservoirs, and releases
17 for all of our reservoirs, as well as the San
18 Juan-Chama project accounting and overview of our
19 operations and maintenance activities at all of our
20 projects within the basin.

21 Q. And where does the San Juan-Chama accounting
22 come from?

23 A. My office is in charge of that accounting.

24 Q. Is that produced -- is that produced from the
25 URGWOM model that you described earlier?

1 A. Yes. It comes from the URGWOM accounting
2 model.

3 **Q. So are you providing them the model output?**

4 A. Yes. We provide the San Juan-Chama
5 accounting report that comes from the data from URGWOM
6 accounting model, and the accounting model is also
7 provided to the Compact states.

8 **Q. And is the -- is the -- is that just an**
9 **annual accounting or is -- are they provided the daily**
10 **accounting?**

11 A. We provide New Mexico the accounting every
12 day that we run it through our FTP site. We also
13 provide it to Colorado and Texas when they ask for it
14 throughout the year, but then the official
15 transmission is through this engineer advisor process
16 the following calendar year.

17 **Q. And -- and what -- what output from that**
18 **model do you provide the engineering advisors?**

19 A. In the San Juan-Chama report, it is focused
20 on the San Juan-Chama project accounting, but it
21 includes all of the information that goes into that
22 accounting, including the hydrologic data at the
23 reservoirs.

24 **Q. Okay. Do you provide the engineering**
25 **advisors or the Compact commission any other data that**

1 you know that they use in their accounting?

2 A. No.

3 Q. Do you know whether there's an ongoing
4 dispute between Texas and New Mexico for Compact
5 accounting?

6 A. Yes, I do.

7 Q. Can you generally describe that controversy?

8 A. There is a disagreement in the methodology to
9 calculate evaporation on the Compact credit water
10 being stored at Elephant Butte that goes into the
11 Compact accounting.

12 Q. Does the report to the engineering advisors
13 include computations or accounting for evaporation of
14 San Juan-Chama or credit water?

15 A. Yes, it does.

16 Q. So that information is provided to the
17 engineering advisors?

18 A. Yes. It's in the URGWOM accounting model.

19 Q. How does Reclamation's determination and
20 calculation of actual inflows for purposes of
21 allocating available water -- strike that. Let me
22 rephrase that.

23 To your knowledge, does Reclamation's
24 determination and calculation of actual inflow for
25 purposes of allocating available water determine the

1 Compact commission accounting for evaporation of
2 credit water?

3 A. No, it does not.

4 Q. Does Reclamation's determination and
5 calculation of actual inflows for purposes of
6 allocating available water dictate how Texas accounts
7 for evaporation or -- of credit water for purposes of
8 the Compact?

9 A. No, it does not.

10 Q. Does the Compact commission methodology for
11 calculating evaporation of credit water tend to
12 actually overestimate the amount of actual evaporation
13 from Compact credit water?

14 MR. WECHSLER: Objection, Your Honor,
15 foundation, and this also sounds like it's going into
16 an area of expert testimony.

17 MR. DUBOIS: This is simply comparing
18 the two accounting -- the two methods of accounting,
19 Your Honor. This is not even expert testimony.

20 JUDGE MELLOY: Well, rephrase your
21 question. It --

22 MR. DUBOIS: All right.

23 JUDGE MELLOY: It makes it sound like
24 your question was asking which is the correct method.
25 If you're asking her to compare the two, that's fine.

1 If you're asking her which is the more accurate, I
2 think that -- I think Mr. Wechsler may have a good
3 point.

4 **MR. DUBOIS:** It was not a question of
5 accuracy. It was a question of methodology, Your
6 Honor.

7 **Q. (BY MR. DUBOIS) Ms. Estrada-Lopez, do you**
8 **know how the Compact commission determines the methods**
9 **that they use for determining evaporation of Compact**
10 **credit water?**

11 A. Yes. I've reviewed the methodology.

12 **Q. And what methods do they use?**

13 A. In Compact accounting, they are using a
14 monthly storage value for Elephant Butte Reservoir,
15 and that is the storage value that the evaporation is
16 applied to.

17 **Q. Does Reclamation use a monthly calculation in**
18 **determining storage values and, therefore,**
19 **evaporation?**

20 A. No. We are using daily storage values to
21 determine the evaporation.

22 **Q. Do those two methodologies -- can those two**
23 **methodologies give you a different number for**
24 **evaporation for the same year?**

25 A. Yes, they do.

1 **Q.** All right. Does the methodology used by the
2 Compact commission tend to overestimate the amount of
3 actual evaporation from credit water in contrast to
4 the daily accounting?

5 **MR. WECHSLER:** Your Honor, I'm going to
6 object again. I'm also going to object as this being
7 vague. The testimony has gone forward based on this
8 idea that the methodology used by the Compact
9 commission, but I believe Ms. Estrada-Lopez just
10 testified that there's more than one methodology
11 that's being used, so I'm not sure what this is even
12 referring to, whether it's the -- the version from
13 Texas or the version from New Mexico and Colorado.

14 **JUDGE MELLOY:** I'm going to overrule.
15 You can answer the question.

16 **A.** I'm sorry. Can you repeat the question?

17 **Q.** **(BY MR. DUBOIS)** I probably can't because I
18 don't have realtime -- or I don't have it up, I should
19 say.

20 **JUDGE MELLOY:** Do you want me to have
21 the reporter read it back?

22 **MR. DUBOIS:** Could you, Your Honor?
23 Thank you.

24 **JUDGE MELLOY:** Heather, can you do that,
25 please?

1 (The requested portion was read.)

2 A. When you're using one storage value for an
3 entire month to calculate the evaporation compared to
4 the changing daily storage values, you will get a
5 different answer. Some months, it will be greater;
6 and some months, it will be less.

7 **MR. DUBOIS:** Okay. Thank you. I have
8 no further questions for this witness, Your Honor.

9 **JUDGE MELLOY:** Pretty good timing,
10 Mr. Dubois. It's just about 5:00 our time. Let me
11 ask --

12 **MR. DUBOIS:** I aim to please, Your
13 Honor.

14 **JUDGE MELLOY:** All right. Let me ask
15 this. I know Texas and the United States are
16 basically working in tandem on these witnesses. Are
17 you going to do the entire examination or do you --
18 are you going to be asking any questions, Ms. Klahn?

19 **MR. DUBOIS:** You're not live.

20 **MS. KLAHN:** Sorry. Could you mute?

21 **MR. DUBOIS:** Yeah, I'm going to.

22 **MS. KLAHN:** At this point, I'm not
23 planning to ask more than one or two questions, and
24 I'm going to try and funnel those through Mr. Dubois
25 for redirect. That's the plan for this witness.

1 **JUDGE MELLOY:** All right. And then what
2 about Mr. Wallace, are you going to be asking any
3 questions?

4 **MR. WALLACE:** Your Honor, at this point,
5 I'll need to evaluate what New Mexico does on cross,
6 but the United States may have raised some issues that
7 are a direct interest to the State of Colorado.

8 **JUDGE MELLOY:** All right. Well, then
9 we'll -- we'll adjourn for the evening, and we'll do
10 -- start the cross first thing in the morning, and so
11 I'll see everyone tomorrow morning. Thank you,
12 everyone.

13 (The proceedings adjourned at 5:00 p.m.)
14
15
16
17
18
19
20
21
22
23
24
25

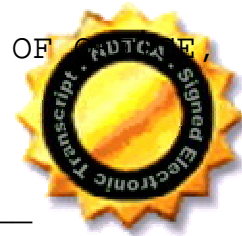
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE

I, HEATHER L. GARZA, a Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the facts as stated by me in the caption hereto are true; that the foregoing pages comprise a true, complete and correct transcript of the proceedings had at the time of the hearing.

I further certify that I am not, in any capacity, a regular employee of any of the parties in whose behalf this status hearing is taken, nor in the regular employ of any of the attorneys; and I certify that I am not interested in the cause, nor of kin or counsel to any of the parties.

GIVEN UNDER MY HAND AND SEAL OF OFFICE
on this, the 7th day of December, 2021.



Heather L. Garza
HEATHER L. GARZA, CSR, RPR, CRR
Certification No.: 8262
Expiration Date: 04-30-22

Worldwide Court Reporters, Inc.
Firm Registration No. 223
3000 Wesleyan, Suite 235
Houston, TX 77027
800-745-1101

A				
a.m 1:12	162:13,15,16	99:3 150:1,2	added 170:18	ADMIN 78:6
ability 38:1	162:24 163:3,8	168:2,7,9	180:22 198:15	administer
45:12 58:21	164:22 175:9	acre-foot 22:21	198:25	37:17
able 35:15 61:15	177:7 178:16	23:17 24:1	adding 75:10	administering
61:16 100:25	179:2,6,9,11	acreage 52:7	addition 18:12	62:1
178:15	183:25 184:10	60:3,4,7 113:6	18:25 19:2,2	administration
above-entitled	184:16,21,24	129:1 131:14	23:4 33:22	64:4
1:11	185:3,23	146:9	53:17 193:25	admission 39:14
absolutely 16:8	192:11 194:3	acres 104:25	199:2,3	88:25 141:2
24:4 149:10	194:10 195:18	105:3 108:18	additional 38:20	admit 14:22
abundant 59:20	195:23,24	108:20 112:10	75:9,11 159:16	15:7,10
69:5	198:23 199:17	112:13 113:9	177:2	admitted 11:16
acceded 27:5,10	200:17,25	119:7,10	address 24:24	13:23 15:4,6
accedes 25:25	201:1,4,6,7,13	131:16	25:5 29:18	86:21,23 87:2
acceding 26:23	201:16,18	acronym 146:22	31:24 32:15	87:3,4,5,6,6,8
accept 30:4,7	202:18,21,23	act 28:9 90:11	34:21 35:20	87:12,12,13,14
58:23 59:12	203:1,5,6,6,9	133:17,18	37:13,16 39:13	87:15,16,18,19
188:16	203:10,11,20	142:18,22,24	49:12 165:23	87:20,22,24,25
accepted 56:21	203:22 204:1,5	143:8,14,24	addressed 17:25	88:1,2,14
59:10 72:14	204:11,13,18	145:18,22	33:2 42:21	141:3,20,23
75:13	205:1,18,18	146:12,17	addresses 23:12	admitting 27:6
accepts 17:15	206:13 207:4	147:2,9,12,13	25:22 30:1	admonish 191:7
access 79:11	accounts 94:22	147:19,25	32:23	admonition
143:16	161:13,14	148:2,5,22	addressing	16:21
accident 150:9	176:16 178:8	acted 28:8 63:15	34:24 42:16	adopted 52:1
accompanies	178:10 179:3	action 31:24	adheres 33:10	56:12 65:6
202:7	205:6	36:17 37:14	adjourn 209:9	adopting 65:11
accomplished	accuracy 193:8	62:10,14	adjourned	66:11
60:25	206:5	actions 18:2	209:13	advance 16:23
account 22:25	accurate 74:21	34:9,10,10,16	adjudication	adverse 27:5
39:6 74:2,22	187:10 206:1	35:10,17 36:4	63:8 69:1	33:16 34:6
161:11 177:22	Acequia 122:14	60:21 63:17,18	adjust 172:25	adversely 44:3
178:23	123:13 150:16	66:8,9,16	adjusted 112:3	advisor 203:15
accounted 199:7	168:23 169:15	73:25	166:13 170:16	advisors 158:6
accounting	171:8	activities 65:23	172:13 177:21	201:25 202:5,8
18:12 23:25	achieve 23:23	202:19	183:16	202:11 203:18
34:2 65:22	acquiesce 26:16	actual 8:22	adjustment	203:25 204:12
66:18 67:7	acre 52:15,24	22:14,15,17	172:10 173:4	204:17
80:21 82:25	53:15,24 54:5	47:23 92:5	177:13 199:18	aerial 93:23
83:2 84:25	54:9,12,17,19	144:8 178:13	199:21	98:19 103:9
127:21,23	59:6 68:16,24	181:16 182:25	adjustments	108:2 110:5,25
137:2 139:3	71:11	184:8 200:2	95:21 165:7	116:22 121:2
153:19,23	acre-feet 52:6,8	204:20,24	170:17 172:3,4	affect 59:25
156:16,22	54:19 68:23	205:5,12 207:3	173:17 183:15	152:9 200:18
157:21 158:15	70:17 72:16	adapt 41:2,6	185:11 199:16	affirm 78:12
	73:14,15 74:25	add 180:25	200:22	after-pumping
	75:3,5 94:12	181:5 197:14	adjusts 173:12	21:15,23

afternoon 80:7	40:8	159:24 160:4,6	allotment 41:18	71:1,11,13
aftertime 154:1	Al 43:15 174:9	166:4,19,22	146:2,5	99:9 109:15
ag 20:11,12	Albuquerque	167:12,16,19	allotments 54:18	115:6,19 148:7
aggregate 54:1	80:16 111:12	167:24 168:10	170:10	149:20 150:7
75:12	111:14	168:13 169:3	allots 68:23	156:14 162:8
ago 180:14	alert 11:25	169:17,22	allotted 54:5,20	166:17 169:6
agree 26:16 67:8	algebraic 171:23	170:18,20	54:22	178:5,6 179:18
189:23	align 193:10	172:11,17	allotting 152:13	188:24 191:25
agreed 14:24	allegations 34:6	173:18,19,22	allow 58:15	205:12 207:2
47:1 78:22	34:8,21 35:1	173:24,25	79:12 199:25	amounts 113:6
86:18 196:20	alleged 35:10	174:1,6,11,15	allowance 57:24	176:20
agreed-upon	ALLISON	174:16,20,21	allowed 6:11	Ana 32:3 90:18
192:15 193:10	93:13	174:25 175:3,4	56:2,18 60:10	102:23
196:13 198:10	allocate 166:10	175:5,7,9,11	72:13 125:11	analyses 41:12
agreement 32:1	168:8 181:19	175:12,14,19	allowing 145:22	43:20 44:21
32:1 37:15	allocated 20:15	175:24 176:4,9	allows 24:12	45:14,18
40:16,18,19,20	40:23 48:19	180:1,9 181:14	49:9 139:24	analysis 24:14
40:25 41:5,8	53:15,16 54:8	181:24 182:2	144:23 145:13	24:18,23 27:19
41:10,21 45:16	54:13,16 59:5	183:11,16	145:18 146:18	61:8 82:24
45:19 57:16,21	70:19 136:25	185:11 189:12	amended 176:8	85:4,23 169:10
57:23 63:24	144:17 172:20	191:2 192:14	amendments	171:13,19
64:18 65:7,9	172:22 173:15	193:23 194:6	75:11	analyze 66:10,12
66:11 69:15	191:4	195:4,5,6,7,9	America 37:6	analyzed 20:9
74:4 75:25	allocates 68:23	195:12,13,14	American 66:25	66:14
84:6 133:17	allocating 69:20	195:17,18	114:15,20,25	and- 2:7,16
138:1,18,21,25	152:15 204:21	196:4,14,22	116:9,15,21,24	ANDREWS
139:1,5,9	204:25 205:6	197:2,3,5,6,7	117:7 118:12	2:13
140:25 141:10	allocation 21:19	197:11,13,16	118:19,19,23	annotations
156:4,6 170:11	42:4 57:14,17	198:7,16,16,25	118:25 119:2,8	13:19,22,24
170:12,17	57:19 65:6,11	198:25 199:2,3	119:9,11,14,18	14:1
172:1,3,4	65:13,15,22	199:9,11,14,19	119:20,21,23	annual 70:6
173:17 174:3	67:5,19 72:24	199:24 200:9	120:6 121:6,7	168:20,22
175:10 183:10	72:25 80:20	200:11,18,20	121:15,17,18	169:13 171:5,9
183:15 192:17	83:20 84:5,8,9	200:21,23,24	121:20,21,25	173:6 181:7
192:25 193:4	84:20 86:1	allocations	123:3,18 124:4	182:21,24
197:14 198:18	127:23 136:23	50:24 51:17	197:15,17,20	203:9
200:10,14	139:3 145:14	61:18 66:13	198:1,12,21	answer 33:2,3
agreements	146:3,5,7	70:14,15	199:6	60:22 61:2
66:18	150:12 153:7,9	136:18 139:11	amount 52:6,9	65:2 72:20
ahead 5:24	153:16,24	139:13 153:24	52:15,23 53:8	149:14 157:17
12:17,18 20:23	154:5,6,19	156:1 159:8	53:14,24,25	158:22 168:3,9
21:20 83:16,16	155:6,9,13,25	166:24 167:10	54:6,8,9,11,17	172:22 173:13
104:4 118:14	155:25 156:3,5	167:13 170:2	54:20 59:6,25	207:15 208:5
122:2 141:25	156:10,15	170:13 174:17	63:21,22 64:10	answers 61:5
177:8	157:4,7,11	174:18 175:21	65:25 66:6	anticipate 15:21
aim 208:12	158:11 159:2	181:3,11,15,23	68:13,17,18	46:9
akin 38:12,13	159:11,18,21	182:1 199:15	70:15,19,21,24	anticipated

159:17	15:1	Arrey 103:14,25	137:16	160:13,15
Anybody 14:16	approach 60:17	104:3,7,14	attachments	164:12 165:9
anymore 124:11	appropriate	arrive 8:8 23:8	135:19	166:14,18,22
apologies 142:8	57:11 75:14	arrow 66:3	attacking 37:14	168:6 172:18
apologize 16:23	76:12	91:18 92:1	attempt 18:14	175:1 176:10
apparent 29:9	approve 163:16	96:4 102:10	34:16 35:9	176:14 177:21
29:11	approved	105:9,10 109:1	attempts 27:22	178:6 179:22
apparently 35:9	163:19	109:2,2 114:14	34:14	179:24 180:13
appearance 5:17	approximate	114:15 120:15	attended 158:5	180:23,24
appearances	105:22	arrows 125:3	158:19	181:1,6,11,13
5:14	approximately	arroyo 19:3 23:2	attending	195:7 199:25
appearing 5:15	50:2 62:17	arroyos 99:9,12	158:14	200:15,18
6:13	72:16 104:25	article 24:4 53:1	attorney 2:18	204:21,25
appears 111:24	104:25 108:18	53:3	6:10,15 47:9	205:6
118:10	108:20 109:11	articles 51:2	47:10	average 70:9
applicable 63:9	112:10 113:8	55:11,12	attorneys 79:15	73:14
64:5	119:7 161:1	articulate 18:7	210:12	avoid 10:6 34:14
applied 68:15	172:21 173:14	artificially 32:10	attribute 34:16	38:6 64:21
69:15 167:11	approximation	181:16	audio 36:15	avoided 22:15
167:12 172:17	115:14	Aside 161:16	August 96:14	avoids 12:25
172:24 174:18	aquifer 37:25	asked 80:18	130:21	award 75:15
175:16 183:9	64:20	141:13	authentication	awards 65:11
183:13 197:19	arbitrary 23:17	asking 49:6,7	13:25 14:12	aware 12:23
198:22 199:7	area 61:10 64:13	78:23 157:2	authenticity	79:23
206:16	73:24 80:16	205:24,25	13:18,25	axis 171:7
applies 67:7	85:14 90:25	206:1 208:18	authority 29:18	
167:16	94:6 97:19	209:2	29:21 45:23	B
applying 52:3	98:8 109:12	aspects 58:15	62:5 64:3	B 141:3,6
167:23	114:24 118:22	85:17	authorized 60:3	bachelor 81:10
apportioned	121:21 125:3	assessment	60:7 90:9,10	bachelor's 81:2
18:5 37:9 39:4	205:16	164:10	automatically	81:6
39:7 45:10	areas 23:15	assign 168:12	86:22	back 8:15 9:15
apportionment	111:21 130:15	assigned 84:9	availability	10:23 15:14
19:11 20:16	130:16	85:6	38:19 45:11	49:4 68:17
23:11,20,24	argue 20:25	assignments	available 20:19	76:18 77:1,21
29:20 30:5,14	argues 27:23,25	85:23	26:10,14 40:22	86:1 89:24
33:18 36:6	arguing 62:11	assistant 10:12	44:12 45:3	92:15 95:23
37:20 38:7,11	argument 10:17	12:2	55:22 59:25	98:4,6 102:5
39:11 40:4,15	36:15 46:18,20	associated 27:25	63:22 71:16,17	102:20 104:24
42:8,19 45:14	73:20,23 74:8	34:22 36:6	71:22 74:17,19	107:2,12,13
49:25 50:10,21	arguments	185:24	136:23 148:17	109:6 110:13
51:2 52:22	32:15	assume 88:19	153:25 154:10	115:12 118:3
60:24 61:19	arising 42:16	assumption 66:7	154:14,19	121:9,24 127:6
68:3,4 72:17	arithmetic 18:10	assure 49:5	155:6,12	127:10 130:5
appreciate	18:11,13	assuring 43:11	156:10,14	132:5 140:11
112:17	Army 194:17	asterisk 138:9	157:19 158:11	140:14,19,21
appreciative	arose 56:12	attachment	159:1,10,11,20	154:4 166:1,9

190:8 191:14 207:21 backbone 47:13 47:15 backed 107:3 background 31:19 36:16 44:21 53:2 56:7 81:1 93:5 94:3 97:8 98:21 116:17 116:18 117:8 117:12,21 121:4 backing 101:22 109:5 135:6 backup 83:2 backwards 23:21 bad 75:1 balance 23:4 24:13 153:24 170:19 198:16 199:9,19 200:9 200:11,13,23 balances 200:18 Balderas 2:17 4:5 6:11 46:18 46:20,23,24 49:14,19,20 bank 100:2,10 100:10 110:3 Barroll 54:2 66:13 73:3 74:14 bars 71:5 72:23 72:24 73:7,9 base 52:22 61:21 189:3,5 based 24:6 27:15 40:9 51:4,9 57:17 59:3,5 61:12 70:4,17 74:18 139:12 146:8 159:14,24 160:4,5 163:3	164:21 169:3,7 170:16 172:8 172:10 180:15 182:10 187:1 192:5,16 193:11 198:3,5 199:24 207:7 baseline 26:1,23 38:17 39:20 40:10 50:5,12 50:13 51:5,9 51:19 52:4,9 52:12 54:24 55:25 58:15 59:2,13,16 65:20 bases 38:2 basic 20:25 86:4 basically 14:9,13 65:19 71:20 208:16 basin 34:19 35:3 60:15 65:24 66:22 75:19 95:9 100:24 102:13,14 105:16 108:13 109:8 114:19 161:25 162:2 162:13 202:14 202:20 basins 62:7,8 basis 54:12,16 60:2 65:21 139:2,11 141:4 158:3 163:14 163:24 170:13 196:23 Bates 136:15 bears 67:20 73:19 becoming 83:19 bed 121:12 124:2 began 55:14 61:14 beginning 86:18	130:23 144:10 154:4 173:10 begins 89:16 behalf 6:9 88:8 210:11 believe 14:21 25:21 32:20 40:17,21 48:24 67:25 84:10 96:10,14,14 98:10 101:10 111:1 120:24 141:5 144:9 146:10 156:24 161:10 207:9 believes 38:5,8 39:1 beneath 97:4 beneficiaries 43:14 154:12 162:7 beneficiary 55:6 benefit 49:21 66:18 benefits 74:3 best 18:8 45:19 171:21,22 better 10:10 69:25 108:3 113:1 big 94:11 99:2 bill 48:21 binder 9:7,8 binding 13:15 bit 14:25 17:11 109:6 150:18 black 68:18 70:23 Blair 33:9,13,23 34:20 43:16 44:1,22 45:15 174:9 blue 58:13 64:13 65:18 66:5,5 69:6 91:18 96:4 129:23 169:11 171:16	blurred 9:2 board 18:22 158:19 body 62:24 97:7 98:21,22 106:13 116:18 117:6 122:13 123:2,4 bolded 91:17 96:3 102:10 105:9 109:1,3 114:14 120:15 Bolson 35:2 Bonita 97:22,24 98:2,3 boost 187:6 188:14,18,19 188:22,25 189:2,3 BOR 185:8 border 89:17,18 89:18 bottom 55:11,19 96:22 100:1 112:20 117:10 121:22 122:12 bound 49:8 183:23 184:17 boundaries 42:24 90:14 91:6 Boundary 43:10 119:12 box 21:10 Box.com 15:20 15:25 16:3 boxes 13:2 176:18,21 bracket 129:20 130:8 Brandes 19:16 22:19 24:15 25:4 27:14 33:22 break 76:16 140:9,11 bridge 17:11	116:17 bridges 117:20 brief 25:24 32:14,20 36:20 36:24 37:7 46:5,11 58:25 briefing 20:25 21:8 25:8 52:20 briefly 32:15 194:22 briefs 37:2 bring 32:13,13 broad 62:4 Broadway 2:23 browner 123:4 Brownsville 89:20 budget 18:9 19:18 22:23 83:10 84:1 build 60:6 building 93:6 buildup 103:12 built 60:5 111:25 burden 8:19 9:3 12:8 burdensome 9:13 Bureau 26:2,8 26:11 28:6 29:2,6,11,15 30:3,8,18 31:1 48:23 80:14 82:1 114:3 business 8:16 9:2 Butte 30:10,13 30:18 32:6,7 38:23 40:5 42:5 47:3,5 50:21 51:3 52:23 56:10 61:13 62:2 86:3 90:15 91:13,15,18
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

92:14,16,17,19 93:5,8,24 94:11,17,18 95:12,18,19 96:6,9 97:3 99:8 101:3 114:1 134:11 152:2,6 154:15 156:15,17 157:20,22 160:1,17 161:12,15 162:9,24 163:1 163:22 164:7,9 164:16 177:2 177:16 178:9 178:14,19 179:7 180:7,8 181:17 183:24 184:8,14,18,22 185:4,13 204:10 206:14 bypass 127:22 128:1,3,13,14	calculate 176:1 177:19 195:6 197:10,16 201:16 204:9 208:3 calculated 74:24 74:25 196:10 198:12,15 199:15 calculating 205:11 calculation 160:15 164:12 167:10 169:6 169:17 170:10 173:16 181:10 182:25 183:23 195:12 197:8 200:5 204:20 204:24 205:5 206:17 calculations 163:7 164:21 175:24 176:3 182:8 196:18 calendar 9:1 158:3 184:25 201:14,16 203:16 California 2:5 110:14 112:9 call 30:23 50:14 71:18 77:6 80:10 94:22 135:15 137:7 144:22 149:11 162:16 170:17 189:25 called 7:12 51:22 93:3 105:13 107:4 162:4,14 168:11 169:10 169:23 198:17 200:13 calling 76:23 calls 77:10	camera 5:9 77:14 canal 53:8 66:25 103:14,15,25 104:1,7,14,18 104:23,24 106:12,19,21 106:24 107:8 107:11,15 108:10,12,15 108:17,19 110:9,10 112:8 112:8,22,23 113:4,10 116:21 117:7 118:12,19,19 118:23,25 119:1,2,3,5,8 119:21,23 121:6,15,17,18 121:18,20,21 121:25 122:14 123:3,18 126:6 127:4,8 137:1 148:18 150:21 168:24 169:15 197:15,17,20 197:21,24 198:1,4,13,21 199:6 canals 112:6 115:20 125:18 126:11,15,20 126:22 128:21 128:24 129:3 129:24 130:10 132:13 137:11 151:19 Canutillo 195:25 196:1,3 Canyon 102:21 105:12 106:3 cap 70:21 capacity 161:6 210:10 Capitol 2:4 caption 210:6	capture 39:22 captured 95:20 careful 74:5 Carlsbad 83:12 carry 200:12 carryover 50:8 71:10 199:5 case 5:20 16:23 17:14,15,18 18:1,7,8,8,10 25:7 32:12 35:7,14 36:19 36:20 37:2,7 38:3,5 40:3,18 46:12,25 47:3 47:19,21,24 48:12,17,20,21 49:3,20 50:5 50:17 51:16 61:3 66:14 68:10 111:10 143:5,18 147:16 168:2 171:21 cases 75:13 categories 133:22 category 141:10 cause 43:22 66:12 210:13 caused 20:10 33:14 34:2 35:25 36:4,5 41:3 62:15 63:25 64:15 66:9 67:23 68:1 causes 188:22 191:17 192:3 causing 45:24 165:19,20 191:19 ceased 153:18 ceases 109:12 Cedar 44:24 center 117:12 121:5	century 48:12 certain 28:9 70:19 115:11 192:8 certainly 11:6 11:18,19 27:1 40:23 110:21 190:12 CERTIFICATE 210:1 Certification 4:10 210:20 Certified 1:13 210:3 certify 210:5,9 210:12 CFS 190:2 Chad 2:22 6:17 chad.wallace... 2:25 Chama 83:4 84:24 162:3 chance 36:25 180:20 change 60:1,10 67:7 92:10 95:9 151:9,16 176:16 177:13 177:13,25 179:7 187:11 188:17 190:2,3 changed 68:17 151:3 176:11 176:21,23 177:1 178:11 178:12 180:15 changes 59:23 61:4,16,18 65:23,23 73:7 74:22 95:8 175:20 177:5,9 178:22 179:3 191:19 194:7 changing 41:2 41:14 42:12 48:15 208:4 channel 148:19
C				
C 2:1 Caballo 61:13 81:21 85:19 86:3 91:13 95:20,20 96:1 96:4,8,22,24 97:2,7,7 98:22 99:2,4,6,14,15 99:18 101:11 102:12 152:6,7 160:17 167:3 168:21 169:13 171:6 181:4 182:7,24 185:14,16,19 186:2,5,22 187:1,7,9,11 188:17,20 189:17 190:3,6 190:22 192:12 194:13 197:12				

152:1,5 characterize 18:24 characterizing 30:2 charge 67:22 128:1,2 195:24 196:1,3,3,10 202:13,23 charged 62:24 67:5,9,13,15 67:17,18 71:14 200:7 charges 63:24 65:16 127:24 153:23 173:6,8 174:17 175:6 182:21,22,23 185:24 192:13 193:7,10,24 194:4,11 195:5 195:9,13,16,17 196:22 197:4,6 197:7,11 200:21 chart 166:15 check 53:14 106:25 135:12 chief 18:1 46:12 chile 47:16 chose 71:18,23 circumstances 41:14 42:12 150:5 city 35:21 48:9,9 48:10 57:10 67:3 117:13 123:20 143:16 144:1 145:13 145:22 146:15 146:18 187:24 196:5 civil 81:3,10,17 82:17 84:13 claim 35:15 38:3 claimed 45:17 75:2	claims 38:3 39:18 clarification 88:6 115:4 clarify 157:1 190:10 Clayton 52:19 clear 28:14 39:20 48:17 76:7 clearly 28:22 60:5,22 65:2 72:21 clerk 12:2 click 64:14 climate 48:14,14 clip 91:22 92:2,4 92:6,25 93:12 96:12,20,21,24 98:8 103:20 105:24 106:1,9 106:15 112:5 112:14,15,17 112:20,23,25 117:16,18,19 117:23 118:14 118:15 122:23 122:25 123:4 123:16 130:18 130:19,20,24 131:1,8 clips 87:3 close 45:20 closer 97:1,4,11 180:16 Coleman 37:1 collating 188:3 collect 175:5 collected 194:15 collecting 130:5 153:22 188:2 192:13 collection 82:23 collectively 47:5 collects 99:9 color 91:4 92:10 92:11 117:3	Colorado 1:6 2:9,21,23,24 3:3 5:4 6:18 16:17 46:5,9 46:11 75:14 87:12 89:16 94:25 161:19 161:25 164:5 203:13 207:13 209:7 Colorado's 46:10 coloring 98:24 combine 27:22 come 42:23 76:18,25 97:4 99:10 102:5 106:21 132:5 140:11 164:11 166:7 178:3 179:4 180:18 202:22 comes 31:13 66:16,23 104:24 115:8 121:9 146:3 171:22 203:1,5 coming 12:1 77:18 92:21,22 92:24 93:25 94:7 97:18 98:7,22 100:14 103:7,17 104:3 106:5,13 107:2 107:25 108:6 116:19 117:25 153:17 159:25 185:13 commencing 1:12 commission 41:24 43:10 62:23 65:4 85:3,4 119:13 154:2 156:22 158:5,6,8,24 164:18 183:23	184:7,20 201:2 201:20 202:4 203:25 205:1 205:10 206:8 207:2,9 commissioned 91:22 96:13 commissioner 51:12 52:19 62:4,11 64:2 74:6 154:17 155:4,11 156:8 157:3 committee 83:20 84:5,8,10,20 86:1 173:24,25 174:1,6,11,15 174:22,25 175:5,11,14 176:5 182:2 195:5,12,15,19 196:14 197:3 199:14 common 138:21 communication 79:14,15 communicatio... 63:2 79:16 communities 47:13 58:3 community 47:8 47:8,10,11 Compact 22:21 23:10,19 24:2 24:4,12,15,22 24:24 27:3,18 27:20 31:9,13 32:2 37:10,21 38:8,21 39:4,7 39:11,20,25 40:7,8 41:23 41:24 42:19 44:7,8,18 46:10 49:22 50:5,11,14,19 50:21,25 51:6 51:8,10,15	52:1,4,5,12 53:2,3,20 55:10,12,18,25 56:7,9,12,16 57:9,22,25 58:6,15,24 59:11,15 60:22 61:23,25 62:3 62:6 63:3 64:2 64:25 65:3 67:24 70:18 72:12 73:22 74:1,6 76:9 85:3,3 90:25 94:24 154:2,17 155:4,11 156:8 156:16,22 157:3,20 158:2 158:5,6,8,15 158:24 161:18 162:2,13 164:1 164:2,4,8,11 164:14,18,19 165:4 177:4,6 177:6 178:22 178:24 179:5,6 179:19 180:7 183:22,24 184:7,8,10,16 184:20,24 201:1,1,4,6,7 201:13,17,19 202:1,4,14 203:7,25 204:4 204:9,11 205:1 205:8,10,13 206:8,9,13 207:2,8 Compact's 44:10 69:11 Compact-level 38:6 39:22 Compact-rela... 25:19 Compact-to-C... 156:21 Compacting
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

38:17 compare 95:5 100:7 126:12 205:25 compared 54:19 183:8 193:14 208:3 comparing 81:22 196:18 205:17 comparison 75:2 competing 95:14 compile 9:5,16 compiled 9:9 complained 56:18 57:8 complaint 48:21 complete 47:20 61:15 135:17 137:14 141:14 210:7 completed 94:13 94:14 153:21 completely 60:7 63:14 completeness 141:4,6,11 142:7 completion 195:2 198:9 complex 33:3 compliance 50:14 58:24 60:21 74:1 76:8 complies 62:25 comply 61:25 62:5 compressed 8:21 10:24 11:1 comprise 210:7 computations 204:13 computer 79:12 concede 51:22 conceded 50:23 57:20	conceived 10:1 concept 20:25 58:7 70:12 Conceptually 18:8 concern 15:1 189:24 concerned 12:7 76:5 concerns 64:17 concession 26:24 concise 18:7 concluded 24:7 39:9 197:9 conclusion 31:10 38:21 45:16,18 68:2 concrete 94:8 97:17,19 98:2 121:19 concrete-lined 197:24 condition 18:24 19:6 21:11,14 21:15,17 24:7 24:13 25:5,12 25:23,25 27:2 27:10,14 38:18 39:21 40:11 54:24 59:17,19 60:8,12 conditions 21:22 22:10,11 38:12 38:13 40:7,8 40:14 41:2 42:19 60:1 95:9 172:9 174:19 176:11 188:15 conducted 24:14 conducts 64:5 160:25 confer 189:25 confirm 24:16 24:24 57:5 confirmed 60:23	confirming 153:13 conflates 27:20 conformance 63:8 conical 100:17 conjunction 17:6 28:4 42:10 conjunctive 56:1 connected 94:9 127:4 connection 67:20 Conover 24:24 consensus 174:23 consequence 9:1 consequences 42:17 conservation 91:2,5 124:13 124:23 125:6 147:6,18,25 148:21 197:15 197:18 198:2 198:13,22 199:6 considered 31:11,11 54:10 54:11 132:14 134:15 135:1 200:6 considering 47:16 consistent 40:14 46:11 50:24 59:2,3,5,6,8,11 59:21 61:23,23 64:25 69:10 constant 22:7 constitute 57:9 constructed 31:8 33:1 61:2 129:25 130:4 131:24 132:6 construction	30:20 94:14 131:22 134:13 consult 65:5 consultant 33:8 consulting 43:15 174:8 consumption 70:7 consumptive 22:2 23:5 24:10 contemplated 37:21 contentions 32:23 context 17:5 25:20 44:20 continuation 41:22 continue 185:11 continued 37:24 39:15 181:7 continuing 153:16 continuously 100:8 164:22 contours 17:24 contract 30:3,6 42:2 53:23 124:15 125:11 133:6,18,19,24 134:8,9,10,14 134:21 135:1 135:16,18 136:9,12,16 137:8,9,15,22 139:16,19,23 140:3 143:18 143:21 144:5,6 144:8,13,16,20 145:3,5,8,10 145:11,12,18 146:13,18 147:2,5,10,12 147:13,13,19 147:25 148:2,3 148:5,9 149:22	contracted 111:3 contracts 45:13 53:18,19 55:16 84:2 133:3,13 133:15,16,17 133:21,22 135:8 139:6 140:7 142:18 142:22,23 143:9,9,14,24 144:22 145:22 147:4 148:22 149:1 151:6,12 contrary 50:14 67:24 contrast 35:21 51:7 63:11 207:3 control 26:11 29:6,13,16 34:11 41:25 42:10 62:5,6 94:21 99:11 136:19 138:3 190:17,23 191:6 controlled 132:18,20 controversy 204:7 Convention 37:24 52:24,25 53:6,13 167:17 168:1 169:1 conversion 144:5 146:8,13 convert 142:24 143:19 144:7 converted 82:17 143:17 144:21 144:23 145:14 145:19 146:6 converting 143:3 converts 144:17 convey 125:14
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

conveyance 159:13 166:23 167:1,11,23 170:8 172:16	75:12 counsel 5:19 79:18 210:14 counties 32:3,4 country 90:8 117:8 149:5 counts 67:11 county 37:23 43:16 90:16,17 90:18,18,19,20 91:2,3,5,20 96:6 102:22,23 114:21 117:9 124:12,23 125:1,3,4,5,7,7 125:10,10 147:5,18,25 148:3,10,15,20 148:21 149:12 149:13	88:13 cover 30:21 130:14 covered 201:5 covers 15:12 88:3 130:16 create 17:19 45:17 101:22 129:2 132:4 created 18:17 22:11 33:24 75:24 193:1,1 creating 187:15 187:21 creator 33:7 credit 94:24 161:18 163:22 164:2,2,8,11 164:19 165:4 177:4 178:22 178:24 179:19 180:7 197:15 197:18,19 198:2,8,13,22 199:5,6 204:9 204:14 205:2,7 205:11,13 206:10 207:3 credited 198:6 credits 153:23 critical 21:4 48:4,16 crop 70:6 95:8 130:3,3 crops 25:17 60:11 131:23 132:6 cross 90:6,7 91:4 102:16 109:14 109:16 114:23 125:4 209:5,10 cross-examina... 6:24 7:14 9:5,8 10:18 12:15,22 12:24 13:5,7 87:9 88:10 cross-examine	9:10 cross-examining 9:18 crosses 89:17 115:7 121:19 crossing 115:13 116:17 118:9 121:10 122:10 123:19 CRR 210:19 Cruces 48:9,9 67:3 85:13 146:18,21,25 CSR 210:19 Cuidad 117:14 current 27:7 40:14 42:18 43:5 64:24 84:11,19 148:2 159:13 170:19 currently 5:22 102:3 120:14 132:17 143:9 curve 25:25 26:4 26:6,19,24 27:15 59:12 62:18 65:16,19 67:14 168:12 168:15,18 169:7,8 curves 54:7 customers 179:25 cuts 131:13	27:15 54:7 57:15,17 58:22 58:23,25 59:10 59:12 62:18,19 65:13,16,18 66:5,15,25 67:13,25 170:14,21,24 170:25 172:2,7 172:10,12,13 172:16,19,23 173:4,12,13 183:10,16 D3 50:7 65:7 daily 12:6 83:3 95:21 163:14 163:24 189:9 203:9 206:20 207:4 208:4 dam 92:5,14,19 92:21 93:3,4 93:24 94:3,10 94:10 95:18,19 95:20,20 96:1 96:24 97:1,5 97:17,20,22 98:20,23,24 99:18 101:15 101:16,17,20 102:11,12,15 102:19 103:10 103:12,18 104:11 105:2,7 105:8,11,17,19 105:21 106:4 106:18 107:25 108:12,24 109:4,9,12,13 110:2,13,16 111:21,25 112:6,12 113:10,13 114:12,16,20 115:1,8 116:9 116:16,25 117:2,23 118:9 118:24 119:9
correct 7:15 12:19 13:21 14:5,14 15:24 63:17 88:22 111:19,22,24 115:21 136:1,2 136:12 142:12 143:6 161:7,12 163:14 166:15 166:16 170:4 177:14,15 183:13 185:7 201:6 205:24 210:7 correction 172:6 172:7 correctly 86:25 115:18 correctness 31:10 correspondence 169:21 corrugated 100:20 Cortez 43:6,8,18 cost 12:8 30:20 30:21 costs 75:9,10,11	court 1:1 5:2 7:1 7:19,22 10:3 12:25 13:1,3,6 17:20 27:11 36:15 37:5 40:3,15 42:20 45:22 46:25 48:21 49:12,19 53:19 60:14,23 75:13 80:22,25 86:5 91:21 103:19 105:24 107:18 117:15 134:5 210:23 court's 16:21 17:21 73:23	cross-examine	D D'Antonio 25:12 65:8 D1 54:7 168:11 168:12,15,18 168:18 169:7,8 169:11 171:2 171:11,12 181:20 200:3,5 D1/D2 69:16 D2 25:25 26:4,6 26:19,23 27:7	

119:11,15,18 119:20 120:6 120:12,13,14 120:17 121:8 121:10 122:9 122:10 123:22 123:24 124:2,4 124:5,9 152:6 152:7,7 190:18 damage 165:19 165:20 damages 71:22 dams 101:13 102:1,4,8 113:22,25 114:4,7 115:19 119:25 132:22 132:23,24,24 150:21 151:2 152:21 dark 112:2 darker 120:15 123:14 data 62:19 82:23 85:4 153:19,22 158:2,9,9,16 158:20,23,24 163:3,5 164:19 168:19 169:8 171:3,4,11,21 171:22,24,24 175:5 193:22 194:12 196:12 196:15 198:11 200:5 201:15 201:19 202:2,7 202:10,12,15 203:5,22,25 date 27:18 29:22 177:10,11 180:19,22 210:20 dating 68:16 daunting 49:25 David 36:1 day 5:20 7:13 10:7,20 11:21	11:25 12:1 47:9 54:11 59:22 179:14 189:10 203:12 210:17 days 7:11 8:5,6 8:14,16,22,22 8:24,25 9:1,2 30:9 De 2:14 deal 25:6 29:10 133:13,14,16 dealing 21:12 deals 27:24 28:12 29:5,6 debris 107:11 165:18 decades 39:14 59:10 December 159:22 166:4 175:19 201:15 210:17 decide 13:10 decided 12:4,9 17:25 50:18 decision 11:24 17:21 58:19 61:21 decisions 42:12 42:15 83:3 84:22 86:2 156:9 174:21 deck 201:24 declaration 62:9 declared 62:7 decrease 169:2,3 decreased 196:7 deduct 178:13 deeper 128:24 129:17 DEFENDANT 2:12,21 Defendants 1:7 define 40:23 51:19 136:17 194:3	defined 30:6 32:2 42:8 47:1 196:22 defines 41:10 194:4,5,7,8 defining 44:10 degree 28:12 81:9 85:15 Del 110:11 112:9 112:23 129:10 131:5,12,13 deliver 26:14,18 38:1 45:12 119:1 120:14 123:23 148:25 150:1,7,16 159:20 166:11 167:4 168:1 171:15 181:21 delivered 19:24 31:4,5 53:8,10 66:1,6 94:19 97:10,24 101:12,13 113:18 117:5 118:13 121:17 129:3 145:15 149:25 150:2 151:2 153:9 162:3 164:5 167:6 169:14 178:17 183:8 197:20 200:1,4 deliveries 24:2 26:6 32:6,7 39:8,25 43:11 45:4 138:2 139:10 156:17 157:21 173:6 176:23 177:2 181:18 184:8 195:15,22 delivering 41:17 41:18 102:3 151:9,10,22,24 152:14 190:16 197:22	delivers 90:4 delivery 10:9 26:10 39:11 42:5,8 44:10 45:20 90:8 101:25 119:22 127:5,11 128:3 128:22 133:14 136:25 139:13 148:7 149:24 152:10,17,20 153:15 154:11 162:18 168:22 171:7,9,11,12 182:21,22,23 184:21 189:12 193:24 199:19 199:22 200:6 demand 95:8 139:16,20 140:4 148:6 demands 52:7 56:3,14 60:16 61:20 69:12 95:14 Demo 86:9 87:11 90:2 98:14 99:20 102:6 109:19 114:10 120:11 120:19 124:20 153:1 170:7 181:9 demonstrate 18:17 35:6 38:16 45:9 demonstrates 21:6 22:6 33:20 demonstrative 15:22,25 18:20 86:10 87:1,10 88:19,20 89:3 89:9 90:22 91:14 93:17 95:24 102:25 105:5 107:17	108:23 116:1 121:1 124:22 125:21 128:9 129:7 133:12 159:6 167:21 170:22 171:25 176:20 180:11 180:12 191:15 194:25 195:1 denied 27:11 denies 39:2 denigrated 32:19 Denver 2:9,24 3:3 5:22 Department 2:23 3:2 5:23 5:23 departures 67:25 depend 56:6 depends 50:5 deplete 45:2 depleted 22:1 depletes 39:3 depletion 20:21 24:6 70:4 depletions 19:7 20:5,8,9,10 21:22,23,24 59:18 62:15 63:25 67:22 70:5 depositions 25:8 25:8 deprived 73:14 depth 129:13 derived 22:22 23:18 26:19 31:3 derives 26:6 describe 21:10 48:8 63:1 65:8 89:12 91:23 94:16 96:19 99:23 109:23 116:12 120:25
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

133:12,21 167:15 204:7 described 26:5 32:21 35:11 66:8 120:1 135:23 149:2 196:24 202:25 describes 137:17 describing 149:19 description 86:6 135:23 descriptions 135:20 136:5 designate 7:11 7:13 10:20 designated 7:8 7:18,22,25 86:20 designates 6:23 designating 8:18 designed 129:15 Despite 40:16 detail 44:19 deterioration 37:24 determination 40:13 71:19 141:25 154:18 155:5 156:13 157:19 158:10 159:3 160:12 163:24 164:17 165:5,14 166:9 171:20 174:16 175:12,19 176:13 177:21 178:9 189:15 195:17 198:24 199:23 204:19 204:24 205:4 determinations 33:22 155:12 156:1 175:15 184:13,14,15 184:17 determine 40:4	41:9 42:18 60:21 154:16 159:9,13,18 161:9 162:8 166:17,21,24 167:19 168:5 170:19 175:1 178:3,6,11,15 178:25 179:17 179:20,23 185:19 186:25 187:9 189:11 197:6 200:23 204:25 206:21 determined 27:8 30:5 40:15 115:14 141:15 150:12 160:18 165:10 170:9 176:8 177:17 178:23 195:10 198:2,3,8 determines 42:20 184:7 188:24 206:8 determining 10:7 153:24 154:13 157:25 159:1,8 160:21 167:24 180:3 187:18,24 188:14 196:22 206:9,18 develop 85:10 189:1 developed 26:7 57:13 161:2 163:19 169:10 171:13 developing 24:14 27:20 153:23 154:1 development 38:20 170:13 175:3 180:1 developments 44:17 85:2	deviations 65:16 66:11,15 device 79:12 diamonds 169:9 171:4 dictate 205:6 dictated 32:5 differ 128:21 difference 20:20 66:4 101:15 128:4 171:10 172:11 177:25 183:15,17 different 28:20 58:16,18 67:6 74:11 111:21 119:25 157:24 160:14 161:13 163:6 167:3,14 170:1 178:8 206:23 208:5 differently 181:23 diminish 45:2 diminished 53:9 direct 4:8 9:4,7 9:22 25:7 46:14 80:5 209:7 direction 116:23 directly 19:5 25:4 31:3 36:4 41:17 60:9 172:24 183:14 director 51:13 62:22 disagree 14:16 disagreement 204:8 disappear 118:21 discharged 66:24 67:1 discloses 9:11 Disclosures 15:9 discretion 12:11 discuss 51:19	52:17 60:19 174:16,17,18 discussed 14:20 24:25 27:13 139:6 167:25 171:3 174:14 180:14 discussion 6:20 50:3 68:5 dismiss 27:11 display 194:19 displayed 79:6 dispute 7:2,4 28:24 71:2 204:4 distinct 153:4 distinction 9:3 28:15 34:15 distribution 31:7 46:7 101:24 113:19 151:7 district 30:11,19 42:6 43:17 54:8 63:15 70:16,21 91:2 91:6 101:1,7 114:2,22 124:13,24 125:6 127:25 134:12 147:6 147:19 148:1 148:22 159:19 174:9 193:24 200:12,15 district's 44:20 districts 31:5 40:20,21,24 41:1,19,20 42:10,15,21 43:13,23,25 45:13 57:5 85:18 101:8 113:16 115:10 127:18 128:11 139:4,12 151:5 151:8,11,20,21	152:8,16,17,21 153:8,12,14,20 154:7,20 155:7 155:13 156:2 156:11,16 157:8,11 167:13 170:16 170:20 172:14 173:8,20,22 175:4,6,12,22 181:12 182:5 183:18 185:18 185:25 186:3,7 187:4 189:11 189:21 190:5 190:20,25 192:14 193:8 193:15,18 194:19 196:15 199:15 200:19 ditches 126:20 126:24 diversion 21:19 25:15 65:15 101:13,14,16 101:20 102:1,3 102:8,11,15,19 103:18 105:2,7 105:11,17,19 105:21,23 106:4,7 108:12 108:15,24 109:4,9,12,13 110:2,13,16 112:6,12 113:10,13,22 113:25 114:4,7 114:12,16,20 115:1,8,19 116:15,25 117:22 118:9 118:24 119:20 120:12,13,14 120:17 121:8 121:10 122:9 122:15 125:12 132:22,24
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

137:1 151:23 151:24 152:7 152:17,21 153:15 159:16 167:4,6 173:1 173:3,5,11 175:15 182:1,6 182:10,13,18 182:20 183:6 185:21 187:5 187:18,25 188:21 189:6 190:16 191:16 191:17,18,19 191:21 197:8 197:10 201:11 diversions 63:10 102:14 105:1 105:16 109:8 113:9,15 119:18 120:4 185:21,23 186:6 190:20 divert 26:18 103:13 108:16 110:7 112:6 118:24 120:6 127:8 191:1,4 diverted 101:23 107:10 112:11 114:25 115:20 118:10,12 119:20 121:7 122:15 161:24 161:25 diverting 97:12 107:9 190:25 divide 46:18 47:2 197:11 divided 19:10 21:1 63:23 70:13 173:7,9 182:24 dividing 32:9 50:8 64:24 division 52:10 53:21 55:22	59:10 65:20 Doctors 44:22 document 13:22 13:23 14:11 134:6,19,23 137:6 138:17 144:4 145:1 147:23 186:11 192:20,24 193:13 documentation 175:9 documents 9:15 9:16,18,19 14:6,10 15:2 38:9 57:3 156:3 doing 9:13,21,23 9:25 12:6,8 20:18 85:4 153:13 191:7 197:23 dollars 75:12 domestic 20:13 Dona 32:3 90:18 102:22 dotted 72:22 73:11 doubt 53:7 download 179:14 downstream 53:18 65:10 93:3 94:2,8 95:18 96:5,9 98:20,25 99:17 101:13 102:12 103:6 104:3,8 105:12 106:6 108:7,21 110:1 110:4 112:19 112:19 113:2 116:23 118:2 118:13 121:12 123:19 129:4 130:7 Dr 19:16 22:18	22:19 24:15,16 25:3,4 33:6,7,9 33:12,22,23,23 33:23 34:20,21 35:5 36:1 43:15,15 45:15 51:24 52:20 54:2 56:17 66:13 73:3 74:14 174:7,9 drain 39:23 129:11,17,17 131:3,4,5,12 131:13 148:19 drainage 91:1 128:23 148:16 drains 125:19 128:20,22 129:2,13,15,23 129:25 130:4,8 130:12,14 131:1,20,25 132:2,9,14 135:24 137:12 150:22 151:7 151:19 159:15 191:24 drastically 73:6 drawdowns 64:15 DRAWER 2:18 drawn 18:22 draws 28:14 drive 15:18 16:1 16:7 drives 191:22 drone 15:17 91:22 96:13 103:20 105:25 112:15 122:23 130:20 drop 5:25 dropped 69:17 75:21 drought 53:7 56:12 150:8 168:3,4,8	172:6,7,9 drought-related 35:18 Drs 27:13 44:1 45:14 Dubois 3:2 4:4,8 6:2,3,4 7:17,20 7:21 14:3,4 15:24 16:8,10 36:10,12,13,23 37:5 46:2 76:20,21,23 77:2,7,10,20 79:23 80:1,2,6 86:14 89:5,6,8 93:11,14,16 98:10 104:11 107:5 110:18 110:21,23 111:8 113:8 115:3,24,25 118:5,23 123:10,21 131:19 140:8 140:13,19,20 141:5 142:5,12 142:14,15,16 149:10,18,23 154:22,25 155:1,3,19,21 155:22,23 157:2,6,10,14 157:18 158:13 158:25 182:12 182:15 183:4 183:21 184:4,5 184:6 190:10 190:12 191:13 191:14 205:17 205:22 206:4,7 207:17,22 208:7,10,12,19 208:21,24 Dubois' 15:1 due 34:7 65:22 67:7 72:6 166:1 176:23	176:24,25 177:6 duly 80:4 DUNN 2:4,8 duties 193:6 duty 38:6,15 39:22 DVD 15:18 dynamic 60:15 <hr/> E <hr/> E 2:1,1,1,1 e-mail 6:22 79:12 E-S-T-R-A-D-A 78:20 earlier 5:13 17:17 36:14 63:13 73:18 99:6 121:7 127:3 161:11 167:25 175:20 201:5 202:25 early 31:25 39:12 easier 16:9 east 93:25 100:1 110:10 112:8 112:22 131:6 EBID 19:10,14 20:2,12,15,17 20:20 22:25 23:3,6,20,24 24:5 26:2 28:7 29:2,12,16 30:2,6 31:4 33:8 42:6 54:20 60:4 65:14,14 66:19 67:19 71:6 114:2 134:8 135:16,18 136:1,11,18,24 139:1,15 170:2 170:10,14 172:12,13,24 173:15 174:3,8
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

175:16 182:23 183:11,13,16 187:17 188:2 189:1 193:4 195:11 198:19 199:8,12 200:7 EBID's 42:8 43:15 67:5 72:24 172:10 187:15 economies 58:4 economist 36:2 economy 47:14 47:15 educational 81:1 effect 24:9 26:13 26:20 28:21,22 34:20 53:4 62:14 134:15 135:2,2 148:3 181:11 effected 57:7 effective 27:18 61:4 effectively 32:9 effects 57:19 59:8 62:20 64:11 effectuate 37:20 45:13 efficiencies 159:14 166:23 167:1,11,11,23 efficiency 10:4 128:6 167:8,9 170:8 172:16 efficient 9:22,25 effluent 66:20 67:1,3,4,9,17 67:18,21 145:16 effort 41:5 61:25 62:1 efforts 50:6 either 6:24 25:14 34:15 42:20 70:16	72:5 129:16 146:12 174:19 El 32:4 35:3,21 43:16 57:10 58:10,13 63:12 66:18 90:19,20 114:17,18,21 114:24 116:19 117:9 123:20 125:7 126:7 143:15,16 144:1 145:13 145:15,18,23 146:1,11,15 187:24 196:5 elements 18:13 18:25 Elephant 30:10 30:13,18 32:6 32:7 38:23 40:5 42:5 47:3 47:5 50:21 51:2 52:23 56:10 61:13 62:2 86:3 90:15 91:13,15 91:18 92:14,16 92:17,19 93:4 93:8,23 94:11 94:16,18 95:12 95:18,19 96:6 96:9,23 97:3 99:8 101:3 114:1 134:11 152:2,6 154:14 156:15,17 157:20,21 159:25 160:17 161:12,15 162:9,24 163:1 163:22 164:7,9 164:15 177:2 177:16 178:9 178:14,19 179:7 180:7,8 181:17 183:24 184:8,14,18,21	185:4,13 204:10 206:14 elevated 126:18 elevation 126:11 126:12,16 128:24 160:20 160:22,23 161:3,4,5,6 202:14 embrace 50:15 emphasis 81:16 employ 210:12 employed 80:13 employee 210:10 employees 100:5 101:1 employment 81:25 encourage 128:6 encouraged 56:19,23,25 end-of-the-sea... 199:16 end-of-the-year 198:23 200:17 end-of-year 200:21 endangered 82:25 83:18 ends 71:10 114:17 engineer 19:17 25:11 33:8,9 43:15,17 62:3 65:8 84:13 174:8,10 201:25 203:15 engineering 24:21 81:3,10 81:17 82:17 158:6 202:5,8 202:10 203:18 203:24 204:12 204:17 Engineers 194:17 enjoin 45:22	enjoyed 49:21 enlisted 51:11 ensure 53:12 54:8 63:7 136:25 193:9 196:19 ensuring 62:24 69:11 84:2 entail 83:25 84:19 enter 5:16 48:13 142:23 entered 143:20 enters 89:20 147:14 entire 47:11,15 61:10 65:13 135:18 137:15 173:9 182:25 183:3 201:15 208:3,17 entirely 51:9 entirety 106:8 108:5 118:9 151:1 entities 67:4 85:19 97:11 147:15 193:3 entitle 148:5 entitled 22:9 23:25 50:25 52:13,15 55:6 70:16,22 71:2 entitlement 19:7 24:1 entitlements 22:25 23:21 entitling 139:16 entity 139:15 143:10,12,15 143:15,23 146:11 148:25 149:4 150:11 150:14 entry 38:21 EP 19:11 20:3 26:2 28:7 29:2	29:12 30:19 31:5 33:9 35:24 43:16 54:18,22 55:14 55:15 65:11,12 65:22 67:8,10 68:22 70:24 71:1,7,14 72:25 144:6,17 170:2 189:1 EP1 114:21 119:10 120:7 134:21 136:24 137:8,9,12 138:1 139:2 143:18 144:1 145:13,16 146:2,3,4 170:10,14 172:17,22 174:4,10 182:23 187:14 187:20,23 193:4 195:11 197:19 198:6 198:14,16,17 199:5 200:7 EP1's 145:14 146:6 187:21 196:4 198:25 equal 52:15,23 53:24 54:5,9 54:17 59:6 71:11 equation 20:2 20:14 168:11 168:18 169:10 169:11 170:1 170:14,15,24 170:25 171:2 171:13,20,22 171:23 172:2,8 172:19,23 173:13,14 183:10 200:3 equilibrium 75:20,24
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

equitable 49:24 50:10 61:19 68:3,4,7 72:19	109:19 110:23 114:10 115:5 116:1 120:11 120:19 124:19 125:21 128:9 129:7 133:11 140:20,24 141:16 142:17 149:24 153:1 159:6 170:6 176:19 181:9 182:16,18 190:15 206:7 207:9	27:25 28:5,14 31:22 32:17,23 38:13,15 39:1 41:11 43:17 44:8,12 50:1,4 51:7,9 52:16 52:21 54:15 56:3 57:7 58:3 59:17,20 60:14 68:10 142:11 155:10	45:23 exhibit 8:4 10:21 15:9,16 15:22,23,25 18:20,20 57:2 62:10 86:20 87:5,6,7,12,13 87:13,15,15,16 87:17,17,18,21 87:21,21,22,23 88:11 89:9 102:25 133:23 134:18 135:11 137:4,5 138:16 141:15 144:3 186:10 192:19 201:22	61:8 66:14 205:16,19 expertise 51:16 experts 19:17 25:9 44:23 55:7 61:14 74:10 Expiration 210:20 explain 22:20 24:16 30:11 33:10 34:23 43:11 51:14 52:20 54:3,25 55:8 56:24 62:23 63:5 72:10 75:8 89:25 98:17 103:3,20 105:25 107:20 109:6,7 112:16 119:17 129:7 129:14 130:18 143:13 159:7 160:11 161:21 164:24,25 166:18 167:22 168:14,15 170:7,23,24 172:3,15 173:2 173:3 176:20 182:13,18 195:1
era 47:11 error 188:12 errors 33:14 188:12 196:18 essence 26:12 67:11 essentially 67:17 70:8,20 82:3 89:25 143:5 Esslinger 15:10 30:9,23 31:21 43:19 establish 38:11 established 38:4 38:8 39:18 55:8 73:23 establishes 52:9 56:8 establishing 43:2 51:5 Estevan 51:11 estimate 167:5 173:11 183:2 198:5 estimated 164:21 173:3 175:15 182:1 182:10 189:14 189:22 191:16 191:17 estimates 170:9 Estrada-Lopez 4:7 34:20 43:4 76:24 77:11,14 77:21 78:1,7 78:19,22 79:19 80:3,7 86:9 87:1,3 88:12 93:17 95:24 98:14 99:20 102:6,25 107:17 108:23	Estrada-Lope... 86:17 evaluate 61:14 61:16 209:5 evaporated 177:1,5 evaporating 166:6 evaporation 81:22 162:22 165:12,24,25 166:1 176:24 177:9,12 178:2 178:14,25 179:18 180:15 180:20 202:16 204:9,13 205:1 205:7,11,12 206:9,15,19,21 206:24 207:3 208:3 evaporative 163:13,21 166:13 evapotranspir... 81:23 evening 6:22 209:9 event 30:8 eventually 118:25 131:17 evidence 9:4,7 17:18 23:13	evolution 41:22 evolve 43:23 evolved 41:14 exact 63:18 exactly 10:5 14:5 22:22 64:22 142:8 166:7 exaggeration 47:12 examination 4:8 9:22 80:5 208:17 examined 5:13 example 21:8 31:25 52:5 56:11 58:17 60:2,9 66:19 exception 5:12 excess 55:11,16 exchange 7:10 177:3 178:18 194:7 exchanged 10:22 excuse 21:11 87:16 142:6 170:23 182:12 execute 185:20 187:10 189:23 executing 153:13 exercise 29:23	existed 22:10 23:6,7 existence 40:9 exists 21:16 expanded 90:11 Expanding 89:24 expected 159:14 experience 155:4 expert 33:4,6,7,9 35:19 36:2,3 38:16,24 44:5 45:7 51:16	195:1 explained 49:20 72:9 73:12 99:6 explaining 53:21 Express 9:17 expressed 30:12 extension 66:25 110:14 112:9 119:2 121:19 197:15,17,21 197:24 198:1,4 198:13,22 199:6 extent 35:13

39:24 40:1 extra 22:1 74:3 extraneous 13:19 extraordinary 53:7 150:8 168:3,4,8 172:8	factual 17:23 23:13 28:3 43:2 failed 37:17 86:15,23 fails 61:2 fair 10:15 40:21 47:6 48:5,24 49:2,7,10,22 fairness 46:25 47:1 fall 38:10 41:11 43:1,18 44:5 44:18 familiar 52:18 53:18 85:7 124:12 158:16 158:20 183:22 184:6,12 familiarity 85:10 families 47:4,22 48:3 far 6:5 40:11 90:6 92:3 148:14 farm 48:3 126:24,25 farmers 31:4 35:15 41:18,19 47:4,22 48:1,6 60:9 62:12 67:10 69:21,25 73:13 75:7 85:17 130:1 132:7 134:11 151:22,23 152:14 187:17 187:23 farmers' 35:23 farming 47:16 47:16 58:2 farmland 126:13 farmlands 131:23 farms 101:25 126:19 151:2	151:10 fault 73:22 faulty 33:19 favor 76:7 Fe 2:14,19 feature 56:21 97:9 February 185:2 201:8 federal 9:17 44:4 85:18 89:23 134:12 FedExing 10:8 feed 127:9 feet 64:17 129:19 Ferguson 45:15 field 195:25 196:2,3 fields 48:7 90:5 104:10 105:22 fifth 120:13 figure 23:22 69:23 72:21 76:1 file 16:5 filed 13:13,14,19 48:20 files 14:7 fill 17:22 23:13 final 34:4 153:22 175:11,14 179:6 195:6,9 195:13,16,22 195:24 196:22 197:6,7,11,16 198:7,25 199:15 200:5 200:20,25 finalize 195:5 197:3 finalized 177:6 185:2 197:5 finally 9:9 35:8 44:5 48:12 70:2 find 76:7	fine 80:9 106:23 205:25 finish 70:2 98:8 177:8 finished 82:3 Firm 210:23 first 9:14 12:22 14:24 21:13 23:20 27:10 34:5 35:8 38:2 40:18 42:21 46:20 47:9,10 50:11,19 51:20 56:12 65:12 68:11 70:11 74:11 76:17 78:25 80:4 82:9,15 89:12 91:18 109:2 131:1 154:6 155:2 159:9 161:9 169:18 176:7 209:10 firsthand 47:7 fit 17:12 fits 171:21,22,24 five 7:11 8:5,14 8:16,21,22,24 50:4 102:3 132:22 133:15 flat 70:8 flaws 61:7 flesh 17:24 23:15 flexibility 60:16 flood 94:20 99:11 floodwaters 124:3 Floor 2:23 flow 24:9 101:5 141:24 148:16 154:19 155:6 155:12 156:10 158:10 175:20 187:18,25 188:19	flowing 55:19 flows 19:3,4,12 19:13,15,21,22 20:1 23:2,2 29:7,9,19 37:9 38:19 39:23 40:4 44:9,15 45:3,10 51:1 57:7 127:14,17 127:19,20 129:3 130:12 132:5,12 159:15 191:24 fly 96:23 flyover 15:17,17 15:19 91:22 96:13 103:20 105:25 112:15 122:23 130:20 focus 21:3 23:19 34:8 35:25 81:11,17 82:24 focused 35:10 50:12 85:16 203:19 focuses 18:1 26:9 folder 8:3 folks 5:15 follow 46:21 131:5,7,13 followed 53:13 following 131:11 153:25 181:20 181:25 184:25 195:8 200:16 200:19,24 203:16 follows 40:12 50:23 80:4 forced 64:18 69:21,24 75:8 foregoing 210:6 foreground 94:4 97:8 116:20 form 60:15 67:2 79:13 186:12
F				
Fabens 148:18 face 92:19 93:3 94:3 103:6 facilities 31:2,7 41:16 85:7 106:20 111:4 111:10 113:17 113:20 115:11 120:4 125:9,14 132:15,17 134:13 147:15 150:24 151:1,7 151:16 facility 92:5,14 93:6 94:21 95:2,17 108:4 108:4 110:6 165:16,19 facing 96:21 98:20 103:6 106:6 116:16 116:23 117:22 118:2 123:1,19 130:25 fact 19:20 22:8 26:24 27:6 31:7 33:20 34:2 35:17 37:7 53:1,3 55:15 56:5,19 57:10 59:21 60:1 63:12 66:12 69:1 191:7 factor 172:6,7 facts 13:14,15 210:5				

186:14,17,21	203:12	190:3 194:14	41:24 43:4	95:23 96:11,23
187:8 188:1,4	fuels 22:2	gains 159:17	44:19,19 47:20	97:12,14 98:4
formed 30:19	fulfilled 38:15	191:20,22	66:19 76:7	103:19 104:2,8
53:1	full 10:2,10 11:2	gap 12:14 17:11	78:13 155:21	105:24 106:3
former 51:12	11:3,12,24	66:2,2,10,12	206:23	106:17,21
forms 52:8 56:6	12:5 54:10	66:16 67:16	given 59:9,10	112:4,14,19,20
67:6,13,15	60:6 68:24	gaps 17:23	70:16 210:16	113:4 115:15
97:4	69:19 70:12,22	23:13	gives 110:5	116:20 117:5
formula 169:12	70:25 71:4,5,7	GARZA 210:3	180:8,24 183:7	117:15,22
171:23	71:8 72:5 84:3	210:19	giving 71:10	118:1,2 119:1
Fort 90:22,23	109:6 135:2,17	gate 112:3	glean 25:7	122:1,3,22
forth 115:12	137:14	188:17 194:7	go 5:24 9:15	123:8 130:2,17
134:10 193:16	full-time 82:9,15	gates 97:14	12:17,17 13:1	131:5,5,7,12
forward 15:11	fully 44:8 60:5	103:8,11,18	15:6,11,11,20	131:15,16
112:25 207:7	196:24	104:6 106:10	19:18,19,20	135:5 139:2
found 24:3	function 30:24	106:11,12	20:23 21:20	140:10 142:1
50:22 53:19	94:18 108:3	107:25 108:7	41:17 48:16	144:25 154:4
141:14 155:10	123:21 144:15	111:25 117:5	83:16,16 90:22	155:14 156:23
foundation	145:11	121:11,22	104:4 105:20	158:21 159:14
17:19 39:17	functions 94:16	123:13	109:6 118:3,7	166:5 168:10
86:22 89:1	99:4 110:6	GDP 47:17	118:14 122:2,3	183:2 186:9
154:21 155:21	137:23	gears 150:18	130:12 131:17	192:18 195:7
156:19,20	fundamental	general 2:18	141:13 160:15	198:11 200:23
158:12 184:1,3	18:6 40:2	6:11,15 46:17	176:18 177:8	201:14,21
205:15	fundamentally	46:19,22 49:13	180:12 190:8	205:15 207:5,6
foundational	67:21	49:19,20 80:17	191:14 193:23	207:14 208:17
155:17	funnel 208:24	89:13 91:15	198:13 200:24	208:18,21,24
foundationally	further 13:16,25	133:1 158:16	goes 10:23 19:11	209:2
17:15	19:14 38:24	159:8 176:7	57:21 66:23	golden 125:3
four 51:19 68:21	86:21 92:4	generally 8:25	68:11 90:16	good 6:3,8,16
111:21 121:11	106:21,23	59:2,11 130:11	93:10 102:19	46:24 47:9
fourth 55:24	131:17 208:8	177:20 204:7	122:16 180:12	76:16 80:7
frame 8:2	210:9	generate 93:9	194:20 203:21	140:9 206:2
framed 40:6	future 48:14	generation 95:2	204:10	208:9
Frank 52:19	165:21	generations	going 5:8,14,15	gotten 68:25
Franklin 119:1		47:12 48:2	8:2 9:10 10:18	government
121:18	G	geographic	11:11,16 12:21	85:18 134:12
frankly 9:20	gage 27:1 90:24	160:25	13:4 14:23	grade 126:12,16
13:1 24:17	101:2,4 115:6	getting 11:12	15:14,19 17:4	129:19
26:3 35:5	177:18 190:6	36:14 77:13	17:8,9 18:14	graduate 81:12
frequently	193:22	78:2 85:15	23:13 25:6	graduated 82:7
174:12 176:2	gages 113:17	153:18 185:22	26:1 35:22	Grande 18:4
front 62:8 86:8	115:10,18	186:6 187:17	36:11 41:11	32:8,18 37:9
86:10 89:9	163:6 188:15	187:23	44:5 46:6	37:10,12,19,22
124:20 125:22	202:13	gigabyte 16:4	73:11 76:19	38:12 39:4
135:13	gaging 90:24	give 6:11 13:9	78:22 86:19,24	40:5 41:25
FTP 179:13	99:15 100:2,24	16:17 17:4	91:21 92:12,14	43:2 44:7,14

45:2,3,11,25	186:13 192:22	41:3 43:21	64:22 142:8	61:6 62:21
46:8 47:2,23	197:22,25	44:2,11,17,25	happening 69:2	63:3,17 65:8
48:2,11 52:19	201:13 202:1	45:9,9 56:2,4,6	75:22	70:13 71:3
63:5,7 65:3	grandfathered	56:10,13,18,21	happens 63:12	140:19
80:19 83:4,12	57:14	56:23,25 57:6	happy 6:14 16:2	heard 16:22
83:20 84:2,4	graph 171:1,4	57:8,11,14,19	hard 9:12 71:20	31:12 37:1,1
84:21,23 85:3	graphic 19:12	57:24 58:1,5,8	108:9	51:21 54:7
85:8,11,14,16	21:5 168:17,18	58:19 59:9	harm 34:1,3	56:22 62:19
85:20,24,25	grappled 29:24	62:7,12,13,15	harmed 49:3	73:18 141:22
86:7 89:13,15	29:25	62:20 63:6,8	68:11 70:10	156:20 157:3
89:21,22 90:3	gravamen 7:2	64:7,8,13,16	harping 22:7	hearing 1:11
90:13,14,24	gravity 101:24	64:19 65:24	hashed 17:2	5:15 10:3
91:7 92:22	127:9 128:25	68:1,14,15	Haskell 66:20	14:20 36:14
93:25 94:4,7	130:7 192:5	69:10,17,22,23	67:9	47:21 210:8,11
94:20,24 97:9	gravity-delive...	70:1 72:9,13	hat 100:17	hearings 5:7
97:11 98:4,6	126:17	75:8,17,21,23	hatching 90:6,7	11:23
98:23 99:8,10	gray 69:8 120:15	76:1 192:2,5,8	91:4 102:17	heart 18:10
102:1,2,8	greater 28:11	196:4	109:15,16	61:19
104:8,12,15,19	33:2 119:23	groundwork	114:23 125:4	Heather 207:24
105:7 106:5,8	164:5 165:22	86:4	hbalderas@n...	210:3,19
106:11,14,18	166:2 168:6	group 82:12,18	2:20	heavily 70:1
106:20 107:2,4	190:2 198:17	82:22 84:14	he'll 19:20 63:1	Hector 2:17 6:11
107:14 108:7	200:4,13 208:5	85:22	head 101:23	held 1:12 147:5
112:1 113:2,5	green 58:11 66:3	growing 75:5	103:12	helicopter 111:2
114:13,19	72:23 73:7	grown 25:18	headed 92:13	111:9 116:6
116:19,25	90:6 91:4	58:4	heading 108:10	120:22,23
117:2,4,6	102:10,16	guarantee 148:6	108:12 116:21	help 51:11 107:7
118:1,10,11,13	105:10,20	guaranteed	119:1,3,4,4	127:4 130:1,4
118:20 119:5	109:1,2,14	65:12	121:18 168:23	131:25 132:6
119:19,24	125:4 129:22	guess 8:1 10:23	169:15 171:8	helpful 50:17
120:12 121:4	grew 85:13	15:23 16:18	197:21	helps 62:2 69:14
121:11,13,14	ground 5:6	73:20 104:1	headings 127:8	hereto 210:6
121:22,24	116:15	guidance 76:7	130:9 137:1	Heron 162:1
122:16 123:2	groundwater	guide 27:1 50:19	150:21 171:10	high 64:16 68:20
124:2,9 125:8	18:3,4 20:11	guidelines 42:24	171:12,15	highest 81:13
127:7,10 129:3	20:20 21:25	Gulf 89:20	hear 22:18,19	highlighted
130:5,9,13,24	22:12 24:8		26:1 31:20	131:10 176:19
131:3 133:4,8	25:16 26:9,10	H	33:12,16 35:22	176:21
138:19 139:3	26:12,13,16,20	H 2:17	36:9 40:17,19	historian 22:18
139:17,21,25	26:21,25 28:17	hair 68:19	41:8,23 43:6,9	38:16 44:6
143:25 152:1,2	28:19,21 29:8	half 54:21	43:12 44:5,23	51:24
153:10,17	29:10,14,17,19	hand 61:8 78:11	46:3 47:25	historians 38:10
154:2,3,11	33:17 34:7,17	210:16	48:8 49:23	historic 30:14
156:22 161:17	34:18,19,22	handwriting	50:1 51:24	65:19 171:24
162:2,13,15	35:2,3 36:1	138:10	53:11 55:3,15	172:8 183:17
164:4,14 165:6	37:8,18 38:22	happen 104:17	56:16,20 57:10	historical 13:22
179:4,22	39:7,15,24	happened 56:24	57:25 60:9	14:5,11 31:19

38:9 52:21	147:5,18,25	138:17 144:3	importance 44:9	incorporates
155:25 172:12	148:3,5,10,15	145:1 147:23	132:2	26:12,21 57:18
historically 28:8	148:20,21	148:9 186:11	important 31:19	59:8 62:19
31:19 59:13	149:12,13	192:19 201:23	47:22,24 48:12	increase 178:20
150:12	Hueco 35:2	ignore 34:15	53:5 55:10	181:14 199:10
history 41:1	huge 37:10	ignored 13:24	90:24 141:17	199:11
44:7 48:4	hundred 21:9,12	14:13 63:14	importantly	increased 20:5,8
hitting 130:8,9	21:18 72:16	65:2	27:18 67:23	20:10 21:24
hold 73:24 94:12	75:3	ignores 25:21	Improvement	39:16 55:13
119:24 166:1,9	hundreds 64:16	illustrate 18:21	43:16 114:22	69:23 70:5
hole 20:17	131:24 132:11	20:7 69:14	in-person 11:20	181:14
homesteading	135:24	72:2	inactions 18:2	increasing 24:10
47:11	Hutchison 33:6	illustrated 55:13	34:9	index 4:1 24:2
Honor 5:18 6:3	33:12,23 35:5	66:3	inappropriate	51:1
6:8,16 7:4,20	hydrologic	illustrates 58:7	27:23	indicate 58:24
8:3,7,9,11 9:24	24:12 25:5	illustration	inception 28:25	91:14 95:25
11:2,7,10,19	27:2 42:14	18:15,17,19,23	30:16	102:7 105:15
11:22 14:3,4	82:23 85:4,23	illustrative	include 20:8	108:23 114:10
15:25 16:11,20	95:8 153:22	18:16	24:19 32:2	120:10 124:22
36:10,23 37:6	163:5 174:19	imagine 11:20	43:14 126:24	128:15 141:9
46:1,4,19,24	188:15 202:12	71:21	163:7 202:14	indicated 14:20
49:11,16 76:21	203:22	impact 29:19	204:13	20:24 21:22
77:7,15 78:4	hydrologically...	33:16 34:7	included 44:14	27:15 29:9
79:21,24 80:2	39:24	35:4 36:18	83:13,17	84:15 90:1,5,7
88:5,19 89:7	hydrologist	39:7 46:9	131:20 136:9	91:3 92:23
110:17,22	19:17 33:8,9	47:18 48:8	137:22 141:22	96:15 104:1
115:24 140:13	hydrology 33:6	58:16,18 60:20	195:16,22,23	114:22 117:3
141:21 142:15	hyphen 78:20	61:17 63:17	198:6,24	169:9 190:15
149:18 155:2		69:4,14 72:15	includes 19:2	indicates 92:11
155:15 156:21	I	75:6 174:19	26:20,25 38:18	125:5 128:23
157:6 158:13	IBWC 119:13	181:18	61:12 68:14	indicating 92:2
205:14,19	123:25 153:20	impacted 44:3	203:21	102:17 118:18
206:6 207:5,22	169:7,18,19,21	impacting 37:8	including 7:17	129:22,23
208:8,13 209:4	169:22 185:25	impacts 34:25	23:2 25:1 29:7	indication 107:1
HONORABLE	187:4 188:2,5	39:3,6 41:4	40:13 41:2	110:5 113:18
1:11	193:18 195:13	43:20 45:10	42:13 44:1	156:8
honors 81:12,13	IBWC's 43:11	46:7 55:11	55:12 57:23	individual
hopefully 17:13	188:5 194:18	64:21	62:19 65:24	135:22
44:23	idea 27:20 56:1	implement	85:17 202:16	indulgence 6:10
housed 100:4	70:5 207:8	144:20	203:22	industrial 58:10
Houston 210:24	identified 12:13	implementation	inconsistent	143:2 146:24
How's 177:8	134:18 135:6	83:11 84:3	39:25 57:25	147:1
Hudspeth 32:4	135:11 137:4	144:23	60:13	inequity 73:19
55:4,5,6,17,20	138:16 141:16	implementing	incorporate	inflow 90:3
91:2,3,5	141:23 144:3	145:3 192:25	26:15	159:25 166:2
124:12,23,25	identify 134:18	implications	incorporated	177:3,16,22
125:2,4,5,7,10	135:13 137:5	12:7 76:4	50:20 53:20	178:4,15

179:21 181:17 184:14,17 204:24 inflows 44:15 176:23 183:24 185:3,13 204:20 205:5 information 137:17,19 138:13 162:25 164:18 169:18 169:24 173:10 179:2 182:5,7 187:20 190:5,7 193:14,21 194:1,1,8,12 202:3 203:21 204:16 informed 179:5 infrastructures 58:18 inherent 52:4 initial 28:5 44:16 94:14 153:7 154:5 159:21 164:10 164:12 166:3 166:19 169:16 169:21 173:16 173:18,19,22 175:3,18 181:24 initially 19:11 61:14 91:25 initiated 44:17 injured 71:21 injury 35:10,20 35:25 36:3 44:4 45:25 inlet 123:13 inputs 176:13 inset 89:14 instance 41:15 143:1 instant 79:13 instantaneous 194:14	instantaneously 100:8 instrumentation 100:3,7,21,21 101:6 instruments 101:9 insufficient 35:16 integral 48:11 integrated 61:10 intend 12:23 40:7 intended 23:10 24:5,12 27:3 38:17 43:13 52:6,22 60:6 101:18,22 intending 12:12 intends 13:5 intent 141:1 intention 88:13 interaction 51:10 interception 18:3 intercepts 24:9 29:8 interconnected 38:23 interest 149:20 209:7 interested 10:6 210:13 interesting 36:16 37:3 71:12 106:22 interestingly 25:23 interests 44:4 46:10 interfered 39:10 43:21 interference 37:18 38:7 43:24 interferes 40:1	interfering 37:11 45:4,5 intern 82:11 85:21 International 43:10 119:12 120:16 123:22 124:2,5,9 interrupt 86:15 interruption 89:4 interstate 51:13 51:17 62:23,25 intervened 37:17 38:5 intervenor 5:5 introduce 17:6 17:19 introduced 31:22 34:13 Investigate 24:19 invites 169:22 involved 42:1,3 56:15 involvement 74:7 involving 36:17 ironically 33:16 irrelevant 15:2 irreparable 44:4 45:24 irrigated 105:1 108:19 109:8 109:10 112:11 113:9,12 119:8 124:25 125:5 129:1 irrigating 130:2 irrigation 30:11 30:18 42:6 43:13,23,25 44:16 52:7 53:10 56:3,14 58:13 60:11 61:19 66:22 69:7,12 85:17	89:23 90:5 95:6,7,13,16 95:22 101:7,8 101:20 113:16 114:1 115:10 120:5 125:15 127:12,18,25 131:18 132:7 134:11 142:25 142:25 143:4 143:20 144:7 144:18 145:23 146:13,19,21 147:1 150:9 151:5,8,10,20 151:21 152:16 152:17 153:8 153:10,14,18 153:19 154:7 154:20 155:7 155:13 156:10 156:16 159:18 167:13 170:15 173:8,20 174:20 175:6 180:17,17 185:18,24 186:3 187:4 190:5,19,24 192:14 193:8 194:19 200:11 ISC 62:24 issue 6:23 7:5 28:12 40:2 41:9 60:19 61:21 64:23 71:2 issued 17:16 25:16 issues 17:24 27:21,22 28:9 40:12 42:14 46:6 50:4 63:3 131:22 209:6 it'd 16:7 it'll 17:12,21,24 36:18	items 160:15 <hr/> J <hr/> J 3:2 James 3:2 6:4 37:5 james.dubois... 3:4 January 159:22 164:16 166:4 175:19 185:1 Jeff 6:9 Jeffrey 2:13 Jim 7:20 14:4 77:19 JIR 24:19 job 82:9,15,16 134:2,2,24 136:3 137:19 137:23 145:7 jobs 47:17 John 65:8 joined 85:21 joint 13:13 14:22 15:3,5 15:16,23 24:19 57:2 87:13,13 87:14,15,16 Juan 161:24 Juan-Chama 83:2 84:25 94:23 161:17 161:20,22 162:4,7,9,12 162:20,20 163:1,13 165:3 176:25 178:12 178:16,20 179:19 180:6 202:18,21 203:4,19,20 204:14 Juarez 117:14 judge 5:1 6:2,7 6:14,19 7:9,16 8:12 10:16 11:9,11,25
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

12:17 13:8 14:15,19 16:6 16:9,12 36:11 46:2,16,22 49:13 76:14,22 76:25 77:3,5,8 77:12,16 78:2 78:10,16,21 79:3,7,10,22 79:25 86:14 88:7,15,17,22 88:24 115:3,17 115:22 140:8 140:15,18,22 141:19 142:3 142:10,13 149:8,11,16 154:24 155:20 156:23 157:9 157:12,15 158:21 182:12 182:17 183:5 183:12,19 184:2,5 190:9 190:13 191:3 191:11 205:20 205:23 207:14 207:20,24 208:9,14 209:1 209:8 judgment 17:15 17:22 18:1 21:2 23:12,14 24:8 25:2,22 27:9,24 30:1,4 33:21 38:22 39:10,19,19 50:16 69:25 July 186:19 junction 48:4 June 82:2 Justice 3:2 5:23 5:23 justices 36:16 jwechsler@m... 2:15	K	28:18,19 29:3 29:3 31:23 37:12 102:21 114:16 120:16 171:23 knows 110:19	Las 48:9,9 67:3 85:13 146:18 146:21,25 lasted 59:24 late 114:8 185:1 185:5 lately 168:5 lateral 97:24 98:2,3 103:17 104:9 110:11 112:9 126:10 126:20 laterals 112:23 115:20 125:18 126:12,15,23 126:25 128:25 130:10 132:13 135:25 137:11 150:21 law 2:23 17:17 39:18 45:23 Lawrence 2:9 lawyers 75:1 lay 86:4 89:1 184:2 layout 86:6 lead 76:19 84:13 leads 34:4 40:15 166:14 learn 68:22 69:19 71:24 learned 12:11 Leasburg 105:11,16,21 105:23 106:4,6 106:11,12,19 106:20 107:10 108:10,11,12 108:15,17,19 109:12 110:16 113:21,24 leaving 83:17 131:3 left 20:2,14 22:4 26:17 29:13 58:9 65:14 93:24 94:9	100:17 103:14 104:9 110:4,8 116:7 117:6,9 121:3 123:3 129:9 left-hand 92:1 97:13,25 99:25 100:14 103:8 103:10,24 106:9 108:2 110:3 111:20 112:22 113:5 116:14 117:3 123:15 126:5,6 128:12 131:2 131:10 187:4 legal 28:3 31:10 136:4 legally 179:24 length 74:14 lesser 28:11 128:5 let's 21:6 22:4 61:24 63:10 68:4 72:17 76:17,18 81:25 117:23 133:20 170:21 180:12 185:8 letters 52:18,21 156:5 level 69:16 levels 58:18 64:13,16 75:17 75:21,23 76:2 lighter 92:11 likeness 118:17 limit 25:13,14 25:19 50:3 55:2 62:13 70:4 198:17 199:9 200:11 200:13 limited 46:6 59:7 limiting 55:8 limits 64:6
	L	L 2:3 210:3,19 L-O-P-E-Z 78:20 lab 48:2 labeled 128:13 136:15 lack 64:14 66:17 67:18 Lake 97:2,7 98:22 land 53:24 92:16 97:4 109:14,15 129:14 135:20 135:22 137:17 137:18 161:1 lands 19:10 23:3 23:6 50:9 53:10 57:17,18 59:25 74:16 90:18 92:10 102:17 113:12 114:21,22 115:16 124:25 124:25 125:5 129:18 168:22 168:25 169:4 169:14 171:8 171:11 language 149:22 169:1 large 9:9 59:23 92:16 99:9 101:17 107:24 108:6 117:11 130:16 larger 19:23 89:24 98:21 114:23 121:19 largest 48:10		

line 31:6,8 32:11 47:7 58:11 65:18 66:5,5 68:18 70:23 71:13,24 72:22 73:11 75:19 90:20 92:23 97:21 113:19 115:12 125:10 169:12 171:16	109:11 114:12 114:15 120:11 121:14 129:23 129:24 162:19 locations 115:11 130:6 193:23 194:4 logging 131:23 logic 32:5 long 40:25 82:19 83:22 145:21 145:21 148:20 153:16 185:12 long-term 37:11 39:16 40:1 43:22 44:3 45:5,25 64:21 76:4 longer 54:16 67:11 151:18 longstanding 58:25 look 15:20 20:4 57:4 65:18 89:14 121:14 122:12 141:13 looked 63:13 67:14 141:13 looking 10:6 52:25 54:14 57:1 58:7 60:2 62:8 64:12 68:11,13 72:21 73:7 74:12 81:21 85:16 93:24 94:2 100:12 103:6 104:3 106:2 107:23 110:1 112:18 115:25 116:24 117:19 121:3 122:8 130:24 141:8 158:2 160:7 166:23 168:5 196:17 looks 68:19	100:13 171:1 Lopez 25:10 51:12,25 54:2 54:25 86:16 loss 75:2,4,5 165:17 192:3 losses 23:7 74:10 74:23 159:17 162:22 163:13 163:21 188:23 191:20,23 lost 27:11 lot 20:19 26:1 88:12 107:11 115:12 165:19 lots 131:14 low 75:20 92:9 165:17 lower 48:2,11 63:4,6 93:6 97:25 100:2,17 107:14 109:10 110:15 122:12 192:6,7 LR 148:23	maintain 137:13 maintained 101:2 150:25 maintaining 150:23 151:19 152:1 maintains 152:5 maintenance 30:22 66:17 75:10 107:8,14 127:5 150:19 151:4,7,16 152:9 202:19 maker 11:24 making 32:5,7 47:3 84:22 136:18 153:7 153:11 154:18 155:5,12 156:9 158:10 164:17 166:3 172:17 176:8 182:8 187:10 199:23 Mall 2:4 manage 41:19 121:16 190:20 management 40:22 42:11 152:10,20 manager 43:7 83:8,22,25 85:24 156:25 manages 189:17 manual 192:17 192:21,23 193:2,5,6,12 193:16 194:2,9 196:20,24,25 map 89:25 90:1 90:6,21 91:17 95:25 96:3 102:6,7,10,14 105:11 109:5,6 114:23 maps 90:15 March 166:5 185:2 201:8	202:1 marina 93:4 marinas 92:17 mark 122:19 marked 86:8,9 93:17 95:21,24 98:13 99:19 102:6,25 105:5 105:19 107:16 108:22 109:19 114:10 120:10 120:19 124:19 124:19 125:21 128:9 129:6 133:11,23 145:1 147:22 148:13 153:1 159:5 167:21 167:21 170:6 176:19 181:9 186:10 192:19 194:25 201:22 201:23 market 95:11 markings 14:8 markups 14:12 14:13 mass 92:17 master 1:11 17:16 27:24 32:16 63:4 81:10 86:5 91:24 92:20 93:18 96:1,19 97:23 98:1,17 99:24 100:12 100:23 103:3 103:21 105:6 106:1 107:21 108:11,25 109:7,24 112:16 114:11 116:12 117:17 119:18 122:22 122:24 126:1,4 129:8,11 130:18 133:13
		M		
		M 2:1 M-I-C-H-E-L... 78:20 M&I 143:5,17 143:20 146:7 146:19,22,22 146:23 Machine 1:13 Madre 122:14 123:13 150:16 168:23 169:15 171:9 mail 10:8 mailing 12:6 main 82:24 103:15 106:12 106:19,20,24 107:10 108:10 108:17,19 122:14 148:18		

133:21 142:21 153:2 159:7 160:11 161:21 167:22 168:15 170:8,24 172:16 173:3 master's 25:21 81:2,6,15,16 81:19 82:4,7 85:15,19 matching 196:19 materially 45:4 materials 9:6,11 9:13 79:3 math 75:1 200:22 mathematical 169:12 mathematics 18:11 matter 1:11 29:21 39:18 42:21 75:2 80:17 81:19 176:7 matters 13:11 15:13 16:13 55:18 63:12,16 63:23 158:15 174:14 max 54:19 maximum 54:11 70:15,20 71:1 mean 7:21 9:6 10:21 11:14 13:20 15:15 18:6 65:17 83:9 128:17 146:23 154:5 157:4 166:25 166:25 167:2 191:3 meaning 29:24 47:22 55:17 57:23 74:19 83:10	meaningful 39:13 64:5 means 28:1,2 65:4,17 73:16 128:18 meant 182:17,18 measure 99:13 115:19 measured 127:15 128:3 160:19 161:5,6 163:3,5 178:1 178:2 measurement 100:6 101:1,5 101:9 180:21 190:3,4,6 measurements 100:8 measures 115:6 127:17 measuring 100:21 160:19 mechanism 50:20 53:21 60:24 meet 37:22 41:14 42:19 52:7 56:2,14 150:15 169:23 174:11,12 185:19 187:19 189:12 meeting 169:23 169:23 meetings 158:6 158:7,20 MELLOY 1:11 5:1 6:2,7,14,19 7:9,16 8:12 10:16 11:9,11 12:17 13:8 14:15,19 16:6 16:9,12 36:11 46:2,16,22 49:13 76:14,22 76:25 77:3,5,8	77:12,16 78:2 78:10,16,21 79:3,7,10,22 79:25 86:14 88:7,15,17,22 88:24 115:3,17 115:22 140:8 140:15,18,22 141:19 142:3 142:10,13 149:8,11,16 154:24 155:20 156:23 157:9 157:12,15 158:21 182:12 182:17 183:5 183:12,19 184:2,5 190:9 190:13 191:3 191:11 205:20 205:23 207:14 207:20,24 208:9,14 209:1 209:8 member 83:20 84:5,20 86:1 174:7 members 174:5 176:4 mention 26:15 63:14 71:5 140:23 mentioned 42:14 58:22 67:16 71:9 116:6 132:13 164:1 175:18 188:5 mentions 17:22 merely 26:17 41:10 Mesilla 34:19,22 45:1,1 105:14 105:19,20 109:4,9,10,13 109:13,16 110:2,13	111:25 112:6 112:11 113:10 113:10,12,21 113:25 114:17 115:8 126:10 128:19 129:21 196:5 messaging 79:13 met 151:5 method 57:15 57:16 58:23,25 167:15 205:24 methodologies 162:21 163:17 181:3,20 192:16 193:9 193:11 194:10 196:19,21 206:22,23 methodology 50:8 64:24 65:7 66:7 67:8 69:20 71:9,25 163:21 196:13 198:10 204:8 205:10 206:5 206:11 207:1,8 207:10 methods 60:11 167:5,14 183:10 205:18 206:8,12 Mexican 53:8 122:9 123:9 157:4,4 168:23 169:3,15 Mexico 1:6 2:12 2:14,18,19 5:4 6:9,23 7:18 8:1 10:5,13 12:21 13:5,6 16:17 18:2,4 19:8,13 20:13 21:15,19 22:11 23:10,21 23:22,25 24:3 24:8,10 25:6 25:10,14,17,19	25:21,23 26:4 26:11 27:5,23 29:17,18 30:5 31:6,16,23 32:3,6,11,16 32:21,23 33:11 33:14,17,19,24 33:25 34:2,3,7 34:8,12,14 35:1,4,5,9,12 35:14,16,20,25 37:8,12,17,23 38:6,14 39:2,3 39:12,21 40:6 41:4,7,24,25 42:4,5,17,22 43:12 44:2 45:2,8,17,22 45:24 48:1,5,6 48:10,13,22,23 49:1,3,6,9,24 50:10,25 51:11 52:13 53:1,4 53:16 54:13 55:7,22 57:11 57:18 58:2,14 58:22 59:12 61:9,24,24 62:3,7,13,14 62:16,22,25 63:19,24 64:1 64:2,4,17,19 64:20 65:1,8,9 65:17,25 66:9 66:9,16 67:2,4 67:8,17,19,22 67:23 68:2,3,5 68:12,16,25 69:15,21,24 70:3 71:19 72:8,18,18,19 72:23 73:2,12 73:13,16,21 74:9,10,19,23 74:24 75:4,5,7 75:7,17,18 76:2,5,9,11
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

79:20 81:5	42:8 47:14,15	180:14	208:3	mutual 58:5
85:13 87:8,11	51:8,24 70:6	miscellaneous	monthly 61:15	<hr/>
87:17,17,18,19	76:7 88:10	133:18 142:18	174:12 176:1	N
87:19,20,20,24	156:17 157:2	142:22 143:8	184:13,20	N 2:1
88:1 89:17,19	157:21 168:10	143:14,24	193:18 206:14	name 5:18 78:17
89:20 90:5,8	184:8,21	144:7 145:17	206:17	78:17 114:11
90:19 94:20,24	193:24	145:22 146:12	months 50:3	128:23
96:7 102:18,23	MICHAEL 1:11	146:17 147:2	166:2 208:5,6	Narrows 114:17
113:13,22	Michelle 4:7	missed 191:15	Moran 33:5	116:19
115:7 117:8,10	77:11,23 78:9	198:20	45:7	native 162:21
119:22 122:15	78:19 80:3,10	missing 135:19	morning 5:9 6:3	nature 28:3
123:15,23	80:12 89:8	135:22 137:16	6:8,16 13:20	32:19
124:7 132:25	93:16 98:12	141:16	36:25 43:4	near 68:25 89:20
134:11 136:24	107:16 115:25	Mississippi 37:4	46:24 51:20	98:24 100:11
139:15,19,23	128:7 129:5	misunderstan...	52:17 141:22	117:3 122:16
140:2,25 141:9	155:23 159:4	142:11	209:10,11	nearly 47:17,17
149:5,25,25	170:5 181:8	model 32:18,20	motion 27:11,12	necessarily
150:6,8,12	183:21 191:17	32:21 33:1,7	move 59:15	11:16 50:23
153:7,12,14	201:22	33:10,11,14,19	88:25 97:11	necessary 33:3
154:7,17,20	microphones	33:24 35:5	104:11,14	60:20,25 89:1
155:4,7,11,13	5:11	58:21 60:20,25	125:14 128:25	144:20
156:8,11 157:5	middle 83:4	61:2,3,5,9,10	130:1,4 132:1	necessity 26:19
157:8,11	183:1	162:14,14,15	141:1 164:24	need 6:20 16:13
159:19 161:18	mile 99:17	162:16,24	164:25	25:17 41:17
163:9,16 164:5	miles 96:8	163:3,8,9,12	moved 128:15	55:18 71:20
167:12,16,18	126:20,22,23	163:12,17,19	142:7 198:4	95:7 118:5
167:19,24	131:24 132:9	163:20 164:22	moves 112:25	126:17 127:7
168:1,9,13	132:11 135:24	178:16 179:2,9	132:7	159:9 168:1
169:6,17,19,24	135:24	179:11,14,15	moving 61:21	176:10 178:25
172:21 173:8	million 17:1,3	202:25 203:2,3	72:3 97:1	179:23,25
173:18 175:3	47:18 74:25	203:6,6,18	108:8,21 113:3	187:25 188:22
175:22 176:24	94:12	204:18	118:18 125:12	201:15 209:5
179:9,12	millions 75:12	modeled 58:14	127:9,12	needed 22:25
181:12,18	Miltenberger	modelers 73:12	multiple 58:14	62:12 95:6,13
182:22 185:4	22:18 24:16	modeling 32:24	71:3	101:20 119:21
185:18,22	25:3 27:14	33:5 50:6	multiplied 161:6	120:5 127:12
186:4,7 188:3	31:21 38:10	58:17 61:7	municipal 35:15	135:12 174:13
188:7 192:19	44:6	74:20,21	58:2,9 143:1,9	187:18 188:20
195:15 199:19	mind 23:19	models 45:9	146:24 147:1	189:12
199:22,24	155:15	Monday 8:17,18	municipalities	needs 41:14
200:4,6 203:11	mindful 16:21	monitor 62:5	20:11 47:4	42:13 95:10
204:4 207:13	mine 64:20	63:5 191:3	municipality	121:25 176:8
209:5	minimum	monitoring 64:9	117:11 144:21	181:4
Mexico's 6:12	165:11,13	75:18	mute 36:10	negotiated 23:18
7:23 22:7	166:13	MONTGOM...	77:19,21	23:18 56:16
25:13 29:14	minute 26:15	2:13	208:20	74:5
36:4 39:14	minutes 77:1	month 195:22	muted 5:11	negotiating

52:22	54:13 55:7,22	NM-2373	150:20 206:23	OCTOBER
negotiation 74:7	57:11,17 58:2	138:16	numbered 87:11	1:12
negotiations	58:14,22 59:11	NMSU 81:7,14	numbers 19:19	Oddly 48:20
24:22	61:9,24,24	81:15	22:14,15,17	odds 27:7
negotiators	62:3,6,13,14	non 162:20	47:20	offense 78:24
23:19 44:8	62:15,16,22,25	non-EBID 20:12	numerous 54:3	offer 29:15
neither 25:19	63:19,24 64:1	non-irrigation		offered 51:16
34:11	64:2,4,17,18	146:14	O	87:2
never 42:1,2,3	64:20,25 65:8	non-project	O 2:1	offers 51:5
48:3 68:25	65:9,16,24	147:15	object 12:9	office 2:18 5:21
76:3	66:8,9 67:2,4,8	normal 52:5	35:12 141:11	80:15,16 85:2
new 1:6 2:12,14	67:16,19,22	70:18	142:1 155:14	85:6 111:12,14
2:18,19 5:3 6:9	68:2,2,5,12,16	north 90:16 92:8	207:6,6	161:23 162:11
6:12,23 7:18	68:25 69:15,20	92:15,24 93:24	objection 7:17	202:23 210:16
7:23,25 8:1	69:21,24 70:3	106:2 110:12	16:15,18 87:2	official 64:3
10:5,13 12:21	70:6 71:19,25	112:20 116:24	87:5 110:18	169:20 203:14
13:4,6 16:17	72:8,17,18,19	117:20 121:3	141:3,4,6,10	offset 43:24
18:2,4 19:7,13	72:23 73:2,12	123:2 130:25	154:21 156:19	Oh 15:13 79:9
22:7,11 23:10	73:13,16,21	northern 91:19	156:24 205:14	83:15 92:14
23:22 24:3,8	74:9,19,23	105:13	objections 15:9	111:15
24:10 25:6,9	75:4,5,7,7,17	northernmost	87:10 88:14	Okay 7:16 14:15
25:13,14,17,18	75:18 76:2,5,7	102:7	141:18	21:16,21 76:22
25:20,23 26:3	76:9,11 79:20	northwest 196:8	obligated 38:1	78:10 80:17
26:11 27:5,23	81:5 85:13	note 20:16 34:14	obligating 138:4	81:15,25 82:6
29:14,17,18	87:8,11,16,17	35:14 36:19	obligation 25:20	82:15 83:24
30:5 31:16,23	87:18,19,19,20	105:20	136:17 150:15	84:7,11 88:16
32:3,6,16,21	87:20,24,25	notebook 8:3,8	obligations	89:21 91:21,25
32:23 33:11,14	88:10 89:16	notebooks 11:15	37:23 48:18	92:8,15 93:2
33:17,19,24,25	90:5,18 94:19	79:10	53:4	95:23 96:18
34:2,3,7,8,12	94:24 96:7	noted 19:9 20:21	observing	98:10,11 99:2
34:14 35:1,4,5	102:17,23	21:2 23:14,16	182:11	103:3 104:6
35:9,11,14,16	113:13,22	32:12	obtain 143:15	106:17,24
35:20,25 36:4	115:7 117:10	notes 33:21 79:8	143:16 164:19	108:15 109:5
37:8,12,17	132:25 134:11	notice 15:8	obvious 33:19	112:4,14 113:8
38:6,14,19	139:15,19,23	171:1	Obviously 14:6	113:12 115:22
39:2,3,12,14	140:2,25 141:9	notify 169:16	occasion 134:1	116:11 117:25
39:21 40:6	154:17 155:4	notifying 169:21	136:4,8 137:18	118:17 120:6,9
41:3,7,24,25	155:11 156:8	notion 31:14	144:12 145:7	122:1,8,22
42:4,5,7,17,22	156:17 157:2,5	notoriously 75:1	occur 66:16	123:7,11 124:4
43:12 44:2	157:21 161:18	notwithstandi...	69:24 185:5	124:8,18,22
45:2,8,17,22	163:9,16 164:5	28:21	201:1,4,10,12	126:4 127:2
45:23 47:14,15	176:24 179:9	number 8:15	occurred 28:18	128:4,20
48:1,4,6,10,13	179:12 180:5	15:5 22:21	179:1	129:12 130:14
48:22,23 49:1	184:7,21 185:3	23:17,17 24:1	occurring 28:8	130:17,23
49:3,5,9,24	192:19 203:11	59:23 68:8,9	179:18 180:20	131:19 132:12
50:9,25 51:7	204:4 207:13	68:21 71:15	occurs 20:13	133:10,20
51:11,24 52:12	209:5	128:13,14	201:7	134:22 135:5

135:11 136:11 137:25 138:15 138:20 139:9 139:15 140:6 142:3,13,21 143:8,13 144:11,15 147:4 149:6 150:18 154:4 157:9,15,24 160:7 162:5 176:18 177:16 177:20 179:17 183:19 184:4 184:16 185:3,8 191:11 192:10 192:18,23 193:1,13,18 199:2,14 200:8 201:21 202:2 203:24 208:7 old 149:21 on-the-ground 107:23 110:1 once 19:6 55:14 69:20 130:1 147:16 173:13 180:2,10 182:4 188:9 189:10 190:1,4,22,24 197:5 one-sided 59:20 ones 7:25 11:9 88:3 111:14 153:11 ongoing 45:24 85:5 204:3 Oops 144:9 open 104:24 opening 4:3 6:12 13:12 14:21 16:14,16,19 17:3 36:8 46:13 49:5,18 57:21 58:20 73:18 operate 28:24	114:3 119:18 120:1 132:23 137:13 operated 28:25 30:17 31:2,3 32:10 49:9 51:21,23 52:2 54:4 55:1 59:22 63:20 76:8 114:1 119:14 150:25 operates 55:3 113:24 119:11 123:24 operating 32:1,1 37:15 39:20 40:16,18,19,25 41:5,8,10,20 41:21,21 45:16 45:19 55:14 57:16,21,23 63:23 64:18 65:7,9 66:11 69:14 74:4 75:25 114:6 133:17 138:18 138:21,24 139:5,9 140:25 141:9 150:23 151:18 156:4,6 170:11,12,17 172:1,3,4 173:17 174:3 175:10 183:10 183:15 192:16 192:25 193:3 197:14 198:18 200:10,14 operation 28:16 29:10 30:21 37:11 38:18 41:13,16 42:1 42:13 44:3,20 59:4 61:12 107:8 127:5 150:19 151:4,6 151:16 152:9	193:5 194:2 operational 51:14 121:24 124:3 148:17 operationally 190:21,24 operations 27:16,16 28:20 28:22 29:4,5 30:15 33:25 34:1 40:1 43:3 43:5,7,22,24 45:5,25 50:24 51:4 54:2 60:20 61:1,4,5 61:11,17 65:19 72:7 74:23 80:20 82:11,18 82:20,22 83:1 83:3 84:6,14 84:22 85:8,12 85:22 86:2 133:2 152:24 154:3 162:15 192:17,21,23 193:2,6,11,16 194:2,9 196:20 196:23,25 202:19 opportunity 49:12 opposed 8:22 149:12 opposite 116:23 orange 54:18 72:24 73:9 125:3 orchards 129:16 order 7:24 13:14 16:16 17:16,22 18:1 21:3 22:22 23:12,14 23:16,23 24:8 24:20 25:2,18 25:22 27:9,24 30:1,25 33:21 50:16 53:12	100:6 126:18 128:10,13 133:3 139:12 143:21 151:22 159:20 178:11 186:3,7,12,14 186:17,20,21 187:2,3,7,12 187:15,21 188:1,2,6,8,9 188:11 189:7 190:14 201:16 ordered 127:25 orders 120:5 127:22,23 128:8 139:14 152:14,16 153:13 185:17 185:20 187:5 187:17,19,23 194:5 origin 14:9 original 1:1 5:3 36:17 131:21 142:24 143:11 originally 10:1 90:10 ought 9:11 12:10 13:6 outflows 99:13 outlet 148:19 165:19 outlined 59:3 output 163:2 172:7 203:3,17 overall 63:21 overestimate 205:12 207:2 overnight 16:10 overrule 156:24 158:21 207:14 oversaw 83:10 84:1 85:25 oversight 64:9 140:24 overstated 47:19 overview 43:2,5	80:19 202:18 owed 169:6 181:21 owned 30:17 132:17,20 ownership 149:20 owns 132:22 <hr/> P <hr/> P 2:1,1 p.m 209:13 pace 39:15 package 7:25 packet 7:19,21 10:7 page 4:3 62:9 144:9 145:5 pages 144:9 145:4 210:6 pan 92:4,15 106:3 117:22 panning 117:25 123:7 pans 92:8 paper 74:12 paragraphs 138:6 paralegals 77:22 parallel 106:14 121:8 paralleling 106:19 parallels 118:19 Pardon 135:11 parens 73:25 parenthetically 27:4 parlance 138:22 parsimony 32:25 33:11,15 part 5:20 14:9 18:23,25 19:14 20:13 23:4 24:14,21 27:3 33:21 35:24 40:25 48:11
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

52:8 53:21	parts 74:7	percent/43 21:1	117:1,12 121:6	Plaintiff 1:4 2:2
56:4 58:1	party 9:3,10,18	72:22	123:16 126:8,9	plan 46:18
61:25 62:6	9:21 56:17	Percha 102:11	129:10,14	208:25
67:2,6,14,15	143:21	102:15,19	photographs	planning 208:23
68:22 71:8,9	Paseo 2:14	103:16,16	93:20,21,23	plant 66:21,24
83:3 84:21	Paso 32:4 35:3	104:9,11 105:1	98:16,19 99:22	93:7,10 94:8
90:10,13,17	35:21 43:16	113:21,24	99:24,25 103:1	145:15 196:9
91:19 97:25	57:10 58:10,14	152:7 190:18	103:2,4 107:19	play 22:14,17
98:3 102:13,14	63:12 66:18	performance	107:21 109:20	91:23 92:6,25
105:15 107:15	90:19,20	28:1,2,13,15	109:22,24	96:20,24 104:4
114:19 121:6	114:17,18,21	28:17 56:8	110:20,24,25	106:14 112:4,5
128:22 129:22	114:24 116:19	performing	111:3 116:3,13	112:14,23
130:23 131:7	117:9 123:20	182:9 193:6	120:20,21	117:23 118:15
131:21 134:1,2	125:7 126:7	performs 53:14	121:2 123:12	123:4,16 131:8
134:24 136:3	143:15,16	period 26:7,23	126:15	played 92:7 93:1
137:12,19	144:1 145:13	59:7 66:25	photos 93:19	96:12,25 104:5
139:8 143:19	145:15,18,23	67:13 69:16,18	98:15 125:24	106:16 112:24
144:6,12,17	146:1,11,15	73:4,5 74:15	125:25 126:2	117:24 118:16
145:7 146:2,4	187:24 196:5	74:16 101:19	phrase 31:12,13	123:6,17
152:1 158:19	passed 113:1	156:4,6 185:9	physical 86:6	130:22 131:9
163:18,20	119:24 124:1	194:24 201:11	135:20 179:1	plays 92:4
171:3 184:15	180:16	periodic 184:13	physically 166:6	103:22,24
191:1 202:2	patriae 73:25	periods 192:11	176:16,21	104:2 112:17
partially 17:25	pause 92:18	permanent	177:4,13	122:24
43:24 124:6,7	97:6 106:7,22	82:16	pick 5:24	please 37:5
participate 86:2	118:3 123:8,10	permission	picks 124:24	46:25 49:19
participated	130:23	49:17	picture 5:25	78:7,11,18
11:23	pay 124:16	permits 25:16	47:20 100:17	80:25 91:14
participating	pea 91:4 125:4	permitted 58:6	122:20 129:8	92:6,25 93:15
5:8	pecan 47:16	personally 48:1	pictures 99:21	95:23 96:20,24
participation	131:16	49:5	107:18 111:9	98:12 99:16
74:5	Pecos 82:24 83:1	perspective	116:2	102:5,24
particular 15:4	83:5,19 84:24	17:14	pie 21:8	103:22 105:4
39:8 41:4 66:6	84:25 85:3	phase 50:13	pinch 125:8	106:15 107:17
143:5 146:9	people 47:8	76:10	pinches 102:20	108:22 109:18
186:17	56:15	Phil 43:15 174:7	pink 90:7 109:2	112:14 114:9
particularly	Peralta 2:14	photo 107:23	109:16 114:14	115:2 117:18
37:3 38:10	percent 20:17	111:20 117:21	114:23	119:17 120:10
55:10	21:2,9,12,18	126:5	pipe 97:22	120:18 123:5
parties 8:20 10:2	22:5,7,8,9	photograph	100:14,16	124:18 125:20
10:10 11:25	47:17 50:25	94:2,5 100:3,5	pipes 100:20	128:7 129:5
13:13,15 25:9	52:13 54:13	100:9 103:5,8	pizza 21:9,10	131:8 133:10
29:25 34:10	65:1 68:8 72:1	103:9 104:2	place 24:23	138:17 145:2
38:25 50:6	72:6,22 73:2,8	107:24 108:1,2	26:22 27:17	147:23 149:7
56:13 61:12	73:10,17 74:17	110:1,4,5,9,10	55:16 61:22	152:25 159:4,6
174:2 194:8	74:19 76:9	110:12 116:15	62:18 69:21	160:10 161:21
210:10,14	172:21 173:14	116:22,22	places 111:21	166:20 167:20

168:14,16 170:5,22 172:1 178:7 182:14 192:20 194:24 207:25 208:12 plus 50:7 109:15 182:22 point 5:25 12:20 15:3 18:21 21:6 30:24 34:5 39:9 51:22 52:16,17 59:21 60:13 89:2 105:13 107:6,12 118:8 118:11 125:8 131:2 132:21 136:14 138:5,6 140:9 160:7 170:2 182:6 190:19 192:9 206:3 208:22 209:4 pointing 91:18 96:4 102:11 105:10 109:3 114:15 120:16 125:3 points 34:4 101:14 137:1 151:23,24 152:18 153:15 159:16 167:4,7 185:21 187:5 187:19,25 188:21 189:6 190:14,16 191:21 pool 165:13 pools 165:11 166:13 pop 78:7 population 47:18 portion 6:11 20:21 34:23 46:20 75:18	96:22 102:18 109:7 110:15 113:7 118:20 129:21 135:25 136:7,8 137:21 143:4 145:23 146:6 172:11 172:12,13 208:1 posed 61:3 poses 37:25 position 25:6 39:5 50:16 60:13 63:11 82:19 83:6,25 84:11,15,19 possibility 178:18 possible 76:11 possibly 165:20 post 2:18 27:17 27:19 posted 194:16 potential 12:7 37:25 64:21 76:4 166:1 potentially 47:14 power 93:7,9,10 94:7 95:2,5,9 95:11,15 PowerPoint 77:25 78:3 79:5,7 pre-2008 156:6 precedent 60:14 precipitation 19:2 23:1 176:24 178:2 prefer 16:1 preliminary 15:13 16:13 78:23 153:19 173:19,22 175:4 182:8 185:23 192:13 193:7,10	195:12,18,23 present 28:4 30:15 32:22 36:2 84:8 174:6 201:25 presentation 169:25 presented 38:14 38:15,25 41:12 43:1,1,18 44:21 45:6 presenting 46:12,14 pressure 101:23 103:12 pretty 40:3 194:18 208:9 prevent 37:18 39:22 45:23 63:9,9 preventing 62:15 prevents 69:1 preview 28:10 previous 8:19 104:1 117:21 previously 86:9 99:20 124:19 129:6 139:6 141:20 150:21 152:13 185:10 186:10 201:22 201:23 primary 30:19 30:24 94:18 107:7 principle 51:8 52:4,11,14 53:17 54:17,23 55:1,9,9,25 56:7 67:24 principles 50:19 51:5,14,18 53:2 59:2 printing 11:5 prior 38:4 119:25 150:24	158:1,3 170:18 177:23 180:20 186:6 195:3,19 probably 6:20 76:16 106:23 190:23 207:17 problem 8:24 11:12 12:25 14:24 37:10,12 37:16 39:13 165:23 problems 10:9 41:2 42:16 procedures 57:14 192:24 196:21 proceed 36:22 46:23 77:9 89:5 140:22 142:14 proceeding 49:6 proceedings 1:9 1:13 5:9 209:13 210:8 process 8:14,20 10:24 12:6 65:6,11 155:25 155:25 159:8 166:19,22 167:19,23 168:11 180:9 194:1 197:13 203:15 processes 193:15 produce 30:24 produced 31:16 202:24,24 production 95:5 95:10,15 program 82:7 83:10,11,19 84:4 programmatic 38:7,11 51:3 60:16 programs 83:17 prohibit 56:9	60:12 project 21:1 26:6 27:16 28:13,16,19,20 28:22,23,25 29:4,4,5,10,20 30:15,16,21,22 31:1,2,9,15 32:8,9 33:17 33:25 34:1 37:12,19,19,22 38:12,18 39:21 40:2,10,22 41:6,13,15,16 41:25 42:1,2,4 42:7,9,11,23 43:3,5,7,14,22 43:23 44:4,13 44:15 45:4,6 45:12,20 46:1 46:8 49:8,22 50:20,23 51:1 51:4,11,15,20 51:23 52:2,3 52:13,15,24 53:15,24 54:1 54:5,15,20 55:1,2,5,6,15 55:20,21 56:5 56:22 57:1 58:9 59:4,22 60:5,15,20,23 61:1,4,10,18 63:18,19,22 64:24 65:6 66:23 67:2,6 67:12 68:7,15 69:11 70:12 72:1,6,6,13 73:2,9,14 74:17 76:8,10 80:19 83:3,8 83:12,12,21,22 83:24 84:2,4 84:21,23 85:8 85:11,14,16,21 85:24,24,25
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

86:7 89:21,22	projects 44:13	9:4,12 11:21	107:7 138:13	206:4,5 207:15
89:23,25 90:3	55:9 83:17	13:3 188:7	143:8 183:5	207:16
90:4,9,14 91:6	85:1,5 111:12	193:25 203:3	purposes 13:16	questions 33:2,4
91:7,10 94:20	111:13 202:20	province 42:23	18:16 31:9	36:7 61:3
94:23 95:2	properly 35:20	provision 53:5	32:2 88:20,21	78:24 112:5
97:11 99:8	properties	public 194:13,16	89:1,3 99:11	133:1 208:8,18
102:2,9,17	135:21	194:21	133:18 142:18	208:23 209:3
105:7 113:17	proportion	pull 9:15 10:12	142:22 143:14	quibble 22:8
114:13 115:10	19:24 53:9,16	10:22 12:2	143:24 144:7	quick 92:15 97:6
120:7 124:9,16	168:12 170:15	13:2 34:17	144:18 145:17	132:5 149:9
125:8,14,15	178:13,25	192:8	145:22 146:12	quickly 76:11
126:21 127:14	183:17 196:6	pulled 14:6	146:14,17,19	130:5 132:1,8
127:20 129:4	198:5	pulling 11:4,21	147:1,2 164:11	quite 9:20 12:4
129:22 130:13	proportionate	pulls 192:7	167:9 194:3	12:25 24:17
130:16 131:15	169:2,3	pump 64:7	204:20,25	26:3 35:5 92:9
131:18,20,25	proportionately	pumped 26:11	205:5,7	95:7 101:17
132:3,10,14	172:13 200:7	64:11 196:6	pursuant 19:8	Quitman 90:22
133:2,4,8,14	protect 38:17	pumping 18:3	21:16	90:23
134:13 136:23	40:7 100:20	19:25 20:4,11	pushed 8:15	quote 25:25
137:12 138:19	165:16	20:13,21 21:12	put 18:16 21:6	32:19 53:9
139:4,17,21,25	protected 40:11	21:25 22:1,12	22:23 23:22	
140:4 142:24	50:11 51:19	24:8 25:16	25:14 27:25	R
143:4,12,25	protective 50:5	26:9,12,13,17	30:9 35:9	R 2:1,1
145:19,23	protects 39:20	26:20,22,25	38:13 62:18	railroad 116:17
146:19,21,25	protested 62:10	28:17,19 29:7	120:18 160:14	117:20
147:14,16,16	protocol 7:10	29:11,14,17,19	168:17 172:5	raise 78:11
148:16,23,25	provide 10:2	33:17 34:7,17	172:19 173:12	raised 209:6
150:23 151:1	12:5,12 17:4,5	34:19,22 35:2	181:8 187:5	raising 142:2
152:24 153:10	22:24 42:25	36:1 37:8 39:2	188:1 197:7,13	range 27:17
153:12,17	44:20 136:21	39:8,10,15	200:3	Rapids 44:24
154:3,11 158:1	148:14 169:18	41:3,7 42:17	puts 165:22	rate 95:4,5,19
159:10,16	169:24 187:19	43:21 44:25	putting 10:8	132:5 187:18
161:17,23	189:22 190:4,6	45:9 56:2,6,10	22:15	188:19
162:4,6,7	193:22 201:19	56:13,18 57:6		rates 81:22,23
165:6 168:20	202:3 203:4,11	57:8,15,19,24	Q	ratio 65:15
171:6,10,12,15	203:13,18,24	58:1,5,19 59:9	qualified 156:25	173:1,4,5,5,11
172:9 173:6	provided 10:10	62:12,13,16,20	quantified 74:10	175:15 182:1
175:2 178:11	11:2,24 15:22	64:19 68:1	quantity 23:5	182:10,13,19
178:21 179:22	29:1 61:5	69:7,10,17	question 10:24	182:20,21
180:9 182:9	146:1 203:7,9	72:9,13 75:10	13:17 21:3,4	183:6,7 191:16
185:22 186:6	204:16	196:4	30:2 40:2,6	191:18,18,19
186:13 192:22	provides 13:6	purchasing	50:11 72:20	197:8,10
197:13 200:25	52:5 158:24	83:18	88:18 149:9	reacted 56:13
202:18 203:20	164:14 169:20	purple 105:18	155:15 157:16	read 177:18
project's 56:5	192:24 195:13	purpose 17:3	168:4 190:10	207:21 208:1
projections	195:14 202:12	30:7,20 69:11	191:15 198:20	readily 71:22
159:25	providing 7:7	101:18,22	205:21,24	readings 194:15

ready 36:14,22 77:5	reclamation 14:7 26:8 28:6	187:8,12 188:4 189:7,15,19,20	150:7 168:10 178:20	regression 169:10 171:13 171:19
real 19:19 92:15 97:6 149:8 191:6	28:25 29:2,6 29:12,16 30:4 30:8,18 31:1,1	190:2,7 192:11 193:4,19,21	reduced 21:18 53:15 72:8 150:5 168:2	regular 60:2 210:10,12
really 40:3 46:12 47:20 48:13 68:17 70:10 177:12	41:1,18 42:2,9 42:15 43:6 48:23 51:13,14 51:25 53:12,13	194:6 195:14 199:23 201:17 201:25 202:12 206:17	reduces 63:21 63:21 67:19 107:14 172:7	regulate 63:6 regulated 103:13
realtime 154:18 155:5 207:18	54:4,6 55:4,9 56:23 57:6,13 65:2 66:10	Reclamation's 74:18 89:22 91:1 151:3 152:10,23	reducing 20:18 reduction 127:24	regulation 64:6 64:15
reason 30:11 31:18 58:12	70:13,14 74:13 75:9 80:14 82:1,6,10,16	153:3 154:13 154:16 156:13 157:18 161:23	reductions 22:3 refer 24:18,22 134:2,7 136:4	regulatory 50:7 61:22 64:1
reasons 14:23 68:8,9 70:9 74:21 90:23	83:7,11 84:6 84:12 85:21 90:11 91:2,6	183:23 184:12 188:9 194:16 194:23 195:2 204:19,23 205:4	136:8 145:8 147:24 reference 18:9 25:1 31:14 53:20 57:22	rehashed 17:1,2 relate 133:7 136:16 138:1 139:10
rebound 76:3 rebounced 75:23	93:20 95:17 98:16 99:13,15 99:22 101:3 103:2 107:19	recognize 16:22 21:5 34:5,18	referred 21:8 24:20 32:17 66:2 128:8 134:20,23	related 28:14,15 28:17 32:22 34:10,12 50:4 80:20 85:23 120:5 192:15
rebouncing 76:2 recalculated 191:18	109:22 111:1,3 114:3,6 116:3 119:14 120:21 123:12 124:13 124:15,24	recognized 7:5 12:13 42:7 58:20	referring 79:4 138:7 157:7 164:8 207:12	relates 169:13 relation 111:10 137:22 170:9
recall 50:18 96:10 111:5 116:7 142:19 147:6	125:6,25 131:24 133:3 139:1,13 143:19 145:12 147:6,14,19 148:1,21	recognizes 25:19 recognizing 25:24	refers 169:2 reflect 33:25 128:11	relationship 42:6 44:11 161:2 171:5,14
recalls 98:1 receive 23:11 48:5 49:9 53:24 54:12 65:1 68:6 72:4 72:19 74:2 133:3 139:16	150:11,14,20 150:25 151:18 151:23,25 152:5,13 153:7 155:10 156:1 157:25 158:10 158:23 160:25 162:11 164:14 165:14 169:20	recommenda... 17:20 reconciled 95:16 record 5:19 78:17 79:17 177:18	referring 79:4 138:7 157:7 164:8 207:12	relative 96:2 105:8 108:24 114:12 129:13
received 9:6 11:13 49:24 50:10 71:6 72:1 73:2,17 128:10 186:14 186:18 188:10 193:15	169:22 174:3,7 175:8 179:17 182:6 185:9,15 185:17 186:15 186:21,25	records 74:12,13 74:18 79:10 155:9,17,24 156:7 recover 76:3 rectangle 123:14 rectangular 112:2	refers 169:2 reflect 33:25 128:11 reflects 41:5 75:20 refused 29:22 regard 26:8 30:12 31:6,8 34:13 50:17 regarding 28:6 40:21 44:7,19 155:24 169:16 191:16 194:12	release 44:14 52:5 93:10 95:4,6,13,15 121:12 140:4 148:6 154:11 158:1,2 159:10 159:12 160:13 160:16 164:13 165:9,16 166:14,18,22 167:3,6 168:6 168:20,21 169:13 171:5,6 171:14 172:19 173:7,9 175:1 176:11,14 178:6 180:13
receives 73:20 76:9 186:22		red 66:4,5 71:13 75:19 123:8,14 169:9 171:4 redirect 208:25 reduce 128:2	regardless 31:9 47:6 regime 64:1 Registration 210:23	
receiving 48:24 49:1,22 68:3 185:17				
recess 76:18 77:4 140:17				

180:20,23,24	69:22 70:1	158:15 193:19	94:3,11,17,19	144:12 151:15
181:2,5,7,7,11	75:8 136:8	represent 70:15	96:5,6,23 97:8	174:24 185:15
181:13 182:4	remainder 49:4	72:23,24,25	98:20 99:2,5,6	responsibility
182:24 185:1	49:18	73:8,9	99:14 101:3,12	67:20 73:19
185:19,20	remained 70:7	representation	152:2,6 154:15	145:8 150:23
187:7,9,10	remaining 19:9	162:17	156:15,18	151:4,9,25
188:17,20	19:9	representative	157:20,22	152:4,9,20
189:16,23,24	remains 48:19	84:5,7 174:9	160:1 161:1,12	responsible 9:11
190:1,1,22	remarkably	174:10 175:7	161:15 162:1	10:14 11:4,6
196:7,11,17	68:12 70:7	representatives	162:10,19	73:25 85:1
197:12 198:9	73:1	43:12 55:4	163:22 165:15	175:2,8 188:3
199:25 201:11	remedies 76:10	174:2	168:21 177:17	responsive 42:12
released 19:5	remedy 76:12	represented	178:4 179:21	42:16
66:20 70:18	REMOTELY	68:18 75:17	181:17 183:24	rest 96:2 97:20
93:8 94:6,8	1:12	127:20 169:11	184:9,14,18,22	114:21 119:10
95:19 98:25	rental 133:7	171:4,16	185:4,14,16	122:6
99:7 101:11,19	149:12	representing	186:2,5,23	restate 157:16
159:12 176:17	rented 91:1	5:21 6:17	187:1,11	restores 99:7
177:10,11	148:10	represents 65:18	189:18 192:12	result 48:17
178:1 180:22	renting 147:16	74:12	194:13 197:12	resulted 18:2
180:25 181:6	148:15	request 188:25	201:11 206:14	75:9
182:7 183:9	repay 30:25	189:2,3,14	reservoirs 19:3	results 24:11
200:3	134:12	requested 120:7	61:13 84:23	66:1 179:8,12
releases 23:1	repaying 30:20	128:3 187:7,9	85:5,20 90:4	return 19:3,12
84:22 86:3	repayment 84:1	188:13,17,21	91:9,11 160:20	19:12,15,21,22
95:7,11,22	133:16 134:7,9	189:24 208:1	162:17,23	20:1 23:2 24:9
97:16,18,21	134:14,20	requests 45:22	163:6 165:12	29:7,8 38:19
124:10 150:15	135:8 151:6	65:3 189:13	166:3,8 176:12	39:23 44:9,15
153:5,5,6,6,11	repeat 16:24	require 133:3	176:22 202:13	129:2 132:4
153:21 176:25	207:16	175:21	202:15,16,17	148:16 159:15
185:9,14,16	repeating 16:25	required 60:17	203:23	171:25 191:24
186:1,5,22	rephrase 154:24	139:5 164:6	resource 38:20	returned 45:19
187:1 189:11	155:1 204:22	requirement	resources 81:11	196:8
189:17,20	205:20	24:3 64:25	81:18	reuse 19:4 129:2
192:11 194:13	report 24:19,20	requires 53:23	respect 16:21	130:13
194:24 195:2	169:19 202:8	reserve 165:12	22:14 27:9	reused 131:18
202:16	203:5,19	165:24,25	28:9,13,18,20	revealed 35:13
releasing 65:25	204:12	166:13 177:9	30:3 33:5	revenue 30:25
112:1 165:21	reported 1:13	177:12 180:15	34:24 136:17	review 84:24
relevant 61:11	reporter 1:13	reservoir 19:1,1	172:24	137:18 155:9
62:7	207:21 210:4	19:5 23:1,23	respective 22:24	155:16 175:7
reliable 61:20	REPORTER'S	30:13 32:6,7	respond 7:13	185:18,25
relied 14:10 24:6	4:10	38:23 40:5	response 10:17	196:16
37:20 138:12	Reporters	47:3 61:17	14:18	reviewed 155:18
relinquishment	210:23	81:21 86:3	responsibilities	155:24 156:3,5
177:6 179:4	reports 24:21,24	90:16 91:16,19	63:1 82:21	184:10 206:11
rely 47:23 64:19	85:2 154:2	92:3,9,12 93:5	83:24 84:18	reviewing

153:20 187:8	161:9,14 164:1	91:7 92:22	83:19 84:24,25	195:2 201:17
188:11,13	164:24 165:7	93:25 94:4,6	85:3 89:13	roles 153:4
192:15 193:8	165:24 166:12	94:20,24 97:9	94:6,9 96:8	Rolf 62:21
revolves 37:7	167:8 169:5	97:10 98:4,6	97:21 100:12	roll 41:24
right 5:1 6:2,19	170:3,5,21	98:23 99:8,10	100:15 101:4	room 78:25
7:3 8:14 13:8	171:25 172:15	102:1,2,8	101:21,24	root 129:1 130:2
14:15,19 16:12	172:23 173:2	104:8,12,15,19	103:10,11,14	132:1,8
20:1 21:13	180:10 181:8	105:7 106:5,8	104:23 108:5	rooted 30:14
46:22 55:24	183:19 186:20	106:11,14,18	110:7,8 116:17	rotate 92:12
58:11 60:18	188:24 192:10	106:20 107:2,4	119:5,6 121:8	97:14,15
69:22 76:25	194:22 197:1	107:13 108:7	122:11 131:6	rotating 106:5
77:5,8,14	201:10 205:22	110:11 112:1,9	159:13,17	roughly 16:4
78:10,11,11,16	207:1 208:14	112:23 113:2,4	161:24,25	rows 128:13
78:21 79:11,22	209:1,8	114:13,19	162:3 166:23	RPR 210:19
79:25 80:10,12	right-hand 76:1	116:18,25	167:1,10,11,23	rule 32:25,25,25
80:22 82:3,4	93:7 94:1,2	117:2,4,6	170:8 172:16	33:11,15 52:14
84:18 86:13	96:16 97:16	118:1,9,11,13	182:11 187:6	61:12 67:6
88:17,24 89:4	100:9 103:5	118:20 119:5	188:13,16,18	141:11 142:6
89:6,12,24	107:22,24	119:19,24	188:19,22,25	154:25
93:14,21 95:1	108:5 109:25	120:12 121:3	189:2,3 190:24	rules 5:6 52:3
96:11,18 98:12	112:21 116:21	121:10,13,14	191:20,23,23	63:9 64:5
99:23 100:11	117:10 121:5	121:21,24	192:1,6,7,7	73:24
100:23 103:16	122:13 126:8,9	122:16 123:2	196:8	ruling 27:5
103:23 104:4	129:20 187:6	124:2,9 125:8	rivers 162:18	rulings 38:4
106:22 107:20	rightly 50:12	127:7,10 129:3	188:23	run 161:23
108:1,8,21	rights 36:18	129:10 130:5,8	Riverside 119:3	164:22 179:14
109:23 110:10	Rincon 44:25	130:13,24	119:5 197:21	179:15,16
111:4,19 114:9	45:1 102:22	131:3,5,12,13	RiverWare	203:12
115:22 116:5	103:15 104:10	133:4,8 138:19	162:14	running 77:22
116:11 119:7	Rio 18:4 32:8,18	139:3,17,21,24	roadway 118:21	77:23
120:9,25 123:4	37:9,10,11,19	143:24 152:1,2	122:16,17,18	runoff 160:1
123:11 125:12	37:21 38:12	153:10,17	robotic 32:21	166:8 180:19
125:20 128:7	39:4 40:5	154:2,3,11	robust 62:1	180:19
131:15 134:5	41:25 43:2	156:22 161:16	robustness	rural 47:13
134:17 135:10	44:7,14 45:2,3	162:2,12,15	32:17,18	Ryan 63:4
136:21 137:3	45:11,25 46:8	164:4,14 165:5	rock 107:24	
138:5,9,15,24	47:2,23 48:2	179:4,22	108:6	S
140:12,15,18	48:11 52:19	186:13 192:22	role 43:11 83:4	S 2:1
141:7 142:3,10	63:4,6 65:3	197:22,24	150:19 151:3	Sacramento 2:5
142:13,16	80:19 83:4,4	201:13 202:1	152:10,23	sale 149:12
143:3,23 144:2	83:12,20 84:2	risk 165:22	153:3 154:13	San 83:2 84:25
144:8,11,19,25	84:4,21,23,23	177:10,13	154:16,18	94:23 161:17
149:17,23	85:2,8,11,14	180:16	155:5,11 156:9	161:20,22,24
154:22 155:19	85:16,20,23,25	risking 47:15	157:3 158:25	162:4,7,8,12
155:20,22	86:7 89:13,15	river 37:25	185:8 187:15	162:19,20,25
157:15 158:25	89:21,22 90:3	58:12 66:17	187:21 188:5,9	163:13 165:3
159:4 160:10	90:13,14,24	82:24 83:1,5	192:10 194:23	176:25 178:12

178:16,20	180:17,18	105:11,18	sending 11:7	190:14
179:18 180:6	182:4 183:1	106:4,6,8,13	121:20 188:4	shift 133:2
202:17,21	185:1 195:8	106:17,21,24	sense 10:12	183:10
203:4,19,20	196:7,11,17	106:24 107:1	26:21 39:14	shifting 106:8
204:14	198:9 200:12	107:23 108:4,6	188:14	142:17
sanctioned 44:2	200:16	108:8,9,11	sent 7:21,22 9:7	shooting 103:7
Santa 2:14,19	second 8:7 27:4	110:6,8,11	11:13 98:6	short 7:24 57:25
Sarah 2:8 5:20	48:10 50:25	112:21,22	107:3 179:12	61:20 91:21
88:8	52:11,24 77:12	113:6 116:16	separate 8:8	96:11 103:19
satellite 194:15	77:13 86:15	116:24 117:1,6	68:5	117:16 122:23
satisfied 69:12	96:3 105:9	117:7,20,21	serious 150:8	shortage 36:5
saved 197:23	114:14 135:6	118:9,17,20	Serrano 63:4	53:25
198:6	135:12 191:15	121:5,9,11,13	serve 91:9	shortages 35:18
saw 7:6,23 63:14	secondly 14:25	121:15,22	served 102:14	36:5
66:21 92:20	seconds 118:4	122:9,11,12,13	105:16,22	Shorthand 1:13
97:22 98:2,3	section 103:16	122:17 123:2,8	114:19	210:4
121:7 126:7,10	127:13 128:19	123:11,12,18	serves 37:22	Shorthand/Co...
126:14 127:3	131:14 136:20	125:6 128:12	service 133:7,7	1:13
saying 24:25	sediment 107:11	129:16,21,24	set 8:10 10:2,10	shortly 8:8
says 57:22 96:17	107:13 121:16	130:7,25 131:3	11:2,3,12,13	24:23 34:20
136:22	127:6 165:18	131:13,16	11:24 12:5	35:22 56:11
scanning 108:4	see 18:18,23	168:19 187:3	52:10 59:18	shot 113:1
scenario 21:24	19:25 31:14	188:11 209:11	65:15 70:18	130:20
schedules 44:10	48:6 49:1 53:6	seeing 64:12	72:22 76:10	should've 31:23
scheme 50:7	54:17 56:19	75:16 77:16	134:10 142:4	show 34:1 38:14
61:22 62:1	57:3,7 58:9,11	91:24 96:20	148:7 149:21	39:1 41:12
Schmidt-Peter...	58:12 60:4	97:6 103:21	162:21 193:16	43:20 44:1,8
62:22	61:9 64:14	106:1 112:17	196:21	44:12,25 45:8
school 158:19	66:2 68:16,25	117:17 122:25	sets 70:14	52:21 54:15
science 81:2,3	69:3,6,16,22	129:8 172:9	seven 8:25 50:3	56:3 58:3,17
81:11	70:6,24 71:4	188:15 189:6	sewage 145:16	60:14 66:15
scope 46:5	71:13,15,24	seek 76:11	shallower 97:2	68:10,12 69:13
scramble 10:22	72:25 73:6,10	seen 48:15 64:11	share 48:5,24	70:23 91:21
screen 6:13	74:9,15 75:2	133:23	49:2,7,10,17	93:22 102:13
49:17 77:13,17	75:19,22,25	seeps 192:1	49:22 68:7	103:19 105:24
86:7 89:9 92:1	77:25 78:8	Selden 102:20	72:19	117:15 122:1,4
92:24 93:16	89:15 90:15	105:12 106:3	shared 179:9	122:22 130:17
97:25 98:13	91:17,25 92:5	sell 55:16	194:13	135:5 144:25
99:19 102:16	92:9,16,21,22	send 7:19,24 8:2	sharing 77:17	186:9 189:6
109:19 129:6	93:4,6,25 94:5	8:4,10 9:19,21	she'll 5:24	192:18 201:21
159:5	96:5 97:3,5,9	10:23 12:24	sheet 128:13	showing 73:4
SEAL 210:16	97:12,13 98:23	16:2,6 107:13	186:21 187:3	74:15 98:5,18
season 66:22	100:3,5,13,15	121:23,24	187:12 188:11	125:20 128:8
153:11,18,25	100:23,25	127:10 173:24	sheets 88:4	133:22 134:17
154:5,8 158:1	102:12,16	175:4 179:13	128:10 187:2	135:10 137:3
158:2 160:1	103:7,9,17,24	193:18,21	187:16,22	138:16 144:2
166:8 174:20	104:6,7,9	195:11	188:6,10 189:8	147:22 149:6

170:6 194:25 shown 53:6 61:9 69:5,7 70:11 70:22 71:25 75:15 99:24 103:4 104:10 107:21 109:24 116:12 120:25 126:5 130:19 180:11 shows 19:12 34:2 54:15 66:20 side 69:22 76:1 92:1 93:3 94:1 97:13,16 98:20 100:1,9,10,14 100:15 103:11 104:20,24 105:12 106:9 106:12 107:22 107:24 108:6 109:25 110:2,3 110:4,9,10 112:8,8,21,21 112:22,22 113:4,5 116:14 117:4 121:5 122:9,18 123:9 123:15 126:6 128:12 129:17 131:2,6,10 187:4,6 sides 103:13 104:12,14 110:8 Sierra 32:3 90:16,18 91:19 96:6 102:22 signed 40:9 significant 19:22 33:18 45:10 59:14 62:17 64:15 68:21 significantly 54:21 55:14 69:7 71:7,10	71:16 72:1,5 73:8,10,17 75:3 similar 126:16 158:9,23 171:2 171:3 similarly 178:24 196:16 199:11 SIMMONS 2:4 2:8 simple 21:5,5 32:19 61:2 75:1 simply 7:5 10:2 10:11 11:2 12:2 19:25 35:6 39:5 40:19 41:9,21 61:6 64:6 74:8 74:15 141:16 149:19 205:17 simulates 61:10 61:11 single 31:3 37:7 39:12 51:21 52:2 57:2 59:4 63:20 115:13 177:17 179:16 singular 44:13 sinuous 92:24 siphon 104:21 siphons 104:18 site 100:4 101:6 101:9 103:6 179:13 203:12 sites 115:14 situation 20:5 48:6 six 8:22 sklahn@soma... 2:10 slide 52:25 54:14 55:13 56:20 58:6 63:13,15 64:12 65:18 66:3,19 68:11 69:3,13 70:6	70:11,23 71:12 72:3 74:9 75:16 86:8 89:14 93:15 95:23 98:12 99:16 102:5,24 102:24 105:4,4 105:6,15 107:16 108:21 109:18,21 114:9,11 115:2 120:9,18,18 121:1 122:4 124:18,18,23 125:20 128:7,9 129:5,5 133:10 133:11 149:6 152:25 159:4,7 160:10,14 166:19 167:20 167:22 168:14 168:17 170:5,7 170:22,23 176:9 178:7,23 180:2 181:8 191:14 194:24 201:24 slides 77:17 slideshow 77:22 slightly 92:13 126:18 small 47:8,13 109:15 129:21 smaller 20:17 101:21 so-called 59:19 Socorro 90:17 soil 75:10 sold 55:20 solely 85:16 solid 17:19 Somach 2:3,4,8 4:4 5:16,18,19 7:16 8:23 11:8 11:10 12:16,19 16:19,20 36:12 58:20,22 63:13	somebody 88:25 somewhat 9:2 17:17 sorry 11:10 77:20 83:15 89:4 111:13 122:1 136:11 137:5 144:11 177:8 182:17 207:16 208:20 sort 111:20 117:11 138:21 186:20 191:22 198:20 sound 205:23 sounds 205:15 source 66:10 93:19 98:14 99:21 103:1 107:18 109:20 116:1 120:20 125:24 138:10 148:9 south 92:3 96:21 112:19 116:24 118:3 190:19 southern 25:14 89:16 90:5 spanning 103:10 116:25 spans 43:8 110:7 speak 78:7 190:17 speaking 5:10 5:12 6:5 130:11 190:22 Special 1:11 17:16 25:21 27:23 32:16 86:5 91:24 92:20 93:18 95:25 96:19 97:23 98:1,17 99:24 100:12 100:23 103:3 103:21 105:6 105:25 107:21	108:11,25 109:7,24 112:16 114:11 116:12 117:17 119:17 122:22 122:24 126:1,4 129:8,11 130:18 133:12 133:21 142:21 153:2 159:7 160:11 161:21 167:22 168:15 170:8,24 172:15 173:3 species 82:25 83:19 specific 194:10 specifically 25:10 57:22 111:2 specified 193:23 specifies 53:3 spell 78:17 Spener 43:9 spills 124:3 spillway 97:17 spillways 94:10 spin 118:1 split 172:13 183:18 spots 112:2 121:15 129:20 spread 50:2 spreadsheets 184:11 spring 17:7,10 19:18 22:20 25:4 32:14,22 33:13 35:18 36:1 38:25 41:12 43:19 44:22,23 45:7 185:5 ssomach@so... 2:6 stability 70:3 stable 68:13
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

70:7 73:2	163:16 179:9	station 90:24	181:1 185:10	130:15
staff 165:17,22	179:12 209:7	99:15 100:2,24	189:12 194:24	subtract 23:5
stage 28:5 35:8	210:4	190:4 194:14	202:15 206:14	165:3,11
stand 77:11	stated 210:5	stations 163:7	206:15,18,20	172:20 180:6
standard 58:23	statement 6:12	status 6:21	208:2,4	200:20
start 5:6,16 6:20	17:4 46:13	53:14 210:11	store 94:19,21	subtracted 23:9
8:14 16:14,18	49:18 58:20	steady 95:10,12	stored 92:12	24:11
48:20 61:24	73:18	95:19	100:4 136:23	subtraction
76:17,19 79:19	statements 4:3	step 39:13 61:16	160:21 161:4	18:12
80:1 82:1	13:12 16:14,19	166:18 180:3	164:6,15	subtractions
86:24 97:3,6	57:21	Stephens 51:24	204:10	20:1 22:3
117:19,22	states 1:1 3:1 5:2	52:20 56:17	stores 90:3	sued 48:22
133:20 144:8	5:4 6:4,25 7:6	stick 184:16	99:10	sufficiently 33:1
160:16 170:21	11:1,5,5 12:4	stipulate 15:23	storing 101:18	43:21
172:2 175:18	14:4 15:8,15	stipulated 13:13	storm 121:20	suggesting 13:4
190:25 195:3	15:15 16:16	13:15	123:19	suggests 50:15
209:10	17:6 28:4	stipulation	straightforward	Suite 2:4,9 3:3
started 5:2	29:15 30:7,17	13:18 14:2,17	40:3	210:24
48:21 85:22	30:25 31:17	stipulations	stream 51:13	Sullivan 73:12
86:16	32:13,25 33:6	138:3	62:23	sum 23:8,8
starting 43:3	36:20 37:6,16	stop 20:2 90:19	streambed 192:1	37:16 197:11
92:3 96:22	38:4,8,17,25	114:6 141:24	192:4	summarize 50:1
106:2,14	40:20 42:22	stopped 100:11	Street 2:9 3:3	summary 17:15
112:18 160:12	43:23 45:7,21	storage 44:15	strike 204:21	17:22,25 21:2
170:2 185:25	47:5 49:21	55:20,21 63:22	structure 94:9	23:12,14 24:7
starts 48:5 90:16	50:7,9,22	71:17 85:20	97:5,17,20	25:2,22 27:9
102:18 109:11	51:12 52:8,22	91:9,11 94:21	98:2,3 100:19	27:24 30:1,4
144:10 145:4	53:11 56:8,15	95:17 101:15	101:20 104:22	33:20 38:21
state 1:3,6,6 2:2	57:5,20 58:4	101:17 125:13	106:7,22,25,25	39:10,19,19
2:12,21 5:3,4	59:9,24 61:22	132:23,23	121:10,19	50:15 153:2
5:20,21 6:9,17	72:12 77:10	148:6 150:15	131:11	summed 182:23
14:7 25:11,17	87:6,7 89:19	151:1 153:12	structures 124:8	summer 17:13
29:18 31:6,8	132:18,21,22	160:5,8,12,16	125:13,13,17	Sunding 36:2
32:11 34:9	136:22,24	160:24 161:10	132:13,20	supplement
42:22 45:23	138:4 139:20	161:11,15	150:20	72:13
46:9 47:6,6,18	139:24 140:3	162:9,17	struggles 47:7	supplemental
48:18 57:8	141:13 147:20	163:22 164:2,3	Stuart 2:3 5:19	56:1,4,6,10,14
60:1 62:3,4	150:10 152:19	164:8,11,25	stuff 20:6 77:23	supplied 202:10
63:2 65:5,8,10	161:18 168:22	165:1,2,3,4,5,8	subject 80:17	supplies 70:25
69:24 75:15	168:25 169:4	165:11 166:12	81:19	supply 7:1 19:9
76:5 78:17	179:6 203:7	168:20 171:6	submission 8:7	19:19 20:19
81:5 88:9	208:15 209:6	175:21 176:12	13:13,25 15:14	33:17 35:16
109:17 113:16	States' 37:22	176:15,16,22	submitted 15:16	37:19 39:4,17
113:19 115:12	38:1,3 39:17	177:21,23,24	15:18	40:10 44:12
125:10 139:19	53:4 57:12	177:25 178:5	subsequent	49:23 51:1
139:23 140:2	136:17 150:22	179:19 180:4,5	144:19	52:13 54:10,16
146:12 163:9	static 41:13	180:11,21,23	substantial	54:20 56:14

63:18,21 64:24 65:23 66:23 67:1,2,6,12 68:7,24 69:4,9 69:19 70:12,18 70:22,24 71:4 71:5,7,8,23 72:2,5,6,8,14 73:3,9 74:18 74:20 75:21 76:10 support 45:15 58:19 59:18 supported 38:24 51:6,7 supporting 53:17 supports 45:18 50:16 supposed 6:25 Supreme 1:1 5:2 36:15 45:22 60:14 75:13 sure 14:24 15:16 47:4 53:14 73:20,21 120:24 131:1 166:10 194:18 207:11 surface 18:5 20:19 21:25 26:6,9,14 29:7 29:8,19 33:5 38:22 39:3,23 44:11 45:3 47:2,23 48:19 57:7 63:7 68:14 69:4,5,5 69:9 75:21,22 160:20,22,23 161:3 surprised 12:4 surrounding 46:7 81:23 92:10 126:13 129:13,18 192:2,6	survey 135:20 137:17,19 surveys 160:25 survival 56:5 survives 69:12 swear 78:12 sweetheart 66:17 switch 140:6 150:18 switched 93:2 sworn 80:4 system 19:15,21 22:3 23:7 37:25 41:11 53:11 60:15 75:24 96:2 107:9,15 108:24 119:8 125:15 126:17 127:5,9 128:22 129:25 150:9 163:4 167:9 188:23 systems 101:25 <hr/> T <hr/> T 2:1 table 53:7 take 5:14 13:11 20:4,23 22:4 22:13 46:20 71:23 74:2 76:16,18 77:1 78:24 104:19 111:3,9 126:2 140:9,10 163:5 165:2 172:18 177:23 180:5 197:7,10 200:20 taken 34:10 39:12 71:14 96:13 100:1 103:5 110:14 110:20,24 111:1,4 116:4	116:7,15 117:1 125:9,25 194:5 210:11 takes 26:17,22 39:5 63:11 74:22 75:6 104:22 194:14 talk 8:21 15:13 22:21 29:21 30:23 36:17 70:11 81:25 150:19 152:23 185:8 194:22 talked 5:6 20:6 151:12 talking 18:18 129:12 142:17 149:24 155:16 157:12 193:13 tandem 208:16 task 49:25 tasked 162:11 team 12:8 63:5 84:22 163:18 tech 77:19 135:12 technical 32:12 43:20 44:21 45:14 50:6 68:9 174:1 tell 9:6 16:25 57:13 73:3 80:25 92:9 93:18 97:2 103:1 105:6 107:17 117:16 122:24 126:4 126:15 134:5 142:21 155:23 160:23 183:6 190:25 telling 117:4 ten 161:1 tend 48:7 130:14 205:11 207:2 term 172:6 terminus 131:4	148:18 terms 5:25 9:24 10:4,13 27:19 32:10 134:10 139:8 151:5 187:6 test 50:14 testified 80:4,22 185:10 201:7 207:10 testify 19:17,20 22:16 33:24 53:23 56:20 73:4 74:14 80:18 140:24 156:25 testifying 77:24 testimony 8:5 9:4 17:5,18,23 22:17 23:12 24:15 26:2,5 28:5,11,14 29:1,15,22 30:16 31:20 32:22 33:12 34:13 35:10,12 35:19,23,23,24 36:3 38:9,24 42:25 43:1,25 44:6,24,24 45:6 47:21 78:12 79:4,16 86:17,22 141:24 190:15 205:16,19 207:7 Texas 1:3 2:2 5:3,20,22 6:25 7:6,11 10:14 11:1,5 12:3 14:8 15:15 16:16 17:5,15 18:1,5,10 19:10,21 20:3 20:16,18 22:25 23:9,11,20,24 24:5 25:20	28:3 29:14,20 30:13,15 31:12 31:13,17 32:2 32:4,9,20,21 33:7,10,18 34:8,9,11,12 34:17,23 35:2 35:11,17,21,25 36:2,6 39:8,11 39:25 40:6 45:5,8,17,19 45:21 48:20 49:2,8 50:9,15 51:5,21 52:19 54:3,14 55:23 57:12,12,17,18 57:20 58:3 59:16 60:8,12 61:1,5,14 62:10,11 63:2 63:10,11,14,15 63:16,16,17,25 64:1,2,4,7,7,9 64:13,15,22 65:5,24 66:16 67:7,18,23 68:5,6,10 70:10 71:11,21 71:25 72:4,8 72:15,23 73:18 73:19,20,24 74:2,6,7,16 75:3 87:5 88:9 89:17,20 90:7 90:12,19,22 91:3,23 96:13 103:20 109:17 113:13 115:7 115:15 117:9 122:23 124:5,6 130:20 132:24 137:12 144:3 196:5 203:13 204:4 205:6 207:13 208:15 210:4 Texas' 19:16
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

36:3 38:15	17:19 18:8	101:1,19 116:8	track 64:10	trees 131:16
44:6 58:21	20:24 21:5,7	116:9 118:11	153:14 162:18	trial 8:9 11:20
59:18 60:13	22:5 23:11	140:12 141:25	163:21	13:16 14:21
61:7 70:3	24:7 33:20	160:6,7 176:14	tracked 113:16	15:3 25:24
72:14,15	37:3 39:2	180:16 182:13	tracking 162:12	28:6 30:7
Texas/New 31:6	50:16 51:22	182:19 195:19	162:22 185:21	31:18 32:14,20
32:11	55:17 57:20	208:10 210:8	tracks 163:12	35:9 38:14
texting 79:13	58:19 59:13	times 17:1,3	transcript 1:9	46:6,11 47:25
thank 16:20	60:22 65:1	53:7,25 75:20	210:7	48:25 49:24
36:8,12,23	68:8 72:11,20	89:18 116:10	Transcription	50:12,13,19
46:1,2,4,14,16	74:21 76:16	timing 62:16	1:14	53:22 58:25
49:11,13,16,19	79:19 86:17	95:4,5,15	transfer 41:16	62:9 68:22
76:13,14 77:2	88:3 135:23	208:9	133:16 135:15	72:10 76:6
77:3 80:2,12	142:1,4 157:3	today 5:14 6:6	135:18 136:12	78:6
88:16,23 89:7	201:4 206:2,2	8:18 29:1	137:8,9,25	triangle 66:4
93:14 96:18,24	thinking 190:9	32:16 36:14	138:1 139:6	105:18
97:6 101:5	third 34:10	50:3 65:25	151:17 152:8	triangle-looking
106:7 111:7,17	40:16 51:1	66:13 67:15	transferred	97:19
115:22,24	54:23,25 109:2	80:18 190:15	135:21 151:8	tributary 44:15
116:11 117:15	143:21	toe 97:22 98:24	198:18 199:8	tried 37:15
118:6 137:3	third-party	tomorrow	200:14	57:10
138:15 140:15	144:22	209:11	transfers 42:13	triggers 186:1
142:15 146:25	thought 10:9	tool 61:20	137:11 199:20	186:22
149:17 183:19	13:9 16:15	top 18:22 19:12	200:9	trip 111:9
207:23 208:7	47:6 70:2	97:15 100:1	transitioning	trips 111:5
209:11	141:6 191:12	103:17 107:25	114:18	trouble 165:21
theory 51:6,8	thousand 72:16	110:12 112:19	transmission	truck 123:8,14
59:18,21 60:8	75:3	Tornillo 148:18	203:15	true 40:24 56:17
70:4 72:14,15	threat 37:25	148:19	transported	63:19 65:13
thesis 81:20	threatening	total 74:23	162:1 165:18	73:5,23 74:4
85:19	39:16	75:12 160:16	transporting	210:6,7
They'd 129:19	three 68:19	161:9 164:25	162:22	truth 78:13,13
thing 10:5 20:22	87:10 114:7	165:2 168:19	travel 113:4	78:14
21:13,21 71:12	115:14 153:4	168:21 169:13	traveling 130:7	try 123:8 155:1
72:2 86:15	174:2 193:3	171:5,9 173:5	travels 89:16	208:24
115:4 140:23	threshold 41:9	173:7 176:15	treasurer/man...	trying 18:21
142:7 157:1	thumb 15:18	176:22 178:5	30:10	22:6 41:1
176:7 188:13	16:1,7	180:5,13 181:4	treat 17:17	64:21
209:10	tied 24:4	182:21 197:12	treated 146:4	tunnels 162:1
things 8:13	time 6:1 8:2 9:20	totalled 74:13	181:23	turn 24:5,11
19:20 28:21	10:12 12:22	tour 66:22 92:20	treating 32:8	36:12 49:3
52:18 61:16	14:22 15:6	97:23 100:11	treatment 66:21	63:10 68:4
191:22	27:5,10 29:4	100:24 108:13	66:24 145:15	72:17 92:15
think 6:5,19 7:3	30:1 44:18	111:2 116:6	196:9	131:7,12,15
8:23,24 9:3,9	56:15 61:15	120:22,23	treaty 19:8	turned 5:10 65:9
10:25 14:10,25	62:11,17 76:15	126:1,7,14	21:16 53:1	turning 51:4,18
15:12 16:7	76:16 98:6,25	129:11	150:6 167:18	52:11 54:1,23

55:24 60:18 63:25 64:23 74:9 turns 92:18 twice 9:9 two 27:20,22 28:20 34:4 39:13 43:13 45:12 50:7,9 72:3,7,7 85:20 90:23 91:11 93:21 103:11 110:24 116:13 117:20 120:20 121:22 125:24 128:5 130:25 132:23,23,24 141:18 144:9 152:21 167:14 172:5,14 173:8 183:18 191:16 205:18,18,25 206:22,22 208:23 TX 210:24 type 22:23 94:24 133:6 162:23 178:10 types 58:16 94:22 133:13 133:15 typically 110:15 127:3 159:22 174:12 185:1 201:3	186:10 194:17 201:22 U.S./Texas 28:10 ultimately 42:20 42:25 un-relate 41:6 unambiguous 48:17 unanimous 65:3 65:4 uncertain 48:14 undercuts 60:8 underestimate 181:16 undergraduate 81:9 underlying 14:11 35:3 51:15 52:12,14 54:24 55:25 underneath 104:19,23 122:15 underscore 136:15,16 138:6 understand 6:22 13:20 14:1 58:16 61:1 70:10 86:25 87:23 115:5,17 141:3 155:17 183:13 understanding 13:23 14:16 15:20 46:8 48:18 58:5 108:3 129:18 141:12 156:21 185:6 190:17 understands 46:5 understood 18:9 28:7,23,23 44:9 56:9 57:6 undiminished	38:19 44:16 undisputed 39:9 undoubtedly 41:7 unfair 67:22 unfortunately 36:25 54:14 unified 31:9 51:23 55:3 unique 32:5 62:24 unit 31:3 32:8 51:21 52:2 59:4 63:20 United 1:1 3:1 5:2,4 6:4,24 7:6 11:1,5,5 12:3 14:4 15:8 15:14,15 16:16 17:6 28:4 29:15 30:6,17 30:25 31:17 32:13 33:6 36:20 37:6,16 37:22 38:1,2,4 38:8,25 39:17 40:20 42:22 43:22 45:7,21 50:22 51:12 53:4,11 57:12 57:20 77:10 87:6,7 89:19 132:18,21,22 136:17,22 138:4 139:20 139:24 140:3 141:12 147:20 150:9,22 152:19 168:22 168:25 169:4 208:15 209:6 unity 31:15 university 81:4 81:5 unknown 14:9 unquote 32:19 unregulated	41:6 unrelated 71:19 unrestricted 62:12 upcoming 154:7 update 176:10 182:1,3,10 194:9 updated 180:3,6 180:7,8,10,24 181:1,10,25 196:15 updates 153:16 updating 153:9 175:21 180:13 181:22 uploaded 16:3 upper 96:15 100:5 102:18 103:24 104:9 162:14 upstream 19:23 24:11 92:19 97:13 102:8 103:7 107:23 116:16 119:20 120:4 121:4 122:10 123:1 130:25 178:17 178:19 urban 121:21 URGWOM 162:16 163:2 164:22 178:16 179:2,8,11 202:25 203:1,5 204:18 US-116 145:1 US-367 135:7 US-380 87:23 US-436 147:22 US-458 134:18 135:7 US-511 135:14 136:9,14 139:7 141:12 151:13 US-512 137:22	138:5 US-547 87:24 US-55 201:23 US-561 87:25 US-563 88:1 usable 21:1 154:9,10,14,19 155:6,12 156:9 156:14 157:19 157:25 158:10 159:1 161:16 165:1,5,8,10 166:12 175:20 176:13 178:21 180:4,8,11 use 12:23 13:4,5 18:3 22:2 23:3 23:5,10 24:10 24:17 25:13 26:9 37:18 42:4,11 44:16 51:3 55:22 56:1,4,25 57:15 58:2,8 58:17 62:5 63:6,7 64:7 68:12 70:3 95:25 99:1 100:20 105:5 108:22 111:18 124:16 127:7 128:11 129:4 134:1 136:7 139:24 140:4 142:24 143:2 143:10,21 144:20,24 145:13,16,19 145:23 146:13 146:15,18,21 146:25 147:14 147:15 148:22 149:21 158:8 158:17 163:9 167:20,22 168:11 170:7 170:21,23
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

U

U.S 3:2 10:14
48:22 54:3
75:13 77:19
87:21,21,21,22
87:22 133:23
135:11 137:4
139:4,12 150:6
151:15 153:8
159:19 167:18
169:14 171:8

173:11 179:25 193:5 204:1 206:9,12,17 useful 61:6 user 64:7 users 35:15 41:15 61:17 63:24,25 64:19 68:24 74:1 uses 45:24 61:15 146:7 USGS 24:23 Utilities 145:18 146:2 Utility 146:11 utilize 145:8 utilized 59:1	191:18 vast 113:6 vegetation 81:24 92:23 98:8 108:9 velocity 100:6 verify 194:1 version 207:12 207:13 versions 31:25 versus 5:3 21:9 75:14 viability 39:16 video 87:3 91:22 92:2,4,7,21 93:1 96:12,16 96:25 103:21 103:23,25 104:5 106:1,9 106:16 112:5 112:24 117:16 117:24 118:16 122:23 123:6 123:17 130:17 130:19,22 131:1,9 view 27:7 30:12 30:14 31:23,25 32:5 108:2 117:17 views 27:7 violation 33:15 57:9 72:12 73:22 virtual 10:3 11:23 volume 1:5 115:15 119:22 160:8,21,24 161:3 162:19 164:15 165:11 165:15,25 167:2,3 172:18 172:20 173:12 173:14 176:15 177:23,24 178:20 179:7	179:21 181:4 188:19 196:6,7 197:19 198:3 198:18 200:2,4 200:7,14 volumes 11:14 165:13,17 188:21 voluminous 52:16 VS 1:5	66:21 91:1 124:16 196:9 wasteway 98:5 107:4,5 128:3 128:18 wasteways 107:7 125:18 127:2,3,15,17 127:20 128:11 128:16 137:11 150:22 151:19 159:15 191:25 watch 74:5 water 18:5,9 19:4,18,24 20:19 21:1,1 22:1,23 23:3,4 23:6,9,22,24 24:11,13 25:13 25:15,15 26:6 26:10,14 29:7 29:8 30:2,12 31:4,4,5,7 33:5 35:16,16 36:5 36:6,17 37:18 37:21 38:2,20 39:3,17,23 40:22,23 41:10 41:15,17 42:3 42:3,5,11 43:10,11,16 44:11,12,14,17 45:3,12,20,24 46:7,10 47:2 47:23 48:3,5 48:16,19,24 49:2,7 50:8 51:17 52:6,9 52:15,23 53:8 53:10,15,16,22 53:24 54:6,9 54:11,12 55:16 55:17,19 58:17 59:5,6,25 61:17,18 62:2 62:5,25 63:4,7 63:24,25 64:3	64:3,6,7,19 65:21,23,25 66:23 67:11,12 67:15 68:12,14 68:14,24 69:4 69:5,5,9,15,20 70:3,12,17,19 70:21 71:11,13 71:17,20,23 73:15,21 74:1 74:3 75:21,23 80:20,21 81:11 81:17 82:11,17 82:20,22,25 83:2,18 84:13 84:22,24 85:22 86:2 90:4 92:11 93:8,9 94:5,7,19,22 94:23,24 95:18 97:4,7,9,10,12 97:18,24 98:5 98:7,21,22,24 98:25 99:7,9 99:11 101:11 101:18,22,23 103:7,13,17 104:7,8,12,14 104:22 106:13 106:17 107:1,3 107:10,12,13 107:25 108:6,8 108:16 110:7 110:13,14 112:1,7,11 113:1,3,18 114:22,25 115:6,15,19 116:18,20,20 117:2,4,7 118:10,11,12 118:18,18,24 119:12,19,21 119:22,24 120:7 121:12 121:13,20,24 122:13 123:3,4
V		W		
vague 207:7 valedictorian 81:14 valid 74:8 valley 35:4 58:10,14 63:12 102:22 103:15 104:10 105:14 105:20 109:10 109:13,16 113:7 114:17 114:18,24 126:7,10 129:21 196:5 valleys 45:1,1 value 188:7 206:14,15 208:2 values 206:18,20 208:4 vantage 118:8 variable 95:8 various 14:7 18:13 24:17 25:9 115:20 130:6 133:22 190:14 vary 176:14		walk 49:17 86:5 153:1 walking 133:20 Wallace 2:22 4:5 6:15,16,17 46:3,4,16 209:2,4 want 5:16 12:10 12:19 16:4 17:8 20:7 22:16 32:14 34:18 49:5,10 59:16 64:20 69:13 154:24 154:25 157:1 207:20 wanted 12:5 15:13 22:24 131:2 wanting 143:10 wants 64:8 88:25 Warren 133:18 147:9,12,13,19 147:24 148:2,5 148:22 wasn't 60:4 141:16 waste 54:25 55:2 55:7,8,11,13 59:7 127:24 148:17,18 wasted 55:19 wastewater		

123:19,23	163:1,13,22	34:12 49:9	29:24 72:9	whatsoever
124:1,10,24	164:2,2,4,7,8	51:23 55:2	74:13 78:22	67:21
125:9,14	164:11,12,15	59:22 63:18	91:17 93:2	When's 159:21
126:18 127:6,8	164:20,25	64:10 65:9	96:3 102:5	184:24
127:9,10,12	165:1,2,3,4,5,8	68:17 97:16	134:20 140:9	whichever 25:18
128:15 129:1	165:8,10,15,17	100:15 103:13	159:5 172:20	128:1,2
130:1,2,4,11	165:21,25	120:3 149:19	176:17 177:11	white 94:6 97:21
131:17,23,25	166:4,6,7,9,10	151:2,15	178:1,1 181:5	98:7,23 100:13
132:8 133:4,7	166:12,14,17	152:12 168:4	190:1	111:21 117:3
133:14,14	166:21 167:2,5	179:20 191:8	weather 163:6	whiteboard
136:18,19,23	168:6 169:6	196:16	202:15	18:15
136:25 137:2	172:18 175:1	ways 74:11	Website 194:17	whitish-colored
138:2,3 139:10	175:20 176:10	131:8 194:20	194:17,18	113:3
139:12,17,21	176:13,20,22	we'll 5:1,16 6:10	Websites 194:20	wholly 30:17
139:25 140:4	176:25 177:4,4	15:11 16:18	Wechsler 2:13	widened 121:15
142:24 143:4	177:10,11,21	32:22 35:12	4:6 6:7,8,9 7:2	wiggles 115:12
143:10,16,19	177:23,24	46:3 49:17	7:3,13,15 9:24	wildlife 85:18
143:22 144:6	178:1,3,12,12	56:19 72:10	10:25 11:13,18	willing 58:23
144:18,21	178:17,18,19	76:19,25 92:13	46:17,19 49:4	59:12
145:14,15,18	178:20,21,22	97:13 106:4	49:11,15,16	windfall 45:17
145:19,24	178:24 179:1,7	118:20 209:9,9	76:14 77:15,18	winter 185:5
146:1,1,9,11	179:19,24	209:9	78:4 79:20	withdraw
146:14,19,21	180:4,5,6,7,9	we're 8:25 10:6	88:18,23	141:17
147:1,5,16	180:11,13,18	10:6 17:4,8,9	110:17 111:7	withdrawals
148:7,10,14,21	180:22,22,24	17:12 20:18	141:8,21	44:2
148:25 149:12	180:25 181:1,1	22:6,9 25:6	154:21 155:14	witness 5:13
149:13,20,21	181:10,13,19	52:25 54:14	156:19 158:12	7:12 8:17
149:25 150:7	181:21 182:5	57:1 58:7	158:18 184:1	10:21 11:22
150:16 151:2,9	183:8,9 185:9	64:12,21 73:7	205:14 206:2	15:4,7,8 17:23
151:10,22,24	186:1 188:19	75:16 76:15	207:5	25:11 35:19
152:10,13,15	189:5 190:18	77:16 78:22	Wechsler's 6:21	56:20,20,24,24
152:20,24	191:25 192:3,7	94:2 97:14	week 8:25	57:4,4 76:17
153:3,5,9,16	195:3 196:8	100:9,12 106:2	weekend 8:16	77:1,6 78:9,15
154:9,10,10,14	197:20,23	106:5,5,19	weeks 17:7,9	78:19 79:2,5,9
154:14 156:14	198:3,6,12	107:9 112:18	22:19 25:4	86:19,20
156:14 157:19	199:24 204:9	113:4 114:18	28:11 35:23	110:19 115:9
157:19,25	204:14,21,25	116:23 117:19	wells 56:25	115:21 149:14
159:1,10,11,25	205:2,6,7,11	117:25 118:2	58:10,13 75:18	156:24 157:16
160:5,12,15,16	205:13 206:10	122:1,10 123:1	went 27:19	158:22 182:20
160:19,21,23	207:3	130:5,24,24	77:21 131:24	183:7,14
160:24 161:3	watered 110:15	131:7,11,12	weren't 61:15	190:21 191:10
161:10,16,17	114:25	142:4 155:16	Weslayan	208:8,25
161:18,20,22	waters 38:22	166:23 172:9	210:24	witnesses 9:8
161:22,24	144:24	182:8,11 183:1	west 90:6 100:10	26:3,4 29:2
162:6,9,12,15	way 9:13,23,25	188:11	110:3,9 112:8	30:8 35:22
162:18,20,20	9:25 10:4 18:7	we've 13:2 18:17	112:21 113:4	38:24 43:25
162:21,23,23	27:23 32:10	20:6,6,24	wet 164:7	44:18 46:14

48:8 50:2	120:23 130:21	009 136:15	16 4:4 53:3	1979 54:2,4
51:25 53:12,22	150:3 152:25	01 86:10 89:9	120:19 121:1	69:18 73:1
54:3 55:4	153:3,5,21	04-30-22 210:20	16-inch 21:9	136:11 150:24
57:12 61:7	158:3,3 159:13	05 98:14	17 124:20,23	1980 54:6 59:1
71:3 78:23	164:6,23	06 99:20	18 125:22	62:8,9,17
208:16	165:21 170:19	07 102:6	18th 3:3	138:1
wondering 8:13	173:7,9,11		19 44:13 128:9	1980s 55:15
110:18	176:14,16	1	1902 90:11	57:11 114:8
word 16:17 49:8	181:4,6 183:1	1 19:11 20:3	1905 90:12	1982 62:8
51:3 59:16	183:3 184:25	26:2 28:7 29:2	1906 37:23	1985 31:25
words 51:4 67:5	185:12 195:3,6	29:12 30:19	52:24 167:17	70:25
67:16 71:1,18	197:9,10 198:4	31:5 33:10	168:1 169:2,23	1st 164:16
work 63:1 83:11	199:1,12 200:2	35:24 43:16,17	1916 94:15	
84:3,21 143:14	200:19,24	54:18,22 55:14	1920 133:17	2
144:13	201:12,14,16	55:16 65:11,12	142:18,22,23	2 47:18 76:7
workday 179:16	203:14,16	66:18 67:9,10	143:8,23	87:4,11 91:14
worked 23:21	206:24	68:22 70:24	145:17,21	94:12
working 8:22,25	year's 170:18	71:1,7,15 76:6	146:12,17	20 77:1 96:10
48:1 82:1	yearly 168:21	87:1,4 90:2,22	147:2	129:7 185:5
153:21 195:4	171:6	144:6 170:3	1921 142:18	20-minute 76:18
208:16	years 27:17	189:1	1924 148:24	140:11
works 122:6	37:13 40:9	1's 65:22 72:25	1928 144:6	200 87:23
165:19 191:9	43:8 48:16	144:17	1937 24:21	2000s 39:12
Worldwide 78:5	59:24 60:3	1.1 74:25 75:4	134:14	2001 145:3
210:23	63:3 66:7 68:6	10 47:17 87:16	1938 18:24 19:6	2002 70:25
worse 63:23	68:20 69:4,8	87:21 107:17	20:9 21:11,22	2003 72:4
75:15	69:19 70:8	129:19	21:23 22:10	2004 72:4
worth 142:2	71:3,6,15,22	100 190:2	23:6,7 24:6,14	2005 54:6 59:1
wouldn't 7:4	72:3,7,11,15	1000 2:4	24:21 25:5,12	65:21 69:18
wrong 13:21	72:18 73:16	1055 87:17	25:22,24 27:2	71:4 73:1
27:6,21,21,22	161:2	1061 87:17	27:10,14 38:13	2006 49:25 71:6
WW 128:14	yellow 70:23	11 108:23	44:14 47:1	71:24 73:6,13
WW32 128:17	71:5 92:1	11:02 1:12	52:1 53:18	74:16
	yesterday 6:22	113 2:9	54:2 59:17,19	2008 37:14
X		116 87:7	59:19 60:4,8	40:18 41:8,21
	Z	12 109:20	64:13 70:4	45:16 57:16
	zero 88:13	12,000 105:3	1940 68:17	138:19,21,24
Y	zone 129:1 130:2	12:50 76:15	1941 145:25	139:9 156:4
Y 171:7	132:1,8	13 114:10	1950s 45:21	170:12 174:2
y'all 18:18	zoom 1:12 89:15	1300 2:23	1951 26:7 27:16	2009 82:2,14
Yeah 77:20	94:4 97:25	14 116:1	54:4 65:19	2011 48:22
105:9 116:10	125:2	140 126:22	148:1 169:8	82:14,18
142:5 208:21		141 1:1 5:3	1951/1978 26:22	2012 16:24
year 17:17 53:13	0	15 27:17 96:10	1954 57:2	2013 82:20 84:8
54:18 65:12	0009 136:16	120:11	1978 26:7 27:16	84:10
70:14,16,20	0011 138:6	1508 2:18	57:15 62:20	2015 84:10
73:15,15 75:6	0084 144:3	15th 186:19	65:20 169:8	2017 64:14
83:23 84:3,16				

2018 111:1 120:24 192:21	31st 201:15	5:00 208:10	148:13
2019 74:16 186:19	32 128:18	209:13	720 2:10,24
2020 202:1	325 2:14	50 11:14	77027 210:24
2021 1:12 96:14 185:4 210:17	34 180:11	50,000 47:17	790,000 22:20 23:16 24:1 52:6,8 70:17
2022 185:5	35 180:12	119:10	7th 2:23 210:17
206 87:13	350,000 99:3	500 2:4	<hr/> 8 <hr/>
21 133:12	36 4:4 87:21 181:9 191:15	505 2:15,19	8 55:12 87:4 102:25
210 4:10	363 87:13	508-6281 2:24	8-inch 21:9
214 87:12	367 87:7 133:23	511 87:7 135:11 136:15 141:7	80 4:8
223 210:23	37 87:1 191:14 195:1,1	141:19	800-745-1101 210:25
2265 87:24	370 3:3	512 87:7,18 137:4,5 139:7	80202 3:3
227 57:2	38 21:14 25:24	141:7,12,19	80203 2:24
2270 87:19,19	391 87:14	151:13	80205 2:9
23 153:1	395 87:14	54 87:22	8262 210:20
23-minute 16:4	<hr/> 4 <hr/>	55 50:2 87:6 201:22	84 87:5
235 210:24	4 1:12 16:4 24:4	556 87:25	844-1375 3:4
2373 87:20 140:25 141:9 142:10	51:2 54:19	564 88:1	87501 2:14,19
239-4672 2:19	68:23 87:4,11 95:25	565 88:1	<hr/> 9 <hr/>
2394 88:1	40 27:17 40:9 43:8	57 20:17 21:1 50:25 52:13 54:13 65:1	9 105:5,15 130:18
24 159:6	40,000 112:13 113:11	72:22 73:2,8 73:17 74:17 76:9 173:14	916 2:5
2464 87:20 192:19	400 135:24	57/43 19:10 20:15 21:3 22:5 73:5	94,000 73:14,15
27 167:21	402 87:14	595 88:1	95814 2:5
2701 2:9	409 87:14	<hr/> 6 <hr/>	986-2637 2:15
275 87:23	41 87:21	6 87:4	999 3:3
279-7868 2:10	428 87:14	60 11:14	
29 170:7,22 172:1	43 22:7,8,9 54:13 68:7 72:1,5 73:10 74:19 172:21	60,00 150:2	
<hr/> 3 <hr/>	436 87:7	60,000 150:1 168:2,8	
3 51:2 76:10 87:4,11 93:18	439 87:15	600,000 168:7	
3.024 54:10	446-7979 2:5	661 87:8 186:10	
3.5 68:20	450 126:22	67 87:23	
3:15 140:11,14	458 87:7	697 87:19	
30 170:23	46 4:5,5 87:22	6A 138:8	
30(b)(6) 25:11	47 87:22	6B 138:8	
30,000 108:20	470 87:15	<hr/> 7 <hr/>	
300 47:8	49 4:6	7 55:12 87:4	
3000 210:24	<hr/> 5 <hr/>		
303 3:4	5 87:4		
31 176:20			