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BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA WATERFIX WATER )  
RIGHT CHANGE PETITION )  
HEARING )

JOE SERNA, JR. BUILDING  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
COASTING HEARING ROOM  
1001 I STREET  
SECOND FLOOR  
SACRAMENTO, CALIFORNIA

FRIDAY, AUGUST 19, 2016  
9:00 A.M.

PART 1A

VOLUME 12

PAGES 1 - 257

Reported by: Megan Alvarez, RPR, CSR No. 12470  
Certified Shorthand Reporter

1 APPEARANCES

2 CALIFORNIA WATER RESOURCES BOARD

3 Division of Water Rights

4 Board Members Present:

5 Tam Doduc, Co-Hearing Officer  
Felicia Marcus, Chair & Co-Hearing Officer  
6 Dorene D'Adamo, Board Member

7 Staff Present:

8 Diane Riddle, Environmental Program Manager  
Dana Heinrich, Senior Staff Attorney  
9 Kyle Ochenduszk  
Jean McCue  
10 Jason Baker

11

12 PART I

13

FOR PETITIONERS:

14

California Department of Water Resources:

15

James (Tripp) Mizell, Esq.

16

Thomas M. Berliner, Esq.

17

18 INTERESTED PARTIES:

19

The U.S. Department of the Interior:

20

Amy L. Aufdemberge, Esq.

21

22 State Water Contractors:

23

Stefanie Morris, Esq.

24

California Water Research:

25

Deirdre Des Jardins

1 INTERESTED PARTIES (Continued):

2 Pacific Coast Federation of Fishermen's Associations and  
3 Institute for Fisheries Resources:

4 Jamey Volker, Esq.  
5 M. Benjamin Eichenberg, Esq.

6 Westlands Water District:

7 Philip A. Williams, Esq.

8 For Brett G. Baker, Local Agencies of the North Delta,  
9 Bogle Vineyards/Delta Watershed Landowner Coalition,  
10 Diablo Vineyards and Brad Lange/Delta Watershed  
11 Landowner Coalition, Stillwater Orchards/Delta Watershed  
12 Landowner Coalition, Islands, Inc., SAVE OUR SANDHILL  
13 CRANES and Friends of Stone Lakes National Wildlife  
14 Refuge, City of Antioch:

15 Osha Meserve, Esq.

16 San Luis & Delta-Mendota Water Authority:

17 Hanspeter Walter, Esq.

18 North Delta C.A.R.E.S.:

19 Suzanne Womack

20 For Planetary Solutionaries:

21 Patrick Porgans

22 For Snug Harbor Resorts, LLC:

23 Nicole S. Suard, Esq.

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1           AUGUST 19, 2016 - FRIDAY           9:00 A.M.

2                           P R O C E E D I N G S

3                           --o0o--

4           CO-HEARING OFFICER DODUC: Good morning,  
5 everyone. It's 9:00 o'clock. Welcome back to the  
6 WaterFix petition hearing.

7           Let me wait for the murmurs to end. Hello?

8           All right. Again, I'm Tam Doduc, hearing  
9 officer. With me are, to my right, Board Chair Felicia  
10 Marcus, Co-Hearing Officer. To her right,  
11 Dorene D'Adamo. To my left are Dana Heinrich,  
12 Diane Riddle, and Kyle Ochenduszk. We also have other  
13 staff assisting with us today.

14           The usual quick announcements to begin with.  
15 By now, hopefully you have identified the exit closest  
16 to you. If an alarm sounds, please leave, take the  
17 stairs, or go into a protective vestibule if you cannot  
18 use the stairs. For those who are using the stairs, we  
19 will walk down to the first floor, leave the building,  
20 and gather up in the park across the street.

21           Second announcement, we have a court reporter  
22 here, Megan. Welcome. We are also recording and  
23 Webcasting this hearing. When you provide your comments  
24 today, please speak into the microphone and begin by  
25 stating your name and your affiliation.

1           Third, and as you all know by now, my most  
2 favorite announcement of the day: Please take a moment  
3 and check all your noise-making devices to make sure  
4 they're turned off, silent, vibrate, do not disturb,  
5 anything that will not cause a ding or any noise that  
6 will attract my attention during today's hearing. All  
7 right. The most important announcement of the day.

8           Before we get back to Ms. Des Jardins'  
9 cross-examination, two things. One, I want to do a  
10 schedule check-in for next week.

11           You all have been blessed, whether you realize  
12 it or not, with a much kinder, gentler persona of me the  
13 last few weeks. And as a result, things haven't gone as  
14 quickly as I would like in terms of scheduling-wise. So  
15 we are considering having a bit of a longer day next  
16 week.

17           And so my first question is to the  
18 petitioners. Would your witnesses be available -- and  
19 I'm thinking now for your engineering team as well as  
20 your modeling team -- will they be available until  
21 6:00 o'clock for Tuesday, Wednesday, Thursday, and  
22 possibly -- hopefully not Friday, but we'll see.

23           MR. MIZELL: My expectation is they will. But  
24 I will check with them this morning, and I can let you  
25 know if that changes.

1 CO-HEARING OFFICER DODUC: And then, for the  
2 other parties, are there any concerns, objections if we  
3 were to go to a longer schedule next week?

4 MS. Womack, if you can come up and speak into  
5 the microphone.

6 MS. WOMACK: Hi. Suzanne Womack, Clifton  
7 Court LP. What date and how long? I need more  
8 specific.

9 CO-HEARING OFFICER DODUC: No later than  
10 6:00 p.m. most likely Tuesday, Wednesday, and Thursday.  
11 Hopefully not Friday. I'll let you know. If there's a  
12 particular day that's problematic for you, could you  
13 shoot us an e-mail and we'll try to accommodate you?

14 MS. WOMACK: Right. Okay. I just wanted to  
15 know a little more specific. Thank you.

16 CO-HEARING OFFICER DODUC: Ms. Meserve?

17 MS. MESERVE: Good morning. Osha Meserve for  
18 various Delta protestants. I would just note that six  
19 of the next eight business days prior to our case in  
20 chief being due, we're here in hearing trying to conduct  
21 cross-examination and learning a lot more information  
22 which is relevant to our case in chief and which was not  
23 included in the written materials.

24 I would just say it's very burdensome and  
25 prejudicial to protestants to try to have even beyond



1 the full day into the rest of the day.

2           And I was going to informally request  
3 perhaps -- I mean, it might be worth it to us to  
4 actually put off cross, focus on our case in chief, and  
5 come back to cross because, you know, for a small  
6 practitioner such as myself -- and we're, you know,  
7 small -- thousands of individuals affected by this  
8 project across the Delta up against the power of the  
9 federal and state governments, trying to keep up with  
10 this and get our case in chief in -- I know that we've  
11 had some time to work on it, but it's very challenging,  
12 and I do believe it's prejudicial the way the schedule  
13 is laying out.

14           CO-HEARING OFFICER DODUC: Thank you.

15           Mr. Eichenberg?

16           MR. EICHENBERG: I'm based in the Bay Area,  
17 and so would probably have to arrange for accommodations  
18 here if we were to go until 6:00. It's just a question  
19 of commute.

20           And then -- so that would add to our expense  
21 that our firm is already bearing. We're not necessarily  
22 being paid for this work. We're representing a client  
23 that doesn't have a lot of funds. So I think a longer  
24 hearing would necessitate greater outlay of funds for a  
25 party that doesn't have a lot.

1 CO-HEARING OFFICER DODUC: Okay. Thank you.

2 And Ms. Des Jardins?

3 MS. DES JARDINS: Yeah. I'd like to note that  
4 there's a great deal of information on the modeling  
5 that's being provided outside of the hearing. This is  
6 against the ruling in the English vs. the City of  
7 Long Beach, and it's necessitated me doing very  
8 extensive Web searches for information on the modeling.

9 It's not organized. It's not provided in any  
10 coherent framework. And I'm having to do an enormous  
11 amount of work for my case in chief. And it is very  
12 reticent of me trying to also do cross-examination,  
13 i.e., cross-examination --

14 CO-HEARING OFFICER DODUC: So that's an  
15 objection to a longer day next week?

16 MS. DES JARDINS: Yes.

17 CO-HEARING OFFICER DODUC: Thank you.

18 MS. DES JARDINS: So the more time we have to  
19 prepare --

20 CO-HEARING OFFICER DODUC: Thank you. All  
21 right. We will take all that under advisement.

22 MS. AUFDEMBERGE: I have a problem.  
23 6:00 o'clock is difficult for me. And the potential  
24 witness that we would have next week in the modeling  
25 team, she's not here, so I can't discuss that with her

1 either. But I just want to be on record that 6:00 is  
2 very tough.

3 CO-HEARING OFFICER DODUC: Okay. In that  
4 case, I will go on record and be not so kind and gentle  
5 anymore.

6 With that, a reminder that when we reconvene  
7 Tuesday, we will be meeting here. But Wednesday,  
8 Thursday, Friday, we will be back to the Byron Sher  
9 Auditorium.

10 And with that, Mr. Ochenduszko, I believe you  
11 sent out -- or someone sent out e-mail with respect to  
12 exhibits being used for cross-examination. And could  
13 you please provide a reminder of that to the parties?

14 MR. OCHENDUSZKO: Absolutely. Just wanted to  
15 point out that yesterday an e-mail went out to the  
16 service list. And the gist of it was mainly that  
17 because we have a lot of the exhibits that are coming in  
18 for cross-examination, it would really help out our  
19 staff to have an exhibit identification sheet. And then  
20 that would help us post online so that everybody would  
21 be able to track along with the cross-examiner about  
22 which exhibits they marked for identification.

23 So moving forward, we're asking that that  
24 exhibit identification sheet be submitted with either  
25 your flash drive, or if you're going to submit

1 cross-examination exhibits via e-mail, that that  
2 electronic Excel spreadsheet that's up on the screen  
3 right now also be included.

4           And wanted to publicly thank Ms. Des Jardins  
5 for being one of the first ones to use this form to help  
6 us organize some of the exhibits that she's going to be  
7 using today.

8           MS. RIDDLE: Be sure to carefully mark each  
9 exhibit as well with a number on it so that we can match  
10 the sheet to the document provided.

11           MR. OCHENDUSZKO: And the final clarification  
12 that we wanted to provide is that this sheet and using  
13 the flash drive methods is acceptable for  
14 cross-examination exhibits. For cases in chief, we're  
15 still requesting that parties use the FTP site that  
16 everybody has been e-mailed their individual access for.  
17 If you've lost your account log-in, by any means please  
18 feel free to e-mail me offline and I'll be happy to help  
19 you.

20           Thank you.

21           MR. EICHENBERG: Just a quick suggestion since  
22 it sounds like you're not going to be your kinder,  
23 gentler -- we could perhaps start at 8:00 and end at  
24 5:00. That would be easier for us.

25           CO-HEARING OFFICER DODUC: I assume that those

1 with a commute might have a problem with that.

2 But not seeing any -- okay. Again, we'll take  
3 it under advisement.

4 And with that, Ms. Des Jardins, please  
5 continue with your cross-examination.

6 MS. DES JARDINS: Thank you.

7 --o0o--

8 CROSS-EXAMINATION

9 MS. DES JARDINS: Can you -- Jason, is it?  
10 Can you pull up Exhibit 18?

11 So, Mr. Anderson, this is a very good  
12 presentation for the PPIC and very informative.

13 I wanted to go to page 11.

14 So on this page yesterday, we finished with  
15 the part on climate change on this page. You go over  
16 the Northern Sierra eight-station index.

17 And these are stations in the watershed for  
18 the major reservoirs in the Sacramento -- the Sierra Rim  
19 reservoirs, correct?

20 WITNESS ANDERSON: Sorry. Michael Anderson,  
21 Department of Water Resources.

22 Yes, so for this slide, the station index,  
23 which is an index developed within the Department of  
24 Water Resources is a measure of wetness in the  
25 Sacramento Basin as shown on the map but the blue

1 triangles the locations of the eight weather stations  
2 and the average of the precipitation at those stations  
3 creating the index.

4 MS. DES JARDINS: So this is a good measure of  
5 the precipitation in the watersheds that flow into the  
6 major reservoirs?

7 WITNESS ANDERSON: This is one indicator.

8 MS. DES JARDINS: So this is -- this is a  
9 measure of precipitation in the watershed that flows  
10 into the Shasta, Folsom, Oroville, the major reservoirs,  
11 correct?

12 WITNESS ANDERSON: In the Sacramento Basin,  
13 yes.

14 MS. DES JARDINS: Okay. Can we go to the next  
15 page?

16 So in the eight-station index, it shows that  
17 2013 to 2014 was only the eighth driest water year on  
18 record?

19 WITNESS ANDERSON: Yes. For this particular  
20 index, water year 2014 came in as the eighth driest in  
21 the period of record.

22 MS. DES JARDINS: Earlier you showed the  
23 statewide precipitation index and that was record dry.

24 Was that not partly because it was drier in  
25 Southern California?

1           WITNESS ANDERSON:  So there are two elements  
2  to that, the first being with the statewide depiction.  
3  Those were done on a calendar year, which is different  
4  than the water year.  Calendar year being January 1 to  
5  December 31st.  Water year starting October 1, in this  
6  case 2013, ending September 30, 2014.

7           And for this particular time period, calendar  
8  year 2013 was the driest on record, bracketed on each  
9  end by atmospheric river events that influenced the  
10 water year totals on each end.

11           MS. DES JARDINS:  Calendar year 2013 was the  
12 driest on record for statewide precipitation, correct?

13           WITNESS ANDERSON:  And for the Sacramento  
14 Basin, both.

15           MS. DES JARDINS:  The calendar year was?

16           WITNESS ANDERSON:  Yes.

17           MS. DES JARDINS:  Okay.  Thank you.  I don't  
18 have a slide for that.

19           Let's go to the next slide.  So this is the  
20 statewide precipitation, and this indicates that -- this  
21 lists the driest precipitation statewide, correct?

22           WITNESS ANDERSON:  Yes.  For this slide here,  
23 we introduce yet a third accounting of a year.  This  
24 would be the precipitation year which runs from July 1st  
25 to June 30th.

1           And for this particular representation, which  
2 comes from Western Region Climate Center, which is the  
3 regional climate center for the Western United States,  
4 and part of the state climate program, which is a  
5 cooperative program -- don't need to digress further.

6           Anyway, with this particular plot, this shows  
7 a three-year accumulation, so the deficit over the three  
8 years starting on July 1st, 2011. And in that  
9 three-year run, where it ends up, it ends up just  
10 slightly below the 1974 to '77.

11           MS. DES JARDINS: But it's not -- it's not  
12 that much below the 1974 to '77 drought, which is the  
13 most severe recent drought, at least short term,  
14 correct?

15           WITNESS ANDERSON: Right. And for '76,  
16 '77 for the two-year drought, it holds the extreme.

17           MS. DES JARDINS: Yeah. And the CalSim  
18 modeling has indicated previously that the State Water  
19 Project and Central Valley Project could meet all  
20 in-basin obligations in a repeat of the '76 to '77  
21 drought?

22           WITNESS ANDERSON: I'm not familiar with  
23 modeling testimony at all. I'm sorry.

24           MS. DES JARDINS: All right. Thank you.

25           Let's go to page 5 on this slide.



1           So you show here that the precipitation is  
2 uniquely variable in the U.S., and the highest -- so  
3 standard deviation is a measure of variation, correct?

4           WITNESS ANDERSON: Yes.

5           MS. DES JARDINS: And this shows that it's  
6 higher in Southern California and highest in the Central  
7 and Sierras and Southeastern California, correct?

8           WITNESS ANDERSON: So for this particular  
9 plot -- and this comes from Dr. Michael Dettinger -- in  
10 Location 2011, this is a property of coefficient of  
11 variation for National Weather Service cooperative  
12 observer stations across the United States.

13           And the coefficient of variation is the  
14 standard deviation divided by the mean. This creates a  
15 unitless entry that can be compared across the country.

16           So in this case, with respect to the southeast  
17 deserts which possess a very small mean, oftentimes  
18 under 5 inches, a smaller denominator in this regard  
19 would lead to a higher coefficient of variation in part  
20 relative to other parts of California. California  
21 relative to the rest of the nation does have a  
22 year-to-year variability that is among the highest  
23 values in the U.S.

24           MS. DES JARDINS: Thank you. Let's go to  
25 No. 6.

1           So this shows the number of days a year that  
2 are in the core of California's water supply, correct?

3           WITNESS ANDERSON: Okay. Again, this plot  
4 from Dr. Michael Dettinger was aiming at looking at a  
5 little more detail. On average, half of our annual  
6 precipitation occurs in the three months December,  
7 January, and February.

8           And in this particular case, he's looking at  
9 the actual number of days of rainfall on average  
10 required to get to half of the total precipitation for  
11 the time period that he lists there.

12           And in this case, it shows that for southeast  
13 deserts, that can be less than a week, Southern/Central  
14 California upwards of 10 days, and then in the northern  
15 part of the state upwards of 15.

16           So that of those three months, it's those  
17 particular large storms that form the core.

18           MS. DES JARDINS: Thank you. Next, No. 7,  
19 please. This -- it's a picture of atmospheric river.

20           Let's go to No. 8.

21           So I believe this is the decadal scale  
22 variability that you were referring to. And can you  
23 explain this slide, please?

24           WITNESS ANDERSON: Yes, be happy to. Okay.  
25 So this particular graphic comes from a publication by

1 Dr. Michael Dettinger and Dr. Dan Cayan. And this looks  
2 at precipitation variability, in this case, for the  
3 Delta catchment. So this would be both the Sacramento  
4 and San Joaquin Basins.

5 And looking at the individual bars in the top  
6 graph are the annual deviations from a mean of  
7 25 inches.

8 So the bars that are above that are indicating  
9 the above average and giving an indication of whatever  
10 that value would be. The bars below are down to what  
11 the total was that year.

12 The black line is a moving average through  
13 that time series. And it illustrates variability on the  
14 scale of decades where you are in cycles that are above  
15 that average and below that average.

16 The green line in the plot shows the bottom  
17 95 percent of rainy days' accumulation. And the red  
18 line is the accumulation and the wettest five days. And  
19 the idea behind this graphic is that the decadal scale  
20 variability, which is still uncertain as to the source  
21 of that variability, appears, at least in part, to be  
22 tied to atmospheric rivers processes.

23 MS. DES JARDINS: So I want to call your  
24 attention to the rightmost side of the graph, which I  
25 believe is the current year on the lower graph, and

1 that's the number of Pineapple Express storms making  
2 California landfall. And that appears to have been  
3 trending down and -- a little bit before 2000, correct?

4 WITNESS ANDERSON: In the decadal scale  
5 average, this particular categorization of atmospheric  
6 rivers and -- I would have to discuss with Dr. Dettinger  
7 again his criteria for limiting it to this particular  
8 class. I don't remember off the top of my head.

9 But in this particular class of atmospheric  
10 river events, that number has been declining on that  
11 decadal scale average.

12 MS. DES JARDINS: So based on this graph, this  
13 decade you might expect a continued lull in Pineapple  
14 Express storms, according to Dettinger's criteria,  
15 making California landfall; is that not correct?

16 WITNESS ANDERSON: Until we reach the next  
17 variable component that starts increasing it. Again,  
18 not knowing the source of that variability makes it  
19 difficult to predict.

20 MS. DES JARDINS: Mr. Leahigh, have you looked  
21 at this decadal scale variable and the possibility that  
22 we may be in this kind of regime where we're getting  
23 fewer Pineapple Express storms?

24 WITNESS LEAHIGH: I'm not familiar with this  
25 specific graph, but generally I'm aware that there is a

1 decadal component to the pattern of precipitation in  
2 California.

3 MS. DES JARDINS: In your operations planning,  
4 do you take this kind of regime into account in the fact  
5 that we may be in a regime where, on average, we get  
6 fewer of these storms that supply 50 percent of our  
7 water?

8 WITNESS LEAHIGH: We take into account the  
9 fact that California's precipitation is extremely  
10 volatile from year to year as far as what the  
11 expectations are.

12 MS. DES JARDINS: Thank you.

13 Mr. Milligan, I wanted to ask you the same  
14 question.

15 WITNESS MILLIGAN: The same question you just  
16 asked Mr. Leahigh?

17 MS. DES JARDINS: Yeah. Well, basically, do  
18 you take into account that we could be in a different  
19 regime than we've been in, you know, like from 1990 to  
20 2000, a drier regime where there's fewer Pineapple  
21 Express storms making landfall?

22 WITNESS MILLIGAN: We -- again, because we're  
23 collocated with the National Weather Service and the  
24 River Forecast Center -- do take a look at these types  
25 of trends.

1           But the degree of variability, which is a  
2 couple slides back, has John kind of indicated, puts us  
3 in a position where we need to be prepared for both  
4 directions of this. Particularly a year ago, we were  
5 getting quite a bit of discussion about El Nino and  
6 flood readiness. So we need to prepare on an annual  
7 basis, particularly in the fall, to be prepared for just  
8 about anything.

9           The lower plot there, given its sawtooth  
10 nature, could be we're on the cusp of the upswing of  
11 that particular cycle. And as Mr. Anderson indicated,  
12 it's hard to know because we're not quite sure what's  
13 causing that variability. So we need to be prepared on  
14 both ends of the scale, particularly because of the  
15 drought sequence aspects, though, and the stressors on a  
16 lot of local water supply systems. That just adds  
17 another degree of complexity.

18           MS. DES JARDINS: Thank you.

19           Can I go to Exhibit No. 8, please? The  
20 Reibsame article.

21           Oh, sorry. I'm not sure it was correct.  
22 Let's go back. That's my -- go back to 11.

23           So this -- I was not able -- I don't know if,  
24 Mr. Leahigh, if you know the history of the State Water  
25 Project operations.

1 I found -- there's a 1988 article by  
2 William E. Reibsame in Climactic Change, and it had some  
3 interesting history. This is page 13 to 18 of that  
4 article.

5 Let's scroll down until we get highlighted.

6 So this talks about water management in the  
7 1977 to 1988 drought. It said -- or 1976 to '77  
8 drought. Said: "The drought was intense, resulting in  
9 new low rainfall extreme stream flow records, but it was  
10 also relatively short-lived compared to the 1928 to '34  
11 design drought.

12 "Yet because project managers could not  
13 predict its ultimate duration, they followed tradition  
14 by assuming that it would emulate the historic multiyear  
15 drought and thus imposed severe delivery restrictions to  
16 avoid eventual storage depletion in subsequent years."

17 Are you familiar with that history of the  
18 project allocation at that time?

19 WITNESS LEAHIGH: Could you identify the  
20 author again of this?

21 MS. DES JARDINS: It's William Reibsame.

22 WITNESS LEAHIGH: I'm not familiar with this  
23 article.

24 MS. DES JARDINS: Okay. Are you familiar with  
25 this history, though, that he describes?

1 WITNESS LEAHIGH: I'm familiar with the  
2 historical record of hydrology in the state, yes.

3 MS. DES JARDINS: Let's go down.

4 "The deliveries in 1977 were shortened by  
5 60 percent, and municipal industrial supplies were  
6 reduced by 10 percent."

7 Does that seem correct, Mr. Leahigh?

8 WITNESS LEAHIGH: I don't recall exactly what  
9 the allocations were in 1977.

10 MS. DES JARDINS: Okay. Let's go further to  
11 the next highlighted section.

12 "A formal allocation protocol was codified in  
13 a rule curve which determines deliveries and carryover  
14 storage during periods of short supply. The rule curve  
15 was formulated in 1977 initially to set allocations for  
16 1978. Assuming continued drought, it required large  
17 year-end storage to achieve 1978 delivery projections of  
18 approaching 99 percent reliability.

19 "Large carryover increases the likelihood of  
20 meeting subsequent year water requests, but decreases  
21 the amount of water which can be delivered in the  
22 current year, a trade-off common to most storage-based  
23 water systems.

24 "By mandating carryover to meet future year  
25 contract entitlements with allowable deficiencies, even



1 in a repeat of the 1928 to '34 design drought, the rule  
2 curve was biased towards large carryover storage at the  
3 expense" -- go to the next page -- "of current year  
4 deliveries."

5           Were you familiar at all with this historic  
6 operation on the project?

7           WITNESS LEAHIGH: I'm familiar with the  
8 general concept which I believe is being described here.

9           MS. DES JARDINS: Thank you.

10           Let's go down further to the next highlighted  
11 section.

12           Okay. "Another short, sharp drought developed  
13 in 1985. The rule curve was invoked, requiring a marked  
14 decrease in previously declared supplies in order to  
15 ensure entitlement delivery for 1986 and beyond.  
16 Reflecting on the 1977 to '78 drought and the wet years  
17 that followed, however, users and managers had become  
18 weary of short-term curtailments that might later be  
19 proved unnecessary.

20           "They now began to question the strategy of  
21 operating the project in constant anticipation of the  
22 design drought if it meant curtailing current year  
23 deliveries. Perhaps, they reasoned, unnecessary  
24 delivery shortages, a frequent problem in a more  
25 variable climate, are worse than simply running out of

1 water further into a multiyear drought."

2 Are you familiar with this change in  
3 operations in 1985?

4 WITNESS LEAHIGH: I'm aware that our  
5 allocation decision process has become more and more  
6 complicated over time. And this certainly is one aspect  
7 of the allocation decisions, this inherent balancing  
8 between overall average delivery capabilities versus dry  
9 year reliability.

10 I also know that in recent times, with new  
11 regulations coming onboard, it has added to the  
12 complexity as well. So there -- there are a number of  
13 aspects that have complicated the delivery  
14 decision-making process.

15 Certainly there has been a significant amount  
16 of curtailing of deliveries in order to maintain  
17 carryover supplies in the project storages, certainly in  
18 the past 10 years.

19 MS. DES JARDINS: Thank you.

20 Let's scroll down to the next highlighted  
21 section.

22 Says: "A new policy emerged. Maintain full  
23 contract delivery early in a drought by drawing more  
24 liberally on reservoir storage, thus accepting greater  
25 risk of failing to meet subsequent year demands."

1           Then let's scroll down further so we can see  
2 the graph.

3           So this is from -- let's scroll down a little  
4 a little more.

5           Yeah, there we go. "Simulated SWP operations  
6 based on the 1977 rule curve and two alternatives  
7 proposed in 1985 for a hypothetical drought beginning  
8 with 1985 precipitation and storage conditions and  
9 following the pattern of the 1929 to '34 design  
10 drought."

11           So you can see up on the top graph, the old  
12 procedure maintained end-of-year storage throughout the  
13 drought, and the new procedure drew storage down.

14           Mr. Leahigh, are you familiar with this change  
15 in operations, and which -- and which operation do you  
16 think the State Water Project is operating to currently?

17           WITNESS LEAHIGH: I wouldn't describe this as  
18 any kind of change in operations. The procedures for  
19 making delivery determinations have changed many -- many  
20 times over the years as far as getting a good balance.

21           One thing that has not changed is that we will  
22 always be making a very conservative estimate as far as  
23 the amount of water supply that we would expect to --  
24 amount of runoff that we would expect to see in any  
25 given year. That's the one thing that is constant over

1 time.

2 CO-HEARING OFFICER DODUC: Ms. Des Jardins,  
3 you've used up an hour.

4 Do you have additional -- different lines of  
5 questioning?

6 MS. DES JARDINS: Yes. I would like to  
7 request an additional 15 minutes.

8 CO-HEARING OFFICER DODUC: For what line of  
9 questioning?

10 MS. DES JARDINS: I wanted to finish this up  
11 and go to CalSim allocation assumptions and particularly  
12 with respect to operator decisions about...

13 CO-HEARING OFFICER DODUC: I'll give you the  
14 15 minutes, but I'm going to strongly encourage you to  
15 ask direct questions. The foundation is interesting,  
16 but I don't know that we need to spend that much time on  
17 building foundation. Or if we do, I'm sure there will  
18 be objections on questions from the witness. I  
19 encourage you to ask your questions directly of these  
20 witnesses.

21 MS. DES JARDINS: Okay. Thank you.

22 Let's scroll down a little further.

23 It says that -- Part A shows total project  
24 storage at the end of each simulated year, and Graph B  
25 shows delivery shortfall from contract amounts.

1           So, Mr. Leahigh, you agree with the slide that  
2 if -- if you have a trade-off between maintaining  
3 carryover storage and delivering more early in the  
4 drought; is that correct?

5           WITNESS LEAHIGH: There's -- yes, there's  
6 always going to be trade-offs with respect to deliveries  
7 and average annual deliveries and water supply  
8 reliability. Typically, though, we do guard against  
9 prolonged period of dry years in our assessment of  
10 carryover storages. So that is an aspect that we  
11 continue today.

12           MS. DES JARDINS: Okay. Thank you.

13           Let's put this slide away.

14           I'd like to go back to CalSim. Slide No. 10,  
15 Oroville storage, 2013 and 2016. Let's go down to 2013.

16           In August of 2013, there was a little more  
17 than about 2,100,000 acre feet in Oroville; is that  
18 correct?

19           WITNESS LEAHIGH: I'm sorry. What?

20           MS. DES JARDINS: In August 2013, there was  
21 about 2,100,000 acre -- 2.1 million acre feet of water  
22 in Oroville Dam.

23           WITNESS LEAHIGH: Yes, I see that.

24           MS. DES JARDINS: Okay. Let's go scroll up to  
25 2016.

1           And in August, we're right about at  
2 2,100,000 acre feet, correct? About the same as 2013?

3           WITNESS LEAHIGH: Yes.

4           MS. DES JARDINS: So if the rest of this year  
5 is as dry as 2013, if we have a dry fall, we could see a  
6 similar drawdown in Oroville, could we not?

7           WITNESS LEAHIGH: It depends on what our  
8 runoff inflow expectations are.

9           With 2013 being the record dry precipitation,  
10 I'm not sure exactly what the runoff expectations were  
11 on that particular year. I don't have that in front of  
12 me.

13           But certainly -- I'm sorry what year? Could  
14 you repeat your question?

15           MS. DES JARDINS: Let's go down to -- scroll  
16 down to the 2013 reservoir.

17           If this year turns dry, if next fall turns out  
18 to be as dry as 2013 was, could we see a similar  
19 drawdown to what happened in 2013, Mr. Leahigh?

20           WITNESS LEAHIGH: Yes, we could.

21           MS. DES JARDINS: And if next year was dry,  
22 you could be facing the same circumstances as you did in  
23 2014, correct?

24           WITNESS LEAHIGH: It depends on how dry.

25           MS. DES JARDINS: Thank you.

1           So if 2014 is as dry as -- I mean, if 2017 is  
2 as dry as the bottom 10 years in historic record, if  
3 Michael Anderson says the average Sacramento runoff for  
4 those years was 7.5 million acre feet, there could be  
5 problems with having sufficient storage to meet the  
6 basic needs, correct?

7           WITNESS LEAHIGH: I don't believe we would  
8 have a problem. It's highly unlikely we would have  
9 issues next year with our projected carryover storage  
10 for the end of this year.

11          MS. DES JARDINS: What is your projected  
12 carryover storage?

13          WITNESS LEAHIGH: Well, generally we're  
14 projecting that we'll come in -- currently, that we'll  
15 come in about 1.4 million acre feet end of September.  
16 That's our latest projection.

17          MS. DES JARDINS: All right. Okay. I just  
18 want to note that that actually looks to be a little  
19 lower than the storage you had in -- at the same time in  
20 2013; is that not correct?

21          WITNESS LEAHIGH: Yeah, that looks to be  
22 correct.

23          MS. DES JARDINS: Thank you. Okay.

24          So let's go to -- back to the list of slides.

25          MS. McCUE: It's DDJ-10 in the exhibits,

1 right?

2 MS. DES JARDINS: Yes. I apologize.

3 The next thing I'd like to go to is the CalSim  
4 peer review response. Are you familiar with the 2004  
5 USPR and DWR response to the CalSim peer review?

6 WITNESS LEAHIGH: 2004, no, not offhand.

7 MS. DES JARDINS: I wanted to ask you because  
8 there's some very specific language about validation and  
9 about operators. This is page 18 and 19 of -- scroll  
10 down until you see the highlighting.

11 MR. BAKER: There's only two pages with this  
12 PDF file.

13 MS. DES JARDINS: Let's see. Go back up.  
14 Yeah, it looks like I didn't get the correct -- let's  
15 close that, and let's go to the full peer review  
16 response which is --

17 MS. McCUE: Last one was DDJ-12.

18 MS. DES JARDINS: Go down the bottom. It's  
19 actually DDJ-102, CalSim peer review response. It's  
20 just after No. 21. Open that up.

21 CO-HEARING OFFICER DODUC: This now will be  
22 22.

23 (Whereupon Exhibit DDJ-22 was marked for  
24 identification.)

25 MS. DES JARDINS: This is -- I marked as



1 DDJ-102 because I previously introduced this.

2 Yeah. So let's go down to -- let's try  
3 page 20, next page.

4 Yeah, we need -- there we go. Go back up.

5 We want page -- actually, document page 18.  
6 Go up.

7 CO-HEARING OFFICER DODUC: Mr. Leahigh, are  
8 you familiar with this document?

9 WITNESS LEAHIGH: No.

10 CO-HEARING OFFICER DODUC: Are you able to  
11 answer questions about the modeling in terms of this  
12 peer review?

13 WITNESS LEAHIGH: No, I doubt it.

14 MS. DES JARDINS: There is a very specific  
15 question about operator behavior that --

16 CO-HEARING OFFICER DODUC: Please ask that  
17 question.

18 MS. DES JARDINS: Okay. So let's scroll down.

19 CO-HEARING OFFICER DODUC: What is the  
20 question?

21 MS. DES JARDINS: I just need to highlight it.  
22 It says: "DWR reclamation suggests that a more  
23 reasonable approach to defining behavioral parameters is  
24 through discussions with system operators to define  
25 current operational policy or rules. It would appear

1 more reasonable to define operating rules in  
2 conversation with operators and subsequently use a  
3 recent wet, normal, and dry year in a validation  
4 exercise."

5           So, Mr. Leahigh, this goes to the core of  
6 whether CalSim can be validated. And, arguably, one of  
7 the reasons why it's difficult to validate is that the  
8 core reservoir operations in the system are changing  
9 over time. And has there been a discussion with you  
10 about what your current operational policy is?

11           CO-HEARING OFFICER DODUC: A discussion --

12           MS. DES JARDINS: With the modelers with you  
13 about what your current operational policy is.

14           WITNESS LEAHIGH: And I can assume you're not  
15 talking about 2004?

16           MS. DES JARDINS: No.

17           WITNESS LEAHIGH: Yes. So we -- yes, we  
18 periodically do have discussions with the modelers in  
19 order to try to, again, try to have the code and the  
20 rule curves within CalSim trying to better emulate kind  
21 of decisions we would make. There's actually -- it's  
22 actually a two-way street. We actually are informed by  
23 the CalSim modeling result as well as far as some of the  
24 assumptions that they make as far as the optimal way to  
25 operate the system. And we will take some of that

1 feedback to inform the decisions that we make as far as  
2 realtime as well.

3 MS. DES JARDINS: So if there was -- if DWR  
4 put together input data from a recent wet, normal, and  
5 dry year -- and I would argue the recent critically dry  
6 years -- and ran the simulation and compared it with  
7 your operations, would that help you in forecasting the  
8 project operations?

9 WITNESS LEAHIGH: Well, we're generally -- we  
10 are familiar with the results that CalSim produces.  
11 And, like I said, it is a two-way street as far as they  
12 learn a little bit more from us as far as some of the  
13 realtime and allocation decisions that we make, and we  
14 also learn from the CalSim modelers as far as how their  
15 rule curves work and that interplay between water supply  
16 reliability and overall project yield. So it is a --  
17 like I said, it is a two-way.

18 MS. DES JARDINS: But isn't it a handicap for  
19 a forecasting model to not have any input data after  
20 2003, Mr. Leahigh?

21 WITNESS LEAHIGH: Actually, the historical  
22 data set that we use goes beyond 2003. It's -- the  
23 historical data that we receive for our water supply  
24 forecast are typically updated every -- I believe it's  
25 every five years.

1 MS. DES JARDINS: So you have CalSim inputs  
2 that go beyond 2003?

3 WITNESS LEAHIGH: No, not CalSim inputs.  
4 These would be input -- these would be historical --  
5 historical. The forecasts that are developed for any  
6 given year use historical data as kind of a foundation,  
7 and that historical data set is updated essentially  
8 every -- every five years.

9 MS. DES JARDINS: When you look at historical  
10 precipitation inflows, do you use the entire historical  
11 record or do you use like the last 20 or 30 years?

12 WITNESS LEAHIGH: Well, there's two aspects to  
13 that. In terms of -- and this is my understanding. We  
14 use the entire historical record when we're talking  
15 about exceedances in terms of volume of precipitation  
16 and runoff that we would expect to receive.

17 But at the same time, there's also a -- my  
18 understanding -- there's a running 50-year average in  
19 terms of trying to look at the pattern of that  
20 precipitation.

21 So to the extent that there are changes  
22 occurring due to whatever, let's say climate change,  
23 that piece of information would be captured in the  
24 50-year running average; that the hope would be it would  
25 be captured there in terms of if there is a change from

1 generally lower snowpack, higher percent of direct  
2 runoff, that would be captured in that patterning.

3 MS. DES JARDINS: Thank you.

4 CO-HEARING OFFICER DODUC: Thank you.

5 Next up is Group No. 38. Mr. Eichenberg,  
6 Ben Eichenberg.

7 Again, if you could ask direct questions  
8 specific to the information you're trying to gather. If  
9 we need to backtrack to lay foundation, we will; but  
10 let's assume that adequate foundation has been laid by  
11 now.

12 --o0o--

13 CROSS-EXAMINATION

14 MR. EICHENBERG: I had hoped that the attorney  
15 for Institute for Fisheries Resources, Jamey Volker,  
16 would be here. He's on court call right now, and he's  
17 going to try to come as soon as that call is ended.  
18 Hopefully he'll be joining me.

19 Ms. McCue and Mr. Baker, I just wanted to  
20 thank you guys and all of the Water Board staff that  
21 things that have been running smoothly, and I'm  
22 impressed every day. Thank you very much for all the  
23 work you do helping us get our presentations up. It's  
24 been really helpful.

25 Mr. Milligan, Mr. Leahigh, and Mr. Anderson,

1 and Mr. Holderman -- who I don't think I'll have any  
2 questions for you today -- but I apologize in advance.  
3 I might get a little confused about who said what during  
4 cross from behind. It's just backs of heads. It's  
5 really hard to tell who's talking. Sometimes one of you  
6 is a little animated and I'm like, okay, I remember that  
7 way. But I might get confused, so please feel free to  
8 correct me if I'm misattributing something.

9           So, Mr. Baker, can you please pull up DWR-61,  
10 page 4? And we'll be looking at line 17 through 18.  
11 Thank you.

12           Page 4, yeah. Thanks.

13           Mr. Leahigh, you state that --

14           (Reporter request for clarification.)

15           MR. EICHENBERG: It's been hard because, as  
16 you know, we're under time pressure. I apologize in  
17 advance if I go too fast. Feel free to slow me down.

18           CO-HEARING OFFICER DODUC: Is there a way to  
19 ask the question without reading the text which we can  
20 all read?

21           MR. EICHENBERG: Yeah. I don't intend to  
22 read -- I don't think I have any sessions where I had  
23 planned about reading exactly what was in the text.

24           But I did want to draw the witness's attention  
25 to line 17 through 18.

1           Mr. Leahigh, you stated that, "Unregulated  
2 flows are typically in excess of all system needs."

3           Can you tell us again what "all system needs"  
4 mean?

5           WITNESS LEAHIGH: Yes. So "all system needs"  
6 I've been defining as all legal diverters of water in  
7 the system and all of the water quality control plan  
8 objectives.

9           CO-HEARING OFFICER DODUC: That was your one  
10 foundational question.

11           MR. EICHENBERG: Can you tell me how it  
12 differs from in-basin requirements as you refer to in  
13 your testimony at line 25?

14           WITNESS LEAHIGH: The definition I just gave  
15 would be the in-basin -- what I defined as in-basin  
16 requirements. "All system needs" is probably more  
17 expansive and would include many other regulatory  
18 restrictions: Flood control, minimum in-stream flow  
19 requirements, BIOP requirements, biological opinion  
20 requirements.

21           MR. EICHENBERG: Same page, line 26, you refer  
22 to unused conservation space. Can you define that for  
23 us?

24           WITNESS LEAHIGH: Yes. So that would be  
25 required space that we need to provide for flood control

1 purposes in the wintertime.

2 MR. EICHENBERG: Sorry. So "conservation  
3 space" means just flood control?

4 WITNESS LEAHIGH: Well, I guess I have to look  
5 at the context there exactly. But...

6 MR. EICHENBERG: I have the context up there.  
7 Take a minute.

8 WITNESS LEAHIGH: I'm sorry. That -- give me  
9 a second, please.

10 I misspoke. Unused conservation space would  
11 be all of the space that would be vacant up to the flood  
12 control required space. So during excess conditions, to  
13 the extent that we're not using part of that  
14 conservation space in the reservoir, we're allowed to  
15 divert into that conservation space.

16 MR. EICHENBERG: Okay. Can you tell me why  
17 it's called conservation space?

18 WITNESS LEAHIGH: Because that's the space in  
19 the reservoir that's dedicated to conservation of water.

20 MR. EICHENBERG: Okay. I believe it's been  
21 established -- we don't need to do this again -- the  
22 purpose of the water basin is to provide capacity to  
23 deliver up to full contract amounts. We're agreed on  
24 that?

25 WITNESS LEAHIGH: Yes, that was one of the



1 objectives of the project.

2 MR. EICHENBERG: Do you know where this  
3 purpose comes from?

4 WITNESS LEAHIGH: I'm sorry. It's -- what do  
5 you mean by where it comes from?

6 MR. EICHENBERG: What designates that as the  
7 project's purpose?

8 WITNESS LEAHIGH: That's the stated purpose of  
9 the project.

10 MR. EICHENBERG: By who?

11 WITNESS LEAHIGH: A policy maker. I'm not --

12 MR. EICHENBERG: Is it your boss or something  
13 or --

14 WITNESS LEAHIGH: I don't know.

15 MR. EICHENBERG: You don't know. But it is a  
16 sort of governing purpose of this project that you base  
17 all of your operations assumptions on, right?

18 WITNESS LEAHIGH: That's a general goal for  
19 the project, is to provide up to those contractual  
20 amounts of the Delta to the extent possible.

21 MR. EICHENBERG: But this instruction wasn't  
22 given to you in any document. It's just sort of -- it's  
23 confusing. It seems like -- when I have a job to do and  
24 I say, okay, well, I have to get X done, X is usually  
25 given to me by somebody or something or -- but you don't

1 recall how you know about this purpose?

2 WITNESS LEAHIGH: The fundamental purpose of  
3 the State Water Project is to provide water supply and  
4 flood protection. So that's a purpose of the project,  
5 is to provide water supply to those that have contracted  
6 for that water supply to the extent possible while  
7 meeting all the other regulatory and contractual  
8 obligations.

9 MR. EICHENBERG: Just to be clear -- I know  
10 I've asked this -- but you don't have any basis for this  
11 fundamental purpose other than it's kind of like God  
12 maybe?

13 MR. BERLINER: I'm going to object. We're  
14 really in the arena of state law here and a whole litany  
15 of judicial decisions concerning this as well as the  
16 contract. And this is beyond the scope of this  
17 witness's expertise.

18 CO-HEARING OFFICER DODUC: So I would agree  
19 with that.

20 Mr. Eichenberg, where are you going with this  
21 line of questioning? The objective is the objective.  
22 The Board is not considering approving the objective.  
23 And why does it matter who gave direction to Mr. Leahigh  
24 with respect to the objective?

25 MR. EICHENBERG: This is the fundamental basis

1 of all of his operational assumptions. He makes  
2 decisions based on what he's comfortable with under this  
3 basis. So his understanding of what the purpose of the  
4 project is, I think, goes -- is quite relevant to what  
5 he's comfortable with operating the project as.

6 CO-HEARING OFFICER DODUC: Yes, and you've  
7 questioned him about that objective. I don't see the  
8 relevance as to where that objective came from is  
9 necessary.

10 MR. EICHENBERG: It's relevant in terms of his  
11 definition of what that objective is. He has to define  
12 that in his decisions or whether he's comfortable with  
13 running the project at a certain level. If he decides  
14 to allocate -- if he decides to prioritize deliveries  
15 over conservation, then he's making that decision based  
16 on what he thinks the purpose of the project is.

17 CO-HEARING OFFICER DODUC: You may question  
18 him on the purpose of the project even though I think  
19 we've covered that ground sufficiently. But let's not  
20 dwell into why and how that purpose came to be. The  
21 purpose is what it is, and it's up to him to operate the  
22 project.

23 Mr. Williams?

24 MR. WILLIAMS: Philip Williams for Westlands.  
25 Also objection. Argumentative. Mr. Leahigh is

1 receiving direction from God as to --

2 CO-HEARING OFFICER DODUC: Let's not go there.

3 MR. WILLIAMS: Objection. Argumentative.

4 CO-HEARING OFFICER DODUC: Thank you,

5 Mr. Williams.

6 Let's move on to your next line of

7 questioning.

8 MR. OCHENDUSZKO: Mr. Eichenberg, you were

9 joined by fellow counsel.

10 Do you mind identifying yourself, please?

11 MR. VOLKER: Jamey Volker, counsel for PCFFA

12 and IFR. I'll be presenting for IFR after this.

13 CO-HEARING OFFICER DODUC: Thank you,

14 Mr. Volker.

15 Please continue, Mr. Eichenberg.

16 MR. EICHENBERG: Thank you.

17 Mr. Leahigh, do you believe that you are

18 required just -- do you believe that you're required to

19 seek the outcome of full -- of delivery of full contract

20 amounts where such delivery is feasible under this

21 purpose that we've been talking about?

22 MR. BERLINER: Objection. Vague and question

23 of relevancy. Mr. Leahigh's beliefs are really

24 irrelevant.

25 MR. EICHENBERG: We've covered that he makes

1 decisions based on what he's comfortable with.

2 CO-HEARING OFFICER DODUC: Rephrase your  
3 question, Mr. Eichenberg.

4 MR. EICHENBERG: Okay. Okay.

5 Do you weigh the delivery of full contract  
6 amounts where such delivery is feasible? Is that a goal  
7 you try to accomplish in your operation of the project?

8 MR. BERLINER: This has been asked and  
9 answered. Ms. Des Jardins went through this whole issue  
10 of trade-off between deliveries and carryover.

11 CO-HEARING OFFICER DODUC: Let's give him a  
12 quick answer so we can move on.

13 Obviously the answer is yes?

14 WITNESS LEAHIGH: Yes, to the extent possible,  
15 we try to meet those contractual amounts to our supply  
16 contractors.

17 MR. EICHENBERG: Mr. Baker, can we pull up  
18 PCFFA-18?

19 PCFFA-18 is a July 25 9th Circuit case  
20 addressing renewal contracts. Are you familiar with  
21 this case, Mr. Leahigh?

22 MR. BERLINER: Objection. Relevance. This is  
23 a case concerning a NEPA review of interim renewal  
24 contracts on the CBP. Mr. Leahigh is a state  
25 representative.

1 CO-HEARING OFFICER DODUC: Mr. Williams?

2 MR. WILLIAMS: I echo Mr. Berliner. For  
3 Westlands, I have an objection as to relevance.

4 CO-HEARING OFFICER DODUC: Mr. Eichenberg,  
5 your response to the relevance objection?

6 MR. EICHENBERG: I'm trying to lay the  
7 foundation for the relevance of this case. It has to do  
8 with delivery of full contract amounts.

9 CO-HEARING OFFICER DODUC: Let's go ahead, but  
10 let's move quickly.

11 Are you familiar with this case, Mr. Leahigh?

12 WITNESS LEAHIGH: If you could scroll down a  
13 bit. I don't believe I am, but I just wanted to make  
14 sure that...

15 Yeah, I don't think I'm familiar with this.

16 CO-HEARING OFFICER DODUC: Okay. Since you're  
17 not familiar with this and since I'm sure your attorney  
18 will remind us that you're not an attorney, feel free to  
19 answer you don't know to any questions that  
20 Mr. Eichenberg addresses.

21 And Mr. Berliner and Mr. Mizell, we will take  
22 your, I'm sure -- to avoid objections -- that he is not  
23 an attorney and should not be able to address legal  
24 questions. We'll take that under advisement in weighing  
25 the testimony and evidence here.

1 With that, Mr. Eichenberg.

2 MR. EICHENBERG: Thank you.

3 We can go to page 3 of the opinion. I think  
4 it's on page 3.

5 The Court held that the no action alternative  
6 which assumed renewal contracts at their full amounts  
7 was invalid. And, again, on page 6, the Court held that  
8 the failure to consider a reduction in quantity of water  
9 delivered was an abuse of discretion.

10 Would holdings like this impact your view of  
11 this stated purpose in WaterFix and your opinion that  
12 you would -- you would try to deliver full contract  
13 amounts where possible?

14 WITNESS LEAHIGH: I have no idea what that  
15 case was about. I have no opinion on this.

16 MR. WALTER: Hanspeter Walter, San Luis and  
17 Delta-Mendota Water Authority. I, too, object to this  
18 line of questioning on relevancy. I do believe it's  
19 beyond Mr. Leahigh's testimony -- or expertise.

20 This is a case involving CVP water service  
21 contracts. It has nothing to do with State Water  
22 Project contracts. So there's a lot of confusion being  
23 introduced in suggesting that all these water project  
24 contracts are the same. There are hundreds of them.  
25 They're all different. And, again, objections on

1 relevancy, argumentative, beyond the expert's expertise.

2 CO-HEARING OFFICER DODUC: Thank you.

3 And, Mr. Eichenberg, again, why are you asking  
4 Mr. Leahigh this question?

5 MR. EICHENBERG: Thank you for the reminder.  
6 I'll ask Mr. Milligan.

7 CO-HEARING OFFICER DODUC: All right.  
8 Objections are sustained. Move on, please.

9 MR. EICHENBERG: Mr. Milligan, are you  
10 familiar with this case?

11 WITNESS MILLIGAN: Yes, I am.

12 MR. EICHENBERG: And, again, my brief summary,  
13 based on that, did it have any impact on your view of  
14 the stated purpose of the WaterFix?

15 WITNESS MILLIGAN: Which particular stated  
16 purpose?

17 MR. EICHENBERG: The deliverable contract  
18 amount.

19 WITNESS MILLIGAN: I am not sure that that's  
20 consistent with the testimony. The material we saw  
21 yesterday had a "where possible" associated with that.  
22 That seems consistent with, frankly, existing operation  
23 of the project.

24 We strive to meet the contract quantities,  
25 understanding that there are shortage provisions



1 embedded in many of the water service contracts for the  
2 CVP, which renewal of those contracts was and continues  
3 to be the subject of this particular litigation.

4           So I think they are compatible. It's not  
5 necessarily a change of, let's say, an objective of the  
6 current Central Valley Project.

7           The intention of the WaterFix would allow us  
8 to be able to meet our obligations as we have in the  
9 past but to be able to recover some of the lost supplies  
10 that have occurred, or we say a yield, to use that term,  
11 that's occurred over the last number of years as we kind  
12 of progressed through various -- some hydrologic changes  
13 but also regulatory constructs.

14           MR. EICHENBERG: Did you -- I thought at the  
15 beginning you said the purpose of the project was not  
16 necessarily to deliver full contract amounts.

17           WITNESS MILLIGAN: My recollection of the  
18 sub-bullet that was called up from the EIS had the  
19 parenthetical that it was "when possible" or "where  
20 possible," which I think is different than an objective  
21 that says to meet full contract quantities. So I think  
22 there's, from an operational standpoint, an  
23 understanding of trade provisions within the contracts  
24 is pretty key to how we operate the project year to  
25 year.

1           MR. EICHENBERG:  Would you degree that "where  
2 possible" is a pretty broad term?  I mean, that's  
3 basically to the full capacity of the project, isn't it?

4           WITNESS MILLIGAN:  Typically in an EIS -- this  
5 may have been a question more suited for Jennifer Pierre  
6 with the construct of the EIS -- the scoping process,  
7 development of the purpose of statement, and identifying  
8 objectives for the project are the process of a public  
9 scoping process and tend to be more general.  And then  
10 as you formulate the alternatives around that, you get  
11 into the more specifics.

12           So, yes, I think the objective that was stated  
13 was probably in a more general sense, and then the  
14 process of the planning effort and speaking to NEPA,  
15 which I'm a little more familiar with as opposed to  
16 CEQA, would be then to hone that down to a series of  
17 alternatives to allow decision makers to define what the  
18 project is.  Ultimately, I think some of the direction  
19 will be the product of a record of decision at the end  
20 of the NEPA process.

21           MR. EICHENBERG:  Where we are in agreement is  
22 that the purpose of the project is to meet full contract  
23 amounts where possible?

24           WITNESS MILLIGAN:  A purpose, yes.

25           MR. EICHENBERG:  A purpose of the project.

1 Mr. Leahigh, you refer to the unique  
2 challenges of the current drought in your testimony at  
3 DWR-61, page 3. Can you define "unique"?

4 WITNESS LEAHIGH: What page are you referring  
5 to?

6 MR. EICHENBERG: Page 3 of your testimony,  
7 DWR-61.

8 Mr. Baker if we could pull that up.

9 MR. BAKER: Was there a line number?

10 MR. EICHENBERG: I don't have the line number  
11 off the top of my head.

12 CO-HEARING OFFICER DODUC: 11.

13 MR. EICHENBERG: Thank you so much.

14 WITNESS LEAHIGH: Yes, I think my use of the  
15 term "unique" there goes to the testimony on the  
16 exhibits that I presented for the 2013 through 2015  
17 hydrology and how it was unprecedented in terms of the  
18 historical record.

19 MR. EICHENBERG: The historical record going  
20 back how many years?

21 WITNESS LEAHIGH: I think it varied depending  
22 on the parameter we were looking at. But most of the  
23 record went back to drought 1900 plus or minus.

24 MR. EICHENBERG: But it's possible that a  
25 drought like this could have happened before 1900?

1 WITNESS LEAHIGH: Yes, I think that's  
2 possible.

3 MR. EICHENBERG: So, in that sense, "unique"  
4 doesn't mean the only time in history that this had  
5 happened?

6 MR. BERLINER: Objection. Assumes facts not  
7 in evidence. He didn't say it did happened; he said  
8 it's possible it could have happened.

9 CO-HEARING OFFICER DODUC: Go ahead and  
10 answer, Mr. Leahigh.

11 WITNESS LEAHIGH: Meaning something that would  
12 have been unexpected.

13 MR. EICHENBERG: Okay. Thank you.

14 Can you describe the challenges that you were  
15 talking about when you spoke of unique challenges?

16 WITNESS LEAHIGH: Yeah. The challenges had to  
17 do with the very limited water supply that was available  
18 in the system during these years, how that was managed  
19 in order to meet -- try to meet as many of the Water  
20 Quality Control Plan objectives as possible, how to meet  
21 other -- settlement contractual needs, and other --  
22 other needs of the system.

23 MR. EICHENBERG: Are those -- those are  
24 challenges that you face in every year?

25 WITNESS LEAHIGH: Generally, no. We're

1 typically able to meet those -- those very fundamental  
2 first needs of the project as I've been describing them,  
3 which would be the Water Quality Control Plan objectives  
4 and the settlement contracts.

5 MR. EICHENBERG: And meeting those needs -- so  
6 if you didn't meet those needs, we'd be talking about  
7 exceedances; is that right?

8 WITNESS LEAHIGH: Well, in terms of the  
9 objectives, those would be exceedances. Of course, we  
10 did petition the Board for modifications to the  
11 objectives in 2014 and 2015.

12 MR. EICHENBERG: Okay. You told Ms. Cardella,  
13 who represents South Valley Water Agency -- I hope it  
14 was you -- that while the modeling that has been done  
15 for the project is useful, it may not represent the full  
16 range of what's realistic. Is that what you said?

17 WITNESS LEAHIGH: I may have said something to  
18 that extent.

19 MR. EICHENBERG: Okay.

20 WITNESS LEAHIGH: I don't recall the exact  
21 context when I said that.

22 MR. EICHENBERG: If the intent of the  
23 modeling, as you testified, is to show what might happen  
24 in extreme hydrology such as that of the last few years,  
25 some other modeling should be done? Is that what you

1 said, that the -- I'm sorry if I didn't say that  
2 right -- but that the intent of the modeling is not to  
3 show the extreme hydrology, and if that were the intent,  
4 then some other modeling should be done?

5 WITNESS LEAHIGH: I don't remember saying  
6 that, actually. I'm not sure if that was my testimony  
7 or not.

8 MR. EICHENBERG: Someone said it. It's hard  
9 to tell who's talking.

10 But any of the panel recall someone who said  
11 that the intent of the modeling is not to represent  
12 extreme hydrology?

13 WITNESS MILLIGAN: Did you recall we were  
14 having some discussion about modeling -- and I can't  
15 remember even which group of cross-examination. But  
16 maybe as a point of clarity, the CalSim modeling is  
17 meant to illustrate the operations of the project and,  
18 again, in a comparative sense across a broad range of  
19 hydrology.

20 There are some extreme circumstances that may  
21 not be covered in that and some examples of how the  
22 project may operate. Mr. Leahigh had an example of this  
23 last -- last year, trying to drill down to a finer time  
24 step. And that's an example of trying to answer a  
25 pretty good question as to how, in that particular

1 example, the project could have captured in some  
2 short-time steps some additional volumes of water that  
3 probably in the scenario was fairly significant.

4           And it could have been in that context that,  
5 depending on what question might be posed, some  
6 additional combinations of things may be useful.

7           Another example that we may have talked about  
8 was the environmental documents do have some sections to  
9 do some sensitivity analysis around climate change and  
10 the potential climactic possibilities going forward.

11           MR. EICHENBERG: Is that what was meant by  
12 "extreme hydrology"?

13           WITNESS MILLIGAN: I think extreme hydrology  
14 could be obviously -- and Mr. Anderson could probably  
15 capture that as well -- could be at either end of the  
16 scale typically. Might be sequential drought for a  
17 period of time, particularly when we're talking about  
18 atmospheric rivers book-ending very long periods of dry  
19 which we've seen the last couple of years. So it may  
20 also account for some flooding events that certainly  
21 fall through the cracks in a monthly time step by  
22 CalSim.

23           MR. EICHENBERG: For anybody, can you describe  
24 extreme hydrology in terms of percentage? Are we  
25 talking about a 1 percent hydrologic year or less, more?

1 MR. BERLINER: Again, this has been asked and  
2 answered. We covered a lot of this territory already  
3 with Ms. Des Jardins.

4 CO-HEARING OFFICER DODUC: We are -- you  
5 are -- I mean, it seems like you're trying to follow up  
6 on previous cross, which I guess is helpful as long as  
7 we don't repeat all that.

8 So let me ask again: Where are you going with  
9 these questions? And perhaps you can just get there.

10 MR. EICHENBERG: It's my impression that  
11 extreme hydrology was not covered by the modeling, and I  
12 thought that was the previous testimony of these  
13 witnesses.

14 CO-HEARING OFFICER DODUC: Do you -- perhaps  
15 that's better saved for the modeling panel.

16 MR. EICHENBERG: Perhaps. They can certainly  
17 answer that if they felt that they were qualified to  
18 answer.

19 CO-HEARING OFFICER DODUC: So what was the  
20 question again?

21 MR. EICHENBERG: What we're talking about as  
22 far as extreme hydrology, whether we're talking about --  
23 like what's the chance of it actually happening, whether  
24 it's 1 percent in one 100 year or whether it's --

25 WITNESS MILLIGAN: I would say that would



1 depend on the question at hand. If one were to use the  
2 example -- may be a little late here -- if you're  
3 designing a spillway for a dam, you're going to use a  
4 much more infrequent event than you may be doing for,  
5 let's say, designing a levee that might protect an  
6 agriculture area versus levees that protect the city of  
7 Sacramento.

8           Again, water supplies for M&I use, you may  
9 have a different risk equation than you may have for  
10 agricultural. Different element as it relates to  
11 complex water quality standards in the Delta. So it  
12 would depend on the question.

13           So I think the CalSim modeling covers a great  
14 deal of those types of things, particularly across the  
15 broad range of the hydrology. And there are probably  
16 supplemental pieces of analysis that have been done that  
17 deal with finite specific questions that need more  
18 resolution and a little more detail to really weed out  
19 what the concern level may be.

20           So it would depend on the question, and I  
21 think the modelers would probably have a great deal of  
22 information, particularly as it relates to some of the  
23 water quality and very tight resolution. We have a lot  
24 of the discussion about flows in particular sections  
25 with channels within the Delta, and I think that that's

1 certainly not something that comes out of CalSim.

2           So, again, one may have to be very specific  
3 about where they're looking, and the modeling may be  
4 able to pick up a particular piece of information.

5           MR. EICHENBERG: What are some of those  
6 specific circumstances? You said -- I forget your exact  
7 phrasing -- but an addendum or additional modeling that  
8 had been done about specific extreme hydrological  
9 events. Was that taken into account in your operations  
10 review, or was it just a straight model that has been  
11 presented as part of RDEIR.

12           WITNESS MILLIGAN: For myself, I've looked at  
13 a lot of particular components out of the modeling  
14 suite. As you can imagine, there's a great deal of  
15 information that's come out of these models, and some  
16 pieces of information may be more germane to certain  
17 things of concern than others.

18           So the things that I've looked at would be  
19 different than Mr. Leahigh from a State Water Project  
20 standpoint. It may be different than some individuals  
21 who may be interested in flow past the city of  
22 Courtland, let's say, for example, which -- I'm not  
23 quite sure how that may affect CDP operations, but I'm  
24 certainly willing to listen.

25           But there is a lot of information out there,

1 and I guess one needs to be very specific about what  
2 question they have to be able to then go and pull it out  
3 of that data set. It's a pretty vast library of  
4 information.

5 MR. EICHENBERG: The data set you're talking  
6 about, though, my assumption is that that's part of like  
7 a central modeling data set that was presented for the  
8 whole project. And I thought you had said there may be  
9 been additional modeling done for these extreme  
10 hydrological events. Did I misunderstand?

11 WITNESS MILLIGAN: I think everything that's  
12 been done is somewhere within the body of work, pretty  
13 extensive for the EIS, EIR drafts, and also for the  
14 draft -- or for the final biological assessment for the  
15 ESA consultation for WaterFix as well.

16 MR. EICHENBERG: Ask it this way: What  
17 modeling did you review for your operations testimony?

18 CO-HEARING OFFICER DODUC: Is there a specific  
19 aspect of the modeling that you would like Mr. Milligan  
20 to address rather than an open-ended model?

21 MR. EICHENBERG: I was trying to get at the  
22 extreme hydrological modeling, and I -- I just thought  
23 that they had said earlier that there was no -- that the  
24 modeling didn't adequately cover those events. And then  
25 I thought he said there may have been supplemental

1 modeling done. So I'm trying to establish whether or  
2 not supplemental modeling was part of the modeling that  
3 he reviewed as part of the operations testimony.

4 CO-HEARING OFFICER DODUC: The question is:  
5 To your knowledge, was the extreme scenarios modeled  
6 and, if so, did you review results from that?

7 WITNESS MILLIGAN: I looked at a great deal of  
8 the CalSim output which captures some level of the outer  
9 boundaries of the ranges we've been talking about.

10 I have seen some with the output from some of  
11 the climate change work that's been done, again, more in  
12 a network that was more geared to a sensitivity analysis  
13 which would kind of help us define trends that may be  
14 not absolute numbers.

15 I have looked at and seen some individual  
16 pieces of data from DSM-2 modeling as well that think  
17 about some of the Delta dynamics.

18 There may be some other information that was  
19 in the federal document over the last five, six years  
20 that this has been kind of in play.

21 So looked at a great deal of the modeling  
22 output. It's hard to say today exactly which pages of  
23 which outputs -- again, predominantly geared towards  
24 CVP, operations storage, and then Delta collective  
25 hydrodynamics as well as salinity, changes in salinity

1 particularly that may occur when we think about  
2 different schemes related to balancing North Delta  
3 diversion versus South Delta diversion.

4 CO-HEARING OFFICER DODUC: So, Mr. Eichenberg,  
5 was there a specific extreme scenario that you were  
6 interested in?

7 MR. EICHENBERG: Yes, drought.

8 CO-HEARING OFFICER DODUC: What level of  
9 drought? What particular aspect? Is there a particular  
10 time period you're interested in?

11 MR. EICHENBERG: The aspects of drought that  
12 we've been talking about the last -- the one labeled as  
13 a unique situation.

14 CO-HEARING OFFICER DODUC: Okay. The fact  
15 that we have been talking about it extensively, what  
16 particular aspect are you now looking for? I'm trying  
17 to help you narrow the focus here.

18 MR. EICHENBERG: Thank you so much.

19 I'm wondering whether there's been some  
20 modeling that has encompassed the most recent drought  
21 that they reviewed as part of their operational review  
22 for the WaterFix, whether -- I mean, it goes to question  
23 of whether they've looked at extreme situations like the  
24 one we just went through when they were trying to  
25 predict what impact the WaterFix would have on the users

1 of water.

2 CO-HEARING OFFICER DODUC: Okay. So do you  
3 know, or is that something that we need to defer to the  
4 modeling panel?

5 WITNESS MILLIGAN: Well, I will say this, in  
6 terms of at least my review. The unique nature of the  
7 last couple years is we've done a lot of discussions  
8 about the hydrology, which is a big driver, but there's  
9 also the dynamic of going back to our previous drought  
10 analyses, let's say the historical documents I'll call  
11 that, from the '80s, looked at the 1928, 1932 drought  
12 sequence -- and, again, our experience is through '88  
13 through '92, '93 -- superimposed with our current levels  
14 of demand in the state versus -- and our current  
15 regulatory structure that were obviously not in place in  
16 the 1920s, 1930s, and were not necessarily in place  
17 fully as they are today and the 1980s, 1990s.

18 Thinking about those particular dynamics and  
19 multiple years of drought, when we get to years 4 and 5,  
20 there's a lot of lessons to be learned by taking that  
21 hydrology just itself and superimposing current  
22 regulatory structure to that and then learning to think  
23 through what does that mean as well as just not looking  
24 at, well, here's what we had as something.

25 So there's a lot in the current data that,

1 although one might say historically we'd have some of  
2 these challenges, well, some of these challenges take  
3 that hydrology and superimpose it into our current --  
4 the current structure in terms of putting that together.

5 I don't know of an analysis that's taken the  
6 last three, four years, and with the WaterFix in place  
7 and really run that simulation all the way through to  
8 see how things may have changed. And that is an  
9 analysis that I'm not aware of.

10 MR. EICHENBERG: So that's not something you  
11 took into account in your operations analysis of the  
12 WaterFix?

13 WITNESS MILLIGAN: I did not take something  
14 into account that doesn't exist, but did try to glean  
15 what we could from the existing modeling that does have  
16 two really good examples of prolonged drought over as  
17 long as a six-year period that can give us some  
18 indication as to how we might operate with and find a  
19 utility in something like a WaterFix.

20 MR. EICHENBERG: But that is a review -- you  
21 did review the historical record for extreme drought  
22 conditions when you were doing your review of the  
23 operations for the WaterFix?

24 WITNESS MILLIGAN: Again, I certainly looked  
25 at the CalSim results which have two six-year drought

1 periods embedded in that and then also thought through  
2 where we've been in the last few years in terms of our  
3 operation and things like Mr. Leahigh's example that he  
4 had last year, last year's kind of winter, early spring  
5 operations.

6           And there have been others that have put  
7 together some illustrations as to the if you're having  
8 North Delta diversion that could operate on a short-time  
9 step, what the advantages to those would be in terms of  
10 water supply.

11           And then one thing they still think about is  
12 what does that mean in terms of the change in outflow.  
13 Because these were all during periods of fairly intense  
14 rainfall, excess conditions in the Delta that, you know,  
15 peaked and then kind of then ebbed as it diverted. And  
16 this kind of fits in with Mr. Anderson's discussion of  
17 atmospheric river events, great deal of excess flows of  
18 water on the value floor downstream of the major  
19 catchments, reservoirs for the project that end up  
20 getting to the Delta, cause pretty high peaks and flows  
21 and then recede within a couple weeks because they're  
22 not followed up by a series of waves of storms which are  
23 probably a lot more typical to the hydrology.

24           MR. EICHENBERG: Okay. Mr. Leahigh, did you  
25 also look at any analysis of the last few years of



1 unique circumstances or -- I guess we can start with  
2 that.

3 WITNESS LEAHIGH: With regards to the  
4 California WaterFix, no, no.

5 Looked at the modeling in terms of comparative  
6 analysis. And I think that was the proper use of the  
7 model, is to look at the comparative effects of the new  
8 project.

9 The California WaterFix is not a project to  
10 avoid a drought situation. That's not the purpose of  
11 the California WaterFix. There are aspects of the  
12 California WaterFix that could -- if we are able to  
13 convey more water supplies in the wetter years and that  
14 to the extent that helps local storages better deal with  
15 drought situations, that is probably the only aspect I  
16 see as a connection to the WaterFix and the extreme  
17 drought scenarios that you're kind of describing.

18 MR. EICHENBERG: We've been hearing a lot  
19 about extreme drought scenarios and climate change. Do  
20 you have any opinion on why we would be making a major  
21 infrastructure investment that didn't deal with drought  
22 at this time in history?

23 WITNESS LEAHIGH: Well, I just talked about  
24 the aspect of how it does help mitigate against those  
25 types of events.

1           MR. EICHENBERG: You said its primary purpose  
2 was not to deal with drought.

3           WITNESS LEAHIGH: I said it wouldn't prevent a  
4 drought -- extreme drought conditions, but it  
5 potentially enables the end users to better deal with  
6 those types of circumstances.

7           MR. EICHENBERG: Okay. Can we agree it's not  
8 a primary purpose of the project to deal with drought  
9 conditions?

10          MR. MIZELL: Object. Again, misstates his  
11 testimony. His testimony was it won't prevent a  
12 drought.

13          CO-HEARING OFFICER DODUC: Let's move on,  
14 please. In fact, if you're moving on to your next line  
15 of questioning -- I'm just checking with the court  
16 reporter. Would you like to take a break now?

17          Let's take a 15-minute break now and we'll  
18 resume at 10:50.

19          (Off the record at 10:36 a.m. and back  
20 on the record at 10:51 a.m.)

21          CO-HEARING OFFICER DODUC: Please take your  
22 seats. We're resuming with cross-examination by  
23 Mr. Eichenberg and Mr. Volker. If I could ask both of  
24 you -- actually, everyone, when you speak again, please  
25 speak into the microphone and try to be as clear as

1 possible for the court reporter.

2 Thank you.

3 MR. EICHENBERG: I'm going to try a sort of  
4 sideways mic. Is this any better?

5 CO-HEARING OFFICER DODUC: Much better.

6 MR. EICHENBERG: I'm going to try to assume  
7 the foundation that we talked about. And I think we've  
8 already brought up the Delta Reform Act to some extent.

9 If we could -- we've talked about the Delta  
10 Reform Act and that the Board developed flow criteria  
11 based on the Delta Reform Act.

12 And I'd like to ask Mr. Leahigh whether you  
13 evaluated the WaterFix operations under the assumption  
14 that you might have to comply with the flow criteria  
15 developed by the Board in 2010.

16 We can pull those up if you're not familiar  
17 with what I'm talking about.

18 WITNESS LEAHIGH: No, the answer is no.

19 MR. EICHENBERG: Mr. Milligan, is that true as  
20 well?

21 WITNESS MILLIGAN: Are you referring to the --  
22 what we talked about the other day as the -- is this  
23 75 percent?

24 MR. EICHENBERG: Yeah, that was part of that  
25 document.

1 WITNESS MILLIGAN: Yes. No, I have not.

2 MR. EICHENBERG: Do you feel that you can  
3 evaluate the operations of the WaterFix well enough to  
4 give an opinion on injuries to legal users of water  
5 under a new Water Quality Control Plan?

6 WITNESS MILLIGAN: Not knowing what the  
7 changes of a potential new control plan would be  
8 relative to the current plan, I would say no.

9 MR. EICHENBERG: Is that true for you, too,  
10 Mr. Leahigh?

11 WITNESS LEAHIGH: Yeah. Same answer.

12 MR. EICHENBERG: Okay. So, again, assuming  
13 some foundation here, we indicated that operations --  
14 and we were talking about water rights permits, you were  
15 including the auspices of a temporary urgency change  
16 petition, or TUCP. And exceedance rates that we were  
17 talking about earlier with other cross-examiners, we  
18 talked about 1.1 percent exceedance, et cetera, that  
19 these were -- it included the operation of TUCPs, that  
20 they weren't counted as exceedances -- that exceedances  
21 were not counted if they came under the operation of a  
22 TUCP.

23 And in your testimony, Mr. Leahigh, you said  
24 that you would continue to operate within permit terms.  
25 And I'm assuming that we're talking about the operation

1 of TUCPs, we're including that in your definition of  
2 "permit terms"; is that correct?

3 WITNESS LEAHIGH: I thought those would be  
4 included as a permit term.

5 MR. EICHENBERG: Mr. Milligan, does that  
6 comport with your understanding?

7 WITNESS MILLIGAN: We would view it as a  
8 temporary change to our permit terms.

9 MR. EICHENBERG: Included in the definition of  
10 "operating" under your permit terms that Mr. Leahigh had  
11 in his testimony and you corroborated?

12 WITNESS MILLIGAN: Yes.

13 MR. EICHENBERG: Okay. How many --  
14 Mr. Leahigh, maybe, or either of you if you know, how  
15 many TUCPs has the State Water Project, Central Valley  
16 Water Project combined -- how many have they asked for  
17 in the history of their operations?

18 CO-HEARING OFFICER DODUC: Do you have a time  
19 frame for that?

20 MR. EICHENBERG: The history of since they  
21 started operating.

22 WITNESS LEAHIGH: How many have we asked for  
23 or how many have we received?

24 MR. EICHENBERG: I said "asked for."

25 WITNESS LEAHIGH: Asked for?

1 I'm only aware of the request in 2009 which  
2 was subsequently retracted and then the request in 2014  
3 and -- I'm sorry. 2014 and 2015.

4 MR. EICHENBERG: Mr. Milligan, any additional  
5 requests you're aware of?

6 WITNESS MILLIGAN: I would refer to probably  
7 defer that question to our water rights folks who would  
8 be more in tune, particularly if we're going back to the  
9 history of the Central Valley Project.

10 Yeah, other than the ones I come to mind, the  
11 same as Mr. Leahigh described in addition to this year's  
12 petition.

13 MR. EICHENBERG: Okay. So just looking back  
14 to 2003 perhaps, I have the State Water Board has a Web  
15 page that shows TUCPs. And maybe we could take a look  
16 at that and get a more specific number. I have  
17 PCFFA-12, Exhibit PCFFA-12.

18 If we could pull that up, Mr. Baker. Thank  
19 you so much.

20 This is a list of TUCPs from the Board's  
21 Web site. We'll mark it as Exhibit PCFFA-12.

22 (Whereupon Exhibit PCFFA-12 was marked  
23 for identification.)

24 MR. EICHENBERG: I believe we handed out a  
25 paper copy of that. Take a look and maybe we can figure

1 out how many of those since 2003 the project has. I  
2 count -- I highlighted all of DWR reclamations, TUCPs  
3 since 2003, and I count 49, or close to four per year  
4 that -- that the Bureau and DWR requested for -- across  
5 their operation.

6 Can you take a look at that exhibit and tell  
7 me how many of those were SWP and CVP requests?

8 WITNESS MILLIGAN: Again, I would probably  
9 defer to our water rights presenters. That will be  
10 later into the process. Not to kick the can down the  
11 road in that regard, but at least I think some of these  
12 for reclamation would be good to know what the context  
13 were of these requests.

14 Were they dealing with Delta objectives that  
15 might be related to the WaterFix? Some of these might  
16 have been consolidated place of use or request for  
17 change of place of use south of Delta. It looks like a  
18 number of these. So I would defer to -- the details I  
19 think we're get heading towards here to our  
20 representative for CVP.

21 MR. EICHENBERG: Mr. Leahigh, are you also  
22 unable to tell me?

23 WITNESS LEAHIGH: I would just -- my first --  
24 a long document here, but I -- and this is probably  
25 better answered by the other panel, but I would find it

1 very hard to believe that many, if any, other of these  
2 are related to our Water Quality Control Plan, temporary  
3 agency change.

4 MR. EICHENBERG: My question was about the  
5 project, the Central Valley Project and the State Water  
6 Project.

7 WITNESS MILLIGAN: Right. That's what I'm  
8 referring to as well.

9 MR. EICHENBERG: So anything related to those  
10 projects? Okay. I think I heard your answer. That's  
11 fine.

12 Mr. Leahigh, does DWR plan on requesting to  
13 use you for part of its planning process for WaterFix?

14 CO-HEARING OFFICER DODUC: What do you mean by  
15 "planning process"? I wouldn't ask for a TUCP for  
16 planning.

17 MR. EICHENBERG: No, you're right. I mean in  
18 terms of planning for future operations of the WaterFix  
19 project. In their operational review, I assume they  
20 looked at what potential operations might have been. My  
21 question is whether they looked -- whether they plan on  
22 asking for TUCPs as part of that, those operations.

23 CO-HEARING OFFICER DODUC: I believe that's  
24 been addressed. The TUCP option is one option on the  
25 table that currently exists for the project, that



1 currently exists for -- for other water rights  
2 operations. And it's one option that they, I don't  
3 believe, have ruled out going into the future.

4 So, moving on?

5 MR. EICHENBERG: Okay. I was hoping for a --  
6 more of a statement that it was something that they  
7 considered proactively as part of their planning  
8 process, but I think you may be right that it's been  
9 covered.

10 So we've been talking about conservative water  
11 supply estimates, I think, in response to some other  
12 cross -- and I think that was you, Mr. Leahigh -- and  
13 making operational decisions based on recent experiences  
14 in your recent -- in extreme hydrological conditions.

15 Are we going to be in the same situation  
16 requesting temporary urgency change petitions as we were  
17 in 2014 and 2015 if we see similar hydrological  
18 conditions?

19 WITNESS LEAHIGH: I think it's too vague of a  
20 question in terms of "similar hydrologic conditions."

21 I think --

22 MR. EICHENBERG: If we see about the same  
23 amount of the precipitation, same hydrological  
24 conditions as we did -- have we changed our operations  
25 in any way that would prevent the need for TUCP?

1 WITNESS LEAHIGH: When?

2 MR. EICHENBERG: As we needed them in 2014 and  
3 2015 and, say, in 2017 and 2018.

4 MR. BERLINER: I'm going to object on the  
5 grounds that this is a highly ambiguous question, and  
6 it's vague, and it assumes an awful lot of facts not in  
7 evidence. I don't have any objection if he wants to  
8 break this down and give the witness some parameters to  
9 answer this but --

10 CO-HEARING OFFICER DODUC: Well, I have an  
11 objection. Let's get some clarity here.

12 Mr. Leahigh, Mr. Milligan, are TUCPs a  
13 continuing option for the projects in the future if  
14 hydrology and operational restrictions necessitate the  
15 need for it? I mean, sitting here right now, can you  
16 definitely say that TUCPs will not be something that you  
17 would consider in the future? If so, I would like to  
18 hear that.

19 I'm of the impression that TUCP requests is an  
20 option that the projects have and it's an option that  
21 you're not proposing to eliminate with the WaterFix.  
22 And if that is incorrect, let's get that into the  
23 record.

24 WITNESS MILLIGAN: I think that we would view  
25 that that is still an option under certain

1 circumstances. I think, to take it a step further, we  
2 do not believe we're going to rely on change petitions  
3 to a greater degree if WaterFix were approved.

4 CO-HEARING OFFICER DODUC: Because of the  
5 flexibility?

6 WITNESS MILLIGAN: Because of the flexibility.  
7 If anything, it would make it possible for us to be less  
8 likely to make a -- such a request.

9 CO-HEARING OFFICER DODUC: But you're not  
10 ruling out the option?

11 WITNESS MILLIGAN: Not ruling out the option.  
12 And my review, at least to the CVP, would say that the  
13 operation or how we would operate with such a facility  
14 within the operating range that we defined between the  
15 H3 and H4 would not create a circumstance where we're  
16 more likely to require a need to have change petitions.

17 CO-HEARING OFFICER DODUC: You're not ruling  
18 out that option?

19 WITNESS MILLIGAN: Not ruling it out.

20 CO-HEARING OFFICER DODUC: Does that go for  
21 the State Water Project as well, Mr. Leahigh?

22 WITNESS LEAHIGH: Yes, I think that I would  
23 agree that that wouldn't be ruled out. And I wouldn't  
24 specifically tie it to the California WaterFix. I think  
25 that question is really independent of whether the

1 WaterFix is approved or not.

2 CO-HEARING OFFICER DODUC: Sitting here today,  
3 you cannot predict under what scenario you might be apt  
4 to score a temporary urgent change petition?

5 WITNESS LEAHIGH: That's right, because it's  
6 dealing with unsuspected conditions.

7 CO-HEARING OFFICER DODUC: Thank you.

8 All right. Let's move on, Mr. Eichenberg.

9 MR. EICHENBERG: Great. Thank you so much.

10 I want to talk about or ask some questions  
11 about salmon doubling. We have -- D-1641 mentioned  
12 salmon doubling. I'm going to try to lay the foundation  
13 without pulling things up so we can keep this moving  
14 faster. And that references the 1995 Bay-Delta plan.

15 Mr. Leahigh, are you familiar with the salmon  
16 doubling objective from D-1641 of 1995 Bay-Delta Plan?

17 MR. BERLINER: Object on grounds of relevance.  
18 This is a Part II question.

19 CO-HEARING OFFICER DODUC: So where are you  
20 going with this, Mr. Eichenberg?

21 MR. EICHENBERG: Well, they've said that they  
22 operate -- that they plan their operations based on  
23 D-1641 -- combined with D-1641. I want to see if  
24 they're talking about complying with all of D-1641.

25 And I think that that does have an impact on

1 legal uses of water, because if there are additional  
2 flows that should be directed towards the salmon  
3 doubling provision, those flows have to come from  
4 somewhere.

5 CO-HEARING OFFICER DODUC: Mr. Berliner, your  
6 response?

7 MR. BERLINER: In that case, I'm going to  
8 object on the grounds that it misrepresents D-1641.  
9 There's no doubling criteria in D-1641.

10 CO-HEARING OFFICER DODUC: All right.

11 MR. EICHENBERG: We have the exhibit. We can  
12 pull up where it mentions the doubling criteria in  
13 D-1641.

14 CO-HEARING OFFICER DODUC: I'll give you a  
15 little bit of leeway on this, but keep in mind the focus  
16 for fishery will be in Part II.

17 MR. EICHENBERG: I understand that.

18 CO-HEARING OFFICER DODUC: So your linkage to  
19 impact on users is valid, but let's keep that focus.

20 MR. EICHENBERG: Thank you.

21 Are you familiar with the salmon doubling  
22 provision? was my question.

23 WITNESS LEAHIGH: Yeah. I'm not aware that  
24 there's any requirement in D-1641 for salmon doubling.

25 MR. EICHENBERG: Can we pull up SWRCB-21,

1 page 61? I think it's near the bottom here.

2 Let's scroll back up.

3 It says near the top -- it says:

4 "Implementing the narrative objectives for salmon  
5 protection requires a long-term process."

6 So it mentions the salmon doubling narrative  
7 objectives and that it will require a long-term process.

8 "Period of actual operation meeting the  
9 numerical objective in the 1995 Bay-Delta Plan or the  
10 measures under the SJRAVAMP coupled with adequate  
11 monitoring is required before the SWRCB can determine  
12 whether additional implementation measures are needed to  
13 meet this objective."

14 And then we have PCFFA-17, so  
15 Exhibit PCFFA-17, 1995 Bay-Delta Plan, page 28.

16 (Whereupon Exhibit PCFFA-17 was marked  
17 for identification.)

18 MR. EICHENBERG: This is fish doubling  
19 requirements.

20 Would you agree that it has been 21 years  
21 since the numerical objectives in the Bay-Delta Plan  
22 were adopted?

23 WITNESS LEAHIGH: Not sure I agree with the  
24 premise of that question.

25 MR. EICHENBERG: It's been about 21 years

1 since the salmon doubling objective, narrative objective  
2 was introduced?

3 MR. BERLINER: Object. Misstates what the  
4 document says.

5 MR. EICHENBERG: We can scroll down. Sorry.

6 Narrative objective for salmon protection. We  
7 can review that.

8 CO-HEARING OFFICER DODUC: So what is your  
9 question?

10 MR. EICHENBERG: My question is, is that I'm  
11 asking if we can agree that it's been about 20 years,  
12 21 years since we've since we had this narrative  
13 objective that we would double salmon populations  
14 consistent with the goals of the CVPIA.

15 WITNESS LEAHIGH: All I can say is it's been  
16 about 20 years since the 1995 Water Quality Control Plan  
17 was adopted.

18 MR. EICHENBERG: And do you feel that, in  
19 fact, salmon populations have doubled?

20 MR. BERLINER: Objection. His feelings are  
21 irrelevant.

22 CO-HEARING OFFICER DODUC: I think we can  
23 agree that the salmon population has not doubled. So  
24 move on, please.

25 MR. EICHENBERG: Okay. Can you project a time

1 when we will see this promised doubling?

2 MR. MIZELL: Objection. Relevance.

3 MR. BERLINER: At best, this is a Part II  
4 question, but I'll object --

5 MR. EICHENBERG: We've already had --

6 CO-HEARING OFFICER DODUC: Okay. All right.

7 MR. EICHENBERG: -- objections and  
8 interruptions.

9 CO-HEARING OFFICER DODUC: Mr. Eichenberg, the  
10 poor court reporter here.

11 Tie this -- tie this back down, your line of  
12 questioning, to operations as proposed by the WaterFix  
13 petition.

14 MR. EICHENBERG: I would like to know if they  
15 took into account when reviewing current water quality  
16 standards that -- any effects on day-to-day operations  
17 for the purpose of rejecting what future operations with  
18 the WaterFix will look like if future operations have to  
19 meet increased flow standards as a result of salmon  
20 doubling objectives.

21 CO-HEARING OFFICER DODUC: I don't know that I  
22 follow that question.

23 MR. EICHENBERG: Did you think about salmon  
24 doubling objectives when you were planning the  
25 operations of the WaterFix?



1 WITNESS LEAHIGH: This is outside my level  
2 area of expertise.

3 MR. EICHENBERG: Did you consider salmon  
4 doubling when --

5 WITNESS LEAHIGH: This is outside my area of  
6 expertise.

7 MR. EICHENBERG: It seems like your area of  
8 expertise is the operations of the project. You run the  
9 operations of the project for the purposes of the  
10 WaterFix.

11 CO-HEARING OFFICER DODUC: One at a time.  
12 Mr. Mizell?

13 MR. MIZELL: I'm objecting to the  
14 argumentative line of questioning. The witness has  
15 already answered this question. It's beyond his  
16 expertise. He said it twice now. I'm not sure badgering  
17 the witness is going to help.

18 CO-HEARING OFFICER DODUC: Move on. You're  
19 not going to get much farther on this line of  
20 questioning.

21 MR. EICHENBERG: Mr. Baker, can we pull up  
22 Exhibit PCFFA-14?

23 This is -- I'll introduce as PCFFA-14,  
24 Mr. Anderson's 2009 presentation which we are already  
25 familiar with.

1           If we go to page 8 where you talk about  
2 multiyear drought period, I think we can agree that the  
3 most recent drought was a multiyear period.

4           Can you tell me when the most recent drought  
5 started?

6           WITNESS ANDERSON: The first year of below  
7 average precipitation began in water year 2012.

8           MR. EICHENBERG: And how long did it last?

9           WITNESS ANDERSON: We are currently moving  
10 through that period of drought.

11          MR. EICHENBERG: So it hasn't ended yet?

12          WITNESS ANDERSON: Not to my knowledge.

13          MR. EICHENBERG: If we go to the next page,  
14 please, Mr. Baker. Thank you. That's page 9.

15          Can you tell me, Mr. Anderson, how many  
16 multiyear droughts we've had in the last 95 years?

17          WITNESS ANDERSON: Not off the top of my head  
18 looking at the graphic on display, which, again, is one  
19 facet of drought represented by the eight-station index.

20          MR. EICHENBERG: If I represent to you that  
21 there are eight spikes there -- nine, rather -- sorry.

22          WITNESS ANDERSON: Your question would be in  
23 the period between 1941 and --

24          MR. EICHENBERG: 1921?

25          WITNESS ANDERSON: No. So you have the long

1 prolonged drought, '28 to '34. Then you have two spikes  
2 close together offset possibly by a single year.

3 Whether you would consider that one or two --

4 MR. EICHENBERG: It's your --

5 WITNESS ANDERSON: -- may depend on impacts.

6 MR. EICHENBERG: Okay.

7 CO-HEARING OFFICER DODUC: The court reporter  
8 cannot make out your words, so please try to speak into  
9 the microphone and enunciate.

10 MR. EICHENBERG: Okay. Sorry.

11 Is that most recent drought, is that included  
12 in this graph?

13 CO-HEARING OFFICER DODUC: Okay. Before you  
14 answer that...

15 What additional lines of questioning are you  
16 pursuing? Can we get there more directly without going  
17 through every single slide of this presentation? And  
18 how much additional time would that take?

19 MR. EICHENBERG: Yes, I do not intend to go  
20 through every single slide. And I think I -- I found  
21 some ways to speed up, and I'll try to keep finding  
22 those. I think probably combined Mr. Volker and I have  
23 another hour or so.

24 I'm about -- I'm about halfway through my  
25 questions, and I think I can take them faster than I

1 have been taking them so far.

2 CO-HEARING OFFICER DODUC: And help me -- by  
3 the way, just so everyone knows, it really helps us if  
4 we can understand the direction of your questioning. It  
5 might make me more sympathetic to the time you need.

6 So obviously we are exploring, or at least you  
7 are exploring with Mr. Anderson, some aspects of the  
8 current drought with, I would expect, some linkage to  
9 future operations under the WaterFix project.

10 Am I correct in that?

11 MR. EICHENBERG: Yes. Yes. Absolutely.

12 CO-HEARING OFFICER DODUC: Okay. I strongly  
13 encourage you to get there. And then what additional  
14 lines beyond that do you have or does Mr. Volker have?

15 MR. EICHENBERG: Well, this line I have  
16 labeled under climate change. And Mr. Volker also has  
17 some climate change questions which we can either -- we  
18 can either do now or he can come after my presentation.

19 CO-HEARING OFFICER DODUC: All right. Let's  
20 wrap up your presentation first -- or your cross-exam  
21 first.

22 Ms. Morris?

23 MS. MORRIS: Stefanie Morris, State Water  
24 Contractors. I'm objecting to additional time being  
25 given because the time we spent this hour has been

1 largely duplicative of other questions and lines of  
2 questioning, including climate change, including TUCPs,  
3 including salmon doubling goal. All of these things  
4 have been thoroughly covered and now we're -- covered in  
5 them in an hour and now we're going to have an  
6 additional hour. And I feel like the standard for a  
7 burden of proof as to why additional time is needed  
8 shouldn't just be "I have more questions, and I've  
9 already spent my first hour asking questions other  
10 people have asked."

11 CO-HEARING OFFICER DODUC: Your objection is  
12 noted, and I'm completely sympathetic.

13 But let's go ahead and allow Mr. Eichenberg  
14 and Mr. Volker some additional time.

15 But I will be nudging you to get more directly  
16 to your questions and see how this plays out. Let's put  
17 30 minutes on, and we'll try to accomplish what we can  
18 in 30 minutes.

19 MR. VOLKER: I would note my questions are on  
20 behalf of the Institute for Fisheries Resources, and  
21 they are separate and not subject to the same time  
22 limitation as PCFFA.

23 CO-HEARING OFFICER DODUC: I was under the  
24 impression that PCFFA and IFR comprise one party.

25 But in any case --

1 MR. VOLKER: Two separate parties represented  
2 by the same counsel.

3 CO-HEARING OFFICER DODUC: But, in any case,  
4 the objective still remains to make the line of  
5 questioning as efficient as possible and not  
6 duplicative.

7 MR. VOLKER: Understood.

8 CO-HEARING OFFICER DODUC: Mr. Eichenberg?

9 MR. EICHENBERG: Thank you.

10 Maybe we can go to page 15. There's a  
11 highlighted statement there.

12 Mr. Anderson, do you agree with the  
13 highlighted statement that: "We could expect greater  
14 variability and below average runoff as a result of  
15 climate change"?

16 MR. BERLINER: Asked and answered.

17 CO-HEARING OFFICER DODUC: This is his slide,  
18 I assume.

19 Is this your slide?

20 So, yes, he would agree with his statement.

21 Let's move on.

22 MR. EICHENBERG: Great. Thank you.

23 Did you -- Mr. Leahigh, did you draw any  
24 operational effect from this conclusion or a conclusion  
25 similar to it for your potential administration of the

1 WaterFix?

2 WITNESS LEAHIGH: No.

3 MR. EICHENBERG: Mr. Milligan?

4 WITNESS MILLIGAN: No, I did not.

5 MR. EICHENBERG: Thank you.

6 On page 17, Mr. Anderson, your slide discusses  
7 smaller duration shift in more recent times. Do you  
8 agree with that -- do you still agree with that  
9 characterization today? Feel free to review that off  
10 the screen.

11 CO-HEARING OFFICER DODUC: Was that a question  
12 for Mr. Anderson?

13 MR. EICHENBERG: Yes.

14 WITNESS ANDERSON: So the question as I  
15 understand it was do I agree with my characterization of  
16 what I call a climate shift? Which is an effort to try  
17 and describe the broader detail scale variability where  
18 you end up durations 20 years or longer and trying to  
19 characterize that separate from an individual drought.

20 MR. EICHENBERG: And that's -- your conclusion  
21 in 2009 still applies today? You have no qualification  
22 of that that you would make?

23 WITNESS ANDERSON: I have not revisited this  
24 since that time.

25 MR. EICHENBERG: Is it possible that such a

1 shift may be occurring now?

2 WITNESS ANDERSON: It is uncertain as these  
3 periods are best seen diagnostically or in the past  
4 after we've been through them. We do not have a  
5 capacity to forecast ahead on decadal scale variability,  
6 as I testified earlier this morning.

7 MR. EICHENBERG: That means it is possible?

8 WITNESS ANDERSON: Yes.

9 MR. EICHENBERG: And Mr. Leahigh and  
10 Mr. Milligan, have you made any allowance for such a  
11 shift in your current operation?

12 WITNESS MILLIGAN: No.

13 WITNESS LEAHIGH: Well, the only -- to the  
14 only degree that would account for shifts would be, as I  
15 testified earlier, in that a forecast for a given year  
16 based on a historical average, a running 50-year  
17 average, to the extent that shifts are showing up in  
18 that 50-year record, then they would be accounted for as  
19 a part of our decision-making process in realtime.

20 MR. EICHENBERG: We can move on. Thank you so  
21 much.

22 Mr. Baker, can we pull up DWR-61, page 3,  
23 specifically lines 20 through 21?

24 Thank you.

25 Mr. Leahigh, in light of your statement that



1 management of net Delta outflow is a fundamental way in  
2 which salinity is managed in the system, did you  
3 consider whether failure or collapse of currently  
4 existing levees in the Delta area could necessitate a  
5 greater outflow in order to keep saltwater intrusion at  
6 bay?

7 WITNESS LEAHIGH: That would depend on a  
8 number of factors, one of those being, you know, what  
9 time of year would a failure occur. Certainly if it was  
10 during a large flood event with high outflows, there  
11 would be sufficient flow in the system. It really  
12 depends on a number of factors and what the particular  
13 circumstances would be at the time.

14 MR. EICHENBERG: Were you thinking about those  
15 circumstances when you -- when you made this  
16 testimony -- when you made this statement?

17 WITNESS LEAHIGH: I don't believe I've made  
18 any statement about levee failures.

19 MR. EICHENBERG: About managing salinity in  
20 the Delta -- management of net Delta outflow. Were you  
21 considering levee failure as a scenario when you were --  
22 when you made your testimony about managing Delta  
23 outflow managing salinity?

24 WITNESS LEAHIGH: It was really a more general  
25 relationship between Delta outflow and salinity. So to

1 the effect that that would be affected by a levee break,  
2 that would certainly fall into same category.

3 MR. EICHENBERG: Mr. Milligan, you indicated  
4 that you were familiar with a Jones Tract levee break in  
5 2004. I think that was you. I hope.

6 How large an increase in Delta outflow is  
7 necessary, if you know, to prevent saltwater intrusion?

8 WITNESS MILLIGAN: I don't recall. I was not  
9 in my current position that particular summer.

10 MR. EICHENBERG: Mr. Leahigh, are you familiar  
11 with that incident?

12 WITNESS LEAHIGH: Yes.

13 MR. EICHENBERG: And do you know how much  
14 outflow was required?

15 WITNESS LEAHIGH: Offhand, I don't believe it  
16 required a large amount of additional outflow because of  
17 the timing of that event. If I remember correctly, it  
18 was late spring. Water quality conditions were actually  
19 pretty good.

20 And once the system -- once conditions reached  
21 equilibrium, if you will, inside Jones Tract and outside  
22 conditions, water quality conditions, were still --  
23 still very good at the time.

24 So if I recall correctly, there was not the  
25 need for significant amounts. There may have been some

1 release of additional water or reduction in exports, but  
2 I don't believe it was a substantial amount.

3 MR. EICHENBERG: Is it true pumping was halted  
4 as a result of the failure?

5 WITNESS LEAHIGH: There was right when the  
6 incident occurred. If I remember correctly, I believe  
7 the State Water Project exports were actually down for  
8 maintenance activities, so we were already at a low  
9 export rate. There may have been temporary action on  
10 the part of the Central Valley Project for a reduction.  
11 But, as I said, I think that was just during the period  
12 of when Jones Tract was actually filling.

13 Once the system stabilized, I recall that  
14 operations were fairly -- so this was over a number -- a  
15 few days that there was any kind of change in the  
16 operations. After that point, I think it was -- didn't  
17 have a significant impact on our -- our operations at  
18 that point other than those -- those first few days  
19 after the breach.

20 MR. EICHENBERG: Can you predict what kind of  
21 operations would be necessary if we had the North Delta  
22 diversions under the WaterFix?

23 WITNESS LEAHIGH: What kind of operations?

24 MR. EICHENBERG: Of the North Delta diversions  
25 of the WaterFix project as a whole would be necessary in

1 the event a levee breaks, not just the Jones Tract levee  
2 break.

3 WITNESS LEAHIGH: I haven't done any analysis.

4 MR. EICHENBERG: And would sea level rise if  
5 impacted, increased outflow required as a result of the  
6 levee break?

7 WITNESS LEAHIGH: Well, generally to the  
8 extent that we are experiencing sea level rise, it would  
9 require additional outflows in order to achieve the same  
10 salinity reaching in the Delta.

11 MR. EICHENBERG: And either Mr. Leahigh or  
12 Mr. Milligan, did you consider other scenarios or  
13 evaluate other scenarios where levee breaks might  
14 necessitate greater outflow as part of your testimony  
15 for this Board?

16 WITNESS MILLIGAN: As it relates to how  
17 operations may look with the WaterFix in place?

18 MR. EICHENBERG: Yes.

19 WITNESS MILLIGAN: Not explicitly, no.

20 MR. EICHENBERG: Mr. Leahigh?

21 WITNESS LEAHIGH: Yes, not explicitly.  
22 Certainly additional flexibility offered by what's  
23 contemplated under the WaterFix. To the degree the  
24 system has more flexibility, it's generally, as a  
25 general statement, able to respond to unexpected events.

1 Additional tools to be able to respond to unexpected  
2 events.

3 MR. EICHENBERG: Are you -- the engineering  
4 report that we talked about earlier, it says that levee  
5 failure may occur in the event of an n earthquake based  
6 on a large fraction of the borings taken testing those  
7 levees.

8 Is that -- a situation where earthquake  
9 causing levee breaks, is that something that you  
10 considered?

11 WITNESS LEAHIGH: No, same answer. Generally  
12 did not consider levee breaks as...

13 MR. EICHENBERG: Do you know how many levee  
14 failures there have in the Delta and Suisun Marsh since  
15 1900?

16 CO-HEARING OFFICER DODUC: From that long  
17 silence, is the answer no?

18 WITNESS LEAHIGH: I'm aware there's  
19 documentation of that, but I don't recall what the  
20 numbers are.

21 MR. EICHENBERG: Okay. Let's pull up  
22 PCFFA-16. We'll mark that Exhibit PCFFA-16, DWR-212,  
23 page 259.

24 (Whereupon Exhibit PCFFA-16 was marked  
25 for identification.)

1 MR. EICHENBERG: Highlighted text from DWR-12,  
2 which is Appendix A of a conceptual engineering report.  
3 And it says that there have been 166 such failures since  
4 1900. Do you have any cause to dispute that number?

5 WITNESS LEAHIGH: I don't, no.

6 MR. EICHENBERG: Mr. Leahigh, what impact do  
7 you think climate change might have on levee failures in  
8 the Delta? Do you think it will increase the likelihood  
9 or decrease the likelihood?

10 WITNESS LEAHIGH: That's really outside my  
11 area of expertise.

12 MR. EICHENBERG: Anybody on the panel have  
13 that expertise?

14 WITNESS MILLIGAN: I guess I would say my  
15 familiarity with the history of Delta levee failures is  
16 that there's a -- this particular citation goes back to  
17 1900. The number of levee failures pre-upstream  
18 reservoir for flood control like Shasta Dam, Oroville,  
19 Folsom are significantly reduced since the, let's say,  
20 the 1940s going forward.

21 MR. EICHENBERG: My question had to do with  
22 climate change impacting levee failures.

23 WITNESS MILLIGAN: So the question is  
24 increasing probability of this particular rate disclosed  
25 here as compared to this rate?

1           MR. EICHENBERG: I wasn't comparing it to this  
2 table. I just meant, in general, is the rate of levee  
3 failures increased or decreased as a result of climate  
4 change?

5           CO-HEARING OFFICER DODUC: Do you know?

6           MR. EICHENBERG: Do you know?

7           WITNESS MILLIGAN: The answer is it's hard to  
8 say because the state of the levees is constantly  
9 changing as well.

10          MR. EICHENBERG: Is levee failure incorporated  
11 into the operational modeling that you use?

12          WITNESS MILLIGAN: You mean on a seasonal  
13 basis?

14          MR. EICHENBERG: Sure.

15          WITNESS MILLIGAN: No.

16          MR. EICHENBERG: How about on a long-term  
17 basis?

18          WITNESS MILLIGAN: There are contingency plans  
19 about levy failure. Again, timing is a key thing.  
20 Failure in the winter during high outflow events like a  
21 flood. Is it a -- the question goes around the recovery  
22 of those islands of the islet of the Delta. Is it  
23 summertime failure like Jones Tract or Brannan-Andrus  
24 back in 1972? Those are more in the forms of the  
25 contingency plans that are there to kind of identify and

1 help the operators at the time know what things to look  
2 at so they have appropriate response.

3 MR. EICHENBERG: Does that mean yes, it's part  
4 of the modeling long term?

5 WITNESS MILLIGAN: No, it's not part of the  
6 modeling. It's a contingency plan.

7 CO-HEARING OFFICER DODUC: Mr. Eichenberg, let  
8 me do a time check here. Down to about 15 minutes.

9 And just for the record, PCFFA and IFR are one  
10 party as so noted on your NOI. So you're not a grouping  
11 of parties; you are one party. So you might want to at  
12 some point have Mr. Volker to ask him questions.

13 MR. EICHENBERG: Thank you. Yeah, I intend  
14 to.

15 I just want to go back real quick to  
16 yesterday, Mr. Milligan, where you said you didn't  
17 believe there should minimum carryover in project  
18 reservoirs because you wanted to maintain flexibility.

19 Could you imagine having minimum carryover  
20 with exceptions that would allow that flexibility, such  
21 as minimum carryover with an exception for levee failure  
22 which is, I think, one of the examples that you gave,  
23 and maybe some of the other predictable emergencies or  
24 possible emergencies?

25 WITNESS MILLIGAN: I think what we've seen in



1 our experience collectively is although we can identify  
2 a range of things that could occur, we're constantly  
3 confronted with things we may not have thought through  
4 or what the criteria would be. So it's difficult to, in  
5 my mind, to be confident that we've captured all the  
6 potential variabilities that we may need to respond to.

7 MR. EICHENBERG: What about carryover  
8 requirements just -- that only apply to exports?

9 WITNESS MILLIGAN: I'm sorry. I don't quite  
10 follow your question.

11 MR. EICHENBERG: Would that give you the  
12 flexibility that you said you -- you said the problem  
13 with having carryover requirements was that you didn't  
14 have enough flexibility to deal with unforeseen  
15 circumstances. If those carryover requirements only  
16 apply on exports, wouldn't that give you the added  
17 flexibility you needed?

18 WITNESS MILLIGAN: I'm not -- at the risk of  
19 saying I don't fully follow your question, it's very  
20 difficult to sort out our project operation upstream  
21 releases and say, oh, it's uniquely just for exports.

22 MR. EICHENBERG: Yeah. May not know enough  
23 about the project to ask that more specifically.

24 Just generally for the panel, what level of  
25 sea level rise did you factor into your operational

1 review?

2 CO-HEARING OFFICER DODUC: Did you factor any  
3 level of sea level rise?

4 WITNESS MILLIGAN: I think that that will be a  
5 good question for the modelers. There is, in terms of  
6 some of the future, an inception of sea level rise that  
7 was in some of the modeling. But the exact nature, how  
8 big that is, I'm not sure.

9 CO-HEARING OFFICER DODUC: Thank you.

10 MR. EICHENBERG: I believe maybe it was  
11 Mr. Leahigh who said that the assumptions embedded in  
12 the CalSim model since its inception drive the  
13 reservoirs collectively down. Is that correct?

14 WITNESS LEAHIGH: That doesn't sound familiar.  
15 I don't know the context you're talking about.

16 MR. EICHENBERG: I was curious it was not  
17 gotten into in the previous cross-examination.

18 Do the reservoirs get down drawn as a result  
19 of assumptions in the CalSim modeling?

20 WITNESS LEAHIGH: Reservoirs are generally  
21 cycled annually. Yes, that is an assumption in the  
22 model.

23 MR. EICHENBERG: And that also results in  
24 reservoir drawdown?

25 WITNESS LEAHIGH: Part of that cycle is

1 reservoir drawdown, and the other part of the cycle is  
2 the filling of the reservoir.

3 MR. EICHENBERG: Okay. And does that come  
4 because the assumptions of the modeling prioritize  
5 meeting D-1641 and senior water rights at the expense of  
6 taking water levels in the reservoirs down? They  
7 prioritize senior water rights and meeting D-1641 over  
8 carryover storage and reservoir storage?

9 MR. MIZELL: I'm going to object as compound.  
10 I could not follow the question included in that  
11 statement.

12 CO-HEARING OFFICER DODUC: Do you know if the  
13 modeling prioritizes certain operations over others?

14 WITNESS LEAHIGH: Yes, I believe that CalSim  
15 does prioritize the use. I'm not familiar exactly how  
16 that priority works. That would be a question for the  
17 modelers. But, yes, there is a priority system.

18 CO-HEARING OFFICER DODUC: Thank you.

19 MR. EICHENBERG: Okay. At this point, I'd  
20 like to give to Mr. Volker some time to give his  
21 presentation. And if we have time at the end of that --

22 CO-HEARING OFFICER DODUC: This would be  
23 climate change?

24 MR. VOLKER: Climate-related. Not  
25 specifically climate change. No, more historical

1 droughts.

2 MR. EICHENBERG: I misspoke earlier. I  
3 apologize.

4 CO-HEARING OFFICER DODUC: And I hope you've  
5 been following the cross-examination to date which has  
6 developed into a lot of drought issues and  
7 drought-related issues and that we're not going to be  
8 repeating some of those areas.

9 MR. VOLKER: Yes, understood. I don't believe  
10 that long-term historical droughts identified through  
11 tree ring data and the like have been discussed in any  
12 depth so far in these proceedings.

13 CO-HEARING OFFICER DODUC: We'll see to what  
14 extent these witnesses -- well, perhaps Mr. Anderson  
15 might. Go ahead and ask your questions.

16 MR. VOLKER: Mr. Baker, would pull up the IFR  
17 PowerPoint. I won't get to it just yet, but I want to  
18 have it up.

19 --o0o--

20 CROSS-EXAMINATION

21 MR. VOLKER: Good morning, Mr. Leahigh. I  
22 will direct my first questions to you. And you assert  
23 on page 13, lines 20 to 22 of your written testimony,  
24 which is Exhibit DWR-51, that the hydrologic and  
25 temperature conditions for the past four years are "at

1 or beyond the extreme ends of historical record and  
2 should be considered statistical outliers from what  
3 would be within the expected range of conditions."

4 Now, does this mean that you did not in your  
5 testimony consider how the State Water Project would  
6 operate with the WaterFix under these conditions?

7 WITNESS LEAHIGH: I'm sorry. Could you tell  
8 me which line that was on page 13?

9 MR. VOLKER: Lines 20 to 22.

10 WITNESS LEAHIGH: So just to be clear, I did  
11 not do any of the analysis on the WaterFix with the  
12 exception of the one example. Looking at this year. I  
13 relied on the modeling group to do that long-term  
14 analysis on the effects of WaterFix.

15 MR. VOLKER: Okay. So you would not able to  
16 tell me how the State Water Project operation would  
17 perform under such drought conditions with the  
18 Cal WaterFix versus without?

19 WITNESS LEAHIGH: Well, the purpose for this  
20 part of my testimony was describing the circumstances  
21 that caused the projects to petition the Water Board for  
22 temporary urgency change petitions in 2014 and 2015.

23 MR. VOLKER: Do you know if those conditions  
24 have been considered in -- in the modeling and in your  
25 consideration of how the operation of the project would

1 change with the Cal WaterFix?

2 WITNESS LEAHIGH: That's probably best  
3 answered by the modelers in terms of all the inputs that  
4 they used and how -- my understanding is that they  
5 relied significant to the -- to a significant extent on  
6 historical data, but there were adjustments to that  
7 databased on some climate change assumptions. But I  
8 don't know specifics on how that might relate to the  
9 last couple of years.

10 MR. VOLKER: Okay. Moving on then, the graphs  
11 you cite to support your statement that the hydrologic  
12 and temperature conditions for the past four years are  
13 at or beyond the extreme ends of historical record only  
14 go back to 1895 at the earliest.

15 Is it true that there are precipitation  
16 reconstruction records for the Sierra Nevada and  
17 Central Valley in California going back over 1,000  
18 years?

19 WITNESS LEAHIGH: I'm generally aware that  
20 there are tree ring records that go back much further.

21 MR. VOLKER: And do these precipitation and  
22 stream flow reconstructions show decades- and even  
23 centuries-long droughts?

24 WITNESS LEAHIGH: Generally that's my  
25 understanding, but that's -- this is outside my field

1 generally.

2 MR. VOLKER: Okay.

3 WITNESS LEAHIGH: I don't know about the  
4 precision or the accuracy of those -- tree ring  
5 reconstruction and how they relate to the hundred years  
6 of historical observations that we have.

7 MR. VOLKER: Okay. I'd like to introduce some  
8 exhibits that bear on this issue now, if I may.

9 CO-HEARING OFFICER DODUC: Let me ask here. I  
10 sense a trend here to use cross-examination for purposes  
11 that should be accomplished in your own case in chief.

12 To what extent are you intending to ask these  
13 witnesses specific questions versus introducing evidence  
14 that should be in your case in chief?

15 MR. VOLKER: This is evidence that relates to  
16 what these witnesses considered in their testimony. And  
17 this goes directly to how the State Water Project and  
18 Central Valley Projects will operate in the future given  
19 past evidence of massive droughts. And it's entirely  
20 relevant to this and essential that this be considered  
21 in this proceeding, whether the Cal WaterFix will indeed  
22 have any benefits if, going forward, we have similar  
23 prolonged periods of drought.

24 CO-HEARING OFFICER DODUC: I'm not arguing  
25 with you in terms of whether this should be considered.

1 My question is: I'm wondering if this is better being a  
2 part of your case in chief versus handing these  
3 witnesses documents that they have not seen before and  
4 then asking them questions on those documents.

5           Actually, let me ask: Have you seen these  
6 documents before? Are you familiar with these studies?

7           WITNESS MILLIGAN: I'm familiar with these  
8 types of studies. These particular documents appear to  
9 be a lot of PowerPoint slides which are probably  
10 characterizations of some broader bodies of work. So it  
11 is difficult to pick them up now and say, you know, and  
12 particularly say how applicable they may be to or think  
13 about operations going forward.

14           CO-HEARING OFFICER DODUC: And keep in mind  
15 that not only have the witnesses not seen these  
16 documents, but neither has the Board or Board staff or  
17 other parties, for that matter.

18           So there is -- there is some restrictions in  
19 terms of how far you might proceed with this. And,  
20 again, I would encourage you to -- you as well as other  
21 cross-examiners -- to keep in mind that distinction  
22 between cross-examination and putting on evidence for  
23 your case in chief.

24           MR. VOLKER: I understand this is primarily  
25 foundation for my question, but this is entirely



1 relevant to this proceeding to ask this panel how  
2 historical droughts will impact the operation of the  
3 Central Valley Project and State Water Project.

4           And to the extent that their memories might  
5 need to be refreshed on certain scientific evidence,  
6 that is the purpose of these exhibits.

7           CO-HEARING OFFICER DODUC: Ms. Morris?

8           MS. MORRIS: Stefanie Morris. Perhaps they  
9 could ask the witnesses if they considered tree ring  
10 data, and we could dispose of this whole line of  
11 questioning in an efficient manner.

12           CO-HEARING OFFICER DODUC: Good suggestion.

13           MR. VOLKER: Well --

14           CO-HEARING OFFICER DODUC: Do you need  
15 Ms. Morris to repeat the question?

16           MR. VOLKER: I'd like to move on to the second  
17 slide of my presentation which refers back to  
18 Exhibit PCFFA-14, which Dr. Anderson is assumably  
19 familiar with since it was a presentation that he gave  
20 in 2009.

21           CO-HEARING OFFICER DODUC: Even I am familiar  
22 with his presentation now.

23           So your question, please.

24           MR. VOLKER: Let's move on now, actually, to  
25 the third slide, and my question will be forthcoming.

1           So here is an acknowledgement via the slide  
2 from Professor Jay Lund at UC Davis who is  
3 characterizing the seminal study in the Journal of  
4 Nature and which first reported two centuries-plus long  
5 droughts, one ending the around 11, 12 A.D. and the  
6 other ending around 1350 A.D.

7           And in that -- in that article, the author,  
8 Scott Stine, concluded that "California's medieval  
9 precipitation regime, if it recurred with today's  
10 burgeoning human population, would be highly disruptive  
11 environmentally and economically."

12           So with that as a base, and with the further  
13 exhibits that I introduced into the record which I will  
14 quickly identify: The first exhibit, IFR-1, is a 2009  
15 presentation given by Dr. David Meko, professor at the  
16 University of Arizona at the same California Extreme  
17 Precipitation Symposium at which Dr. Anderson gave his  
18 presentation.

19           Second exhibit, IFR-2, is a 2009 Journal of  
20 Quaternary Science article authored by Dr. Edward Cook,  
21 et al., entitled "Mega Droughts in North America Placing  
22 IPCC Projections of Hydroclimatic Change in a Long-term  
23 Paleoclimate Context."

24           If you'd like me to move on to my questions, I  
25 will. I think we can take it as assumed that there have

1 been historical droughts of incredible duration and  
2 magnitude that have not been seen in the last century or  
3 so since 1900, since the instrumental records for  
4 precipitation and stream flow began.

5           So going back now, Mr. Leahigh, should these  
6 prolonged droughts be considered in evaluating the  
7 operational impacts of the Cal WaterFix?

8           MR. MIZELL: Objection to the extent that they  
9 are not presenting their case in chief and testimony,  
10 then I am going to object to this question. Assumes  
11 facts not in evidence. And there's been no previous  
12 establishment that these decade -- or century-long  
13 droughts have occurred.

14           CO-HEARING OFFICER DODUC: And, again, I refer  
15 back to the question of: Are you conducting  
16 cross-examination or --

17           MR. VOLKER: Well, the purpose of this  
18 first -- of all of these exhibits is to show the  
19 unquestioned fact that there have been these droughts.

20           Dr. Anderson, would you disagree with your  
21 slide and your acknowledgement in that presentation of  
22 these medieval droughts?

23           WITNESS ANDERSON: I would not disagree with  
24 any of my testimony to this point.

25           CO-HEARING OFFICER DODUC: All right.

1 Mr. Jackson, did you have something to add?

2 MR. JACKSON: Yeah. I was simply going to  
3 point out that the relevance seems to be that these  
4 folks are familiar with the concept and this is in --  
5 seems to me that it's in answer to Dr. Anderson's  
6 statement that we're going to throw out everything from  
7 this drought because it's outside of the range of  
8 history. He says it's not.

9 CO-HEARING OFFICER DODUC: Okay.

10 MR. MIZELL: Let the record reflect that I  
11 don't believe my witness, Mr. Anderson --

12 CO-HEARING OFFICER DODUC: -- said that. All  
13 right.

14 Let's -- okay. Mr. Anderson, to the extent --  
15 are you familiar with this study?

16 WITNESS ANDERSON: I am familiar with the  
17 journal article on the screen currently.

18 To the extent I remember the Extreme  
19 Precipitation Symposium back in 2009, I have a general  
20 recollection of Dr. Meko's presentation.

21 CO-HEARING OFFICER DODUC: And are any of the  
22 other witnesses familiar with either the study or this  
23 concept?

24 WITNESS MILLIGAN: I am not familiar with this  
25 study, but I am with the concept. As it relates to

1 operations, particularly in the context of tree ring  
2 studies and potentially century-long drought, the  
3 concern I have from an operational modeling standpoint  
4 would be I think this would challenge our entire concept  
5 of the basin plan, of our flood control curves, on just  
6 how we would operate our reservoirs.

7           So if one were to try to grapple with this,  
8 you don't take what was typically done as an incremental  
9 analysis of just for WaterFix and try to assess that. I  
10 think at this point you're perturbing the hydrologic  
11 settings that drive this and the rules on how we would  
12 most effectively run the projects in that scenario and  
13 really need to do an extensive analysis of what that  
14 might look like and then reassess at an increment of a  
15 decision does a WaterFix mean anything in that  
16 hydrology.

17           And that's been our concern since to the  
18 degree that we thought about it is, "Well, gee, that  
19 could be an entirely new animal that really gets down to  
20 details. Okay. What does it look like?"

21           The difficulty, from what I've seen in some of  
22 these analyses, is that, for CalSim, the reason we use  
23 the very record that we have is because there's a lot of  
24 detail that goes into that that we're trying to capture.  
25 And although we can certainly capture trends and

1 magnitudes of iterations of dry conditions, it's more  
2 difficult to say here is a flow hydrograph by day, or by  
3 month, and to the location of the Folsom Dam, for  
4 example, based on this analysis from the 1300s, let's  
5 say.

6           So it's a very difficult analysis, and it does  
7 challenge everything. I would say you can't use the  
8 same flood control diagrams that you currently have if  
9 you're going to analyze a century-long condition that  
10 looks like the exact same period of record that we  
11 currently have, take that snapshot, and put that into  
12 our understanding. I think we would just be opening  
13 everything up for question, and I -- as an operator, I  
14 would say I don't know what to operate to.

15           CO-HEARING OFFICER DODUC: You don't know  
16 what?

17           WITNESS MILLIGAN: I would not know exactly  
18 what to operate to in that environment. It would be  
19 like dropping in a kind of parallel universe with the  
20 same terrain and infrastructure but with entirely  
21 different understanding of the hydrology involved.

22           And do the criteria that we would operate to  
23 today that were shaped given the experiences of the  
24 last, you know, decades of hydrology, if that's  
25 significantly different based on something from 500

1 year, 600 years ago, how would that look. I think as an  
2 operator, I start thinking do we need to change how we  
3 protect against floods or manage salinity in the Delta.

4           That's the level of thinking that, from both  
5 the planning standpoint when this has come up in other  
6 studies as well as this one, and just from an  
7 operational standpoint is how do you take these  
8 scenarios of potential shifts of things and -- for a  
9 whole hydrologic set, how do you incorporate them  
10 into -- even sensitivity analyses around climate change.  
11 When they get significant enough, one needs to wonder is  
12 there a whole suite of things that should be reexamined.

13           If you went to talk to folks at the Corps of  
14 Engineers, for example, they look at this type of data  
15 and think, "How do I incorporate changes to the flood  
16 control rule curves, for example, based on this  
17 potential?"

18           And we kind of come to the same conclusions,  
19 say, well, depending on what your thoughts are, you can  
20 certainly track this and think how you might do it  
21 differently. But it's hard to know whether or not  
22 you're in it or not until you've got enough record.

23           CO-HEARING OFFICER DODUC: So these concepts  
24 are familiar to you and are being discussed and  
25 considered. However, if my understanding is correct,

1 the analysis submitted to date for this petition does  
2 not include these specific scenarios, and your  
3 operational projections for the WaterFix as currently  
4 proposed does not address this?

5 WITNESS MILLIGAN: To my knowledge, it does  
6 not.

7 CO-HEARING OFFICER DODUC: Would it be correct  
8 to say that you have, aside from that detailed  
9 explanation you just provided, Mr. Milligan, no  
10 additional substantive input that you could provide on  
11 this topic from an operational perspective?

12 WITNESS MILLIGAN: No, other than to, again,  
13 to defer to modeling folks that there has been some work  
14 done as it relates to climate change.

15 CO-HEARING OFFICER DODUC: Mr. Leahigh, do you  
16 concur with that?

17 WITNESS LEAHIGH: Yes. Generally, I think I  
18 concur with Mr. Milligan's statement.

19 CO-HEARING OFFICER DODUC: Okay. Mr. Volker,  
20 I don't know how much further you will be able to get  
21 with these witnesses, but you brought up a very good  
22 point that I would encourage you to pursue in your case  
23 in chief.

24 MR. VOLKER: Thank you, Ms. Doduc.

25 That -- I have one final question following up



1 Chair Doduc's good questions.

2           And that first, Mr. Leahigh, do you think from  
3 an operational standpoint that it would be wiser for  
4 long-term management to consider these historical  
5 droughts in deciding whether to adopt such a massive  
6 change and costly change as to Cal WaterFix?

7           WITNESS LEAHIGH: So I think Ron touched on a  
8 lot of this, but I don't think the specificity is there  
9 in this recent work. It's very rough. Doesn't have the  
10 granularity that we need in order to even analyze it.

11           I think that to the -- to the extent the  
12 modelers are looking at climate change, that is -- that  
13 is an aspect that was covered as far as the analyzing  
14 the effects of project.

15           I think generally what you can say about the  
16 project is the conditions that water management with the  
17 WaterFix would improve with the opportunities if we're  
18 looking at a climate that's going to be -- have more  
19 frequent droughts or to the extent that we can take the  
20 advantage, the opportunity to capture additional excess  
21 flows in other years to better be prepared for those  
22 drier conditions, that's one of the real benefits of the  
23 proposed project.

24           MR. VOLKER: And do those benefits, though,  
25 disappear if you have decades- or centuries-long

1 droughts where you are not able, even with the WaterFix,  
2 to divert extra water?

3 WITNESS LEAHIGH: Yeah. That's where I'm  
4 fairly certain that, even these years -- you know, going  
5 back a thousand years, you're certainly going to have  
6 more observations of dry years. Doesn't necessarily  
7 mean the frequency increases. You're looking at a  
8 longer time scale for one thing. But even under any  
9 type of dry year or dry year, say, drought period, you  
10 will see winter conditions even during a prolonged  
11 drought period, and those would represent opportunities  
12 to capture additional water.

13 So, again, the example of this year not  
14 particularly that wet coming off of a dry year -- of  
15 three- to four-year dry period, but yet there would have  
16 been significant opportunity to recover the drawn down  
17 storages in the state through the proposed project as  
18 represented in the example -- that I gave.

19 MR. VOLKER: Okay. That's all of my questions  
20 for now.

21 CO-HEARING OFFICER DODUC: All right. Thank  
22 you.

23 MR. EICHENBERG: Thank you for your extreme  
24 forbearance. And have five more minutes to finish two  
25 questions?

1 CO-HEARING OFFICER DODUC: What are your two  
2 questions? Give them to me now.

3 MR. EICHENBERG: One on the modeling shows  
4 dead pool conditions.

5 CO-HEARING OFFICER DODUC: Okay. Stop.

6 Does the modeling show dead pool conditions?

7 WITNESS MILLIGAN: The CalSim modeling does  
8 indicate some periods of time where the reservoirs reach  
9 dead pool.

10 CO-HEARING OFFICER DODUC: The answer is yes.  
11 Your next question?

12 MR. EICHENBERG: If you're relying on modeling  
13 to form your operational opinions, how do you take into  
14 account that it portrays conditions that you would never  
15 let happen? Assuming the foundation that they would not  
16 let dead pool occur because that's been sort of  
17 established, I think.

18 WITNESS MILLIGAN: Not sure I understand the  
19 question.

20 MR. EICHENBERG: If the modeling shows certain  
21 situations that result in dead pool yet those situations  
22 are situations which you would operationally act to  
23 prevent from happening, how do you take -- how do you  
24 adjust your consideration of the modeling to take into  
25 account that there are times when the modeling is simply

1 incorrect?

2           WITNESS MILLIGAN: That's where we assess it  
3 as an incremental effect of the action being proposed.  
4 If we -- particularly given that element of the extreme  
5 nature getting to dead pool that's happening, we see  
6 that happening both with the no action as well as with  
7 the proposed project, and we have to kind of assess the  
8 benefits of -- of WaterFix in that context. But we're  
9 trying to hold as much constant as you do that  
10 comparison.

11           So, yes, we may take some actions to alleviate  
12 the frequency or the even existence of any dead pool  
13 operations in the reservoirs, but those actions we would  
14 envision being the same with or without the WaterFix in  
15 place.

16           MR. EICHENBERG: Then one question about  
17 exceedance. You had exceedance graphs 1 percent,  
18 whatever. Do you equate exceedance with -- is that the  
19 same thing as injury to a legal user of water or are  
20 there injuries that are not captured by this exceedance  
21 graph?

22           MR. MIZELL: Object. Asked and answered  
23 over -- I think in -- both Mr. Berliner and I filed  
24 numerous objections as to whether or not the witnesses  
25 can indicate to the Board whether or not there are

1 injuries to legal users of water given that's your  
2 purview and not ours.

3 CO-HEARING OFFICER DODUC: Well, they've made  
4 assertion in their testimony that they will not be  
5 injuring. So...

6 MR. MIZELL: Certainly.

7 CO-HEARING OFFICER DODUC: Answer the  
8 question.

9 MR. MIZELL: They can have an opinion on that,  
10 but I would hate to see it be treated as conclusive.

11 CO-HEARING OFFICER DODUC: Answer the question  
12 to the extent that you can. Referring back to the  
13 exceedance curves.

14 WITNESS LEAHIGH: So I assume we're talking  
15 about the exceedance pie charts for the record of  
16 compliance with the Water Quality Control Plan  
17 objectives? Is that what you're referring to?

18 MR. EICHENBERG: That's what I was thinking  
19 of, yes.

20 WITNESS LEAHIGH: Okay. So the exceedances  
21 that did occur are what we would contend were for  
22 reasons that were beyond our reasonable control.

23 And I think the testimony is that we don't  
24 foresee that there will be any change in our historical  
25 record with the California WaterFix. If anything, there

1 may be improvements to lessen the number of exceedances  
2 due to the increased flexibility associated with the  
3 new -- the proposed project.

4 MR. EICHENBERG: If I may repeat the question:  
5 Is exceedance the same thing as legal injury or is  
6 injury to a legal user of water?

7 In other words, are there injuries that could  
8 occur even if there was no exceedance?

9 WITNESS LEAHIGH: I believe your question on  
10 injury is asking me for a legal opinion, and I can't  
11 give a legal opinion on...

12 MR. EICHENBERG: Mr. Milligan, do you have any  
13 answer to that?

14 WITNESS MILLIGAN: Well, obviously, each  
15 particular objective is just a component that tries to  
16 protect the other legal uses of water, so they in  
17 themselves don't necessarily make up that. But it is a  
18 complex question. I think it would be unique to each  
19 particular legal user of water. So they probably need  
20 some more details, but obviously it would need to be  
21 evaluated. And I think they have.

22 So they are different.

23 MR. EICHENBERG: Thank you.

24 CO-HEARING OFFICER DODUC: Thank you.

25 MR. EICHENBERG: Thank you for your

1 forbearance and for understanding of our coming last and  
2 difficult to follow all these other questions.

3 CO-HEARING OFFICER DODUC: Thank you.

4 For planning purposes, let me do a check.

5 Number 39, North Delta C.A.R.E.S., Ms. Daly or  
6 Ms. Swenson? Don't see. Mr. Porgans is ill and unable  
7 to be with us today. Good wishes to him for a speedy  
8 recovery.

9 Ms. Suard, do you have cross-examination, and  
10 how long do you anticipate?

11 MS. SUARD: An hour.

12 CO-HEARING OFFICER DODUC: 42 has not been  
13 showing up, so I don't know -- don't see 42.

14 Ms. Womack, I see you. Do you have questions?

15 MS. WOMACK: Of course. Probably an hour.

16 CO-HEARING OFFICER DODUC: That should take us  
17 until about 3:00 o'clock. Let me look at my colleagues.

18 Do we want to request the engineering team  
19 back today or hold off until next week?

20 Because, remember, we were going to -- there  
21 was a witness on the engineering panel who was not  
22 available and we were going to call him back.

23 CO-HEARING OFFICER MARCUS: Are we sure  
24 Mr. Porgans isn't coming?

25 CO-HEARING OFFICER DODUC: Do you plan to have

1 redirect for this panel?

2 MR. MIZELL: Not at this time.

3 CO-HEARING OFFICER DODUC: Not at this time.

4 Okay. All right.

5 Let's please have your engineering team on  
6 standby. They don't necessarily have to be here. And  
7 we'll see how the cross-examination goes this afternoon  
8 with Ms. Suard and Ms. Womack.

9 It's possible that we'll get to them by about  
10 3:00 o'clock after our afternoon break.

11 MR. MIZELL: I'll have them on standby.

12 CO-HEARING OFFICER DODUC: I'll definitely  
13 take a break if we do request their presence.

14 MR. MIZELL: Thank you.

15 CO-HEARING OFFICER DODUC: With that, we will  
16 resume at 1:10.

17 (Whereupon the luncheon recess was taken  
18 at 12:13 p.m.)

19 --o0o--

20

21

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25



1 AUGUST 19, 2016 AFTERNOON SESSION 1:10 P.M.

2 --o0o--

3 CO-HEARING OFFICER DODUC: Please take your  
4 seats. It is 1:10.

5 And we're missing a couple witnesses. Could  
6 someone go into the hallway and see if Mr. Milligan and  
7 Ms. Aufdemberge are out there?

8 All right. I'll ask Ms. Suard to address her  
9 questions to these three witnesses until we can locate  
10 Mr. Milligan.

11 MS. SUARD: Most of my questions are for  
12 Mr. Milligan.

13 CO-HEARING OFFICER DODUC: Do you have any at  
14 all for Mr. Leahigh, Mr. Holderman, or Mr. Anderson?

15 MS. SUARD: Yes, Leahigh and Holderman.

16 CO-HEARING OFFICER DODUC: Okay. Please ask  
17 Mr. Leahigh his questions for now.

18 --o0o--

19 CROSS-EXAMINATION

20 MS. SUARD: I'd like to hand out a couple  
21 sheets, just -- I'm not sure who all's supposed to get  
22 them but...

23 CO-HEARING OFFICER DODUC: These are what?  
24 Have they already been provided to staff?

25 MS. SUARD: Yes. It's slides from my slides.

1 CO-HEARING OFFICER DODUC: Are we ready now?

2 All right. Ms. Suard, you're on.

3 MS. SUARD: Thank you.

4 I want to just make note that I did try to  
5 reduce the number of slides, and apparently when I saved  
6 it, it wasn't correct. I may go through slides that I  
7 don't need to.

8 CO-HEARING OFFICER DODUC: Okay.

9 MS. SUARD: And I wish I had the clicker so I  
10 could do it quickly. We'll have to coordinate here.

11 I would like to say second slide, please.

12 I just want to say, Mr. Leahigh, and when  
13 Mr. Milligan comes, and Mr. Holderman, I am going to be  
14 asking much more practical -- your testimonies talked  
15 about real life, the hydrology, what's really going on,  
16 how do you manage the system. And I represent one of  
17 the businesses that, you know, have the benefit or the  
18 burden of some of that management. And so my questions  
19 are going to be asking how do you manage it now and how  
20 is that going to change. So that you'll understand.

21 And I'm really focused on North Delta and  
22 Steamboat Slough, but that doesn't mean the other parts  
23 of the Delta are not important. I'm just -- my focus is  
24 going to be North Delta.

25 Next slide, please.

1           This slide which I will be submitting, it is  
2 just one page of Bulletin No. 76. And that's from 1960.

3           Does this look familiar to Mr. Holderman or  
4 Leahigh or Milligan? Hi, Mr. Milligan.

5           WITNESS MILLIGAN: Hello.

6           MS. SUARD: Hi.

7           It's the Delta water facilities from the  
8 planning for the Central Valley Project in -- from  
9 1960s.

10          WITNESS LEAHIGH: I'm familiar with some of  
11 the older historical bulletins; but this particular one,  
12 I don't believe so.

13          MS. SUARD: Okay.

14          WITNESS MILLIGAN: No, I'm not familiar with  
15 this document either.

16          MS. SUARD: Thank you.

17          The map of the Delta there, does that look  
18 familiar? Is that what the Delta looks like today to  
19 you?

20          WITNESS LEAHIGH: Yes, that appears to be the  
21 current representation of the channels in the Delta.

22          MS. SUARD: Next slide, please.

23          MR. BAKER: Before we move on, I just want to  
24 identify this as SHR-103 for the record. Slide 3 of --

25          MS. SUARD: Excuse me. 103 is the whole set,

1 right.

2 MR. BAKER: This is just slide -- page 3 of  
3 SHR-103.

4 MS. SUARD: Could we go to the next one,  
5 please?

6 This is Mr. Milligan's testimony. And I don't  
7 really need to go through anything other than on the  
8 bottom. It talks about CVPIA from 1937, and that  
9 it's -- the project should be managed first for river  
10 regulation, improvement of navigation, and float  
11 control; second, for irrigation, domestic uses, and then  
12 fish and wildlife and all that.

13 My point on this is: Navigation and  
14 recreation are two different things, and I wanted to  
15 make sure it's okay that I bring up navigation in this  
16 section. Is that correct? I'm asking the chair.  
17 Navigation.

18 CO-HEARING OFFICER DODUC: That's fine.

19 MS. SUARD: Okay. I just want to make sure  
20 because recreation is supposed to be a different.

21 CO-HEARING OFFICER DODUC: Okay.

22 MS. SUARD: Okay. So because how -- would  
23 either Mr. Leahigh or Milligan, or both, do you agree  
24 that how you operate or manage the water system has an  
25 impact on flood control and on navigation?

1           WITNESS MILLIGAN: I will say it's how we  
2 operate in the case of CVP and the Congressional  
3 direction. How we operate has -- influences things like  
4 management of flood control and navigation.

5           MS. SUARD: But that's part of your  
6 responsibility when you're managing the flows; is that  
7 correct?

8           WITNESS MILLIGAN: That's correct.

9           CO-HEARING OFFICER DODUC: Mr. Milligan, if I  
10 could ask you to bring your microphone closer to you, it  
11 will help the court reporter. I see her straining to  
12 hear.

13          MS. SUARD: The next slide, please.

14          I put up two different Web sites where you can  
15 get information on flows.

16          Do either or both of you utilize the flow data  
17 from these different Web sites to make determinations  
18 of -- I think it was called turning on and off knobs,  
19 you know, releasing water from reservoirs or anything  
20 like that? Do you use this data here, either of these,  
21 like CDEC flow data?

22          Mr. Milligan or Mr. Leahigh?

23          WITNESS LEAHIGH: Yes, we certainly do  
24 generally use CDEC information quite frequently.

25          MS. SUARD: So on a daily basis?

1 WITNESS LEAHIGH: Yes.

2 MS. SUARD: And Mr. Milligan?

3 WITNESS MILLIGAN: The answer is yes. And for  
4 our facilities, the data that we collect has to be fed  
5 to CDEC. So we usually are seeing some of the data from  
6 what we provided to CDEC as opposed to handing out to  
7 CDEC to get the data back.

8 MS. SUARD: Does USGS collect that for you or  
9 does DOI collect its own?

10 WITNESS MILLIGAN: Reclamation will collect a  
11 lot of its own data, but there's also data throughout  
12 the system that USGS collects. And I understand DWR  
13 collects some data as well.

14 MS. SUARD: So on the, like, for example, the  
15 map, the state map, does that reflect -- over here on  
16 the left. Does that reflect all the different flow  
17 monitoring stations within the Delta or just ones for  
18 the state?

19 And I focus on North Delta. Sorry.

20 WITNESS MILLIGAN: I'm -- it's not the easiest  
21 thing to see from here given the resolution.

22 But CDEC will have a number of stations there  
23 that are both USGS and DWR as it relates to the Delta  
24 and then any reclamations stations as well. It's meant  
25 to be a place where you can find all that data in the

1 same location.

2 MS. SUARD: Okay. It -- I really like the  
3 site. It was very helpful once I learned to watch out  
4 for flows.

5 Okay. Can we go to the next slide?

6 So this is the schematic for CalSim. Do you  
7 both recognize this?

8 WITNESS MILLIGAN: I'm familiar with the  
9 schematic for the CalSim. This appears to be a  
10 component of it.

11 MS. SUARD: I'm sorry. I'm just focused on  
12 the Delta right now, so the component of CalSim that is  
13 in the Delta. Do you recognize this?

14 WITNESS MILLIGAN: Yes.

15 MS. SUARD: Do you use CalSim flow data at all  
16 or modeling data at all in -- in making decisions?

17 WITNESS MILLIGAN: Day-to-day decisions?

18 MS. SUARD: Yes.

19 WITNESS MILLIGAN: No.

20 MS. SUARD: No.

21 Mr. Leahigh, does California use CalSim for  
22 day-to-day decisions?

23 WITNESS LEAHIGH: No, not really for  
24 day-to-day decisions.

25 MS. SUARD: So it is -- what is CalSim used

1 for, then?

2 WITNESS LEAHIGH: It's generally used for  
3 longer term analyses in terms of comparisons of, for  
4 example, the California WaterFix comparing the effects  
5 of a new facility to existing conditions.

6 MS. SUARD: Okay. I'm really not going to go  
7 much into this model at all.

8 One thing I noticed is we see flow starting  
9 at -- and this is within the Delta. You see that circle  
10 and 401, and then it goes to a word. It's "DXC." Is  
11 that the Delta Cross Channel?

12 Any of you?

13 WITNESS MILLIGAN: Can we zoom in on that part  
14 of the schematic, please?

15 MS. SUARD: It goes from Hood and then it goes  
16 down -- it keeps going on down. And then you see where  
17 there is a diversion away. The arrows point towards the  
18 water. It shows the water direction, and there's that  
19 401 and then DXC. Would that be the Delta Cross  
20 Channel?

21 WITNESS MILLIGAN: Yeah, this would be a great  
22 question for modeling group, but I believe that is the  
23 Cross Channel.

24 MS. SUARD: Yeah, because it used to be called  
25 Delta DCC, and now I see a change.



1           WITNESS MILLIGAN: This nomenclature is kind  
2 of unique to the language within the code of CalSim.

3           That doesn't necessarily mean it's changed in,  
4 let's say, some of the other reporting that you might  
5 see out on the Internet.

6           MS. SUARD: Well, I'm just asking about the  
7 models to understand what you all use for managing  
8 flows, what data you use.

9           Can we go to the next slide, please?

10          So this next one is DSM-2, just the portion  
11 that shows the North Delta; is that correct?

12          Does that look familiar to you, Mr. Milligan?

13          WITNESS MILLIGAN: I'm not sure that I've seen  
14 the schematic superimposed over the Delta islands that  
15 often. But, yeah, it's familiar.

16          MS. SUARD: That actually comes from  
17 Appendix 5 of one of the exhibits, but I'll have the  
18 reference for it when I clean up this slide show.

19          Mr. Leahigh, does that look familiar to you?

20          WITNESS LEAHIGH: Generally it looks familiar.  
21 I'm -- I'm somewhat familiar with the schematics that go  
22 into DSM-2.

23          MS. SUARD: Do either of you use DSM-2 for  
24 managing everyday flows and making decisions?

25          WITNESS MILLIGAN: DSM-2 is certainly more

1 relevant when we've done some work with it that project,  
2 say, the upcoming tidal cycle. So things about  
3 salinity. And I'm sure Mr. Holderman could chime in a  
4 little bit on water level. And in South Delta, there's  
5 some utility there as well.

6 MS. SUARD: Mr. Holderman, do you utilize  
7 DSM-2 in decisions for South Delta?

8 WITNESS HOLDERMAN: Not on a day-to-day basis.  
9 DSM-2 is used frequently, or as Mr. Leahigh has said,  
10 for comparative purposes between alternatives where a  
11 project is being proposed and existing conditions.

12 We generally use CDEC on a day-to-day basis to  
13 look at age and flows to determine whether or not we  
14 need to reoperate the temporary barriers to the extent  
15 that we can.

16 MS. SUARD: Next slide, please.

17 Just for reference of the big picture, you  
18 have to manage all of that. Especially Mr. Milligan and  
19 Mr. Leahigh, you manage all that flow, and it ends up in  
20 the Delta; is that correct? That's the big picture, all  
21 the different flow knobs you have to manage; is that  
22 correct.

23 Does that look appropriate to you?

24 WITNESS MILLIGAN: That being -- that appears  
25 to be a good chunk of entire watershed.

1 MS. SUARD: Yes.

2 WITNESS MILLIGAN: We obviously don't control  
3 every flow on every stream of the watershed. So to the  
4 degree that that water gets to the Delta, that's all  
5 part of -- may come into some of our decision making.  
6 But we're not controlling that whole -- all the flows  
7 within that area.

8 MS. SUARD: Okay.

9 MR. BERLINER: Just excuse me. The record is  
10 not going to disclose at all what Ms. Suard is talking  
11 about. If we could get some instruction to the  
12 cross-examiners about referencing their exhibit. And  
13 saying "on the left side" doesn't really mean much.  
14 Just a little bit more for the record would be helpful.

15 CO-HEARING OFFICER DODUC: Thank you for that  
16 reminder, Mr. Berliner.

17 MS. SUARD: Go to the next slide, please.

18 CO-HEARING OFFICER DODUC: Before you do that,  
19 if you could scroll down a little bit. And, Ms. Suard,  
20 if you can specify for the record what that image is  
21 showing.

22 MS. SUARD: This image is showing Sacramento  
23 River Delta east side watershed model domain. And it is  
24 a model from Water Boards, and it gives the exact  
25 location online where you can find that model. And it's

1 page 12 of 37 of a 2013 workshop on drinking water  
2 policy.

3 CO-HEARING OFFICER DODUC: All right. Thank  
4 you. And it's Slide 8 of your Exhibit SHR-103.

5 MS. SUARD: Okay. Next slide, please. I'm  
6 trying to go very fast so I can get to the questions I  
7 want to ask.

8 Sorry. There's going to be a problem with  
9 slide order for me.

10 This slide is a -- it is a quote from the  
11 petitioners, and I'm sorry that it got cut off. I think  
12 it's the testimony of Mr. Leahigh. Does that look  
13 appropriate?

14 If you can reduce the size of the slide, you  
15 might see it says "Testimony of Mr. Leahigh."

16 So you had talked -- and I don't want to  
17 repeat what you had said, but you talked about excess  
18 flows. And you had a definition of "excess." Previous  
19 hearings back to the 1960s used the word "surplus."

20 And, in fact, could you go to the next slide,  
21 please?

22 So this next slide is from the 1960 bulletin  
23 on No. 76 Delta water facility. And when the projects  
24 were being approved to be built, the word used was  
25 "surplus."

1           Mr. Leahigh, I believe you were the one who  
2 talked about -- I'm a little confused. Was it  
3 Mr. Leahigh or Mr. Milligan that talked about excess  
4 flows?

5           WITNESS LEAHIGH: Well, I certainly talked  
6 about it quite a bit in my testimony, yes.

7           MS. SUARD: Okay. Could you tell me the  
8 difference between "surplus" and "excess"?

9           WITNESS LEAHIGH: I think the terms are  
10 somewhat interchangeable. I don't know that there's  
11 a -- a big distinction. It probably depends on the  
12 context; but, generally, I think they're somewhat  
13 interchangeable.

14          MS. SUARD: Okay. Next slide, please.

15          CO-HEARING OFFICER DODUC: Ms. Suard, you had  
16 a second question on that slide. Were you going to get  
17 to that second question later or --

18          MS. SUARD: Oh, thank you. No, I would like  
19 to go ahead and ask that.

20                 Does operations of the in-basin requirements  
21 include recharge to drinking water aquifers to protect  
22 drinking water rights and -- so, period. Does your  
23 charge, your responsibility, include protecting drinking  
24 water rights in the Delta?

25          WITNESS MILLIGAN: That sounds like two

1 different questions. One was in the Delta and one was  
2 related to recharging aquifer.

3 MS. SUARD: I'm focused on the Delta right  
4 now. So my question is: Is it your responsibility to  
5 manage the water system of California to protect  
6 drinking water in the Delta region?

7 WITNESS MILLIGAN: I think that's a little bit  
8 of a broad interpretation. You know, we have certain of  
9 our quality objectives in the Delta, some of which deal  
10 with drinking water as the prime focus and the projects  
11 managed to those as part of our permit terms and  
12 conditions. But that may be not necessarily covering  
13 all the elements of drinking water within the Delta.

14 MS. SUARD: So would that be surface water and  
15 well water?

16 WITNESS MILLIGAN: I think we've kind of  
17 talked, particularly in Mr. Leahigh's testimony,  
18 identifying the locations for the objectives where  
19 those -- what the criteria are and how they're met.

20 MS. SUARD: I'm trying to understand how the  
21 project is managed right now. And is the project being  
22 managed now to protect drinking water rights in the  
23 Delta?

24 WITNESS MILLIGAN: I guess I would say to the  
25 extent that the current standards contribute to that,

1 though not directly, no.

2 MS. SUARD: Mr. Leahigh, do you have the same  
3 answer? Different answer?

4 WITNESS LEAHIGH: No, that was pretty much  
5 exactly how I was going to answer that.

6 MS. SUARD: Okay. Now switch to -- assuming a  
7 project is built, you know, WaterFix is built, would  
8 there be a change to the drinking water quality in the  
9 North Delta? I'm focused on North Delta.

10 CO-HEARING OFFICER DODUC: And are you asking  
11 about surface water or groundwater?

12 MS. SUARD: Yes. Both. Would there be a  
13 change first to surface water? And then the second  
14 question will be: Would there be a change to  
15 groundwater as it pertains to drinking water?

16 CO-HEARING OFFICER DODUC: Or do you know?

17 WITNESS LEAHIGH: Well, in terms of surface  
18 water, the testimony is that, with the proposed project,  
19 we have no reason to believe that the Water Quality  
20 Control Plan objectives would be met any less than they  
21 have been historically.

22 MS. SUARD: Okay. Mr. Milligan?

23 WITNESS MILLIGAN: I would agree with that.

24 And the second part of your question, I'm not  
25 aware if there's -- that there's anything to suggest

1 there would be a change to groundwater quality.

2 MS. SUARD: You're not aware of any modeling  
3 that suggests change to groundwater quality? Is that  
4 what you said?

5 WITNESS MILLIGAN: That's correct.

6 MS. SUARD: Okay. So just to summarize,  
7 you're saying the project that you know of would not  
8 change quality of surface water in the North Delta or  
9 groundwater?

10 WITNESS MILLIGAN: My comment was to the  
11 groundwater.

12 MS. SUARD: Okay.

13 WITNESS MILLIGAN: Surface water, we would  
14 continue to meet the objectives as Don outlined them.

15 MS. SUARD: Could we go to the next slide?

16 This is actually a screenshot. I'm just  
17 showing where I get a slide that's about two down.

18 Could we go two down or three?

19 Okay. Right there.

20 So I didn't know if I needed to set up where I  
21 got the screenshot from, but you can go online and  
22 California has a water plan update. The last one was  
23 2013. And this is an exact screenshot from that. It  
24 shows where it came from. And this is called the "Water  
25 Portfolio Inflow/Outflow Delta" PDF. And that's in the



1 middle of the slide.

2 And I'm bringing up this 2013 one because I  
3 believe that computer modeling is from that time frame.  
4 And I -- I wanted to point out a couple different things  
5 about this.

6 You see at the bottom of the screen print it  
7 says "Delta Outflow," and then we go over to like 2008,  
8 and it says "Delta Outflow" -- and says this is in  
9 thousand acre feet -- is 1,529.

10 Does that look low to you?

11 This particular slide is actually -- I handed  
12 it out if it makes it's easier to read. It's the second  
13 page.

14 MR. BERLINER: Just a point of order. It's in  
15 millions of acre feet, not thousands.

16 Top line where it says "TAF."

17 MS. SUARD: Yes.

18 MR. BERLINER: That's times a thousand.

19 MS. SUARD: So that -- okay. There you go,  
20 times a thousand. That is an exact screen print of what  
21 was online just for reference.

22 So I'm just asking: Is that Delta outflow,  
23 does that look like unusually low also in 2010?

24 WITNESS LEAHIGH: Probably not unusually low  
25 for a dry year.

1 MS. SUARD: Wasn't there testimony that the  
2 drought started in 2012? Wasn't that just in the last  
3 question series?

4 WITNESS LEAHIGH: Yes, there was -- we  
5 experienced another drought in the 2007, 2009, 2010  
6 period.

7 MS. SUARD: Okay. I want to represent to you  
8 the lower part, those numbers did not look correct to  
9 me, and so I -- I took them and actually put them into  
10 an Excel spreadsheet and in QuickBooks too. Treated the  
11 water like it was dollars. What came up was that there  
12 was unaccounted for flows, meaning if you take that  
13 table and you look at it, there was -- the numbers were  
14 not entered in there correctly. I will be presenting  
15 the correction that the state did for that, but I wanted  
16 to point out that the time frame of this -- these  
17 numbers actually match the rest of the report and are --  
18 were used for a lot of the studies.

19 So I do -- how much acre feet per year or  
20 million acre feet does USBR claim a right to for the  
21 diversion from the Sacramento River?

22 WITNESS MILLIGAN: I think that depends  
23 obviously on the time of year.

24 MS. SUARD: Okay. What is --

25 WITNESS MILLIGAN: Maybe I misunderstand your

1 question.

2 MS. SUARD: What is your maximum permitted in  
3 a wet year?

4 WITNESS MILLIGAN: Again, I don't think it's  
5 related to -- obviously, there's different types of wet  
6 years and what we would be able to operate within the  
7 collective portfolio of our permits. Probably not easy  
8 to quantify as something you could add. There's a  
9 number of our permits that allow us to, let's say, store  
10 water up to a certain amount and use that water for a  
11 number of purposes, and sometimes those appear like  
12 they're double-counting the same water.

13 So I don't have the number off the top of my  
14 head. It may be a good question for our water rights  
15 expert.

16 MS. SUARD: For what?

17 WITNESS MILLIGAN: Our water rights expert who  
18 will be testifying later.

19 MS. SUARD: Mr. Leahigh, could you answer it  
20 for -- on behalf of the state?

21 WITNESS LEAHIGH: Yeah. As part of that water  
22 rights panel, we will also have a water rights expert  
23 representing State Water Project.

24 MS. SUARD: Next slide, please.

25 MR. MIZELL: If I can beg the Board's

1 indulgence here, I have a quick point of clarity. I  
2 believe that Ms. Suard indicated that the graph she --  
3 or the chart at the top of that page has been corrected,  
4 and we're being asked questions about an uncorrected  
5 chart. Is that the case here?

6 I would hate for people to go away thinking  
7 that that's accurate data if Ms. Suard is correct and it  
8 has been corrected by the state.

9 MS. SUARD: Thank you for bringing that up.

10 My point is that I'm the one who brought this  
11 to the attention of the state, that those numbers are  
12 incorrect. And if you go online, you will see that the  
13 chart's not there anymore.

14 But the computer modeling that was done for  
15 WaterFix was using numbers of that time period.

16 MR. MIZELL: I'm still not clear. Has it or  
17 hasn't it been corrected?

18 MS. SUARD: It's been pulled off the Web site.

19 CO-HEARING OFFICER DODUC: It is being  
20 corrected.

21 MS. SUARD: There was a correction that was  
22 done and that was pulled off. So I don't know the  
23 status of it right now.

24 CO-HEARING OFFICER DODUC: All right.

25 WITNESS LEAHIGH: Well, to be clear, I wasn't

1 involved in the preparation of this report, so I don't  
2 have any information on it.

3 MS. SUARD: Again, my point, you know, we're  
4 all trying to understand the numbers. And when we ask  
5 questions about the numbers and those questions change,  
6 I -- I'm still trying to understand what are the real  
7 numbers here. So I wondered if either of you had the  
8 corrected numbers. I'll move on from that.

9 Next slide, please.

10 MS. McCUE: Before we move, this was, just to  
11 keep track, this was Slide 14.

12 MS. SUARD: So this map, I believe I read that  
13 before, this is from Phase 1 Water Rights Control Board  
14 and it is water rights associated with the Delta. It's  
15 a pretty good Web site. You can go and see all the  
16 different points of diversion and claimed rights,  
17 license rights.

18 And my question is -- again, I sort of already  
19 asked it, but do you -- are you aware of how many acre  
20 feet are allowed to be appropriated from the Sacramento  
21 River?

22 You said you're not aware of that; is that  
23 correct? That number, Mr. Milligan?

24 WITNESS MILLIGAN: I don't know that we have  
25 answered that or were asked that question. But off the

1 top of my head, the collective number, no, what that is  
2 at any particular time.

3 MS. SUARD: Okay. What about DWR? Would  
4 DWR's rights show on this map if somebody clicked on the  
5 little buttons?

6 WITNESS LEAHIGH: It sounds like a different  
7 question.

8 WITNESS MILLIGAN: It does to me too. Sorry.

9 MS. SUARD: What did you say?

10 WITNESS MILLIGAN: It sounds like a different  
11 question to me also. Now I'm a little confused whether  
12 I was responsive to your question.

13 MS. SUARD: I'm trying to understand how many  
14 acre feet DOI and DWR are claiming from the Sacramento  
15 River basically at Georgiana. I'm going to move on  
16 because there's more graphics related to that.

17 CO-HEARING OFFICER DODUC: Before you move on,  
18 though, let me make sure I understand.

19 Mr. Leahigh and Mr. Milligan, you are  
20 deferring questions regarding the project's water rights  
21 to the water rights panel, and you don't have any  
22 information with respect to the total diversion that is  
23 being appropriate in the Delta in this chart here being  
24 shown by Ms. Suard?

25 WITNESS MILLIGAN: That is correct. We have a

1 pretty -- very good records about what each project has  
2 diverted in the South Delta or at, you know, let's say  
3 to Contra Costa as it relates to our contract with them,  
4 Contra Costa Water District.

5 But the collective of all these dots at any  
6 particular time, I am not aware as to what or of  
7 anything that would suggest that you could quantify that  
8 in a particular instance.

9 CO-HEARING OFFICER DODUC: If Ms. Suard had a  
10 specific question about, say, the CVP's diversion at  
11 Contra Costa, would you be able to answer that?

12 WITNESS MILLIGAN: Yes.

13 WITNESS LEAHIGH: Just to be clear, these are  
14 not project diversions that we're looking at here.  
15 Correct?

16 MS. SUARD: Well, we'll keep going because I  
17 actually pulled some of those up. I just wanted to make  
18 a pretty clear reference.

19 Let me ask again: When each of you manage the  
20 flows, does that management include protecting the water  
21 quality in that area of the -- in the Delta? You've got  
22 the whole Delta on the left. That's just a blowup of  
23 the same thing. For some reason, different background.  
24 That whole area, is that those water rights -- water  
25 quality protected by your management?

1 WITNESS LEAHIGH: Yes, through implementation  
2 of the Water Quality Control Plan.

3 MS. SUARD: Okay. And the same will be true  
4 if the WaterFix project was built; is that correct?

5 WITNESS LEAHIGH: Yes.

6 CO-HEARING OFFICER DODUC: Let me be very  
7 clear. You asked two questions. You asked about water  
8 rights and water quality being protected.

9 My -- well, Mr. Leahigh, your answer, was that  
10 specific to water quality or water rights or both?

11 MR. BERLINER: Could we get the question  
12 reread so he has it in mind?

13 CO-HEARING OFFICER DODUC: Ms. Suard?

14 WITNESS LEAHIGH: I think I can answer it.

15 So in terms of water rights as I defined the  
16 in-basin uses, those would include any legal diverters  
17 of water. So, yes, those need to be protected first  
18 before we can develop supplies for the project.

19 MS. SUARD: Do you consider residential  
20 drinking water wells as legal users of water in the  
21 Delta?

22 WITNESS LEAHIGH: I don't have an opinion on  
23 who's legal and who's not. I think that's the  
24 Water Board's job.

25 MS. SUARD: Okay. Okay. Next slide, please.



1           This has got to go back up so we can see where  
2 it came from.

3           There is a Web site called CA.statewater.org,  
4 and it focuses on water rights. And it says that it got  
5 its database information from State Water Rights Control  
6 Board. And I just -- I like to use graphics. So here's  
7 graphics. And do you see those rather large dots there?

8           MR. BERLINER: For the record, this is  
9 SHR-103, page what?

10          MS. McCUE: 16.

11          MR. BERLINER: Thank you.

12          MS. SUARD: I'll just represent to you if you  
13 go to this Web site, you click on the rather large dots,  
14 it refers to USBR and DWR water rights, appropriation  
15 claim there. I'm just going to go on from this. And I  
16 have to say these slides are a little bit out of order  
17 from my hand done. So I'm going to keep going. Next  
18 slide, please.

19                 So let's go back to -- this actually is  
20 from -- you can see this is Water Board's Web site  
21 again, CA.gov, and you can see the whole long line that  
22 shows exactly where you could find this.

23                 And I think you have to look down a little bit  
24 lower, a little bit more.

25                 And so this is U.S. Bureau of Reclamation, and

1 I believe it says 8 million-acre feet a year.

2 Do you read that below there, Mr. Milligan?

3 WITNESS MILLIGAN: You mean the big red  
4 letters or where specifically?

5 MS. SUARD: Yeah, down below. I'm sorry. I  
6 quoted -- I put 8 million acre feet claimed by USBR, and  
7 it's -- the screen print shows it's just under  
8 8 million acre feet. And those are from Contra Costa  
9 Glen, Sacramento, Shasta, and Tehama.

10 Do you see it says "Old River" and "Sacramento  
11 River" there? Is Old River and San Joaquin River where  
12 that's coming from? Is that part of the San Joaquin  
13 River system or is that Old River and Sacramento?

14 WITNESS MILLIGAN: Old River is, in essence,  
15 the diversions in Old River which technically would be  
16 within the San Joaquin River Basin.

17 So if -- I see the slide. Is there another  
18 part of your question?

19 MS. SUARD: This is just one of the  
20 appropriative rights. It says "8 million acre feet."  
21 That's just one of the ones, right?

22 WITNESS MILLIGAN: Again, where the -- how the  
23 8 million -- how that gets added up to that number, I  
24 think you need to probably refer the question to our  
25 water rights staff and I'm sure they can explain that.

1 MS. SUARD: Okay. If you are responsible for  
2 managing the system, isn't there a goal of how much is  
3 transferred through the system to meet these type of  
4 appropriative rights?

5 WITNESS MILLIGAN: Our objective -- or let's  
6 say philosophy in managing the project isn't to maximize  
7 up to the quantity within the rights. Those are  
8 basically limits, upper limits, as to what we can do  
9 being the CVP is not anywhere close to exporting and --  
10 of the South Delta Old River any close to 8 million acre  
11 feet. That's never been a limit that's been much  
12 concern.

13 MS. SUARD: You brought up a question for me.

14 What is the difference -- or do you know if  
15 there's a difference between export or diversion off of  
16 the river and what is actually delivered in acre feet?  
17 Like how many diverted acre feet results, let's say --  
18 does 5 million diverted acre feet result in 4 million  
19 delivered acre feet? Do you -- have you ever looked at  
20 it that way?

21 WITNESS MILLIGAN: Well, if the question is,  
22 is there a different in the amount of, let's say,  
23 diverted or rediverted at this particular location in  
24 Old River versus what's ultimately delivered through the  
25 CVP downstream or south of that point, there's probably

1 going to be a difference because there are some losses  
2 in that system.

3 MS. SUARD: Do you have a percentage of loss,  
4 any idea like that?

5 WITNESS MILLIGAN: I do not have a number off  
6 the top of my head, no.

7 MS. SUARD: Mr. Leahigh, would you have a  
8 percentage of loss, the amount? What it -- from  
9 diverted to delivered, is there a gap 5, 10, 15,  
10 20 percent?

11 WITNESS LEAHIGH: Yeah, offhand, I don't know  
12 what that is. But that's certainly something we take  
13 into account is losses in the system.

14 MS. SUARD: Okay. And that's a day-to-day  
15 management also?

16 WITNESS LEAHIGH: It's not necessarily a  
17 day-to-day management question. It's more  
18 after-the-fact accounting.

19 MS. SUARD: Okay. After-the-fact accounting.

20 WITNESS LEAHIGH: Well, just water balance.

21 WITNESS MILLIGAN: And probably more of a  
22 seasonal consideration.

23 MS. SUARD: Okay. Next slide, please.

24 MR. BERLINER: For the record, that was  
25 Slide 17 in the same exhibit, right?

1 MS. SUARD: Yeah. I'm sorry. I can't give  
2 the slide numbers. What ended up on my -- I'm using two  
3 different ones, so we're going to go by the slide number  
4 that you see up there.

5 So here we're getting to much more practical,  
6 just day-to-day operation and how they might change.  
7 Here is that CDEC Web site again, and you can see the  
8 link to where it is. And I actually did the screen  
9 print, but then I circled each of the different water  
10 locations that I might have ask a question about.

11 CO-HEARING OFFICER DODUC: This is Slide 18.

12 MS. SUARD: Slide 18. Are you both familiar  
13 with that area of the Delta?

14 WITNESS MILLIGAN: The North Delta and up  
15 towards Sacramento, yes.

16 MS. SUARD: Yes.

17 Okay. And can we go to next slide? Hopefully  
18 it's where it's supposed to be.

19 Wait. Let's wait here for a second.

20 Just for reference --

21 CO-HEARING OFFICER DODUC: Slide 19.

22 MS. SUARD: -- Slide 19 is on Steamboat  
23 Slough. Are you both familiar with where that is?

24 WITNESS MILLIGAN: Your business or Steamboat  
25 Slough?

1 MS. SUARD: Steamboat Slough.

2 WITNESS MILLIGAN: Yes.

3 WITNESS LEAHIGH: Yes.

4 MS. SUARD: Just for reference, that  
5 property's been there a very long time and there's  
6 longtime records of flows and all that so -- going by.

7 So next slide, please. This is Slide 20. And  
8 I wanted to -- this is just general screen print, and I  
9 wanted to talk about how does the water flow and how  
10 would it change if the WaterFix project was built?

11 So do you see where Sutter Slough is?

12 CO-HEARING OFFICER DODUC: No, I do not.

13 MS. SUARD: Courtland Road. Do you see the  
14 word "Courtland"? And there is a waterway that goes  
15 towards -- actually, that would be going towards -- what  
16 direction would that be? That what would be going west,  
17 northwest sort of.

18 And then if -- then the arrow direction  
19 changes and it starts flowing south. Do you see that?  
20 Do you see the arrow?

21 WITNESS MILLIGAN: I see the arrows, yes.

22 MS. SUARD: Okay. So that's Sutter Slough.

23 WITNESS MILLIGAN: Which is Sutter Slough?

24 MS. SUARD: Where it starts about Courtland  
25 and then goes off of the Sacramento River. Well, okay,

1 where the word "160" is, that's the Sacramento River.

2 WITNESS MILLIGAN: I see the Sacramento River,  
3 the numeral 160.

4 MS. SUARD: Right. Okay. There's a couple  
5 waterways or sloughs that leave the Sacramento River,  
6 and one is Sutter Slough, one is Steamboat Slough. Down  
7 by Walnut Grove is the Delta Cross Channel, and below  
8 that you see Georgiana.

9 Are you familiar with those waterways?

10 WITNESS MILLIGAN: The Cross Channel and then  
11 cumulative Delta have some markings here, but I do  
12 believe I see the blue line that might be Georgiana  
13 Slough.

14 MS. SUARD: So there's a red line by  
15 Georgiana, there's a red line by the Delta Cross  
16 Channel, and a red arrow by the lower Sacramento River.  
17 And the red arrow points the direction of the flows  
18 right there. Because I will be asking about Delta Cross  
19 Channel.

20 WITNESS MILLIGAN: I will kind of say that, in  
21 this area, it's very tidally influenced, so there are  
22 times that it's not one direction of flow. The tides  
23 will certainly drive the water in these channels both  
24 directions at times.

25 MS. SUARD: Okay. Let's -- I'm going to say

1 this is for outflow time, the direction of flow when the  
2 tide's going out. Does -- is that a fair  
3 representation, then?

4 WITNESS LEAHIGH: During the ebb tide?

5 MS. SUARD: Uh-huh.

6 WITNESS LEAHIGH: During the ebb tides?

7 MS. SUARD: Okay. So there is -- going down  
8 Sutter Slough, there's a confluence and Sutter Slough  
9 keeps going south and then joins with Steamboat Slough.

10 And you see that other arrow? And that is  
11 pointing west. Is that -- that's Miner Slough. Are you  
12 familiar with Miner Slough?

13 WITNESS MILLIGAN: You're getting a little off  
14 my beaten path for the Delta. I'm not sure if that is  
15 Miner Slough. I've heard of Miner Slough, but I  
16 couldn't tell you if that's indeed it.

17 MS. SUARD: But you manage the whole area  
18 here, right?

19 WITNESS MILLIGAN: We manage the CVP, but  
20 there's no water deliveries from the project that go out  
21 that direction. So I have not had occasion to give that  
22 a lot of thought.

23 MS. SUARD: Okay. Mr. Holderman, I see you  
24 smiling. Do you want to tip in on this? Because I have  
25 a feeling you have much more familiarity with it.



1           WITNESS HOLDERMAN: I'm familiar with this  
2 area mostly because of the planning work we were doing  
3 for possible drought barriers on Steamboat and Sutter  
4 Slough at one time.

5           MS. SUARD: Right. So that's part of what I  
6 want to be asking about. So I'm really happy you're  
7 here, because I saw your name on all those documents.

8           I wanted to establish how flows do go.

9           On the -- on the Delta Cross Channel -- and  
10 maybe Mr. Holderman might be the best one to answer  
11 this. When the Delta Cross Channel gates are closed,  
12 what happens to the hydrology in this area?

13          WITNESS HOLDERMAN: Well, that right arrow  
14 pointing to the east along -- point that way. The water  
15 will continue down or would have gone down Delta Cross  
16 Channel, would go down Sacramento and towards Georgiana  
17 Slough more so.

18          MS. SUARD: Okay. Does it have impact on the  
19 waterways above it?

20          WITNESS HOLDERMAN: On Sutter Steamboat? When  
21 the Delta Cross Channels close?

22          MS. SUARD: Yes.

23          WITNESS HOLDERMAN: There could be very minor  
24 but not very much. Because the -- when it's closed,  
25 that's one less waterway that is taking water out of

1 system. And so you might get a small backwater effect  
2 that could increase flows down Sutter and Steamboat.  
3 But that would have to be modeled. I couldn't tell you  
4 for sure.

5 MS. SUARD: Okay. Could we go to the next  
6 slide, please?

7 CO-HEARING OFFICER DODUC: Slide 21.

8 MS. SUARD: Make this slide a bit smaller so  
9 you can see. So this actually is another slide from  
10 water rights. This actually was from the Bay-Delta  
11 hearings, DOI Exhibit 8. And it talks about how  
12 operations affect upstream flow splits on Steamboat and  
13 Sutter.

14 Do you see that, Mr. Holderman?

15 WITNESS HOLDERMAN: Yes.

16 MS. SUARD: Okay. And so the -- one of the  
17 reasons I believe they were looking at this is for fish  
18 flows as well as just hydrology; is that correct? Do  
19 you know?

20 WITNESS HOLDERMAN: I couldn't tell you what  
21 the purpose of these slides were when they were provided  
22 to the Board.

23 MS. SUARD: Okay. So I guess I want to just  
24 point out is the percentage of water 30 percent into  
25 Steamboat and Sutter when the gates are open, 50 percent

1 into Steamboat and Sutter when the gates are closed.

2 Do you see those numbers at the bottom there?

3 WITNESS HOLDERMAN: Yes.

4 MS. SUARD: Does that sound accurate to you?

5 WITNESS HOLDERMAN: Again, I couldn't tell you  
6 if those numbers are accurate. But it does reflect what  
7 I just mentioned; that there would be probably increased  
8 flows down Sutter Steamboat with Delta Cross Channel  
9 closed. But I don't know to what extent and if those  
10 numbers are accurate.

11 MS. SUARD: Okay. Next slide, please.

12 Now, this is a -- I'm sorry. I don't have  
13 the -- where exactly on the USGS Web site I got this.  
14 It is a representative of basically flows on Steamboat  
15 Slough over a period of time from 2002 to 2011.

16 And I brought this up because it has -- it was  
17 brought up before the -- in the Delta, there tends to be  
18 peak flows, and on Steamboat Slough, it pretty much  
19 matches the Sacramento River. And so I'm going to --  
20 does this look like a similar pattern of flows for  
21 North Delta waterways at least to all three of you?

22 WITNESS MILLIGAN: I think it would be much  
23 more helpful to have a pretty direct comparison. You  
24 know, obviously the peak flows correspond with the times  
25 of year. You would expect to see higher flows on the

1 Sacramento. But I don't know that there's enough  
2 information to really measure the changes in magnitude  
3 of some of this.

4 MS. SUARD: Okay. I have actually a lot of  
5 slides and not enough time, so I'm just going to go  
6 faster.

7 Next slide, please.

8 MR. OCHENDUSZKO: Were you just referencing  
9 Slide 22 of SHR-103?

10 MS. SUARD: Yes. Sorry. I will start saying  
11 that.

12 I'm going to go right past 23, please.

13 So this is Slide No. 24, SHR-103. And I  
14 actually handed out a -- if it might be easier for you  
15 to look at it, I handed out a sheet. And this is an  
16 exact screen print from CDEC, and it was from 3/26/2014,  
17 and you can see that screen print on there.

18 And I wanted you to just kind of review. Do  
19 you see any gaps in times or data here?

20 WITNESS HOLDERMAN: There's a one-hour gap  
21 at -- between 11:00 o'clock and noon in the morning and  
22 another one between 1:00 and 2:00 o'clock in the  
23 afternoon that I spotted right off the bat.

24 MS. SUARD: So what would be the purpose of  
25 those gaps?

1           WITNESS HOLDERMAN: I would have no idea. But  
2 a lot of these -- I mean, typically, there's a lot of  
3 instrumentation at Delta that periodically and sometimes  
4 unforeseen -- for unforeseen reasons will stop  
5 collecting data. Could be a power issue or could be  
6 that they're being maintained at that point by the  
7 parties that maintain the station. And so they'll take  
8 them out of -- offline, basically, for a period of time  
9 while they're doing the maintenance.

10           But also I've seen times where there are --  
11 stations are down and we investigate why they're down.  
12 There's a bird nesting on some critical part of the  
13 devices, or I've also seen stations that are riddled  
14 with bullets. So there's a number of reasons that there  
15 can be loss of a station. Until we investigate it, we  
16 can't -- they'll get fixed eventually.

17           MS. SUARD: Thank you.

18           Is it the standard practice to then just skip  
19 that time and not show it on the CDEC site when this is  
20 supposed to be, you know, realtime flow?

21           WITNESS HOLDERMAN: That's typically what we  
22 see there. You have to look at this data to make sure  
23 it's continuous. There can be data gaps. When they  
24 plot this data, you'll see an irregularity in the plot  
25 that will kind of tip you off that there's some data

1 missing.

2 MS. SUARD: Okay. And would, you know, people  
3 trying to run computer models or whatever, would they be  
4 aware of this? How would they know about this?

5 WITNESS HOLDERMAN: That's a good question for  
6 the modelers. But they do use the historical data to  
7 run their models. And where there are data gaps, I  
8 understand that sometimes they try to fill those gaps by  
9 drawing straight lines between points for interpreting  
10 the plots based upon data that might be, you know, the  
11 previous day or following day when the data would be  
12 similar but maybe slightly different on the scale. So  
13 they'll sometimes try to fill that data if it's  
14 critical.

15 MS. SUARD: So they're just guessing at what  
16 the data might have been there?

17 WITNESS MILLIGAN: They are educated --

18 MS. SUARD: Educated guesses, yes.

19 WITNESS MILLIGAN: I would say that's  
20 professional judgment --

21 MS. SUARD: Okay.

22 WITNESS MILLIGAN: -- to be honest. And also  
23 can use adjacent stations. It's not unusual for data to  
24 be missing, and there's a lot of very well-established  
25 techniques that you use to fill in information if you're

1 going to use it for some kind of statistical analysis.

2 MS. SUARD: Okay. Thank you.

3 I'll just -- you know, Mr. Holderman was  
4 correct. I put asterisk where data was missing. And I  
5 happened to note because I was on a dock when the water  
6 went down very, very fast. And, as Mr. Holderman noted,  
7 there's these little glitches in the water flow on CDEC,  
8 and that's where you might see -- you see this minus  
9 down at the bottom and there's irregularities. We don't  
10 normally get low flow like that, so I had taken note of  
11 that.

12 Next slide, please.

13 Slide No. 26, this is again from CDEC. And  
14 what I had done, because I started noticing a pattern of  
15 data gaps, as you call them. I happen to call them that  
16 too. And so I had to create an Excel spreadsheet where  
17 it had the actual hours and, you know, the 15-minute  
18 increments.

19 And then I would get it from CDEC and put it  
20 onto a spreadsheet. And then I found a pattern of data  
21 gaps like you wouldn't know what's going on at Freeport,  
22 wouldn't know what's going on at Sutter, but you could  
23 kind of guess what's going on on the other sloughs.

24 Can you -- Mr. Holderman, why would there be  
25 two different stations breaking down or whatever in a

1 pattern like this, like 15 minutes apart, and then they  
2 start again and stop again and then start again? Do you  
3 have any idea why would there would be a pattern like  
4 this?

5 WITNESS HOLDERMAN: I do not know. The people  
6 that -- if we saw data like this -- if we were gathering  
7 data for planning purposes and we saw things like this,  
8 we would contact a different office of DWR to explain it  
9 or go out and see what's wrong with the instrument and  
10 that sort of thing.

11 MS. SUARD: So who manages those instruments?

12 WITNESS HOLDERMAN: Well, it depends on the  
13 station. If this was a DWR-maintained station, it would  
14 be our -- our Delta regional office technical staff that  
15 typically go out and -- and manage these stations.  
16 Sometimes they have to go out and download data  
17 directly. Some of it's downloaded to CDEC directly. So  
18 it does take some maintenance. If this is a USGS  
19 station -- and there are other agencies that have  
20 stations out there that maintain them -- they would be  
21 required to go out and maintain them.

22 MS. SUARD: Thank you.

23 Next slide, please.

24 This is Slide 27. And I'm sorry it is not  
25 more readable. I will provide this in a larger graphic



1 interface.

2 I wanted to point out that there appears to be  
3 inconsistency on flows on Georgiana in April for four  
4 years in a row, but I'm going to move on from there.

5 Next slide, please.

6 So this slide is a representation from  
7 water.ca.gov, that particular CVFPP meeting. It shows  
8 basically high water flows in the Delta.

9 Next slide, please. I'm trying to go really  
10 fast right now.

11 So this is -- this is Mr. Leahigh's testimony.  
12 So you had said that hydrology is very variable  
13 basically, particularly with regard to salinity; is that  
14 correct?

15 WITNESS LEAHIGH: I think what I'm saying here  
16 is the variables, the hydrodynamic variables, will  
17 affect the water quality of the Delta.

18 MS. SUARD: You focus on salinity?

19 WITNESS LEAHIGH: Yes.

20 MS. SUARD: Are there other water quality  
21 issues that you consider also?

22 WITNESS LEAHIGH: So we consider the water  
23 quality constituents that are part of the Water Quality  
24 Control Plan. So that would be primary salinity in  
25 terms of either EC or milligrams per liter chloride.

1 MS. SUARD: Okay. Any other mineral  
2 constituents or anything like that?

3 WITNESS LEAHIGH: Those are the only two in  
4 which we have Water Quality Control Plan objectives.

5 MS. SUARD: Do you recognize or do you believe  
6 that the water flow -- the surface water flow in the  
7 Delta acts as a recharge for the drinking water aquifer?

8 WITNESS LEAHIGH: Well, certainly I'm aware  
9 there's an interaction between surface water and  
10 groundwater generally, yes.

11 MS. SUARD: Okay. And if the groundwater  
12 quality declines, would you consider that a function of  
13 surface water flows?

14 WITNESS LEAHIGH: No, necessarily no. There's  
15 likely multiple reasons why there would be declines in  
16 groundwater water quality.

17 MS. SUARD: What is the main -- if you know,  
18 what is the main function of surface water as it relates  
19 to drinking water aquifers? Do you believe it recharges  
20 it?

21 WITNESS LEAHIGH: Well, it probably depends on  
22 the aquifer that you're talking about and exactly the  
23 geographic location. Generally, like I said, there is  
24 interaction.

25 MS. SUARD: Okay. I'll ask some really direct

1 questions about the salinity.

2 Do you believe that encroachment of salinity  
3 on the surface waters might possibly impact drinking  
4 water aquifer as well?

5 WITNESS LEAHIGH: I don't know. I think  
6 that's something that probably needs groundwater model  
7 to really get a good handle on whether there's any  
8 significance of any changes there.

9 MS. SUARD: Mr. Milligan, are you aware of  
10 changes to drinking water quality in the Delta in the  
11 last -- since 2005 -- so last 10 or 11 years -- under  
12 the management between DWR and USBR?

13 WITNESS MILLIGAN: Drinking water quality?

14 MS. SUARD: Yes.

15 WITNESS MILLIGAN: No, I'm not.

16 MS. SUARD: Would you be surprised if there  
17 was an increase in salinity in the North Delta for  
18 drinking water?

19 WITNESS MILLIGAN: I guess it depends on the  
20 location.

21 MS. SUARD: Okay. So, to your knowledge, was  
22 drinking water quality even for the rest of the Delta  
23 other than the -- you know, you guys in WaterFix look at  
24 the drinking water of maybe 18 locations. Was the  
25 drinking water quality for the rest of the Delta

1 considered in WaterFix?

2 WITNESS MILLIGAN: Well, the answer is yes, to  
3 the degree I think you'd have to go through the --  
4 particularly the environmental document would probably  
5 document that very well.

6 MS. SUARD: You believe that was covered in  
7 the environmental document?

8 WITNESS MILLIGAN: I'm sure that there is a  
9 section on this question.

10 MS. SUARD: Can we go to the next slide,  
11 please?

12 You know, John, if I'm going to have time,  
13 next slide, please. We can skip that.

14 This is Slide 31. This shows a map of the  
15 Yolo Bypass area and work that's been done in the  
16 last -- that is being done in and are proposed to be  
17 done in the Yolo Bypass. Is this part of the mitigation  
18 or --

19 CO-HEARING OFFICER DODUC: Go ahead, finish.

20 MS. SUARD: Okay. Can I have like another  
21 half hour?

22 CO-HEARING OFFICER DODUC: Let's finish this  
23 question.

24 MS. SUARD: Okay.

25 Are you familiar with the changes that have

1 happened in Yolo Bypass in the last 10 years,  
2 Mr. Milligan?

3 WITNESS MILLIGAN: I assume -- again, not easy  
4 to see if these are habitat restoration-type projects.  
5 I am somewhat familiar that there are a number of  
6 habitat restoration projects at this lower end of the  
7 Yolo Bypass.

8 MS. SUARD: Okay. Are you familiar with  
9 Liberty Island Reservoir? It's called a reservoir in  
10 DSM-2. What is Liberty Island? What is that project?

11 WITNESS MILLIGAN: I don't know what that  
12 project is, other than there are quite a bit of tidal  
13 marsh restorations going on in this general area.

14 MS. SUARD: Mr. --

15 CO-HEARING OFFICER DODUC: Let me interrupt  
16 here.

17 I really appreciate you taking the time to put  
18 this together. It actually is very helpful.

19 My question, though, is: Given an hour has  
20 passed and given that this is the operations panel, I am  
21 wondering what specific questions do you have for these  
22 gentlemen that you believe are most critical to address  
23 right now?

24 MS. SUARD: Well --

25 CO-HEARING OFFICER DODUC: I appreciate you

1 want to get into some of the modeling. Seems they can't  
2 go too much further into the modeling aspect. You're  
3 providing good information that could go towards your  
4 case in chief. Help me understand, say, what are the  
5 two or three critical remaining points that you want to  
6 get from this panel?

7 MS. SUARD: I'm trying to understand  
8 operations now compared to how we would be impacted by  
9 WaterFix. Because I've still not seen number flows,  
10 exactly what will be on Steamboat Slough, and I -- I  
11 know for a fact that the current operations for the last  
12 10 years have had tremendous negative impact on  
13 Steamboat Slough. So just getting into examples of  
14 where that's coming from.

15 CO-HEARING OFFICER DODUC: Okay. Now -- good.  
16 I'm glad. I'm glad you clarified that.

17 My understanding from answers to previous  
18 questions in cross-examination is that the analysis that  
19 was conducted and submitted for this petition did not go  
20 into the -- the specific level perhaps of, you know,  
21 Snug Harbor. And it was more of like, I guess, a  
22 general kind of analysis.

23 Is that correct, Mr. Leahigh? I guess -- let  
24 me rephrase the question.

25 Ms. Suard is looking for specific flows or how

1 flows might be impacted for her in her area. Do you  
2 have that level of detail of information or where might  
3 she get that information?

4 WITNESS MILLIGAN: My assumption is the  
5 modeling panel would be best prepared. I don't know if  
6 there's a specific output of data that they apply to  
7 this point in the Delta, but I think there would be  
8 enough information to be able to say what the change in  
9 the flows and the stages are. You know, obviously, this  
10 is part of the Delta.

11 CO-HEARING OFFICER DODUC: Ms. Suard, the rest  
12 of your presentation, is there enough background that  
13 you can -- you've done an awesome job -- where perhaps  
14 your modeling team -- I'm looking at Mr. Mizell and  
15 Mr. Berliner -- can take a look at this, sit down with  
16 Ms. Suard, and make sure you're prepared to address her  
17 questions now that you have this background information  
18 that she's put together so well?

19 MS. SUARD: Can I add something to that? I  
20 handed out a sheet that, unfortunately, didn't end up on  
21 that. It was supposed to. And it actually -- the  
22 specific purpose of that sheet in front of you is to ask  
23 that specifically, if there is 15,000 cubic feet per  
24 second on the Sacramento River minus, you know, what the  
25 intake takes and minus what goes to Sutter and minus





1 MS. SUARD: Okay.

2 Mr. Holderman, if you could see the graphics.

3 But we'd have to go down to about Slide 50, in that  
4 range.

5 CO-HEARING OFFICER DODUC: Let's give  
6 Ms. Suard another 15 minutes, and we'll ask her to be  
7 very fast with her questions.

8 MS. SUARD: Okay. This is going to be for  
9 Mr. Holderman, and we won't refer to all the different  
10 slides.

11 There's been proposals for barriers and gates  
12 in the Delta for many years, is that correct, to your  
13 knowledge?

14 WITNESS HOLDERMAN: From -- yes, for various  
15 reasons, yes.

16 MS. SUARD: Yeah. And in the last seven  
17 years, since about 2007, I believe there's been  
18 proposals for barriers and gates in different areas of  
19 the Delta for flood control for earthquake emergency,  
20 for drought emergency. Have you been involved with all  
21 that planning?

22 WITNESS HOLDERMAN: I'm aware that planning's  
23 being done for those reasons and -- but I mostly have  
24 been involved with the planning for barriers to improve  
25 water quality due to the recent drought.

1 MS. SUARD: Okay. So you refer to water  
2 quality. The purpose of those barriers is water  
3 diversion to maintain water quality for exports; is that  
4 correct?

5 MR. MIZELL: Object. You can take this as a  
6 standing objection if necessary, but the California  
7 WaterFix proposal did not include any emergency  
8 barriers. I believe we've been over the emergency  
9 barriers point with previous testimony.

10 So, at this point, it's both asked and  
11 answered and irrelevant.

12 CO-HEARING OFFICER DODUC: And where are you  
13 going with this, Ms. Suard?

14 MS. SUARD: I actually want to ask  
15 Mr. Holderman if he's aware of any subsurface barriers  
16 in the Delta -- in the North Delta right now.

17 WITNESS HOLDERMAN: What do you mean by  
18 "subsurface"?

19 MS. SUARD: That means flow barriers that do  
20 not block boating navigation but do block part of flow.

21 CO-HEARING OFFICER DODUC: And if those  
22 barriers are in place and if they do block the flows,  
23 how would the WaterFix project change that?

24 MS. SUARD: I think -- I'm curious to see if  
25 any of these gentlemen who manage the system are aware

1 of existing flow barriers that I have graphic proof of.  
2 And I'm -- I don't know that they were modeled for, and  
3 I wonder if Mr. Holderman is aware of any flow barriers.

4 CO-HEARING OFFICER DODUC: All right. Let's  
5 ask him directly.

6 Are you aware of any barriers that were  
7 modeled as part of the analysis for this petition?

8 WITNESS HOLDERMAN: The drought barriers and  
9 salinity barriers that we have been studying for the  
10 last few years in response to the drought are not  
11 modeled as part of this project. They're not part of  
12 the project. And whether or not a decision is ever  
13 made, that would be regardless of this project.

14 CO-HEARING OFFICER DODUC: Are you aware of  
15 any barriers that were included in the analysis?

16 WITNESS HOLDERMAN: Just the South Delta  
17 agricultural barriers that have been there for over  
18 50 years.

19 CO-HEARING OFFICER DODUC: All right.

20 MS. SUARD: So you're not aware of any current  
21 North Delta flow barriers in place?

22 WITNESS HOLDERMAN: Not in place. We  
23 certainly have some future planning unrelated to the  
24 project should the drought continue for many more years.  
25 And we would be looking at planning for obtaining

1 permits in the future if the drought continues and we --  
2 there might be a need for barriers in the North Delta.  
3 But -- though we did install a drought barrier on West  
4 Falls River last year in response to the drought. That  
5 could happen again in the future, so we're planning for  
6 that. But no decisions have been made to install any  
7 barriers in the North Delta right now.

8 MS. SUARD: So if I represented to you that  
9 there is a subsurface flow barrier at the north end of  
10 Steamboat Slough, the -- that this was not an  
11 installation by USBR or DWR to direct flow off of  
12 Steamboat Slough?

13 WITNESS HOLDERMAN: I'm not aware of any  
14 barriers planned by either Reclamation or DWR at that  
15 location. I am aware of a sandbar that's been  
16 accumulated at the entrance to Steamboat Slough. But  
17 the department's not involved in directing sand to  
18 deposit there.

19 MS. SUARD: Okay. There's --

20 CO-HEARING OFFICER DODUC: Please move on,  
21 Ms. Suard.

22 MS. SUARD: Okay. Sorry.

23 So I am interested in the scheduling of this  
24 whole permit process, and I noticed that the permits  
25 with U.S. Army Corps of Engineers is that -- that

1 process is going on simultaneous with this process; is  
2 that correct?

3 WITNESS HOLDERMAN: Are you referring to  
4 Cal WaterFix or the barriers?

5 MS. SUARD: For WaterFix. Sorry. For  
6 WaterFix.

7 WITNESS LEAHIGH: I'm not very familiar with  
8 what the permitting process is.

9 MS. SUARD: Mr. Milligan?

10 WITNESS MILLIGAN: That's really not a  
11 operational question. That would have been for the  
12 initial panel, I believe.

13 MS. SUARD: Okay. I'm just -- one other  
14 question. This really relates back to navigation. The  
15 WaterFix, if it was being operated, would divert that  
16 winter flow that normally flushes out the navigable  
17 waterways; is that correct?

18 WITNESS MILLIGAN: I don't know if that's a  
19 correct statement or not.

20 MS. SUARD: Okay. How -- are you aware of how  
21 the silt that builds up over summertime gets flushed out  
22 of the navigable waterways?

23 MR. MIZELL: Objection. Assumes facts not in  
24 evidence. We've received no information about silt  
25 buildup and the causes of that.

1 CO-HEARING OFFICER DODUC: Ms. Suard?

2 MS. SUARD: Okay. I will -- I think I'm just  
3 going to have to leave it at that. Thank you.

4 CO-HEARING OFFICER DODUC: Thank you. And  
5 please do work with Mr. Mizell and the modeling team --

6 MS. SUARD: Okay.

7 CO-HEARING OFFICER DODUC: -- on your  
8 material, and thank you for preparing it.

9 MS. SUARD: Sure. What would be the timing of  
10 Mr. Mizell being able to provide that information?

11 CO-HEARING OFFICER DODUC: I'll let you two  
12 work it out amongst yourself. Thank you.

13 Asking the court reporter, would you be okay  
14 if we continue on until 3:00 o'clock?

15 THE REPORTER: Yes. Thank you.

16 CO-HEARING OFFICER DODUC: Ms. Womack?

17 --o0o--

18 CROSS-EXAMINATION

19 MS. WOMACK: Before we get started, I wanted  
20 to ask you, Chair, the last meeting, you asked DWR to  
21 talk with me regarding the map, and I've got a new map  
22 today from Niki. But what sort of time frame did you  
23 envision with them talking with me? Sometime -- I mean,  
24 I just -- what does that mean?

25 CO-HEARING OFFICER DODUC: Before we wrap up.

1 MS. WOMACK: So before the end of the hearings  
2 in, say, December?

3 CO-HEARING OFFICER DODUC: I'm -- now I  
4 confused. I'm expecting that the department would reach  
5 out and work with you on any questions that you might  
6 have that could be addressed without bringing it before  
7 us as part of our proceedings.

8 It seems at the time like you had very  
9 specific questions regarding the project and your --  
10 your land and what was being proposed and how -- how  
11 that may proceed in terms of -- I think you had concern  
12 that your land would be taken and that there would be --  
13 well, anyway, without putting words in your mouth, I  
14 asked the department to reach out and work with you to  
15 address those matters outside of our hearing processes.

16 MS. WOMACK: Okay. I just -- I'd like to work  
17 with them as far as -- you know, there's a lot of  
18 different maps. I'd like clarity.

19 CO-HEARING OFFICER DODUC: Mr. Mizell?

20 MR. MIZELL: We have a long history of working  
21 with Ms. Womack outside of this process, and those  
22 meetings continue to occur. She has had routine  
23 contacts with our property division. They have the very  
24 maps that we presented last time we were talking with  
25 her. And they are in a -- probably the best position to

1 continue to explain what the implications of this are to  
2 her property specifically.

3 Now, the content of those conversations in  
4 some cases is confidential, so I would not be prepared  
5 to present the content of the discussions to the Board  
6 at this time. But rest assured we have a long -- a long  
7 list of days and times that we've met with Ms. Womack,  
8 and we are committed to continuing to work with her.

9 MS. WOMACK: The last --

10 CO-HEARING OFFICER DODUC: One at a time,  
11 please, for the court reporter.

12 All right. Now, Ms. Womack?

13 MS. WOMACK: I have had erroneous details from  
14 DWR, from Mr. Davis, who's the land person. I had to  
15 come to the hearing to ask. And, you know, the problems  
16 we had with the maps, getting the right map. I've had  
17 several different answers, and I haven't had a meeting  
18 with DWR.

19 CO-HEARING OFFICER DODUC: Mr. Davis is from  
20 the DWR, I assume?

21 MR. MIZELL: Exactly.

22 MS. WOMACK: Well, wouldn't it be DWR talking  
23 about this land person from DWR?

24 He's making it sound like --

25 CO-HEARING OFFICER DODUC: You had a meeting



1 with Mr. Davis. Mr. Davis is a representative of the  
2 department.

3 MS. WOMACK: Yeah. Well, I've met with him --  
4 let's see. That was when -- with the Water Commission.  
5 When they wanted to drill on our land, we met with  
6 Mr. Davis. And then he was working with my water  
7 lawyer. And I had several e-mails back and forth with  
8 him trying to get information about what was proposed to  
9 being taken. I can bring those in, give them to you.  
10 I've got copies of back-and-forth with him not giving me  
11 the information I'm asking for.

12 I'm just trying to -- my simple question: Is  
13 there a time frame for them getting back? And that was  
14 my simple question.

15 CO-HEARING OFFICER DODUC: Well, Mr. Mizell --  
16 I don't know how to respond to this. Mr. Mizell is  
17 saying that they are having their representatives work  
18 with you and you're saying no.

19 MS. WOMACK: No, absolutely not.

20 MR. MIZELL: Ms. Doduc, maybe I can make this  
21 very simple. Is there a discrete time frame in which  
22 you would like me to indicate to Mr. Davis that he  
23 should get in touch with Ms. Womack again --

24 CO-HEARING OFFICER DODUC: Immediately.

25 MR. MIZELL: Very good.

1 MS. WOMACK: Mr. Davis was very confused with  
2 the details back and forth. Is that the best -- is that  
3 the best person to deal with?

4 CO-HEARING OFFICER DODUC: I cannot direct the  
5 department as to who they believe is best appropriate to  
6 deal with you.

7 MS. WOMACK: Okay.

8 CO-HEARING OFFICER DODUC: But, Mr. Mizell,  
9 I'm sure you appreciate that the more productive  
10 discussions you have with Ms. Womack to address her  
11 questions and clear up any confusion with respect to  
12 potential impacts to her property, the better it is for  
13 the efficiency of this effort of this proceeding.

14 MR. MIZELL: I agree with you completely.

15 CO-HEARING OFFICER DODUC: So please have  
16 Mr. Davis -- or if he is not the appropriate person,  
17 have the person who is most capable of answering  
18 specific questions with respect to the WaterFix and  
19 Ms. Womack's property get in touch with her immediately.  
20 Well, he may have the weekend off, but next week.

21 MR. MIZELL: Yes.

22 MS. WOMACK: Thank you. Yeah, my last  
23 conversation with Mr. Davis was, "We have -- oh, we  
24 might take 550 acres, but don't quote me." So I really  
25 would like very, very specific details.

1 CO-HEARING OFFICER DODUC: All right.

2 MS. WOMACK: Thank you.

3 CO-HEARING OFFICER DODUC: Ms. Womack, at the  
4 end of next week -- which would be on Friday, right?

5 MS. WOMACK: Friday, yes.

6 CO-HEARING OFFICER DODUC: -- I'd like to hear  
7 from you on the status of that. If you're not here in  
8 person, then please send an e-mail to the WaterFix  
9 e-mail address.

10 MS. WOMACK: Okay. I'll bring my past  
11 e-mails.

12 CO-HEARING OFFICER DODUC: That's not  
13 necessary. I just need a check-in.

14 MS. WOMACK: Okay. Thank you.

15 CO-HEARING OFFICER DODUC: With that, please  
16 proceed with your cross-examination.

17 MS. WOMACK: Thank you.

18 Let's see. I've been waiting for operations  
19 for a while because my property, of course, is very  
20 close to operations of at least one component of both  
21 FWP and CVP, Clifton Court.

22 If I could start with Clifton Court 1. I  
23 wanted to talk to Mr. Holderman regarding temporary  
24 barriers.

25 Is this the sort of notice you send out to

1 people, I guess to legal water users, to let them know  
2 that you're going to be putting in barriers?

3 CO-HEARING OFFICER DODUC: And for the record  
4 this is CCLP-1. It's a letter dated March 8, 2002,  
5 regarding notice of the 2002 temporary barriers  
6 installation from the Department of Water Resources  
7 addressed to a distribution list.

8 WITNESS HOLDERMAN: Yes. In the past, we've  
9 sent out letters to a list of interested parties,  
10 particularly near the barrier sites, to let them know  
11 we're putting the barriers in, and I believe we do the  
12 same thing at the end of the season. And we've been  
13 doing that for many years.

14 These days, though, they do it via e-mail.  
15 Just more efficient.

16 MS. WOMACK: And so the point is to let the  
17 people know that there's going -- what is the point of  
18 letting them know? I mean --

19 WITNESS HOLDERMAN: It's really just a  
20 courtesy to let them know possibly the dates we're going  
21 to be out there working just in case they're out, you  
22 know, boating on planning on moving from Point A to  
23 Point B where the barrier might be under construction in  
24 between so they can plan their trips around that.

25 MS. WOMACK: We're legal water users and, of

1 course, I don't boat. I'm a farmer -- or I'm not a  
2 farmer. My dad was a farmer.

3 So why would you send it to me?

4 WITNESS HOLDERMAN: Well, we can remove you  
5 from the mailing list. But the list has been around  
6 from -- a long time, and so usually we just add to it  
7 rather than subtract unless somebody indicates, you  
8 know, a desire to be removed from the list.

9 MS. WOMACK: Okay. Thank you.

10 CO-HEARING OFFICER DODUC: I'm sorry,  
11 Ms. Womack. So was that a request to be removed?

12 MS. WOMACK: Oh, no, absolutely not. I  
13 wouldn't want to be removed from anything. I was  
14 just -- you know, to me, the barriers -- you would let  
15 somebody know there's barriers because there's going to  
16 be changes in your water level is what we assumed.

17 We're at Clifton Court, and we're affected by  
18 the water flows by the State Water Project, the  
19 Central Valley Project, and by temporary barriers. All  
20 of it affects the water level directly to our farm and  
21 our pumping operations.

22 So could I have the next slide, please?

23 Clifton Court CCLP-2.

24 This is what my father wrote back to Mr. Kwan.  
25 And he says his "Ranch supply is adversely affected by

1 the barriers you put in our canals. The water level is  
2 higher on the upstream side of the barriers and lower on  
3 my side most of the time. The water on -- that my up --  
4 my side of the barrier is never higher than the upstream  
5 side. It's only fair that your department compensate us  
6 for the adverse action. Why should I even have to  
7 request action on your part?"

8           So basically he's upset because it's going to  
9 cost him a lot more to pump water.

10           Mr. Holderman, you're aware if the water level  
11 is down, it costs more to pump?

12           And my father being UC Berkeley-educated,  
13 pretty darn smart guy, only pumps when it's high level,  
14 but the high level changes when you put a barrier in.

15           And so then could we have the next slide,  
16 which is Clifton Court LP-3? I guess, you know, I'm  
17 getting looks, but I want to show how operations happen  
18 right now. This is what we've experienced.

19           So here we got a letter back from Mr. Ford.  
20 And, in particular, in the second paragraph, he says  
21 that the department has on occasion assisted South Delta  
22 farmers who are downstream of the temporary barriers  
23 with water supply. Reliability problems. These farmers  
24 sometimes cannot divert water because the water levels  
25 are too low for the syphon and floodgate to operate. In

1 these instances, DWR has insisted a diverter would be  
2 expensive to modify their diversion in a manner that  
3 would provide them with the ability to divert water for  
4 irrigation under these low water level conditions.

5           However, it is not the policy or practice of  
6 DWR to provide reimbursement for the incremental  
7 additional energy costs of pumping during the low tide  
8 when -- which, of course, my father didn't say low  
9 tide -- when the temporary barriers are operating for  
10 diversions that are capable of diverting water under  
11 these conditions.

12           And then Mr. Ford goes on to say to call you,  
13 actually.

14           So you say that -- I guess what I want to know  
15 is why you treat people differently. You -- you are  
16 able to help some farmers on diversions, but if I have  
17 an increased cost directly caused by the operations of  
18 the barriers and the SWP and CVP, I don't get  
19 compensated for that. I don't -- nobody said -- you  
20 know, if my pumping increases go up 50 percent, nobody  
21 writes me a check.

22           CO-HEARING OFFICER DODUC: Ms. Womack, all  
23 right. Okay. Specifically, what is -- what is your  
24 question with respect to the WaterFix proposal?

25           MS. WOMACK: Well, the WaterFix will continue

1 to have a barrier there. They'll have an operable gate,  
2 so there will be a barrier.

3 I want to know, do the operations of the  
4 temporary barriers, do they cost legal water users  
5 money? Should they cost money?

6 CO-HEARING OFFICER DODUC: Okay. Let's break  
7 it up.

8 MS. WOMACK: Okay.

9 CO-HEARING OFFICER DODUC: Do you agree,  
10 Mr. Holderman, that there are the existing barriers to  
11 which Ms. Womack is referring and to which there are  
12 current concerns that she has been working with the  
13 department to address?

14 MS. WOMACK: Well, by rereading these letters  
15 from --

16 WITNESS HOLDERMAN: From 14 years ago, yes,  
17 apparently there's been discussions about that.

18 CO-HEARING OFFICER DODUC: All right.

19 Does the WaterFix proposal in any way create  
20 any changes to this current scenario, meaning will there  
21 be additional barriers, will there be less? How will  
22 her specific property be impacted, if you know?

23 WITNESS HOLDERMAN: Under this project, the  
24 only barrier being proposed is a permanent barrier at  
25 the head of Old River.



1 MS. WOMACK: Which is the same as this  
2 temporary barrier or similar.

3 WITNESS HOLDERMAN: Well, same location.

4 MS. WOMACK: Similar, yeah.

5 WITNESS HOLDERMAN: And there are no -- during  
6 the early times of the year, January through, I believe,  
7 probably through the end of March, that barrier may be  
8 operating 50 percent of the time according to the  
9 current proposal.

10 CO-HEARING OFFICER DODUC: And while it's  
11 operating, how might Ms. Womack's property be affected?

12 WITNESS HOLDERMAN: Because, if I recall the  
13 location of that diversion, as the letter stated, it's  
14 just upstream of the Jones pumping plant intake channel.  
15 You're on Old River.

16 MS. WOMACK: I can show -- do we need the  
17 slide, DWR1-8? I mean, we're right at Clifton Court.  
18 We're between the two pumping plants.

19 WITNESS HOLDERMAN: At that location, the head  
20 of Old River operation is not going to affect their  
21 water levels.

22 MS. WOMACK: But it's affected these.

23 WITNESS HOLDERMAN: Well, the complaint from  
24 2002 was that the agricultural barriers that are  
25 installed, roughly operating fully in June, and those

1 arguably would have more of an effect on locations  
2 near -- just downstream of those barriers.

3           But the head of Old River barrier under this  
4 project is considerably more distance away, the head of  
5 Old River and the San Joaquin River, and you won't  
6 see -- because of the tidal movement and all the other  
7 hydrodynamics down in Clifton Court, you're not going to  
8 see a change in water levels due to that head of  
9 Old River barrier alone.

10           CO-HEARING OFFICER DODUC: And where in the  
11 materials that have been admitted might Ms. Womack find  
12 that information to give her that assurance?

13           WITNESS HOLDERMAN: Well, I don't know that  
14 there is, like, stage information at her location or  
15 near her location in the documents. I don't know that.

16           CO-HEARING OFFICER DODUC: Are you able or do  
17 you know who in the department may be able to provide  
18 her with that information?

19           WITNESS HOLDERMAN: Well, the information from  
20 the modeling typically has output data that includes  
21 lots of things: Water quality, stage flows, velocities,  
22 all of that.

23           Now, that information that was put into the  
24 draft EIR EIS may not specifically show that location,  
25 but the data will still be available to be extracted

1 from the modeling output and then displayed or shown.

2 CO-HEARING OFFICER DODUC: Mr. Mizell, there  
3 are -- one of our purpose for this hearing is to  
4 determine what, if any, impacts there are to users of  
5 water and to what extent that is being mitigated by the  
6 petitioners or proposed to be mitigated by the  
7 petitioners.

8 So, again, I say to you that it is in your  
9 best interest to provide the necessary information,  
10 since you are making the assertion, or at least  
11 Mr. Holderman is, that the proposed operation would not  
12 have the similar impact on Ms. Womack's property, that  
13 you provide her with that information. And if Mr. Davis  
14 is not the appropriate person, then you need to identify  
15 the appropriate person; otherwise, it will become an  
16 issue in this hearing.

17 MR. MIZELL: And to be clear, this is the  
18 agricultural barriers in the South Delta?

19 CO-HEARING OFFICER DODUC: She is concerned  
20 about the -- the proposed -- well, the only barrier  
21 that's being proposed as part of the WaterFix project is  
22 head of Old River.

23 MR. MIZELL: Okay. I can certainly make that  
24 information available to her.

25 CO-HEARING OFFICER DODUC: All right. And

1 please do that next week as well.

2 MS. WOMACK: Ms. Doduc, you know, one of the  
3 real frustrations here, though, is if I have a  
4 complaint, if whoever writes this says there's nothing  
5 we can do -- we have years of letters of complaints, and  
6 we don't get any money. I mean, we're a farming  
7 operation. I know it's -- you know, you're looking  
8 at -- I would like to know where -- it would be nice if  
9 they had a board where you could go to with your bills  
10 and say, "Look, I have problems here. Can you  
11 compensate me?"

12 As a farmer, I don't have time to come and  
13 try -- my father did three or four letters. He never  
14 got anything. He never went back because he knew from  
15 2002 that they said no. So how are you going to really  
16 help people like little farmers, you know, that -- I  
17 just want some compensation. I want it fair.

18 You're saying it's not costing me money and  
19 yet here, you know, these are like gods saying, "No,  
20 we're not going to pay." How do we have something in  
21 place for the people, especially if you're going to do  
22 the North Delta? That's what I want to know. Where is  
23 that in -- in the WaterFix? It needs to be there where  
24 they're going to -- it seems -- it seems minor, but --  
25 it puts you out of business. You know, I mean, it's --

1 I -- I have more to show as well.

2 But, anyway, I really am looking for more fix  
3 to how do people that get injured get the money. They  
4 should almost have like a place in Sacramento you can  
5 go.

6 CO-HEARING OFFICER DODUC: Ms. Womack, I  
7 appreciate you've had a long history on this.

8 MS. WOMACK: Yes.

9 CO-HEARING OFFICER DODUC: Please keep in mind  
10 the very narrow focus of the petition that is before the  
11 Board. We cannot go back and address all the concerns  
12 that you've had, and neither can we direct the  
13 department to compensate you for that. That is outside  
14 of our authority.

15 MS. WOMACK: I don't expect --

16 CO-HEARING OFFICER DODUC: What we need to do,  
17 and what I'm directing the department to do, is there's  
18 been an assertion made by Mr. Holderman that the  
19 proposal does not -- they don't believe it will create  
20 the kind of impact that is being demonstrated here. So  
21 my direction to them is to provide you with that  
22 information to the best of their ability, to the best of  
23 your satisfaction, I guess, because the issue of injury  
24 is one that -- injury as a result of this particular  
25 proposal --

1 MS. WOMACK: Yes, yes.

2 CO-HEARING OFFICER DODUC: -- is important to  
3 us. But we need to determine, first of all, whether  
4 there is that injury. And so that's what they need to  
5 work with you on.

6 MS. WOMACK: Thank you. Thank you. I  
7 appreciate it so much.

8 Okay. I'll move on, then, to operations,  
9 Mr. Leahigh. And there we go.

10 Okay. It is weird looking from the back. You  
11 just can't tell what's everybody's face.

12 So, Mr. Leahigh, I consider you kind of --  
13 kind of like you're a big -- you operate huge operations  
14 and you're a manager, so you're kind of like maybe like  
15 Exxon. You know, you're like this huge company. And I  
16 realize that my little farm which is at Clifton Court,  
17 just south of the Clifton Court Forebay, you know, is  
18 kind of like me living next to a gas station. I'm a  
19 very small account, I realize. But, anyway, it's really  
20 important to me.

21 I want to talk about -- let's see. I want to  
22 talk about many things, but I think I would like to  
23 start with talking -- oh, I'm sorry. No.

24 Well, I'll leave that for now. I'll talk  
25 about security. Security is, of course, really

1 important everywhere. You don't want children drowning.

2 So, right now, you secure Clifton Court  
3 Forebay with -- you have a cyclone fence around it and  
4 you have various gates; is that correct?

5 WITNESS LEAHIGH: Well, the facilities around  
6 Clifton Court Forebay diversion is managed by the local  
7 Delta field division. They would better know the  
8 specifics about which --

9 MS. WOMACK: You wouldn't know the operations?

10 WITNESS LEAHIGH: I wouldn't know the  
11 specifics of where various gates and fences are down  
12 there.

13 MS. WOMACK: Oh, you don't know if it  
14 surrounds the whole forebay or -- that seems vague to  
15 me.

16 CO-HEARING OFFICER DODUC: Ms. Womack, are you  
17 concerned about security during the construction?

18 MS. WOMACK: No. I'm concerned about their  
19 operations of security now and how that will happen in  
20 the future.

21 Could I have. Let's see. Clifton Court  
22 No. 8. Maybe it will help illustrate my concerns.

23 This is the fence that surrounds the forebay  
24 at Clifton Court now. My side is the -- there's the  
25 road. And then your side is all the berry bushes that

1 you've allowed to grow in and all of this fencing  
2 material except there's no fence there.

3           So this was taken last December, I believe  
4 December 6.

5           And I -- I have -- unfortunately, I lost my  
6 last tenant farmer, he went out of business. So I was  
7 showing around my new tenant farmer and he said, "Whoa,  
8 those fences." And he goes, "Oh, yeah, those are bad."

9           I said --

10           CO-HEARING OFFICER DODUC: And your question?

11           MS. WOMACK: So my question is: Is this the  
12 secure fence you're going to have at -- around all your  
13 facilities? I mean, you talk about having your security  
14 and having gated fences so that people will be safe.

15           MS. MORRIS: Stefanie Morris, State Water  
16 Contractors. I'm objecting to this line of questioning  
17 based on relevance. I'm not sure that fencing has  
18 anything to do with legal users of water or operations,  
19 in fact.

20           CO-HEARING OFFICER DODUC: Mr. Leahigh, to the  
21 extent you have any knowledge at all about security  
22 issues, or is this something else that I need to add to  
23 the homework for Mr. Davis?

24           WITNESS LEAHIGH: I will say that I'm aware  
25 that there's -- as I said, this -- the fencing, the



1 security, all those issues are managed by our local  
2 Delta field division. And I am aware there has been  
3 communication back and forth between the field division  
4 chief and Ms. Womack over the years.

5 So I'm not sure there's anything that I can  
6 add sitting here today as far as that conversation. I'm  
7 not aware of what the specific issues are.

8 MS. WOMACK: You're not -- so is this how the  
9 security is going to be on your other forebays and  
10 things?

11 CO-HEARING OFFICER DODUC: At this point, have  
12 you gotten to the -- it may be, since there are only  
13 10 percent in the design phase right now, that the  
14 details of security is not something that has been  
15 addressed yet and this could be a flag for you to  
16 address it in the future.

17 MS. WOMACK: It was in 2012. It's in 2012  
18 they talk about security. They're very -- it is  
19 addressed.

20 Could I see Clifton Court 9?

21 That's another -- you can see the pathway in.  
22 It's really hard to see this.

23 And Clifton Court 10 -- hopefully this one  
24 won't be sideway. Oh, there we go. So these are the  
25 guys that cut the fences. Well, they're not there;

1 they're on the bike. They come to fish. And  
2 Clifton Court, unfortunately, the southern side has the  
3 intake and, unfortunately, it's a half mile in on our  
4 property to get to Clifton Court Forebay and we have  
5 bikers. I have a lot more pictures I'll be showing.

6 But I just wanted to talk about operations and  
7 security because this is not secure. We have problems  
8 all the time. That last fence that you saw that was  
9 broken, you can't really see that they're -- that it's  
10 broken from up there where the bike is when they drive  
11 around.

12 CO-HEARING OFFICER DODUC: I understand,  
13 Ms. Womack. But, again, our definition, or at least my  
14 understanding of the word "operations" as applied to  
15 this panel and applied to their specific testimony does  
16 necessarily include the security component that you are  
17 talking about as part of the general analysis of the  
18 various impacts associated with this project.

19 So I am, once again, directing Mr. Mizell to  
20 have the appropriate DWR personnel, Mr. Davis or your  
21 local operational team, whoever the appropriate person  
22 is, to work with Ms. Womack on this matter.

23 MS. WOMACK: I talked with Diana Gillis. Is  
24 that who would be in charge?

25 WITNESS LEAHIGH: Yes, she's the current field

1 division chief.

2 MS. WOMACK: When I spoke with her, she, first  
3 of all -- well, anyway, when we finally spoke, I took  
4 these on a Sunday. I spoke with her on a Monday. I  
5 remember because I was off to school and it was early in  
6 the morning. But she said, "Oh, we fixed all the  
7 fences."

8 CO-HEARING OFFICER DODUC: All right.

9 MS. WOMACK: So, anyway, this fence as of the  
10 end of June still wasn't fixed.

11 So I understand this isn't operations and,  
12 really, it's so base. I mean, it should be taken for  
13 granted.

14 CO-HEARING OFFICER DODUC: Ms. Womack, I hear  
15 you.

16 And, again, I will turn to Mr. Mizell and  
17 Mr. Leahigh to direct the appropriate people from the  
18 department to address this matter with Ms. Womack  
19 outside of this hearing. She is a user. This is  
20 arguably part of the public interest matter that this  
21 Board might have to consider. So it is in the best  
22 interest of this efficiency of this proceeding that you  
23 work with her to address these matters outside of this  
24 hearing process.

25 I will remind you that a critical component of

1 the petitioner's request in this matter is based on a  
2 matter of trust, trust in the future operation of the  
3 project should it be -- or should the petition be  
4 granted by this Board. And part of that trust is --  
5 part of building that trust is, as you know, working  
6 with people like Ms. Womack, who's had a long history of  
7 concern, to address those concerns. And I strongly  
8 encourage you to do so outside of these proceedings.

9 MR. MIZELL: Noted.

10 CO-HEARING OFFICER DODUC: Your next line of  
11 questioning?

12 MS. WOMACK: Regards maintenance.

13 CO-HEARING OFFICER DODUC: Again, maintenance  
14 of what?

15 MS. WOMACK: Of -- well, the maintenance of  
16 Clifton Court.

17 CO-HEARING OFFICER DODUC: Is this after the  
18 expansion that's being proposed or as part of --

19 MS. WOMACK: Well, it's part of -- I think  
20 it's combination. I don't know if am I going to have a  
21 little sliver left or I'm going to have nothing left. I  
22 have a little sliver. I certainly have problems.

23 But this is more a case of injury. I am being  
24 injured on a daily basis. It's ongoing nonstop. And  
25 this is -- this is saying -- the department says there's

1 no injury. I'm injured on a daily basis before we even  
2 get into the WaterFix.

3 So I -- this is injury. And this is the  
4 operations that cause injury. The operation -- daily  
5 operations cause injury. Are they -- this is happening  
6 to me and I'm fearful for what the rest of the project  
7 will do.

8 CO-HEARING OFFICER DODUC: All right. Then  
9 let me suggest, because you will have an opportunity in  
10 Part IB to present your case in chief. And, again, I  
11 strongly encourage the department to work with  
12 Ms. Womack to address this matter or else she will be  
13 allowed to present her case of injury as part of IB of  
14 the hearing.

15 MS. WOMACK: Okay. How about seepage, dealing  
16 with seepage?

17 CO-HEARING OFFICER DODUC: What is your  
18 question? There's a difference between you presenting  
19 your case in chief in terms of the harm that you are  
20 experiencing or asserting that you will experience to  
21 cross-examination of these operations witnesses based on  
22 the project that's being proposed. So what is your  
23 question with respect to seepage as applied to the  
24 proposed project?

25 MS. WOMACK: Well, it's more on how they deal

1 with seepage right now. See, I'm looking at it from a  
2 perspective of I have seepage; you don't deal with it;  
3 how are you going to deal with it in the future.

4 CO-HEARING OFFICER DODUC: Okay. Then I will  
5 ask you again to work with the department on that  
6 matter. And if it is not resolved to your satisfaction,  
7 to include evidence of your concerns with respect to  
8 seepage as part of your case in chief in Part IB.

9 MS. WOMACK: Okay. All right. Then I  
10 appreciate that.

11 So all of this, you know, really is  
12 operations. How does each operation deal with, when  
13 people are injured, how do people get money back? What  
14 is set up for that -- that's what I would like to know  
15 from the operations point.

16 MS. WOMACK: And that assumes that injury that  
17 the petitioners are claiming does not exist. That's  
18 their assertion.

19 So I'm again asking you to work with the  
20 department. And now there's a specific deadline because  
21 Part IB has a deadline of September 1st for you to  
22 submit your materials.

23 So again, Mr. Mizell, please have the  
24 appropriate personnel work with Ms. Womack.

25 MR. MIZELL: Absolutely. It would be very

1 helpful to those conversations if Mr. Womack could  
2 provide the documentation she's relying upon, and I can  
3 start to have people look at that and assess how it can  
4 be discussed and addressed.

5 MS. WOMACK: I doubt in a week I can -- wow.  
6 That's kind of -- you want -- I mean, I have a stack of  
7 pump bills this thick. I have a stack of -- I have a  
8 history this thick.

9 CO-HEARING OFFICER DODUC: It is in the  
10 department's best interest to do what they can to  
11 address those concerns, and you've heard from Mr. Mizell  
12 that they will do so next week. With that, I will ask  
13 you to wrap up your cross-examination.

14 MS. WOMACK: Oh, okay. Well, I have more  
15 questions. So --

16 CO-HEARING OFFICER DODUC: Are these specific  
17 questions on operations of the proposed project?

18 MS. WOMACK: They're operations, yeah.  
19 They're the operations, what they're doing. This is  
20 their operations and what they will be doing in future.  
21 They're saying -- remember, Mr. Cowin is saying things  
22 are great. I have a --

23 CO-HEARING OFFICER DODUC: Mr. Cowin is not  
24 before us, and his policy statement is not subject to  
25 cross-examination. So again I will ask you: With

1 respect to the testimony, what is your -- from these  
2 operational witnesses, what is your question?

3 MS. WOMACK: I have another question about  
4 damages, injuries from water levels. And that would be  
5 for Mr. Milligan.

6 MR. BERLINER: Might I interrupt here?

7 Ms. Womack may not be familiar with it, but  
8 the state has an entire process set up for anybody that  
9 feels that they've been damaged by the state. She can  
10 file what amounts to about one page of paper --

11 MS. WOMACK: I did.

12 MR. BERLINER: -- and ask for damages from the  
13 state.

14 MS. WOMACK: I have.

15 MR. BERLINER: There's a whole process to go  
16 through to sort this sort out. And it sounds like that  
17 would be the appropriate place, if there's financial  
18 damage to Ms. Womack and -- and her facilities, to  
19 resolve that type of issue.

20 Now, we understand, we've heard you loud and  
21 clear about the issues of trust and all of that. We'll  
22 be happy to meet with her. But the appropriate place to  
23 seek damage recovery --

24 CO-HEARING OFFICER DODUC: Is not here.

25 MR. BERLINER: -- is through state process



1 that's well established.

2 CO-HEARING OFFICER DODUC: Thank you. We will  
3 not address damages here, at least not at this point.

4 What is your next question, Ms. Womack?

5 MS. WOMACK: Water levels in the CVP.

6 CO-HEARING OFFICER DODUC: Okay. What is that  
7 question?

8 MS. WOMACK: The -- how the state is going to  
9 operate right now -- I'm sorry -- the federal operates  
10 the CVP and Delta-Mendota Canal. They have a Tracy fish  
11 facility first that has a trash rack.

12 CO-HEARING OFFICER DODUC: And what is your  
13 question?

14 MS. WOMACK: My question is: How are they  
15 going to improve their operations at the Tracy fish  
16 facility with the trash rack so that the -- we have  
17 drops of up to 13 feet. And when the trash racks are  
18 full of dead fish and debris and all kinds of things,  
19 water hyacinths, the -- but we -- we experience drops of  
20 up to 13 feet in the water levels. Nothing to do with  
21 tides.

22 CO-HEARING OFFICER DODUC: Okay. Okay.

23 MS. WOMACK: So I'd like to know how that's  
24 going to be addressed. It's operations.

25 CO-HEARING OFFICER DODUC: Is that part of the

1 project proposal? I don't believe it is, but let me  
2 ask.

3 WITNESS MILLIGAN: I don't believe as it  
4 relates to the use of the current Tracy fish facility,  
5 using it as a South -- South Delta diversion point, that  
6 the proposed action has any changes to that operation.

7 CO-HEARING OFFICER DODUC: Has not made any  
8 changes to that?

9 WITNESS MILLIGAN: No, I don't believe there's  
10 any.

11 MS. WOMACK: So you're not going to fix  
12 that -- that injury. Okay. All right. Let's see.

13 Mr. Berliner tells of a whole process to get  
14 damages. This is a state thing, "Oh, we have a process.  
15 Oh, we have something."

16 CO-HEARING OFFICER DODUC: And what is your  
17 question?

18 MS. WOMACK: My question is you get told that  
19 you need to sue the state.

20 CO-HEARING OFFICER DODUC: That is not a  
21 matter before us. That is not something that we are  
22 going to be addressing here.

23 MS. WOMACK: But --

24 CO-HEARING OFFICER DODUC: If you have no  
25 other further line of questioning, I will consider your

1 cross-examination at an end.

2 MS. WOMACK: I'm not sure. Let me look some  
3 more.

4 I'm just wondering why -- it just doesn't seem  
5 right that they can pretend to help, and then somebody  
6 else says, "Oh, you're going to have sue us. You can't  
7 just go up and get money. There is no place."

8 You know, at least we have done that. We've  
9 tried that.

10 CO-HEARING OFFICER DODUC: Well, as you're  
11 looking through your notes, let's go ahead and take our  
12 15-minute break for the court reporter. We will resume  
13 at 3:30.

14 (Off the record at 3:14 p.m. and back on  
15 the record at 3:30 p.m.)

16 CO-HEARING OFFICER DODUC: All right. It is  
17 3:30. We're back in session. Yes?

18 MR. EICHENBERG: Ben Eichenberg for PCFFA.

19 Ms. Womack, I understand, is not an attorney,  
20 but it seems to me that her questions are relevant to  
21 the extent that she's discussing damages she suffered  
22 under the current operations run by these men, who have  
23 represented that they will continue current operations  
24 in the same manner under the WaterFix.

25 They've said that they will try to meet the

1 D-1641 in the future and they said that they tried to  
2 meet D-1641 in the past. And they've said that that  
3 encompasses their analysis of injury to legal uses of  
4 water. So to that extent, I feel that her questions and  
5 her -- her questions as to whether they're aware of  
6 these damages are relevant.

7 CO-HEARING OFFICER DODUC: Thank you. Noted.

8 My ruling stands.

9 Ms. Womack, what is your --

10 Mr. Porgans?

11 MR. PORGANS: Thank you for asking me.

12 Hearing Officer Doduc, I would like to  
13 cross-examine these witnesses if I may. I couldn't get  
14 here because of my health.

15 CO-HEARING OFFICER DODUC: All right.

16 MR. PORGANS: I have tried.

17 CO-HEARING OFFICER DODUC: We will get to you  
18 shortly.

19 Next question. Actually, I should say what is  
20 your remaining lines of questioning?

21 MS. WOMACK: So I just wanted to double-check.  
22 So current operations maintenance, security, water level  
23 injuries, barrier injuries, levee injuries, pump  
24 injuries all are off the table; is that correct?

25 CO-HEARING OFFICER DODUC: Off the table to

1 the extent that I'm asking you to work with the  
2 department to get clarification on some of those issues  
3 and to address to the extent possible the impacts that  
4 you are concerned about.

5           And if those things are not addressed, then  
6 you may include that as part of your case in chief of  
7 Part IB.

8           MS. WOMACK: Okay. Last thing. You want me  
9 to meet with them. Monday, I have to go to the water  
10 measurement. I have three pumps that need measurement  
11 devices put in regardless of whether or not I get  
12 condemned in the next couple years.

13           Tuesday, Wednesday, Thursday, Friday, we're in  
14 session, so I don't really see where there's a lot of  
15 room to meet with them.

16           CO-HEARING OFFICER DODUC: All I can do is  
17 request that they make the time to meet with you. To  
18 the extent that you can address some of these matters,  
19 you should try. If not, then we'll be hearing more from  
20 you in Part IB.

21           MS. WOMACK: Okay. Okay. Thank you very  
22 much.

23           I guess I have one more question. It is  
24 Clifton Court 5. It is to do with dredging. The -- all  
25 of your -- all your operations bring a lot of silt to

1 the area and they will continue.

2           If we could go down to the last -- near the  
3 bottom. Right there. The -- you spent 3 -- 3 -- over  
4 \$3 million to dredge out the boat harbor that is almost  
5 within a quarter mile of our property. I guess I'm  
6 wondering, how do people -- you know, I've never  
7 received a dime from you. How -- how do people get up  
8 the queue and get \$3 million worth of dredging done and  
9 how do you pick who you compensate?

10           CO-HEARING OFFICER DODUC: And that is not  
11 something that we will be addressing in operations.

12           Is that your final question, Ms. Womack?

13           MS. WOMACK: Yeah, that is. That's going to  
14 do it for me today but...

15           CO-HEARING OFFICER DODUC: All right.

16           MS. WOMACK: Thank you so much.

17           CO-HEARING OFFICER DODUC: Thank you.

18           Mr. Porgans, you are up next.

19                           --o0o--

20                           CROSS-EXAMINATION

21           MR. PORGANS: I can give you a list of the  
22 exhibits.

23           CO-HEARING OFFICER DODUC: Since I know you're  
24 still feeling the effects of your illness, you get very,  
25 very close to the microphone so that we can hear you

1 better.

2 MR. PORGANS: I'm having a problem seeing  
3 also. And --

4 CO-HEARING OFFICER DODUC: And slow down a  
5 little bit, please.

6 MR. PORGANS: Thank you.

7 Can I touch the screen? Will that work? Can  
8 he pull up that Porgans exhibits please?

9 CO-HEARING OFFICER DODUC: Mr. Porgans, I  
10 cannot hear you.

11 MR. PORGANS: I'm speaking as loud as I can.  
12 You want me to start screaming? I can't do that.

13 CO-HEARING OFFICER DODUC: Yeah, I know.

14 MR. PORGANS: That's fine.

15 CO-HEARING OFFICER DODUC: Hold on. Is there  
16 a way we can get him a different microphone or...

17 That is a little bit better.

18 Mr. Porgans, how much time do you think you'll  
19 need for your --

20 MR. PORGANS: I really don't know. I would  
21 hope it would be less than an hour. I don't know if I  
22 can hold up that long.

23 CO-HEARING OFFICER DODUC: Well, perhaps you  
24 can list for me what topics you will be exploring.

25 MR. PORGANS: I could do that right now.

1           First of all, my name is Patrick Porgans. I'm  
2 representing Planetary Solutionaries --

3           (Reporter request for clarification.)

4           CO-HEARING OFFICER DODUC: Ms. Riddle will  
5 help out because she can sit there and hear Mr. Porgans  
6 better.

7           Before you begin, Mr. Porgans -- Mr. Mizell is  
8 not here. Mr. Berliner, I suspect that with Mr. Porgans  
9 joining us after all to conduct his cross-examination,  
10 that we will not get to the engineering panel today.

11           My apologies, but we'll get to you first thing  
12 next week.

13           MR. BERLINER: Do you anticipate that to be  
14 first thing Tuesday morning?

15           CO-HEARING OFFICER DODUC: Mr. Porgans is --  
16 well, is the last cross-examiner. Assuming that you  
17 still will not have any redirect, that will be the case.

18           MR. BERLINER: We have no redirect at this  
19 point.

20           CO-HEARING OFFICER DODUC: Okay. Then we will  
21 end with Mr. Porgans' cross-examination of this panel,  
22 and then we will visit the engineering panel first thing  
23 on Tuesday.

24           MR. BERLINER: That will be at 9:00 a.m. in  
25 this room?



1 CO-HEARING OFFICER DODUC: 9:00 a.m. in this  
2 room. And because of the various concerns that were  
3 raised earlier this morning, we will stick to the 9:00  
4 to 5:00 schedule for next week.

5 MR. BERLINER: We'll make arrangements  
6 accordingly.

7 CO-HEARING OFFICER DODUC: All right. Thank  
8 you.

9 MR. PORGANS: In response to your request, I'm  
10 going to be discussing three issues here today that will  
11 be the focus of my cross-examination.

12 First, I want to explore the basis of the  
13 State Water Project yield -- the yield of the project.

14 (Reporter request for clarification.)

15 MR. PORGANS: And I want to look at the Delta  
16 pooling concept. And I want to try to quantify the  
17 stressors associated with the cumulative impacts of the  
18 ranking through the system.

19 Now, we're going to be using their  
20 information. It's not mine. We'll get it up there when  
21 we can.

22 The second thing I'm going to do I'm going to  
23 be talking about we have surplus -- where this surplus  
24 water is coming from. I'm going to be examining who's  
25 paying for that water. Like for the \$500 million for --

1 (Reporter request for clarification.)

2 MS. RIDDLE: Fish flow water.

3 MR. PORGANS: I really want to apologize. I'm  
4 really sorry about this. It's not like me to be like  
5 this. Forgive me. I'm not here to trick you. I'm not  
6 an attorney. I want to know if you have answers. If  
7 you don't, I'll subpoena someone to get them.

8 CO-HEARING OFFICER DODUC: Mr. Porgans, the  
9 entire afternoon is all yours. So just slow down. We  
10 want to be able to understand you and your questions and  
11 get the answers we're all interested in. Slow down.

12 MS. RIDDLE: Our microphones are terrible so  
13 just...

14 MR. PORGANS: At least it's not just me.

15 I want to look at the 800,000 acre feet of the  
16 water CVPPI. I want to examine where that water is  
17 going and who can pick it up somewhere down the line.  
18 And I want to look at the issues discussed by Mr. Cowin  
19 in his -- in his policy statement. I realize he wasn't  
20 under oath at the time.

21 But I want some assurances from these  
22 gentlemen, you know, regarding his commitment to be  
23 compliant. And I want to do that in a way where we're  
24 going to look at the historical track record to  
25 ascertain whether, in fact, there's substance to the

1 arguments they're making with respect to meeting the  
2 standards, you know, at all costs.

3 And we're going to differentiate between the  
4 violations that would have occurred, the first one that  
5 did occur and would have occurred had this Board not  
6 lowered the standards.

7 And then I'm going to go back over some of the  
8 issues associated with the shortcomings of the State  
9 Water Project -- intrinsic shortcomings.

10 We'll also examine the amount of water they  
11 provide annually which is, you know, kind of startling.  
12 For me anyway.

13 MS. RIDDLE: Hold on for a second. If you  
14 turn on both of the -- I don't think they're both on.

15 MR. PORGANS: I got two mics going.

16 At any rate, so what are we looking for here?  
17 First and foremost, if we go to -- somebody put some  
18 exhibits up there. Let me see. Try that one first.

19 Go back again, please.

20 MR. BERLINER: If I could just interrupt?

21 MR. PORGANS: I did have them.

22 CO-HEARING OFFICER DODUC: Okay. Hold on.

23 Mr. Berliner?

24 MR. BERLINER: Just before we get started, I'm  
25 noticing that Mr. Porgans has not numbered his exhibits.

1 If we could give a designation and then go through  
2 whatever numbers are appropriate.

3 CO-HEARING OFFICER DODUC: Let's take a moment  
4 and do that now.

5 MR. PORGANS: You want me to do that now?

6 MS. RIDDLE: Jason or Jean, do you recall if  
7 we had previous numbers for Mr. Porgans?

8 MR. BAKER: No. He identified two exhibits  
9 during Ms. Pierre's cross. And since then, I do not  
10 recall any other ones.

11 MS. RIDDLE: So we're on No. 3, I believe.

12 MS. McCUE: No. He didn't give them numbers.  
13 We haven't gotten anything.

14 MS. RIDDLE: Let's call those 1 and 2, and  
15 let's start with 3.

16 CO-HEARING OFFICER DODUC: So let's, just for  
17 ease, just run down that list right now and add numbers  
18 to all of them. Make that three.

19 MR. BAKER: Are all of these files cross  
20 exhibits?

21 CO-HEARING OFFICER DODUC: It doesn't matter.  
22 We're just going to number them.

23 MR. PORGANS: Tam, okay. I have my exhibits  
24 listed right here in this document, which I intend to  
25 give you the entire breakdown of everything that's

1 there. Okay?

2           These are documents where I got the -- DWR  
3 files.

4           So could you go down to --

5           CO-HEARING OFFICER DODUC: Mr. Porgans, hold  
6 on.

7           We need to do this because as you're referring  
8 to them in your cross-examination, we need to have a way  
9 to identify them in the record for someone who's reading  
10 the transcript later on. So that's why we need to take  
11 the time to do this right now.

12           MR. PORGANS: I appreciate that. And as I  
13 said, when I want to speak about these, I'll say  
14 Exhibit 1 or Exhibit 1C because you have two on me  
15 already. Is that good to say?

16           Like if I say 1C is that state control board  
17 regarding issues, that will let me have in -- that's  
18 Exhibit 1. I mean, that's not that complicated, I don't  
19 think.

20           CO-HEARING OFFICER DODUC: These exhibits  
21 being numbered right now, are these exhibits that you  
22 will using in your cross-examination?

23           MR. PORGANS: Yes.

24           CO-HEARING OFFICER DODUC: Okay. Then please  
25 refer to them by these numbers that are being -- so

1 you're seeing right there.

2 We need to do this for the record.

3 MR. PORGANS: Can I get a number 13 up there?

4 CO-HEARING OFFICER DODUC: All right. Let's  
5 open 13, please.

6 MR. PORGANS: That's it. Exhibit 1. That's  
7 good.

8 Going back. That's open. Is it listed?

9 I'm sorry if I'm making trouble here.

10 MS. RIDDLE: Are they all labeled or only some  
11 of them labeled?

12 MR. PORGANS: They're all labeled. I did it  
13 unless, you know, like -- anyway, you know the story.

14 Never mind.

15 That's how it's listed.

16 MR. BERLINER: Maybe I could offer a  
17 suggestion?

18 CO-HEARING OFFICER DODUC: Please do,  
19 Mr. Berliner.

20 MR. BERLINER: Maybe we could work with  
21 Ms. Riddle and Mr. Baker after the cross-examination is  
22 done, and Mr. Porgans can refer to his exhibits by the  
23 numbers that he put on them. And then we can coordinate  
24 against the list that we have -- that's been created now  
25 by Mr. Baker to reorder them consistent with what

1 Mr. Porgans will please refer to when you put an exhibit  
2 up, and just refer to it as Porgans Exhibit 1 or  
3 whatever it is, like you've labeled them. And then we  
4 can go back and fix it afterwards.

5 And I'll interrupt during the thing if we are  
6 getting a little off track just so we can try to  
7 maintain the record.

8 And just, Mr. Porgans, for your benefit, when  
9 you put up an exhibit, if you could just call it Porgans  
10 Exhibit 1 and just give the title of it, it will be  
11 much easier to put that list together.

12 MR. PORGANS: Thank you, Mr. Berliner. I  
13 appreciate that.

14 CO-HEARING OFFICER DODUC: Thank you. Let's  
15 proceed.

16 MR. PORGANS: So this is Porgans Exhibit 1.

17 And before I get into the issue itself, I have  
18 to ask each one of you on this particular panel. Were  
19 you all sworn in?

20 WITNESS LEAHIGH: Yes.

21 WITNESS MILLIGAN: Yes.

22 WITNESS ANDERSON: Yes.

23 MR. PORGANS: Have you had the opportunity to  
24 hear or read the director's policy statement to this  
25 board on July 26?

1           This is a copy of that policy statement right  
2 there.

3           And you know the -- he clearly states that  
4 he's going to meet with -- let me get this going so I  
5 can drop down. Right here in this particular paragraph  
6 it tells us...

7           "I asked you" -- on Porgans Exhibit 1, in the  
8 second paragraph, and this is Mr. Cowin stating: "I  
9 asked you to keep in mind that we are committed to  
10 meeting our obligations under the standard you impose to  
11 protect beneficial uses of water and we have a proven  
12 track order of doing so."

13           Excuse me. Do you agree with that, sir?

14           MS. MORRIS: Stefanie Morris, State Water  
15 Contractors.

16           CO-HEARING OFFICER DODUC: Ms. Morris?

17           MS. MORRIS: The objection is I don't think  
18 that it's relevant or proper for Mr. Leahigh to be  
19 cross-examined on the policy statement. It's not in  
20 evidence. It isn't evidence.

21           But to help move things along, I think  
22 Mr. Leahigh, in his actual testimony, says the same  
23 thing and has actual charts and shows how they met  
24 standards.

25           So I think you can get at the same question,



1 but it would -- I feel like it's more proper for it to  
2 be Mr. Leahigh's testimony and not a policy statement.

3 CO-HEARING OFFICER DODUC: Thank you,  
4 Ms. Morris.

5 And I fully expect that Mr. Leahigh will be  
6 able to answer as such in responding to Mr. Porgans'  
7 question.

8 MR. PORGANS: I'd say there's relevance to it  
9 because there's the policy of the director, and it all  
10 filters down to the operators.

11 CO-HEARING OFFICER DODUC: Mr. Porgans, I am  
12 allowing you to ask questions on this, so please go  
13 ahead and ask your question.

14 MR. PORGANS: So they're saying here -- and,  
15 again, let me ask you. As operators, do you take every  
16 precaution necessary in order to avoid exceeding the  
17 standards that are required under D-1641 and other --

18 (Reporter request for clarification.)

19 MS. RIDDLE: North Delta water users.

20 CO-HEARING OFFICER DODUC: Let me -- I believe  
21 the first part of that question to Mr. Leahigh was do  
22 you take all the steps necessary to comply with the  
23 requirements?

24 MR. PORGANS: That's right.

25 CO-HEARING OFFICER DODUC: Mr. Leahigh?

1           WITNESS LEAHIGH: Yes. We take our  
2 obligations to meet the Water Quality Control Plan  
3 objectives very seriously.

4           MR. PORGANS: And in your operations, how do  
5 you consider taking that level of seriousness into  
6 consideration when, you know, you get into a few dry  
7 years? What's the procedure there on your end?

8           CO-HEARING OFFICER DODUC: If I understand the  
9 question correctly, how -- how is that consideration  
10 made, how is it incorporated into operational decisions  
11 during a critical dry period?

12          WITNESS LEAHIGH: Yes. The standards that we  
13 need to meet at any particular year are going to be  
14 linked to the water year type. And that is a -- one of  
15 the fundamental factors that we are considering as part  
16 of our operations plan from any year.

17          There will be a set of Water Quality Control  
18 Plan objectives that are applicable for dry and  
19 critically dry years, and we take that into  
20 considerations in our operations role.

21          MR. PORGANS: So for taking all that into  
22 consideration in the event that you have an ensuing  
23 drought -- you see the drought comes on. When we're  
24 getting into a dry period, you're saying, based on your  
25 operation records, you're taking all the precautions

1 necessary to meet the standards?

2 CO-HEARING OFFICER DODUC: I'm afraid I did  
3 not hear that question.

4 MR. PORGANS: Did you hear it, Mr. Leahigh?

5 MS. RIDDLE: Do you take your operational  
6 records into consideration when -- the previous records  
7 into consideration when planning your future operations?

8 WITNESS LEAHIGH: Do we take the -- my  
9 testimony is that under all year types, our success rate  
10 in meeting the Water Quality Control Plan objectives  
11 under all year types, including dry and critically dry,  
12 is -- success rate is quite high.

13 MR. PORGANS: And I commend the department for  
14 doing the job it has. However, we don't always have dry  
15 years, so when we're in balanced conditions of the  
16 Delta, you may not have to push out as much --

17 MS. RIDDLE: Carriage water -- you may not  
18 have to put out as much carriage water to meet the  
19 standard.

20 MR. PORGANS: Say Rio Vista or Emmaton...

21 WITNESS LEAHIGH: Well, there's a couple  
22 things there. Under drier and critical year types, the  
23 standards that we need to meet for salinity at various  
24 locations is typically lower requirements under those  
25 years. So -- also, pumping generally is lower in those

1 types of years as well.

2           So certainly those influence our forecasted  
3 release requirements for that year.

4           MR. PORGANS: That's taking into account the  
5 different types of years. I want to focus on, say,  
6 like, a particular year or two, and I'll be giving new  
7 information that will be up in the screen in a minute.  
8 I want to talk about when --

9           (Reporter request for clarification.)

10          MS. RIDDLE: -- when we're not meeting the  
11 standard and the standard is relaxed.

12          MR. PORGANS: How does that affect the amount  
13 of water available to the project?

14          WITNESS LEAHIGH: I'm not quite sure about the  
15 question. I heard two different things. As far as when  
16 the standard is not being met or when a standard is  
17 being relaxed? I need a little more.

18          MS. RIDDLE: I think what Mr. Porgans is  
19 asking is when the standards are relaxed, how does that  
20 inform your allocation decisions?

21          WITNESS LEAHIGH: Well, over the last couple  
22 years that we have petitioned the Board for relaxed  
23 standards or modified standards, it didn't change the  
24 amount of stored water available for our deliveries.

25          We essentially have no stored water available

1 for our deliveries in both of those years. And, in  
2 fact, we didn't have enough stored water even to meet  
3 our -- the Water Quality Control Plan and other in-basin  
4 uses in those years. And that was the reason for our  
5 petition to the Board for modified standards.

6 MR. OCHENDUSZKO: Mr. Leahigh, do you mind  
7 trying to point your microphone maybe more horizontal?  
8 We're getting a little bit of feedback.

9 MR. PORGANS: Is Mr. Leahigh --  
10 (Reporter request for clarification.)

11 MS. RIDDLE: Mr. Leahigh, are you talking  
12 about water year '91 or '92?

13 WITNESS LEAHIGH: No. I was referencing water  
14 years 2014 and 2015.

15 MS. RIDDLE: And you said you didn't have any  
16 water to deliver.

17 I think we need to take a break. I don't  
18 think that microphone's working anymore.

19 MR. PORGANS: Did you understand the question?  
20 Thank you so much.

21 WITNESS LEAHIGH: I'm sorry. I didn't hear  
22 the question.

23 MR. PORGANS: For years 2014 and 2015, what  
24 did you say -- you had some less water, less water?  
25 What were you saying? I'm sorry.

1           WITNESS LEAHIGH: What I said was we didn't  
2 have any stored water available for delivery for our  
3 allocations south of the Delta in those years.

4           We had a 5 percent allocation to our  
5 contractors in 2014 and 20 percent to our contractors in  
6 2015. But the source of that water was unregulated  
7 flows that we picked up in winter and spring period.

8           MR. PORGANS: I want to talk -- when you talk  
9 the amount of those flows, unregulated flow, I want to  
10 talk about that. What water are we talking about that's  
11 unregulated, that you're having access to pumping?

12           WITNESS LEAHIGH: Unregulated flow would be --  
13 the source would have been any other tributaries coming  
14 into the Sacramento Valley downstream of the  
15 intraproject reservoirs. It would also include any  
16 flows that were required -- any releases that were  
17 required to make as part of either -- well, in those  
18 particular years, it would have been just the in-stream  
19 flow requirements.

20           It would also include any runoff from  
21 precipitation that falls directly in the Sacramento  
22 Valley. All of these combined can amount to substantial  
23 amount of flow even in dry years in the winter and  
24 spring period.

25           MR. PORGANS: So is it fair to say that the

1 problem depends heavily on surplus flows in order to  
2 meet the increasing demands on the -- on Table A?

3 WITNESS LEAHIGH: Yes, I think the projects  
4 have always depended to a large extent on these excess  
5 flows in order to meet deliveries.

6 MR. PORGANS: Are you familiar with the Delta  
7 pooling concept?

8 I have an exhibit I'll put up in a moment.

9 Right in that same batch right there. Go back  
10 where -- you're there. And then go to the next page.  
11 And two pages down after that where he speaks, and we're  
12 going to the next page, please.

13 Okay. This is the portion on Exhibit 2. This  
14 is State Bulletin 132-63. California State Water  
15 Project in 1963. Can we go down the page, please?  
16 Right there.

17 Here it says in the first paragraph: "Project  
18 yield as used in this report is determined by the  
19 relationships among three factors: The water demand  
20 upon the Delta pool, and water supplies available to the  
21 Delta pool, and the capacity of the project conservation  
22 facilities to develop supplies to meet the total  
23 demands. The yield of the project was determined by  
24 comprehensive operation studies utilizing the surplus  
25 flows discussed at Chapter 5" -- we'll go there -- "for

1 each decade from 1960 through 2020 as the basic water  
2 supply to the Delta and utilizing the project demands  
3 set forth in Chapter 6.

4 "The yield represents the quantity of water  
5 that can be made available on a firm annual basis to  
6 municipal industrial users and for agricultural users on  
7 a full irrigation supply basis during an equivalent of  
8 six years of the seven-year critical drought period,"  
9 particularly referring to 1928 to '34 period.

10 CO-HEARING OFFICER DODUC: And what is your  
11 question?

12 MR. PORGANS: The question is: Does he  
13 understand that that is telling us he's depending on the  
14 Delta pool for his water? He's depending on surplus  
15 waters to meet his -- that's what I'm asking him -- does  
16 he realize that? I think he answered.

17 CO-HEARING OFFICER DODUC: All right.  
18 Mr. Leahigh, are you familiar with this document and do  
19 you have an opinion on the statement?

20 WITNESS LEAHIGH: Well, I'm not that familiar  
21 with the document, and the term "Delta pool" is not  
22 necessarily a terminology that we typically use now.  
23 But the basic concept as far as excess or surplus flows  
24 in the system contributing to the yield of the project,  
25 that certainly is true.



1 MR. PORGANS: Okay. I want to go down to the  
2 next page 3. This is bulletin -- Porgans Exhibit 3,  
3 Bulletin No. 132-63. Next page, please.

4 Okay. What he's talking about here going into  
5 Chapter 5: "As we said, we visit the Delta pooling  
6 concept. The department will operate the project in  
7 accordance with the Delta pooling concept. The Delta  
8 pooling concept recognizes Sacramento-San Joaquin Delta  
9 as the central collection point for all surplus waters  
10 from the Sacramento and San Joaquin Valley. All state  
11 project demands in Central and Southern California as  
12 well as a substantial" --

13 (Reporter request for clarification.)

14 MR. PORGANS: -- "substantial measure of the  
15 federal Central Valley Project demands will be met."

16 Excuse me. I'm sorry. I apologize to you for  
17 that.

18 CO-HEARING OFFICER DODUC: And your question?

19 MR. PORGANS: The question is it's talking  
20 about the fact that it goes on to say that the -- we're  
21 going to be talking about the annual firm yield of the  
22 project which -- I'll ask him if he knows what that is.

23 MS. RIDDLE: Firm yield of the project.

24 MR. PORGANS: That's my next question, but I  
25 want to focus here.

1           You're not using a Delta pooling concept but  
2 you're still using the concept as the basis on surplus  
3 water, abandoned water, that you release for fish that  
4 are no longer using it, so forth and so on; is that  
5 correct?

6           WITNESS LEAHIGH: Yes. As I've said, the -- a  
7 big part of the yield of the project is the capture of  
8 excess or surplus flows from a number of sources that  
9 I've outlined.

10           MR. PORGANS: Okay. So what I'm saying  
11 here -- could we move down, please, to the next page?  
12 Hold it right there.

13           So, anyway, they're talking in the operation  
14 of the -- let me point there. Sorry.

15           See that paragraph there? "In the operation  
16 of the State Water Project, Oroville and San Luis  
17 Reservoirs will be operated in conjunction with surplus  
18 flows in the Delta to develop an initial firm yield for  
19 delivery a million acre feet. The present surplus  
20 fleet," blah, blah, blah.

21           My question is: Do you recognize -- and he --  
22 it goes to say that -- to -- talk about your firm yield  
23 in a minute. But that's telling us that you're looking  
24 for 4 million acre feet. Is it saying that you're  
25 looking for 4 million acre feet using those facilities

1 in the Delta? Is that what that says?

2 CO-HEARING OFFICER DODUC: Okay. Let's give  
3 him a chance to read this and respond.

4 MR. PORGANS: Forgive me. I haven't slept for  
5 two days. I'm not usually like this.

6 WITNESS LEAHIGH: Well, at the time that this  
7 document was produced, I think that under the  
8 assumptions that were in play at that time, that seemed  
9 to be the -- that seemed to be the assumption as far as  
10 the firm annual yield.

11 MR. PORGANS: Thank you. What I'm going to be  
12 talking about here -- keep going down, please, until we  
13 get to the next water rights right now.

14 Keep going, please. Going to Exhibit 4,  
15 Porgans Exhibit 4.

16 This is California requirements -- by the way,  
17 this is Porgans Exhibit 4, carriage water requirements  
18 to meet D-1485, D-1641, or for meeting North Delta Water  
19 Agency requirements.

20 So what I'm -- we're looking at here, I want  
21 to turn your attention because we have numbers that were  
22 taken around the time there was a major drought. And  
23 these numbers were provided to the -- to this Board. I  
24 have copies of them. And what I'm saying is these  
25 numbers we're looking at, carriage water requirements to

1 move water across the Delta...

2 Can we go down the list, please? Scroll  
3 down.

4 Right back up for a second. Start at the top.

5 Amount of outflow water required to meet  
6 North Delta water contract criteria. It says here in  
7 the first paragraph during negotiations --

8 (Reporter request for clarification.)

9 CO-HEARING OFFICER DODUC: Okay. Okay. Take  
10 a break. What is -- just help me out here. Okay. What  
11 is the point that you are trying to get to, Mr. Porgans?

12 MR. PORGANS: Well, we're going to show that  
13 the --

14 CO-HEARING OFFICER DODUC: Microphone, please.

15 MR. PORGANS: Excuse me. We're going to be  
16 looking at how the project benefits by not meeting those  
17 standards.

18 CO-HEARING OFFICER DODUC: How the project --

19 MR. PORGANS: -- benefits from not meeting  
20 those standards.

21 CO-HEARING OFFICER DODUC: Now, this is not  
22 the time for you to present a case in chief. This is a  
23 time for you to cross-examine these witnesses.

24 So what is the question that you have for  
25 them?

1 MR. PORGANS: Okay. For example, you don't  
2 meet the North Delta Water Agency contract.

3 CO-HEARING OFFICER DODUC: I did not hear  
4 that.

5 MS. RIDDLE: If you don't meet -- for example,  
6 if you don't meet the North Delta Water Agency contract.

7 I want to make it clear, I'm not speaking for  
8 North Delta Water Agency.

9 CO-HEARING OFFICER DODUC: What is the  
10 question?

11 MR. PORGANS: The question is: If they don't  
12 meet the standard, do they save water by not meeting the  
13 standard? That's what the question is. It's pretty  
14 simple.

15 CO-HEARING OFFICER DODUC: Hold on. Hold on.  
16 Their testimony -- at least Mr. Leahigh's testimony --  
17 is that the department has a very good record of meeting  
18 the standards. So if you are making an assumption that  
19 they're not making the standard and benefiting from it,  
20 I don't expect you'll get a very good answer. So,  
21 again, your question is?

22 MR. PORGANS: My question is still the same.

23 MS. RIDDLE: They don't meet the standard.

24 MR. PORGANS: I'm sorry. I'm not -- I'm a  
25 straightforward person. Anybody that knows me, that's

1 for sure.

2 CO-HEARING OFFICER DODUC: I know that,  
3 Patrick. So your question is?

4 MR. PORGANS: My question is, you know, I'm  
5 going to be showing -- first of all, let me preface  
6 this. I will be showing that there have been numerous  
7 violations over there.

8 CO-HEARING OFFICER DODUC: And that will be in  
9 your case in chief.

10 MR. PORGANS: Okay.

11 CO-HEARING OFFICER DODUC: Okay.

12 MR. PORGANS: Yeah. Okay.

13 CO-HEARING OFFICER DODUC: So, for today, what  
14 is it that you're asking them?

15 MR. PORGANS: My question is: To your  
16 knowledge, if you don't meet the North Delta Water  
17 Agency's standard, whether it's Emmaton or Three Mile,  
18 do you save water by not meeting the standards?

19 MR. MIZELL: Just to avoid an objection from  
20 me, we're speaking hypothetically here, I'm assuming?

21 CO-HEARING OFFICER DODUC: We will assume that  
22 it's a hypothetical scenario.

23 MS. MORRIS: Stefanie Morris for Statewide  
24 Water Contractors.

25 For clarity of the record, I don't think this

1 document that's being shown to the witness -- apparently  
2 to lay foundation -- has been identified. It's unclear  
3 to me what this document is. And also, the North Delta  
4 Water Agency contract is already an exhibit. It's our  
5 exhibit.

6 I'm happy to pull it while we're talking so I  
7 can help Mr. Porgans if he wants specific provisions get  
8 to that. But if we can use the document that is  
9 actually the contract instead of excerpts from the  
10 contract.

11 CO-HEARING OFFICER DODUC: I don't think we  
12 need to pull it up just yet because he's asking a  
13 hypothetical question.

14 And, Mr. Leahigh, can you speculate at all on  
15 this scenario?

16 WITNESS LEAHIGH: Well, first of all, I'd like  
17 to clarify that we are meeting the provisions of the  
18 North Delta Water Agency contract.

19 There's a provision in the contract that deals  
20 with emergency drought years. And there is a claim  
21 process that kicks in during those types of years if  
22 we're not meeting the criteria that is in the contract.

23 And generally my testimony has been that if we  
24 are meeting the Water Quality Control Plan standards, we  
25 would also be meeting the North Delta Water Agency





1 that up in my case in chief, chief case, whatever.

2 Moving along on this issue with regard to --  
3 could you tell us -- could you move down a couple  
4 paragraphs here?

5 I want to stop right here for a minute. I  
6 have the actual exhibit of that particular document, but  
7 it's not in my possession; it's in the possession of the  
8 Department of Water Resources. I gave it to Mrs. Pierre  
9 when she was here.

10 MS. RIDDLE: He gave that document to  
11 Mrs. Pierre. That is referenced here.

12 MR. PORGANS: And that document has the name  
13 on there to whom it was sent and for what purpose. So  
14 that's going to be there as soon as I get my document  
15 back.

16 So moving down here, this is looking at a  
17 description of carriage water requirements. Are you  
18 familiar with that, Mr. Leahigh?

19 WITNESS LEAHIGH: Yes. I know how -- yes, I'm  
20 familiar with the term.

21 MR. PORGANS: Okay. And what's the average  
22 amount of water depending on various conditions?  
23 Inflow? Outflow? You know, so forth and so on.

24 What's the average condition that would  
25 require how much percent of water you would have to use

1 as carriage water to move your water through the  
2 system --

3 MS. RIDDLE: How much carriage water does it  
4 require to move the water through the system, right?  
5 He's making the reference to what percentage is carriage  
6 water.

7 MR. PORGANS: -- a thousand acre feet.

8 WITNESS LEAHIGH: Well, I can couch it in  
9 terms of percent because that's typically how we deal  
10 with it when we're looking at water transfers, for  
11 example.

12 But it will vary on the year and the amount of  
13 just the general hydrology, and the amount of pumping  
14 that's occurring in the south diversion locations. But,  
15 typically, generally, we're looking at about 20 percent  
16 carriage water is the general assumption. But that can  
17 be higher or lower depending on conditions.

18 MR. PORGANS: So would 2008, on average, it  
19 would be 20 or 3 percent over a period of time or --

20 (Reporter request for clarification.)

21 MS. RIDDLE: Is that 20 or 30 percent,  
22 roughly?

23 MR. PORGANS: 20 percent or above.

24 CO-HEARING OFFICER DODUC: All right. I'm  
25 going to stop this because I'm really having trouble

1 understanding the relevance of this to the petition that  
2 is before us. And you need to help me understand that,  
3 Mr. Porgans, before we go any further.

4 MR. PORGANS: I will. Project operations has  
5 historically --

6 MS. RIDDLE: Project operations has  
7 historically --

8 MR. PORGANS: -- impacted people differently.  
9 Different types of water use.

10 So what I'm saying to you is that I'm trying  
11 to get to the point that the operations of the project  
12 in 1991 and '92 cause the loss of family farmers to  
13 lose -- to give up 10,000 acres on Sherman Island.

14 CO-HEARING OFFICER DODUC: Mr. Porgans, and  
15 you will have the opportunity to present that in your  
16 case in chief. That is where you should be making that  
17 argument.

18 MR. PORGANS: I'm trying to get an answer.  
19 I'll take your advice. You're smarter than I am.

20 Could we go down?

21 CO-HEARING OFFICER DODUC: We're not going  
22 anywhere until I understand the relevance of your line  
23 of questioning.

24 MR. PORGANS: My line of questioning is to  
25 establish the fact that there seems to be, based on

1 record, a recurrence -- a recurrence of the events that  
2 lead up to these crises, and it's not just a natural  
3 phenomenon; it's operational. And I want to look at the  
4 record and have them questioned -- and so they can  
5 tell --

6 CO-HEARING OFFICER DODUC: All right. You  
7 definitely have the prerogative to make that  
8 demonstration in your case in chief.

9 MR. PORGANS: Okay. Could we go -- are we  
10 permitted to look at the next page?

11 CO-HEARING OFFICER DODUC: What is that next  
12 line of questioning?

13 MR. PORGANS: Next line of questioning is the  
14 operations of the projects since the project started --  
15 to look and see what happened in pre-drought, during  
16 drought, after the drought so we can look at whether the  
17 project operations, based on the numbers that they  
18 delivered, are consistent with that looking out for --  
19 making sure everything's complying with it. That's all  
20 I'm trying to get out of here.

21 CO-HEARING OFFICER DODUC: Okay. Now, that is  
22 an extremely broad statement.

23 Can you narrow that focus down to in terms of  
24 the specific questions that you will be exploring?

25 MS. RIDDLE: And speak very slowly.

1 MR. PORGANS: Well, first of all, I need to  
2 know, has any one of you -- excuse me.

3 Mr. Leahigh, you have been with the department  
4 how many years?

5 CO-HEARING OFFICER DODUC: I'm sorry.

6 Again, you're now -- Mr. Porgans, you're  
7 talking to me, not to the witnesses, because you need to  
8 help me understand where you're going with this line of  
9 questioning and its relevance to the matter before us  
10 for cross-examination purposes.

11 MR. PORGANS: Well, all I need -- simple  
12 question.

13 CO-HEARING OFFICER DODUC: What is the  
14 question that you want to ask?

15 MR. PORGANS: The question is, is how long has  
16 Mr. Leahigh been employed with the Department of Water  
17 Resources.

18 CO-HEARING OFFICER DODUC: And you have that  
19 in his exhibit -- in his statement of qualifications.

20 What is the direct question you want to ask  
21 him in follow up to that?

22 MR. PORGANS: Was he in operations back then  
23 when -- during that last 1990-'91 time period?

24 CO-HEARING OFFICER DODUC: And where are you  
25 going with that? What's after that?

1 MR. PORGANS: What's after that, we'll look  
2 and see what happened after that 2007, 2009, and  
3 2010-2014 period.

4 CO-HEARING OFFICER DODUC: And what  
5 specifically about operations during that time period  
6 are you trying to explore?

7 MR. PORGANS: Well, I want to look at  
8 operations in terms of delivery to see what the record  
9 indicates, for example.

10 CO-HEARING OFFICER DODUC: Slow down. You are  
11 looking for operations in?

12 MR. PORGANS: Looking for historical  
13 operations to see what was going on and looking at  
14 whether he knows -- because he may not know if he was  
15 there at the time -- what decisions were made.

16 CO-HEARING OFFICER DODUC: I did not hear  
17 that.

18 MS. RIDDLE: He wants to look at historical  
19 operations to know if he knows what the thinking -- what  
20 was going on at the time those decisions were made in  
21 the '90s.

22 CO-HEARING OFFICER DODUC: Again, that's a  
23 very broad topic area.

24 What specifically -- what specific outcome  
25 during that time period tied to operational parameters

1 are you hoping to explore?

2 MR. PORGANS: I already explored the data, and  
3 I'm going to ask if in those years in '87, '92 drought  
4 they delivered more water than ever and --'76, '77,  
5 drought. Show that they delivered more surplus water in  
6 '76, 500 -- over 600,000.

7 CO-HEARING OFFICER DODUC: All right.

8 Ms. Riddle?

9 MS. RIDDLE: He says that he's going to look  
10 at the 1992 drought and the drought of the '70s and show  
11 that they delivered more water than ever. And to show  
12 that there's a pattern.

13 CO-HEARING OFFICER DODUC: And if you want to  
14 show that pattern, you may do so as your case in chief.

15 MR. PORGANS: To be honest, Chairperson, I  
16 don't know. I don't speculate. I'm asking questions  
17 based on the record. I go down to exhibit -- I'm going  
18 to -- it's DWR data. I'm just asking them is that  
19 information correct, to their knowledge? That's all I  
20 want to know. If it is, then I could use it.

21 CO-HEARING OFFICER DODUC: And the documents  
22 that you want to show, do they come from -- do they come  
23 from the department? Did the data come from the  
24 department?

25 MR. PORGANS: And their board.

1 CO-HEARING OFFICER DODUC: And our board.

2 MR. PORGANS: And the Office of Legislative  
3 Analyst. My documents are based on government  
4 documents -- not my documents --

5 CO-HEARING OFFICER DODUC: So do you have a  
6 list of those documents that we can put up for these  
7 witnesses to see just a list to see if they are familiar  
8 with them and whether it can come from the bureau or the  
9 department?

10 MR. PORGANS: That's correct.

11 CO-HEARING OFFICER DODUC: Do you have that  
12 list?

13 MR. PORGANS: If you just go down, go down to  
14 the next exhibit, 5. It's highlighted.

15 CO-HEARING OFFICER DODUC: Is there an index?

16 MR. PORGANS: I'm putting an index together at  
17 the request of one of your assistants. I don't have an  
18 index. I told you we'd have it soon.

19 The exhibit is -- it states what it is when  
20 you look at it. It's right under the reports.

21 This is not my opinion.

22 CO-HEARING OFFICER DODUC: Okay. And so these  
23 exhibits and these documents -- through these documents,  
24 you're trying to ascertain the level of deliveries  
25 during these dry periods?



1 MR. PORGANS: Yeah. That's my point, yes.

2 CO-HEARING OFFICER DODUC: Okay. Can we  
3 shortcut that? Mr. Milligan or Mr. Leahigh, can you  
4 provide -- could you answer the question by an estimate,  
5 if need be, in terms of the level of deliveries during  
6 the dry periods in which Mr. Porgans is interested -- or  
7 point to where in the record that information might be?

8 WITNESS MILLIGAN: It's my understanding, at  
9 least from the CVP, that part of our exhibits had  
10 represented percents of contract totals, our deliveries  
11 or our allocations, you know, through quite a few number  
12 of years through the past.

13 If the question were actual deliveries, that  
14 would probably be something we can look at, and we would  
15 get some specificity as to the years and groups of  
16 contractors to probably facilitate that. But -- let's  
17 see. What's currently in the record now is at least the  
18 allocations that were made going back quite a bit,  
19 probably into the '70s at least.

20 We can certainly provide the allocations from  
21 the CVP perspective. But as I said, actual deliveries,  
22 depending on how far back we go, may be a little more  
23 difficult. But we could certainly take a stab at it.

24 CO-HEARING OFFICER DODUC: And if Mr. Porgans  
25 has that documentation, are you able to recognize it if

1 he shows it to you right now?

2 WITNESS MILLIGAN: Certainly take a look.

3 CO-HEARING OFFICER DODUC: All right.

4 So, Mr. Porgans, for now, let's focus on CVP  
5 deliveries. Let's put up your document that shows that  
6 you believe has information on CVP deliveries during  
7 those periods.

8 MR. PORGANS: Well, my focus was on State  
9 Water Project.

10 CO-HEARING OFFICER DODUC: All right. So your  
11 focus is not CVP --

12 MR. PORGANS: No, it's not.

13 CO-HEARING OFFICER DODUC: Mr. Leahigh, same  
14 question to you: Are you able to give Mr. Porgans  
15 information, data, estimates of SWP deliveries during  
16 some key periods? Or if you are not able to off the top  
17 of your head, if he were to provide such documents, will  
18 you be in a position to verify or comment on them?

19 WITNESS LEAHIGH: I don't know that we have  
20 our deliveries as part of the record right now. But  
21 certainly that is information that we could provide. As  
22 far as if he's going to going to be displaying it now, I  
23 couldn't absolutely verify the information's correct,  
24 depending on what format it is, but...

25 CO-HEARING OFFICER DODUC: All right. Let's

1 go ahead and try that. Let's put up whatever you have,  
2 Mr. Porgans, that reflects SWP deliveries. What is that  
3 document?

4 MR. PORGANS: Porgans Exhibit 5.

5 CO-HEARING OFFICER DODUC: Porgans Exhibit 5.

6 MR. PORGANS: Okay. So what we're looking at  
7 here --

8 CO-HEARING OFFICER DODUC: Mr. Porgans, where  
9 did this come from? Did you generate this?

10 MR. PORGANS: It's off the spreadsheet that I  
11 have in the file that I left with the public information  
12 officer.

13 CO-HEARING OFFICER DODUC: So you generated  
14 this table, and where did the data come from?

15 MR. PORGANS: It comes from an Excel file that  
16 I received under Public Records Act from the Department  
17 of Water Resources public information officer. That's  
18 where this -- you'll see the Excel program here.

19 So this is just numbers that made it easier --  
20 if you want to go through Excel -- if you go to the  
21 name -- the files, you'll see there's an Excel  
22 spreadsheet file in there. If you bring that up, it  
23 will show the source of this.

24 At any rate, moving along until that comes,  
25 because we have it --

1 CO-HEARING OFFICER DODUC: Assuming that we  
2 will just for now say that these numbers are what they  
3 are, what is the question or the point that you want to  
4 get to?

5 MR. PORGANS: I want to look at deliveries  
6 during certain critical periods to see how the projects  
7 were operated. And then I want to explore what happened  
8 or -- and during that ensuing period. Because it's  
9 going to -- the data indicates it seems to be a pattern  
10 here. But I may be missing the mark.

11 CO-HEARING OFFICER DODUC: Okay.  
12 Mr. Porgans -- okay. Since you are most familiar with  
13 this data, and since it sounds like you've done a  
14 thorough analysis, why don't you specify for me the  
15 trend that you are seeing in this data.

16 MR. PORGANS: Okay. Well, the data indicate  
17 to me that the numbers based here on the Excel sheet  
18 that person could pull up, it indicate that during these  
19 critical dry periods, we have -- more water was  
20 delivered, including surplus water, and -- and then more  
21 violations occurred as the drought ensued.

22 CO-HEARING OFFICER DODUC: Did you hear that,  
23 Ms. Riddle?

24 MS. RIDDLE: Yes. He indicated that during  
25 these drought periods, more water was delivered and

1 during periods of violation.

2 CO-HEARING OFFICER DODUC: I'm sorry.

3 MS. RIDDLE: More water deliveries were made  
4 during periods when the water quality standards were  
5 being violated, correct?

6 CO-HEARING OFFICER DODUC: And by "being  
7 violated," what do you mean by that?

8 MR. PORGANS: Exceeding the standard, not  
9 complying with the standard.

10 CO-HEARING OFFICER DODUC: Not complying with  
11 standards, yes. Which standards?

12 MR. PORGANS: That would be -- formally be  
13 D-1485 and D-1641.

14 CO-HEARING OFFICER DODUC: And do you know  
15 whether or not there were TUCPs in place during that  
16 time?

17 MR. PORGANS: Yes. I have them here.

18 CO-HEARING OFFICER DODUC: And they were in  
19 place?

20 MR. PORGANS: I have them here.

21 CO-HEARING OFFICER DODUC: I'm not asking --  
22 were they in place?

23 MR. PORGANS: Yes.

24 CO-HEARING OFFICER DODUC: Okay.

25 So the question that -- we'll put aside the

1 issue of whether or not you were violating. During  
2 those periods in question, under the TUCP, how would you  
3 characterize the State Water Project's level of  
4 delivery?

5 MS. MORRIS: This is Stefanie Morris for State  
6 Water Contractors.

7 I'm objecting to the question Mr. Porgans  
8 asked, and I think you're reinterpreting it for him  
9 based on relevance --

10 CO-HEARING OFFICER DODUC: That's fine. I  
11 want to know the answer.

12 MS. MORRIS: I don't feel that it's relevant,  
13 because it goes to past project operations and it has  
14 nothing to do with California WaterFix.

15 CO-HEARING OFFICER DODUC: It's on the trust  
16 issue because the department claims that, "Trust us.  
17 We've met our compliance in the past, therefore, we'll  
18 continue to comply in the future."

19 Thank you, Ms. Morris.

20 Mr. Leahigh?

21 WITNESS LEAHIGH: I'm sorry. I don't know  
22 what time period.

23 I heard the late '80s to early '90s time  
24 period. I'm not clear on what the question is.

25 CO-HEARING OFFICER DODUC: Let's pick a

1 period, Mr. Porgans.

2 MR. PORGANS: '76 to '77 and then 1987 to 1992  
3 period. First four years, 1987 to 1990, those four  
4 years, and then this last drought where the data shows  
5 you delivered more water from 2014 back to, again, that  
6 four-year period than you did in the prior four years.  
7 That what's this data shows. It wasn't a lot, but they  
8 delivered more water.

9 Moving along here. This is '76-'77 drought.

10 Do you recall this drought? Were you there,  
11 Mr. Leahigh?

12 WITNESS LEAHIGH: No, I was not.

13 MR. PORGANS: Okay. If this information --  
14 and I want to pull up that Excel file so I want you to  
15 see this. Anyway, this information shows us that in  
16 that year you delivered 1.9 --

17 (Reporter request for clarification.)

18 MR. PORGANS: We'll say 1.9 million acre feet.  
19 And 541,685 acre feet were what they call Article 21.

20 Could we go to the top of that? I want to  
21 identify this.

22 So it says -- Article 21. So this Article 21,  
23 water, could you tell us what that is? I mean, for --  
24 for the general interest.

25 CO-HEARING OFFICER DODUC: Hold on a second.

1 Yes?

2 MR. WALTER: Hanspeter Walter.

3 CO-HEARING OFFICER DODUC: You need to pick up  
4 the microphone, please.

5 MR. WALTER: Hanspeter Walter, San Luis  
6 Delta-Mendota Water Authority.

7 Just for clarification purposes, the table at  
8 the top says "Values in thousands of acre feet of  
9 water," however, I believe we're just talking about  
10 straight units of water there. They're actual values.  
11 They're not multiplied by a thousand, if I understand  
12 how Mr. Porgans interpreted the last...

13 It's -- I'm just noting for clarification. I  
14 think the units are not in thousands of acre feet of  
15 water.

16 MR. PORGANS: Ms. Chairman, in the Excel file,  
17 it shows it's thousand acre feet of water.

18 That's not my number. Thousand acre feet. It  
19 shows up in that year.

20 MR. MIZELL: Object to this exhibit and the  
21 whole line of questioning around it. We have no  
22 foundation on this. Clearly there's a distinction to be  
23 made about what unit we're talking about here. Unless  
24 Mr. Porgans is saying that the project somehow had  
25 121 million acre feet of Article 21 water.



1 MR. PORGANS: That's not what -- doesn't seem  
2 right.

3 CO-HEARING OFFICER DODUC: Okay. All right.  
4 All right. Time out.

5 Mr. Porgans, the difficulty I'm having -- we  
6 all are having is while I appreciate your compilation of  
7 this table, it's not something that we can rely on right  
8 now. So rather than focusing on the numbers, where I  
9 was trying to lead Mr. Leahigh was to address -- to  
10 respond to the concepts that you are asserting, and so  
11 let me go back.

12 You are -- based on your analysis, you believe  
13 that during these critically dry periods operating under  
14 a TUCP, the State Water Project delivered, in your  
15 opinion, high level of deliveries; is that correct?

16 MR. PORGANS: Yes. Based on the record, yes.

17 CO-HEARING OFFICER DODUC: Okay. Now, and  
18 what is the follow-up question to that?

19 MR. PORGANS: Well, my follow-up question is  
20 this: We can't predict, they said themselves, what  
21 we're going to do in future. How do I base what they're  
22 going to do in the future if I don't look at what  
23 happened in the past? That's my question here. I'm  
24 going to go on somebody's reputation. They have zero as  
25 far as I can see.

1 CO-HEARING OFFICER DODUC: All right. All  
2 right. Mr. Porgans, you -- let's just say for the  
3 record that you have made your point, it is in the  
4 record, and I will ask you to move on to your next line  
5 of questioning.

6 MR. PORGANS: Okay. Why don't we cut to the  
7 chase now. You know, I'm going to ask you a question.  
8 According to the State Water Resources Control Board and  
9 Department of Water Resources -- I have the exhibits  
10 here. I can pull them up. And it's going to show us  
11 that -- excuse me for a second here. These lights are  
12 blinding me.

13 Forget that. Retract that. Would the person  
14 put up the Excel file, please? Whoever is controlling  
15 the computer, is there an Excel file there?

16 That's it right there. Pull that up. That  
17 was given to me by the Department of Water Resources. I  
18 don't know if you can pull that up.

19 CO-HEARING OFFICER DODUC: What is this  
20 document?

21 MR. PORGANS: This is an exhibit. Could you  
22 move up to the top, and I'll tell you what exhibit it  
23 is. Go up a little bit. I'm sorry. Okay. Okay.

24 What this is providing -- this again came  
25 from -- this is my exhibit. If you go to the

1 exhibit before that, it should have that number.

2 But this particular exhibit -- okay. I'm  
3 going to introduce it as an exhibit that I received from  
4 the Department of Water Resources -- and my last exhibit  
5 and add this one in there for me. Is that possible to  
6 do?

7 This is source information I'm talking about.

8 CO-HEARING OFFICER DODUC: Okay. Now I --  
9 what is this? I mean --

10 MR. PORGANS: This is the spreadsheet provided  
11 to me by the Department of Water Resources public  
12 information officer's office. And this information --

13 CO-HEARING OFFICER DODUC: When? I'm sorry.  
14 When was this provided to you? And by whom exactly?

15 MR. PORGANS: It was provided by the --  
16 Ted Thomas. Ted Thomas, public information officer. He  
17 provided that to me.

18 CO-HEARING OFFICER DODUC: All right. We'll  
19 put that aside for now. And what is -- what is the  
20 question you want to ask?

21 MR. PORGANS: Well, they recognize this  
22 particular map?

23 CO-HEARING OFFICER DODUC: All right. Do you  
24 recognize, Mr. Leahigh, this information?

25 WITNESS LEAHIGH: This looks similar to a

1 spreadsheet that I'd seen from our State Water Project  
2 Analysis Office. I can't say for sure it's the same  
3 one, but it looks similar.

4 CO-HEARING OFFICER DODUC: Okay. And then  
5 what is your question, Mr. Porgans?

6 MR. PORGANS: Well, if we review the number --  
7 all I'm asking -- it looks familiar to him and the  
8 numbers seem accurate, to his knowledge. Is that too  
9 much to ask?

10 CO-HEARING OFFICER DODUC: Ms. Riddle?

11 MS. RIDDLE: He's asking if this information  
12 looks familiar to him and if, to his knowledge, these  
13 numbers are correct.

14 I think he's trying to make -- I think he's  
15 looking for verification from Mr. Leahigh that these  
16 look like the exports that occurred under this -- for  
17 the State Water Project during these time periods. And  
18 maybe scrolling down...

19 WITNESS LEAHIGH: I cannot verify these  
20 numbers sitting here.

21 MR. PORGANS: Okay. Can I submit that as an  
22 exhibit and then provide my source for the public  
23 information officer?

24 CO-HEARING OFFICER DODUC: You may propose  
25 that it be submitted, and I will have to hear

1 objections, I'm sure, but you certainly may label it and  
2 propose to move it into the record.

3 MR. PORGANS: Thank you. For now, I'm going  
4 to label it "Excel spreadsheet from DWR."

5 CO-HEARING OFFICER DODUC: Okay. Mr. Porgans,  
6 I need to let you know that at 5:00 o'clock our audio  
7 equipment will go offline.

8 Just hang on, Megan.

9 So I need for you to focus on what remaining  
10 key questions you have for these witnesses before  
11 5:00 o'clock.

12 MR. PORGANS: Thank you. I'll try to be brief  
13 in my -- could you move that -- take that off and go  
14 back to the last exhibit, please?

15 MS. McCUE: We don't have an identification  
16 for this.

17 MR. PORGANS: I believe it's Porgans --

18 MS. RIDDLE: He requested that we add this as  
19 the next number, and it's an Excel spreadsheet that  
20 Mr. Porgans got from DWR's -- an employee at DWR named  
21 Ted Thomas, correct?

22 MR. PORGANS: Uh-huh.

23 MS. McCUE: So it's PORGANS-6.

24 CO-HEARING OFFICER DODUC: We will so label it  
25 PORGANS-6.

1 MR. PORGANS: Thank you.

2 Could we go back to that -- go back to -- the  
3 next exhibit, PORGANS --

4 CO-HEARING OFFICER DODUC: We already have a  
5 PORGANS-6. Make the spreadsheet PORGANS-7.

6 (Whereupon Exhibit PORGANS-7 was marked  
7 for identification.)

8 CO-HEARING OFFICER DODUC: Now, we're on  
9 PORGANS-6. What is your question?

10 MR. PORGANS: Well, in this particular thing,  
11 I'm making references to the fact that they did come in  
12 and request --

13 (Reporter request for clarification.)

14 MS. RIDDLE: He's making the point that they  
15 did come in and ask for relaxations. This is a  
16 temporary urgency change petition order issued by the  
17 State Water Board.

18 CO-HEARING OFFICER DODUC: And your question?

19 MR. PORGANS: Do you recall how much water was  
20 delivered from 2011 through 2014 in acre feet to  
21 contractors?

22 CO-HEARING OFFICER DODUC: Is your question to  
23 Mr. Leahigh the amount of State Water Project delivered  
24 while operating under this order?

25 MS. RIDDLE: He said 2011 to 2014, prior to

1 this change.

2 CO-HEARING OFFICER DODUC: 2011 to 2014. On  
3 an annual basis?

4 MS. RIDDLE: In acre feet.

5 CO-HEARING OFFICER DODUC: Mr. Leahigh, an  
6 estimate of annual deliveries in acre feet for the years  
7 2011, '12, '13, and --

8 MS. RIDDLE: And '14.

9 CO-HEARING OFFICER DODUC: If you know off the  
10 top of your head.

11 WITNESS LEAHIGH: Well, I -- starting with  
12 2011, as far as -- I can tell you what the State Water  
13 Project allocations were.

14 Let's see. 2011 would have been 80 percent;  
15 2012, I believe, was 60 percent; 2013, 35 percent; 2014,  
16 5 percent; and 2015 would have been 20 percent.

17 MR. PORGANS: I understand the 20 percent but  
18 could you refer to that in acre feet, ballpark?

19 WITNESS LEAHIGH: So that would have been the  
20 percent of the request -- requested amount, and the  
21 requested amount would have been most likely, in most of  
22 those years, close to the 4 million acre feet of  
23 contractual Table A.

24 MR. PORGANS: What is your firm yield for the  
25 project now?

1           WITNESS LEAHIGH: We don't necessarily use  
2 that term "firm yield" anymore as it was used in some of  
3 these historical documents. We have a -- we do put out  
4 a delivery reliability report to our contractors.  
5 Doesn't -- does look at delivery capabilities,  
6 expectations in the long term, and it also looks at  
7 specific year types, including the dry year sequence.

8           MR. PORGANS: I'm asking you in acre feet, do  
9 you have an idea from that period that you reference  
10 today, 2014, how much water the project delivered as  
11 opposed -- I'm sorry. If I'm -- if he can't answer,  
12 that's fine. I already know the answer.

13           In those four years -- and thank you for your  
14 account -- but you didn't give me acre feet percentage  
15 of what they wanted, not that you could provide.  
16 There's a big difference.

17           4 million you don't have to provide because  
18 you don't have it. That's what I'm asking.

19           MS. RIDDLE: He's asking for the acre foot  
20 amount, not the percentages.

21           CO-HEARING OFFICER DODUC: And the answer that  
22 Mr. Leahigh provided in percentages could be calculated,  
23 based on my understanding, a 4 million acre feet  
24 contractual amount.

25           WITNESS LEAHIGH: That's correct.



1 CO-HEARING OFFICER DODUC: Yes. So the  
2 calculations are possible.

3 Mr. Porgans, I need you to wrap up the  
4 cross-examination. What is your remaining question?

5 MR. PORGANS: Remaining question is: Is the  
6 Department of Water Resources involved in water  
7 transfers across the Delta to contractors or to others  
8 in Southern California for the State Water Project  
9 facilities?

10 WITNESS LEAHIGH: I'm sorry. I'm having a  
11 hard time hearing you.

12 MR. PORGANS: The question is: Is the  
13 Department of Water Resources involved in any large  
14 water transfers to your knowledge?

15 WITNESS LEAHIGH: In drier years, we often  
16 convey water for third parties to supplement the low --  
17 our project allocations that occur in those dry years.

18 MR. PORGANS: Do you know how much water you  
19 push through, for example, for the Yuba County Water  
20 Agency? Do you know how much water you deliver them  
21 annually?

22 MS. RIDDLE: How much water was delivered --  
23 did you have a time period, Mr. Porgans?

24 MR. PORGANS: That's in one of my exhibits  
25 that shows the time period from 2010 to 2014 -- how much

1 water was transferred during that time period.

2 WITNESS LEAHIGH: Yeah. I don't have the  
3 exact numbers, but there's various components to that  
4 Yuba long-term transfer agreement.

5 And the first component is essentially  
6 60,000 acre feet, which if we have the capacity to move  
7 that water, we would move. So that would be averaged to  
8 drier years. We might have that capability.

9 In drier years, there's additional components  
10 that would be part of that transfer program.

11 And I'm not sure of the exact -- exact amounts  
12 during that period, but could very well -- for that  
13 program -- could very well have been over -- well over  
14 100,000 acre feet -- I don't know -- 150,000. I'm --  
15 just ballpark.

16 MR. PORGANS: Okay. I'm not going to badger  
17 him because I already have the answer. I'll submit it  
18 in my case in chief. Okay.

19 On this last page, were you familiar with the  
20 environmental water account that the Department of Water  
21 Resources managed to purchase water for fish between  
22 2002 to 2007?

23 CO-HEARING OFFICER DODUC: He's asking about  
24 the environmental water account.

25 And your final question with respect to the

1 environmental water account, Mr. Porgans?

2 MR. PORGANS: Yeah. For everybody's sake,  
3 forgive me if I stressed anybody out. That wasn't my  
4 intention.

5 So, anyway, can you answer the question  
6 related --

7 (Reporter request for clarification.)

8 MS. RIDDLE: Are you familiar with the  
9 environmental water account from 2002 to 2007?

10 WITNESS LEAHIGH: Yes.

11 MR. PORGANS: Do you have any idea how much  
12 water was purchased -- how much money was spent for  
13 water --

14 MS. RIDDLE: How much money was spent and how  
15 much water was purchased as part of the environmental  
16 water account?

17 WITNESS LEAHIGH: I don't know the specifics.

18 I don't know the amounts of money that was  
19 spent. I do know generally they were a big player as  
20 far as water transfers were concerned in that period.  
21 And, in fact, the Yuba core water was one component of  
22 the environmental water account. So that, in fact, that  
23 C1, that first component, 60,000 acre feet, was kind of  
24 a base of supply for the environmental water account.  
25 But there were -- there were additional transfers that

1 were made available for the environmental water account  
2 during that period as well.

3 MR. PORGANS: And you don't know --

4 WITNESS LEAHIGH: I don't know the specifics  
5 sitting here.

6 MR. PORGANS: Okay.

7 CO-HEARING OFFICER DODUC: Okay. Thank you.

8 With that, I'm going to ask you to close your  
9 cross-examination. Hold on a second.

10 And, Mr. Porgans, I stand corrected. Under  
11 Part I you are not presenting a case in chief; however,  
12 we will see you for rebuttal.

13 MR. PORGANS: I appreciate that. And I have  
14 to tell you my main comment for everyone's interest --

15 CO-HEARING OFFICER DODUC: Thank you.

16 MR. PORGANS: This is important.

17 CO-HEARING OFFICER DODUC: This is not the  
18 time for making comments --

19 MR. PORGANS: This is about health.

20 CO-HEARING OFFICER DODUC: We will hear from  
21 you when you present your rebuttal. And I hope you feel  
22 better. Thank you, Mr. Porgans.

23 MR. PORGANS: Thank you.

24 CO-HEARING OFFICER DODUC: At this point,  
25 Mr. Mizell, do you have any redirect?

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MR. MIZELL: No.

CO-HEARING OFFICER DODUC: Thank you.

In that case, we are done with these witnesses, this panel. Thank you, all. We will resume at 9:00 o'clock at Tuesday with the engineering team.

MR. MIZELL: Thank you.

CO-HEARING OFFICER DODUC: Thank you.

(Whereupon, at 4:52 p.m. the proceedings were concluded.)

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CERTIFICATE OF REPORTER

I, MEGAN ALVAREZ, a Certified Shorthand Reporter, hereby certify that the foregoing proceedings were taken in shorthand by me at the time and place therein stated, and that the said proceedings were thereafter reduced to typewriting, by computer, under my direction and supervision;

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

DATED: \_\_\_\_\_

\_\_\_\_\_

MEGAN F. ALVAREZ  
RPR, CSR 12470

