

1
2
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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
COASTAL HEARING ROOM
1001 I STREET
SECOND FLOOR
SACRAMENTO CALIFORNIA

PART 2

Monday, March 19, 2018
9:30 A.M.

VOLUME 18

Pages 1 - 206

Reported By: Deborah Fuqua, CSR No. 1248

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1 APPEARANCES:
2 CALIFORNIA WATER RESOURCES BOARD
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5 Tam Doduc, Co-Hearing Officer:
6 Felicia Marcus, Chair and Co-Hearing Officer:
7 Dorene D'Adamo, Board Member
8 Staff Present
9 Andrew Deeringer, Staff Attorney
10 Conny Mitterhofer, Senior Water Resources Control Engr.
11 Hwaseong Jin, Staff
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13 For California Department of Water Resources
14 Tripp Mizell, Senior Attorney
15 Duane Morris, LLP
16 By: Jolie-Anne Ansley, Attorney at Law
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18 U.S. Department of the Interior, Bureau of Reclamation
19 and Fish and Wildlife Service
20 Amy Aufdemberge, Assistant Regional Solicitor
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22 State Water Contractors
23 Stefanie Morris
24 Adam Kear
25 Becky Sheehan
26
27 Local Agencies of the North Delta
28 Osha Meserve
29
30 Cities of Folsom and Roseville, San Juan Water
31 District, Sacramento Suburban Water District, and The
32 Water Forum
33 Ryan Bezzera
34 Wesley Miliband
35
36 (Continued)

1 APPEARANCES (continued)

2 County of San Joaquin, San Joaquin County Flood Control
3 and Water Conservation District and Mokelumne River
4 Water and Power Authority
5 Thomas H. Keeling

6 Sacramento Regional County Sanitation District and City
7 of Stockton
8 Kelly Taber

9 Delta Agencies and other parties
10 John Herrick
11 Dean Ruiz

12 California Sportfishing Protection Alliance, California
13 Water Impact Network, AquAlliance
14 Michael Jackson

15 California Water Research
16 Deirdre Des Jardins

17 County of Sacramento
18 Aaron Ferguson

19 San Luis and Delta Mendota Water Authority
20 Rebecca Akroyd

21 North Delta Water Agency and Member Districts
22 Kevin O'Brien

23 ---o0o---

24

25

1	I N D E X	
2		PAGE
3	Opening Remarks	1
4	by Co-Hearing Officer Doduc	
5	--o0o--	
6		
7	PANEL 3 WITNESS CALLED BY GROUP 24	
8	Dr. Jeffrey Michael	
9	DIRECT EXAMINATION BY:	PAGE
10	- no direct this session -	-
11	REDIRECT EXAMINATION BY: PAGE	
12	Mr. Ruiz 39	
13	CROSS-EXAMINATION BY:	PAGE
14	Ms. Morris	5
15	Ms. Meserve	17
16	Ms. Taber	30
17		
18	PANEL 2 WITNESS CALLED BY GROUP 21	
19	Dante John Nomellini	
20	DIRECT EXAMINATION BY:PAGE	
21	Mr. Ruiz 43	
22	CROSS-EXAMINATION BY:	PAGE
23	Ms. Ansley	64
24		
25	(continued)	

1

I N D E X
(continued)

2

3

PANEL 1 WITNESSES CALLED BY GROUP 11

4

Tom Gorhing and Paul Bratovich

5

DIRECT EXAMINATION BY: PAGE

6

Mr. Bezerra 75

7

CROSS-EXAMINATION BY:

8

- no Panel 1 cross this session -

9

10 PANEL 2 WITNESSES CALLED BY GROUP 11

Tom Gorhing, Paul Bratovich, Dr. Craig Addley, Jeff

11 Weaver, Dr. Chris Hammersmark

12 DIRECT EXAMINATION BY: PAGE

13 Mr. Miliband 102

14 REDIRECT EXAMINATION BY: PAGE

15 Mr. Bezerra 193

16 CROSS-EXAMINATION BY: PAGE

17 Ms. Morris 127

18 Ms. Akroyd 168

19 Mr. O'Brien 178

20 RECROSS-EXAMINATION BY: PAGE

21 Ms. Morris 198

22

23

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24

25

1 Wednesday, March 14, 2018 9:30 a.m.

2 PROCEEDINGS

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4 CO-HEARING OFFICER DODUC: Good morning,
5 everyone. Welcome back. It is 9:30. We are going to
6 resume this Water Right Change Petition Hearing for
7 California WaterFix project.

8 I am Tam Doduc. With me is Board Chair and
9 Co-Hearing Officer Felicia Marcus. To my left are
10 Andrew Deeringer, Conny Mitterhofer, and Hwaseong Jin.
11 We are also being assisted today by Jason Baker.

12 I see all familiar faces, so I will skip the
13 emergency announcement. You all know what that is. I
14 will skip the "speak into the microphone." You all do
15 that very well.

16 But I will not skip the most important item,
17 which is take a moment, put your noise-making devices
18 to silent, vibrate, do not disturb.

19 Yes, thank you. The Board Chair sets a great
20 example, except for when her phone goes off.

21 Are there any other housekeeping matters
22 before we begin today with the cross-examination of
23 Dr. Michael? We didn't do that on Friday because we
24 were trying to get Mr. Stroshane his opportunity to
25 cross-examine.

1 But before we do that, Mr. Ferguson, thank you
2 for obeying the traffic laws this morning.

3 MR. FERGUSON: You're welcome.

4 Aaron Ferguson, Sacramento County Water
5 Agency. I've been preparing to submit a letter this
6 morning to enter the Agencies' exhibits into evidence
7 because our case is complete last Friday. But it was
8 brought to my attention that others had orally
9 introduced theirs. So wanted to come this morning, and
10 if I need to orally introduce those now into the record
11 or I can follow through and submit a letter. I didn't
12 do that.

13 CO-HEARING OFFICER DODUC: You may do that.

14 MR. FERGUSON: Okay. So I just wanted to
15 SCWA-300 through and inclusive of SCWA-308 into the
16 record.

17 CO-HEARING OFFICER DODUC: Are there any
18 objections?

19 Seeing none, they are so admitted. Thank you,
20 Mr. Ferguson.

21 (SCWA Exhibits 300 through 308 admitted
22 into the record)

23 MR. FERGUSON: Thank you.

24 CO-HEARING OFFICER DODUC: All right. Let me
25 get -- oh, Mr. Keeling, something else?

1 MR. KEELING: A point of clarification, the
2 rule, as I understand it, is that we get our exhibits
3 and we introduce them or submit them into evidence at
4 the end of our case in chief. But for many of us, that
5 phrase "case in chief" is somewhat complicated. For
6 example, the San Joaquin County protestants' will not
7 end until the very end of all the presentations with
8 Mr. Del Piero. So as I understand it, we wouldn't be
9 submitting until that time; is that correct?

10 CO-HEARING OFFICER DODUC: Until your case in
11 chief is completed, yes.

12 MR. KEELING: Thank you.

13 CO-HEARING OFFICER DODUC: Which might, yes,
14 be a while.

15 All right. Time estimate, please, for those
16 who are planning on cross-examining Dr. Michael?

17 MS. MESERVE: Osha Meserve for Group 19, I
18 have about ten minutes. Thank you.

19 CO-HEARING OFFICER DODUC: Welcome back,
20 Mr. Mizell.

21 MR. MIZELL: Thank you. Tripp Mizell, DWR, 15
22 minutes.

23 MS. TABER: City of Stockton for Group 22, 30
24 minutes or less.

25 CO-HEARING OFFICER DODUC: All right. Looks

1 like we will very quickly get to Mr. Nomellini. Is
2 that who's next?

3 MR. RUIZ: Yes, that is who is next, but based
4 on Friday's conversation at the end, it didn't seem
5 like we'd get to him before noon. So I told him to
6 come at 11:00, so we probably need to tell him to leave
7 now if we haven't already done so.

8 CO-HEARING OFFICER DODUC: That also depends
9 on whether you have redirect.

10 MR. RUIZ: That's true.

11 CO-HEARING OFFICER DODUC: And recross.

12 All right. With that, Mr. Mizell or
13 Ms. Ansley.

14 MS. MORRIS: So it's actually,
15 Stefanie Morris, DWR and State Water Contractors,
16 coordinated for efficiency purposes.

17 CO-HEARING OFFICER DODUC: Thank you.

18 MS. MORRIS: About 15 minutes, the topics are
19 regarding the basis for backup for some of the opinions
20 and some of the agency participation that he testified
21 to.

22 CO-HEARING OFFICER DODUC: Thank you.

23 DR. JEFFREY MICHAEL,
24 called as a Panel 3 witness by Protestant
25 Group 21, having been previously duly

1 sworn, was examined and testified as
2 further as is hereinafter set forth:

3 CROSS-EXAMINATION BY MS. MORRIS

4 MS. MORRIS: Good morning, Dr. Michael, how
5 are you?

6 WITNESS MICHAEL: Good morning.

7 MS. MORRIS: Your optimistic analysis that you
8 provided for this hearing is based on Boundary 1
9 operations, correct?

10 WITNESS MICHAEL: No, the -- in the benefit
11 cost analysis, what I labeled the optimistic scenario,
12 it took values for water and some of the other areas of
13 benefits from analysis that was done for the Bay Delta
14 Conservation Plan by the Brattle Group.

15 MS. MORRIS: What I was trying to get at is I
16 believe you testified -- and I reviewed the transcript
17 on Friday -- that the optimistic analysis for water
18 supply that you used in your testimony was based on the
19 Boundary 1 operational scenario.

20 WITNESS MICHAEL: Yeah. So if there was
21 some -- no. The water supply -- the difference in the
22 water supply values between those two scenarios is the
23 dollar -- the value that's attributed to the water
24 supply.

25 The assumption about the water supply with and

1 without the project is actually the same in the two.
2 It's just -- the same in the base scenario as the
3 optimistic scenario. And that particular assumption or
4 that particular value came from comparing the No Action
5 Alternative to the analysis in the Biological
6 Assessment because that was the most recent modeling
7 that was done at the time that I wrote that analysis.
8 So I believe that was in the neighborhood of 225,000
9 acre-feet, a little over 200,000 acre-feet.

10 That value it is used in both the base
11 scenario and optimistic scenario. The optimistic
12 scenario used values for water that I derived from
13 these consulting reports that were done to support BDCP
14 and WaterFix from the Brattle Group. The base
15 scenarios, I used values for water that I took from the
16 California Water Plan and other DWR documents.

17 MS. MORRIS: Okay. So, again, I'm really
18 focusing on the operational scenario that you used. So
19 I'm hearing -- and I would just like you to confirm --
20 that all of your testimony that you're providing for
21 water supply is based on the Biological Opinion H3+
22 operational scenario?

23 WITNESS MICHAEL: That was what was in the
24 benefit cost analysis. There was one slide where I
25 believe the title of the slide was, you know, "How much

1 water supply would be required to get a benefit cost
2 analysis of one." And I made a rough calculation of I
3 believe it was 1 million acre-feet in the optimistic
4 scenario and about 2 million acre-feet in the base
5 scenario. And that calculation I did compare to the
6 boundary conditions.

7 And I don't remember whether it was bound- --
8 which boundary it was. But as I recall, the boundary
9 that had the highest water supply relative to No Action
10 did not reach that 1 million-acre-foot threshold. So
11 there was no overlap at all in my view.

12 MS. MORRIS: Okay. Let's look at what's
13 labeled -- well, technically on the website it's
14 SDWA-275. And if we could pull that up, Mr. Baker.
15 Thank you. I just would like to confirm -- it's marked
16 as SDWA-147, but I think SDWA-147 was withdrawn. It
17 was from Part 1. So I just want to make sure we're
18 talking about the same document and that we maybe
19 correct the labeling for the record.

20 MR. BAKER: You had said 275?

21 MS. MORRIS: Yes, please.

22 MR. BAKER: That is not on the website. It
23 stops at -- oh, pardon me. My mistake.

24 MS. MORRIS: I've done that five times this
25 morning already.

1 It's labeled SDWA-147, but the -- am I correct
2 in assuming that it's -- should properly be and we
3 should refer to it as SDWA-275?

4 WITNESS MICHAEL: That's correct.

5 MS. MORRIS: Thank you. And this cost benefit
6 analysis of the California WaterFix that's dated August
7 2016, this is the -- these contain the water supply and
8 the benefit, cost benefit analysis that are also
9 included in your testimony and your PowerPoint,
10 correct?

11 WITNESS MICHAEL: Correct.

12 MS. MORRIS: And where can I find the
13 calculations for -- and the backup for the figures that
14 are referenced and the numbers and calculations that
15 you arrive at in SDWA-275?

16 WITNESS MICHAEL: All the -- the source for
17 all the values and the calculations is in the document
18 as well as an explanation of them. So they're easily
19 replicable.

20 MS. MORRIS: Do you have them in their native
21 format, I'm assuming, in Excel or something of that
22 nature?

23 WITNESS MICHAEL: I'm sure I do in my archive
24 somewhere.

25 MS. MORRIS: Could we produce -- have those in

1 their native format so we can see how they're
2 calculated because I don't believe it was produced in
3 this exhibit?

4 MR. RUIZ: Those can be produced.

5 MS. MORRIS: When can we have those, Mr. Ruiz?

6 MR. RUIZ: Probably tomorrow.

7 MS. MORRIS: Great. Thank you.

8 In your testimony on Friday, you said that you
9 received specific calculations from Dr. Rodney Smith,
10 correct?

11 WITNESS MICHAEL: That's correct.

12 MS. MORRIS: And what calculations were those?

13 WITNESS MICHAEL: Those were the calculations
14 of the cost per acre-foot of the yield from the tunnels
15 project.

16 MS. MORRIS: And do you have the backup data
17 for those calculations as well?

18 WITNESS MICHAEL: I would -- there's a memo
19 attached as an exhibit that explains how they've been
20 calculated. I will contact Dr. Smith and see if he
21 wants to -- if he's able to provide the programming
22 that he used.

23 MS. MORRIS: Okay. Mr. Ruiz, can we please
24 also have that information?

25 MR. RUIZ: We will contact him by tomorrow,

1 and assuming that he's okay with that, we'll provide
2 that, yes.

3 MS. MORRIS: Thank you.

4 Looking at SDWA-292 -- I'm sorry, it's labeled
5 "292" but it's actually on the website SDWA-266. And
6 looking at Slide 15. Maybe while he's pulling that up,
7 I'll ask the question, and maybe you don't need to see
8 the slide perhaps, or we can also wait.

9 You stated in the slide that Westlands Water
10 District voted 7-1 against the WaterFix because it was,
11 quote, "not financially viable"; correct?

12 WITNESS MICHAEL: Correct.

13 MS. MORRIS: Isn't it true, if we look at
14 Westlands Water District 16 and also at -- SDWA-278
15 that Westlands clarified that the participation
16 approach announced by Reclamation was really driving
17 the Board's vote? Do you recall seeing that?

18 WITNESS MICHAEL: I believe I quoted from a
19 statement after the vote. You're referring to a
20 different document?

21 MS. MORRIS: Let's go ahead and pull it up, if
22 you could, Mr. Baker, WWD-16. If we look at the second
23 full paragraph.

24 MR. RUIZ: We don't have that up yet.

25 MS. MORRIS: Oh. Sorry. It's on the screen.

1 I apologize.

2 Do you see that it says that the Westlands
3 Board district [sic] was in large part a reaction to
4 the participation approach proposed by the Bureau of
5 Reclamation?

6 MR. RUIZ: Maybe, Counsel, just for the
7 record, I don't know that he's familiar with this
8 letter. Maybe you could just set it up a little bit
9 and say what it is and who it's from, et cetera.

10 MS. MORRIS: Have you seen this letter before?

11 WITNESS MICHAEL: Actually, I have seen it
12 before.

13 MS. MORRIS: So I would just repeat my
14 question. I can --

15 WITNESS MICHAEL: Can you rephrase your
16 question? Yeah.

17 MS. MORRIS: Sure.

18 WITNESS MICHAEL: Or just restate it?

19 MS. MORRIS: Sure. Isn't it true that the
20 Westlands Board decision, as summarized by their
21 general manager, was in large part a reaction to the
22 participation approach proposed by the Bureau of
23 Reclamation?

24 CO-HEARING OFFICER DODUC: Hold on.

25 Mr. Bezzera.

1 MR. BEZERRA: Yeah, I'm going to object to the
2 question as misstating the evidence. This is a letter,
3 I believe, from the general manager. Obviously the
4 Board of Directors took whatever action Westlands took.
5 So to characterize this as a statement by Westlands is
6 a misstatement of the evidence. If it's a statement by
7 the general manager, that's fine. But the question has
8 been asked in terms of, "Isn't it true that Westlands"
9 said something. And that's a misstatement.

10 MR. RUIZ: Which goes back to my initial
11 comment. We should figure out exactly who the letter
12 is from so we can get some clarification. If it's from
13 the GM, let's establish that.

14 CO-HEARING OFFICER DODUC: Let's scroll down
15 and see who signed this. But I suspect it's from the
16 general manager.

17 MS. MORRIS: Sure. We can do this a different
18 way.

19 If you'd pull up SDWA-278, which was an
20 exhibit produced by South Delta Water Agency, which is
21 an official statement and not the general manager
22 characterizing his board's actions. Do you see in
23 second paragraph, it says, "However, under the
24 participation approach announced by Reclamation for
25 CWF, only CVP contractors that choose to participate in

1 CWF would pay the costs of constructing and operating
2 the new facilities with no assurances that those
3 contractors would receive the water supply benefits
4 resulting from CWF." Do you see that?

5 WITNESS MICHAEL: Yes.

6 CO-HEARING OFFICER DODUC: And may I remind
7 counsel of the numerous objections voiced by some
8 parties when things are read into the record? Just a
9 reminder.

10 MS. MORRIS: Thank you.

11 So if we could go back to Westlands Water
12 District 16. Do you think that it's fair to say,
13 based -- in your opinion, having looked at both of
14 those letters, that the issue with Westlands Water
15 District wasn't necessarily that it wasn't financially
16 feasible but it wasn't financially feasible given the
17 participation approach put forth by USBR?

18 MR. RUIZ: Before you answer, I'll just going
19 to object. The document speak for itself. The
20 language speaks for itself. To ask Dr. Michael to
21 speculate as to what this Board or, in the other case,
22 the general manager meant is improper.

23 CO-HEARING OFFICER DODUC: Where are you going
24 with this, Ms. Morris?

25 MS. MORRIS: I'm just trying to -- the slide

1 presented by Dr. Michael says that it's not financially
2 viable. And I'm trying to show that it's more than
3 that it's not financially viable, that it's based on
4 the participation approach. And if I could continue to
5 ask a few other questions, very limited, about whether
6 Westlands is still pursuing the project...

7 WITNESS MICHAEL: I don't mind answering this
8 question.

9 I mean, the participation approach is part of
10 the financial plan. My testimony was about the
11 financial plan and financial viability. So it says in
12 part -- it doesn't say in whole, but it says in part it
13 was based on the participation approach, participation
14 approach and cost allocation that refers to is the
15 financial that was provided to Westland.

16 So I think saying that that's part of the
17 issue is important. It's also the water yield provided
18 by the project, I believe, is also referenced and the
19 uncertainty related to it which speaks to operations.
20 So all of those things are a factor.

21 MS. MORRIS: And by -- you're saying
22 "financial plan" you're -- again, this is talking about
23 a participation approach, correct?

24 WITNESS MICHAEL: The participation approach
25 includes -- it discusses the cost allocation, which is

1 a component of the financial plan. So it may not be
2 labeled "The Financial Plan" but it specifies their
3 understanding of how costs would be allocated at that
4 time.

5 MS. MORRIS: Thank you. And do you know if
6 Westlands is still pursuing participation in the
7 WaterFix project?

8 WITNESS MICHAEL: I don't know what they're --
9 no.

10 MS. MORRIS: Okay. Thank you. Again, looking
11 at that same slide, SDWA-266, 5 -- 15, you state -- and
12 you also testified, I believe, on Friday that MWD staff
13 white paper showed different operations than presented
14 to this Board, correct?

15 WITNESS MICHAEL: I said that it had a
16 different water yield and a different project
17 description. So rather than comparing the project to
18 the No Action Alternative, what the white paper did in
19 the presentation of the Board is it took elements of
20 the project that's in the project description presented
21 to this Board and took them and put them into the
22 without-tunnel project.

23 So if you take elements that are in your
24 project and it put it into the no-project alternative,
25 they are no longer part of the project.

1 So it's a -- you know, it's a change to the
2 project description.

3 MS. MORRIS: Okay. But let's look at your
4 slide. You specifically state and this was my question
5 about water supply, you said that the staff white paper
6 has different operations. Do you see that?

7 WITNESS MICHAEL: Oh, yeah. So I guess that's
8 being a bit loose with the term. It's a different
9 water yield, water yield that varies significantly and
10 a no-tunnel project that varies significantly.

11 MS. MORRIS: But you agree that the
12 Metropolitan white paper analyzed a range of operations
13 between H3 and H4, correct?

14 WITNESS MICHAEL: Yes.

15 MS. MORRIS: What kind of bonds will DWR issue
16 to finance the California WaterFix project?

17 WITNESS MICHAEL: I don't think they've
18 presented a financial plan with that level of detail.

19 MS. MORRIS: What type of funding mechanism
20 did you assume in your analysis when you testified on
21 Friday that there was risk to taxpayers and the State
22 General Fund?

23 WITNESS MICHAEL: Well, I don't know the type
24 of bonds that are planned. But with the -- you know,
25 if the agencies don't develop a -- I mean, if the

1 agencies haven't specified in their financial plan and
2 haven't shown evidence that they have revenues that are
3 sufficient to pay the debt, then there's a possibility
4 of that risk.

5 It's also worth noting that, at least in the
6 case of Metropolitan, they do receive revenue from
7 property taxes from households in their agency. So
8 they do have -- taxpayer funds are part of their
9 support.

10 MS. MORRIS: Do you know what percentage
11 taxpayer funds are for Metropolitan Water District?

12 WITNESS MICHAEL: I don't know that, and I
13 don't know that it's relevant.

14 MS. MORRIS. Okay, thank you.

15 We have no further questions.

16 CO-HEARING OFFICER DODUC: Thank you.

17 Ms. Meserve?

18 MS. MESERVE: Good morning, I just have a
19 couple of questions about additional economic and
20 community impacts of the project.

21 CROSS-EXAMINATION BY MS. MESERVE

22 MS. MESERVE: Good morning, Dr. Michael.

23 WITNESS MICHAEL: Good morning

24 MS. MESERVE: I represent local agencies of
25 the North Delta and I just have a few questions for

1 you.

2 In terms of private property required for --
3 to construct the project, have you looked at the number
4 of acres of private property that would need to be
5 taken to construct this?

6 WITNESS MICHAEL: I've looked at the total
7 agricultural acreage that would be lost due to
8 construction. I don't know if that's the totality of
9 property that would be taken.

10 (Reporter interruption)

11 WITNESS MICHAEL: I don't know if that's all
12 the property that would be taken to construct it, but
13 I've seen estimates of the amount of agricultural land
14 that would be lost in the Delta as a result of
15 construction.

16 MS. MESERVE: And that's around 4,000 acres of
17 direct, does that sound right?

18 WITNESS MICHAEL: Sounds right. I was
19 thinking it was 5,000 but in that range, yes.

20 MS. MESERVE: I believe the additional
21 thousand acres is tagged as temporary, which may be --
22 may be the reason.

23 And have you considered the issue of the
24 economic effects of large portions of land being taken
25 by eminent domain in that community?

1 WITNESS MICHAEL: Not in detail, no.

2 MS. MESERVE: Have you read any of the
3 articles about what is happening with the land
4 acquisition process for the high-speed rail project,
5 which is another linear project here in California?

6 WITNESS MICHAEL: Not in detail, no.

7 MS. MESERVE: Are you familiar with how long
8 it might take to acquire the 4- or 5,000 acres of land
9 that would be required for this project through eminent
10 domain?

11 WITNESS MICHAEL: No.

12 MS. MESERVE: If that process took several
13 years, for instance, would that lead to some properties
14 setting with no activity on them if they were acquired
15 through that process and the project was not being
16 constructed yet?

17 WITNESS MICHAEL: Could you be more specific
18 about when you mean "setting with no activity"?

19 MS. MESERVE: Assuming the eminent domain
20 process took a long time and all the land couldn't be
21 acquired at one time, might some parcels of land be
22 left with no use upon them for years?

23 WITNESS MICHAEL: It -- yeah. It's my view
24 that even, you know, a proposal like this that's in
25 place for a long time would have such an impact on a

1 region, can affect, you know, land use decisions,
2 property values, and investment before the eminent
3 domain process starts. Although I have not analyzed
4 it, it certainly is true in theory and would be my
5 expectation that the project's already affected land
6 use and property values within the Delta.

7 MS. MESERVE: Are you aware of any examples of
8 how the project has already affected property values in
9 the Delta?

10 WITNESS MICHAEL: I'm not specifically aware
11 of it, no.

12 MS. MESERVE: And if some properties were
13 acquired and nothing is occurred on them -- if some
14 properties were acquired by the DWR or the JPA or
15 whoever is running this project and were held and
16 nothing occurred on them, would you be concerned about
17 what might happen on those lands if they were -- had no
18 activity?

19 WITNESS MICHAEL: Would I be concerned about
20 what might happen?

21 MS. MESERVE: Would those lands likely be in
22 productive agricultural uses if they were -- had been
23 acquired for this project, for instance?

24 WITNESS MICHAEL: They may or may not,
25 depending upon what the agencies were to do. I mean,

1 they certainly they might make different investment
2 decisions than a, you know, a farmer that intended to
3 own the -- and produce on that property long-term,
4 whether that was, you know, infrastructure investment,
5 certain types of crops that have a longer term return.

6 MS. MESERVE: But if DWR or the JPA owned the
7 property, it's unlikely that DWR or the JPA would be
8 conducting agricultural operations; isn't it?

9 WITNESS MICHAEL: I don't know. I mean, they
10 may lease the land to a farmer in the area to generate
11 some, you know, revenue from their ownership. I'm not
12 specifically aware what their plans would be.

13 MS. MESERVE: Would anyone be likely to make
14 investments to promote agricultural productivity on
15 land that has been acquired for the right of way?

16 WITNESS MICHAEL: No, I don't think they would
17 make, you know, long-term investments to promote the
18 productivity.

19 MS. MESERVE: Do you think that some of that
20 agricultural productivity in the right of way areas may
21 already be impacted?

22 WITNESS MICHAEL: I think -- I think it's
23 definitely possible that one could, you know,
24 theoretically explain why that would be true. But I
25 have not studied it or investigated it specifically.

1 MS. MESERVE: Would that be another layer of
2 economic impacts that's not covered in the study you've
3 done thus far on this issue?

4 WITNESS MICHAEL: That's correct.

5 MS. MESERVE: And if land was held for a long
6 time waiting for a large might that land also be
7 subject to vandalism?

8 WITNESS MICHAEL: I would think that would
9 increase the risk of that, yes.

10 MS. MESERVE: Now, have you had any experience
11 with a project that didn't have enough funds to
12 complete construction, that began but did not complete?

13 WITNESS MICHAEL: Do I -- I don't specifically
14 have experience with --

15 MS. MESERVE: For instance, are you, just as
16 an example, aware of the mall in Elk Grove that is
17 partially built but not completed on Highway 99?

18 WITNESS MICHAEL: Yes, I'm very aware of that
19 case.

20 MS. MESERVE: Is that parcel, just as an
21 example, providing any economic benefit at this time to
22 your knowledge?

23 WITNESS MICHAEL: No, not at this time.
24 Although that particular parcel has changed hands and
25 after, you know, over a decade of sitting vacant and

1 deteriorating, may eventually attract investment.

2 MS. MESERVE: And given your assessment of the
3 economic feasibility of this project, do you think
4 there's a risk that this project could be commenced but
5 not completed?

6 WITNESS MICHAEL: I believe, yes, there is a
7 risk that it could be -- yes, commenced but not
8 completed, yes.

9 MS. MESERVE: What kind of implications would
10 that have?

11 WITNESS MICHAEL: Well, I mean, there
12 certainly would be some costs that delivered no
13 benefits. And depending upon what work was completed,
14 there could be permanent and disruptive, you know,
15 impacts and alterations on the -- on the Delta
16 landscape and economy if land was taken out of
17 agricultural production and, you know, construction was
18 started and not completed. You know, then that loss
19 would still exist even though the project was not
20 completed.

21 MS. MESERVE: And thinking about the
22 businesses in the Delta, what impact would it have on
23 businesses in the vicinity of those incomplete
24 construction areas?

25 WITNESS MICHAEL: I guess -- it's hard to --

1 it's hard for me to envision what an incomplete
2 construction area would look like. I mean, I don't
3 know enough about the specifics of the project to know
4 what would be left behind and how it might impact the
5 community.

6 MS. MESERVE: Just say, for instance,
7 Intake -- Proposed Intake No. 3 is just north of and
8 sort of on top of the town of Hood.

9 WITNESS MICHAEL: Mm-hmm.

10 MS. MESERVE: So if that intake was partially
11 constructed and then abandoned, what impact would that
12 have on a town like Hood?

13 WITNESS MICHAEL: It would certainly -- it
14 would certainly be a segment for that town. I mean,
15 property would be -- would have been taken, the project
16 would be -- you know, you would have a partially
17 constructed project or maybe even that element of the
18 project would be fully constructed but just sitting
19 there.

20 I mean, it would be a concern, too, if a
21 project's abandoned and there isn't -- you know, it's
22 not generating a revenue stream for maintenance even of
23 what's already been produced. So one could foresee a
24 lot of negative impacts that could result.

25 MS. MESERVE: If there was inadequate -- if I

1 might just have a couple more minutes?

2 CO-HEARING OFFICER DODUC: Okay.

3 MS. MESERVE: If there was inadequate
4 maintenance and staffing, might that lead to heightened
5 crime in an area such as Hood?

6 WITNESS MICHAEL: Well, abandoned structures
7 are known for risk of crime and deterioration, so I
8 think this would be no different

9 MS. MESERVE: And just thinking about Hood, if
10 the project -- if the intake and the project was
11 completed, do you see any economic benefit to a town
12 like Hood?

13 WITNESS MICHAEL: No, not after it's
14 completed. I mean, a town like Hood is an example of
15 an area that's probably already been negatively
16 impacted just by the proposal and the potential for
17 this plan. And, you know, to the extent that there was
18 any economic benefit for people who owned businesses in
19 town, it might accrue during the construction period.
20 After the construction period, probably not too much.

21 MS. MESERVE: And with the town basically
22 bisected, wouldn't that reduce the level of interest in
23 investment in new businesses and things like that?

24 WITNESS MICHAEL: Yeah, I would think that
25 Hood would be a very, you know, unattractive location

1 for business and housing if the project were built.

2 MS. MESERVE: And then just thinking about
3 across the river from Hood, do you think that there
4 could be negative economic implications even just from
5 the change in aesthetics across the river?

6 WITNESS MICHAEL: Oh, absolutely. I mean,
7 you're taking a rural area and putting a very --
8 enormous industrial structure in it. So it would
9 certainly affect the character of the community and the
10 rural environment. And it would affect, you know,
11 people's desire to recreate along that river.

12 MS. MESERVE: Would that also include things
13 like agritourism and visiting farms?

14 WITNESS MICHAEL: Potentially.

15 MS. MESERVE: And did you try to take account
16 of those longer term impacts on the community economics
17 in your study?

18 WITNESS MICHAEL: No, I did not.

19 MS. MESERVE: So that would be an additional
20 layer of cost to the local community that might be
21 weighed in this project?

22 WITNESS MICHAEL: Yes.

23 MS. MESERVE: Thinking back to if a project
24 was partially constructed and then abandoned and then
25 restarted again, would that lengthen the amount of time

1 that the communities were subject to these kinds of
2 depression on investment?

3 WITNESS MICHAEL: Yes, it would because the
4 construction period would be the most -- you know,
5 would have the biggest amount of negative impacts. And
6 so if the -- if financial challenges extended to the
7 construction period, that would increase those impacts.

8 MS. MESERVE: And then finally, just thinking
9 about the Delta and if the tunnels project was never
10 built, would you have a positive outlook on the
11 economic future of the Delta?

12 WITNESS MICHAEL: How would you define Delta
13 in this instance? There's a lot of definitions of it.

14 MS. MESERVE: I'm just thinking of the legal
15 Delta in general. Obviously, there's parts of the
16 Delta that are more directly impacted than others. But
17 you've opined in your report submitted with your
18 testimony about what kinds of economic impacts occur if
19 the tunnels are built. And I'm just wondering what
20 kind of future, with your experience, you see would if
21 they weren't built.

22 CO-HEARING OFFICER DODUC: Ms. Morris.

23 MS. MORRIS: Objection, calls for speculation.
24 There's been no foundation that this witness has done
25 such analysis.

1 CO-HEARING OFFICER DODUC: It is speculative;
2 we recognize that.

3 Dr. Michael, are you prepared to answer?

4 WITNESS MICHAEL: I do forecasts in the
5 regional economy, so -- but I wanted to know
6 specifically what areas. I mean, the legal Delta
7 includes -- you know, it is in a fast-growing region.
8 It's increasing in prosperity. So particularly, the
9 secondary zone has -- is an area that's experiencing
10 economic growth.

11 The primary zone is the area that would be
12 most impacted by the project. That area is very
13 protected from development by various rules and
14 statute. And so, you know, my outlook for it is tied
15 to the outlook for the agricultural industry, which is
16 generally a positive outlook at the moment. So we
17 would expect that to continue to do well.

18 The recreational economy in the Delta, I think
19 there will be increasing demand for those recreational
20 services. My concern is about, you know, the ability
21 in the Delta for -- to make investments and to continue
22 to, you know, improve and maintain that recreational
23 infrastructure that's needed, for the economy
24 associated with it to prosper. That could be a bit
25 challenging.

1 MS. MESERVE: But if the tunnels weren't
2 built, you still would have concerns about the
3 recreational future in the Delta?

4 WITNESS MICHAEL: Less, concern but, yes,
5 still concern.

6 MS. MESERVE: And doesn't the primary zone
7 provide important inputs for -- in terms of providing
8 produce locally and nationally and internationally?

9 WITNESS MICHAEL: It does. There's enormous
10 variety, particularly of vegetable crops grown in the
11 Delta and sometimes referred to as "truck crops" in our
12 report. So that's an important provider of those.

13 It's been a -- it's a growing area for wine
14 grape production, which that wine grape production
15 supports a lot more jobs and industry in the wineries
16 and distribution and the businesses associated with
17 that crop than, you know, even on the farms itself. So
18 it's an important source for that as well as processing
19 some of the vegetable crops like tomatoes.

20 MS. MESERVE: And without the tunnels would
21 you be concerned about that economic prosperity
22 continuing?

23 WITNESS MICHAEL: No.

24 MS. MESERVE: No further questions.

25 CO-HEARING OFFICER DODUC: Ms. Taber?

1 CROSS-EXAMINATION BY MS. TABER

2 MS. TABER: Good morning, Dr. Michael. I'm
3 Kelley Taber on behalf of the City of Stockton. And I
4 have some questions regarding methods that would be
5 used by an economist to study the Delta recreation
6 economy and compensation funds for impacts from public
7 works projects and a few questions about benefit cost
8 analysis assumptions and methods addressed in your
9 testimony.

10 Dr. Michael, referring to your testimony at
11 SDWA-265, in the section starting on Page 4, Line 28
12 through Page 5 Line 14 where you describe the effects
13 on the Delta recreation economy of construction-related
14 disruption, you state that -- all of the factors you
15 list in your testimony combine to make permanent
16 economic damage from the WaterFix project's
17 construction much more likely than in most public works
18 projects, correct?

19 WITNESS MICHAEL: Could you -- I was shuffling
20 through the wrong document when you gave me the
21 citation. So if you could give me --

22 MS. TABER: I'm sorry. Starting on Page 4,
23 Line 28 continuing on Page 15, Line 14 you discuss
24 characteristics of the WaterFix project that you
25 state -- and I'm summarizing -- combine to make

1 permanent economic damage from the WaterFix project's
2 construction much more likely than in most public works
3 projects --

4 WITNESS MICHAEL: Correct.

5 MS. TABER: -- is that an accurate summary of
6 your testimony?

7 WITNESS MICHAEL: Yes.

8 MS. TABER: Thank you. In your opinion,
9 Dr. Michael is a feasible to measure and quantify the
10 amount of permanent economic damage to Delta businesses
11 from the California WaterFix project construction.

12 WITNESS MICHAEL: I think that's -- would be
13 very difficult.

14 MS. TABER: Are there any generally accepted
15 methods that economists would use to attempt such an
16 analysis?

17 WITNESS MICHAEL: I think if we had a -- you
18 know, a clear description of a -- of the project and,
19 you know, mapped out the businesses and the traffic
20 patterns, there's -- certainly an estimate could be
21 made. It would be very -- it would just require a lot
22 of work. It would be a very detailed analysis that I
23 have not undertaken.

24 MS. TABER: Okay. Keeping in mind that you
25 said it would be very difficult, could you, sitting

1 here today, even estimate, based on your experience,
2 the amount of time or costs that would be required to
3 undertake such a study on an order of magnitude?

4 WITNESS MICHAEL: I wouldn't want to venture a
5 guess. I wouldn't say it's completely infeasible, but
6 it would be -- it would be significant.

7 MS. TABER: Recognizing the difficulty that
8 you described, would such an analysis of economic
9 impacts to the Delta recreation businesses be an
10 important element of any determination regarding the
11 costs and benefits of the California WaterFix project?

12 WITNESS MICHAEL: In the context of the
13 benefit cost analysis I talked about, it would be
14 important to include it to the extent possible.

15 But I don't think -- it would be unlikely to
16 be a really large factor in a benefit cost analysis of
17 a \$17 billion project.

18 MS. TABER. Thank you. In your testimony,
19 Dr. Michael, on Page 7, Line 24, you references the DWR
20 "Economic Analysis Guidebook." Do you recall that?

21 WITNESS MICHAEL: Yes.

22 MS. TABER: Thank you. To your knowledge,
23 Dr. Michael, does that guidebook list or otherwise
24 describe methods that could be used to undertake a
25 study of the Delta's recreational economy and the

1 California WaterFix project's effect on the Delta
2 recreational economy?

3 WITNESS MICHAEL: It describes socioeconomic
4 analysis that could be done. It doesn't get into the
5 level of detail for this application, but it describes,
6 you know, socioeconomic analysis in general that one
7 might conduct, yes.

8 MS. TABER: Is it your understanding that, as
9 it relates to the Delta's recreational economy, the
10 California WaterFix project does not include a fund for
11 compensating local Delta businesses that might be
12 harmed as a result of California WaterFix project
13 construction?

14 WITNESS MICHAEL: That's my understanding,
15 yes.

16 MS. TABER: And are you aware of any evidence
17 submitted in this proceeding by the petitioners that
18 describe compensation -- a compensation fund for local
19 Delta businesses that could be harmed by project
20 construction?

21 WITNESS MICHAEL: I'm not aware of any
22 testimony.

23 MS. TABER: In your opinion as an economist,
24 Dr. Michael, should the State Water Board include a
25 permit condition that addresses a compensation fund for

1 local Delta businesses should the Board decide to
2 approve the Water Rights Change Petition for the
3 California WaterFix?

4 WITNESS MICHAEL: In my view, it should. My
5 interpretation of some of the documents that have been
6 submitted by petitioners, they've talked about the
7 construction economic impacts and, you know, that
8 they're going to be spending a tremendous amount of
9 money in these communities and that will generate
10 economic activity in places like Stockton from building
11 it, which is true.

12 But I don't think it would -- I don't think
13 that that's a sufficient reason not to create a
14 compensation fund because the businesses that could be
15 impacted are very different, those that could be
16 negatively impacted and those that could be positively
17 impacted. And those that could be negatively
18 impacted -- in particular some of the small
19 recreation-oriented businesses in the core of the Delta
20 are the ones that are critical to the community
21 character of the Delta.

22 And so -- and as I described, it's a difficult
23 area for there to be new investment. So there's a
24 public interest in making sure that those businesses
25 are able to endure the construction period. And the

1 nice thing for the petitioners about a compensation
2 fund is, if -- you know, there's a lot of uncertainty
3 about these offsetting effects.

4 If their theory is true and that the spending
5 from building the WaterFix would, you know, compensate
6 for any loss in recreational business, then the
7 compensation fund -- they wouldn't make any payments
8 because it's based on actual business. So there
9 wouldn't be any costs to them. There wouldn't be
10 outlays from the fund if in fact the businesses did not
11 see their business harmed.

12 And so in my view, I think it's essential.

13 MS. TABER: Thank you, that's helpful.

14 Dr. Michael, are you familiar with DWR's Delta
15 levee subvention program which reimburses Delta
16 reclamation districts for a portion of their levee
17 maintenance costs?

18 WITNESS MICHAEL: Yes, I am.

19 MS. TABER: Did your benefit cost analysis
20 make any assumptions about DWR's levee subvention
21 program?

22 WITNESS MICHAEL: Not -- not specifically, no.

23 MS. TABER: So did it, just to clarify, did it
24 assume that the program would continue with full
25 funding and consistent availability to the Delta

1 reclamation districts' levee maintenance activities
2 over the hundred-year project operation period?

3 WITNESS MICHAEL: No, there's no specific
4 assumption of that. I mean, if I hesitated, it's
5 because in the section on earthquake risk there's some
6 discussion of the levee system in general and what --
7 what the meaning -- what the implication of assuming an
8 economic benefit from the earthquake risk, in
9 describing it and attaching that to the tunnels sort of
10 has some embedded assumptions about, you know, the
11 levee system going forward.

12 So there's some discussion of the levee system
13 in that part of the report, but there is no specific
14 discussion of the subventions program.

15 MS. TABER: Okay. Thank you. I think I may
16 have just one more question.

17 Dr. Michael, on Page 11 of your testimony, on
18 Lines 10 through 11, you reference a favorable
19 assumption that you included in your cost benefit
20 analysis, that you use a discount rate below the
21 recommendation in DWR's Economic Analysis Guidebook,
22 correct?

23 WITNESS MICHAEL: Correct.

24 MS. TABER: Can you explain in laymen's terms
25 the significance of using a discount rate in your

1 analysis that is below the recommendation in DWR's
2 Economic Analysis Guidebook?

3 WITNESS MICHAEL: So a discount rate is
4 important because you're comparing economic
5 difficulties and costs that accrue at different periods
6 of time, different points in time. And so you need to
7 use a discount rate to calculate a present value so
8 that those values, costs, and benefits that occur in a
9 time series are directly comparable.

10 The discount rate, you know, accounts for the
11 time value money and, you know, the value of resources
12 and alternative investments. So when you use a higher
13 discount rate, you know, it tends to be less favorable
14 for a big infrastructure project because the costs are
15 incurred early and the benefits are very far into the
16 future.

17 So the higher the discount rate is
18 generally -- you know reduces the benefits of the
19 project because it's accounting for the costs of having
20 to wait so long for those benefits to occur.

21 And so by using the DWR Economic Analysis
22 Guidebook recommends a 6 percent real discount rate. I
23 utilized a 3 1/2 percent real discount rate because I
24 wanted to use a current source that was accepted by the
25 State of California.

1 So that's what has been adopted by the
2 California Water Commission. And it's through a pretty
3 extensive process. And it's a review of Prop 1
4 funding. So I thought that that was the most
5 current -- current guidance that one could point to
6 for -- in use by the State of California. And I wanted
7 to ensure that I didn't use assumptions that someone
8 might argue were biased against the tunnels.

9 So I adopted that 3 1/2 percent discount rate.

10 Now, I'll say that it conflicts with that --
11 in the Economic Analysis Guidebook, there's certainly a
12 lot of people -- comments that would argue that that's
13 too low. The federal government actually recently
14 issued guidance on benefit cost analysis reaffirming
15 its support for higher discount rate, I believe, on the
16 order of 7 percent is appropriate.

17 So anyway, that's probably a longer answer
18 than you were looking for.

19 MS. TABER: No, that was very helpful.

20 So then just to make sure I understand, had
21 you used a higher rate, and specifically the rate in
22 DWR's Economic Analysis Guide Book, the calculation of
23 the project's overall benefits would have been lower?

24 WITNESS MICHAEL: Correct.

25 MS. TABER: Thank you. No more questions.

1 CO-HEARING OFFICER DODUC: Thank you

2 Ms. Taber. Any redirect?

3 MR. RUIZ: We actually do not have -- we don't
4 have any redirect.

5 CO-HEARING OFFICER DODUC: All right.

6 WITNESS MICHAEL: Am I allowed to request to
7 re-answer a question or at least to clarify a
8 statement?

9 CO-HEARING OFFICER DODUC: Why don't you
10 consult with your attorneys, and we'll hear from
11 Mr. Herrick while that's happening.

12 MR. HERRICK: I contacted Dante at 10:03 and
13 he's about 27 minutes away, not counting walking to a
14 parking place. So if we take a short break, he should
15 be here.

16 CO-HEARING OFFICER DODUC: We'll take a short
17 break after we find out whether or not there will be
18 any redirect.

19 MR. RUIZ: Yes, we just have actually one
20 small point of clarification. And I'll do it in the
21 form of just one quick redirect question, if that's
22 okay.

23 CO-HEARING OFFICER DODUC: All right.

24 REDIRECT EXAMINATION BY MR. RUIZ

25 MR. RUIZ: Dr. Michael, referring to your

1 PowerPoint presentation, Slide No. --

2 WITNESS MICHAEL: I don't have the number
3 listed on here, but this was the slide that says,
4 "Recent Water Agency Votes Show Project Is Not
5 Financially Feasible."

6 MR. RUIZ: Looking at the last bullet you have
7 regarding the Metropolitan Water District, the bullet
8 underneath the Metropolitan Water District point refers
9 to "Approved based on staff white paper on operations
10 that varies significantly..." What did you mean by
11 that specifically?

12 WITNESS MICHAEL: So I received a question
13 that focused -- it says "white paper on operations that
14 vary significantly," and my attention was directed to
15 the phrase playing off the white paper part and
16 operations that vary significantly, and I said that
17 the -- you know this is a grammatical point, but I said
18 what I've written was incorrect. But what I'm
19 referring to in the sentence, maybe I'm not a clear
20 writer, but the "on operations" is referring to the
21 white paper.

22 Metropolitan produced three white papers. The
23 white paper I submitted as an exhibit was the white
24 paper on operations. So maybe I should have used the
25 title of it. But I was referring to the white paper

1 varied significantly, not making testimony that the
2 operations in the white paper varied significantly.

3 CO-HEARING OFFICER DODUC: Thank you.

4 MR. RUIZ: And that's it. Thank you.

5 CO-HEARING OFFICER DODUC: Any recross?

6 MS. MORRIS: Can I have one minute, please?

7 I have no questions. Thank you.

8 CO-HEARING OFFICER DODUC: Thank you.

9 Thank you, Dr. Michael.

10 And before we take a break, though, let's get
11 a housekeeping matter done with Ms. Osha and DWR here,
12 which is Ms. Ansley, I believe.

13 Ms. Ansley, in conducting cross-examination of
14 LAND's witnesses, you had voiced an objection -- or
15 perhaps you did not, but you mentioned LAND-3 and the
16 fact that LAND-3, according to you at the time, while
17 it was not admitted into the record, Ms. Meserve did
18 some homework and confirmed with us, and we also
19 confirmed that, I believe, that LAND-3 was entered into
20 evidence in Part 1.

21 Are you -- did you have a -- are we still
22 waiting for you to respond to LAND's argument, or are
23 you withdrawing the objection? Is there an outstanding
24 objection that we need to respond to?

25 MS. ANSLEY: No. I think if the Water Board

1 confirmed that it was after -- I guess it was either
2 rebuttal or surrebuttal. If it was indeed entered into
3 the record -- I'm sorry.

4 No. I'm withdrawing the objection. Since the
5 Water Board itself has confirmed that, after rebuttal
6 or surrebuttal, it was actually entered into the
7 record, that's fine.

8 CO-HEARING OFFICER DODUC: Have we so
9 confirmed?

10 MR. DEERINGER: I think Hearing Officer Doduc
11 needs to confer with counsel, and we'll come back at
12 the break and speak to that.

13 MS. ANSLEY: Okay.

14 CO-HEARING OFFICER DODUC: With that, we'll
15 confer during the break and resume at 10:45

16 (Recess taken)

17 CO-HEARING OFFICER DODUC: All right. It is
18 10:45, welcome back. At this point, we welcome always,
19 Mr. Nomellini, and we'll turn it over to -- oh, I will
20 have to ask you to stand and raise your right hand.

21 (Witness sworn)

22 DANTE JOHN NOME LLINI,
23 called as a Panel 2 witness by Protestant
24 Group 21, having been first duly sworn,
25 was examined and testified as hereinafter

1 set forth:

2 CO-HEARING OFFICER DODUC: Mr. Ruiz,
3 Mr. Keeling.

4 DIRECT EXAMINATION BY MR. RUIZ

5 MR. RUIZ: Yes. Good morning, Mr. Nomellini.
6 Dean Ruiz on behalf of the SDWA parties.

7 Mr. Nomellini, did you prepare SDWA-300
8 Corrected, actually did you prepare your written
9 testimony SDWA-300?

10 WITNESS NOMELLINI: Yes.

11 MR. RUIZ: And do you have with you and have
12 you reviewed SDWA-300 which is your corrected
13 testimony?

14 WITNESS NOMELLINI: Correct.

15 MR. RUIZ: And did you also prepare a
16 PowerPoint presentation that's SDWA-314?

17 WITNESS NOMELLINI: Yes, I did.

18 MR. RUIZ: Are you prepared to provide a
19 summary of your testimony at this time?

20 WITNESS NOMELLINI: Yes.

21 MR. RUIZ: Are you going to primarily use your
22 PowerPoint or written or a combination of both?

23 WITNESS NOMELLINI: A combination.

24 MR. RUIZ: Okay. Would you please proceed?

25 WITNESS NOMELLINI: All right. First of all,

1 my testimony was stricken in major part by staff. And
2 I'm not sure how to deal with that, and I don't know
3 what the ruling is of the Hearing Officer, if she ruled
4 on that deletion or not.

5 CO-HEARING OFFICER DODUC: We did.

6 WITNESS NOME LLINI: You have ruled in support
7 of it? Okay.

8 First of all, the part that was not
9 redacted -- just to be careful, I'm just going to read
10 it to you.

11 CO-HEARING OFFICER DODUC: There is still
12 plenty there, Mr. Nomellini.

13 WITNESS NOME LLINI: Pardon me?

14 CO-HEARING OFFICER DODUC: There is still
15 plenty there.

16 WITNESS NOME LLINI: Oh, yes, I understand.

17 The current proceeding -- this is what staff
18 left in there. The current proceeding is basically
19 State of California ruling on its own actions. The
20 inherent conflict of interest in this proceeding is
21 greatly exacerbated by the aggressive and premature
22 support of the Governor's and high ranking federal
23 officials for an isolated conveyance facility,
24 separating Sacramento River water from the common
25 pooling of the watershed water in the Delta and

1 deliberately causing a significant degradation of water
2 quality in the Bay-Delta estuary.

3 The State Board has been entrusted with broad
4 responsibilities to protect the public trust and public
5 interest and should not ignore evidence indicating
6 corruption of the process.

7 And I speak to that with regard not to the
8 adequacy of the environmental document for DWR's
9 purposes but to your responsibility as a responsible
10 agency with regard to your determinations. And you
11 have very broad authority in that regard and some
12 special duties.

13 And so aside from the -- and this was left in
14 my testimony.

15 Aside from the adequacy of DWR's EIR for
16 purposes of CEQA compliance with public trust and
17 public interest concerns, you should encompass the need
18 for a fair and open public process and avoidance of
19 corruption and avoidance of predetermination other than
20 the CEQA processes.

21 In other words, in your handling I think you
22 have to take into consideration with regard to public
23 interest and the public trust the background of this.
24 We all recognize the Governor's position has been long
25 in favor of isolated facilities, and he's asserted

1 himself aggressively with regard to what we're dealing
2 with.

3 I think, too, that the evidence that you
4 received the petition in this case for additional
5 intakes on the Sacramento River and tunnels ahead of
6 the completion of the environmental document indicates
7 further evidence of the predetermination on the issue.
8 And in my belief, it taints the whole process.

9 The projects that you're dealing with, the
10 change in point of diversion, will create more reliance
11 on the Delta rather than less. Somebody's going to
12 invest billions of dollars, 10 billion, whatever the
13 number is. Once that investment is made, there's going
14 to be a strong pressure to go ahead and utilize the
15 facility.

16 And of course, the Delta Reform Act was very
17 specific about where we should go with regard to a
18 WaterFix or some other type of conveyance. And the
19 co-equal goals, of course, means the two goals of
20 providing more reliable water supply for California and
21 protecting, restoring, and enhancing the Delta
22 ecosystem.

23 Now the Delta, of course is part of
24 California, so the reliability of its supply ought to
25 be equal to the reliability of export supply.

1 On the other hand, enhancing the Delta, how
2 can you enhance the Delta when you degrade the water
3 quality? And there's no question in the record that
4 the development of tunnels with two additional intakes
5 on the Sacramento River will mean that for part of the
6 time there will be water directly diverted from the
7 Sacramento River to the pumps without passing through
8 the Delta.

9 That, of course, reduces the dilution that
10 would come from the water of the Sacramento River,
11 which is our better water quality, moving across the
12 Delta. And of course as it moves across the Delta, it
13 mixes with the San Joaquin River water. And therefore,
14 it's no surprise that there will be a substantial
15 degradation in water quality, which the documents all
16 support.

17 The nondegradation policy of the State is of
18 serious concern to me, and I think it should be to your
19 Board. So any plan that will degrade water quality, I
20 think, really runs counter to one of the basic
21 principles and efforts of the State Board to try to
22 improve water quality with regard to discharges and all
23 other actions that could impact water quality. And
24 this would acknowledge a degradation in violation of
25 that policy.

1 Now, the underlying problem we have is that
2 the State and Federal project have not developed the
3 water necessary to meet the contractual commitments and
4 meet their other obligations, which include salinity
5 control in the Delta. And the reason for that is
6 that -- well, first of all, the plan was to develop
7 5 million acre-feet a year by the year 2000. And that
8 plan is in the SDWA-169, which is a December 1960
9 Bulletin 76 report to the legislature.

10 The reason that document is important is
11 because it's an early description of what the project
12 entails, and was that reported to the legislature as
13 such, which was shortly after the election for the
14 California Water Development Bond Act, which is we call
15 it the Burns-Porter Act.

16 That 5 million acre-feet was to be developed
17 primarily from north coast watersheds, and they were
18 going to start the first project on the north coast
19 under Governor Reagan. And because of ownership in the
20 Round Valley with -- the person that owned that was
21 concerned about his land being inundated, and he
22 happened to be a friend of Ike Livermore and Governor
23 Reagan at the time, they submitted it for further study
24 rather than proceed with the project. Wild and Scenic
25 Rivers legislation came in thereafter, and the water

1 has not been developed.

2 Now, the year 2000 is long passed. The State
3 Water Project itself has about 4 and a quarter million
4 acre-feet of entitlement. They didn't develop the 5
5 million acre-feet, so they have no water supply that
6 was planned to supply those contracts, much less meet
7 the salinity obligations in the Delta and the needs in
8 the areas of origin.

9 That's driving this, coupled with the lack of
10 a drain. The valley drain was supposed to be a part of
11 the federal commitment for the San Luis Act. They
12 weren't supposed to commit the water from the San Luis
13 unit unless there was a drainage outlet to the ocean.
14 And they didn't do that.

15 The State Water Project also was committed to
16 have a valley drain which hasn't been built. So we
17 have the degradation in water quality comes from the
18 drain, and we have the lack of water supply.

19 And I would say the State has not exercised
20 its due diligence in terms of developing water, and no
21 project such as this, which is going to increase
22 exports from the Delta, should be allowed without a
23 reckoning of what the real entitlement of the projects
24 is to water. So in my view, we have a premature
25 situation.

1 Now, I presented to you as an exhibit the
2 State Water Project Filing Delivery Capability Report
3 of 2015. That shows that their ability, the State
4 Water Project ability, which has this 4 and a quarter
5 million acre-feet of entitlement, by its own document
6 says in a dry year, single dry year like 1977, it has
7 the capability of delivering 454,000 acre-feet.

8 That's a big difference, that's about one
9 tenth, a little more than one tenth of what their
10 obligations are.

11 And this is a serious problem for us all
12 because this huge investment in tunnels is going to
13 take a major part of the capital that can be raised for
14 water development in the State and devoting it to
15 moving water from one part of the state to another
16 rather than solving the deficiency in the yield that we
17 need to meet our needs.

18 The drought, the State says the drought that
19 we experienced in 2013 through 2016, I guess, was
20 unexpected. It's not unexpected. I went through all
21 the hearings that we went for the past two majors
22 decisions on the Delta, and the structure of our water
23 quality plan anticipated significant droughts. And we
24 have dry year criteria, critical year criteria, we have
25 all of that.

1 And I have an exhibit -- let's -- maybe I'll
2 put my exhibits up there. Anyway -- we put the
3 exhibits in in the first round as well. But anyway,
4 the droughts that we've had over the years which are
5 available -- it's SDWA-173. Can we put that up?

6 MR. RUIZ: It will be here [indicating].

7 WITNESS NOMELLINI: There we go. I'm not sure
8 I can read it, but anyway, the significance is -- oh,
9 there you go.

10 We've had droughts that extend well beyond six
11 years, you know, a number of times in history. It's
12 not new information. The water projects were designed
13 around the '28 through '34, which is a significant dry
14 period. And I'd point out to you, I looked at John
15 Leahigh's testimony, and disappointingly, they gave you
16 information with regard to their compliance with water
17 quality standards for a period since 1934.

18 The projects were designed to go through
19 drought in '28 to '34. So I'm disappointed that
20 they're kind of hiding the ball in terms of their
21 representation and what their performance has been.

22 But I would point out to you, and I've got the
23 evidence in my testimony, in 2009, in February, they
24 claimed to lack the ability to meet the water quality
25 criteria which was the monthly quality for February of

1 that year.

2 And they did so based on the assertion that
3 they needed to preserve cold water in the reservoirs,
4 particularly in Shasta, in order to take care of the
5 salmon.

6 Well, as it turned out -- and the Board has
7 this evidence. The Board actually heard it. Nothing
8 was done, but the Board at that time heard it. The
9 State and Federal government were exporting the very
10 amount of water that could have been used to meet the
11 standard. So it wasn't saving water. But the fact is
12 that they ran out of water in one year.

13 So February of 2009, then we get to 2013. And
14 2013, we had that dry period for a number of months in
15 the year. And they said they needed cold water, to
16 save cold water in Shasta. And what they did was they
17 came to the Board -- well, they went to the executive
18 officer, I guess -- and said, "We want to work against
19 a critical year criteria instead of a dry year
20 criteria," although it was clearly a dry year, not a
21 critical year.

22 Fishery agencies came back -- and they
23 recommended that they violate -- or not meet the dry
24 year standard, instead, meet a critical year standard.
25 Fishery agencies came in and said, "Yeah, we support

1 that."

2 Nobody said anything about exports. In other
3 words, they didn't plan on curtailing exports. But
4 there you go through the first year, not even a real
5 drought, they ran out of water that's sufficient to
6 meet the cold water obligation. Now, maybe they
7 discerned a difference between meeting water quality
8 standards and meeting the cold water requirements.

9 They are they're incorporated in your
10 standards, but they're subject to a variability based
11 on a committee review and then an executive officer
12 determination.

13 The long and the short of it is, these people
14 do not have the ability, in my opinion, to meet the
15 water quality standards even for the '28 through '34
16 period. And they operate the project only to meet one
17 year. Nobody has put their feet to the task as to what
18 is the planning to go over and carry over water
19 sufficient to meet the water quality standards through
20 a six-year drought. And I'd say the '28 through '34,
21 although we know we have much longer droughts in the
22 history of California.

23 And with the tunnels, it's going to be much
24 more pressure to go ahead and seek these variances. I
25 think the State Department of Water Resources has

1 called these things "minor adjustments for
2 conditions" -- oh, "temporary adjustments as occurred
3 pursuant to the Water Board's authority."

4 In other words, your executive officer,
5 Tom Howard, issued a number of temporary urgency
6 changes. And those are the changes that these people
7 are trying to put in in their testimony to tell you,
8 when they say they can meet the standards, provided you
9 can have temporary adjustments as needed.

10 Now, the problem with that is that we have
11 depleted our groundwater basins in Northern California.
12 And of course, you're well aware -- and you people are
13 principally involved in, you know, sustainable
14 groundwater management effort. And we can no longer
15 depend on going to our groundwater to take care of the
16 needs of Northern California. So we have a shortage in
17 groundwater that's going to have to be taken care of.

18 And the obligations of the project are to take
19 care of the areas of origin, in priority, the exports.
20 And they ignore that. So they're assuming they're
21 going to be able to operate these tunnels in spite of
22 the law and the requirements for taking care of areas
23 of origin.

24 Now I'm going to kind of jump through my
25 testimony. I don't know how much time I have, but

1 anyway.

2 The law is fairly clear that the projects have
3 to meet the area of origin requirements and
4 particularly in the Delta. In the Delta -- and I might
5 just deviate for a minute. A prior Board, your prior
6 Board in D1465 said, "To provide full mitigation of
7 project impacts on all fishery species now would
8 require the virtual shutting down of the project export
9 pumps." That was in 1978.

10 And of course, as you know, they did not
11 curtail exports. In addition, Suisun Marsh at that
12 time was thought to require up to 2 million acre-feet
13 of water outflow in dry and critical years.

14 Now what happened to the marsh -- and I know
15 you know, but the Montezuma Gates were put in to supply
16 the marsh for an overland supply instead of with
17 offshore waters. So 2 million acre-feet, not only was
18 it taken away from Delta outflow, but it was used to
19 isolate the marsh, you know, from Suisun Bay and
20 whatever the fishery impacts of that, I think we could
21 argue about those at length.

22 The idea put before you with the WaterFix is
23 that, instead of water for fish, we're going to have
24 habitat. In other words, we're going to develop
25 habitat for fish. You know, you've got the EcoRestore

1 separated from the water conveyance, which I think is
2 not legitimate to separate the two. But anyway, they
3 did.

4 They're using bond funds to finance
5 EcoRestore, which I think is in great part mitigation
6 for the projects, which should be paid for by the
7 projects.

8 Now, what they presented to you is the fat --
9 I call it the fat fish-skinny fish. And there's a --
10 they show this picture based on a test of the Cosumnes
11 River of fat salmon and skinny salmon.

12 The fat salmon were those that were in cages
13 in a wetland habitat along the Cosumnes River. It was
14 a floodplain, not a tidal marsh; it was a floodplain.
15 The advantage of the floodplain versus tidal marsh is
16 probably less predators.

17 But anyway, they showed that picture. And the
18 skinny fish were in the cages in the river where the
19 flow was coming down fast. So the question presented
20 was, well, are we better off with fat fish or skinny
21 fish. Well, I know in my fatter condition I'm less
22 athletic than I was when I skinny. So a skinny fish
23 might be able to survive better than a fat fish.

24 But what they forgot to tell you in that study
25 was there was a cage in the river upstream of the

1 habitat, the wetland habitat, and the fish did as well
2 there in terms of size versus those in the wetlands.
3 It's in the study, and I cited it in my exhibits.

4 The subsequent studies -- and we haven't seen
5 escapement detail supporting that, but there's no
6 question that you get fat fish in a tranquil area, and
7 those fish in a cage in the Cosumnes, they might not
8 have stayed in the fast water of the stream were it not
9 for the cage. They might have moved over to quieter
10 water. All I'm saying is the science, I think, does
11 not support the proposition that they put forth.

12 Now, there was a subsequent study -- and that
13 Cosumnes study was by Jeff Opperman, and I think it was
14 a fellowship thing.

15 And the subsequent study was by Sommer. And
16 he experimented -- or his team -- in the Yolo Bypass.
17 And fish were released, fingerlings, in the Yolo Bypass
18 and in the river. And again they concluded that, well,
19 there's probably a benefit to that. But it's based in
20 large part on the high flow that was going through the
21 bypass, and it was a high flow period.

22 Then they did a subsequent study in 2004. And
23 that study indicated -- and there's a table on Page 31
24 of my testimony. And it shows you that, in 1998, there
25 was an advantage of the fish going through the bypass

1 versus the fish going through the river. Okay? In
2 1999, it was a push, even. And in 2000, it was the
3 other way.

4 So I would submit to you that that
5 conclusion -- and it's in the public interest. And
6 it's with regard to the impact on fish that I'm
7 concerned. And that conclusion is not supported in any
8 of the studies that I've seen.

9 Now, Vogel did a comprehensive study for the
10 Northern California Water Association. And he pointed
11 out that the flooding of Lower Liberty -- which is
12 Reclamation District 293 which I represented years back
13 over a period of time. But the flooding of that
14 affects the downstream migration of salmon such that he
15 called it advection. In other words, they get drawn
16 off their path back to the ocean because of the tidal
17 effects of having that flooded.

18 The bad thing about that is that there's
19 predators in that Lower Liberty area because it's
20 flooded all the time. It's like tidal wetlands or
21 deeper. So you have predators there. It's not a
22 floodplain.

23 And the idea that the Delta ought to be he
24 equipped with restoration back to the 1800s or
25 something like that by turning them back into tule

1 marsh or something, which is really tidal wetland, I
2 think is not supportable. The reason is the Delta was
3 fully reclaimed by 1930.

4 And our collapse of fishery -- and I think
5 this one we can go to my slides. If we can go to slide
6 starting at SDWA-178.

7 All right. This shows you exports -- this is
8 right out of their documents. And they've been
9 increasing steadily as time goes on. And then we look
10 at the next slide, please.

11 Okay. You can see that for some species of
12 fish, there's been a serious decline. For example, in
13 smelt, striped bass indices, and I think that you can
14 see somewhat in the salmon. But the period of time
15 that we're looking at that we're worried about fish
16 isn't 1850 or 1800. We're worried about what happened
17 between the '60s and now.

18 And the Delta's been fully developed. In
19 fact, we have more wetland than we had in the '30s.
20 Franks Tract hasn't been reclaimed, Mildred Island
21 hasn't been reclaimed. So I think the hypotheses that
22 we need more tidal wetlands is a mistake. We may need
23 more wetlands farther up in the system that could help
24 fish, but we need more information on the success of
25 that, and we shouldn't jump off the bridge and buy into

1 this idea until we get that better information.

2 Now, the bad thing about tidal wetlands, in
3 the Delta, we have methylation of mercury because of
4 all the mining that went on. We've got mercury coming
5 down our system. You stir up the water, and it
6 releases the mercury, and then it methylizes in these
7 wetlands which causes a big problem with regard to fish
8 and for the health of the people that eat much fish
9 from the Delta.

10 The other thing that happens is the
11 evapotranspiration of water greatly increases in these
12 tidal wetlands. And I pointed out in here and at
13 Page 33 of my testimony, the differences between, for
14 example, alfalfa and tules. Tules can use up to 9.63
15 acre-feet per acre. And that's based on DWR's study,
16 which is their Exhibit DWR-22. And at any rate,
17 whether it's 9.63 -- and they show in there that it's
18 14.63 per acre for cattails and, in another study,
19 13.48 acre-feet per acre for tules.

20 Well, as we go through process where we have
21 shortages of water, the project proponents are ignoring
22 the tremendous loss of freshwater that we're going to
23 incur. Now, is it good to lose that amount of water in
24 order to get the fishery benefit which is in question?
25 I would say that's a matter of public interest and

1 public trust for you to decide. I think it is reckless
2 to do that.

3 Now, with regard to the Delta -- and you guys
4 are probably tired of hearing all this stuff, fighting
5 over what our rights are and whatnot. But we went
6 through some big court battles, you know, and we got
7 some decisions which I would consider to be the law of
8 the case in terms of our relationship with you and the
9 projects.

10 And the Racanelli Appellate Court decision
11 pointed out that the Delta Protection Act, which is
12 12200 et seq of the Water Code, and it's quoted here in
13 my testimony, and you can look at the decision, "The
14 Act prohibits project exports from the Delta of water
15 necessary to provide water to which Delta users are
16 entitled," okay? That's water rights. You guys would
17 say -- somebody would say, "Oh, you don't have any
18 water rights."

19 Is that the end of my time? All right. Let
20 me just finish this point or give me more time, if you
21 will.

22 CO-HEARING OFFICER DODUC: I think your
23 attorney managed to wrangle an extra ten minutes from
24 staff already.

25 WITNESS NOMELLINI: Okay.

1 CO-HEARING OFFICER DODUC: So please do wrap
2 up.

3 WITNESS NOMESELLINI: I'll keep going. You tell
4 me when to stop.

5 CO-HEARING OFFICER DODUC: Finish this
6 thought, and then we'll wrap up.

7 WITNESS NOMESELLINI: Okay.

8 All right. So we're -- that's the
9 entitlement. That's water rights.

10 Second thing is water needed for salinity
11 control. So over and above what the Delta needs to
12 have before you can export is salinity control. Now,
13 you guys, you know, we haven't -- we don't have an
14 agreement fixed -- fixing salinity control like in the
15 North Delta. We don't have it for Central or South.
16 But your standards set the salinity control.

17 And the third thing is an adequate water
18 supply for Delta users. Now, they don't have to give
19 us an adequate supply, but they can't export unless we
20 have an adequate supply. So the idea of these tunnels
21 is that, if the Delta levees fail because of some
22 earthquake scenario, that they will then use the
23 tunnels to take water and export.

24 Well, that water might be needed for salinity
25 control in the Delta if you deplete the reservoir, and

1 it's when we don't have an adequate water supply. So
2 they cannot use those tunnels for that purpose under
3 that circumstance.

4 Additionally, in 12205 of the Water Code, it
5 is the policy of the State that the operation and
6 management of releases from storage -- and this is
7 stored water if you want to call it that -- into the
8 Sacramento-San Joaquin Delta of water for use outside
9 the area in which the water originates shall be
10 integrated to the maximum extent possible to permit
11 fulfillment of the objectives of this part.

12 And that Delta Protection Act, there's two
13 objectives, salinity control in the Delta and an
14 adequate supply to fully develop all the needs of the
15 Delta.

16 So this concept of having the tunnels for the
17 purpose that they've indicated is going to be contrary
18 to law.

19 Okay. Unless you give me more time, I'm going
20 to shut up.

21 CO-HEARING OFFICER DODUC: Thank you very
22 much.

23 WITNESS NOMEILLINI: And I'd I like to point
24 out, some of the exhibits we put in in the first part
25 I've referred to -- because it get with fish, I

1 referred to them now. So I put them in as the same
2 exhibit number, only Part 2. So I think we want those
3 at some stage to go into the record. They're already
4 there. And then I have some additional ones.

5 Thank you.

6 CO-HEARING OFFICER DODUC: All right.

7 Cross-examination of Mr. Nomellini? May I see those
8 who would like to conduct cross-examination come up and
9 provide me with a time estimate?

10 MS. ANSLEY: Five to ten minutes at most for
11 DWR.

12 CO-HEARING OFFICER DODUC: All right. I think
13 that might be it.

14 In which case, is the Water Forum ready?

15 MR. BEZERRA: I guess our witnesses are across
16 the street at City Hall, so we need a few minutes to
17 bring them over.

18 CO-HEARING OFFICER DODUC: Thank you. Please
19 have them make the trek over.

20 CROSS-EXAMINATION BY MS. ANSLEY

21 MS. ANSLEY: Pardon me, I'm looking for my
22 page. If we could go to Page 27 of Mr. Nomellini's
23 corrected testimony.

24 And good morning, Mr. Nomellini. My name is
25 Jolie-Ann Ansley. I'm with the Department of Water

1 Resources.

2 WITNESS NOMESELLINI: Pleased to meet you. I
3 have Page 27.

4 MS. ANSLEY: So if you have it in front of you
5 or if you can see the screen on the right which tends
6 to be clearer, you referenced two exhibits, SDWA-304
7 and 305. Do you see that there, sir, at the very top
8 on Lines 2 through 5 roughly?

9 WITNESS NOMESELLINI: Yes.

10 MS. ANSLEY: And you state that these are from
11 the Anadromous Fish Restoration Program. Do you see
12 that?

13 WITNESS NOMESELLINI: Yes, some of them I have
14 from the fish restoration program. They're probably
15 identified, I think.

16 MS. ANSLEY: If you want to look at your
17 testimony that paragraph or maybe that paragraph on the
18 page before, my question simply is which anadromous
19 fish restoration program website do you references here
20 on Lines 4 to 5?

21 WITNESS NOMESELLINI: I just go to the -- my
22 Google Anadromous Fish Restoration Program website.
23 Now, their exhibits have change a little bit over time.
24 But that's where I found it. The only thing that
25 wasn't there was the smelt information, and I cite with

1 that --

2 MS. ANSLEY: Do you know if this is a State or
3 a Federal website?

4 WITNESS NOMELLINI: It's the Restoration -- I
5 think it's a Federal site.

6 MS. ANSLEY: I'm asking because these two
7 exhibits, on the face of these exhibits, do not provide
8 a website or an agency -- they don't provide any
9 information as to which agency these came from. So I'm
10 asking if you know who maintains this website.

11 WITNESS NOMELLINI: Yeah, I think it's the
12 U.S. Fish and Wildlife Service. But they have a -- I
13 think it's a joint effort to satisfy the CVP IA fish
14 doubling requirement. If you have time, whenever, we
15 can grab a computer and look for it and find it.

16 MS. ANSLEY: Do you recall the date that those
17 figures, 304 and 305, were downloaded by you?

18 WITNESS NOMELLINI: Well, I tried to get the
19 latest information when I prepared my testimony. So it
20 would have been right before submitting my testimony
21 because I had exhibits like this that were derived from
22 their website prior to that time. So I tried to use
23 the updated ones.

24 MS. ANSLEY: Would that be before your Part 1
25 or your Part 2 testimony?

1 WITNESS NOMELLINI: It would be Part 2.

2 MS. ANSLEY: Okay. Then turning to your
3 statement of qualifications -- and these are my final
4 questions. I do know of you personally, and I know
5 that you have a long history in Delta litigation.

6 Looking at your statement of qualifications,
7 however, you have a bachelor's in civil engineering; is
8 that correct?

9 WITNESS NOMELLINI: Correct.

10 MS. ANSLEY: And then you have a -- obviously,
11 a law degree from Berkeley, Boalt.

12 WITNESS NOMELLINI: Yes.

13 MS. ANSLEY: Do you have a degree or
14 professional experience in the biological sciences?

15 WITNESS NOMELLINI: I have no degree, but I'm
16 an enthusiastic naturalist and hunter, and I manage a
17 lot of wildlife habitat on my own. So I am familiar
18 somewhat. I don't -- I'm not the foremost expert, but
19 I consider I have some expertise in that area.

20 MS. ANSLEY: Have you yourself conducted any
21 field studies for salmon or smelt or striped bass?

22 WITNESS NOMELLINI: Well, other than fishing
23 for striped bass and salmon and witnessing my success
24 or my lack of success, I've not conducted any
25 biological experiments.

1 MS. ANSLEY: Have you conducted a
2 comprehensive literature review?

3 WITNESS NOMESELLINI: I've been particularly
4 interested in this idea of having more tidal wetlands
5 in the Delta. And I've gone through that fairly
6 carefully. And I've put the major items into the
7 record as evidence.

8 MS. ANSLEY: The major items that you are
9 aware of; is that true?

10 WITNESS NOMESELLINI: Yeah. You know, I tried
11 to find the current stuff.

12 MS. ANSLEY: Okay. I have no further
13 questions for Mr. Nomellini.

14 Thank you, sir.

15 CO-HEARING OFFICER DODUC: Thank you,
16 Ms. Ansley.

17 Anyone else? Any redirect?

18 MR. RUIZ: There's no redirect.

19 CO-HEARING OFFICER DODUC: All right. Thank
20 you, Mr. Nomellini. Always a pleasure.

21 WITNESS NOMESELLINI: Always a pleasure to see
22 you all still well, still doing your job.

23 CO-HEARING OFFICER DODUC: All right.

24 Mr. Ruiz, does that conclude Central Delta, South Delta
25 case in chief?

1 MR. RUIZ: That does conclude it as far as our
2 witnesses are concerned, yes.

3 CO-HEARING OFFICER DODUC: Yes. Not
4 Mr. Keeling.

5 MR. RUIZ: Right. For us, for the agencies.

6 CO-HEARING OFFICER DODUC: Do you wish to
7 mover your --

8 MR. RUIZ: Yes. At this point in time, we
9 would request to have all of our exhibits moved into
10 evidence.

11 And I don't believe there's been --

12 CO-HEARING OFFICER DODUC: Ms. Ansley is
13 coming up.

14 MS. ANSLEY: I was just wondering if Mr. Ruiz
15 was going to read which numbers that he would like to
16 move to evidence. I only ask because a great deal of
17 testimony has been struck. So I've tried to sort of
18 prepare a list of which exhibits may have been from a
19 testimony that was struck. And so I'm just wondering
20 is he planning on reading which numbers he's talking
21 about as opposed to just moving everything into the
22 record.

23 MR. RUIZ: Well, I wasn't planning on -- the
24 evidence that was struck for Mr. Nomellini's had to do
25 with his written testimony. And that was already

1 stricken by the -- by staff, by the Hearing Officers.
2 So other than that, everything that we have submitted,
3 everything that's come in, everything that's been
4 parted of Part 2 we are requesting to be moved in.

5 MS. ANSLEY: For clarity's sake because so
6 much of Part 1 was submitted as part of his Part 2
7 testimony and the numbers were repeating, I would
8 appreciate a final list of what was intended to be
9 submitted so that is there is no mistake and I don't
10 have to come back to the Board later about any
11 particular exhibit.

12 CO-HEARING OFFICER DODUC: Mr. Ruiz, would you
13 like to have until 5:00 -- well, noon tomorrow to
14 submit --

15 MR. RUIZ: Yeah, let's do that because I think
16 she's -- there's -- she's speaking to some confusion to
17 Mr. Nomellini's versus the Part 1 versus the Part 2.
18 So we'll just clarify that and submit that as you
19 suggested.

20 CO-HEARING OFFICER DODUC: Right. You will
21 submit that by noon tomorrow, and the parties will have
22 until noon on Wednesday to file any objections.

23 MR. RUIZ: Thank you.

24 MS. ANSLEY: Yes. And just for the record, I
25 do have a list of what I believe were the exhibits that

1 were within the testimony that was struck, again, in
2 Part 2.

3 And I do also lodge an objection to Exhibits
4 304 and 305, which were the -- which were the figures
5 from the website that Mr. Nomellini could not
6 substantively identify that came from the Anadromous
7 Fish Program Restoration website.

8 CO-HEARING OFFICER DODUC: Thank you.

9 MS. ANSLEY: And I'm happy to argue that
10 further, but I'm really waiting to see what numbers
11 they try to move into evidence.

12 CO-HEARING OFFICER DODUC: Let's wait, and
13 then you'll have your chance then.

14 All right. Thank you Mr. Ruiz, and thank you
15 Mr. Nomellini.

16 Mr. Bezzera.

17 MR. BEZERRA: Yes, the Water Forum witness are
18 on their way, across the street.

19 CO-HEARING OFFICER DODUC: All right. We will
20 stand and stretch. How long does it take to cross the
21 street?

22 MR. BEZERRA: Hopefully not very long. I will
23 go figure that out. Thank you.

24 CO-HEARING OFFICER DODUC: Thank you.

25 (Recess taken)

1 CO-HEARING OFFICER DODUC: Please take a seat.

2 Are we still missing Mr. Bratovich?

3 MR. GOHRING: He's on his way.

4 CO-HEARING OFFICER DODUC: All right.

5 Ms. Morris.

6 MS. MORRIS: May I ask a housekeeping issue?

7 CO-HEARING OFFICER DODUC: Sure.

8 MS. MORRIS: On these panels, there's overlap.

9 CO-HEARING OFFICER DODUC: I'm sorry. There's
10 talking going on.

11 Ms. Morris.

12 MS. MORRIS: There are two panels for
13 Water Forum. And I was thinking it would be more
14 efficient to ask questions -- because Mr. Gohring and
15 Mr. Bratovich are on both panels. And so it seems like
16 it might be more efficient to hold questions until the
17 second panel and then just ask all my questions at that
18 time.

19 CO-HEARING OFFICER DODUC: Any objection to
20 that?

21 MR. BEZERRA: Well, we broke them up,
22 specifically part -- the first portion is injury, and
23 the second portion is a completely different set of
24 testimony on the technical bases. I mean, I suppose we
25 can have this testimony occur, and then if people want

1 to --

2 CO-HEARING OFFICER DODUC: Why don't we wait
3 until after the testimony, and then you may make your
4 request then, Ms. Morris.

5 MS. MORRIS: Okay.

6 MR. BEZERRA: We do have a logistical issue.
7 As we discussed, one of our witnesses has a health
8 issue, and we'll call him right -- if we're going to
9 handle cross after both panels, we need to call him
10 right now. And there may be some delay because he
11 needs to drive down from where he is.

12 CO-HEARING OFFICER DODUC: Does anyone else
13 have cross-examination for Mr. Gohring and
14 Mr. Bratovich?

15 MS. MORRIS: I just -- because maybe I'm
16 mistaken, but I understand that there was only one set
17 testimony for each witness. And that's why I believe
18 it would be for efficient to ask the questions because
19 I -- until they're testifying, I'm just reading their
20 testimony, and my questions are based on that.

21 CO-HEARING OFFICER DODUC: Understood.

22 Yes, please.

23 MS. AKROYD: Rebecca Akroyd, San Luis and
24 Delta Mendota Water Authority. I believe my questions
25 go more to the second panel, but again, it's the same

1 two witnesses; I just thought it related more to the
2 topic, and I would also prefer.

3 CO-HEARING OFFICER DODUC: Okay.

4 Ms. Aufdemberge.

5 MS. AUFDEMBERGE: Yes, very same issue.

6 CO-HEARING OFFICER DODUC: Mr. Bezzer, you
7 might want to get your other witnesses here.

8 MR. BEZERRA: Yes. Mr. Miliband and I just
9 confirmed. We'll let them know to come. And since
10 we're approaching the lunch hour, I suspect it's not
11 going to be much of a problem.

12 CO-HEARING OFFICER DODUC: Great. All right.

13 MR. MILIBAND: Wes Miliband, representing the
14 City of Sacramento.

15 CO-HEARING OFFICER DODUC: Actually, before
16 you get comfortable, please stand and raise your right
17 hand.

18 (Witnesses sworn)

19 TOM GOHRING and PAUL BRATOVICH,
20 called as Panel 1 witnesses for Protestant
21 Group 11, having been first duly sworn,
22 were examined and testified as hereinafter
23 set forth:

24 CO-HEARING OFFICER DODUC: Thank you. Be
25 seated.

1 Mr. Bezzerera?

2 MR. BEZERRA: Thank you very much.

3 CO-HEARING OFFICER DODUC: How much time do
4 you anticipate needing for direct testimony?

5 MR. BEZERRA: I anticipate it's about 40
6 minutes for Mr. Gohring and Mr. Bratovich to complete
7 their --

8 CO-HEARING OFFICER DODUC: Let's put 40
9 minutes on the clock, and then we will take our lunch
10 break then.

11 MR. BEZERRA: Very good.

12 DIRECT EXAMINATION BY MR. BEZERRA

13 MR. BEZERRA: Good morning, Mr. Gohring and
14 Mr. Bratovich.

15 Mr. Gohring, can you please state your name
16 for the record.

17 WITNESS GOHRING: I'm Tom Gohring.

18 MR. BEZERRA: And you just took the oath in
19 this hearing, correct?

20 WITNESS GOHRING: Yes.

21 MR. BEZERRA: Mr. Baker, if we could please
22 pull up Exhibit ARWA-301. And I think that is
23 Mr. Baker. Let me make sure.

24 It's actually a Part 1 exhibit. It's just
25 Mr. Gohring's resume. Thank you very much.

1 Mr. Gohring, is Exhibit ARWA-301 a correct
2 statement of your qualifications?

3 WITNESS GOHRING: Yes.

4 MR. BEZERRA: Mr. Gohring, is Exhibit ARWA-500
5 your written testimony for Part 2 of this hearing?

6 WITNESS GOHRING: Yes.

7 MR. BEZERRA: Is there any portion of the
8 Exhibit ARWA-500 you'd like to clarify?

9 WITNESS GOHRING: There is a typo in 501, and
10 I don't know if I want to clarify that now, or if I
11 want to clarify that in another submittal.

12 MR. BEZERRA: Did you mean Exhibit ARWA-500?

13 WITNESS GOHRING: I did.

14 MR. BEZERRA: If this relates to the second
15 portion, the MFMS, you can clarify it now or later,
16 depending on your preference.

17 CO-HEARING OFFICER DODUC: Do it now, please.

18 MR. BEZERRA: Why don't you go ahead,
19 Mr. Gohring.

20 WITNESS GOHRING: Okay. If you turn to
21 Paragraph 34, the first --

22 CO-HEARING OFFICER DODUC: Page number?

23 WITNESS GOHRING: Oh, I'm sorry. Do we have
24 the exhibit up? Paragraph 34, please.

25 And the first bullet has a bit of a typo. In

1 between the words "acre-feet" and "and" on the first
2 line of the first bullet, the words, "During a
3 simulated 1977 drought and" -- so the bullet should
4 read, "maintain Folsom Reservoir storage above 90,000
5 acre-feet during a simulated 1977 drought and end of
6 December above 230,000 acre-feet in all simulated
7 years." Typo.

8 MR. BEZERRA: Thank you very much.

9 WITNESS GOHRING: Thank you.

10 MR. BEZERRA: Are Exhibits ARWA-501 through
11 ARWA-506 referenced in your testimony?

12 WITNESS GOHRING: Yes.

13 MR. BEZERRA: Is Exhibit ARWA-702 referenced
14 in your testimony?

15 WITNESS GOHRING: Yes.

16 MR. BEZERRA: Is Exhibit ARWA-703 referenced
17 in your testimony?

18 WITNESS GOHRING: Yes.

19 MR. BEZERRA: Does Exhibit ARWA-703 reflect
20 your understanding of the status of steelhead in the
21 Lower American River?

22 WITNESS GOHRING: Yes.

23 MR. BEZERRA: Did you participate in the
24 preparation of Exhibit ARWA-702?

25 WITNESS GOHRING: Yes.

1 MR. BEZERRA: Does Exhibit ARWA-501 contain a
2 summary of your testimony?

3 WITNESS GOHRING: Yes.

4 MR. BEZERRA: Mr. Bratovich, could you please
5 state your name for the record?

6 WITNESS BRATOVICH: Paul Bratovich.

7 MR. BEZERRA: And if you could you please turn
8 your mike on by pressing the little button so the green
9 light comes on.

10 WITNESS BRATOVICH: Good.

11 MR. BEZERRA: So Mr. Bratovich, could you
12 please restate your name for the record?

13 WITNESS BRATOVICH: Paul Bratovich.

14 MR. BEZERRA: Thank you. Have you taken the
15 oath in this hearing?

16 WITNESS BRATOVICH: Yes.

17 MR. BEZERRA: Is Exhibit ARWA-701 your resume?

18 WITNESS BRATOVICH: Yes.

19 MR. BEZERRA: Mr. Bratovich, is Exhibit
20 ARWA-700 your written testimony?

21 WITNESS BRATOVICH: Yes.

22 MR. BEZERRA: Is Exhibit ARWA-703 referenced
23 in your testimony?

24 WITNESS BRATOVICH: Yes.

25 MR. BEZERRA: Does Exhibit ARWA-703 state your

1 opinions concerning the effects of the California
2 WaterFix project on steelhead in the Lower American
3 River?

4 WITNESS BRATOVICH: Yes.

5 MR. BEZERRA: Does Exhibit ARWA-501 contain a
6 summary of your testimony?

7 WITNESS BRATOVICH: Yes.

8 MR. BEZERRA: Mr. Gohring, could you please
9 summarize your testimony concerning the effects of
10 California WaterFix and shift to Mr. Bratovich upon
11 reaching the summary of his testimony?

12 WITNESS GOHRING: Yes. Can I please see
13 ARWA-501?

14 Chair Doduc, Members of the Board, our team
15 was here during Part 1 testifying in kind of a shallow
16 drill-down of the Modified Flow Management Standard.
17 And we kept it shallow because we were doing our best
18 to respect the division between Part 1 and Part 2
19 topics.

20 I think the shallowness of that presentation
21 was somewhat unsatisfying for a number of folks. And
22 so we, I believe, as part of Part 1, committed that we
23 would bring back in Part 2 a deep dive. And we will be
24 doing that in the next panel. That will be the
25 panel -- Mr. Bratovich and I will both be testifying as

1 part of the next panel.

2 Do I get a clicker, or do I say "next slide"?

3 Ah, thanks.

4 So next panel, we'll have more of us. But
5 Paul -- excuse me, Mr. Bratovich and I will both be
6 testifying on Panel 2 as well.

7 This panel is about injury. A little context.
8 Our panel all represent the Sacramento Water Forum.
9 This is a consortium of environmental groups, water
10 agencies, public agencies, agricultural interests,
11 business interests in the Sacramento region who have
12 signed a comprehensive 30-year agreement to try to
13 simultaneously protect the region's water supplies and
14 the resources of the Lower American River including the
15 fishery resources.

16 MR. BEZERRA: Mr. Gohring, just for the
17 record, when you click to the next slide, if you could
18 just say "next slide," so we know where you're going in
19 your presentation.

20 WITNESS GOHRING: Thank you.

21 And our area of study, our area of interest is
22 basically the watershed of the American River.

23 Next slide.

24 So when I push this, nothing happens? I'll
25 say "next slide."

1 CO-HEARING OFFICER DODUC: Mr. Gohring, I
2 believe Mr. Bezerra is asking you to say "next slide"
3 for the transcript, so that --

4 MR. BEZERRA: Correct.

5 CO-HEARING OFFICER DODUC: But the clicker
6 should work. Maybe not?

7 WITNESS GOHRING: Can I get someone under 23
8 to please -- I'm sorry. Oh, I think it just finally
9 advanced. So can I go back one, please?

10 There we go.

11 We have a storage problem in the American
12 River watershed. And our problem is that, during
13 drought years or during successive low water years, the
14 storage in Folsom Reservoir ends up being so low that
15 it creates some water supply reliability issues, some
16 critical issues with water supply reliability. Our
17 team testified on that in Part 1.

18 But it also creates environmental issues in
19 the Lower American River. Our injury testimony centers
20 on sort of three points. Number one, we have the
21 storage problem. It already exists in the Lower
22 American River -- in the lower American River and in
23 the American River watershed. The WaterFix project
24 exacerbates this existing problem. And then again, in
25 our next panel, we will talk about how the Modified

1 Flow Management Standard helps protect against the low
2 storage conditions.

3 Next slide, please.

4 This is an excerpt of data from the Biological
5 Assessment of the WaterFix, and it shows that -- if you
6 look the columns in June and July, it shows that the
7 WaterFix project reduces storage in many months during
8 June and July. This is for the current climate
9 scenario.

10 Next slide.

11 This is for central tendency climate scenario.
12 And, again, this shows reduced storage in June and July
13 with WaterFix compared to the No Action Alternative.
14 WaterFix reduces Folsom storage in June and July.

15 Next slide.

16 Mr. Bratovich will testify in depth about the
17 relationship between water temperature and fishery
18 resources, but we know from direct experience that
19 low -- lower storage in Folsom Reservoir in June and
20 July directly results in warmer temperatures in the
21 Lower American River during the period when juvenile
22 steelhead are present.

23 Next slide.

24 We also know that conditions in the Lower
25 American River are already degraded and any increase in

1 temperature, particularly in drier years, results in
2 harm to the species.

3 Next slide.

4 So the -- Mr. Bratovich is going to give a
5 much deeper and rigorous discussion. I'm trying to
6 make my point as simply as possible. Using the State's
7 own modeling, we see that the WaterFix reduces storage
8 in June and July. We know from direct experience that
9 lower storage in Folsom means a smaller cold water pool
10 which results in a warmer river. We know that the
11 warmer river creates harm to steelhead.

12 Put those three points together, and I
13 conclude that the WaterFix project would harm steelhead
14 in the Lower American River.

15 Paul.

16 WITNESS BRATOVICH: Thank you.

17 Next slide, please.

18 I'm going to address the key issue raised by
19 the State Board in its August 31st ruling in this
20 proceeding, which identified the key issue to be
21 answered, the key issue being will the changes proposed
22 in the petition unreasonably affect fish and wildlife
23 or recreational users of water or other public trust
24 resources. I am limiting my testimony and presentation
25 of that testimony to steelhead in the Lower American

1 River.

2 I'm limiting it to steelhead the Lower
3 American River because, as Tom mentioned, we're here
4 representing the Water Forum and but technically it's
5 because it's a federally listed species and it was
6 thoroughly evaluated by Reclamation in the Biological
7 Assessment, or BA, and by NMFS in the Biological
8 Opinion, or BO.

9 Next slide, please.

10 So to answer this question, I developed an
11 analytical standard. I searched and tried to find a
12 handbook, guidelines how to assess what is an
13 unreasonable effect and was unable to locate any such
14 guidance. So what I did was I relied upon National
15 Marine Fishery Service -- which I'll call NMFS in my
16 testimony here --- in an approach that seemed
17 particularly germane. It's the habitat approach, which
18 is what we're evaluating here, but specifically for
19 anadromous salmonids on the Pacific Coast, how to
20 implement the Endangered Species Act, Section 7 of that
21 act. And we used these two documents as guidelines.

22 The State Board corrected orders for the water
23 rights hearing in the Yuba River in 2008 came as close
24 to providing a standard that I could incorporate into
25 my analytical standard as I was able to find. And it

1 is -- the statements in those corrected orders were
2 that water temperature impacts listed species are of
3 special concern and that there is a low threshold for
4 unreasonable impact to listed species. That's the
5 closest thing I can find addressing "unreasonable
6 effect."

7 The NMFS guidelines for how to implement
8 Section 7 were quite useful as well. And it boils down
9 to the status of the species is poor if the habitat is
10 degraded under existing conditions or under the
11 existing analytic baseline, then any additional adverse
12 effects caused by the action will more likely be
13 significant.

14 So I incorporated those two guidance documents
15 into the analytic standards, tried to address the
16 question of would implementation of the WaterFix
17 exacerbate water temperature conditions in the Lower
18 American River where the analytic baseline is already
19 degraded and for which the status of steelhead is poor?

20 Next slide, please.

21 We used what was presented in the BA and the
22 BO. We did that intentionally just to reexamine the
23 analyses and the results that were presented in those
24 two documents. One example of consistency is that
25 those documents analyzed water temperature effects at

1 two locations in the Lower American River, one up near
2 the upper boundary of Nimbus Dam at River Mile 23 at
3 Hazel and then the other a little bit more than halfway
4 at Watt Avenue, River Mile 9.4

5 Next slide, please.

6 We'll go right to my findings of my
7 reexamination addressing the analytical standard to
8 answer the Board's question. I've listed a couple of
9 examples here. There are other statements and examples
10 in my testimony, which is ARWA-700 on Pages 3 and 4. I
11 have six quotes from the BO itself describing the poor
12 status of steelhead in the Central Valley and, in some
13 cases, specifically in the Lower American River.

14 One of the quotes from the BO that's not on
15 this slide but I think is particularly demonstrative is
16 directly from Page 56 of the BO which says, "In
17 summary, the status of the California Central Valley
18 steelhead DPS," which stands for "distinct population
19 segment" a categorization of a tax on, "is likely to
20 become endangered within the near future throughout all
21 or a significant portion of its range." And the BO
22 cites NMFS 2016, which was the updated status review
23 addressing steelhead in the Central Valley.

24 So it was clear to me that NMFS themselves and
25 Reclamation in the BA recognize and clearly demonstrate

1 the poor status of steelhead in the Central Valley and
2 particularly also in the Lower American River.

3 Next slide, please.

4 Conditions in the Lower American River are
5 degraded. I think this is incontrovertible fact.
6 There are five quotes from the Biological Opinion
7 discussing the degraded habitat, one quote in the
8 Reclamation's BA, and five quotes from National Marine
9 Fisheries 2014 Anadromous Salmonid Recovery Plan.
10 Again, a couple of examples here, another really
11 demonstrative quote not included on this slide, but it
12 is in my testimony. It is talking to the fact that the
13 environmental factor probably most limiting to
14 steelhead production, natural steelhead production in
15 the Lower American River is high water temperatures
16 during the summer and fall.

17 So there are -- there's a plethora of
18 statements and findings discussing the degraded nature
19 particularly due to high water temperatures in the
20 Lower American River.

21 When we were in the course of developing our
22 testimony and developing the Modified Flow Management
23 Standard, our phrase that we used commonly was the
24 Lower American River is thermally challenged. I think
25 indeed that is true.

1 Next slide, please.

2 Next finding in my testimony, presented on
3 Pages 5 and 6 of ARWA-700 uses the information
4 presented in the BO and in the BA to substantiate that
5 we find differences in water temperatures in the Lower
6 American River that indeed are substantial.

7 We looked through those, and I will now
8 present you some examples. In testimony, it has some
9 examples. I'll go over a couple of them now.

10 Next slide, please.

11 This figure is taken directly from the NMFS
12 BO, Figure 2-35. And it is showing the percent
13 exceedance of water temperatures in the Lower American
14 River. In this case, it is at Watt Avenue during
15 August in critical years. So there's a lot of
16 categorization that occurs in the BA and the BO. So
17 there's different stratum. This stratum is a
18 combination of August, Watt, critical. So this figure
19 demonstrates what I consider to be a substantial
20 difference.

21 If you look -- you've probably have your fill
22 of exceedance figures in this proceeding. But just
23 quickly looking at this an interpreting it, on the
24 bottom it's probability of exceedance. We oftentimes
25 use percent of time. It's easier to comprehend that

1 way to some degree. But -- so it does represent
2 percent of time.

3 If you look at 50 percent and you go up, what
4 do we see? We see that approximately 50 percent of the
5 time during critical years in the month of August at
6 Watt Avenue, temperatures exceed 72 degrees. Those are
7 really warm temperatures for steelhead in any river,
8 let alone the American.

9 So when we look at this, then -- I looked at
10 this more closely, and there's some criteria that was
11 included in the BA and in the BO, one of which was they
12 sort of established a half a degree Fahrenheit as an
13 indicator of potential effect.

14 I adopted that. And when you look at this and
15 you examine this exceedance distribution, over 50
16 percent of the time there are water temperature
17 increases over a half a degree, up to 4 degrees at Watt
18 during critical water years.

19 I conclude that this is a substantial
20 increase. And I will provide some more information
21 documenting and justifying that conclusion.

22 This also demonstrates the other category of
23 what I was just talking about. This is when conditions
24 are degraded. In the BA and the BO, they established
25 two what I call metrics for establishing what they

1 called threshold temperatures. I call them indicator
2 values, but it doesn't matter. They use them as
3 threshold temperatures.

4 And the threshold temperature for juvenile
5 steelhead rearing, they established two of them: 63
6 degrees mean monthly and 69 degrees, 7 datum. "7
7 datum" means seven-day average daily maximum. So it's
8 the maximum temperature that occurs for seven days in a
9 row and it's calculated on a running seven-day basis.

10 When you look at this, either one of them,
11 those differences of over a half a degree occur at
12 temperatures well above the threshold.

13 The significance of that is that's when these
14 temperatures are most adverse. When you are looking at
15 this and you have a threshold, what does that really
16 mean? How do you analyze that? And the way it is
17 intended to be done is that you're not necessarily
18 concerned about temperatures below that stated
19 threshold, accepting that threshold as an indicator of
20 impact.

21 Below that threshold, the statement would be
22 that they're lower than that stated threshold,
23 therefore, they're acceptable, they're suitable. When
24 you're above that threshold, that's when they are most
25 adverse and damaging. And that's where your analysis

1 and your effects determination should focus.

2 So it's a gradation of affect to steelhead.
3 The higher the temperature above that stated threshold,
4 the more adverse that effect is. And it goes up from
5 the threshold up to lethal levels, by the way, which
6 we're actually seem to be exceeding here in this plot.

7 The upper incipient lethal temperature for
8 juvenile steelhead has been reported to be 75 degrees.
9 So when you look at this plot and you look at where 75
10 degrees intersects these two lines, you can see there's
11 a substantial amount of time where, under the analytic
12 baseline, the No Action Alternative it's below lethal
13 levels but above lethal levels with the Proposed
14 Action.

15 So when I talk about substantial differences,
16 it's the whole suite of considerations that I'm really
17 going into and making my determination. I'll try to
18 pick it up here a little bit.

19 Next slide, please.

20 Another example. This example is a different
21 life stage. It's smolting migration presented in the
22 BO and the BA by NMFS, when more than 40 percent of the
23 time, at temperatures above the stated threshold -- in
24 this instance, the stated threshold is 61 degrees; so
25 above that, it's adverse and increasing adverse the

1 warmer you get -- there is a substantial difference
2 between the Proposed Action and the baseline.

3 Next slide, please.

4 This demonstrates frequency of occurrence.
5 When we talk about substantial differences, it is in
6 consideration of both frequency and the magnitude of
7 the difference.

8 I've talked about a half a degree or more
9 being indicative of a potentially substantial change.
10 But in this instance, it's amazing to observe that
11 there is up to a 2 degree on the left part of this
12 curve, certainly over a half a degree increase over 80
13 percent of the time, nearly 80 percent of the time,
14 excuse me.

15 So 80 percent of the time during August of
16 critical years -- in this case, this is Hazel Avenue;
17 it's the upper station. So over 80 percent of the
18 time, we expect to see temperatures exacerbated at
19 levels above the stated threshold value during critical
20 years, over 80 percent of the critical years in August.
21 We consider that to be substantial.

22 Next slide, please.

23 Well, we went through, again, the logical
24 sequence of unreasonable effects. So we've identified
25 substantial effects. We also did determine that these

1 are significant. And we determined that these are
2 significant by applying that other component of the
3 guidance document, which was NMFS' own Section 7
4 implementation guidance document, where again, not to
5 be redundant, but the baseline is degraded, the status
6 is poor; any additional adverse effect is likely to be
7 significant.

8 So these substantial differences and these
9 substantial adverse effects and my determination and
10 our determination and consideration are substantial and
11 significant.

12 And then Finding No. 5, using the only
13 guidance I can find that there's a low threshold for
14 water temperature effects for listed species and
15 that -- excuse me, water temperature of special concern
16 for listed species, and that there is a low threshold
17 for effect to listed species leads me to conclude then
18 that the substantial significant effects are
19 unreasonable based upon that consideration.

20 Next slide, please.

21 This is a simple summary of the major findings
22 I just presented demonstrating life stage, the extent
23 of the change, the frequency. So the less suitable
24 column actually would be a magnitude statement and then
25 the frequency statement identifying what month, what

1 water year type, and location.

2 To us, these represent clearly exacerbations
3 but also unreasonable effects.

4 Next slide, please.

5 So in conclusion, going through the process
6 and the analytic standard that we established, which is
7 would implementation of WaterFix exacerbate water
8 temperature conditions in the Lower American River with
9 the existing condition already degraded, the status of
10 steelhead poor, represent unreasonable effects? So
11 going through the status, the conditions, the
12 differences which were substantial, the substantial
13 differences being significant, and then the conclusion
14 that these significant adverse effects, with
15 implementation of the WaterFix BA, to address the
16 Board's stated question, we conclude they are
17 unreasonable effects. Thank you.

18 CO-HEARING OFFICER DODUC: Does that conclude
19 the direct, Mr. Bezzera?

20 MR. BEZERRA: Yes, for this panel.

21 CO-HEARING OFFICER DODUC: Ms. Morris, are you
22 and the Department and others still requesting to hold
23 your cross until the second panel?

24 MS. MORRIS: (Nods head affirmatively).

25 CO-HEARING OFFICER DODUC: If there are no

1 objections --

2 MR. BEZERRA: No, that's fine. We came in
3 right at noon.

4 CO-HEARING OFFICER DODUC: Okay. Then we will
5 break for lunch and return at 1:00 o'clock with the
6 rest of your panel.

7 MR. MILIBAND: Yes. And just one note,
8 Hearing Chair Doduc, we have confirm all the Panel 2
9 witnesses can be here right at 1:00 o'clock. So we
10 might have a five-minute lag time.

11 CO-HEARING OFFICER DODUC: We will return at
12 1:05. Does that help?

13 MR. MILIBAND: Just -- hopefully that will. I
14 don't know if it's 1:05 or 1:10, but --

15 CO-HEARING OFFICER DODUC: I'll tell you what.
16 We will resume at 1:15.

17 MR. BEZERRA: I can add a little to this that
18 I think maybe helpful. The direct presentation of the
19 next panel is Mr. Bratovich and Mr. Gohring. The other
20 witnesses are here primarily to respond to
21 cross-examination.

22 So we could get started on direct examination,
23 and they can go through their summary and --

24 CO-HEARING OFFICER DODUC: Oh, forget the
25 longer break. We will resume at 1:00 o'clock.

1 MR. BEZERRA: Sorry, everyone.

2 CO-HEARING OFFICER DODUC: You may thank

3 Mr. Bezzera. See you at 1:00.

4 (Whereupon, the luncheon recess was taken

5 at 12:04 p.m.)

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1 AFTERNOON SESSION

2 ---o0o---

3 (Whereupon, all parties having been
4 noted for the record, the proceedings
5 resumed at 1:01 p.m.)

6 CO-HEARING OFFICER DODUC: Welcome back. It
7 is 1:00 o'clock, and I see Ms. Morris at the
8 microphone, so I assume we have some housekeeping
9 matters.

10 MS. MORRIS: We do.

11 CO-HEARING OFFICER DODUC: Ms. Morris.

12 MS. MORRIS: Thank you. We were just
13 conferring, and it looks like maybe there's very
14 limited questioning for Mr. Addley. And given his
15 situation, we were wondering if it would be possible to
16 go ahead and let DWR, State Water Contractors do their
17 cross and then let him be dismissed, unless there was
18 somebody else. But it doesn't seem like there is.

19 I don't believe Ms. Akroyd has any questions
20 for him.

21 CO-HEARING OFFICER DODUC: Any -- no
22 objections?

23 MR. MILIBAND: No objection.

24 CO-HEARING OFFICER DODUC: Actually, aside
25 from Mr. Gohring and Mr. Bratovich, will the rest of

1 you please --

2 MS. MORRIS: Oh, I --

3 CO-HEARING OFFICER DODUC: You have more?

4 MS. MORRIS: Yes, I apologize.

5 This is actually in regards to the last panel.

6 And at -- specifically, in the rough transcript,

7 Mr. Bratovich made statements and drew opinions on the

8 rough, Page 84, Line 18 through 85, Line 15 regarding

9 gradation of temperature effects as well as a lethal

10 temperature of 75 degrees.

11 I represent to you that I have searched

12 through all of the exhibits, including ARWA-700,

13 ARWA-501, ARWA-701 and ARWA-703 that were cited by

14 Mr. Bratovich in his testimony, and none of this

15 testimony appears there. So this is new testimony and

16 new opinions that go beyond the scope of his direct,

17 and we would move to strike it.

18 CO-HEARING OFFICER DODUC: Response?

19 MR. MILIBAND: Yes, just if we can get

20 clarification as to what specifically about degradation

21 Ms. Morris thinks went beyond Mr. Bratovich's written

22 testimony, please.

23 MS. MORRIS: I didn't say -- if I said

24 "degradation" -- I said gradation of temperature.

25 Gradation of temperature, not degradation, and the

1 lethal temperature of 75 degrees, which appears
2 nowhere.

3 MR. MILIBAND: If we can have a moment -- if
4 there's -- if we could just have a moment to confer.

5 CO-HEARING OFFICER DODUC: You may have until
6 the end of your panel.

7 MR. MILIBAND: Thank you.

8 CO-HEARING OFFICER DODUC: Anything else?

9 MR. BEZERRA: Actually, could I just make a
10 request? If we could have a copy of the rough
11 transcript you're talking about? We don't have a rough
12 transcript here.

13 CO-HEARING OFFICER DODUC: I don't think I can
14 provide that.

15 MR. BEZERRA: If that's the basis of the
16 objection, I'd just ask the moving parties to provide
17 us a copy of that slice of the transcript.

18 CO-HEARING OFFICER DODUC: I don't think we
19 can do that either.

20 How did we handle it earlier? I think we just
21 took it under advisement for now.

22 MR. DEERINGER: Yes. I think until
23 Mr. Bezerra and, I would hope the hearing team as well,
24 would have a chance to review the relevant portions of
25 the rough transcript, we would have to just take it

1 under advisement.

2 MS. MORRIS: May I speak? Thank you.

3 I think though, that this again is very
4 specific testimony. And I have gone through it. And
5 maybe the witness can show me where he has stated 75
6 degrees is lethal temperature. And I don't think that
7 that is in his testimony. And it should -- you know, I
8 don't think we need to wait for the rough transcript.

9 I just was giving that information to support
10 my motion. But I've pointed out the areas where there
11 are discrepancies and my -- in my belief, new opinions
12 that have been offered by this witness.

13 CO-HEARING OFFICER DODUC: Mr. Bratovich,
14 perhaps you can help us out. One, do you recall
15 testifying to that? And, two, if so, where might we
16 find it in your written testimony?

17 WITNESS BRATOVICH: Yeah, I'm hurriedly trying
18 to review 700, 702, and 703 to see if there is
19 reference specifically to UILT or not. I can't tell
20 you for sure there is or isn't without doing that
21 review. I apologize, but I would like to do that
22 before responding.

23 MR. BEZERRA: And for the record,
24 Mr. Bratovich cites in a variety of his documents quite
25 a number of scientific studies. You know, there's

1 supporting material. He's an expert witness relying on
2 expert knowledge as reflected in the citations in his
3 materials.

4 So I'd like to have the opportunity go over
5 the motion based on the transcript so we can reply.

6 CO-HEARING OFFICER DODUC: We can only take it
7 under advisement at this time.

8 Mr. Mizell?

9 MR. MIZELL: Yes. Just for a complete record,
10 DWR would like to join in the motion as well. We've
11 reviewed as much we can, similar to Ms. Morris and the
12 State Water Contractors.

13 CO-HEARING OFFICER DODUC: So noted.

14 Now, will the three gentlemen who have not
15 taken the oath please stand and raise your right hands.

16 (Panel witnesses sworn)

17 DR. CRAIG ADDLEY, JEFF WEAVER,

18 DR. CHRIS HAMMERSMARK,

19 called as Panel 2 witnesses by Protestant
20 Group 11, having been duly sworn, were
21 examined and testified as hereinafter
22 set forth:

23 CO-HEARING OFFICER DODUC: Thank you. Be
24 seated.

25 And is it my understanding that, Ms. Morris,

1 you wanted to cross-examine Dr. Addley before the rest
2 of the panel present their direct testimony?

3 MR. MILIBAND: Hearing Chair Doduc, if I may,
4 I think what Ms. Morris was looking to do before lunch
5 was to reserve cross on Panel 1 so we could do direct
6 on Panel 2 --

7 CO-HEARING OFFICER DODUC: Correct.

8 MR. MILIBAND: And then commence cross with
9 all of the witnesses for Panel 1 and Panel 2, with
10 Dr. Addley now, first of all.

11 CO-HEARING OFFICER DODUC: Got it. So how
12 much time do you anticipate needing for now, this
13 direct?

14 MR. MILIBAND: Approximately 40 minutes.

15 CO-HEARING OFFICER DODUC: All right. Let's
16 do that.

17 DIRECT EXAMINATION BY MR. MILIBAND

18 MR. MILIBAND: Good afternoon, Mr. Weaver.
19 Would you please state your name and spell your last
20 name for the record?

21 WITNESS WEAVER: Jeffrey Weaver, W-E-A-V-E-R.

22 MR. MILIBAND: You've taken the oath in this
23 proceeding; is that correct?

24 WITNESS WEAVER: That's correct.

25 MR. MILIBAND: Does Exhibit ARWA-101 from

1 Part 1 of this proceeding remain a correct statement of
2 your professional credentials and experience?

3 WITNESS WEAVER: It does.

4 MR. MILIBAND: Mr. Weaver, is Exhibit ARWA-600
5 your written testimony for Part 2 of this proceeding?

6 WITNESS WEAVER: Yes, it is.

7 MR. MILIBAND: Are Exhibits ARWA-504 and 505
8 and 600 through 604 prepared by you or at your
9 direction?

10 WITNESS WEAVER: Yes.

11 MR. MILIBAND: Did you participate in the
12 preparation of Exhibits ARWA-502 and 702? And turn
13 your mike on, please.

14 WITNESS WEAVER: It is on. Sorry. Yes. Is
15 that loud enough?

16 CO-HEARING OFFICER DODUC: Closer to you.

17 WITNESS WEAVER: Yes.

18 MR. MILIBAND: That's much better. So to be
19 clear, you've taken the oath in this proceeding,
20 correct?

21 WITNESS WEAVER: That's correct.

22 MR. MILIBAND: ARWA-101 for Part 1 remains
23 your current resume or CV, correct?

24 WITNESS WEAVER: That's correct.

25 MR. MILIBAND: And ARWA-600 is your written

1 testimony for Part 2?

2 WITNESS WEAVER: That's correct.

3 MR. MILIBAND: Did you participate in the
4 preparation of 502 and 702?

5 WITNESS WEAVER: I did.

6 MR. MILIBAND: Does Exhibit ARWA-501 contain a
7 summary of the key points of your testimony?

8 WITNESS WEAVER: It does.

9 MR. MILIBAND: Thank you, Mr. Weaver.

10 Dr. Hammersmark, good afternoon. Please state
11 your name and spell your last name for the record.

12 WITNESS HAMMERSMARK: Christopher Trevor
13 Hammersmark, H-A-M-M-R-S-M-A-R-K.

14 MR. MILIBAND: You've taken the oath in this
15 proceeding, correct?

16 WITNESS HAMMERSMARK: Correct.

17 MR. MILIBAND: And, sir, if I could ask you to
18 bring your mike in a little bit close and make sure the
19 green light is lit.

20 WITNESS HAMMERSMARK: Correct.

21 MR. MILIBAND: Is Exhibit ARWA-801 a true and
22 correct statement of your professional credentials and
23 experience?

24 WITNESS HAMMERSMARK: Yes, it is.

25 MR. MILIBAND: Dr. Hammersmark, is Exhibit

1 ARWA-800 your written testimony for Part 2 of this
2 proceeding.

3 WITNESS HAMMERSMARK: Yes, it is.

4 MR. MILIBAND: And were Exhibits ARWA-800
5 through 802 prepared by you or at your direction?

6 WITNESS HAMMERSMARK: Yes, they were.

7 MR. MILIBAND: Did you participate in the
8 preparation of Exhibits ARWA-502 and 702?

9 WITNESS HAMMERSMARK: Yes, I did.

10 MR. MILIBAND: Thank you, Dr. Hammersmark.

11 Dr. Addley, good afternoon. Would you please
12 state your name for the record and spell your last for
13 the record.

14 WITNESS ADDLEY: It's Craig Addley,
15 A-D-D-L-E-Y.

16 MR. MILIBAND: And you've taken the oath in
17 this proceeding?

18 WITNESS ADDLEY: Yes.

19 MR. MILIBAND: Is Exhibit ARWA-901 a correct
20 statement of your professional credentials and
21 experience?

22 WITNESS ADDLEY: Yes.

23 MR. MILIBAND: Dr. Addley, is Exhibit ARWA-900
24 your written testimony for Part 2 of this proceeding?

25 WITNESS ADDLEY: Yes, it is.

1 MR. MILIBAND: Were Exhibits 900 through 908
2 prepared by you or at your direction?

3 WITNESS ADDLEY: Yes, they were.

4 MR. MILIBAND: Did you participate in the
5 preparation of Exhibits ARWA-502 and 702?

6 WITNESS ADDLEY: Yes, I did.

7 MR. MILIBAND: Does Exhibit 501 contain a
8 summary of the key points of your testimony?

9 WITNESS ADDLEY: Yes, it does.

10 MR. MILIBAND: Thank you, Dr. Addley.

11 Mr. Bratovich, were Exhibits ARWA-700, 701,
12 and 703 prepared by you or at your direction?

13 WITNESS BRATOVICH: Yes.

14 MR. MILIBAND: Did you participate in the
15 preparation of Exhibits ARWA-502 and 702?

16 WITNESS BRATOVICH: Yes.

17 MR. MILIBAND: Does Exhibit ARWA-501 contain a
18 summary of the key points of your testimony relating to
19 the Modified Flow Management Standard as terms and
20 conditions to address the injury that Mr. Gohring and
21 you testified to on Panel 1?

22 WITNESS BRATOVICH: Yes, it does.

23 MR. MILIBAND: Thank you, Mr. Bratovich.

24 Mr. Gohring, good afternoon.

25 WITNESS GOHRING: Good afternoon.

1 MR. MILIBAND: Were 500, 501, 503, and 506
2 prepared by you or at your direction?

3 WITNESS GOHRING: Yes.

4 MR. MILIBAND: Did you oversee and participate
5 in the preparation of Exhibit ARWA-502?

6 WITNESS GOHRING: Yes.

7 MR. MILIBAND: Mr. Gohring, does Exhibit 501
8 contain a summary of the key points of your testimony
9 relating to the Modified Flow Management Standard as
10 terms and conditions to address the injury that
11 Mr. Bratovich and you testified to on Panel 1?

12 WITNESS GOHRING: Yes.

13 MR. MILIBAND: And do you refer to the
14 Modified Flow Management Standard as the Modified FMS
15 or MFMS?

16 WITNESS GOHRING: I do.

17 MR. MILIBAND: Turning to Exhibit ARWA-501,
18 first of all, if I could ask -- it's not Mr. Baker. If
19 I could ask for 501 to be brought up and to the 23rd
20 slide, I believe it is, please.

21 Thank you.

22 So, Mr. Gohring, turning here to Slide 23 of
23 Exhibit ARWA-501, would you please summarize your
24 testimony concerning the MFMS to address the injury
25 that Mr. Bratovich and you testified to? And in doing

1 so, please switch back and forth between Mr. Bratovich
2 as you see fit.

3 WITNESS GOHRING: Yes, I certainly will. And
4 I will also be switching off to Mr. Weaver as well.

5 MR. MILIBAND: Understood. Thank you.

6 WITNESS GOHRING: Next slide, please.

7 So we developed the Modified Flow Management
8 Standard for several reasons, one of which is that we
9 observed through modeling from the BDCP and then the
10 WaterFix that the existing dangers of low storage in
11 Folsom Reservoir were exacerbated by WaterFix.

12 Next slide, please.

13 Modified Flow Management Standard is not the
14 first flow standard on the American River. It's not
15 even the first flow standard developed by the Water
16 Forum. Before our Water Forum agreement in 2000, there
17 was already a flow regime required on the river. It
18 was circa -- is circa 1958, Decision 893 of the State
19 Board. And so as part of the Water Forum agreement, we
20 had a commitment to come up with a more protected flow
21 regime in D893.

22 We did so in cooperation with our state and
23 federal fish agencies, and Bureau of Reclamation
24 published that in 2006. Reclamation began voluntarily
25 implementing that standard at that time.

1 What was different from the -- from
2 Decision 893 was it had a floor in about 95 percent of
3 the years, a minimum flow floor, of 800 cfs as opposed
4 to the 250 cfs floor of D893. It also, for the first
5 time, incorporated an official approach, an explicit
6 approach for managing temperatures on the Lower
7 American River along with flows.

8 After 2009, we began working on the Modified
9 Flow Management Standard. The initial trigger that
10 started that work was the 2009 NMFS Biological Opinion.
11 That Biological Opinion incorporated our 2006 FMS by
12 reference for all of the flow requirements.

13 For the temperature requirements, NMFS went on
14 to say "do something more," "do something more
15 protective." They actually used words like, "Create an
16 iterative temperature approach," and that Reclamation
17 should consider curtailing discretionary deliveries in
18 order to meet a higher temperature result -- excuse me,
19 a more protective temperature result, which of course
20 would be a lower temperature.

21 So by October of 2015, we had developed and
22 published a version of the Modified Flow Management
23 Standard that also has a minimum floor. The minimum
24 floor is 500 cubic feet per second, which is higher
25 than the last version, which reverts down to the

1 250 standard part of the time. It has the same general
2 approach to temperature management, but it results in a
3 more protective temperature through the use of Folsom
4 Reservoir storage requirements, specifically an
5 end-of-December requirement of either 300,000 acre-feet
6 or 230,000 acre-feet, depending on hydrologic
7 conditions, and a sliding scale storage requirement at
8 the end of May that goes up to 900,000 cubic feet per
9 second.

10 Next slide, please.

11 As we went through the work of developing the
12 Modified Flow Management Standard, we initially had two
13 objectives: protecting water supplies in the American
14 River Basin and improving conditions for fishery, in
15 particular, temperature. Those are roughly the Water
16 Forum's co-equal objectives.

17 As we went through different versions of
18 modifying the 2006 Flow Management Standard, we
19 ultimately ended up adopting a third objective and that
20 was to hold the fisheries of the Sacramento River
21 harmless in order to avoid redirected impacts,
22 particularly to winter-run and spring-run Chinook
23 salmon.

24 Next slide.

25 How did we immediate those objectives? Well,

1 we met them by going through a lot of iterations and
2 checking our results. The green box up there looks at
3 the three objectives that I just mentioned: Folsom
4 Reservoir storage, which is a proxy for water supply
5 reliability; Lower American River water temperatures;
6 and impacts to or potential impacts to the Sacramento
7 River.

8 And I'll get more -- Paul -- Mr. Bratovich and
9 I will get into more of the metrics for how we
10 determined those.

11 As we iterated, we played with two primary
12 knobs. One was the approach to minimum flows, and the
13 other was the magnitude of our storage requirements.
14 And we played with those knobs until we found something
15 we called our sweet spot, a place where we have
16 demonstrable benefits in this basin to water supply
17 reliability and the environment. And we have convinced
18 ourselves and our wide variety of stakeholders that
19 we're avoiding redirected impacts to the Sac.

20 This is a good time to mention that we have
21 updated some of those parameters, particularly the
22 definition of "minimum flows" --

23 Next slide, please.

24 -- and a few other parameters since Part 1 of
25 this proceeding. The reason we updated those is

1 because we -- newer data became available to us,
2 particularly on the distribution of Chinook salmon and
3 steelhead redds in the Lower American River.

4 Water Forum has a longstanding commitment to
5 using the best available scientific information and the
6 best available technical tools. And when we found this
7 data to be available since the end of Part 1, we felt
8 that it was important to us to incorporate that into
9 our analysis. We reiterated, and we basically found a
10 new sweet spot, slightly different than the old one.

11 And there's a list there of a few other things
12 that we changed. The other substantive one besides the
13 definition of the -- sort of the hinge points on our
14 curves for minimum flows is that we extended our
15 fall-run redd dewatering protection into the month of
16 February. The other things on the list there are more
17 cleanup actions.

18 Next slide, please.

19 So how well have we met these objectives?
20 Let's start with storage, water supply reliability.
21 This is an exceedance graph that shows end-of-May
22 storage for Folsom Reservoir. This shows the Modified
23 Flow Management Standard in blue, the existing
24 condition or the 2006 Flow Management Standard in red.
25 And you can see that storage for about 46, 45 percent

1 of the time is noticeably higher for the Modified Flow
2 Management Standard.

3 Next slide.

4 By the way our -- our water rationale document
5 has a more complete listing of these exceedances; for
6 time, I'm going through a sampling.

7 This is end-of-September storage. Again, you
8 see that we have significantly higher storage for about
9 50 percent of the time with Modified FMS.

10 Next slide, please.

11 Same thing with November. It's important to
12 note that November is usually the low point for Folsom
13 Reservoir, November or early December. In the modeling
14 world, it's almost always November. This basically
15 shows that the Modified Flow Management Standard avoids
16 what the modeling world would call dead pool, which you
17 see with the 2006 FMS.

18 Next slide, please.

19 And then finally, December, I'm presenting
20 December because it is one of the months for which we
21 have a storage requirement in the Modified FMS, again
22 demonstrably higher storage in Folsom Reservoir.

23 Next, we'll talk about water temperature, and
24 I'll turn it over to Paul.

25 WITNESS BRATOVICH: Next slide, please.

1 Thank you, Tom.

2 Obviously, with water temperature being
3 considered to be the most limiting factor to steelhead
4 natural production in the Lower American River, much of
5 our analyses emphasized water temperature suitability.
6 We examined water temperature differences between the
7 Modified FMS and the current regime, the 2006 FMS, by
8 month, by location. And we examined every month of the
9 year and compared that with the criteria, the numeric
10 criteria associated with the specific species and life
11 stage. But I'm going to simply go over real quickly
12 April through October as an example of that at Watt
13 Avenue, which is the middle station.

14 We added additional stations downstream
15 because, particularly for -- regarding the migratory
16 life stages, whether it is juvenile, salmon steelhead
17 migrating out of the river or adults migrating upstream
18 in the river, obviously they have to pass through the
19 lowermost portion of the river on their journeys, so we
20 included that as a station of examination.

21 So quite quickly and in effort of expediency,
22 we show improved water temperatures in Lower American
23 River. For this presentation, I'm just going to show
24 April through October. Those are the warmest months of
25 the year. And we can quickly go through them and look

1 and talk about quickly the water temperature
2 improvements that we see.

3 In April, we see up to 3 degrees cooler water
4 temperature at various portions of the exceedance
5 probability, as you can see on the graph, up to about
6 15 percent, the warmest, 15 percent of the
7 distribution.

8 Next slide, please.

9 In May we see water -- cooler water
10 temperatures, oh, depending on the station, 20 to 35
11 percent of the probability distribution or 25 to 30
12 percent of the time during May at the stations of
13 Hazel, Watt, and Paradise Beach.

14 In this instance, recalling that 63 degrees
15 would be a threshold value used by NMFS for juvenile
16 steelhead rearing, you can see the cooler water
17 temperatures above that threshold value associated with
18 the Modified FMS relative to 2006 FMS.

19 Next slide, please.

20 June, there is a more extensive amount of time
21 or percent of time, I should say, when cooler water
22 temperatures are provided by the Modified FMS, up to
23 about a degree, roughly a degree over about 35 percent
24 of the time, when temperatures are warmest during June.
25 This is particularly beneficial to steelhead juvenile

1 rearing, juvenile Chinook salmon, out migration, and
2 rearing through June, as indicated by NMFS, and adult
3 pre-spawn staging as we call it. For fall-run, we call
4 it "staging" because it's slightly different and it has
5 been believed we have a shorter period of time than,
6 for example, spring run, which have a much longer
7 duration of holding after they return to freshwater..

8 Next slide, please.

9 In July, fairly substantial differences with
10 Modified FMS, meaning cooler water temperatures, up to
11 25 percent of the warmest temperatures, again, of the
12 distribution during in July at the various locations,
13 again, a benefit to steelhead juvenile rearing, which
14 was the focus of our first panel in demonstrating
15 adverse and substantial and significant and
16 unreasonable effects.

17 Next slide, please.

18 August, same story, cooler water temperatures
19 with the Modified FMS.

20 Next slide.

21 September, again, seeing improvements with
22 Modified FMS.

23 Next slide, please.

24 And October, some lesser amount of improvement
25 but still some improvements during the month of

1 October.

2 So our conclusion here is that implementation
3 of the Modified FMS would provide more suitable water
4 temperatures during all of the warmer months of the
5 year at the various locations that apply to the various
6 life stages and specifically and particularly relative
7 to juvenile steelhead rearing, which was our concern
8 associated with Panel 1 and implementation of WaterFix

9 Tom?

10 WITNESS GOHRING: So we've covered water
11 supply reliability objective, fishery objective in the
12 lower American. For one of the metrics we used to look
13 at redirected impacts, potential redirected impacts to
14 Sac River, I'm going to turn to Jeff -- Mr. Weaver.
15 Excuse me.

16 WITNESS WEAVER: Thank you.

17 Next slide, please.

18 So we also, in order to look at avoiding
19 redirected impacts to the Sacramento River, we did look
20 at Shasta Reservoir storage and also the Shasta
21 Reservoir cold water pool. We extracted the cold water
22 pool volume out of the Sacramento River HEC5Q model
23 that was provided to us by Reclamation. And -- well, I
24 should say we ran the tool provided to us by
25 Reclamation and extracted these values from it.

1 So you could see -- we have the complete set
2 of output, as is in my testimony. So we just have some
3 excerpts here. We did see that there are some
4 year-to-year differences in storage, but the cold water
5 pool was something we really focused on for purposes of
6 evaluating redirecting impacts to Sacramento River
7 fisheries.

8 So what we see here, in the upper two lines,
9 the solid lines are the same, 2006 FMS and Modified FMS
10 from CalSim. And you see that the storage is on top of
11 each other throughout the -- pretty much the entire
12 distribution.

13 And then the lower figure shows the
14 distribution of the 49-degree temperature volume from
15 the models for the two scenarios. And same thing, the
16 red line is the 2006 FMS, and the blue line is the
17 Modified FMS.

18 We see here that the lines, all four lines,
19 the two -- each pair of lines are basically on top of
20 one another and are essentially indistinguishable.

21 Could we go to the next slide, please?

22 So here I pulled out September. And we see
23 more of the same throughout the distribution of the
24 storage and the cold water pool volume, very difficult
25 to ascertain any difference between the two.

1 Then we go to the next slide is December, and
2 so here we've -- the reservoir is starting to reset its
3 temperature. And so we see that, again, basically the
4 same temperatures throughout the entire -- excuse me,
5 same volume both of storage and 49-degree water
6 throughout the entire distribution.

7 And next slide.

8 WITNESS GOHRING: So that was one of our
9 matrices for looking at potential impacts to Sac River.
10 The second matrix is water temperature in the
11 Sacramento.

12 So back to Mr. Bratovich.

13 WITNESS BRATOVICH: As Tom mentioned, one of
14 our objectives was not to inadvertently create
15 redirected impact to the Sacramento River from
16 implementation of the Modified FMS. This is a very
17 integrated relationship.

18 So we examined specifically whether we would
19 have any water temperature changes in the Sacramento
20 River during the winter-run Chinook salmon spawning,
21 incubation, and alevin period, as it's called. We did
22 that for a couple reasons: one, obviously because
23 winter-run is in danger; two, because that's the
24 warmest time of the year; three, because the threshold
25 utilized by NMFS and by Reclamation in the BA was the

1 lowest of the thresholds, 55.4 degrees, with other
2 thresholds, other species and runs being higher than
3 that with the exception of other spawning.

4 So for the warm months and the lowest
5 threshold, that was -- took the most rigorous
6 examination that we thought we could actually
7 investigate to see if we had redirected impacts.

8 We looked at temperature differences at three
9 locations, from upstream to downstream, from below
10 Keswick and Balls Ferry and then Red Bluff.

11 NMFS and Reclamation in the BO and BA
12 respectively looked at five locations, including our
13 uppermost Keswick, our middle at Balls Ferry, and our
14 most downstream Red Bluff. They had a couple of
15 intermediate stations, but we examined these, which
16 covers both the uppermost, the lower most, and a
17 central location.

18 So we examined the water temperature
19 differences. And I'll, in the interest of expediency,
20 go through these a bit quickly.

21 There's very, very little to no change most of
22 the time. That includes April; that includes May.

23 Next slide, please. That -- next slide again.

24 That includes June.

25 Next slide.

1 July. We did see a -- if you can look and
2 squint down at critical, and you'll see a little bit of
3 elevation here at Balls Ferry. We found a little bit
4 larger of a difference at Red Bluff during critical
5 years in July.

6 Next slide, please.

7 August, this one, again, for the water year
8 types, not much difference at all, with the exception
9 on the lowermost right-hand side. At Balls Ferry
10 during August, we see a little bit warmer under the
11 Modified FMS relative to the 2006 FMS.

12 It's relatively infrequent, as you can see.
13 It represents 4.6 percent of the distribution during
14 August of critical years, which actually represents
15 less than 1 percent, about 0.7 percent, of all August.
16 So it's of relatively small frequency that that is
17 encountered.

18 Next slide, please.

19 September, when looking at September, critical
20 again at Balls Ferry. This time we see the Modified
21 FMS being cooler. So in August, we had 4.6 percent of
22 the time it was warmer, but in September, 12.5 percent
23 of the time for the -- for the critical September
24 stratum, it's actually cooler.

25 Next slide, please.

1 We see a similar but more dramatic cooling in
2 October and, again, the bottom-most right-hand corner
3 of all of these plots, which include the "all years" on
4 the top left and then "by water type" specifically. In
5 critical years during the month of October, that
6 equates to a 25.7 percent of the time it's demonstrably
7 cooler.

8 So we did see some minor increases in August,
9 but we see larger decreases during September and
10 October of the same water year type.

11 So that was part of our consideration to
12 conclude that we don't have substantial changes and
13 unreasonable redirected effects on the Sacramento River
14 fisheries.

15 WITNESS GOHRING: Next slide please. Thanks.

16 As Paul said, our team concludes by looking at
17 those two matrices that -- no redirected impact to
18 Sacramento River fisheries.

19 Next slide, please.

20 Although it was not one of our objectives to
21 avoid other redirected impacts, we find that we have
22 achieved that. We have -- using the modeling tools at
23 our disposal, we've looked at delivery to CVP and SWP
24 contractors north and south of the Delta; we've looked
25 at other environmental factors such as X2 and Delta

1 outflow, we've looked at hydropower generation. What
2 we found for all of those factors was negligible change
3 between the Modified FMS and the existing flow
4 standard.

5 Next slide, please.

6 Back to Paul.

7 WITNESS BRATOVICH: I'll take it from here,
8 Tom.

9 So we went through a full evaluation. We
10 evaluated various parameters, various life stages,
11 fall-run Chinook salmon and steelhead on the Lower
12 American River to determine what the differences would
13 be between implementing the Modified FMS relative,
14 again, as I said, to the 2006 FMS.

15 This is a brief summary composition of our
16 findings for fall-run Chinook salmon in this case. And
17 I guess the overall conclusion is that pretty much
18 similar or slightly increased level of protection for
19 fall-run in the Lower American River.

20 We didn't see -- we frankly did not see really
21 large benefits to fall-run Chinook salmon with
22 implementation of the Modified FMS.

23 Next slide, please.

24 That is not the same finding for steelhead.
25 We did find an increased level of protection for

1 steelhead in the Lower American River by a compilation
2 of the various life stages. Obviously from our
3 previous testimony in Panel 1, through the
4 demonstration of water temperature changes that we
5 admittedly quite quickly just went through, we have
6 improved water temperature conditions in the Lower
7 American River, which would improve the level of
8 protection for steelhead with implementation of the
9 Modified FMS.

10 WITNESS GOHRING: Next slide at least, please,
11 two slides.

12 In conclusion, the first conclusion slide is,
13 given the evidence that we've submitted in this
14 proceeding, we -- and as you've heard summarized here
15 today, we believe that we have met the three objectives
16 we sought to meet. We're protecting -- helping protect
17 water users in the American River Basin from low
18 storage conditions. We're improving conditions for
19 steelhead, in particular, water temperature in the
20 Lower American River. And we're avoiding redirected
21 impacts to fisheries in the Sacramento River.

22 Next slide.

23 Water Forum has a longstanding tradition of
24 not just complaining about things but trying to bring
25 solutions. So we have tried to do that as part of this

1 proceeding. We're not just here to testify about
2 injury, we're also -- we come for a partial solution,
3 at least a solution or a way to address the storage
4 conditions in the American River watershed, storage
5 conditions at Folsom, and the exacerbation of those
6 conditions created by WaterFix.

7 So in ARWA-502, we have updated terms and
8 conditions, and we submit them with all humility.
9 Thank you very much.

10 MR. MILIBAND: Thank you, Mr. Gohring and
11 members of Panel 1 and Panel 2.

12 If we could jump back, please, to Slide 25 of
13 ARWA-501.

14 And Mr. Gohring, I just -- a little
15 ticky-tacky point, I think somewhere in the direct
16 testimony on this, going to the fourth column, fourth
17 row, referring to the end-of-May storage requirement
18 with the Modified FMS, I thought I heard "900 cfs," but
19 I just wanted to clarify that it's 900,000 acre-feet.

20 WITNESS GOHRING: 900,000 acre-feet is
21 correct.

22 MR. MILIBAND: Thank you.

23 That concludes our direct testimony on
24 Panels 1 and 2. And I think means we're up with Dr.
25 Addley for cross-examination.

1 CO-HEARING OFFICER DODUC: Thank you.

2 Actually, can I get an estimate from all
3 parties who intend to conduct cross-examination of this
4 panel, in particular, anyone who wishes to conduct
5 cross-examination of Dr. Addley?

6 Go ahead, Mr. O'Brien.

7 MR. O'BRIEN: Kevin O'Brien, Group 7. About
8 15, 20 minutes, but I don't have any questions for
9 Dr. Addley.

10 CO-HEARING OFFICER DODUC: Okay.

11 MR. MIZELL: Tripp Mizell, DWR. We're
12 projecting about an hour.

13 CO-HEARING OFFICER DODUC: But not for
14 Dr. Addley?

15 MR. MIZELL: Probably 10, 15 minutes for
16 Dr. Addley.

17 MS. AUFDEMBERGE: Amy Aufdemberge, Department
18 of the Interior. 10 minutes, none for Dr. Addley.

19 CO-HEARING OFFICER DODUC: Thank you.

20 Ms. Akroyd?

21 MS. AKROYD: 20 minutes, none for Dr. Addley.

22 CO-HEARING OFFICER DODUC: Mr. Ruiz?

23 MR. RUIZ: Yes. I'm just going to reserve 10
24 minutes, none for Dr. Addley. But it might not be
25 necessary at all.

1 CO-HEARING OFFICER DODUC: All right. And
2 Ms. Morris, your questions for Dr. Addley?

3 MR. BEZERRA: And, again, we very much
4 appreciate the professionalism to focus for
5 Dr. Addley and get him out of here quickly.

6 CROSS-EXAMINATION BY MS. MORRIS

7 MS. MORRIS: Good afternoon, Dr. Addley.

8 WITNESS ADDLEY: How are you doing?

9 MS. MORRIS: Good. How are you?

10 WITNESS ADDLEY: Good.

11 MS. MORRIS: Good. On Page 4 of your
12 testimony, ARWA-900, you talk about operations within a
13 given year that negatively affect storage or multi-year
14 operations. Do you see that?

15 WITNESS ADDLEY: Yes.

16 MS. MORRIS: Do those oper- --

17 WITNESS ADDLEY: I assume you're talking about
18 Paragraph 6?

19 MS. MORRIS: Yes. Do those operations in that
20 context include meeting D1641 water quality control
21 time requirements?

22 WITNESS ADDLEY: I would say that that -- that
23 paragraph isn't really referring to what you're asking.
24 The paragraph is really just saying that, if
25 operations -- and I didn't testify to injury.

1 But if any operations -- they could be State
2 Water Project or CVP, or they could be the Modified
3 FMS. If operations reduce the amount of cold water
4 storage in May, June or July, they can have a negative
5 effect on temperatures downstream.

6 MS. MORRIS: Though you weren't referring to
7 any specific requirements for operations on CVP or SWP?

8 WITNESS ADDLEY: That's correct.

9 MS. MORRIS: Okay. Thank you. Is it your
10 understanding that the Modified FMS Folsom Reservoir
11 storage requirements and MRRs were specifically
12 designed to ensure water temperatures in the Lower
13 American River are maintained or enhanced?

14 WITNESS ADDLEY: Yes.

15 MS. MORRIS: And was that -- is the Modified
16 FMS not for water supply reliability also?

17 WITNESS ADDLEY: Yes, it is. You said "not,"
18 but it is developed for water supply reliability.

19 MS. MORRIS: Thank you. In Paragraph 11 of
20 your testimony, you have come to the opinion that the
21 Modified FMS protects temperature conditions in the
22 Lower American River for salmonids, correct?

23 WITNESS ADDLEY: Correct.

24 MS. MORRIS: Have you analyzed the impacts
25 from implementing the Modified FMS on Sacramento River

1 salmonids with the California WaterFix in place?

2 WITNESS ADDLEY: Ask that one more time.

3 MS. MORRIS: Okay. Have you analyzed the
4 impacts from implementing the Modified FMS on
5 Sacramento River salmonids with the WaterFix project in
6 place?

7 WITNESS ADDLEY: I haven't. And I don't
8 know -- Jeff Weaver might have done that work. My
9 recollection is no.

10 WITNESS WEAVER: Mr. Bratovich evaluated the
11 effects on fisheries.

12 MS. MORRIS: I'm sorry. What?

13 WITNESS WEAVER: Mr. Bratovich evaluated the
14 effects on fisheries.

15 MS. MORRIS: Of the -- I'm sorry. I want to
16 be clear here. Let me just ask Mr. Bratovich then.

17 Did you analyze the impacts of implementing
18 the Modified FMS on the Sacramento River salmonids with
19 California WaterFix in place?

20 MR. BEZERRA: And I'm going to object, vague
21 and ambiguous at this point because we've seen a wide
22 variety of modeling runs reflecting the California
23 WaterFix. So if there is some particular modeling run
24 she'd like to focus on, we should specify that.

25 CO-HEARING OFFICER DODUC: Do you have a

1 modeling run, or were you asking a general question?

2 MS. MORRIS: I'm asking the general question
3 but any modeling run. It could be H3+; it could be H3;
4 it could be H4. You can pick. If there's any that --
5 you could just let me know. I could ask one at a time
6 if counsel prefers.

7 CO-HEARING OFFICER DODUC: Overruled.

8 Mr. Bezzera?

9 WITNESS WEAVER: Maybe it is a question for
10 me. We did not do a model run, a CalSim run that
11 included the WaterFix.

12 WITNESS GOHRING: And the FMS.

13 WITNESS WEAVER: And the FMS, I'm sorry.
14 Correct.

15 MS. MORRIS: Thank you. That was my
16 understanding.

17 WITNESS ADDLEY: And I would add that we
18 didn't did do a temperature model run. We had great
19 concerns about the way that the WaterFix, the
20 hydrology, inflow hydrology into the rim dams was
21 developed and used in the WaterFix modeling because it
22 didn't take into account the storage upstream.

23 And I reviewed with Jeff Weaver, I reviewed
24 inflow hydrology into Folsom Reservoir. And in July
25 the climate change inflow hydrology said that inflows

1 into Folsom Reservoir would be about 40 percent of what
2 they would be without climate change.

3 And I know from working on PCWA's projects
4 that they have a large amount of storage,
5 350,000 acre-feet of storage upstream. So with climate
6 change, with earlier hydrology, earlier rainfall, they
7 would store that water.

8 But in July all the projects, even on the
9 SMUD, on the South Fork project, they would store the
10 water, and they would release in July. And there would
11 not be a 40 percent reduction in inflow hydrology to
12 Folsom. So we had some serious concerns about the
13 hydrology.

14 MS. MORRIS: I respectfully ask that that
15 response be stricken from the record. That was not
16 based on my question. My question was answered, and it
17 was whether or not the modeling for the FMS included
18 WaterFix and was analyzed.

19 And I believe that that testimony Mr. --
20 Dr. Addley, excuse me, just gave was part of this
21 group's testimony in Part 1.

22 CO-HEARING OFFICER DODUC: Mr. Bezzera?

23 MR. BEZERRA: I think all Mr. Addley was
24 trying to do was explain why he didn't do that. There
25 was a distinct reason; I believe it's in his testimony

1 even someplace.

2 But, I mean, I would opposed the motion on the
3 grounds that he was just trying to explain what
4 happened.

5 CO-HEARING OFFICER DODUC: That's what I
6 understood.

7 Overruled, Ms. Morris.

8 MS. MORRIS: I have no further questions for
9 Dr. Addley.

10 CO-HEARING OFFICER DODUC: Actually, let me
11 get a clarification from you. Does the State Water
12 Contractors have other cross-examination for this
13 panel?

14 MS. MORRIS: In conjunction with DWR.

15 CO-HEARING OFFICER DODUC: In conjunction.

16 MS. MORRIS: With the hour.

17 CO-HEARING OFFICER DODUC: All right.

18 Anything else for Dr. Addley?

19 (No response)

20 CO-HEARING OFFICER DODUC: If not, then thank
21 you very much, Dr. Addley.

22 WITNESS ADDLEY: Thank you, very much.

23 CO-HEARING OFFICER DODUC: And let's get to
24 the rest of your cross-examination.

25 MS. MORRIS: Thank you. I'll start -- I'm

1 going to bounce around a little bit, so I should
2 probably give you my overview of topics.

3 I have some questions about real-time
4 operations for Mr. Gohring. I have questions for
5 Mr. Bratovich regarding his findings and the basis of
6 his findings regarding temperature. And I have some
7 questions for Mr. Weaver regarding his -- the work that
8 he did and is relied upon by Mr. Gohring.

9 CO-HEARING OFFICER DODUC: Proceed.

10 FURTHER CROSS-EXAMINATION BY MS. MORRIS

11 MS. MORRIS: Mr. Gohring, would you agree that
12 end-of-May storage, is a good indicator of available
13 cold water pool in Folsom?

14 WITNESS GOHRING: It is an indicator of cold
15 water pool for Folsom Reservoir, yes.

16 MS. MORRIS: And it's one that you used in
17 your presentation on Slide 8 ARWA-501, correct?

18 WITNESS GOHRING: Let me look at Slide 8.

19 As I just said, it is one of the matrices that
20 is on Slide 8.

21 MS. MORRIS: Are you aware of the American
22 River Operations Group that Reclamation convenes?

23 WITNESS GOHRING: I am.

24 MS. MORRIS: What is the purpose of that
25 group?

1 WITNESS GOHRING: It -- yeah. It's kind of a
2 deep answer. The group was actually first specified in
3 the Water Forum's 2006 Flow Management Standard. It is
4 essentially an inner agency staff working group that
5 invites members of the public, which includes the Water
6 Forum, to be present and make comments while they
7 deliberate about real-time operational decisions for
8 Folsom Reservoir and the American River.

9 MS. MORRIS: So is it true that the ARG is the
10 forum where Reclamation and stakeholders discuss the
11 American River operations for upcoming months,
12 including the temperature management plan?

13 WITNESS GOHRING: That's a long -- see if I
14 can parse that out. Hit me again.

15 MS. MORRIS: Is it true that the ARG is the
16 forum where Reclamation and stakeholders discuss the
17 American River operations for upcoming months,
18 including temperature management plans?

19 WITNESS GOHRING: Is one of the -- it is
20 probably the -- I mean, I want to be careful. It's not
21 the only forum where that happens. It is probably the
22 primary forum that Reclamation convenes to -- yeah, to
23 do exactly what you said.

24 MS. MORRIS: And do you know if WaterFix is
25 proposing changes to the existence of this group?

1 WITNESS GOHRING: Not that I'm aware of.

2 MS. MORRIS: How about the function of the
3 group?

4 WITNESS GOHRING: Not that I'm aware of.

5 MS. MORRIS: And do you know if WaterFix is
6 proposing changes to the American River operations
7 requirements in the 2009 NMFS Biological Opinion?

8 MR. BEZERRA: Objection, vague and ambiguous
9 as to "operational requirements."

10 CO-HEARING OFFICER DODUC: Is he aware?

11 WITNESS GOHRING: Question again? Sorry.

12 MS. MORRIS: Do you know if WaterFix is
13 proposing changes to the American River operations
14 requirements in the 2009 NMFS Biological Opinion?

15 WITNESS GOHRING: Operational requirements in
16 the Biological Opinion? I don't believe so.

17 MS. MORRIS: Thank you. A couple questions.
18 if -- could you please pull up -- thank you.

19 CO-HEARING OFFICER DODUC: Ms. Gaylon is doing
20 the duties today.

21 MS. MORRIS: Thank you, Ms. Gaylon.

22 Could you please pull up the website has the
23 exhibit, and specifically ARWA and scroll to the top.

24 Oops, sorry. I meant to the top of Part 2.

25 Okay. I think these questions are for

1 Mr. Weaver, but I'm not sure. So if anyone can help me
2 by answering, if appropriate, that would be good.

3 The modeling files that are shown on the top
4 four, are those all of the modeling files for the
5 Modeling Flow Standard as well as the 2006 Flow
6 Management Standard that you used to create the -- your
7 exhibits for this proceeding?

8 WITNESS WEAVER: Yes.

9 MS. MORRIS: Are there other modeling files
10 that are not included that show other operations for
11 the Modified Flow Standard?

12 WITNESS WEAVER: Not that I'm aware of.

13 MS. MORRIS: So this also shows operations on
14 the American River? One of these files shows the
15 operations of the Modified Flow Standard on the
16 American River?

17 WITNESS WEAVER: Not the water temperature
18 modeling, but the CalSim results for flows on the
19 American River.

20 MS. MORRIS: Okay. So the temperature
21 modeling is included for the Sacramento River under the
22 HEC5Q.Zip, correct?

23 WITNESS WEAVER: That's correct.

24 MS. MORRIS: But not for the American River?

25 WITNESS WEAVER: That's correct.

1 MS. MORRIS: Where can I find that information
2 for the American River?

3 WITNESS WEAVER: That was -- Mr. Addley did
4 that modeling. I was not part of the American River
5 temperature modeling.

6 MS. MORRIS: But it's not included in the
7 exhibits for this panel, correct, or for this American
8 Rivers group?

9 CO-HEARING OFFICER DODUC: Does anyone know?

10 WITNESS GOHRING: It's tough to answer without
11 Dr. Addley, but ARWA-908 are the results of his
12 temperature modeling that we did for the Lower
13 American.

14 MS. MORRIS: Right. Those are selected
15 results and not the full results. And I'm wondering if
16 Mr. Bezerra or Mr. Miliband can produce the modeling --
17 the modeling for the American River temperature as well
18 as the full suite of results.

19 MR. BEZERRA: I believe we can.

20 CO-HEARING OFFICER DODUC: Can you confirm
21 that and let us know?

22 MR. BEZERRA: I suspect we can confirm it at a
23 break, I suspect. I might be wrong about that, but I
24 suspect by the end of the day we can figure that out.

25 CO-HEARING OFFICER DODUC: Good. Thank you.

1 MS. MORRIS: Okay. Thank you.

2 Mr. Bratovich -- it's Mr. Bratovich, correct?

3 Or is it Doctor?

4 WITNESS BRATOVICH: No, it's Paul.

5 MS. MORRIS: Thank you. You can call me Stef,

6 but I think I should call you Mr. Bratovich.

7 WITNESS BRATOVICH: That's fine.

8 MS. MORRIS: I've couple -- I'm going to jump

9 around a bit, but I'll start with you.

10 In your --

11 If we could pull up ARWA-703.

12 This is your exhibit that you prepared,

13 correct?

14 WITNESS BRATOVICH: Yes.

15 MS. MORRIS: And then if we could scroll to

16 the very last page. And then I just want to confirm

17 that the literature you cited for this particular

18 exhibit is these two studies under Section 4.0, which

19 includes National Marine Fishery Services 2017 and U.S.

20 Department of Interior 2016; is that correct?

21 WITNESS BRATOVICH: Yes.

22 MS. MORRIS: And then I also would like to ask

23 you if you could show me in your written testimony,

24 which is ARWA-701, which studies you cite for the

25 temperature findings.

1 WITNESS BRATOVICH: My testimony was ARWA-700
2 not 701.

3 MS. MORRIS: I'm sorry, I apologize. Thank
4 you for clarifying.

5 WITNESS BRATOVICH: That's fine. Could you
6 repeat your question?

7 MS. MORRIS: Sure. Let me just try to
8 short-cut this a bit.

9 WITNESS BRATOVICH: Yeah, okay.

10 MS. MORRIS: I read your testimony 700, and it
11 seems to rely, for studies cited, almost entirely on
12 703, which relies on -- the majority of the citations
13 are on the NMFS Biological Opinion for California
14 WaterFix.

15 Are there other studies that you cite to or
16 rely on for temperature findings? And can you please
17 point me to those?

18 MR. MILIBAND: I just want to interject a
19 little bit of an objection or point of clarification
20 maybe for Ms. Morris. In saying "cited" versus "relied
21 upon," those are two very different things for an
22 expert. Things that are cited are obviously cited.
23 Things that are relied upon, almost becomes a memory
24 test for an expert that's been in this line of work for
25 35 years.

1 So I don't know if that question could be
2 narrowed a bit, or distinguishing between "cited"
3 versus "relied upon."

4 MS. MORRIS: I'm asking for the citations.
5 There was a comment earlier from Mr. Bezzera that this
6 witness cited to several studies, and so I'm asking for
7 the citations.

8 MR. MILIBAND: Fair enough with that
9 clarification for citations. Thank you.

10 WITNESS BRATOVICH: These are the citations
11 that I used, and I used them in 703, specific examples,
12 to illustrate status of the steelhead and the
13 conditions in the Lower American River. Also, when I
14 was looking at water temperatures, I referred to the
15 NMFS Biological Opinion and the Reclamation BA, which
16 themselves contain numerous citations.

17 So when I referred to the NMFS BO and where I
18 used quotations from the NMFS BO, oftentimes they were
19 citing another document or two. And that includes a
20 suite of considerations in those documents talking
21 about water temperature thresholds and such.

22 So I'm trying to answer your question.

23 Yeah, I included those two in my citations
24 here, but I think my references would include that
25 which was cited in those other documents.

1 MS. MORRIS: Let me ask you this question,
2 then. The two documents that you cited to, relied
3 upon, in either of those two documents, the Biological
4 Opinion or the Bureau of Reclamation document, is
5 Exhibit ARWA-702 the "Lower American River Biological
6 Rationale Development and Performance of the Modified
7 Flow Management Standard" cited in either of those
8 references?

9 WITNESS BRATOVICH: Is our Exhibit 702 cited
10 in either the NMFS BO or Reclamation's BA?

11 MS. MORRIS: Yeah, that's the question.

12 WITNESS BRATOVICH: Well, no, our 702 came out
13 subsequent to those documents.

14 MS. MORRIS: Okay. Thank you. Isn't it true
15 that the steelhead -- let me step back here for a
16 second.

17 Isn't it true that the steelhead produced at
18 the Nimbus Hatchery on the American River are not
19 protected by the ESA?

20 WITNESS BRATOVICH: I believe that is true.

21 MS. MORRIS: Are the Central Valley steelhead
22 listed under the California Endangered Species Act?

23 WITNESS BRATOVICH: Central -- California
24 Central Valley steelhead, are they listed under the
25 ESA?

1 WITNESS ADDLEY: CESA.

2 MS. MORRIS: CESA.

3 WITNESS BRATOVICH: Oh, under CESA. No,
4 steelhead are not listed under CESA.

5 MS. MORRIS: And, Mr. Gohring, I just wanted a
6 quick follow-up question for you. I think you state in
7 your testimony on Paragraph 19 -- so that's ARWA-500 --
8 that they are listed under CESA. So would you agree
9 with Mr. Bratovich that they are not?

10 WITNESS GOHRING: I agree with Mr. Bratovich.

11 MS. MORRIS: You do?

12 WITNESS GOHRING: I do.

13 MS. MORRIS: Thank you. Mr. Bratovich, isn't
14 it true that a majority of the in-river steelhead
15 spawning in the American River are of hatchery origin?

16 WITNESS BRATOVICH: I don't know how easy of
17 an answer that is technically. I think there is --
18 there are some statements that the steelhead run is
19 supported by hatchery production in the Lower American
20 River. There are observations both, adipose
21 fin-clipped steelhead indicating a hatchery production,
22 hatchery marking -- is this on?

23 MR. BAKER: We are having trouble with the
24 mike.

25 WITNESS BRATOVICH: What? Can you hear me

1 now?

2 Adipose fin-clipped individuals and
3 non-adipose fin-clipped individuals, the hatchery
4 production for steelhead, when they insert coded wire
5 tags into their heads, they clip off their adipose fin,
6 which is right in front of the caudal fin in the back
7 of the fish so they can be more readily distinguished
8 as a hatchery produced fish rather than a naturally
9 produced fish.

10 MS. MORRIS: Are you familiar with the Hanon
11 and Deason 2008 study, I believe, that was citation
12 under Biological Opinion that you cited in your
13 testimony?

14 WITNESS BRATOVICH: I believe I am. I think I
15 have reviewed that paper.

16 MS. MORRIS: And based on that paper, would
17 you agree that approximately 75 to 95 percent of the
18 steelhead on the American River are of hatchery origin?

19 WITNESS BRATOVICH: Well, I can't recollect
20 specifically what was said in that paper. But if
21 you're reading that from that paper, then I'll agree.

22 MS. MORRIS: Would you like me to show you?

23 WITNESS BRATOVICH: No, that's okay. I'll
24 take your word for it.

25 MS. MORRIS: Sounds about accurate from your

1 understanding?

2 WITNESS BRATOVICH: As I said, there is a
3 documentation of the hatchery supporting the run as
4 well as some wild spawning fish, naturally produced
5 fish.

6 MS. MORRIS: Thank you.

7 Mr. Weaver, did you prepare the tables on
8 ARWA-501, Pages 6 and 7? They're also indicated
9 ARWA-504 and ARWA-505, which I believe comes from your
10 testimony.

11 WITNESS WEAVER: Yes, I did.

12 MS. MORRIS: And in this -- for these tables,
13 you used the BA modeling in your testimony, correct?

14 WITNESS WEAVER: That's correct. I did find,
15 however, that I used a slightly different methodology
16 to create these tables than was used in the BA. I
17 extracted the data from the BA modeling, and I had two
18 differences from the way that DWR or whomever wrote the
19 BA did it, and so the values will be slightly
20 different. But the data is from the same source.

21 MS. MORRIS: And what were the two different
22 methodologies that you used?

23 WITNESS WEAVER: Sure. The BA tables used an
24 equation or function in Excel called percentile.inc,
25 and I used an equation -- a function, the

1 percentile.exe. It's a slight different way that it
2 calculates the percentiles.

3 The second difference that the BA tables
4 relied upon a water year basis that went from March to
5 February, and I used October to September.

6 MS. MORRIS. Thank you. Can we agree that, in
7 the modeling that you're using, that the CWF BA is
8 labeled as PA for "project alternative"?

9 WITNESS WEAVER: I believe so, yes.

10 MS. MORRIS: We don't have to agree it's
11 project alternative; it is PA, correct?

12 WITNESS WEAVER: That is project alternative,
13 yes.

14 MS. MORRIS: Thank you. And then if we can
15 just look at 504, is it true that the difference in
16 Folsom -- whoops. Sorry.

17 MR. BEZERRA: Just for clarity of the record
18 we're now on Slide 6 of Exhibit ARWA-501, correct?

19 MS. MORRIS: Correct, which is the exact same
20 exhibit which is ARWA-504.

21 Is it true that the difference in Folsom
22 storage in every month between the PA and the NAA,
23 without climate change, are less than 10 percent in
24 every probability exceedance except for one, which is
25 11.2 percent, and that's the 90 percent exceedance in

1 July, correct?

2 MR. BEZERRA: Objection, compound.

3 CO-HEARING OFFICER DODUC: I'm just wondering,
4 can he do that math that quickly?

5 WITNESS WEAVER: I'm not sure I can calculate
6 the percent differences on this table.

7 MS. MORRIS: So you -- you're not familiar
8 what the percent differences are?

9 MR. BEZERRA: Objection, misstates prior
10 testimony.

11 WITNESS WEAVER: Are we referring to what's on
12 the screen here?

13 MS. MORRIS: Yeah. I'm looking at the June
14 and July in red. And what you're showing is one thing
15 minus the other. And I'm asking what the percent of
16 difference is.

17 CO-HEARING OFFICER DODUC: Between June and
18 July?

19 MS. MORRIS: No, they're not comparing June
20 and July. They're comparing two different
21 alternatives.

22 WITNESS WEAVER: Yeah, Tom --

23 WITNESS GOHRING: Yeah, so I think I
24 understood the question.

25 That's right. That's magnitude of change.

1 And I think percentage might be instructive. But when
2 you're talking about Folsom storage that's within 10-
3 or 20,000 acre-feet of dead pool, the magnitude, I
4 think, is most instructive. So when I look at the
5 90th percentile and the critical, and they're about
6 20,000 acre-feet difference, that's very concerning for
7 us.

8 MS. MORRIS: Okay. But my question was
9 regarding -- these are just comparing one action to the
10 other. And --

11 WITNESS GOHRING: Yeah, and I just -- by the
12 way --

13 MS. MORRIS: -- I understand --

14 WITNESS GOHRING: I think it's "PA" is
15 "proposed action." I think you called it
16 "project alternative."

17 MS. MORRIS: We agreed that we would not
18 characterize it, that it was just Biological Opinion.
19 But we'll call it proposed action.

20 Mr. Weaver, are you okay with that?

21 WITNESS WEAVER: The proposed action and PA,
22 that's fine, project alternative.

23 MS. MORRIS: I appreciate that.

24 WITNESS WEAVER: But your question -- could
25 you repeat your question, please?

1 MS. MORRIS: Do you know what difference, the
2 percentage difference is in July and June between two
3 alternatives? You're just showing the actual impact.
4 What I'm asking is do you know the percentage?

5 WITNESS WEAVER: Do you have an exceedance
6 level you're questioning about, you're asking about?

7 MS. MORRIS: I'm asking for every -- I will
8 represent to you that I have calculated the change in
9 the percentage in June and July and that each of the
10 change in percentage for each exceedance is below
11 10 percent except for in the 90th percentile in July.

12 MR. BEZERRA: Objection, assumes facts not in
13 evidence. The Department has chosen not to produce
14 modeling tables reflecting the results for Folsom
15 storage or any other reservoir for every single month
16 of every single year. The Department could easily do
17 that.

18 The Water Contractors are now asking
19 Mr. Weaver to calculate percentages based on assumed
20 numbers the Department has chosen not to put into this
21 record.

22 CO-HEARING OFFICER DODUC: Hold on. I
23 believe, however, that Mr. Gohring attempted to answer
24 your question by explaining why, in his opinion, the
25 percentage is not as --

1 WITNESS GOHRING: Instructive.

2 CO-HEARING OFFICER DODUC: -- instructive --
3 your words, not mine -- as what is shown.

4 So, Ms. Morris, where are you going with this
5 question? Obviously they did not calculate the
6 percentage.

7 MS. MORRIS: Right.

8 CO-HEARING OFFICER DODUC: And Mr. Gohring
9 explained why. So, your turn.

10 MS. MORRIS: Okay. Well, we -- I -- well,
11 I'll just ask this a different way.

12 Mr. Weaver, would you agree with Mr. Gohring's
13 conclusion that the percentage difference is not
14 instructive?

15 WITNESS WEAVER: I think when we're seeing --
16 particularly, if you look at July and a 90 percent, now
17 you did indicate that that one did have a 10 percent
18 difference. And in that particular month, I'm looking
19 at the rest of ARWA-504, and the 90 percent exceedance
20 was 367,000 acre-feet.

21 So as you indicated, that one is greater than
22 10 percent. And I think that that lower storage -- I
23 don't think a storage differential when reservoir's
24 almost full is as meaningful as a storage differential
25 when the reservoir is almost empty.

1 So seeing a 41,000 acre-foot differential when
2 the reservoir is at 367- under the No Action I think is
3 concerning.

4 MS. MORRIS: So you would agree?

5 MR. BEZERRA: Objection, vague and ambiguous.
6 I don't know what he's being asked to agree to.

7 CO-HEARING OFFICER DODUC: Whether -- I
8 believe the question was whether he agreed with
9 Mr. Gohring's statement, which we might have to repeat
10 all over again, now.

11 WITNESS WEAVER: I believe that the storage
12 during low -- the difference in storage during lower
13 storage periods is of particular concern.

14 MS. MORRIS: Okay. Mr. Gohring, in
15 Paragraph 19 of your testimony, is it correct that the
16 basis of your opinion regarding storage in June and
17 July is based solely on the info compiled in ARWA-501,
18 Pages 6 and 7, which is also ARWA-504 and 505?

19 WITNESS GOHRING: Okay. First of all, we're
20 looking at Paragraph 19 in my testimony?

21 MS. MORRIS: Your testimony.

22 WITNESS GOHRING: Can we pull it up?

23 MR. BEZERRA: And I'm going to object that it
24 misstates prior testimony because Mr. Gohring also
25 relied on other testimony regarding the relationship

1 between low Folsom storage and water temperatures.

2 MS. MORRIS: I was asking specifically about
3 this paragraph. I think if we can give the witness a
4 minute to read it, he can answer.

5 CO-HEARING OFFICER DODUC: Let's do that.

6 WITNESS GOHRING: Let's have the question
7 again.

8 MS. MORRIS: Is the testimony in Paragraph 19
9 based solely on your -- is your opinion in Paragraph 19
10 based solely on the storage figures in June and July
11 shown in ARWA-501, Page 6 and 7 and also the they're
12 the same exhibits, ARWA-504 and 505?

13 WITNESS GOHRING: I understand the question.

14 No. I think they're also based on my direct
15 experience during the recent drought, particularly the
16 drought year 2015 when Water Forum was intimately
17 involved in real-time operations with Reclamation. We
18 saw firsthand the connection between low storage and
19 reduced cold water pool and a resultant elevated
20 temperature in the Lower American River.

21 So I'm drawing from that as well. And I
22 believe -- I might be able to find it, but I believe
23 there is a description of that experience here in the
24 testimony.

25 MS. MORRIS: Okay. Thank you.

1 Mr. Weaver, are you familiar with the draft
2 Yolo Bypass Salmonid Habitat Restoration and Fish
3 Passage Project EIR and EIS?

4 WITNESS WEAVER: I'm familiar with portions of
5 it.

6 MS. MORRIS: Isn't it true that you were a
7 preparer of that document or portions of that document?

8 WITNESS WEAVER: I assisted in preparation of
9 a piece of it, yes.

10 MS. MORRIS: I'm sorry. You did?

11 WITNESS WEAVER: Yes, I assisted in the
12 preparation of a piece of it.

13 MS. MORRIS: Were you specifically
14 participating for hydrologic modeling and water supply
15 analysis?

16 WITNESS WEAVER: Water supply analysis.

17 MS. MORRIS: And modeling?

18 WITNESS WEAVER: I did not do any modeling.

19 MS. MORRIS: Okay. Could we pull up, on the
20 jump drive, what's marked as "Pages from 17 Yolo Bypass
21 Draft EIR/EIS, Chapter 20." And could you scroll down
22 to Page 25-4, please. And can you go just a tiny bit
23 more. There we go.

24 And do you see, Mr. Weaver, on this
25 document --

1 Whoops. There we go.

2 Do you see your name listed?

3 WITNESS WEAVER: I do.

4 MS. MORRIS: Does this refresh your
5 recollection that you were involved --

6 WITNESS WEAVER: I was involved. I was not
7 the primary author. A woman under my supervision,
8 Amy Kindle [phonetic] there, was the primary author of
9 the hydrologic analysis.

10 MS. MORRIS: And she was working on the
11 modeling?

12 WITNESS WEAVER: No, we were provided the
13 modeling by Bureau of Reclamation. Nancy Parker at
14 Reclamation did the modeling.

15 MS. MORRIS: I don't have any more questions.
16 Mr. Mizell might have one other question. I'll just
17 flip through and make sure.

18 Oh, I'm sorry, I do have -- I had to re- -- I
19 apologize for being disorganized, but based on other
20 testimony I had to -- that was provided that we moved
21 to strike, I had to move through and cross a bunch of
22 questions out. So I just need one second.

23 Sorry, Mr. Bratovich, to jump back to you.
24 Again, so we went through what you looked at in
25 ARWA-703 is largely a compilation of quotations

1 regarding the status of steelhead in the NMFS
2 Biological Opinion, correct?

3 WITNESS BRATOVICH: That's part of it, yes.

4 MS. MORRIS: And in the NMFS Biological
5 Opinion, as you've shown with those excerpts that you
6 have, it's true that they still concluded that changes
7 in water temperature between the PA and the No Action
8 Alternative will not result in adverse effects of
9 juvenile steelhead in the American River, correct?

10 WITNESS BRATOVICH: Could you tell me where in
11 the Biological Opinion it says that?

12 MS. MORRIS: Sure.

13 We could pull up State Water Resources Control
14 Board 106, And it's pdf Page 409, I hope. And it's the
15 last paragraph. And starts on the -- yep.

16 Right there, "NMFS concludes," do you see
17 that?

18 WITNESS BRATOVICH: I do see that.

19 MS. MORRIS: Okay. I have no further
20 questions.

21 MR. MIZELL: Mr. Weaver, earlier you explained
22 that the concern you had over Slide 6 of ARWA-501 is
23 that in the 90 percent exceedance in July you were near
24 dead pool at Folsom storage. Is that a correct
25 summarization of what you said?

1 WITNESS WEAVER: No, I didn't say we were near
2 dead pool. I said low storage.

3 MR. MIZELL: Near low storage?

4 WITNESS WEAVER: I said it's a low storage
5 condition. I think the No Action Alternative had a
6 367,000 acre-foot storage. And I think dead pool is
7 around 90,000 acre-feet. So that's -- that is a bit
8 above dead pool, but it's still low storage condition.

9 MR. MIZELL: Thank you. That's the only
10 question I had.

11 CO-HEARING OFFICER DODUC: Thank you,
12 Mr. Mizell.

13 Ms. Aufdemberge.

14 We will take our break after Ms. Aufdemberge
15 finishes her cross. She estimated only about ten
16 minutes or so.

17 MS. AUFDEMBERGE: Hello, my name is
18 Amy Aufdemberge. I'm with the Solicitor's Office for
19 the Department of Interior here, in Sacramento. And
20 with me is Kristin White, she is the deputy manager for
21 Central Valley Operations. She's sitting in with me
22 for this cross-examination. And all of my questions
23 are for Mr. Gohring.

24 These first couple questions are just to --
25 we've kind of covered this ground, but just to kind of

1 get to my other questions.

2 But Mr. Gohring -- or excuse me. It's
3 Gohring, right?

4 WITNESS GOHRING: Ms. Aufdemberge? You may --
5 you have license.

6 MS. AUFDEMBERGE: You discuss in your
7 testimony how you sought to find a sweet spot, as you
8 call it, for a modified floor management standard that
9 meets your stated objectives; is that correct?

10 WITNESS GOHRING: Yes.

11 MS. AUFDEMBERGE: And you're very clear that
12 the Modified FMS in ARWA-502, or just the Modified FMS
13 is what we've been calling it, has both water supply
14 reliability and river protection objectives; is that
15 correct?

16 WITNESS GOHRING: Yes.

17 WITNESS WEAVER: And one mechanism in the
18 Modified FMS for protecting water supply is the minimum
19 storage requirements; is that correct?

20 MR. BEZERRA: I'm going to object, vague and
21 ambiguous. I just -- Ms. Aufdemberge is speaking very
22 quickly, and I have to say, I just didn't catch the
23 question.

24 CO-HEARING OFFICER DODUC: Yes, please do slow
25 down, Ms. Aufdemberge.

1 MS. AUFDEMBERGE: Wow. I just -- normally I'm
2 much slower, so I must be a little nervous.

3 WITNESS GOHRING: Coffee.

4 MS. AUFDEMBERGE: Yes. One mechanism the
5 Modified FMS for protecting water supply is the minimum
6 storage requirements; is that correct?

7 WITNESS GOHRING: Partially correct. The
8 storage requirement, it was developed to protect water
9 supply objectives and to provide higher temperatures
10 for -- excuse me, higher temperature protection, lower
11 temperatures, for steelhead.

12 MS. AUFDEMBERGE: Thank you. I want to spend
13 a few seconds on a sentence we focused on in Part 1.
14 Can you bring up ARWA-502.

15 CO-HEARING OFFICER DODUC: I think you mean
16 Panel 1?

17 MS. AUFDEMBERGE: It was Part 1, but it's the
18 same FMS. Is it's the Modified FMS.

19 It's about a little over halfway down. It
20 starts, "Permitee shall not reduce water supply
21 allocations or deliveries" -- oh, sorry.

22 WITNESS GOHRING: Halfway down that --

23 MS. AUFDEMBERGE: Of Paragraph 1, sorry.

24 "Permitee shall not reduce water supply
25 allocations or deliveries that are diverted from Folsom

1 Reservoir." Do you see that sentence?

2 WITNESS GOHRING: I do. Second to the last?

3 Yes.

4 MS. AUFDEMBERGE: Okay. If adopted by the
5 Board, this would essentially be a Board prohibition on
6 Reclamation under its federal American River contracts
7 from reducing contract allocations or deliveries due to
8 implementation of the minimum storage requirements; is
9 that correct?

10 WITNESS GOHRING: I don't -- I don't
11 understand how that would -- I don't know. I don't --
12 I don't know -- I don't know what you -- I'm not sure
13 what you said, so I can't agree with it.

14 MS. AUFDEMBERGE: You're asking the Board to
15 adopt this paragraph as a condition?

16 WITNESS GOHRING: Yes.

17 MS. AUFDEMBERGE: And this sentence says that
18 Reclamation would not be able to short allocations or
19 deliveries to American River contractors under the
20 federal contracts, and that would be a Board action; is
21 that correct?

22 WITNESS GOHRING: No, it doesn't say that they
23 can't short contracts. It says its intent is to say
24 that they can't short American River contracts beyond
25 what they would have done under normal M and I shortage

1 provisions.

2 MS. AUFDEMBERGE: Okay. I'll take that as
3 well.

4 Would the Water Forum advocate for the Board
5 to adopt this Modified FMS if it did not include this
6 protection for American River contracts? So in other
7 words, if the Board were to modify your Modified FMS
8 and take that sentence out and maybe the sentence after
9 it?

10 WITNESS GOHRING: I don't know.

11 MS. AUFDEMBERGE: Are you aware of any
12 unmetered water use within the Water Forum member
13 agency service areas?

14 WITNESS GOHRING: I am.

15 MS. AUFDEMBERGE: In your testimony, you state
16 that an objective of the Modified FMS is to maintain
17 sufficient storage -- and you've said this repeatedly,
18 so it's not a trick question -- in Folsom basically
19 during a simulated repeat of the '76-'77 drought; is
20 that correct?

21 WITNESS GOHRING: Yes.

22 MS. AUFDEMBERGE: And can we bring up DOI-36,
23 Page 2?

24 This is from rebuttal testimony of
25 Ron Milligan. And on Page 2 here, we have Congress's

1 definition of CVP yield in the CVP IA. Are you
2 familiar with this? Have you read this before?

3 WITNESS GOHRING: No, I don't think so.

4 MS. AUFDEMBERGE: Can you read it now, please?

5 WITNESS GOHRING: Be specific. Are you
6 talking about the indented part?

7 MS. AUFDEMBERGE: Yes.

8 WITNESS GOHRING: I have read it.

9 MS. AUFDEMBERGE: Okay. This is basically
10 Congress saying that CVP yield -- the delivery
11 capability of the CVP is during the '28 to 1934
12 drought; is that correct?

13 CO-HEARING OFFICER DODUC: Way too fast,
14 Ms. Aufdemberge.

15 MS. AUFDEMBERGE: This is Congress saying CVP
16 yield is the delivery capability of the CVP during the
17 1928 to 1934 drought; is that correct?

18 MR. BEZERRA: Objection, calls for legal
19 conclusion. Among other things, it says "for purpose
20 of this section." It's a specific part of the CVP IA,
21 so you can't conclude anything outside of this section.
22 And Mr. Gohring is not an attorney.

23 MS. AUFDEMBERGE: I can ask my final question,
24 then.

25 CO-HEARING OFFICER DODUC: Please.

1 MS. AUFDEMBERGE: Are the years 1976 to 1977
2 different from the years 1928 to 1934?

3 MR. MILIBAND: Objection, vague.

4 CO-HEARING OFFICER DODUC: Different in what
5 way?

6 MS. AUFDEMBERGE: Just different.

7 MR. MILIBAND: Renew my objection.

8 CO-HEARING OFFICER DODUC: I'm sorry. Your
9 objection was?

10 MR. MILIBAND: Vague and ambiguous.

11 CO-HEARING OFFICER DODUC: Sustained.

12 MS. AUFDEMBERGE: I want to consult real
13 quick.

14 Is the hydrology in the years 1976 to 1977
15 different than the hydrology of the years 1928 to 1934?

16 MR. BEZERRA: Objection, assumes facts not in
17 evidence. The hydrology of those periods is an
18 extraordinarily large amount of data points, I imagine.

19 CO-HEARING OFFICER DODUC: Overruled.

20 To the extent that you are familiar with the
21 hydrological conditions and can answer that question.

22 WITNESS GOHRING: My understanding is that the
23 hydrology in 1976-'77 is different than the hydrology
24 of 1928 to 1934.

25 MS. AUFDEMBERGE: Thank you.

1 No further questions.

2 CO-HEARING OFFICER DODUC: Thank you. I think
3 I'm exhausted just listening to that cross-examination.
4 We will take a break, and we will return at 2:50.

5 I'm sorry. I think I gave you way too much --
6 see, I am exhausted. 2:35.

7 (Recess taken)

8 CO-HEARING OFFICER DODUC: It is 2:35. We are
9 back in session.

10 I see Ms. Ansley at the microphone for
11 housekeeping matter, I assume?

12 MS. ANSLEY: Just quickly. Do you
13 anticipate -- I understand that we're going through the
14 cross for the Water Forum group. Do you anticipate
15 reaching the County of Yolo's first panel today? And I
16 don't see Ms. Meserve around to ask her. I can't
17 remember if we had an agreement already about when they
18 would start or not.

19 CO-HEARING OFFICER DODUC: Even if we didn't,
20 I think I would be more than happy to adjourn a little
21 bit early today. Does anyone object?

22 (No response)

23 CO-HEARING OFFICER DODUC: I see no objection.

24 MS. ANSLEY: I hope she's listening then.

25 CO-HEARING OFFICER DODUC: Unless she rushes

1 here in the next, you know, ten minutes and tells me
2 they're ready to go, we will adjourn after completion
3 of this --

4 MS. ANSLEY: Of the Water Forum?

5 CO-HEARING OFFICER DODUC: Water Forum.

6 MS. ANSLEY: Thank you.

7 MR. MILIBAND: And for clarity, Hearing Chair
8 Doduc, I've had some communications with Ms. Meserve,
9 and I think she'll be very relieved to hear that based
10 on and understanding from last Friday that Panel 5
11 would not start -- or Group 5, rather, would not start
12 until Thursday.

13 CO-HEARING OFFICER DODUC: Okay.

14 MR. BEZERRA: One further housekeeping matter.
15 We understand that doctor -- the temperature model for
16 the American River that Dr. Addley used was provided to
17 Reclamation Central Valley Operations office two years
18 ago. That was the tool. We believe we could probably
19 post the actual model runs that were used within a few
20 days.

21 CO-HEARING OFFICER DODUC: Thank you. And
22 then since we are on it, with respect to I believe it
23 was Ms. Morris' earlier objection to something
24 Mr. Bratovich stated in his testimony, oral testimony,
25 I've been advised that it takes us about 15 business

1 days to get a copy of the transcript.

2 So once we have a copy of that transcript, in
3 particular, that section of Mr. Bratovich's testimony,
4 we will make it available to all parties.

5 MR. MILIBAND: And Hearing Chair Doduc, we
6 might be able to shortcut this one as well.

7 CO-HEARING OFFICER DODUC: Oh, perfect.

8 MR. MILIBAND: In fact, rather than to save
9 for redirect, I'm happy to address that now because
10 there is a specific reference to 75 degrees. And I'll
11 make this representation given that it's not on the
12 screen but it's in Exhibit 702, Page 41, Footnote 6.

13 And so that addresses, I believe, a comment or
14 basis for objection that Ms. Morris had as to not
15 having that figure quantified.

16 MS. MORRIS: It does not address it because I
17 specifically asked this witness in his opinions just on
18 cross-exam whether or not what citations and documents
19 he relied on and -- for the injury claim. And he
20 specifically said that the two that were cited in his
21 opinions, the Biological Opinion and the USBR document,
22 did not cite to ARWA-702.

23 And it is not incumbent upon us to search
24 thousands of pages of documents to find a footnote when
25 it wasn't -- if it was that important, it should have

1 been referenced in his opinion and the documents that
2 he relied on.

3 CO-HEARING OFFICER DODUC: Did that change
4 your cross-examination, Ms. Morris, of Mr. Bratovich?

5 MS. MORRIS: I couldn't change it because it
6 just came out this morning. And I have had no time to
7 consult with my experts. I'm not a fishery biologist.

8 CO-HEARING OFFICER DODUC: I'm sorry. What
9 I'm referring to is you made a comment while you were
10 trying to determine whether you had additional
11 cross-examination. You said you were striking some
12 things because of a motion that was made -- it had
13 nothing to do with this? Never mind.

14 MR. MILIBAND: Well, I'm hearing something
15 entirely different. There were two grounds that I
16 heard Ms. Morris making earlier. One was as to not
17 having received through written testimony but instead
18 only now today, on oral testimony, references to 75
19 degrees, which we can demonstrate and has been
20 demonstrated is not true by way of Exhibit 702,
21 Page 41, Footnote 6.

22 CO-HEARING OFFICER DODUC: So let me stop
23 right there.

24 My understanding, Ms. Morris, was that you had
25 asked for that to be struck because it was surprise

1 testimony. And now Mr. Miliband is saying it is not
2 surprise but in fact is referenced in one of the
3 exhibits that were filed.

4 MR. MILIBAND: And I would even go one step
5 further because the written of Mr. Bratovich, ARWA-700,
6 specifically references ARWA-702. And it's within that
7 exhibit, Page 41, Footnote 6, that that quantification
8 figure is there.

9 And, frankly, I don't think that was adding a
10 new opinion. It was the basis for an opinion that was
11 timely provided through written testimony at the end of
12 November 2017.

13 CO-HEARING OFFICER DODUC: Thank you for
14 further clarifying that.

15 Ms. Morris.

16 MS. MORRIS: I would like to be clear that
17 ARWA-702, as denoted by counsel and his testimony, has
18 injury, which was the first panel, and it does not cite
19 to ARWA-702. It relies on his testimony in ARWA-703
20 and his written testimony regarding injury.

21 And the only thresholds that are identified in
22 his testimony are 63 degree and 69 degrees. And then
23 he has a second part of his testimony that has to do
24 with the Modified FMS. That is the testimony of
25 ARWA-702. And that was not referenced. And this

1 witness has already, on cross-examine, said he did not
2 rely on ARWA -- that ARWA-702 was not cited in any of
3 the documents he cited to for injury.

4 So it is still surprise testimony, and it is a
5 new opinion.

6 CO-HEARING OFFICER DODUC: Thank you for
7 attempting to clarify this, Mr. Miliband, but we will
8 revert to our initial approach, which is to wait for
9 the transcript, and we will allow you the opportunity
10 to respond then based on the transcript.

11 MR. MILIBAND: We appreciate that. Thank you.

12 CO-HEARING OFFICER DODUC: Where were we? I
13 think we are finally on Ms. Akroyd. Are there any
14 other housekeeping matters?

15 (Recess taken)

16 CO-HEARING OFFICER DODUC: Okay. Ms. Akroyd.

17 MS. AKROYD: Rebecca Akroyd for the San Luis
18 and Delta-Mendota Water Authority. My questions will
19 be for Mr. Gohring, Mr. Bratovich and maybe some for
20 Mr. Weaver as well.

21 And topics of my cross will be the
22 relationship between WaterFix and the Modified FMS and
23 some questions about modeling Modified FMS and then
24 also about potential impacts to other water users.

25 And I will be kind of cutting as I go along.

1 Some of the questions I have planned have already been
2 covered. Thank you.

3 MR. MILIBAND: We just have a telephone
4 ringing. Our apologies.

5 CROSS-EXAMINATION BY MS. AKROYD

6 MS. AKROYD: I'll begin with Mr. Gohring.

7 Earlier you testified about the three
8 objectives of the Modified FMS, which include the
9 second objective of addressing water temperature
10 conditions for fisheries in the Lower American River,
11 correct?

12 WITNESS GOHRING: Yes.

13 MS. AKROYD: Short-cut some of that, since
14 we've already gone there quite a bit. If we could
15 please pull up ARWA-700, Mr. Bratovich's written
16 testimony, the bottom of Page 5.

17 Thank you.

18 Mr. Bratovich, here you focus on specific
19 temperature increases in time periods relevant to
20 juvenile rearing and smolt immigration; is that right?

21 WITNESS BRATOVICH: Yes.

22 MS. AKROYD: In developing the Modified FMS to
23 meet the second objective of improving water
24 temperature conditions, did you focus the modified FMS
25 targets on avoiding specific temperature increases that

1 you identified from the WaterFix?

2 WITNESS BRATOVICH: I think I understand your
3 question, and I think my answer is no.

4 We developed -- we've been working on the
5 Modified FMS for years. And what we did was we tried
6 to make sure that we were providing improved conditions
7 over the course of several months for those life
8 stages. So did we specifically address the changes
9 identified by the -- that we identified due to the
10 WaterFix? I would say no.

11 MS. AKROYD: Thank you. And if you know,
12 would the Modified FMS improve temperature conditions
13 beyond addressing impacts from the WaterFix?

14 WITNESS BRATOVICH: Could you repeat that,
15 please?

16 MS. AKROYD: If you know, would the Modified
17 FMS improve temperature conditions beyond addressing
18 impacts from the WaterFix?

19 WITNESS BRATOVICH: The implementation of the
20 Modified FMS would improve water temperature conditions
21 irrespective of the ones implemented by the WaterFix or
22 not. I'm trying to answer your question, I'm not sure.
23 But as we demonstrated, it could be a very large number
24 of improved temperature conditions --

25 (Reporter interruption)

1 MR. BEZERRA: His mike's cutting out.

2 WITNESS BRATOVICH: Oh, man. It's on. They
3 are on.

4 MR. BEZERRA: Try one or the other. No
5 stereo.

6 WITNESS BRATOVICH: Do you really want me to
7 repeat that?

8 CO-HEARING OFFICER DODUC: She is the boss.
9 If she wants it repeated, you will repeat it.

10 WITNESS BRATOVICH: Where do you want me to
11 start?

12 (Record read)

13 WITNESS BRATOVICH: The Modified FMS would
14 improve water temperature conditions in the Lower
15 American River.

16 MS. AKROYD: Thank you. Moving on to a point
17 of clarification, as we've discussed through other
18 cross, you've presented testimony regarding fishery
19 impacts on the Sacramento River and the American River;
20 is that correct, Mr. Bratovich?

21 WITNESS BRATOVICH: We did address both, yes.

22 MS. AKROYD: Yes. Did you analyze temperature
23 effects of the Modified FMS on the Trinity River?

24 WITNESS BRATOVICH: No, I did not.

25 MS. AKROYD: Did you analyze temperature

1 effects of the Modified FMS on Clear Creek?

2 WITNESS BRATOVICH: No, I did not.

3 MS. AKROYD: Did you analyze temperature
4 effects of the Modified FMS on the Stanislaus River?

5 WITNESS BRATOVICH: No, I did not.

6 MS. AKROYD: Switching over to Mr. Weaver.

7 Mr. Weaver, in your written testimony, you
8 referred to ARWA-601, which contains selected modeling
9 results of the Modified FMS; is that right?

10 WITNESS WEAVER: Yes.

11 MS. AKROYD: If we could please bring up
12 ARWA-601 and go to PDF Page 71. Thank you.

13 Mr. Weaver, this table compares average South
14 of Delta CVP agricultural water service contract
15 deliveries with the 2006 FMS in place versus the
16 Modified FMS in place; is that right?

17 WITNESS WEAVER: That's correct.

18 MS. AKROYD: And depending on the month and
19 year type, this table shows the long-term average
20 differences between the Modified FMS and 2006 FMS as
21 ranging between negative 39,000 cfs and positive
22 13,000 cfs in a given month.

23 WITNESS WEAVER: I don't see those numbers,
24 no.

25 MS. AKROYD: Am I on the wrong -- sorry.

1 We'll strike that question. I think I was referring to
2 a different table.

3 The comparisons on this table were made using
4 CalSim II output, which includes historical flow data
5 through September of 2003; is that right?

6 WITNESS WEAVER: The period of record for the
7 model is 1922 through 2003. I characterize it as
8 historical, I think is a little bit of a
9 simplification, but generally.

10 MS. AKROYD: Thank you. CalSim II model
11 results aren't reflective of the conditions during the
12 recent drought, correct?

13 WITNESS WEAVER: That's correct. The
14 recent -- the 2012 to 2015 drought was not in the
15 CalSim period of record, no.

16 MS. AKROYD: Have you performed any modeling
17 or analysis of possible effects of the Modified FMS
18 under the hydrology of the recent drought?

19 WITNESS WEAVER: I did. It's not part of
20 my testimony though -- or I don't have anything handy.

21 MS. AKROYD: Was there any change to Folsom
22 storage in that analysis?

23 WITNESS WEAVER: Yes.

24 MR. BEZERRA: Objection, vague and ambiguous
25 as to what analysis.

1 MS. AKROYD: We'll go back a step then. You
2 just testified that you did perform some modeling or
3 analysis of possible effects of the Modified FMS under
4 hydrology of the recent drought although that analysis
5 was not presented in your testimony here, correct?

6 WITNESS WEAVER: It was a very cursory, you
7 know, kind of desktop analysis. There was no modeling
8 involved.

9 MS. AKROYD: Will you please describe what
10 analysis you did perform.

11 WITNESS WEAVER: I took a look at historical
12 Folsom operations and I layered on -- I didn't have the
13 exact MRRs, minimum release requirement, that they had
14 in the historic operation, so we guessed what they were
15 and then calculated what the appropriate indices and
16 Modified Flow Management Standard requirements would
17 have been and evaluated the operations of the American
18 River against those.

19 But we didn't look at anything external to the
20 American River. We limited it purely to operations for
21 the minimum flow requirements and end of -- and the
22 storage requirements. And so we didn't try capture
23 what the operations would have been above the minimum
24 requirements.

25 MS. AKROYD: Okay. So as part of that

1 analysis, which I understand with the caveats you've
2 given, did that analysis show any change to Folsom
3 storage during -- under hydrology conditions such as
4 those during the recent drought?

5 WITNESS WEAVER: Yes, it did.

6 MS. AKROYD: Can you please describe those
7 changes?

8 WITNESS WEAVER: It's all from memory, and I
9 haven't looked at that in probably six months to a --
10 at least six months.

11 My recollection is that it did show that, in
12 that recent drought, it would have provided increased
13 storage relative to what actually history occurred.

14 MS. AKROYD: Do you recall what quantity of
15 increased storage?

16 WITNESS WEAVER: I would be guessing if I did.

17 MS. AKROYD: And I think, based on what you
18 just told me, I know the answer to this one. But to
19 clarify for the record, did you analyze any impacts to
20 South of Delta CVP agricultural water service
21 deliveries from the Modified FMS under the hydrology of
22 the recent drought?

23 WITNESS WEAVER: I did not.

24 MS. AKROYD: Thank you.

25 If we could please pull up ARWA-501, the

1 PowerPoint presentation at PDF Page 51. Thank you.

2 And this question is either for Mr. Weaver or
3 Mr. Gohring. In reliance on the table we just briefly
4 looked at in discussion about impacts, you've testified
5 that the CalSim modeling you have done indicates that
6 the Modified FMS would not result in redirected impacts
7 to South of Delta CVP agricultural contractors; is that
8 right?

9 WITNESS GOHRING: I don't -- I don't think
10 that's exactly what we said.

11 I think we said we have avoided redirected
12 impacts to Sacramento River fisheries. We went on to
13 say -- or I went on to say in my testimony we also see
14 negligible changes in other parameters, including South
15 of Delta deliveries.

16 MS. AKROYD: How confident are you -- this
17 probably goes more to the modeling, so probably for
18 Mr. Weaver.

19 How confident are you that your modeling of
20 water supply impacts to South of Delta CVP agricultural
21 contracts showing negligible impacts is correct?

22 WITNESS WEAVER: I didn't do any evaluation of
23 the model's representation of South of Delta water
24 supply. And in my -- the limit of my modification to
25 the model was just to do the American River. So I

1 can't speak to how they represented the South of Delta
2 operations, South Delta water supply deliveries.

3 WITNESS GOHRING: Can I take a shot as well at
4 that one?

5 Within the limits of these modeling tools, I
6 am confident that these are negligible changes to South
7 of Delta.

8 MS. AKROYD: Thank you. Mr. Gohring,
9 following up on that, is the Water Forum proposing any
10 terms or conditions that would prohibit redirected
11 impacts to South of Delta CVP agricultural contractors
12 that could result from the Modified FMS to ensure that
13 your modeled results match the actual results?

14 WITNESS GOHRING: No.

15 MS. AKROYD: Is the Water Forum proposing any
16 terms or conditions that would prohibit reductions to
17 water supply allocations or deliveries that are
18 diverted from Folsom Reservoir or the lower American
19 River in order to comply with the Modified FMS?

20 WITNESS GOHRING: I'm going to have to ask for
21 the question again. I'm sorry.

22 MS. AKROYD: Is the Water Forum proposing any
23 terms or conditions that would prohibit reductions to
24 water supply allocations or deliveries that are
25 diverted from Folsom Reservoir or the Lower American

1 River in order to comply with the Modified FMS

2 MR. BEZERRA: Objection, asked and answered.

3 It's the same question Mrs. Aufdemberge asked regarding
4 the terms and conditions we've proposed.

5 CO-HEARING OFFICER DODUC: But it's said much
6 slower, so I can understand. Overruled.

7 Please answer.

8 WITNESS GOHRING: Yeah, I think if you look at
9 Paragraph 1 of ARWA-500, our proposed terms and
10 conditions, I think that we are proposing something
11 along the lines of if Reclamation is -- were to make a
12 change to the normal American River M and I shortage
13 provisions in order to make the -- in order to hit the
14 Folsom Reservoir storage targets, that that would be
15 unacceptable.

16 MS. AKROYD: Thank you. So you are proposing
17 terms and conditions that would protect some CVP
18 contractors from loss of water supply per the Modified
19 FMS but no terms and conditions to protect others; is
20 that right?

21 WITNESS GOHRING: We believe we've crafted
22 terms and conditions that hold people outside the
23 American River harmless while providing a modest
24 protection for the American River Basin.

25 MS. AKROYD: Thank you. I have no further

1 questions.

2 CO-HEARING OFFICER DODUC: Thank you,

3 Ms. Akroyd.

4 Mr. O'Brien?

5 And Mr. Ruiz is no longer here, so unless he

6 rushes in in the next 15 to 20 minutes, that will be

7 the end of cross.

8 CROSS-EXAMINATION BY MR. O'BRIEN

9 MR. O'BRIEN: Good afternoon. Most of my
10 questions are for Mr. Weaver. I'd like to start -- if
11 we could pull up ARWA-502 on Page 1. Paragraph 1.

12 Mr. Weaver, it's my understanding that the
13 ARWA group is proposing terms and conditions reflected
14 in this document, ARWA-502; is that correct?

15 WITNESS WEAVER: Yes.

16 MR. O'BRIEN: In the modeling that you did for
17 proceeding, did you always hit the storage targets that
18 are reflected in Paragraph 1 of ARWA-502?

19 WITNESS WEAVER: No, we did not.

20 MR. O'BRIEN: In some cases, did the modeling
21 undershoot those storage targets?

22 WITNESS WEAVER: Yes, it did. And --

23 MR. O'BRIEN: How often?

24 WITNESS WEAVER: If we looked at -- I don't
25 have the exact statistics in memory, but probably I

1 think it was a few percentage of the years. And we
2 actually describe several conditions under which
3 missing end-of-December storage requirement is
4 acceptable.

5 We did include some forecasting for fall
6 inflows in the model, and so if the simulated inflows
7 were less than those -- those, then it would -- that
8 was -- it was understandable that the model would
9 miss -- say for instance, I don't remember the exact
10 numbers, but say we had 100,000 acre-feet forecasted
11 inflow for October through December but the actual --
12 the simulated year had 90,000 acre-feet, then we would
13 expect there to be a shortage or miss the
14 end-of-December requirement in that year.

15 We also anticipate that there's going to be
16 some years where you're operating to the MRR the whole
17 year, or basically from June on. And under those
18 conditions, it would also be understandable that you
19 would possibly miss the end-of-December requirement.
20 We're not -- we're not anticipating that there would be
21 a reduction in minimum flows in order to hit the
22 end-of-December storage target -- or storage
23 requirement, excuse me.

24 MR. O'BRIEN: If, as you've indicated modeling
25 in some years failed to meet the proposed storage

1 targets, would that have a tendency to understate the
2 impacts of the Modified FMS to other users in the CVP
3 system?

4 WITNESS WEAVER: It would depend on magnitude
5 of that. It could. But it depends on what else is
6 going on and what the other conditions were during that
7 same time.

8 MR. O'BRIEN: Have you attempted to quantify
9 or summarize the number of situations where you failed
10 to meet the storage targets?

11 WITNESS WEAVER: I don't believe so.

12 MR. O'BRIEN: You haven't reduced that to
13 writing anywhere?

14 WITNESS WEAVER: I don't -- not that I'm aware
15 of.

16 MR. O'BRIEN: Is that a topic you've discussed
17 internally? And I'm not talking about conversations
18 with your attorneys. But is that a topic that's been
19 discussed within the technical team?

20 WITNESS WEAVER: The question of under what
21 conditions it would miss the end-of-December storage
22 requirement?

23 MR. O'BRIEN: Yes.

24 WITNESS WEAVER: I'm sure it has. We talked
25 about a lot of things over the years.

1 MR. O'BRIEN: Did you ever consider the
2 possibility of redoing the modeling so that you fully
3 hit those targets?

4 MR. BEZERRA: Just at this point, I'm going to
5 object as to vague and ambiguous because there are two
6 end-of-December storage requirements in the Modified
7 FMS. Mostly it's 300,000 acre-feet, sometimes it's
8 230-.

9 CO-HEARING OFFICER DODUC: Are you referring
10 to a particular one or both?

11 MR. O'BRIEN: I'm just referring to what's in
12 Paragraph 1 of ARWA-502.

13 WITNESS WEAVER: Sure. So in our modeling, we
14 do not include an explicit requirement to hit the
15 end-of-December. It's set up as an objective. So
16 within CalSim, you can assign weights or penalties on
17 certain flows and -- or exceeding or undershooting
18 flows.

19 And so we don't include the end-of-December
20 storage requirement as a hard requirement. It is an
21 objective. And so we -- there I give CalSim some
22 flexibility to operate and to try to meet that.

23 But given that it's possible that there are
24 other conditions that have a higher weight, that those
25 would, based upon CalSim's algorithm, supersede the

1 end-of-December storage requirement.

2 MR. O'BRIEN: I'm not sure you answered my
3 question. My question was whether internally you ever
4 considered the option of redoing the modeling so that
5 those storage targets were met.

6 WITNESS WEAVER: We played -- we did adjust
7 some of the weights and tried to find -- to make -- to
8 try to -- you know, get them so that we would try to
9 hit that target at the end of the year without making
10 those weights too obscenely hard.

11 I don't think we played with other metrics
12 besides that. We just used the CalSim penalties on --
13 it's actually on the flows that would meet the
14 end-of-December requirement.

15 MR. O'BRIEN: Let me make sure I understand
16 what you just said. Your response to my question of
17 whether you considered redoing the modeling, you said
18 you adjusted the weights. What exactly are the
19 weights?

20 WITNESS WEAVER: Again, CalSim includes --
21 rather than saying, you know, because there's a lot of
22 competing requirement for flows. And within the CalSim
23 model, we use weights for -- to allow the model to
24 balance out the different requirements. And so it's
25 possible you would get infeasibilities if you just said

1 it must equal this value. So you therefore use a
2 weight to allow the model to try to balance the
3 different requirements.

4 And so, like, for example, we use -- you know,
5 we don't let it reduce the flows below the MRR to hit
6 the end-of-December requirement; therefore, the MRR has
7 a higher weight than the end-of-December storage
8 requirement. So we've tried to set weights that were
9 appropriate to balance out the storage -- all the
10 different demands on the operations of the reservoir.

11 MR. O'BRIEN: So you could have, if you'd
12 wanted to, made the end-of-December storage
13 requirements, you could have weighted them higher in
14 the modeling so -- to ensure that you would have hit
15 those targets?

16 WITNESS WEAVER: We could have.

17 MR. O'BRIEN: But you chose not to?

18 WITNESS WEAVER: We thought we had a good
19 balance.

20 MR. O'BRIEN: I'd like to move now to ARWA-61,
21 please, Page 33. I'm sorry, Page 35.

22 This exhibit, Mr. Weaver, presents a number of
23 figures relating to simulations of end-of-July Shasta
24 Reservoir storage; is that correct?

25 WITNESS GOHRING: We have a page discrepancy.

1 WITNESS WEAVER: Yeah, this looks like Folsom
2 Reservoir to me.

3 WITNESS GOHRING: I think it may be PDF
4 Page 35.

5 MR. O'BRIEN: PDF Page 35, thank you. That's
6 it. Thank you.

7 There's a series of these figures, and I just
8 want to make sure I understand what these are
9 depicting. So we have some purple bars on the bottom
10 portion of the graph, and at the top we have some
11 orange bars, some of which go up from the 4,500,000
12 acre-foot storage line and some go down.

13 Can you just explain to me what it means when
14 one of the orange lines go down in that figure?

15 WITNESS WEAVER: Sure. And just as one
16 clarification, it's not using the 4,500
17 thousand-acre-foot [sic] storage.

18 It's actually -- there's a zero on the right,
19 but that does correspond to the 4.5 million-acre-foot
20 line.

21 MR. O'BRIEN: My mistake.

22 WITNESS WEAVER: So those lines represent --
23 so there's two columns down below. There's a red
24 column and a blue column. They're very difficult to
25 see here. And this depicts the 82-year period of

1 record for CalSim. And so what we're showing there at
2 the top are the gold bars represent the difference in
3 storage between the two alternatives.

4 MR. O'BRIEN: So if I was going to determine
5 the impact of the Modified FMS on storage in Shasta
6 Reservoir end-of-July, I would look at this graph,
7 Figure 4.2-4, and I would -- if I was concerned in
8 particular about decreases in end-of-July Shasta
9 storage, I would focus on the orange lines that dipped
10 down below that zero point; is that fair?

11 WITNESS WEAVER: The -- yes, the orange bars
12 dip below -- the orange bars below the zero line do
13 represent the decreases in storage.

14 MR. O'BRIEN: And just kind of eyeballing that
15 figure, it looks like there's some years in the late
16 '80s early '90s. I assume that was during that drought
17 that occurred during that time period.

18 What's the just ballpark reduction that we're
19 looking at in end-of-July Shasta Reservoir storage in
20 those drought years?

21 WITNESS WEAVER: It looks like the maximum
22 there is about 150,000 acre-feet in one particular
23 year. And there might be another year that goes just
24 below a hundred.

25 MR. O'BRIEN: And just so I've got this right,

1 it's fair to attribute that reduction in Shasta
2 end-of-July storage to the Modified FMS; is that right?

3 WITNESS WEAVER: Yes.

4 MR. O'BRIEN: Okay. Let's move now the next
5 figure, which is Figure 4.2-5.

6 I won't take quite as much time with this, but
7 this is the end-of-September Shasta storage figure. So
8 is it essentially the same thing we just went through
9 for July?

10 WITNESS WEAVER: Yes.

11 MR. O'BRIEN: So, again, if we were focusing
12 on that drought period, late '80s, early 90's, what's
13 the ballpark reduction in end-of-September Shasta
14 storage attributable to the Modified FMS?

15 WITNESS WEAVER: It looks like in September
16 here, there's just less than 100,000 acre-feet in one
17 year and then probably not quite 150- in another year.

18 MR. O'BRIEN: And then finally that next
19 figure just down below, 4.2-5 -- actually, no.
20 4.2-6 is the end-of-December.

21 WITNESS WEAVER: Scroll down a little bit,
22 please.

23 MR. O'BRIEN: Pull that one up. There we go.

24 And same question, so if I'm trying to
25 understand the impacts of the Modified FMS on

1 end-of-December Shasta Reservoir storage, I would look
2 at the orange lines. And, again, if we focus on that
3 drought period, late '80s, early '90s, what does that
4 tell us?

5 WITNESS WEAVER: That one, that figure does
6 show that we have at most about a 100,000-acre-foot
7 storage differential.

8 I would point out the next two figures
9 actually show our cold volume. That was one of the big
10 metrics we looked at.

11 So if you could go down to Figures 4.2-7 and
12 4.2-8. For those same years, we do show that, in
13 particular, the 4.2-8 is the cold water pool volume.
14 And what we see here is that the effect on storage --
15 and you know, again, our target was to avoid redirected
16 impacts to Sacramento fisheries and what these figures
17 show is that we actually have -- the effects on storage
18 overall are greater than the effect on the cold water
19 pool volumes.

20 MR. O'BRIEN: You said that your objective was
21 to avoid impacts on Sacramento River fisheries. Was it
22 your understanding that one of the objectives was also
23 to avoid impacts to Sacramento River water right
24 settlement contractors?

25 WITNESS WEAVER: I think that our focus was on

1 the redirected impact of fisheries. I don't think that
2 we had an explicit stated goal to avoid impacts to
3 anything else.

4 MR. O'BRIEN: I'd like to turn to ARWA-601,
5 the very last page. There's no page number on this.
6 There it is, on that last figure.

7 This figure is labeled "Simulated Daily
8 Sacramento River Water Temperatures for WY," water year
9 "1992"; is that correct?

10 WITNESS WEAVER: That is correct.

11 MR. O'BRIEN: And this figure was prepared
12 under your direction as part of your modeling work?

13 WITNESS WEAVER: Yes, that's correct. We had
14 some -- we looked very closely at the water
15 temperatures in the model, in the model output. And
16 there were some -- when we looked at exceedance plots,
17 there were a couple of temperatures that concerned us.
18 So we did a real deep dive into it. So we included
19 this as one example of the deep dive we did into the
20 water temperature modeling.

21 If you could scroll up, please, to the
22 previous page.

23 And so if I could, I'd like to talk through
24 the sequence of slides -- of figures here and describe
25 what we observed when we dug into this particular year

1 here.

2 MR. O'BRIEN: Well, excuse me, Mr. Weaver.
3 This is my examination. You're attorneys can ask you
4 about other figures when they get a chance to redirect.
5 Thank you.

6 So back to that last figure, first of all, was
7 1992 a drought year?

8 WITNESS WEAVER: Yes, it was.

9 MR. O'BRIEN: And I believe it was a drought
10 year that followed a number of dry years?

11 WITNESS WEAVER: That's correct.

12 MR. O'BRIEN: I'm trying to understand, it's
13 kind of difficult graph for me to read, so bear with
14 me. I'm trying to understand what the modeling shows
15 in terms of the difference in temperature on the
16 Sacramento River at Balls Ferry, which is one of the
17 items listed in the legend at the bottom, so if you
18 could help me with that.

19 Let's focus first on the dark -- the black
20 solid line, which is my understanding that's the line
21 that represents the Modified FMS; is that correct?

22 WITNESS WEAVER: That is correct.

23 MR. O'BRIEN: And let's compare that to the
24 red solid line, which is the line that represents the
25 2006 FMS; is that correct?

1 WITNESS WEAVER: That is also correct.

2 MR. O'BRIEN: What does a comparison of those
3 two lines tell us in terms of what the effect of the
4 Modified FMS would be on water temperature at Balls
5 Ferry in 1992?

6 WITNESS WEAVER: Sure. In this particular
7 year, what we're seeing is that the temperatures are
8 elevated at Balls Ferry under the Modified FMS relative
9 to the 2006 FMS. And that's largely due to -- again,
10 if you let me explain the conditions leading up to
11 that, I think this is an example -- a good example
12 here.

13 MR. O'BRIEN: I'll continue with my
14 examination. Your lawyers will give you all the
15 opportunity you want to explain, I'm sure.

16 So you said that there was an effect of the
17 Modified FMS on temperature at Balls Ferry in 1992.
18 Can you tell me, based on that graph, how much sooner,
19 for example -- let's use the temperature of 56 degrees.
20 Can you tell me how much sooner the temperature, water
21 temperature as Balls Ferry would have hit 56 degrees in
22 1992 if Modified FMS had been in effect?

23 WITNESS WEAVER: I believe it's a little over
24 two weeks earlier.

25 MR. O'BRIEN: Okay.

1 CO-HEARING OFFICER DODUC: As Mr. O'Brien
2 pauses here, just to straight -- lest there's confusion
3 later on when someone reads transcripts, the black line
4 to which Mr. O'Brien referred and to which Mr. Weaver
5 confirmed is a blue line.

6 WITNESS WEAVER: That's correct, a navy blue
7 line.

8 MR. O'BRIEN: My color-blindness coming out
9 again. Thank you for that.

10 CO-HEARING OFFICER DODUC: Just for the
11 record.

12 MR. O'BRIEN: I think maybe this is a question
13 for Mr. Bratovich.

14 Mr. Bratovich, good afternoon.

15 WITNESS BRATOVICH: Good afternoon.

16 MR. O'BRIEN: You're familiar with temperature
17 issues on the upper Sacramento River I take it?

18 WITNESS BRATOVICH: Yes, sir.

19 MR. O'BRIEN: And that was one of the issues
20 that you examined as part of your work in connection
21 with this?

22 WITNESS BRATOVICH: Yes.

23 MR. O'BRIEN: Are you aware that there's a
24 process underway to reexamine the temperature
25 requirements?

1 WITNESS BRATOVICH: Yes. I am.

2 MR. O'BRIEN: Can you generally explain what
3 that process is?

4 WITNESS BRATOVICH: Well, what I understand
5 the process to be is that, in recent years, multi-year
6 drought, that there was -- National Marine Fisheries
7 Service undertook a process to reexamine the
8 temperature requirements on the Sacramento River
9 because of an investigation into the elevated adverse
10 effects on winter-run associated with those
11 temperatures.

12 So they're a reexamination of the temperature
13 requirement. My understanding, which I'm not sure is
14 exactly the case, my understanding was that they
15 undertook a review of the situation that occurred, and
16 actually, in the WaterFix BO itself, they talk about
17 changing the requirement from 56 degree mean daily to a
18 55.47 datum. That's my understanding.

19 MR. O'BRIEN: Thank you. I have nothing
20 further.

21 CO-HEARING OFFICER DODUC: Thank you,
22 Mr. O'Brien.

23 Any redirect?

24 MR. BEZERRA: Yeah, I believe we'll have some
25 redirect. If I could just take a minutes?

1 CO-HEARING OFFICER DODUC: Why don't you take
2 a few minutes. We'll take a short break, and we'll
3 return at 3:20.

4 (Recess taken)

5 CO-HEARING OFFICER DODUC: All right. It is
6 3:20. We are back.

7 Mr. Bezzer.

8 MR. BEZERRA: Thank you very much. I have a
9 few redirect questions I think primarily for
10 Mr. Weaver.

11 REDIRECT EXAMINATION BY MR. BEZERRA

12 MR. BEZERRA: If we could please pull up
13 Exhibit ARWA-601. And there you go, that last -- we'll
14 start with the last page here, which is PDF Page 107.

15 Mr. Weaver on that graph labeled "Simulated
16 Daily Sacramento River Water Temperatures For Water
17 Year 1992," did you investigate why the Modified FMS
18 results in higher temperatures sooner in the modeling?

19 WITNESS WEAVER: Yes, I did.

20 MR. BEZERRA: And if we could please scroll up
21 to the previous page, PDF Page 106 and a little bit
22 further.

23 Mr. Weaver, does that graph labeled "Simulated
24 Mean Monthly Nimbus Releases and MRR for Water Year
25 1992" help explain that change?

1 WITNESS WEAVER: Yes, it does, and the figure
2 above that.

3 MR. BEZERRA: Can you please explain why, in
4 your opinion, that change in Sacramento River
5 temperatures in 1992 occurred in the modeling?

6 WITNESS WEAVER: Sure. So what we see here is
7 that, under the -- again, the red line is the 2006 FMS,
8 and the dark blue line is the Modified FMS. So the
9 upper figure is Folsom Reservoir storage, and the
10 second figure is the Nimbus releases.

11 And so what we see here in the second figure
12 is that, in July of 1992, the releases from Folsom
13 Reservoir under the 2006 FMS are, for all intents and
14 purposes 5,000 cfs; whereas under the Modified FMS,
15 they're limited to about 3,000 cfs.

16 What we see under the storage under this
17 condition is that the 2006 FMS drives Folsom Reservoir
18 storage down to essentially dead pool at the end of
19 July; whereas, in the Modified FMS, the storage is kept
20 up at much higher level.

21 And what we see when -- under 2006 FMS, when
22 the storage is down at dead pool, it's maintained at
23 dead pool essentially through the end of November.

24 So in this particular instance, when -- by
25 holding the Folsom storage up under the Modified FMS --

1 now if we scroll down to the third figure here, we
2 should see Shasta releases.

3 So what we see is, in that July, when Folsom
4 Reservoir storage or Folsom Reservoir releases are, in
5 essence, held back to protect storage under the
6 Modified Flow Management Standard, we see under 2006
7 FMS that the Shasta releases are substantially lower.
8 And in particular, again, in July the -- there's a very
9 similar flow differential here at Shasta as we's on the
10 American River. And this is really the trade-off
11 between American River and Sacramento River operations.

12 MR. BEZERRA: I'd like to unpack that a little
13 bit.

14 So essentially, going back down do Page 107
15 and that last graph, "simulated Daily Sacramento River
16 Water Temperatures For Water Year 1992," the Modified
17 FMS results in warmer temperatures in Sac somewhat
18 earlier because it, in the modeling, holds somewhat
19 more water in Folsom Reservoir longer than the base
20 case, correct?

21 WITNESS WEAVER: That's correct, the --
22 because the Folsom -- the Modified FMS is maintaining a
23 higher Folsom Reservoir storage, it flips it around,
24 and we do have a decreased Shasta storage.

25 But what we believe is the operation under the

1 2006 FMS where the 2006 FMS is essentially pushing
2 reservoir -- Folsom Reservoir storage down to dead-pool
3 is inconsistent with --

4 MR. BEZERRA: Okay. Let me unpack the details
5 of that a little bit.

6 If we could please scroll back up to Page 106,
7 and that middle graph entitled "Simulated Mean Monthly
8 Nimbus Releases and MRR For Water Year 1992."

9 In the base case 2006 FMS in July, the base
10 case causes releases from Folsom Reservoir to be
11 increased from 1500 to 5,000 cfs for one month,
12 correct?

13 WITNESS WEAVER: Yes.

14 MR. BEZERRA: And it reduces those flows back
15 down to less than a thousand the following month,
16 correct?

17 WITNESS WEAVER: That's correct.

18 MR. BEZERRA: And the modified FMS does not --
19 only increases flows for that month from 1500 to 3,000,
20 correct?

21 WITNESS WEAVER: From about 2,000 to 3,000.

22 MR. BEZERRA: 2,000 to 3,000 in that month.

23 Now if we could scroll up to the previous
24 graph entitled, "Simulated Folsom Reservoir Storage For
25 Water Year 1992," in the base case, that July release

1 results in Folsom Reservoir hitting dead-pool at the
2 end of July, correct?

3 WITNESS WEAVER: Correct.

4 MR. BEZERRA: And Folsom Reservoir will then
5 stay at dead-pool until the end of November, correct?

6 WITNESS WEAVER: Correct.

7 MR. BEZERRA: And in the Modified Flow
8 Management Standard, that condition would not occur,
9 correct?

10 WITNESS WEAVER: Correct.

11 MR. BEZERRA: Okay. So if we could scroll
12 back down to that middle slide one more time,
13 "Simulated Mean Monthly Nimbus Releases," in your
14 experience, have you ever seen Fol- -- Reclamation
15 operate Folsom Reservoir in this manner, causing Folsom
16 Reservoir to reach dead pool as occurs in the 2006 FMS
17 scenario?

18 WITNESS WEAVER: No, I don't believe so.

19 MR. BEZERRA: Mr. Gohring, have you ever seen
20 Reclamation operate Folsom Reservoir in this manner?

21 WITNESS GOHRING: No.

22 MR. BEZERRA: So if we could -- just to
23 conclude, if we could go back down to that final slide,
24 "Simulated Sacramento Water Temperatures For 1992,"
25 this effect in the modeling at Shasta Reservoir is the

1 result of a modified operation in which Folsom
2 Reservoir is pulled to dead-pool for six months,
3 correct?

4 WITNESS GOHRING: Yes.

5 MR. BEZERRA: And, again, that operation
6 nothing you've ever seen Reclamation conduct, correct?

7 WITNESS GOHRING: Correct.

8 MR. BEZERRA: Thank you.

9 That concludes redirect.

10 CO-HEARING OFFICER DODUC: Recross?

11 MS. MORRIS: Thank you.

12 RE-CROSS-EXAMINATION BY MS. MORRIS

13 MS. MORRIS: Mr. Weaver, the modeling that's
14 shown here is done with CalSim, correct?

15 CO-HEARING OFFICER DODUC: And for the record,
16 this is Ms. Morris recrossing on behalf of State Water
17 Contractors.

18 MS. MORRIS: My apologies. Thank you.

19 WITNESS WEAVER: The figure on the screen
20 right now is from the Sacramento River water
21 temperature model.

22 MS. MORRIS: But what's -- can you go up what
23 you were showing about -- on the flows? Can you scroll
24 up?

25 The charts that we just looked at that Mr.

1 Bezzera walked you through were based on CalSim
2 modeling, correct?

3 WITNESS WEAVER: That's correct.

4 MS. MORRIS: And none of the CalSim modeling
5 that's shown includes the Shasta RPAs, correct, for
6 NMFS, the NMFS Shasta RPAs?

7 WITNESS WEAVER: I'm not aware of what is or
8 not included. My understanding was that some of the
9 RPAs are included in the Sacramento River in the
10 CalSim.

11 MS. MORRIS: But you don't know if the NMFS
12 Shasta RPA is included in the CalSim modeling, correct?

13 MR. BEZERRA: Objection, vague and ambiguous
14 as to the RPA. We have a 2009 Biological Opinion from
15 NMFS that includes an RPA. And we have discussion by
16 Mr. O'Brien previously as to a proposed RPA potentially
17 that is under consideration now.

18 CO-HEARING OFFICER DODUC: Ms. Morris,
19 obviously you're probably not talking about what's
20 under discussion now.

21 MS. MORRIS: I am not because, as you know,
22 I've objected numerous times about that.

23 So I'm talking about the existing 2009 RPA for
24 Shasta.

25 WITNESS WEAVER: I am not -- I don't know

1 how -- it is or is not included in the model.

2 MS. MORRIS: Assuming it isn't included,
3 wouldn't it be difficult to see potential impacts to
4 Shasta cold water pool if this modeling did not include
5 the Shasta RPA?

6 MR. MILIBAND: Objection, calls for
7 speculation, incomplete hypothetical.

8 CO-HEARING OFFICER DODUC: Yes, it is
9 speculating, but, Mr. Weaver, are you able to
10 speculate?

11 WITNESS WEAVER: I'm not sure which -- which
12 RPA you're referring to? Is it --

13 MS. MORRIS: The NMFS, the cold water pool
14 management.

15 WITNESS WEAVER: The end-of-September cold
16 water pool?

17 MS. MORRIS: Yes.

18 WITNESS WEAVER: I think this is actually run
19 at cold water in August. So I'm not sure how -- I
20 don't know if the RPA would be able to project it.

21 MS. MORRIS: In this particular scenario.

22 WITNESS WEAVER: So are you suggesting that
23 the 2006 FMS run here, where it goes up to 5,000 cfs is
24 incorrect?

25 MS. MORRIS: I'm not suggesting anything. I'm

1 asking you a question.

2 WITNESS WEAVER: I'm sorry. I'm not equipped
3 to evaluate how it responds there.

4 MS. MORRIS: Okay. Thank you.

5 I have no further questions.

6 CO-HEARING OFFICER DODUC: Any other recross?

7 (No response)

8 CO-HEARING OFFICER DODUC: Not seeing any,
9 thank you very much, gentlemen.

10 MR. BEZERRA: Thank you.

11 CO-HEARING OFFICER DODUC: Does that conclude
12 the Water Forum's case in chief?

13 MR. MILIBAND: Yes, it does, Hearing Officer
14 Doduc, subject to moving our various exhibits, all of
15 them, into evidence, which I'm happy to enumerate. But
16 they are the ARWA series starting 500 concluding at
17 908.

18 CO-HEARING OFFICER DODUC: Any objections?

19 (No response)

20 CO-HEARING OFFICER DODUC: With the exception
21 of that one outstanding motion to strike by Ms. Morris,
22 the remaining exhibits are hereby received into the
23 record.

24 MR. MILIBAND: Thank you.

25 CO-HEARING OFFICER DODUC: Thank you. Are

1 there any housekeeping matter -- actually, you know
2 what? Let me get a time estimate.

3 For those who are here, in terms of
4 cross-examination tomorrow, what is your estimate of
5 cross-examination for the first panel, which
6 includes -- I won't even try pronounce the names, but
7 two witnesses from the County of San Joaquin and Yolo.
8 Any cross-examination?

9 MS. ANSLEY: I put my sheet away. This is
10 Mr. Balaji and the other person?

11 CO-HEARING OFFICER DODUC: Yes.

12 MS. ANSLEY: I estimate 20 to 30 minutes. I
13 usually come in a little bit under as I throw out
14 questions, but 20 to 30 minutes at this time for that
15 first panel from County Yolo.

16 CO-HEARING OFFICE DODUC: Anyone else? What
17 about for the second panel, Ms. Ansley, which includes
18 Mr. Wilson, Mr. Heringer, and Mr. Slater?

19 MS. ANSLEY: I anticipate that will even be
20 more limited. At this time, I would estimate 10 to 15,
21 but it's very possible that it would be more limited
22 than that.

23 CO-HEARING OFFICER DODUC: All right. What
24 about the third panel?

25 MS. ANSLEY: The third panel has a number of

1 witnesses. I would say 30 to 40 minutes at this point,
2 but that one is still -- I'm still refining, so I'll
3 reserve my time estimate for the third panel. But I'd
4 be happy, the first thing when we shown up, to go back
5 over these numbers.

6 CO-HEARING OFFICER DODUC: So it looks like we
7 will get to EB MUD tomorrow.

8 MR. DEERINGER: No, Thursday.

9 CO-HEARING OFFICER DODUC: I'm sorry.
10 Thursday, yes, Thursday.

11 And so estimate of cross-examination for
12 EB MUD?

13 MR. MIZELL: Tripp Mizell for DWR. We
14 estimate about an hour for East Bay MUD.

15 CO-HEARING OFFICER DODUC: Dr. Petrie is not
16 available until Monday. All right.

17 Let's do this. Is anyone here from Sac
18 Regional? Ah, Mr. Ferguson. It's possible we actually
19 might get to you late tomorrow afternoon -- I'm sorry,
20 Thursday.

21 MR. FERGUSON: Yeah. This is Aaron Ferguson
22 on behalf of Regional Sanitation. I've been talking to
23 Ms. Taber. Her witnesses have issues at the beginning
24 of next week, so she was trying to finagle things to
25 make sure she could go this week. So if that's going

1 to happen that would be great, I think, for her.

2 CO-HEARING OFFICER DODUC: Well, I don't know
3 if there are any other parties who are anticipating
4 cross-examining -- because right now we've only heard
5 from the Department. But if this is it, then we very
6 likely will get to Sac Regional tomorrow.

7 MR. FERGUSON: There's things that might help
8 that. If she's talked to East Bay MUD and they're
9 willing to have Regional San go before them, would that
10 be acceptable? I think we've talked to DWR -- and that
11 would actually split Dr. Paulsen up. And we understand
12 that. And I know we've requested already to have them
13 go together, but this would have Regional San going
14 ahead of East Bay MUD sometime this week hopefully.

15 CO-HEARING OFFICER DODUC: Any objection to
16 that?

17 MR. MIZELL: No. Mr. Ferguson checked with us
18 about Ms. Taber's proposal, and so long as -- yes, I
19 believe the Department is fine with that.

20 CO-HEARING OFFICER DODUC: So it is possible
21 then, Mr. Ferguson, that we might actually even get to
22 Sac Regional County Sanitation District late Thursday.

23 MR. FERGUSON: Great.

24 CO-HEARING OFFICER DODUC: All right. Thank
25 you everyone. Enjoy your afternoon.

1 And we will be back here in this room, 9:30
2 on Thursday.

3 MR. BEZERRA: Just one clarifying -- so
4 cross-examination exhibits are submitted at the end of
5 Part 2, correct?

6 CO-HEARING OFFICER DODUC: Yes.

7 MR. BEZERRA: Thank you.

8 (Whereupon, the proceedings recessed
9 at 3:34 p.m.)

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1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF MARIN)

4 I, DEBORAH FUQUA, a Certified Shorthand
5 Reporter of the State of California, do hereby certify
6 that the foregoing proceedings were reported by me, a
7 disinterested person, and thereafter transcribed under
8 my direction into typewriting and which typewriting is
9 a true and correct transcription of said proceedings.

10 I further certify that I am not of counsel or
11 attorney for either or any of the parties in the
12 foregoing proceeding and caption named, nor in any way
13 interested in the outcome of the cause named in said
14 caption.

15 Dated the 30th day of March, 2018.

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DEBORAH FUQUA
CSR NO. 12948