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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

THURSDAY, MAY 18, 2017
9:30 A.M.

PART 1 - REBUTTAL

VOLUME 45
PAGES 1 - 211

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

1 APPEARANCES

2 CALIFORNIA WATER RESOURCES BOARD

3 Division of Water Rights

4

Board Members Present:

5

Tam Doduc, Co-Hearing Officer

6

Felicia Marcus, Chair & Co-Hearing Officer

Dorene D'Adamo, Board Member

7

8 Staff Present:

9

Dana Heinrich, Senior Staff Attorney

Conny Mitterhofer, Supervising Water Resource Control

10 Engineer

Kyle Ochendusko, Senior Water Resources Control

11 Engineer

12

PART I

13

For Petitioners:

14

California Department of Water Resources:

15

Robin McGinnis, Esq.

16

Thomas M. Berliner, Esq.

17

The U.S. Department of the Interior:

18

Amy L. Aufdemberge, Esq.

19

20 INTERESTED PARTIES:

21 State Water Contractors:

22 Stefanie Morris, Esq.

23

San Luis & Delta-Mendota Water Authority:

24

Rebecca R. Akroyd, Esq.

25

- 1 INTERESTED PARTIES (Continued):
- 2 The City of Roseville, Sacramento Suburban Water
3 District, San Juan Water District, the City of Folsom,
4 Yuba County Water Agency:
- 5 Ryan Bezerra, Esq.
- 6
- 7 The Sacramento Valley Group:
- 8 David Aladjem, Esq.
- 9
- 10 Sacramento County Water Agency:
- 11 Aaron Ferguson, Esq.
- 12
- 13 California Sportfishing Protection Alliance (CSPA),
14 California Water Impact Network (C-WIN), and
15 AquAlliance:
- 16 Michael Jackson, Esq.
- 17
- 18 North Delta Water Agency & Member Districts:
- 19 Kevin O'Brien, Esq.
- 20
- 21 For Brett G. Baker, Local Agencies of the North Delta,
22 Bogle Vineyards/Delta Watershed Landowner Coalition,
23 Diablo Vineyards and Brad Lange/Delta Watershed
24 Landowner Coalition, Stillwater Orchards/Delta Watershed
25 Landowner Coalition, Islands, Inc., SAVE OUR SANDHILL
CRANES and Friends of Stone Lakes National Wildlife
Refuge, City of Antioch:
- Osha Meserve, Esq.
- County of San Joaquin, San Joaquin County Flood Control
and Water Conservation District, and Mokelumne River
Water and Power Authority:
- Thomas H. Keeling, Esq.

1 INTERESTED PARTIES (Continued):

2 Central Delta Water Agency, South Delta Water Agency
(Delta Agencies), Lafayette Ranch, Heritage Lands Inc.,
3 Mark Bachetti Farms and Rudy Mussi Investments L.P.:

4 John Herrick, Esq.

5
6 Tehama-Colusa Canal Authority & water service
contractors in its service area:

7 Meredith Nikkel, Esq.

8
9 The City of Stockton:

10 Kelley Taber, Esq.

11 City of Antioch:

12 Matthew Emrick, Esq.

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1 MAY 18, 2017 - THURSDAY 9:30 A.M.

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

3 --o0o--

4 CO-HEARING OFFICER DODUC: Good morning,
5 everyone. Welcome back.

6 It is 9:30 and we are back in the State
7 Water Board water rights change petition for the
8 California WaterFix project.

9 I am Tam Doduc. I believe joining me shortly
10 will be to my right board chair and co-hearing officer,
11 Felicia Marcus, and to my far right, board member
12 DeeDee D'Adamo. To my left are Dana Heinrich, Conny
13 Mitterhofer, and Kyle Ochenduszko.

14 We're also being assisted by Mr. Hunt and
15 Mr. Wong. And here is the board chair.

16 Since it is a new week, although a shortened
17 week, I will go over the three announcements.

18 First of all, please identify the exit closest
19 to you. In the event of an alarm, please use it to then
20 take the stairs down to the first floor and meet up with
21 the rest of us in the park across the street. If you're
22 not able to use the stairs, please track down one of us,
23 and we will direct you to a protected area.

24 Secondly, as always, this is being Webcasted
25 and recorded so speak into the microphone when you are

1 reading your statements or comments and please identify
2 yourself as you begin for the court reporter. The
3 transcript will be made available at the completion of
4 Part I-A. If you wish to have it sooner, please make
5 arrangements with the court reporting service.

6 Finally, and most importantly, please take a
7 moment and put all noise-making devices to silent,
8 vibrate, do not disturb.

9 That's for you, Mr. Herrick.

10 All right. With that, before we get back to
11 the cross-examination of Group 7 witnesses, I have a
12 pretty lengthy set of rulings to read. So please settle
13 down, get comfortable, and we will get started.

14 I would like to address the petitioners'
15 rebuttal testimony and exhibits.

16 After petitioners finished presenting the
17 rebuttal testimony on May 12, they offered their
18 rebuttal testimony and exhibits into the evidentiary
19 record. They submitted letters on May 15 confirming
20 which exhibits they are offering into evidence.

21 A number of objections to petitioners'
22 rebuttal testimony and exhibits remain outstanding,
23 which I will address at this time, and we will go
24 through them one by one.

25 The first one was an objection made by EB MUD.

1 It was to DWR-659, the ARUP memo, as well as associated
2 rebuttal testimony of John Bednarski, DWR-75, at page 18
3 through 20, and DWR-6, Mr. Bednarski's PowerPoint
4 Slide 46.

5 The objection was made on April 25, and the
6 grounds for the objection was that the authors of the
7 memo are not witnesses and the memo is being offered for
8 the truth of the matter stated therein.

9 So this is essentially a hearsay objection
10 which goes to the weight of the evidence, not its
11 admissibility.

12 I will remind everyone that in our ruling
13 dated March 15, 2017, we directed the parties to reserve
14 for their closing briefs any objections that go to the
15 weight of rebuttal testimony or exhibits, including
16 hearsay objections.

17 EB MUD's objection is overruled to the extent
18 that EB MUD sought to exclude DWR-659 and the related
19 testimony from the record. The objection is noted for
20 the record and will be taken into consideration when
21 weighing the evidence.

22 Moving on to the next objection which was made
23 by San Joaquin County protestant with CSPA joining in.
24 Objection was made on April 25th, and it focused on
25 statements in the testimony of John Bednarski, DWR-75,

1 page 5, lines 12 through 13; as well as page 5, lines 27
2 through 28; page 7, line 11; page 8, line 6 through 7.

3 This is all about budgetary feasibility of
4 other tunnel projects.

5 The objection was made on the grounds that the
6 testimony was outside the scope of rebuttal and of
7 Part I.

8 This objection is sustained because DWR has
9 not identified any testimony presented in Part I-B of
10 the hearing concerning economic feasibility to which
11 Mr. Bednarski's statements are responsive.

12 Accordingly, the statements about the budgets
13 of other tunnel projects are not proper rebuttal.

14 The next objection was made by
15 San Joaquin County protestants on April 25th, and --
16 actually, it was a motion to strike portions of
17 Mr. Bednarski's testimony, DWR-75, concerning other
18 tunnel projects. The ground stated was that the
19 testimony is hearsay and lacks foundation to the extent
20 that the source of information concerning other projects
21 was not identified.

22 This motion to strike is overruled. Again,
23 under Evidence Code Section 801, an expert witness's
24 opinion on a given subject may be based on any type of
25 matter, whether or not admissible, that reasonably may

1 be relied upon by an expert in the field.

2 In this case, Mr. Bednarski's opinion
3 regarding other tunnel projects was based on information
4 obtained by taking -- by talking to the design engineers
5 and construction managers who worked on these projects
6 and by reviewing information available on the Internet.
7 It was reasonable for him to rely on that type of
8 information in forming his opinion. And his testimony
9 itself is not hearsay.

10 Mr. Bednarski's failure to identify -- to
11 specify the source of information, however, includes --
12 including the names of his contacts will be taken into
13 consideration when evaluating the weight to be given to
14 his testimony.

15 The next objection came from LAND, et al., and
16 was joined by Antioch, CSPA, et al., Clifton Court,
17 South Delta, et al. It was made on April 27th. It was
18 directed to unspecified DWR exhibits and testimony that
19 cite to the final EIR for the WaterFix project.

20 The grounds stated was that DWR should have
21 submitted the entire FEIR or any excerpts from the FEIR
22 upon which their experts relied on both to support their
23 testimony and so that other parties could review those
24 excerpts.

25 This objection is overruled. An expert may

1 rely on material that is outside the record, and the
2 FEIR has been available for public review during this
3 phase of the hearing.

4 DWR proposes to offer the certified FEIR into
5 the record during Part II of this hearing. In the event
6 that the FEIR ultimately is not admitted into evidence,
7 the objection may go to the weight of any testimony that
8 relies on it.

9 But from a procedural standpoint, DWR's
10 decision not to submit either the entire FEIR or
11 excerpts from the FEIR into evidence during this stage
12 of the hearing was not improper.

13 The next objection was made by Ms. Des Jardins
14 on April 28. It was focused on DWR-651 and DWR-653.
15 These were technical reports prepared by Dr. Bryant that
16 constituted part of his rebuttal testimony.

17 The grounds she stated was that the reports
18 are inconsistent with Evidence Code Section 801,
19 Subdivision B, as interpreted by the California
20 Supreme Court decision in Sargon Enterprises vs.
21 University of Southern California.

22 The objection to the admissibility of this
23 report is overruled. Ms. Des Jardins has not
24 demonstrated that Dr. Bryant's expert opinion, as
25 expressed in DWR-651 and DWR-653, is inadmissible

1 because it was unreasonable for him to rely on a
2 particular type of matter or because the basis for his
3 objection was speculative.

4 Ms. Des Jardins' arguments concerning the
5 validity of Dr. Bryant's analysis may be addressed
6 through surrebuttal or in her closing brief.

7 Now we get to the objection made by
8 North Delta Water Agency and San Joaquin County
9 protestants. They were made by North Delta on April 28
10 and by San Joaquin County protestants on May 4th.

11 This has to do with the portions of
12 Maureen Sergent's testimony in DWR-77 regarding
13 interpretation of the North Delta Water Agency contract
14 with DWR. It also had to deal with a specific paragraph
15 in Ms. Sergent's testimony, DWR-77, page 14, lines 12
16 through 23.

17 The grounds made for this objection was that:
18 One, Ms. Sergent is not qualified as an expert in
19 contract interpretation and does not administer the
20 contract; two, that the intent of the contracting
21 parties is not relevant unless the contract -- unless
22 the contract is ambiguous; three, Ms. Sergent had no
23 personal knowledge concerning the parties' intent; and,
24 four, the historic documents upon which her opinion may
25 be based are not available to the other parties.

1 This objection is overruled. Technical rules
2 of evidence, including the rules governing the
3 admissibility of extrinsic evidence to aid in the
4 interpretation of a contract, are not applicable in
5 State Water Board proceedings.

6 Moreover, even in a court of law, the test of
7 admissibility of extrinsic evidence is not whether a
8 contract appears to be plain and unambiguous on its
9 face, but whether the evidence is relevant to prove a
10 meaning to which the language of the contract is
11 reasonably susceptible.

12 In this case, the North Delta contract is
13 reasonably susceptible to Ms. Sergent's interpretation
14 that the contract was intended to mitigate for the
15 impacts of the peripheral canal, and, therefore, her
16 testimony concerning the circumstances that existed when
17 the North Delta contract was signed and the intent of
18 the contracting parties would be admissible in a court
19 of law and is admissible in this proceeding as well.

20 To the extent that other parties disagree with
21 Ms. Sergent's interpretation of the contract, they may
22 address this issue through surrebuttal or in their
23 closing briefs.

24 The remaining objection based on Ms. Sergent's
25 qualifications, lack of personal knowledge concerning

1 the intent of the contracting partners, and the fact
2 that DWR did not submit any historic documents
3 concerning the North Delta contract go to the weight to
4 be given to Ms. Sergent's testimony, not to its
5 admissibility.

6 That was long. You made a lot of objections.

7 The next one was made on May 4th by the
8 San Joaquin County protestants. This was focused on
9 DWR-77, page 4, line 17 through 20.

10 This was Ms. Sergent's testimony regarding
11 whether the State Water Board considered the authorized
12 source of water in two State Water Project permits to
13 include the Sacramento River near Hood.

14 The grounds specified for this objection was
15 that the testimony is unsupported opinion.

16 Again, this objection goes to the weight of
17 the testimony, and it is overruled to the extent that
18 San Joaquin County protestants sought to exclude the
19 testimony altogether.

20 Staying with San Joaquin County protestants,
21 the next objection they made, also on May 4th, was to
22 DWR-77, page 5, line 7 through 10. This was
23 Ms. Sergent's testimony concerning the Hood point of
24 diversion depicted on maps submitted with SWP permit
25 applications.

1 The grounds specified was that the testimony
2 should be stricken unless the maps are made available to
3 the public and the parties by posting them on the State
4 Water Board Web site.

5 This objection is overruled. The maps
6 submitted with the four water rights applications are
7 public documents on file with the Division of Water
8 Rights. The maps are oversized and cannot readily be
9 copied and posted on the Web site, but they can be
10 inspected upon request or copied at the expense of the
11 person making the request.

12 The hearing team is currently working with the
13 Division of Water Rights staff to post these maps on the
14 State Water Board WaterFix change petition Web site.

15 The next objection was made by LAND on
16 May 9th. This was an objection to DWR-10, Slide 19, the
17 now infamous Delta hydrodynamic graphics in
18 Mr. Leahigh's PowerPoint.

19 The grounds was that the graphic is misleading
20 and incomplete because it does not show an increase in
21 reverse flows on the Sacramento River or a decrease in
22 flows below the North Delta diversion.

23 This objection also goes to the weight of the
24 evidence and is overruled to the extent that LAND,
25 et al., sought to exclude the slide from the record.

1 We note in this regard that the graphic was
2 intended to illustrate, not necessarily to accurately
3 depict Delta hydrodynamics throughout the Delta with and
4 without the project.

5 Moving on now to an objection made by the City
6 of Brentwood, joined by South Delta, Ms. Des Jardins,
7 and San Joaquin County protestants. South Delta, when
8 joining in this objection, also added an objection to
9 Mr. Munevar's testimony on the same ground.

10 Now, the focus for this objection was
11 initially Dr. Nader-Tehrani's testimony. And the
12 grounds specified was that his testimony was irrelevant
13 based on his responses during cross-examination
14 concerning limitations on the use of DSM2 modeling to
15 evaluate short-term impacts to water quality and water
16 levels.

17 The motion to strike Dr. Nader-Tehrani's and
18 Mr. Munevar's testimony -- I will forever remember, I'll
19 try to remember how to say his name -- Mr. Munevar's
20 testimony is overruled.

21 As Dr. Nader-Tehrani himself made clear on
22 redirect, his testimony is not irrelevant to the issues
23 in this proceeding. The objection, however, does go to
24 the weight to be afforded Dr. Nader-Tehrani and
25 Mr. Munevar's testimony.

1 Next, we get to LAND's objection made on
2 May 10th to which CSPA joined. It was an objection to
3 DWR-84, page 15, line 13 through 18 and also line 20.
4 This was Dr. Thornberg's testimony regarding leaching
5 fractions. The grounds specified was that the testimony
6 is outside of the witness's area of expertise.

7 This objection is sustained. The testimony in
8 question is not sufficiently reliable to be admissible
9 because it is outside Dr. Thornberg's expertise as an
10 economist. The subject of leaching fractions was
11 appropriately addressed by Dr. Kimmelshue in his
12 rebuttal testimony.

13 We now move on to an objection made on
14 May 10th by CSPA, et al., with, actually, LAND,
15 San Joaquin County protestants. And Snug Harbor also
16 joined in. This was an objection to the portions of
17 Dr. Thornberg's testimony in DWR-84.

18 This was Dr. Thornberg's testimony concerning
19 the need to balance the economic impacts of the WaterFix
20 project against the economic benefits of the project, as
21 well as his testimony concerning funding for the
22 project. The grounds specified was that his testimony
23 is not responsive to the protestants' testimony and is
24 outside the scope of Part I of the hearing.

25 This objection is sustained in part and

1 overruled in part.

2 Dr. Thornberg's testimony is responsive to
3 testimony presented by protestants concerning the
4 potential economic impacts of the project. And if this
5 hearing had not been bifurcated, it would be permissible
6 rebuttal.

7 Most of the testimony in question, however,
8 concerns issues that are outside the scope of Part I,
9 including the economic benefits of the WaterFix project
10 and the source of funding for the project.

11 Petitioners will have the opportunity to
12 address these issues in Part II. And we have determined
13 that it will be more efficient to hear testimony on
14 these issues in Part II rather than opening the door to
15 testimony on these issues during rebuttal and
16 surrebuttal in Part I.

17 Accordingly, the motion to strike is granted,
18 except for page 40, lines 3 through 15, and the second
19 sentence of the first full paragraph on page 41 of
20 Dr. Thornberg's written testimony. Those portions of
21 Dr. Thornberg's testimony concern the magnitude of the
22 economic impacts estimated by Dr. Jeffrey Michael and
23 are within the scope of Part I.

24 We recognize that Dr. Thornberg was
25 cross-examined on the portions of his testimony that

1 have been stricken. Rather than parse the transcript,
2 however, we will simply disregard any of Dr. Thornberg's
3 testimony during cross-examination that concerns the
4 economic benefits of the project or the sources of
5 funding for the project.

6 And, finally, although it has been stricken, I
7 would like to address the portion of Dr. Thornberg's
8 testimony rebutting Dr. Aaron Whitelaw's testimony
9 concerning the no-injury rule because this or similar
10 testimony could be presented in Part II.

11 Dr. Thornberg's use of the term "injury" and
12 "legal users of water" in the context of a discussion
13 concerning economic principles caused unnecessary
14 confusion and was a waste of time and resources because
15 those terms have a certain legal meaning and
16 significance in this proceeding.

17 As a result, some protestants, understandably,
18 felt compelled to explore the meaning of his testimony
19 through cross-examination that proved to be unnecessary.

20 In the future phases of this hearing, counsel
21 for all parties are advised to be mindful of the meaning
22 of these terms when assisting your witnesses in
23 formulating and presenting testimony.

24 With that, I think I have ruled on all of the
25 outstanding objections to petitioners' rebuttal

1 testimony and exhibits.

2 Are there any outstanding objections you're
3 aware of that have not been addressed?

4 MR. KEELING: No objections, but we do have
5 some other issues before we start.

6 CO-HEARING OFFICER DODUC: Hearing none, the
7 rebuttal testimony and exhibits listed in DOI's
8 May 15th, 2017, letter, and in DWR's revised exhibit
9 identification index submitted on May 15, 2017, are
10 accepted into evidence subject to our rulings on the
11 evidentiary objections to petitioners' testimony and
12 exhibits.

13 Can we call it a day now?

14 All right. With that, I believe Mr. Keeling
15 requested to speak first, and then Mr. Aladjem, and then
16 everyone else.

17 Are these housekeeping matters or are these --

18 MR. KEELING: Housekeeping,
19 scheduling-related. We, of course, are going to have
20 our rebuttal witnesses here whenever they're supposed to
21 be here. But since they're out of town -- one's coming
22 from the Monterey area, the other's coming from Stockton
23 and is an employee of the county with lots of
24 obligations -- they need to have a little bit of time.
25 We need to tell them when you need to be here.

1 The witnesses I'm talking about will come
2 after the remainder of Group 7 today. Will come after
3 Group 9, which has other witnesses today, I assume.
4 Will come after Central Delta Water Agency --
5 South Delta Water Agency's witnesses, Mr. Burke and
6 Mr. Salmon.

7 Will come after Group 19, that is, LAND's
8 Ringelberg and Dr. Leinfelder-Miles. Will come after
9 the San Joaquin Tribs, Mr. Steiner. Will come after the
10 City of Stockton and City of Antioch both, Ms. Paulson.

11 So we're a group of combined panel of 19, 24,
12 and 31.

13 As I read this, and I want to get a take from
14 you to see if I'm wrong or if I'm misunderstanding, I
15 think it's likely that they'll be up Tuesday. Obviously
16 not today and probably not tomorrow.

17 That's my take. But if -- I'm inclined to say
18 to them, "Be here on Tuesday."

19 CO-HEARING OFFICER DODUC: My take is they
20 will not be needed this week.

21 We'll revisit this, as we always do, on a
22 rolling basis at the beginning and end of each day.

23 MR. KEELING: Do I have permission to tell
24 them, at least at this point, "Don't get in the car
25 today, but be prepared on Tuesday"?

1 Thank you very much.

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

4 MR. OCHENDUSZKO: And so for -- just a moment,
5 Mr. Aladjem. So for groups and parties in the room, the
6 e-mail schedule that Mr. Keeling was referring to
7 yesterday is available at the front -- front right-hand
8 side of the room if you don't have your e-mail available
9 to you.

10 CO-HEARING OFFICER DODUC: And if by some
11 miracle we get through all that and get to your
12 witnesses this week, I think we all deserve an early
13 break in any case.

14 Mr. Aladjem.

15 MR. ALADJEM: Good morning, Chair Doduc.
16 David Aladjem.

17 Just a very quick question of the Chair. That
18 was a very extensive list of rulings. Would it be
19 possible for the board to post that or distribute it to
20 the parties in writing?

21 CO-HEARING OFFICER DODUC: You can't wait for
22 the transcript?

23 MR. ALADJEM: We can always wait for the
24 transcript.

25 CO-HEARING OFFICER DODUC: We will take that

1 into consideration, but my preference is we handle these
2 things -- we try to get the objections in verbally and
3 we'll try and get the rulings out verbally to just sort
4 of shorten the amount of paperwork and handling that we
5 all have to do.

6 MR. ALADJEM: Thank you.

7 CO-HEARING OFFICER DODUC: I did try to read
8 very slowly.

9 Ms. Taber?

10 MS. TABER: Good morning. Kelley Taber on
11 behalf of the City of Stockton and I'm joined with
12 Mr. Emrick on behalf of the City of Antioch.

13 As you will recall, the hearing officers
14 granted our request to have our witness,
15 Dr. Susan Paulson, appear on the same day. And
16 Dr. Paulson does have to travel, the night before she
17 would present testimony, from Southern California. So
18 we wanted to confirm that she -- whether or not she
19 would be appearing tomorrow.

20 CO-HEARING OFFICER DODUC: I somehow doubt
21 that. And, again --

22 MR. EMRICK: Could we get a stipulation?
23 Because we need to let her know so she can get a -- a
24 plane. If we could have a stipulation for Tuesday.

25 CO-HEARING OFFICER DODUC: Let's say we will

1 not get to her tomorrow.

2 MS. TABER: Thank you.

3 MR. EMRICK: Thank you very much. Appreciate
4 it.

5 CO-HEARING OFFICER DODUC: Ms. Meserve?

6 MS. MESERVE: Good morning. Osha Meserve for
7 LAND, Group 19.

8 One of my witnesses is coming from Stockton.
9 So I don't know if you know right now, but I guess as
10 soon as maybe after we hear estimates of cross, it would
11 be excellent if I could tell her whether she's coming up
12 here this afternoon or not.

13 CO-HEARING OFFICER DODUC: Will do.

14 MS. MESERVE: Thank you.

15 CO-HEARING OFFICER DODUC: And this is the
16 infamous Dr. Leinfelder-Miles.

17 Anything else?

18 MR. BEZERRA: One matter related to what was
19 this panel of witnesses. We think that I may have
20 inadvertently not asked Mr. Durkin formally to identify
21 his written testimony. So I could do that on redirect
22 after completion of cross, but I'd like to ask if we
23 could just ask three questions now and get Mr. Durkin
24 out of here so we can formally get that done.

25 CO-HEARING OFFICER DODUC: I will hope that

1 there be no objection to that.

2 Not seeing any, Mr. Bezerra, you may do that.

3 MR. BEZERRA: Thank you. If I could just --

4 CO-HEARING OFFICER DODUC: Hold on. Let me
5 make sure there's no other housekeeping matter.

6 Anything else we need to address?

7 Let me just say that even though there was a
8 flurry of e-mails that I did my best to ignore these
9 past few days, I do appreciate all the parties' effort
10 to coordinate with each other to adjust to your
11 scheduling conflict so that we don't have to get
12 involved in that and work things out. Really appreciate
13 that effort.

14 So with that, Mr. Bezerra.

15 MR. BEZERRA: Yes.

16 Mr. Durkin, could you come to the front mic?

17 CO-HEARING OFFICER DODUC: Welcome back to the
18 shortest retirement on record.

19 MR. BEZERRA: So everyone knows, I owe
20 Mr. Durkin lunch.

21 Mr. Durkin, could you please state your full
22 name for the record?

23 THE WITNESS: Keith Durkin.

24 KEITH DURKIN,

25 recalled as a witness by the Protestants, having

1 been previously duly sworn, was examined and
2 testified as follows:

3 --o0o--

4 REDIRECT EXAMINATION

5 MR. BEZERRA: Mr. Durkin, do you understand
6 you're under oath?

7 WITNESS DURKIN: Yes, I do.

8 MR. BEZERRA: And is Exhibit SJWD-17 your
9 testimony on rebuttal?

10 WITNESS DURKIN: Yes, it is.

11 MR. BEZERRA: As of May 12, 2017, were you San
12 Juan Water District's assistant general manager?

13 WITNESS DURKIN: Yes, I was.

14 MR. BEZERRA: Thank you very much, Mr. Durkin.
15 Now we'll leave you alone.

16 CO-HEARING OFFICER DODUC: Thank you very
17 much.

18 MR. BERLINER: Two hours of cross for this
19 witness.

20 CO-HEARING OFFICER DODUC: Mr. Bezerra will
21 owe him dinner as well.

22 MR. BEZERRA: And then probably his wife.
23 Thank you very much for the accommodation.

24 CO-HEARING OFFICER DODUC: Let's just recap.
25 It's been a while.

1 Right now, the petitioners are conducting
2 their rebuttal. And how much additional time do you
3 anticipate needing?

4 MR. BERLINER: Cross-examination.

5 CO-HEARING OFFICER DODUC: I'm sorry.

6 Cross-examination. You know what I mean.

7 MR. BERLINER: I'm Tom Berliner for Department
8 of Water Resources. My initial estimate was incorrect.
9 I thought I would get through all of it in about
10 40 minutes or so.

11 I believe that I probably have closer to an
12 hour remaining for, hopefully, both witnesses. Not two
13 hours, just one hour to get through both.

14 CO-HEARING OFFICER DODUC: All right. Then I
15 have Ms. Morris.

16 MS. MORRIS: Stephanie Morris, State Water
17 Contractors. I think based on questioning, I had asked
18 for an hour, but I think maybe more like ten minutes.
19 Might just have a few questions or not.

20 CO-HEARING OFFICER DODUC: All right. And
21 Group 4?

22 MS. AKROYD: Rebecca Akroyd for San Luis
23 Obispo Delta-Mendota Water Authority. I estimate about
24 30 minutes.

25 CO-HEARING OFFICER DODUC: You went up from

1 your initial 15.

2 MS. AKROYD: Some may get covered by
3 Mr. Berliner, so it may go back down.

4 CO-HEARING OFFICER DODUC: All right.

5 And, Mr. O'Brien, you still anticipate
6 30 minutes?

7 MR. O'BRIEN: That's correct.

8 CO-HEARING OFFICER DODUC: That's all I have.

9 I can't remember if Ms. Des Jardins requested
10 cross-examination of this group or not, and she's not
11 here to answer that question.

12 So, Mr. Berliner, we will now turn to you.

13 MR. MILIBAND: If I may interject quickly.
14 Thank you, Mr. Berliner.

15 I'd like to make just a real brief statement
16 just given some of the events from last Friday and some
17 confusion that might have arisen just from the
18 objections we were having to make on confidentiality.
19 So we're just hoping to clear the air, because we have
20 met and conferred and spoken with counsel and just want
21 to try to create as best a process as we can as a group.

22 CO-HEARING OFFICER DODUC: Please do.

23 MR. MILIBAND: Thank you.

24 So last week, there were various questions to
25 Tom Gohring in which we objected because the questions

1 called for information that appeared privileged or a
2 part of confidential settlement communications.

3 The questions and objections appeared to
4 create some confusion, so legal counsel for the
5 American River Water Agencies group met and conferred
6 earlier this week with legal counsel for DWR and
7 reclamation on issue.

8 Part of the situation arises from both DWR and
9 members of the American River Water Agencies group being
10 involved in discussions regarding, among other things,
11 the water quality control plan update.

12 In addition, some of the American River Water
13 Agencies have met with DWR and reclamation to discuss
14 terms under which the parties may be able to settle
15 differences we have over WaterFix, and those
16 conversations are considered confidential that are not
17 admissible in this or any other proceeding.

18 In order to allow participants to talk freely
19 in those discussions, they are protected by either
20 confidentiality rules or agreements.

21 Certain of the questions last week appeared to
22 us, at least to those within the American River Water
23 Agencies group, to inquire into the nature and content
24 of those discussions.

25 After conferring with DWR, they made clear

1 they did not intend to do so, and that was certainly our
2 presumption as well.

3 And at this point, our mutual understanding is
4 to respect that confidentiality exists. Mr. Gohring is
5 certainly prepared to talk about nonconfidential
6 discussions assuming they're relevant and so forth.

7 But with that common understanding, we just
8 wanted to make a brief statement to that effect and
9 hopefully clear any confusion and have a clearer path
10 forward this morning. Thank you.

11 CO-HEARING OFFICER DODUC: All right. Thank
12 you.

13 Actually, Mr. Berliner, before you begin, I've
14 forgotten Ms. Meserve's request. Turn back to that.

15 It looks like we will finish this group, at
16 the latest, by our lunch break, maybe even sooner
17 depending on whether or not you have redirect.

18 Do you anticipate redirect at this point?

19 MR. MILIBAND: Unlikely. And if so, very,
20 very briefly. Thank you.

21 CO-HEARING OFFICER DODUC: Okay. North Delta,
22 are your witnesses here, ready to go?

23 MS. NIKKEL: Yes.

24 CO-HEARING OFFICER DODUC: How long do you
25 anticipate needing for their rebuttal presentation?

1 MS. NIKKEL: Good morning. Meredith Nikkel
2 for North Delta Water Agency. I anticipate maybe ten
3 minutes for direct examination.

4 CO-HEARING OFFICER DODUC: Okay. And at this
5 time, estimated cross for Group 9 rebuttal witnesses?
6 Please identify -- come up, identify, and give me a
7 rough time estimate.

8 MS. MCGINNIS: Robin McGinnis for Department
9 of Water Resources. Maybe none at all, but at the most,
10 ten minutes.

11 CO-HEARING OFFICER DODUC: Okay. Ms. Morris?

12 MS. MORRIS: I'm likely to have none, but
13 maybe five, ten minutes just in case.

14 CO-HEARING OFFICER DODUC: Mr. Herrick?

15 MR. HERRICK: John Herrick, South Delta
16 Parties, Group 21. Maybe five, ten minutes.

17 MS. MESERVE: Osha Meserve for LAND, five to
18 ten minutes.

19 CO-HEARING OFFICER DODUC: All right. And
20 then after that -- so that's -- should go fairly
21 quickly.

22 Next up will be Group 21, Central Delta Water
23 Agency, Mr. Burke and Mr. Salmon. Looks like we will
24 get to them this afternoon. So let me get a rough
25 estimate of time you'll need for direct as well as any

1 cross.

2 MR. RUIZ: Good morning. Dean Ruiz for the
3 South Delta Agencies parties.

4 Tom Burke's direct, 15 minutes.

5 CO-HEARING OFFICER DODUC: Okay. I understand
6 Mr. Salmon won't be appearing until tomorrow.

7 MR. RUIZ: Tomorrow morning, yes.

8 CO-HEARING OFFICER DODUC: So then cross for
9 Mr. Burke?

10 MS. MCGINNIS: Robin McGinnis for the
11 Department of Water Resources.

12 Probably about an hour.

13 MS. MORRIS: Stephanie Morris.

14 I'm going to say 20 minutes but it may be less
15 depending on what questions are asked before me.

16 MS. AKROYD: Rebecca Akroyd, San Luis &
17 Delta-Mendota Water Authority. I'd say maybe ten
18 minutes, but maybe not at all.

19 MR. JACKSON: Michael Jackson on behalf of the
20 C-WIN parties, 15 to 20 minutes.

21 MR. KEELING: Tom Keeling on behalf of the
22 San Joaquin County protestants, maybe ten minutes.

23 MS. MESERVE: Osha Meserve for LAND, 10 to 15
24 minutes.

25 CO-HEARING OFFICER DODUC: All right. Who's

1 been doing the quicker addition than I have?

2 Let's say two hours for Group 21 and an hour
3 for Group 9.

4 So, yes, Ms. Meserve, we might get to you this
5 afternoon.

6 Have I forgotten any other requests at this
7 point?

8 Seeing none...

9 Now, Mr. Berliner, the floor is yours.

10 MR. BERLINER: Very much.

11 TOM GOHRING

12 JEFFREY WEAVER

13 called as a witness by the Protestants, having
14 been previously duly sworn, were examined and
15 testified as follows:

16 --o0o--

17 CROSS-EXAMINATION (RESUMED)

18 MR. BERLINER: Good morning, Mr. Gohring.

19 WITNESS GOHRING: Good morning, sir.

20 MR. BERLINER: I'm going to try to pick up
21 where we left off in our cross-examination.

22 We were talking about the modified flow
23 management standard. I have some questions for you
24 about that.

25 I'd like to refer you to Department of Water

1 Resources Exhibit 915, please. And it may be that you
2 actually don't need that in front of you to answer these
3 questions, but just in case, my reference will be to
4 page 14.

5 Mr. Gohring, is it okay if I call it the
6 modified FMS?

7 WITNESS GOHRING: Yes, of course.

8 MR. BERLINER: Thank you.

9 Isn't it true that the modified FMS may cause
10 reductions in municipal and industrial CVP contract
11 deliveries south of the Delta?

12 WITNESS GOHRING: According to modeling we've
13 done, over the long term, there would be no reduction in
14 CVP or SWP delivery south of Delta. Our modeling does
15 show that there are reductions, reductions in the
16 magnitude of about a few percentage points in certain
17 months and certain year types.

18 MR. BERLINER: And by "a few percentage
19 points," could you give me a range, please?

20 MR. MILIBAND: Madam Chair, I'm sorry to
21 interpret. But this potentially relates to a pending
22 objection we have as to relevancy on the PowerPoint,
23 specifically impacts from conditions for approval
24 relating to Part I or not and the board's prior ruling
25 is saying those are not part of I.

1 So just for sake of efficiency and looking to
2 renew that objection to hear if Madam Chair has a ruling
3 on that or some other direction. Thank you.

4 CO-HEARING OFFICER DODUC: Thank you. That is
5 still under consideration. So for this time, I will
6 allow the questioning to continue. And, if necessary,
7 we will strike it as appropriate at a later time when we
8 issue our ruling.

9 MR. BERLINER: I will proceed, but I have to
10 confess, I'm a bit confused.

11 This proposal, we believe, has injury to other
12 uses of water. I would think this would be the time to
13 ask those types of questions.

14 CO-HEARING OFFICER DODUC: Mr. Miliband?

15 MR. MILIBAND: This relates back to what I was
16 setting forth last Friday referring to the February 21st
17 ruling as well as the October 7th ruling that originally
18 said explicitly and literally almost verbatim that
19 Part I does not encompass impacts from conditions for
20 approval.

21 Based upon that -- and this really touches
22 upon having Part I and Part II of the FMS that relates
23 to both. And Mr. Gohring, you know, is probably in
24 second gear and would love to be in fifth gear, you
25 know, giving a presentation about all of it. But this

1 gets into that challenge of trying to separate and parse
2 out those things.

3 If it's the hearing team's direction to
4 undertake this line of questioning and have the
5 testimony and subject to revisiting, I'm fine with that.
6 But I just had made that objection based upon the
7 board's rulings and --

8 CO-HEARING OFFICER DODUC: And I believe the
9 ruling we refer to was a ruling on -- on the -- the
10 direct cases in chief and not on rebuttal which would be
11 responsive to some of those cases in chief that we heard
12 in Part I-A and 1-B.

13 MR. MILIBAND: Madam Chair, if it says that --
14 that's not fresh in my memory -- but I would stand
15 corrected, if that's indeed the case.

16 CO-HEARING OFFICER DODUC: It is.

17 MR. MILIBAND: With that, we're happy to allow
18 this line of questioning if we could just follow with
19 the chair's direction, just revisit potential motion or
20 some other action or no action following the hearing
21 team's ruling. Thank you.

22 CO-HEARING OFFICER DODUC: All right. My
23 counsel has just reminded me that the standard for cross
24 is different in that cross-examination can go outside
25 the scope of where I went.

1 MR. BERLINER: I guess I'm just going to ask
2 the question.

3 CO-HEARING OFFICER DODUC: Please just ask the
4 questions.

5 MR. BERLINER: If I could ask that last
6 question again. You indicated that there were -- that
7 there may be an impact of a few percentage points.
8 Could you give me an idea of the range of those
9 percentages?

10 WITNESS GOHRING: It's difficult for me to
11 speak beyond generalities about the modeling. I --
12 we -- you know, we've modeled -- we've been working this
13 flow standard for many years. We've modeled it in
14 virtually every way that we can conceive. We feel we've
15 done beyond due diligence to look for a flow regime for
16 the American River that meets local objectives without
17 transferring impacts outside of the American River
18 basin. I'm really looking forward to presenting all
19 that information in depth as part of Part II. I -- I am
20 excited to do that.

21 In answer to your question, to the best of my
22 recollection at this time, the magnitude of changes in
23 deliveries to CVP, M&I, and AG contractors south of
24 Delta, is a change -- sometimes a change in the
25 positive, sometimes a change in the negative -- in the

1 magnitude of hundreds of acre feet out of several
2 million acre feet of deliveries.

3 MR. BERLINER: Since we'll get into that more
4 in Part II as I understand it, let me just ask you a
5 simple question. In your analysis -- and I'm not going
6 to ask for details at this time because I'm assuming
7 you're going to come forward with those in Part II.

8 But just to get a sense, on the scale of
9 impact, you're familiar with CVP allocations, I'm going
10 to assume for this question. In your view, would it
11 have an effect on allocation to a south of Delta
12 contractor?

13 WITNESS GOHRING: I honestly don't know. I'm
14 not familiar enough with those allocation rules to
15 understand that.

16 I can tell you that it is my understanding
17 that those allocation rules are represented in CalSim.
18 And when we run CalSim in the many different scenarios
19 that we've looked at, many different conditions in water
20 year types, CalSim uses some representation of those
21 rules to come up with its estimate of deliveries to
22 those contractors. And those deliveries over the long
23 term show no difference.

24 MR. BERLINER: So obviously contractors are
25 going to be concerned with annual impacts as opposed to

1 long-term impacts. Obviously water-short years have
2 different impact than years such as the current year.

3 So I'm just going to take you at your word at
4 this point that we're going to get into this in the next
5 part, and I'm going to reserve my right to conduct
6 cross-examination in depth on these issues if we get to
7 them if that's acceptable.

8 CO-HEARING OFFICER DODUC: So noted,
9 Mr. Berliner. I think we knew from the start, at least
10 we specified from the start in these proceedings, that
11 it's possible we might have to revisit some Part I
12 issues in Part II.

13 So we'll note your remarks.

14 MR. BERLINER: And I think just to -- so
15 everybody understands, then we will probably -- I'm
16 going to confer with my clients, but I believe we will
17 probably not go into any extensive surrebuttal on this
18 point either at this time and reserve it for rebuttal in
19 Part II.

20 MR. BEZERRA: And we can state for the record,
21 I think Mr. Gohring's testimony, I should state that we
22 plan to present a full suite of technical analysis in
23 Part II.

24 CO-HEARING OFFICER DODUC: Good. Thank you.
25 Thank you both.

1 MR. BERLINER: Thank you.

2 Mr. Gohring, is it accurate that development
3 of the modified FMS is premised on maintaining
4 sufficient storage in Folsom Reservoir to avoid drawing
5 down to 90,000 acre feet, or dead pool, during the
6 1976-'77 drought, and at a 2030 level of demand?

7 WITNESS GOHRING: Yes.

8 MR. BERLINER: And in your exhibit,
9 specifically RWA-309, is that the modeling that you used
10 to support your assertion that the WaterFix will
11 exacerbate existing dry year impacts?

12 WITNESS GOHRING: No. The modeling we used to
13 establish the harm of WaterFix project was the modeling
14 done by the project proponents.

15 MR. BERLINER: You did not rely on modeling
16 done by Mr. Weaver?

17 WITNESS GOHRING: That's not what I said.

18 MR. BEZERRA: Objection. Vague and ambiguous
19 as to how and when.

20 MR. BERLINER: That's what I want to get into
21 to kind of figure out the response here.

22 CO-HEARING OFFICER DODUC: Okay. Overruled.

23 MR. BERLINER: Did you rely on modeling --
24 strike that.

25 The modeling you used was petitioners' model,

1 correct?

2 WITNESS GOHRING: We used some of the
3 petitioners' modeling output, and we used some of our
4 own modeling.

5 The petitioners' modeling was used to
6 demonstrate that the WaterFix project increases the
7 likelihood, increases the frequency and magnitude of
8 reducing storage in Folsom Reservoir, which has a
9 commensurate reduction in water supply reliability for
10 water users in the American River basin.

11 MR. BERLINER: And you say you used part of
12 petitioners' model. What did you supplement the
13 petitioners' model with?

14 WITNESS GOHRING: Again, I'm -- in what
15 regard?

16 MR. BERLINER: Well, did -- Mr. Weaver did
17 some modeling work, correct?

18 WITNESS GOHRING: Yes. And so may I -- I
19 don't want to be out of order. I'm not sure if you're
20 asking about the modeling we did to demonstrate the
21 benefits and lack of redirected impacts of the modified
22 FMS or if you're asking me about the modeling that we
23 relied on to come to the conclusion that WaterFix harms
24 us. So that's -- and there are actually two distinct of
25 groups of modeling there, if that helps.

1 MR. BERLINER: Go to Exhibit 309.

2 WITNESS GOHRING: Uh-huh.

3 MR. BERLINER: Pages 3 and 4.

4 Does this look familiar?

5 WITNESS GOHRING: Yes, sir.

6 MR. BERLINER: And this is out of your

7 PowerPoint presentation, correct?

8 WITNESS GOHRING: Correct.

9 MR. BERLINER: Could you give me a brief
10 explanation of what you intended to show by this slide?

11 WITNESS GOHRING: This is the summary of my
12 written testimony. As I understood, the PowerPoint is
13 intended to capture the primary points for the purpose
14 of verbal testimony.

15 This slide was a placeholder to me for the
16 purpose of delivering my testimony that reminded me that
17 reclamation and DWR witnesses had repeatedly said that
18 their modeling cannot be trusted in the driest 10 or
19 20 percent of the years; that the rest of -- of us in
20 the world should not be concerned with that for two
21 reasons.

22 One is that we should take solace in a promise
23 that reclamation will operate the project in a certain
24 way and undefined and unmodeled way in those dry years
25 that will prevent Folsom Reservoir from hitting

1 disastrous levels.

2 The other reason reclamation and DWR told us
3 not to be concerned is that the model is just not
4 accurate in those years, those drier years, according to
5 testimony we heard from them.

6 The types of decisions that would be made in
7 those kinds of year just cannot be reflected in the
8 model.

9 And so this was my placeholder to remember to
10 say those things and to point out that if we can't trust
11 the project proponents' modeling in the dry year, then
12 we don't really know what the relative difference is in
13 the outcome -- in the output of the models on the
14 storage of Folsom Reservoir in those dry years. And
15 those dry years are the most critical for the water uses
16 in the American River basin.

17 MR. BERLINER: I'm going to move to strike the
18 witness's response to the question as being
19 nonresponsive.

20 CO-HEARING OFFICER DODUC: Mr. Bezerra?

21 MR. BEZERRA: I think it was fully responsive.
22 He asked what Mr. Gohring intended to use this slide
23 for.

24 CO-HEARING OFFICER DODUC: Ms. Morris?

25 MS. MORRIS: I'd to join the objection and

1 just add that when this slide was shown, the testimony
2 was significantly different, and this seems to be a
3 departure from his testimony. He presented this slide
4 on the basis that he was showing that WaterFix, in his
5 words, exacerbated -- the project exacerbated the
6 effects that already exist at Folsom.

7 CO-HEARING OFFICER DODUC: Overruled,
8 Mr. Berliner. I understood his response to be directly
9 responsive to your question of what was his thinking,
10 what is, you know, his use of this graph.

11 Yes, he inserted a lot of his own opinion in
12 his response, but it is his response.

13 MR. BERLINER: Did you prepare this slide?

14 WITNESS GOHRING: I did.

15 MR. BERLINER: This slides refers -- as I
16 understand this slide, it's based on Alternative 4; is
17 that correct?

18 WITNESS GOHRING: Yes.

19 MR. BERLINER: You understood that
20 Alternative 4 is not the project that's being proposed,
21 correct?

22 WITNESS GOHRING: I included this slide not
23 as -- not to point out a specific bit of information on
24 this slide, but to provide a placeholder for me in my
25 verbal testimony to remember to hit the points I just

1 mentioned a moment ago.

2 MR. BERLINER: I'm going to ask that the
3 response be stricken as nonresponsive. I did not ask
4 him that question.

5 My question was that I asked him if he
6 understood whether Alternative 4 was not the project
7 that was being proposed. I think that's a "yes" or
8 "no."

9 CO-HEARING OFFICER DODUC: Mr. Bezerra?

10 MR. BEZERRA: Yes, at this time, this is a
11 graph from the petitioners' draft EIR/EIS which I
12 understand them to plan they have issued a final
13 EIR/EIS. This is petitioners' document. So to say this
14 is not the project that's being proposed --

15 CO-HEARING OFFICER DODUC: Mr. Berliner --

16 Hold on.

17 Mr. Berliner, does your question rely on this
18 graph?

19 MR. BERLINER: Apparently the analysis by the
20 American River folks does rely on showing impacts based
21 on Alternative 4.

22 Alternative 4A is not a late long-term
23 project. It does not involve 65,000 acres of wetlands
24 restorations and a number of other differences.

25 CO-HEARING OFFICER DODUC: The objection is

1 sustained.

2 Ask your question again, and Mr. Gohring will
3 answer directly.

4 MR. BERLINER: Mr. Gohring, do you understand
5 that Alternative 4 is not the project that's being
6 proposed by the project proponents?

7 WITNESS GOHRING: I understand.

8 MR. BERLINER: Do you understand that there
9 are significant differences between Alternative 4 and
10 Alternative 4A which is being proposed?

11 WITNESS GOHRING: Yes.

12 MR. BERLINER: And among those are the late
13 long-term and the restoration of wetlands components,
14 among others?

15 WITNESS GOHRING: I'm -- I can't really speak
16 to that level of detail.

17 MR. BERLINER: Okay. Thank you.

18 If we could DWR-916, please. It's on the
19 thumb drive.

20 Mr. Gohring, since you indicated you're
21 familiar with modeling, I'm assuming that you're going
22 to be comfortable looking at figures like this.

23 This is Figure 14 from a prior DWR exhibit,
24 Exhibit 514, and a figure from the Sacramento Valley
25 Water Users Exhibit 107, Figure 49.

1 Now if we could go to the first page, please.

2 The lower left-hand corner, there's a square that I've
3 drawn. Do you see that?

4 WITNESS GOHRING: I do see the square.

5 MR. BERLINER: Do you agree that --

6 MR. BEZERRA: Can I just clarify for the
7 record? I want to make sure I understand. These are
8 all end of September storage plots; is that correct?

9 MR. BERLINER: Yes.

10 MR. BEZERRA: Thank you.

11 MR. BERLINER: And these are end of -- end of
12 September for Folsom storage.

13 Do you see that, according to this analysis,
14 there are no worse scenarios than the no-action
15 alternative for Folsom end of September storage under
16 the drier conditions?

17 WITNESS GOHRING: I have -- I feel I'm unable
18 to draw that conclusion having listened to testimony
19 from DWR and reclamation that says their modeling, which
20 is represented here, cannot be trusted when Folsom is
21 shown at dead pool in the, quote, dry years.

22 So I look at the lines that all converge in
23 the lowest 5 percent of these curves, and I can't make
24 any conclusion from that.

25 MR. BERLINER: Do you understand -- strike

1 that.

2 I don't want to get into an argument with you
3 over whether modeling can be trusted or not. I take
4 some different view of the testimony regarding whether
5 modeling can be trusted.

6 I think there's a question of whether the
7 models are accurate under certain conditions because of
8 functions of a model which drive water supply to
9 conditions that would not exist under actual operations.

10 But I'm going to take it that we are
11 essentially talking about the same problem that models
12 have that will continue to run until they drive
13 reservoirs to dead pool under dry conditions.

14 So you're familiar with the difference, I take
15 it, in modeling between a no-action alternative and
16 project alternatives?

17 WITNESS GOHRING: I am.

18 MR. BERLINER: And you understand that if the
19 no-action alternative shows a particular outcome, that
20 you would want to compare that outcome against project
21 alternatives, correct?

22 WITNESS GOHRING: I certainly would.

23 MR. BERLINER: So for purposes of comparison,
24 using this chart and understanding that under the driest
25 of times a model will continue to drive a reservoir to

1 dead pool whereas operators will try to avoid that
2 condition, as you look at this chart, you see that there
3 are no worse scenarios than the no-action alternative
4 for Folsom end of September storage under drier
5 conditions?

6 CO-HEARING OFFICER DODUC: I hear an objection
7 coming.

8 MR. MILIBAND: It seems to call for
9 speculation or be an incomplete hypothetical, as much as
10 I understand the question, Chair Doduc.

11 MR. BERLINER: I believe this witness has
12 testified that he has modeling experience and that he's
13 familiar with the difference between no-action
14 alternatives and project alternatives, that he knows how
15 to read these types of graphs.

16 CO-HEARING OFFICER DODUC: Mr. Berliner, that
17 was a very long question.

18 MR. BERLINER: It was not a hypothetical,
19 though.

20 CO-HEARING OFFICER DODUC: But it was based on
21 a premise that this witness has stated his disagreement
22 with. So let's try again. And make your question as
23 concise as possible.

24 MR. BERLINER: Of course. Thank you.

25 Let me ask it a little differently. Do you

1 disagree that this graph shows that the no-action
2 alternative for Folsom Reservoir at the end of
3 September -- strike that. Try that again.

4 Do you disagree with the statement that this
5 graph shows that there are no worse scenarios than the
6 no-action alternative for Folsom end of September
7 storage in the drier conditions?

8 MR. MILIBAND: Objection. Asked and answered.

9 CO-HEARING OFFICER DODUC: Overruled.

10 Please answer.

11 WITNESS GOHRING: I am incapable of supporting
12 that -- I was asked if I would agree with that
13 statement. I cannot agree with that statement.

14 MR. BERLINER: Okay. Thank you. That's --
15 that's all I asked.

16 If we could, DWR-917, please. Ask you about
17 an excerpt from the EIR appendices which is the same
18 appendix that ARWA cited in your Exhibit 306.

19 If we could go to the next page, please. This
20 is Appendix 5A from the final EIR/EIS. And the
21 Section C concerns CalSim II and DSM2 modeling results.
22 There's all this --

23 Scroll down, please.

24 I've highlighted a couple of months. For end
25 of month -- end of month storage for December and May

1 under Alternative 4A, does this look familiar to you?

2 WITNESS GOHRING: It does.

3 MR. BERLINER: Minus the highlighted?

4 WITNESS GOHRING: Yes.

5 MR. BERLINER: Do you recall the ARWA

6 Exhibit 306 that was done?

7 WITNESS GOHRING: Yeah. I actually have it in
8 front of me.

9 MR. BERLINER: Great.

10 If you compare 306 with the graphic that's on
11 the screen which shows Alternative 4A and end of month
12 storage for December and May, is it accurate that these
13 two tables, the ARWA-306, as compared to DWR-917, show
14 end of month storage for Folsom that are different?

15 WITNESS GOHRING: I -- ARWA.

16 MR. BERLINER: If it would help, we could try
17 to get the ARWA exhibit on the screen, if that would
18 make it easier.

19 MS. MORRIS: Could Mr. Berliner identify what
20 page number in 306 so we can follow along? Thank you.

21 CO-HEARING OFFICER DODUC: Please,
22 Mr. Berliner.

23 MR. BERLINER: It's page 5A, C113.

24 MS. MCGINNIS: I gave out the wrong paper
25 copies. I'll be back around.

1 WITNESS GOHRING: Explains my confusion.

2 MR. BERLINER: Could we get those
3 side-by-side? Does that work?

4 MS. MCGINNIS: It's DWR-918, not 917.

5 MR. BERLINER: I'm not sure that's going to be
6 legible for the room, folks watching on the Webcast.

7 WITNESS GOHRING: I think the tables are
8 identical. Do we need to show them both?

9 ARWA-306 is at the top. DWR-918 is below.

10 MR. BERLINER: Can you scroll down?

11 I'm sorry. I'm having exhibit confusion here.
12 Let me move on. I'm going to come back to this. I can
13 be a little more fluent with this. I'm just having
14 problems with this exhibit.

15 Is it accurate that the -- I'm just going to
16 move on and ask you some other questions.

17 Is it accurate that primary objective of the
18 modified FMS is to require a December and May minimum
19 storage?

20 WITNESS GOHRING: No.

21 MR. BERLINER: Let me state that a little
22 differently. Is one of the objectives of the modified
23 FMS -- strike that.

24 Is one of the elements of the modified FMS to
25 require May and December minimum storage at

1 Folsom Reservoir?

2 WITNESS GOHRING: Yes.

3 MR. BERLINER: And if I could get DWR-917,
4 which is on the thumb drive.

5 MS. MCGINNIS: What we want to do is compare
6 DWR-917 and DWR-918.

7 And DWR-917 -- DWR-918 is actually ARWA-306 as
8 well. It's just that for DWR-918, we had created an
9 excerpt that is the cover page and page 5A-C113.

10 So DWR-917 is an excerpt of Appendix 5A from
11 the final -- final EIR/EIS it is page 5A-C1536.

12 Now I would like to hand out 917 again.

13 MR. BERLINER: If you scroll the bottom one
14 down so you can see that bold highlighted section. And
15 if you could do the same on the top.

16 Mr. Gohring, have you seen this before?

17 WITNESS GOHRING: Yeah.

18 MR. BERLINER: If you look at the table that I
19 highlighted, which is the DWR exhibit, do you agree
20 that, under all conditions, Folsom carryover storage
21 under WaterFix is similar or better than the no-action
22 alternative in December?

23 WITNESS GOHRING: In which of the -- in the
24 highlighted table?

25 MR. BERLINER: Yes.

1 WITNESS GOHRING: That's what this table
2 indicates. For this alternative, that's what that
3 indicates.

4 MR. MILIBAND: To be clear, Mr. Berliner, are
5 you referring to DWR-917 as opposed to 918?

6 MR. BERLINER: Yes, I am.

7 MR. MILIBAND: Thank you.

8 MR. BERLINER: And looking at the month of
9 May, is it accurate that only for the 80 percent
10 exceedance, WaterFix shows 3 acre feet less than the
11 no-action alternative?

12 MR. BEZERRA: I'm going to object on vague and
13 ambiguous. This document is from the EIR. It doesn't
14 specify what the Delta outflow is. And as I understand
15 it, we're still operating with the variable Delta
16 outflow proposal under the EIR. So I need to -- the
17 exhibit is what it is, but I'm trying to understand what
18 project we're talking about given the petitioners have
19 proposed a variety of options for what the project is.

20 MR. BERLINER: This is a comparison of
21 Alternative 4A minus the impacts of the no-action
22 alternatives, so these are net numbers.

23 CO-HEARING OFFICER DODUC: That's what it
24 says.

25 Overruled, Mr. Bezerra.

1 WITNESS GOHRING: Can you repeat the question?

2 MR. BERLINER: Sure. If you look at the month
3 of May at the 80 percent probability of exceedance, is
4 it accurate that there -- that the difference between
5 the Alternative 4A and the no-action alternative is a
6 negative 3 acre feet?

7 THE WITNESS: I see. Yes, it's accurate.

8 MR. BERLINER: We agree that's an
9 insignificant difference?

10 WITNESS GOHRING: I didn't say that.

11 MR. BERLINER: That's a different question I
12 just asked.

13 WITNESS GOHRING: You're asking me if that's
14 an insignificant difference for the comparison of that
15 alternative to no-action. That appears to me to be
16 insignificant.

17 MR. BERLINER: Do you have an understanding
18 that the Bureau of Reclamation operates the
19 Central Valley Projects as an integrated project?

20 MR. BEZERRA: Objection. Calls for a legal
21 conclusion.

22 CO-HEARING OFFICER DODUC: Overruled.

23 MR. BERLINER: Thank you.

24 WITNESS GOHRING: That is my understanding.

25 MR. BERLINER: And just for the benefit, could

1 you -- let's make sure people understand what we mean by
2 "integrated." It's a bit of a term of art.

3 Would it be fair to say -- not to put words in
4 your mouth; I'm just going to kind of give my own
5 understanding and see if you agree -- that reclamation
6 addresses water needs throughout the project by looking
7 at all the available resources and uses water from
8 different reservoirs and based on its water rights to
9 meet the various needs throughout the project as opposed
10 to saying specifically a particular need may be met from
11 a particular reservoir?

12 MR. MILIBAND: I didn't hear a question in
13 there, but it sounds -- it sounds long, but I'm happy to
14 try to have the witness answer it if he understands.

15 It's vague and ambiguous if there's a question
16 there, Chair Doduc.

17 MR. BERLINER: I'm happy to -- you know what,
18 Mr. Gohring? Why don't you just tell me what you mean
19 by the word "integrated."

20 WITNESS GOHRING: My understanding of the word
21 "integrated," integrated operations for the
22 Central Valley Project, is that there are several
23 facilities -- conveyance, storage -- that have multiple
24 purposes and are in multiple locations. The projects --
25 all of those facilities, all of those pieces of the

1 project are operated in a coordinated way to try to
2 balance many objectives and legal requirements of the
3 project.

4 MR. BERLINER: Thank you. That's a great
5 definition.

6 And do you understand that the Central Valley
7 Project is operated in coordination with the State Water
8 Project?

9 WITNESS GOHRING: Yes.

10 MR. BERLINER: And is it your understanding
11 that a contributing factor to low Folsom storage in the
12 recent drought was the cold water pool restrictions in
13 Shasta?

14 WITNESS GOHRING: I do understand that that
15 was one of the factors that led to below Folsom storage,
16 yes.

17 MR. BERLINER: If there were additional
18 restrictions imposed on Folsom Reservoir storage such as
19 the minimum storage requirements that ARWA has suggested
20 for May and December, would there potentially be impacts
21 on other components or objectives of the system?

22 WITNESS GOHRING: Not according to our
23 modeling.

24 MR. BERLINER: Are you aware that removing
25 flexibility in the operations of any one part of the CVP

1 has the potential to impact operations in the rest of
2 the system?

3 MR. MILIBAND: Objection. Argumentative. And
4 vague as to "removing flexibility."

5 CO-HEARING OFFICER DODUC: Mr. Berliner, do
6 you want to clarify, even though I think we all know,
7 given all the discussion and testimony to date, what
8 "operational flexibility" means?

9 MR. BERLINER: Sure.

10 Are you aware that by limiting the ability of
11 the operators to call on different reservoirs for
12 sources of water in any one part of the CVP has the
13 potential to impact operations in the rest of the
14 system?

15 WITNESS GOHRING: Absolutely, which is why we
16 defined the modified flow management standard through a
17 tuning process and due diligence and using our best
18 available tools.

19 MR. BERLINER: Thank you.

20 WITNESS GOHRING: We ourselves, we wouldn't do
21 that.

22 MR. BERLINER: I think you've answered my
23 question. Thank you.

24 Is it your understanding that the Bureau of
25 Reclamation currently considers end of September targets

1 in operating the CVP?

2 MR. BEZERRA: Objection. Vague and ambiguous.
3 "The bureau considers them"? Is this a legal -- it
4 calls for a legal conclusion as to is this the bureau's
5 rules. It's vague and ambiguous as to how reclamation
6 considers them. And it calls for speculation as to
7 under what circumstances the bureau considers what
8 operating rules.

9 CO-HEARING OFFICER DODUC: Overruled,
10 Mr. Bezerra. That was a simple question. Let's not
11 complicated.

12 WITNESS GOHRING: Can you repeat the question?

13 MR. BERLINER: Sure. Is it your understanding
14 that the bureau currently considers end of September
15 targets in operating the CVP?

16 THE WITNESS: I'm not trying to be cute. Are
17 we talking about Folsom Reservoir storage targets at
18 Folsom, or are we talking about all reservoirs?

19 MR. BERLINER: Let's start with Folsom.

20 WITNESS GOHRING: I am not aware that they
21 have a September storage target.

22 MR. BERLINER: Are you aware of a September
23 storage target at Shasta?

24 WITNESS GOHRING: I don't have great detail on
25 that, but it is my understanding there's a September

1 storage target. Yes, there is.

2 MR. BERLINER: Are you aware there are
3 September end of storage targets at other CVP
4 reservoirs?

5 WITNESS GOHRING: No, I don't have that
6 knowledge. Sorry.

7 MR. BERLINER: Are you aware of any reliable
8 seasonal forecasting data for Folsom inflow for the
9 months of September through December?

10 WITNESS GOHRING: Again, I'm not trying to be
11 cute, but not sure what you mean by "reliable."

12 I -- if that -- you want me to --

13 MR. BERLINER: What I mean by "reliable" is
14 information of sufficient quality that operators could
15 use that as part of their calculation of likely inflow,
16 likely storage, and, potentially, allocations for the
17 next year.

18 WITNESS GOHRING: Yeah. Our modeling has
19 actually shown that there is -- it is possible to plan
20 for statistically relevant inflow during October,
21 November, December for Folsom Reservoir in a way that
22 that works. And, you know, hundreds of model runs to
23 convince ourselves that with the inflow estimate that
24 we've defined in the terms and conditions, that the
25 system works. It doesn't fall apart. Doesn't redirect

1 impacts.

2 MR. BERLINER: Will you be making that
3 information available?

4 WITNESS GOHRING: As part of Part II, yes.

5 MR. BERLINER: Is it currently available?

6 WITNESS GOHRING: Not in a public document,
7 no. Well, I mean...

8 QUESTIONER: Well, let me ask you this:
9 You're familiar with the Public Records Act? If I was
10 to submit a Public Records Act for that material, is
11 that something that's currently in a form that could be
12 publicly made available?

13 MR. MILIBAND: I would just -- if we're going
14 to get into the Public Records Act issue further, I'm
15 pretty familiar with it, and I couldn't even
16 definitively answer that sitting here.

17 But I think Mr. Gohring's testified about how
18 there have been public documents, and I think it's a
19 little confusing as to what Mr. Berliner is referring
20 to. Are we talking about all the modeling or other
21 documents? Perhaps if we can just parse that out if
22 that's a line of questioning to pursue.

23 MR. BERLINER: I'm asking really kind of a
24 simple question. Apparently you all have done a fair
25 amount of work on this. And rather than having to wait

1 until Part II, because obviously this is going to be
2 pretty complex, we'd like to get this information as
3 soon as possible. And I understand that it may not be
4 in a condition that's capable of being issued to the
5 public, but it may well be.

6 So that my question is simply: Is it in a
7 condition where you can share it at this point?

8 CO-HEARING OFFICER DODUC: Mr. Gohring, are
9 you able to answer?

10 WITNESS GOHRING: The -- my answer would have
11 to be I honestly don't know.

12 MR. BEZERRA: I think I can provide
13 clarification.

14 We posted the operable modeling files to the
15 FTP site in the same manner petitioners posted their
16 operable modeling files. So everything that goes into
17 modeling is publicly available to the same extent that
18 petitioners' modeling files are publicly available.

19 CO-HEARING OFFICER DODUC: Thank you.

20 MR. BERLINER: Then we'll take a look at that.
21 Thanks very much.

22 CO-HEARING OFFICER DODUC: Mr. Berliner, I
23 need to take a break for the court reporter. Is now a
24 good time? How much more do you have to explore?

25 MR. BERLINER: I have just a few more

1 questions for Mr. Gohring. So maybe I could finish --

2 CO-HEARING OFFICER DODUC: Let's do that.

3 MR. BERLINER: -- with him, and then that
4 would be a good time for a break. Sorry. I apologize.
5 This is taking a little longer than -- quite a bit
6 longer than expected.

7 You have proposed some terms and conditions.
8 I understand we'll get into these in more detail in
9 Part II. But just briefly to touch on these so we can
10 be thinking about this before we get to Part II, as I
11 understand it, the premise is that the Bureau of
12 Reclamation would not reduce water supply allocations on
13 deliveries that diverted from Folsom Reservoir or the
14 lower American River in order to comply with the minimum
15 storage requirements; is that correct?

16 Want me to break that down a little bit?

17 WITNESS GOHRING: I think so. Sorry.

18 MR. BERLINER: Yeah. There's a statement in
19 the terms and conditions -- this is -- I'm referring to
20 ARWA-308 at page 1. In paragraph 1, you indicate that
21 the requirement would be that the bureau not reduce
22 water supply allocations as far as compliance with
23 meeting the reservoirs' targets for May and December.

24 Do you understand that to be the case?

25 WITNESS GOHRING: Can you -- can you narrow

1 down where you're -- specifically where you're looking,
2 paragraph 1?

3 MR. BERLINER: Sure. If you look third line
4 up from the bottom of the paragraph, it says:
5 "Permittee shall not reduce water supply allocations or
6 deliveries that are diverted from Folsom Reservoir or
7 the lower American River in order to comply with this
8 term's minimum storage requirements."

9 WITNESS GOHRING: That helps, right. And
10 repeat the question?

11 MR. BERLINER: Okay. Now that we're oriented
12 on that, let me just see how far this is meant to apply.

13 Is this meant to apply solely to the CVP
14 contractors on the American River?

15 MR. BEZERRA: Objection. Vague and ambiguous.
16 We have different kinds of CVP contracts on the
17 American River.

18 MR. BERLINER: That's why I used the general
19 term "contractors." I didn't want to start parsing
20 between them.

21 WITNESS GOHRING: Yes, that this is intended
22 to apply to the contractors in the American River basin,
23 yes.

24 MR. BERLINER: So this limitation would not
25 apply to CVP contractors outside of the American River

1 basin?

2 WITNESS GOHRING: No. No, that's not the
3 intent.

4 MR. BERLINER: So if it were necessary to meet
5 the storage targets for Folsom Reservoir, the Bureau of
6 Reclamation permittee would not be violating this term
7 if it shorted contractors outside of the American River
8 basin in order to maintain Folsom Reservoir storage,
9 correct?

10 WITNESS GOHRING: Correct.

11 For clarification, this does not take away
12 normal shortage provisions for American River
13 contractors. This isn't intended to do away with all
14 shortage provisions, just additional shortage provisions
15 that might be applied in order to meet the storage
16 requirement.

17 MR. BERLINER: Just to be clear, let's just
18 say there was going to be an allocation of an additional
19 100,000 acre feet to the -- to the American River
20 contractors but that allocation would result in
21 Folsom Reservoir storage being lowered 100,000 acre feet
22 below your target. That would be something that would
23 not be prohibited, correct?

24 WITNESS GOHRING: I'm having trouble
25 understanding what you mean by "an additional

1 allocation." Beyond existing contracts?

2 MR. BERLINER: No. I'm just trying to use a
3 simple number here.

4 If there was an allocation to the
5 American River contractors, and in order to meet the
6 storage targets, this permit term would prohibit the
7 bureau from saying, "That's fine. We can meet the
8 storage target, but we're just going to take
9 100,000 acre feet out of the allocation to the
10 American River contractors," this term would prohibit
11 that, correct?

12 WITNESS GOHRING: Yeah. It would prohibit
13 them from doing additional shortage provisions beyond
14 what they already would be doing, yes.

15 MR. BERLINER: Okay. I understand the
16 mechanism.

17 So is the effect of the storage target then to
18 cap or limit Folsom's contribution to meeting Delta
19 standards because that water would be unavailable?

20 WITNESS GOHRING: Not at all. Not at all.

21 Our -- our modeling due diligence has
22 convinced us that with -- with the proposed storage
23 requirements and minimum flows in the entire package,
24 Delta requirements can be met.

25 MR. BERLINER: And if reclamation decided that

1 it wanted to keep, again, 100,000 acre feet of
2 additional storage in Shasta and pull from the
3 American River instead in order to meet a Delta
4 requirement, and that 100,000 acre feet therefore was
5 taken away from the minimum storage, that would be a --
6 that would be impermissible under this permit term,
7 correct?

8 WITNESS GOHRING: I'm not sure I follow that
9 chain of ifs.

10 MR. BERLINER: If there was a need to provide
11 100,000 acre feet, let's say, over the next source
12 course of the month to Delta, and reclamation intended
13 to pull that water from the American River from
14 Folsom Reservoir rather than from a source on the
15 Sacramento, if that resulted in going below the end of
16 month storage requirement, would that then be a
17 violation of this permit term?

18 WITNESS GOHRING: I --

19 MR. BERLINER: Having trouble?

20 WITNESS GOHRING: Sorry.

21 MR. BEZERRA: Let me lodge an objection.

22 MR. BERLINER: I'll just try to rephrase it.

23 CO-HEARING OFFICER DODUC: Hold on. Hold on.

24 One at that time.

25 MR. BERLINER: I'll rephrase. I'm not trying

1 to ask a tricky question; I'm just trying to understand.

2 WITNESS GOHRING: All right.

3 MR. BERLINER: This storage target
4 requirement -- calling it a target's probably not the
5 right word.

6 This minimum storage requirement would then
7 limit reclamation -- as I understand it, would limit
8 reclamation's ability to pull on Folsom Reservoir to
9 meet downstream requirements if it would result in going
10 below the minimum storage requirement, correct?

11 WITNESS GOHRING: Yes.

12 MR. BERLINER: So that would mean that
13 reclamation would have to take that water from another
14 source, correct?

15 WITNESS GOHRING: This is why we run CalSim.
16 CalSim takes a question like this out of the
17 hypothetical and says with best available tools, what do
18 we expect will happen?

19 And using the CalSim tool and then the
20 associated other temperature models and things, we've
21 convinced ourselves that that is not going to happen,
22 not to a -- a practical amount, measurable amount.

23 MR. BERLINER: In doing your modeling, have
24 you looked at whether there are any impacts on the
25 coordinated operations agreement requirements?

1 MS. NIKKEL: Objection. Calls for a legal
2 conclusion, being asked to interpret the agreement.

3 CO-HEARING OFFICER DODUC: Overruled. It was
4 a did he or did he not consider.

5 WITNESS GOHRING: We have -- we have in that
6 we've -- we have looked at, you know, in -- in the model
7 output of -- in the comparative sense with the different
8 scenarios, we have looked at SWP deliveries, pumping at
9 the state -- state pumps versus federal pumps. So, in
10 that regard -- which are governed by a representation of
11 the coordinated operating agreement in CalSim. So, in
12 that sense, we have.

13 MR. BERLINER: And would these reservoir
14 minimums be then considered and in-basin use under the
15 coordinated operations agreement?

16 WITNESS GOHRING: I don't know.

17 MR. BEZERRA: Objection. Calls for a legal
18 conclusion.

19 CO-HEARING OFFICER DODUC: The witness has
20 answered he doesn't know.

21 MR. BERLINER: Fortunately, Mr. Gohring, I'm
22 just about done here.

23 WITNESS GOHRING: I'm getting shorter.

24 MR. BERLINER: Really, just a couple last
25 questions.

1 If water were needed from the American River
2 to meet Delta requirements or health and safety
3 requirements south of the Delta because Shasta storage
4 or Sacramento River storage was unavailable and that
5 meant pulling Folsom down below the minimum storage
6 requirements in your proposed permit terms, would the
7 permit terms prohibit reclamation from taking Folsom
8 below those minimum targets?

9 MR. BEZERRA: Objection. Vague and ambiguous
10 as to "health and safety needs" and the export areas.

11 CO-HEARING OFFICER DODUC: Mr. Berliner?

12 MR. BERLINER: Are you familiar with the
13 health and safety requirements that were part of the
14 2014-'15 drought exercise that we all just went through?

15 WITNESS GOHRING: In principle, not in detail.

16 MR. BERLINER: Understood. I'm just asking
17 you in general. So let me see if I can simplify it.

18 WITNESS GOHRING: Sure.

19 MR. BERLINER: If water from the
20 Sacramento River is unavailable to meet Delta
21 requirements or health and safety requirements south of
22 the Delta for M&I needs and Folsom was the only
23 reservoir that the bureau could use to meet those, would
24 these minimum storage requirements for May and December
25 prohibit -- if -- if taking that water from Folsom would

1 go below those minimum storage requirements, would that
2 be a violation of the proposed terms and conditions?

3 WITNESS GOHRING: I think -- you know, so what
4 the storage requirements proposed here do is puts Folsom
5 storage on sort of an even playing field with other
6 storage requirements, other operations requirements in
7 the CVP.

8 The -- you know, we just talked about the
9 coordinated nature of the project. So the -- the
10 question if there was a need to go to Folsom for -- to
11 meet the needs I think is kind of a red herring. It's a
12 coordinated project. They need to go to somewhere.

13 And I would assert, if we're talking about a
14 2014-2015 kind of scenario, where the system is pulled
15 to the brink, we're into TUCP land and something like
16 these storage requirements would be on the table as
17 something to be, you know, set aside temporarily.

18 MR. BERLINER: I have no further questions.

19 CO-HEARING OFFICER DODUC: For Mr. Gohring?

20 MR. BERLINER: Correct.

21 CO-HEARING OFFICER DODUC: And when we
22 reconvene, you'll have how much -- well, you have two
23 minutes left.

24 How many additional questions do you have for
25 Mr. Weaver? A lot, it sounds like.

1 MR. BERLINER: Well, if I -- if I have to ask
2 all these questions -- and I think we've probably
3 short-circuited some of this -- I would say 30,
4 35 minutes. But I would like to go through this and see
5 if I can get rid of some of these.

6 CO-HEARING OFFICER DODUC: That would be
7 great. Why don't we take our break and we will
8 reconvene at 11:20.

9 (Off the record at 11:07 a.m. and back
10 on the record at 11:20 a.m.)

11 CO-HEARING OFFICER DODUC: All right. It is
12 11:20. We're going to resume.

13 And we can -- even if Mr. Berliner is much
14 more efficient than he estimated, as well as Ms. Morris,
15 we still have Mr. O'Brien with 30 minutes of
16 cross-examination.

17 So North Delta Water Agencies rebuttal, I
18 think it's a safe bet that we will not get to your
19 witnesses until after our lunch break.

20 MR. BERLINER: Ready?

21 CO-HEARING OFFICER DODUC: Yes.

22 MR. BERLINER: Thank you.

23 CO-HEARING OFFICER DODUC: Mr. Berliner, are
24 you still hoping for 35 minutes, or were you able to cut
25 that down?

1 MR. BERLINER: I am -- I believe it will be
2 less than 35 minutes. At the very tail end, I'm going
3 to let Ms. McGinnis take over with a couple questions at
4 the end.

5 CO-HEARING OFFICER DODUC: All right. Thank
6 you.

7 MR. BERLINER: But I have had some success in
8 eliminating things.

9 Mr. Weaver, good morning. I'm Tom Berliner
10 from the Department of Water Resources. I've got a few
11 questions for you.

12 Do I understand correctly that your modeling
13 for the modified FMS is based on the January '15 --
14 January 2015 benchmark CalSim II model that you received
15 from the Bureau of Reclamation?

16 WITNESS WEAVER: That's correct.

17 MR. BERLINER: And, specifically, you got that
18 from Ms. Nancy Parker, correct?

19 WITNESS WEAVER: I don't recall if it was or
20 it might have been. I believe it was, yes.

21 MR. BERLINER: And is it correct that the 2015
22 benchmark model, CalSim II model, does not include the
23 California WaterFix?

24 WITNESS WEAVER: That's correct.

25 MR. BERLINER: And is it true that in your

1 base case and in the modified FMS -- sorry. Let me --
2 strike that.

3 Is it true that your modified -- that your
4 base case and the modified FMS are the runs that you
5 used in your modeling?

6 WITNESS WEAVER: The two runs that I have here
7 are the 2006 FMS and the modified FMS. I believe that's
8 the answer to your question.

9 MR. BERLINER: What did you use for your base
10 case?

11 WITNESS WEAVER: The base case I started with
12 the -- the reclamation's 2015 benchmark.

13 And then I made some modifications to that to
14 improve the representation of the 2006 FMS, which is
15 existing flow standard for the American River.

16 MR. BERLINER: And neither of those include
17 California WaterFix, correct?

18 WITNESS WEAVER: That's correct.

19 MR. BERLINER: So you made some modifications
20 to the benchmark model, correct?

21 WITNESS WEAVER: That's correct.

22 MR. BERLINER: As I understand it, the inflows
23 are lower by average 82,000 acre feet as compared to
24 reclamation's benchmark; is that correct?

25 WITNESS WEAVER: I don't know the specifics of

1 that. I was provided a time series of flows from
2 Placer County Water Agency and represented their
3 operations and including that of the --
4 Yuba-Bear Drum-Spaulding system releases through the
5 New Castle Power House to Folsom Reservoir.

6 MR. BERLINER: Are you aware that the inflow
7 for 1977 was increased by 96,000 acre feet?

8 WITNESS WEAVER: I don't know the specific
9 numbers, but I believe -- what my understanding from
10 Placer County was that they attempted to operate the
11 upstream systems between '76 and '77 more realistically,
12 I think, and their assessment was that, historically,
13 1976 overreleased and -- to the detriment of -- I think
14 that's the direction.

15 MR. BERLINER: Try to stay close to the
16 microphone for the court reporter. They don't pick up
17 that well if you move away.

18 WITNESS WEAVER: Sorry.

19 MR. BERLINER: Do you have an understanding as
20 of today -- and I understand we're going to come back in
21 Part II. Do you understand -- have an understanding as
22 of today how the adjustments were made to the 1976
23 inflows?

24 WITNESS WEAVER: Only a high level of
25 understanding. I don't know the details of how those

1 adjustments were made.

2 MR. BERLINER: Who would know that?

3 WITNESS WEAVER: I believe that Craig Addley
4 with Placer County Water Agency is lead modeler that --
5 or directed the modeling as a consultant.

6 MR. BERLINER: Thank you.

7 Did you make any changes to the demands in the
8 American River basin as compared to the benchmark model?

9 WITNESS WEAVER: Yes, we did.

10 MR. BERLINER: And what are those?

11 WITNESS WEAVER: As part of the data we
12 received from Placer County Water Agency, it included
13 their deliveries to their contractors, being San Juan
14 Water District, I believe City of Roseville, and then
15 Placer County Water Agency itself. It's an improved
16 representation of how their system would operate to make
17 those deliveries.

18 Then we also included the water -- water forum
19 dry year cutbacks that are a voluntary demand reduction
20 program as part of the water forum.

21 MR. BERLINER: Could I find that information
22 in your testimony?

23 WITNESS WEAVER: I believe I mentioned that I
24 made some changes. I don't remember the specifics of
25 that -- if that level of detail was in there.

1 MR. BERLINER: So is the effect of those
2 changes to reduce demand in the American River basin?

3 WITNESS WEAVER: I believe the attempt was to
4 try to more realistically represent the demand in the
5 American River basin. I don't think it was explicitly
6 to -- with the exception of the dry year reductions, I
7 don't believe there was an attempt to reduce overall
8 demands in the basin.

9 MR. BERLINER: Based on the 1976 work, was
10 there an attempt to increase inflows?

11 WITNESS WEAVER: I don't know the answer to
12 that question.

13 MR. BERLINER: Do you know if the changes have
14 been adopted by either reclamation or DWR?

15 WITNESS WEAVER: No, they have not.

16 MR. BERLINER: Did you make any changes to the
17 Folsom Dam maximum storage or flood control assumptions
18 from the benchmark study?

19 WITNESS WEAVER: Yes, we did. I believe at
20 the time the benchmark study had a representation of the
21 400, 670 of the SAFCA rule curve, and we attempted to
22 put in something that was -- at the time, more akin to
23 what we expected out of the new water control manual
24 process.

25 MR. BERLINER: Did you include the

1 Placer County Water Agency transfer to East Bay MUD in
2 your assumptions?

3 WITNESS WEAVER: Yes, we did.

4 MR. BERLINER: And is it accurate that this
5 release from Placer County would increase inflow to
6 Folsom Lake in dry and critically dry years?

7 WITNESS WEAVER: I believe that that is --
8 that's the result.

9 MR. BERLINER: Do you know if -- if that
10 transfer has been certified through the California
11 Environmental Quality Act process?

12 WITNESS WEAVER: I don't know that.

13 MR. BERLINER: Did the model that you
14 submitted here include climate change?

15 WITNESS WEAVER: It did not.

16 MR. BERLINER: Is it accurate that the ARWA
17 Exhibit 402 only contains exceedance probabilities for
18 Folsom storage and American River flow below Nimbus Dam?

19 WITNESS WEAVER: That is correct.

20 MR. BERLINER: Is there anything in ARWA
21 Exhibit 402 that would provide information about what
22 might occur at Lake Shasta due to implementation of the
23 modified FMS?

24 WITNESS WEAVER: That was not included, no.

25 MR. BERLINER: What about south of Delta

1 exports?

2 WITNESS WEAVER: No, it was not included.

3 MR. BERLINER: What about Oroville operations?

4 WITNESS WEAVER: No, we did not include that

5 either.

6 MR. BERLINER: What about temperature impact

7 to the Sacramento River?

8 WITNESS WEAVER: No, we did not include that.

9 MR. BERLINER: What about Delta water quality?

10 WITNESS WEAVER: We did not include any of

11 that information.

12 All that information -- with the exception of

13 water temperature modeling is included in the model --

14 or the models we provided as part of this testimony.

15 MR. BERLINER: Are you familiar with DWR-915?

16 WITNESS WEAVER: I'm not sure -- yes, I am.

17 MR. BERLINER: And are you aware that DWR-915

18 finds that there might be impact to south of Delta

19 exports?

20 WITNESS WEAVER: I believe that's correct.

21 MR. BERLINER: If we could please have

22 Exhibit DWR-915. I'm sorry. I misspoke. I meant 916.

23 You probably saw this a little earlier today.

24 Focus on the red square on the left-hand side.

25 Go back so that the title shows at the top.

1 So this is simulated end of September Folsom
2 storage. It was taken from DWR Exhibit 514. And for
3 our purposes today, since it has the red square on it,
4 we've numbered it DWR-916.

5 So focusing on the red square which shows the
6 exceedance probabilities starting just above about
7 80 percent up to 100 percent. These are dry year
8 conditions. And on the -- and it compares dry year
9 exceedance probabilities to reservoir storage in Folsom.

10 Do you see that?

11 WITNESS WEAVER: Yes.

12 MR. BERLINER: As you look at this graph, do
13 you see that it shows that there are no worse scenarios
14 in the no-action alternative for Folsom end of September
15 storage?

16 WITNESS WEAVER: By "worse," you mean that the
17 storage isn't lower?

18 MR. BERLINER: Correct.

19 WITNESS WEAVER: I don't -- I don't think that
20 that indicates there's a meaningful difference in
21 storage.

22 MR. BERLINER: In your view, is it possible
23 that in actual operations, holding back Folsom releases
24 in the summer to achieve an end of December storage
25 target could impact Shasta storage or imports?

1 MR. BEZERRA: Objection. Calls for
2 speculation. Mr. Weaver is presented as a modeler. The
3 question regards real-world operations.

4 CO-HEARING OFFICER DODUC: Mr. Berliner, would
5 you like to rephrase?

6 MR. BERLINER: Well, I specifically limited
7 the question to his experience. And he may tell me he
8 doesn't have that experience, so that's I'm asking.

9 WITNESS WEAVER: Yes. Could you please repeat
10 the question?

11 MR. BERLINER: Sure. Based on your
12 experience, is it possible that, in actual operations,
13 holding back Folsom releases during the summer to
14 achieve end of December storage -- to achieve an end of
15 December storage target could directly impact Shasta
16 storage or exports?

17 WITNESS WEAVER: My understanding is that
18 reclamation has a range of options available to them in
19 terms of balancing storage. And I -- I believe that
20 changing releases from Shasta would be among the options
21 available.

22 MR. BERLINER: Mr. Gohring testified that you
23 went through an iterative process to find what he called
24 a sweet spot to minimize effects on the
25 Sacramento River.

1 Do you recall that testimony?

2 WITNESS WEAVER: Yes.

3 MR. BERLINER: What did you change in that
4 iterative process to accomplish that?

5 WITNESS WEAVER: We changed pretty much all
6 the elements of the modified FMS ranging from the MRRs
7 to -- we have some, what we call red dewatering
8 protective adjustments, and the end of December storage
9 curve -- or storage requirements.

10 MR. BERLINER: At this point, I'd like to turn
11 over the rest of the questions to Ms. McGinnis.

12 CO-HEARING OFFICER DODUC: Thank you.

13 Ms. McGinnis?

14 MS. MCGINNIS: Thank you, Mr. Berliner.

15 --o0o--

16 CROSS-EXAMINATION

17 MS. MCGINNIS: Good morning, Mr. Weaver. My
18 name is Robin McGinnis from the California Department of
19 Water Resources.

20 WITNESS WEAVER: Good morning.

21 MS. MCGINNIS: I just have some questions
22 about the modeling process in general to make sure we
23 understand how you came to the conclusions in your
24 testimony.

25 WITNESS WEAVER: Okay.

1 MS. MCGINNIS: You were talking with
2 Mr. Berliner about the base case and the benchmark, and
3 you said you made some modifications?

4 WITNESS WEAVER: That's correct.

5 MS. MCGINNIS: And did those modifications
6 form the basis for the conclusions in your testimony?

7 WITNESS WEAVER: I'm not sure what conclusions
8 I had in my testimony. Did -- I submitted the modeling.

9 MS. MCGINNIS: Well --

10 WITNESS WEAVER: What conclusion are you --

11 MS. MCGINNIS: I'm interested in the modeling
12 process. We could strike that question.

13 What I'm really interested in is the steps you
14 take to make those modifications.

15 WITNESS WEAVER: Okay.

16 MS. MCGINNIS: Can you walk me through that
17 process?

18 MR. BEZERRA: Objection. Vague and ambiguous.
19 I don't know what a "process" means and "steps."

20 CO-HEARING OFFICER DODUC: Yeah.

21 Ms. McGinnis, how detailed are you going to
22 get here?

23 MS. MCGINNIS: Broad overview. But I'm
24 interested in just -- as I understand it, modeling takes
25 outputs, and then -- or a modeler takes outputs and then

1 they do some analysis, and then they present charts or
2 make conclusions.

3 CO-HEARING OFFICER DODUC: And what is your
4 question for Mr. Weaver?

5 MS. MCGINNIS: What the steps in that process
6 are.

7 CO-HEARING OFFICER DODUC: Beyond what you
8 just outlined?

9 MS. MCGINNIS: Okay. So I'll skip to my next
10 question, which is: Would you use a spreadsheet?

11 WITNESS WEAVER: We did use spreadsheets to
12 post-process the data out of CalSim.

13 MS. MCGINNIS: For post-processing. That was
14 a term I was wondering about. Thank you.

15 Would that be an Excel spreadsheet?

16 WITNESS WEAVER: Yes.

17 MS. MCGINNIS: Any other programs you use for
18 post-processing?

19 WITNESS WEAVER: Not that I can think of.

20 MS. MCGINNIS: So that was the thing. So do
21 you use formulas in the Excel spreadsheet?

22 WITNESS WEAVER: Yes.

23 MS. MCGINNIS: Okay. And which steps in that
24 process would you call your analysis if you were asked
25 to identify your analysis?

1 WITNESS WEAVER: I'm not --

2 MR. BEZERRA: Objection. Vague and ambiguous
3 as to "analysis" and "steps."

4 CO-HEARING OFFICER DODUC: Yes. Even I did
5 not understand that question, Ms. McGinnis.

6 MS. MCGINNIS: So there's the model outputs.

7 Does that include any analysis by you?

8 WITNESS WEAVER: Yes. We looked at the direct
9 CalSim DSS output.

10 MS. MCGINNIS: Okay.

11 WITNESS WEAVER: Then we also looked at
12 exceedance curves output.

13 MS. MCGINNIS: Once you get the outputs in the
14 spreadsheet and you're using formulas, would you call
15 that your analysis?

16 WITNESS WEAVER: I think that was part of our
17 analysis. I don't think that was all of it.

18 MS. MCGINNIS: Okay. What else would be
19 included in your analysis?

20 WITNESS WEAVER: Like I said, we looked at the
21 direct output itself and compared the results against
22 what we expected in terms of what we're hoping to see.
23 And if -- if we do not see what we expected or were
24 hoping to see, we made sure there wasn't a bug in the
25 modeling or if there's something within the modeling

1 needed to be changed.

2 MS. MCGINNIS: Thank you.

3 So the information in the spreadsheet, does it
4 go through some kind of formal QA/QC process?

5 WITNESS WEAVER: They have -- they've been
6 subject to pretty extensive scrutiny and review by
7 members of the water forum team.

8 MS. MCGINNIS: And why is that QA/QC process
9 important?

10 WITNESS WEAVER: So it's not just me looking
11 at the output; other people are looking at it as well.

12 MS. MCGINNIS: Okay. And what -- how -- well,
13 actually, that's all questions. Thank you.

14 CO-HEARING OFFICER DODUC: Does that complete
15 your cross-examination? Does Ms. Aufdenberge have
16 questions?

17 MS. AUFDEMBERGE: Our questions were asked
18 through Mr. Berliner. So thank you.

19 CO-HEARING OFFICER DODUC: All right. Thank
20 you.

21 MR. BERLINER: Thank you.

22 CO-HEARING OFFICER DODUC: Ms. Morris, you're
23 up and then Ms. Akroyd. I would like to complete the
24 cross-examination of this panel before we take our lunch
25 break.

1 MR. BERLINER: I'd like to thank the chair's
2 indulgence for the additional time we needed. Thank
3 you.

4 MS. MORRIS: While we're transitioning, could
5 I ask Mr. Hunt to pull up or have ready ARWA-309 and
6 DWR-917.

7 CO-HEARING OFFICER DODUC: Very efficient,
8 Ms. Morris. Thank you.

9 --oOo--

10 CROSS-EXAMINATION

11 MS. MORRIS: Good morning. Stephanie Morris.
12 All my questions are for Mr. Gohring.

13 Mr. Gohring, looking at ARWA-309, page 6,
14 isn't it true that your claim -- or your main claim is
15 that WaterFix may exacerbate existing dry year dangers
16 to Folsom?

17 WITNESS GOHRING: Yes.

18 MS. MORRIS: Isn't it true that those dangers
19 exist without the WaterFix project?

20 WITNESS GOHRING: The dangers that are
21 exacerbated by WaterFix do exist now.

22 MS. MORRIS: Thank you.

23 And the modified FMS --

24 MR. BEZERRA: That wasn't --

25 CO-HEARING OFFICER DODUC: Hold on. One at a

1 time.

2 MR. BEZERRA: She cut off the witness as he
3 was continuing to answer.

4 CO-HEARING OFFICER DODUC: No, he answered the
5 question.

6 Move on, Ms. Morris.

7 MS. MORRIS: Thank you.

8 The modified FMS you are presenting here and
9 in other forums requests a December and a May Folsom
10 carryover to storage target, correct?

11 WITNESS GOHRING: Correct.

12 MS. MORRIS: Isn't it true if we look at
13 DWR-9-7 for Alternative 4A, the highlighted table that
14 will appear on the screen shortly -- wait until it gets
15 up.

16 Can you go to the second page, bottom? Thank
17 you.

18 Isn't it true that in this exhibit, the
19 highlighted table for Alternative 4A, it shows no
20 negative effects due to WaterFix in December to Folsom
21 storage?

22 WITNESS GOHRING: For this variant, this
23 alternative of WaterFix, yes, it's true.

24 MS. MORRIS: The Alternative 4A which is
25 currently before the Water Board, correct?

1 WITNESS GOHRING: I actually don't know which
2 of the many alternatives are before the Water Board. I
3 think it's one of many.

4 MS. MORRIS: In May, it shows only a negative
5 3 -- a negative 3 change in the 80 -- 80 exceedance,
6 which you previously testified was insignificant,
7 correct?

8 WITNESS GOHRING: Correct.

9 MS. MORRIS: So isn't it true that based on
10 Alternative 4A table shown here in DWR-917, that there
11 is no increased risk to Folsom storage in December and
12 May?

13 WITNESS GOHRING: For this alternative, that
14 is correct.

15 MS. MORRIS: Okay. Thank you. I have no
16 further questions.

17 CO-HEARING OFFICER DODUC: Thank you,
18 Ms. Morris.

19 Ms. Akroyd?

20 --o0o--

21 CROSS-EXAMINATION

22 MS. AKROYD: Rebecca Akroyd for San Luis &
23 Delta-Mendota Water Authority. I'm going to be cutting
24 as we go along. I believe most of my questions have
25 been covered at this point.

1 And my cross will be continuing with the same
2 topics and the connection between the modified FMS and
3 the WaterFix potential impacts from the modified FMS.

4 So, first, to begin with, Mr. Gohring, you've
5 already discussed the proposed modified FMS quite a bit,
6 but just a few more questions for you.

7 First, the water forum is looking to change
8 Folsom operations from what they can otherwise be even
9 absent WaterFix; is that correct?

10 WITNESS GOHRING: Yes.

11 MS. AKROYD: And if the WaterFix project
12 doesn't go forward, in your opinion, does the need for
13 the minimum storage requirements in the modified FMS go
14 away?

15 WITNESS GOHRING: No.

16 MS. AKROYD: I'd like to bring up ARWA-300E,
17 which is Mr. Gohring's rebuttal testimony. If we could
18 go to paragraph 27, please. Thank you.

19 Mr. Gohring, in your rebuttal testimony, you
20 described three objectives for the water forum's
21 development of the modified FMS, correct?

22 WITNESS GOHRING: Yes.

23 MS. AKROYD: The first objective you identify
24 is to maintain sufficient storage in Folsom Reservoir to
25 avoid drawing the reservoir down to 90,000 acre feet; is

1 that right?

2 WITNESS GOHRING: Under the -- completing the
3 sentence, yes. Under the -- specifically under a
4 modeling simulation in the '76 year, '77 year drought
5 with a future level of demand.

6 MS. AKROYD: Thank you.

7 The objective regarding minimum storage isn't
8 limited to avoiding injury from California WaterFix,
9 correct?

10 WITNESS GOHRING: No. That objective is
11 designed to help improve water supply reliability even
12 without -- and environmental conditions even in the
13 absence of WaterFix, that's correct.

14 MS. AKROYD: I'd like to bring up now
15 ARWA-309, the PowerPoint presentation, if we could. Go
16 to Slide 6, please.

17 This slide is titled "Modified FMS Response to
18 Increased Risk from WaterFix." And the slide references
19 a risk of exacerbating the existing dry year dangers and
20 drawing down Folsom storage prior to very dry years,
21 correct?

22 WITNESS GOHRING: Yes, it is.

23 MS. AKROYD: And do you believe WaterFix will
24 have these effects because it might enable reclamation
25 to divert more water released from Folsom at the Delta;

1 is that right?

2 WITNESS GOHRING: The modeling results that I
3 looked at convinced me that that's the case, yes.

4 MS. AKROYD: And that is how you believe
5 WaterFix increases the risk in dry years; is that right?

6 WITNESS GOHRING: Yeah. I think my testimony
7 covered that. It's -- it's the combination of some of
8 the modeling output that shows reduction in storage in
9 important months outside of the month of September for
10 Folsom Reservoir and my testimony that recounting
11 previous testimony by DWR and reclamation that -- that
12 their modeling during dry years is not a true
13 representation of what can be expected.

14 MS. AKROYD: Thank you.

15 Is there anything in the modified FMS that
16 limits the application of the new terms and conditions
17 to addressing the incremental increased risk you believe
18 is posed by WaterFix?

19 WITNESS GOHRING: I'm not sure I understand
20 the question.

21 MS. AKROYD: I'll try to put it a different
22 way.

23 Is there anything in the modified FMS that
24 limits its application to just addressing the increased
25 risk posed by WaterFix?

1 WITNESS GOHRING: No, I don't think so.

2 MS. AKROYD: Put another way again. Make sure
3 I understand.

4 The modified FMS goes beyond addressing the
5 new operational flexibility provided by WaterFix; is
6 that correct?

7 MR. MILIBAND: Just quickly -- objection.
8 Assumes facts not in evidence, and some of the
9 editorialization, but...

10 CO-HEARING OFFICER DODUC: Sustained.

11 I think you got the answer you wanted the
12 first time around, Ms. Akroyd.

13 MS. AKROYD: Thank you.

14 We can go on to Slide 8 of this PowerPoint
15 presentation.

16 Again, focusing on objective of modified FMS.
17 The third objective that is listed is: "Avoid
18 redirected impact to Sacramento River."

19 By that do you mean Sacramento River
20 fisheries?

21 WITNESS GOHRING: That was -- yeah, that was
22 the point. That was the intent of that objective, yes.

23 MS. AKROYD: Does that objective include
24 avoiding any other redirective impacts?

25 WITNESS GOHRING: As an objective, no.

1 MS. AKROYD: Okay. If we can move on to
2 Slide 9, please.

3 Confirming our question and answer we just
4 had, this slide describes the modified estimates of
5 hitting the sweet spot among the three objectives?

6 WITNESS GOHRING: Yes.

7 MS. AKROYD: And those objectives do not
8 include avoiding any other redirected impacts other than
9 to Sacramento River fisheries; is that correct?

10 WITNESS GOHRING: That's correct.

11 MS. AKROYD: That's all my questions for
12 Mr. Gohring. I just have a few more questions for
13 Mr. Weaver.

14 CO-HEARING OFFICER DODUC: All right.

15 MS. AKROYD: Go to Slide 3 of the PowerPoint
16 presentation, please.

17 We've had quite a bit of discussion about this
18 slide. Just a few questions I'm hoping you can clarify.

19 I understand that this slide presents an
20 excerpt from the draft ERI/EIS showing end of May
21 storage for Folsom lake; is that correct?

22 WITNESS WEAVER: That's my understanding, yes.

23 MS. AKROYD: And this -- would you agree that
24 that figure shows climate change makes it more difficult
25 to maintain end of May storage in Folsom Lake?

1 MR. BEZERRA: Objection. Assumes facts not in
2 evidence. Mr. Gohring is the witness who testified to
3 having reviewed this information.

4 CO-HEARING OFFICER DODUC: Ms. Akroyd?

5 MS. AKROYD: I can direct that at Mr. Gohring.
6 Would you like me to repeat the question?

7 WITNESS GOHRING: Yes. I was paying attention
8 really, but please do.

9 MS. AKROYD: No problem.

10 This figure shows that climate change makes it
11 more difficult to maintain the end of May storage in
12 Folsom Lake, correct?

13 WITNESS GOHRING: I think I can draw that
14 conclusion from that slide, yeah.

15 MS. AKROYD: Thank you.

16 Turning back to Mr. Weaver.

17 You just testified recently that the modeling
18 that you completed of the modified FMS did not include
19 climate change, correct?

20 WITNESS WEAVER: That's correct.

21 MS. AKROYD: Would you agree, then, that the
22 modeling could underestimate the difficulty of
23 maintaining storage with climate change?

24 WITNESS WEAVER: Which modeling?

25 MS. AKROYD: The modeling that you conducted.

1 WITNESS WEAVER: Would underestimate --

2 MS. AKROYD: Would it underestimate the
3 difficulty of maintaining storage with climate change?

4 WITNESS WEAVER: I haven't looked at that in
5 detail to say "yes" or "no" on that.

6 MS. AKROYD: Okay. Thank you.

7 Now, separate from the CalSim II modeling that
8 you conducted, did you analyze how the modified FMS
9 would have affected CVP operations during the recent
10 drought?

11 WITNESS WEAVER: I looked at how it could
12 affect American River flows. I didn't look at the
13 overall CVP operations.

14 MS. AKROYD: And then looking at that for
15 American River, did you look at storage and operations
16 forecast for that period to consider how it could have
17 required reclamation to change operations?

18 WITNESS WEAVER: I did not look at any of
19 reclamation's forecasts, no.

20 MS. AKROYD: Can you describe what information
21 you did review?

22 WITNESS WEAVER: I used historical flows and
23 storage from and -- off of CDEC and used that and made
24 some gross assumptions about what reclamation could have
25 done during periods that might have been affected by

1 the -- the modified FMS.

2 MS. AKROYD: Did you calculate how many
3 additional acre feet of storage the modified FMS would
4 have required to remain in Folsom Reservoir in the
5 recent drought?

6 WITNESS WEAVER: I -- I did look at that, yes.

7 MS. AKROYD: Did you -- do you have those
8 calculations with you or are those available as part of
9 your testimony?

10 WITNESS WEAVER: No, they're not.

11 MS. AKROYD: Are those calculations included
12 in any of the information uploaded onto the FTP site I
13 know you're referencing?

14 WITNESS WEAVER: No, they're not.

15 MS. AKROYD: Do you have that information
16 available with you today? I'm trying to explore whether
17 I can ask further questions about those calculations.

18 WITNESS WEAVER: I don't believe I do.

19 MS. AKROYD: Thank you.

20 One moment. Turn to the modified FMS, which
21 is ARWA-308, please.

22 We just had some discussion, but, again, just
23 a couple of clarifying questions.

24 The last sentence of Term 1 states that:

25 "Permittee shall not reduce water supply allocations or

1 deliveries that are diverted from Folsom Reservoir or
2 the lower American River in order to comply with this
3 term's minimum storage requirements."

4 Do you see that?

5 WITNESS WEAVER: Are you asking me about this
6 question?

7 MS. AKROYD: Sure.

8 WITNESS WEAVER: Yes, I see that. Yes.

9 MS. AKROYD: And trying to clarify. Does this
10 mean that storage can go below the end of May or
11 December minimum storage requirements, if necessary, to
12 allocate or deliver water to the American River
13 contractors?

14 MR. BEZERRA: Objection. Vague and ambiguous
15 as to "American River contractors." Again, we have
16 multiple different types of contractors on the
17 American River.

18 CO-HEARING OFFICER DODUC: Ms. Akroyd?

19 MS. AKROYD: I'm trying to use -- I'm trying
20 to understand what this sentence says. It refers to not
21 reducing water supply allocations or deliveries. So if
22 I can rephrase the question to tie it maybe to that
23 sentence. Let me try again.

24 Does this sentence mean that storage can go
25 below the end of May or end of December minimum storage

1 requirements, if necessary, to meet the water supply or
2 allocations that are diverted from follow
3 Folsom Reservoir or the lower American River?

4 WITNESS WEAVER: I believe that's the intent.

5 MS. AKROYD: And does it mean that reclamation
6 must meet -- go back to that the previous question. I
7 apologize.

8 Storage can go below the end of May or end of
9 December minimum storage requirements, if necessary?

10 WITNESS WEAVER: In the modeling, we assumed
11 that water supply responsibilities on the American River
12 and MRR, the minimum release requirement, would be met
13 regardless of whether or not it drew Folsom below that
14 end of December storage target.

15 MS. AKROYD: Thank you.

16 CO-HEARING OFFICER DODUC: I'm sorry. Let me
17 follow up.

18 In the modeling, is it assumed, then, that
19 meeting the water supply allocation deliveries has
20 higher priority than meeting with this term's minimum
21 storage requirements?

22 WITNESS WEAVER: I believe that's the intent,
23 yes.

24 CO-HEARING OFFICER DODUC: Thank you.

25 MS. AKROYD: With that, no further questions

1 for this panel.

2 CO-HEARING OFFICER DODUC: Thank you,

3 Ms. Akroyd.

4 Mr. O'Brien?

5 So at some point, Mr. Bezerra, I would like

6 clarification because what I thought I just heard

7 Mr. Weaver say seems to be inconsistent with what I

8 heard Mr. Gohring say.

9 So perhaps you could clarify that for me at

10 some point after Mr. O'Brien finishes his cross.

11 MR. O'BRIEN: I would be happy to have

12 Mr. Bezerra clarify that now. It might limit some of my

13 cross-examination.

14 CO-HEARING OFFICER DODUC: Then, Mr. Bezerra

15 or Mr. Gohring, one of you, because what I thought I

16 heard was different. What I thought I heard Mr. Gohring

17 say in response to previous cross-examination was that

18 that minimum carryover storage term would take

19 precedence over everything else.

20 MR. BEZERRA: Mr. Gohring can clarify. I

21 don't think there's any inconsistencies here.

22 WITNESS GOHRING: I --

23 CO-HEARING OFFICER DODUC: Can we put that

24 language back up again?

25 The last sentence seems to be the focus of

1 many people today.

2 WITNESS GOHRING: Uh-huh.

3 CO-HEARING OFFICER DODUC: So that last
4 sentence, there are two things being discussed: The
5 terms "minimum storage requirements" and "water supply
6 allocations or delivery." I'm just focusing on that,
7 that sentence.

8 So in that sentence, what takes precedence?

9 MR. BEZERRA: Can I clarify? As I understand
10 the question, it's -- you're asking what is the priority
11 between the minimum storage requirement versus the
12 deliveries within the American River basin?

13 CO-HEARING OFFICER DODUC: Correct.

14 MR. BEZERRA: Okay.

15 WITNESS GOHRING: So just make sure I
16 understand the question. What has a higher priority,
17 meeting the storage requirement or meeting
18 American River deliveries? Is that --

19 CO-HEARING OFFICER DODUC: If the term "water
20 supply allocations or deliveries" as used here refers
21 only to American River contractors, then that's a
22 clarification that's good to be noted. And that is also
23 the question.

24 WITNESS GOHRING: Okay. So the -- I'm going
25 to have go to a little bit around to get there.

1 There are water supply allocations that are
2 cut back in dry years for the diverters we're talking
3 about at Folsom Reservoir -- diversion from
4 Folsom Reservoir or lower American River.

5 Those allocations vary by year. The
6 allocations go down when it's dry. The modified flow
7 management standard doesn't propose to change that, that
8 system of allocations. This is trying to say that if
9 reclamation and operating Folsom Reservoir was in danger
10 of missing the target --

11 CO-HEARING OFFICER DODUC: The target minimum
12 carryover?

13 WITNESS GOHRING: Yes. Thank you.

14 -- in danger of missing either of the storage
15 requirements as proposed here, they can't make up --
16 make that up just by cutting American River diverters.

17 They can't -- they can't come up with an extra
18 cut to make up the difference because they, you know,
19 failed to project, you know, where they would end up and
20 how their other operations might or might not hit the
21 storage targets.

22 There's another term in this exhibit in our
23 proposed terms and conditions that does describe there
24 are, as proposed, some situations where it's basically
25 allowable to miss the -- the requirement. And that, in

1 summary, is if reclamation during the -- basically
2 during the summer season ends up operating Folsom so
3 that they're releasing water at the minimum release
4 requirement for the entire season and they still can't
5 make the storage requirement, then they're basically
6 relieved from that. There is a -- there is a -- you
7 know, a safety valve there.

8 MR. BEZERRA: I think I could walk you through
9 this with some redirect, if that would be a better way
10 to do it. We're going to have recross and that kind of
11 thing. If you're satisfied with this, we could stop.
12 Alternatively, I could offer to do some redirect.

13 CO-HEARING OFFICER DODUC: I will be satisfied
14 if Mr. Weaver answers this next question.

15 What Mr. Gohring just described, Mr. Weaver,
16 is that your understanding of how it's modeled?

17 WITNESS WEAVER: That's correct. As I said
18 before, that we -- the modeling assumes that meeting the
19 minimum requirement and any other American River
20 flow-related requirements require that Folsom -- and
21 water supply diversions within the American River
22 watershed. If those actions resulted in
23 Folsom Reservoir being drawn below the requirement, then
24 it was permissible.

25 The intent is not to maintain Folsom Reservoir

1 storage at the cost of either the lower American River
2 flows or the American River water supply.

3 CO-HEARING OFFICER DODUC: Thank you. That
4 clarifies things for me. Thank you for your indulgence.

5 Mr. O'Brien?

6 --o0o--

7 CROSS-EXAMINATION

8 MR. O'BRIEN: I just wanted to note for the
9 hearing record, Hearing Officer Doduc, that these
10 questions are being asked on behalf of our
11 Sacramento River Settlement contractor client and our
12 Feather River settlement contractor clients, but not the
13 remainder of our client group.

14 Some questions for Mr. Gohring.

15 Can we pull up the PowerPoint ARWA-309,
16 Slide 8, please?

17 Referring you to the last bullet on that
18 slide, you state that one of the objectives of the
19 modified FMS is avoid redirected impact to Sac River; is
20 that correct?

21 WITNESS GOHRING: That was the objective. I
22 do want to distinguish between objectives and results.
23 Results showed something different.

24 MR. O'BRIEN: Let's stick with my question, if
25 we could. Thank you.

1 Why did you include this as one of the
2 objectives in the modified FMS?

3 WITNESS GOHRING: It became clear to us that
4 it would not be acceptable to federal regulators or our
5 own internal environmental caucus to harm winter-run
6 salmon on the Sacramento River. That was not an
7 acceptable -- it would not be acceptable to our own
8 internal folks, and it would have made problems with
9 this proposal.

10 MR. O'BRIEN: So when you used the term
11 "redirected impact to Sacramento River," you're limiting
12 that to impacts on the winter-run salmon; is that
13 correct?

14 WITNESS GOHRING: We -- we used as a
15 functional metric in checking whether we met that goal,
16 we used a number of parameters. One was volume of cold
17 water pool in Shasta Reservoir and other was water
18 temperature in the Sacramento River.

19 And using those -- primarily those metrics, we
20 believed we have found the sweet spot that we keep
21 talking about where we can meet our in-basin objectives
22 and avoid harming, essentially, temperature in the
23 Sacramento River.

24 MR. O'BRIEN: But when you use the term "avoid
25 redirected impact to Sacramento River," it sounds to me

1 like you're not talking about avoiding redirected
2 impacts to water users that utilize water from the
3 Sacramento River. Is that correct?

4 THE WITNESS: We're still talking about
5 objectives, not output; is that right?

6 MR. O'BRIEN: Objectives.

7 WITNESS GOHRING: Objectives. We did not
8 adopt an objective about harming or not harming water
9 users outside of the American River basin, that's
10 correct.

11 MR. O'BRIEN: So when you talk about these
12 discussions with your internal folks, was the subject of
13 including as an objective of the modified FMS an
14 objective to avoid redirected impacts on water users
15 that rely on the Sacramento River ever considered?

16 WITNESS GOHRING: I'm thinking about that.

17 Did our internal folks ever discuss -- did we
18 ever consider adopting an objective about -- yeah, we
19 did discuss that at various times in the last, you know,
20 many years.

21 MR. O'BRIEN: And when you say, "We discussed
22 that," just so the record is clear, you discussed the
23 idea of including as one of the objectives of this
24 modified FMS the avoidance of water supply impacts on
25 water users that rely on the Sacramento River; is that

1 correct?

2 WITNESS GOHRING: We discussed -- well, we
3 discussed the possibility of including an objective of
4 harming or not harming other legal users of water.

5 We have an environmental caucus who -- we have
6 members in our environmental caucus who, at various
7 times, have specifically posited the idea that we should
8 fix American River's problems by taking water away from
9 other water users outside of the basin. That has been
10 discussed. So I don't want to limit this to just the
11 discussion of harm, discussing no harm. There were
12 discussions made in other directions as well as.

13 MR. O'BRIEN: Getting back to my question, is
14 it fair to say that the idea of including the objective
15 of avoiding redirected impacts to water users on the
16 Sacramento River was ultimately objected -- rejected by
17 the American River Water Agencies?

18 MR. BEZERRA: Objection. Just to be -- it's
19 vague and ambiguous. I think Mr. O'Brien was asking the
20 question about was that considered by the water forum.
21 The question actually said the American River Water
22 Agencies. So I just want to clarify if we're talking
23 about the water forum or the water agencies.

24 CO-HEARING OFFICER DODUC: Mr. O'Brien?

25 MR. O'BRIEN: Okay. That's -- I'll rephrase.

1 Thank you.

2 Let's take it one at a time. First of all,
3 when we talk about the objectives of the modified FMS,
4 whose objectives are we talking about, the water forum
5 or the ARWA?

6 WITNESS GOHRING: In this case, I think it's
7 both.

8 MR. O'BRIEN: Okay. So when -- and you said
9 earlier that there had been consideration of including
10 as one of the objectives the avoidance of impacts on
11 water users that rely on Sacramento River.

12 Did I get that right?

13 WITNESS GOHRING: I believe that -- that has
14 been discussed, yes.

15 MR. O'BRIEN: But, ultimately, that objective
16 was not included; is that correct?

17 WITNESS GOHRING: Yes. And I can explain why.

18 MR. O'BRIEN: Well, just trying to understand
19 exactly what your intent was with this bullet at this
20 point. We'll get to the why questions a little later.

21 WITNESS GOHRING: It seems like my why would
22 go to intent. Would it not?

23 CO-HEARING OFFICER DODUC: Just allow
24 Mr. O'Brien to ask his questions, please, Mr. Gohring.

25 WITNESS GOHRING: I apologize.

1 MR. O'BRIEN: As part of the modeling
2 analysis -- and I'm going to get to Mr. Weaver in a
3 minute -- but did your modeling analysis specifically
4 consider the question of whether the modified FMS would
5 cause water supply impacts on, for example, the
6 Sacramento River settlement contractors?

7 WITNESS GOHRING: Make sure I'm clear. Did
8 we -- you stated that as did a modeling analysis
9 consider or did we analyze that question? I'm --

10 MR. O'BRIEN: Okay. Let's use your phrasing.

11 WITNESS GOHRING: I'm sorry.

12 MR. O'BRIEN: Did you, in your modeling,
13 consider the question of whether the modified FMS would
14 cause water supply impacts to Sacramento River
15 settlement contractors?

16 WITNESS GOHRING: Yes.

17 MR. O'BRIEN: Did you, in your modeling,
18 consider whether the modified FMS would cause water
19 supply impacts on Feather River settlement contractors?

20 WITNESS GOHRING: Yes.

21 MR. O'BRIEN: Did you, in your modeling,
22 consider whether the modified FMS would cause water
23 supply impacts on contractors within the
24 Tehama-Colusa Canal service area?

25 WITNESS GOHRING: Yes.

1 MR. O'BRIEN: You're generally familiar with
2 the Sacramento River?

3 THE WITNESS: Generally.

4 MR. O'BRIEN: I looked at your resume. You
5 worked for the Bureau of Reclamation and you worked on
6 some projects on the Sacramento River, correct?

7 WITNESS GOHRING: Yes, I did.

8 MR. O'BRIEN: Can you tell us -- I'm not
9 asking for legal opinions, but describe your
10 understanding of the general nature of the SRS
11 contracts.

12 WITNESS GOHRING: I do not know.

13 MR. O'BRIEN: You do not know?

14 WITNESS GOHRING: Those contracts were
15 finalized after I left reclamation, and I'm not familiar
16 with them.

17 MR. O'BRIEN: So you don't have any
18 understanding of, for example, where those contracts fit
19 into the CVP system from a priority standpoint?

20 WITNESS GOHRING: I -- I don't think that's
21 what I said.

22 I think you were asking me about -- I believe
23 the previous question was if I have detailed knowledge
24 of the contracts. I do not.

25 Now I think you're asking me about general

1 knowledge of priority. So can I just ask you to restate
2 that in a more direct question?

3 MR. O'BRIEN: My previous question -- I'll say
4 it almost verbatim. I'm not asking you to give a legal
5 opinion.

6 I'm asking for your understanding of the
7 general nature of the Sacramento River settlement
8 contracts. If you have such --

9 WITNESS GOHRING: The general nature of the
10 contractors?

11 MR. O'BRIEN: Of the contracts.

12 WITNESS GOHRING: Oh, the contracts. Very
13 general, yes.

14 I must have misheard the question I'm sorry.

15 MR. O'BRIEN: It's okay.

16 Can you just give us a general description of
17 your understanding of those contracts? And I'd like you
18 to, in particular, if you can, related to the priority
19 of deliveries under those contracts in relation to other
20 contractors within the Central Valley Project.

21 MR. BEZERRA: Objection. Calls for a legal
22 conclusion. There's a lot of legalities there
23 intertwined. You're talking about priority in the
24 settlement contracts versus many other CVP water users.

25 CO-HEARING OFFICER DODUC: Mr. Gohring may

1 answer to the extent that he's able to.

2 WITNESS GOHRING: I'll do best.

3 My understanding of the Sacramento River
4 settlement contractors, a contract is that they are a
5 settlement between water right holders on the
6 Sacramento River who had water rights prior to
7 development of the Central Valley Project -- excuse
8 me -- Central Valley project.

9 And they represent a settlement that allows
10 those contractors to continue to use their water right
11 water and supplement it with CVP water, water stored at
12 Shasta Reservoir.

13 And that's pretty much the extent of my
14 understanding.

15 MR. O'BRIEN: That's a very good description.
16 Thank you.

17 Did your modified modeling show that the
18 modified FMS would have any water supply impacts on the
19 SRS contractors?

20 WITNESS GOHRING: Our modeling showed that the
21 modified FMS would have no impact on the
22 Sacramento River settlement contractors.

23 MR. O'BRIEN: And is the same true of the
24 Feather River settlement contractors?

25 WITNESS GOHRING: Yes.

1 MR. O'BRIEN: And is the same true of the
2 Tehama-Colusa Canal area contractors?

3 WITNESS GOHRING: I'm going to have to defer
4 to Mr. Weaver on that.

5 MR. O'BRIEN: That's fine.

6 MR. BEZERRA: Again, we plan to present all of
7 these detailed modeling results in Part II.

8 WITNESS WEAVER: I believe that there -- there
9 may have been some very small changes in water service
10 contractor deliveries north of Delta. I don't have any
11 recollection of the specifics of those. I don't think
12 there was zero change across the board.

13 MR. O'BRIEN: And you did not present those
14 numbers in your evidence that you submitted for this
15 part of the hearing, correct?

16 WITNESS WEAVER: That's correct.

17 MR. O'BRIEN: Well, let me ask it this way,
18 Mr. Gohring: I realize you did not include the
19 avoidance of water supply impacts to water users on the
20 Sacramento River as part of your objectives, but is it
21 nonetheless your intent that the modified FMS would --
22 would avoid such impacts?

23 WITNESS GOHRING: Well, that's a good
24 question. I -- let me try to answer.

25 People I work for, our environmental caucus

1 and our American River water users, are satisfied with
2 the modified FMS that doesn't impact Sacramento River
3 settlement contractors.

4 And I don't have knowledge of anyone within
5 this crazy coalition that wants to change that.

6 MR. O'BRIEN: Well, if I were -- let's assume
7 hypothetically that I was to show you an additional
8 modeling analysis, perhaps one done by MBK Engineers,
9 and that showed that, in fact, there would be a -- let's
10 just pick the number -- 50,000 acre foot water supply
11 impact in a critical year in terms of Shasta storage.

12 Would that be something that would cause you
13 to want to reconsider any aspects of the modified FMS,
14 or is that just an impact that you would basically have
15 the view that that's something we all have to accept?

16 WITNESS GOHRING: I don't think we would be so
17 cavalier. I think that if I -- if I -- you know, I'm
18 trying to imagine something like that, and I -- I think
19 I would want to know more. I think I would want to know
20 more than just change in storage at Shasta Reservoir at
21 that. I would want to know change in cold water pool
22 volume. I would want to know change in water
23 temperature as you take those parameters through the
24 available water temperature models.

25 And so that would be my response. I would

1 need to know more, and then I would take it from there.

2 MR. O'BRIEN: Is it fair to say you would take
3 that issue very seriously?

4 WITNESS GOHRING: Yeah. Yeah, you bet.

5 MR. O'BRIEN: There's been mention in the
6 prior testimony of temperature modeling. Do you recall
7 that?

8 WITNESS GOHRING: Say again?

9 MR. O'BRIEN: There's been mention of
10 temperature modeling. Do you recall that?

11 WITNESS GOHRING: Yeah, you bet.

12 MR. O'BRIEN: So there was, in addition to the
13 CalSim --

14 CO-HEARING OFFICER DODUC: Hold on,
15 Mr. O'Brien.

16 Mr. Jackson?

17 MR. JACKSON: This line of questioning,
18 particularly as we shift in temperatures, is your solely
19 a Part II issue.

20 CO-HEARING OFFICER DODUC: Good point.

21 Mr. O'Brien?

22 MR. O'BRIEN: Well, we're straddling Part I
23 and Part II here. I think we all recognize that.

24 And temperature at Shasta has direct
25 implications for water supply on the Sacramento River.

1 We know that from 2014, 2015. So I'm not planning to
2 get deep into temperature modeling questions, but I do
3 want to understand better what was done. And we can
4 deal with the details of that in Part II.

5 CO-HEARING OFFICER DODUC: Mr. Jackson?

6 MR. JACKSON: I do object to this line of
7 questioning as outside of the scope of this hearing.

8 The skillful work that Mr. O'Brien is doing
9 right now is to commit -- potentially commit the users
10 of water on the American River. And I understand those
11 questions. But now that we've gotten into Shasta
12 temperature operation, it seems to me there's a whole
13 bunch of parties who are not present right now who are
14 going to be exceedingly interested in that sort of
15 thing. And as an environmental organization and
16 representative, one of the reasons I'm in Part I is to
17 make sure that those commitments don't happen.

18 Thank you.

19 CO-HEARING OFFICER DODUC: Mr. O'Brien?

20 MR. O'BRIEN: Mr. Jackson has convinced me
21 that it would probably be appropriate to hold the
22 temperature modeling issues to Part II. I think that's
23 reasonable. And I guess this is probably a good time to
24 do this.

25 I wanted to make sure that I made the same

1 reservations that Mr. Berliner made about the ability to
2 come back and ask more detailed questions of the panel.

3 CO-HEARING OFFICER DODUC: I thank you and
4 others.

5 MR. O'BRIEN: We have no problem with that
6 whatsoever. We -- certainly when we present a large
7 amount of technical information in Part II, we can
8 expect a lot of questions.

9 CO-HEARING OFFICER DODUC: I look forward to
10 continuation of the lovefest.

11 MR. O'BRIEN: And without --

12 CO-HEARING OFFICER DODUC: Since we're all
13 being so accommodating to each other right now.

14 MR. O'BRIEN: Without beating a dead horse
15 here, I would just include in that the ability in
16 Part II to bring rebuttal testimony in relating to water
17 supply impacts of water users on both the
18 Sacramento River and the Feather River. So I just want
19 to make sure that I reserve that.

20 CO-HEARING OFFICER DODUC: We'll note your
21 request.

22 MR. O'BRIEN: Thank you.

23 If I could just take a minute. I may not have
24 any questions for Mr. Weaver, but let me just take a
25 quick look.

1 CO-HEARING OFFICER DODUC: Ms. Nikkel?

2 MS. NIKKEL: While Mr. O'Brien is doing that,
3 I would just like to join the reservation on behalf of
4 the Tehama-Colusa Canal Authority, which I think we just
5 heard testimony that there's some potential impacts.

6 CO-HEARING OFFICER DODUC: No need for
7 everyone to rush up. I expect that when we get there,
8 there will be plenty of questioning on that topic.

9 MR. O'BRIEN: Given that, I don't have any
10 further questions.

11 CO-HEARING OFFICER DODUC: All right. Any
12 redirect?

13 MR. BEZERRA: We may have some. I request we
14 perhaps break for lunch, and come back.

15 Otherwise, if we could have five minutes to
16 consult about it.

17 CO-HEARING OFFICER DODUC: Mr. Bezerra, if
18 you -- I'll give you five minutes. If you wish to
19 redirect, I would like to know what topic you would like
20 to cover in your redirect.

21 MR. BEZERRA: Certainly understand that.

22 CO-HEARING OFFICER DODUC: Let's give you a
23 short break until 12:28.

24 MR. BEZERRA: Thank you.

25 (Off the record at 12:24 p.m. and back

1 on the record at 12:28 p.m.)

2 CO-HEARING OFFICER DODUC: We're back in
3 session.

4 Mr. Bezerra? Mr. Miliband?

5 MR. BEZERRA: Thank you, Chair Doduc.

6 We have very brief redirect examination
7 regarding modeling assumptions just to clarify a few
8 points that came up.

9 CO-HEARING OFFICER DODUC: All right.

10 MR. BEZERRA: All for Mr. Weaver?

11 --o0o--

12 REDIRECT EXAMINATION

13 MR. BEZERRA: Mr. Weaver, on
14 cross-examination, you testified that you had made
15 certain changes to reclamation benchmark model in
16 conducting the modified FMS modeling, correct?

17 THE WITNESS: That's correct.

18 MR. BEZERRA: And were those changes contained
19 in both the no-action alternative and the proposed
20 action alternative for the modified FMS?

21 WITNESS WEAVER: Yes, they were.

22 MR. BEZERRA: And then you layered the
23 modified FMS on top of the revised benchmark model,
24 correct?

25 WITNESS WEAVER: That's correct. Essentially,

1 I replaced the 2006 FMS logic with the modified FMS
2 logic. Everything else was the same.

3 MR. BEZERRA: Okay. Thank you.

4 CO-HEARING OFFICER DODUC: Thank you.

5 Not done?

6 MR. BEZERRA: Just a little bit more.

7 Mr. Weaver, on cross-examination, you
8 testified about the conclusion of the water forum dry
9 year actions in the modeling, correct?

10 WITNESS WEAVER: That's correct.

11 MR. BEZERRA: Please refer to ARWA-401.

12 Do you see that?

13 THE WITNESS: I have that in front of me, yes.

14 MR. BEZERRA: And do you see on the first
15 page -- if we could scroll down to the Sacramento River
16 region American River and then the water rights.

17 You indicate in the box that begins "2030"
18 about the water forum dry year actions, correct?

19 WITNESS WEAVER: That's correct. It's the
20 fourth row from the bottom here.

21 MR. BEZERRA: And that indicates that you
22 included the water forum dry year actions in the
23 modified FMS model run, correct?

24 WITNESS WEAVER: That's correct.

25 MR. BEZERRA: And do those water forum dry

1 year actions include Placer County Water Agency dry year
2 transfer?

3 WITNESS WEAVER: Yes, they do. The transfer
4 is not a separate action.

5 MR. BEZERRA: Okay. And just, in general,
6 other dry year actions include demand reductions,
7 correct?

8 WITNESS WEAVER: That's right.

9 MR. BEZERRA: Okay. Do you see in that box
10 the Footnote Z?

11 WITNESS WEAVER: Yes.

12 MR. BEZERRA: Could we please refer to the
13 last page of Exhibit ARWA-401?

14 And Footnote Z, which begins "Water forum dry
15 year actions," do you see that, Mr. Weaver?

16 WITNESS WEAVER: Yes, I do.

17 MR. BEZERRA: And that states: "The water
18 forum dry year actions are defined in Section 5 of the
19 water forum agreement," which is available at a certain
20 Web site; is that correct?

21 WITNESS WEAVER: That's correct.

22 MR. BEZERRA: You incorporated the dry year
23 actions from the water forum agreement into your model?

24 WITNESS WEAVER: That's correct.

25 MR. BEZERRA: And that concludes our redirect.

1 CO-HEARING OFFICER DODUC: Thank you,
2 Mr. Bezerra.

3 Recross? Any takers?

4 Not seeing any.

5 Ms. Meserve is coming up.

6 MS. MESERVE: Osha Meserve for LAND. I don't
7 have any recross. I would just like to check in before
8 we break for lunch regarding what I should tell my
9 witness from Stockton.

10 CO-HEARING OFFICER DODUC: All right. Hold
11 on.

12 MS. MORRIS: Could I ask one question?

13 --o0o--

14 RECCROSS-EXAMINATION

15 MS. MORRIS: Looking at the exhibit in front
16 of you, which is ARWA-401, and Footnote Z, the water
17 forum dry year actions, you said they're available in
18 those water forum agreements. But those agreements are
19 voluntary, correct?

20 WITNESS WEAVER: That is correct.

21 MS. MORRIS: There's no requirement to follow
22 them?

23 WITNESS WEAVER: That's right. As a water
24 forum project, though, we thought it would be
25 appropriate to include the water forum agreements as

1 part of that, that water forum modeling.

2 MS. MORRIS: But they're not part of those
3 water agency's contracts, correct?

4 WITNESS WEAVER: Not that I'm aware of.

5 MS. MORRIS: No further questions.

6 CO-HEARING OFFICER DODUC: Thank you.

7 Not seeing any other cross-examiner --

8 Mr. Bezerra, Mr. Miliband, at this time, do you wish to
9 move your exhibits into the record?

10 MR. BEZERRA: Yes. We would request 24 hours
11 to give you a list. I think I counted 33 different
12 exhibits we need to move in. It's more efficient to do
13 it in writing.

14 CO-HEARING OFFICER DODUC: At this point, I
15 note at least two objections that were filed yesterday
16 with respect to admissibility.

17 Are there any other objections that we should
18 hear right now?

19 MR. BEZERRA: Can I clarify what those were?
20 I understand we had an outstanding motion to strike the
21 entirety of the modified FMS which was the second one.

22 CO-HEARING OFFICER DODUC: The second
23 objection was based on it being outside of the scope of
24 rebuttal -- I believe it was Mr. Berliner -- that it
25 should have been submitted earlier.

1 MR. BEZERRA: Yes.

2 CO-HEARING OFFICER DODUC: And the second one
3 was Mr. Miliband's objection to the cross-examination
4 witnesses on the impacts of the proposal.

5 MS. HEINRICH: Actually, there was an
6 outstanding issue with the scope of questions on
7 cross-examination, but there was also an objection to
8 one of the Sac Valley Water Users exhibits. It had to
9 do with the MBK modeling and recommended changes for
10 purposes of the modeling during drought conditions.

11 I can check my notes, I can get the exhibit
12 number.

13 CO-HEARING OFFICER DODUC: Okay.

14 MR. BEZERRA: I think at this point in
15 relation to the confidentiality issue that we raised, I
16 think --

17 CO-HEARING OFFICER DODUC: I don't have that
18 as one of the list.

19 What I had was, Mr. Miliband, that led to a
20 lengthy discussion on Friday just before we broke about
21 the appropriateness of considering the impacts of the
22 modified flow management proposal, whether the potential
23 water supply impact of that proposal could be explored
24 during cross-examination.

25 And I think we sort of handled that today, but

1 I just want to make sure that we close the door on it
2 when we issue our ruling most likely tomorrow or
3 sometime next week on all of your exhibits.

4 MR. MILIBAND: I appreciate that, and that
5 sounds good, Chair Doduc. I share the same
6 understanding from what we talked about earlier today.

7 CO-HEARING OFFICER DODUC: So there's that
8 third issue that Ms. Heinrich flagged. Do you happen to
9 have --

10 MS. HEINRICH: According to my notes, I
11 haven't had a chance to go back and review the video
12 again. But I have in my notes that there's outstanding
13 objection to Sac Valley Water Users Exhibit 202 on the
14 grounds that it's outside the scope of rebuttal. There
15 was a State Water Contractor objection to which DOI
16 joined.

17 CO-HEARING OFFICER DODUC: Ms. Morris is
18 looking as confused as I feel.

19 MR. BEZERRA: I -- first, that was Group 7's
20 first panel of witnesses, and so we will need to consult
21 with the other Group 7 counsel that was working on that
22 particular set of information.

23 I guess I had understood that was a motion to
24 strike, and I didn't know if -- I thought it had been
25 denied. But perhaps not.

1 CO-HEARING OFFICER DODUC: Ms. Morris, could
2 you shed some light, since it was supposedly your
3 motion?

4 MS. MORRIS: It was. And I was confused
5 because I thought it was in regards to this panel. It
6 was the previous Group 7 panel with Mr. Bourez, and I
7 had made that motion to strike and we were joined on the
8 record. And I don't have anything further to add. So
9 there is that objection, but it was not to this panel;
10 it was a previous panel.

11 CO-HEARING OFFICER DODUC: We will recheck the
12 recording. I expect that, as typical of my conduct in
13 this hearing, that I had given counsel at that time the
14 opportunity to respond to Ms. Morris's
15 objections/motion. So we will review the recording on
16 that.

17 MR. BEZERRA: Thank you.

18 CO-HEARING OFFICER DODUC: Yes?

19 MR. FERGUSON: Aaron Ferguson, Sacramento
20 County Water Agency.

21 I just want to make sure it's clear that -- I
22 believe Mr. Bezerra's comment about the number of
23 exhibits being offered into evidence includes all of
24 this Group 7 participants.

25 I just want to make it clear that we'll be

1 joining and submitting the exhibits in evidence as part
2 of the group for our --

3 MR. BEZERRA: Yes, we will coordinate with all
4 Group 7 counsel to move all Group 7 exhibits into the
5 record.

6 CO-HEARING OFFICER DODUC: All right.

7 MR. BEZERRA: I think my 33 number was this
8 panel, but we will coordinate with all of them.

9 CO-HEARING OFFICER DODUC: Thank you for that
10 clarification.

11 At this time, I'm closing the window for
12 further objections with respect to admissibility for
13 Group 7's exhibits, more than 33 of them.

14 MR. BEZERRA: Thank you very much.

15 CO-HEARING OFFICER DODUC: Now, Ms. Meserve is
16 sitting right in front so that I cannot forget about her
17 request.

18 My estimate is Group 9 will take, at most,
19 half an hour, and Group 21 should take about two hours.

20 Has anyone estimated -- you know, changed
21 their estimates between now and then?

22 So assuming we return at, say, 1:45, that
23 should take us to 4:45.

24 So, Ms. Meserve, your witnesses may stay home
25 today.

1 With that, we will take a break and resume at
2 1:40.

3 (Whereupon the luncheon recess was taken
4 at 12:38 p.m.)

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1 MAY 18, 2017 AFTERNOON SESSION 1:40 P.M.

2 --o0o--

3 CO-HEARING OFFICER DODUC: Good afternoon,
4 everyone. It's 1:40. We are back in session.

5 I see Ms. Nikkel is prepared. I will turn to
6 you now to present your rebuttal witnesses. Have they
7 both taken the oath?

8 MS. NIKKEL: Yes, they have.

9 Good afternoon. Meredith Nikkel on behalf the
10 North Delta Water Agency.

11 GARY KIENLEN, SHANKAR PARVATHINATHAN,
12 called as witnesses by the Protestants, having
13 been previously duly sworn, were examined and
14 testified as follows:

15 CO-HEARING OFFICER DODUC: Do you have an
16 opening statement?

17 MS. NIKKEL: I have a very brief opening
18 statement that I will commence, and then we'll do our
19 direct examination.

20 --o0o--

21 OPENING STATEMENT

22 MS. NIKKEL: Petitioners' expert on water
23 quality, Dr. Nader-Tehrani, has testified that the
24 modeling exceedances of 19 -- excuse me -- of D-1641
25 water quality objectives are not real and are mainly due

1 to modeling limitations which Dr. Nader-Tehrani has
2 referred to as modeling anomalies.

3 However, petitioners have not offered any
4 quantitative analysis of which modeled water quality
5 exceedances are caused by modeling anomaly and which
6 model exceedances are the result of operation of the
7 proposed California WaterFix project.

8 The rebuttal testimony offered by North Delta
9 Water Agency will explain the need to conduct such a
10 quantitative analysis before the modeled exceedances can
11 be dismissed as anomalies.

12 Without any such analysis, petitioners cannot
13 meet their burden to prove that the proposed change will
14 not injure legal users of water within the North Delta.

15 If I could have both witnesses please state
16 your name for the record.

17 WITNESS PARVATHINATHAN: Gomathishankar
18 Parvathinathan.

19 WITNESS KIENLEN: Gary Kienlen.

20 --o0o--

21 DIRECT EXAMINATION

22 MS. NIKKEL: Mr. Kienlen, you understand that
23 you are presenting your testimony today under oath,
24 correct?

25 WITNESS KIENLEN: Yes, I do.

1 MS. NIKKEL: Is NDWA-300 an accurate statement
2 of your rebuttal testimony in this proceeding?

3 WITNESS KIENLEN: Yes, it is.

4 MS. NIKKEL: Dr. Parvathinathan, you
5 understand that you are presenting your testimony today
6 under oath, correct?

7 WITNESS PARVATHINATHAN: Yes.

8 QUESTIONER: Is Exhibit NDWA-301 an accurate
9 statement of your rebuttal testimony?

10 WITNESS PARVATHINATHAN: Yes.

11 MS. NIKKEL: Dr. Parvathinathan, would you
12 please summarize your written testimony submitted for
13 this proceeding?

14 WITNESS PARVATHINATHAN: Thank you. Sure.
15 Thank you for opportunity to allow me to speak here.

16 Before that, I would like to see DWR-513,
17 Figure C1. Figure C1, actually, it's a few pages down.

18 If you don't mind, if you could magnify,
19 showing those a little bit more. Where it crosses --
20 towards the right, please. Yes, thank you.

21 So this figure represents the probability of
22 exceedance of D-1641 standards at Emmaton and the
23 different scenarios.

24 Based on this figure, D-1641 compliance is
25 shown to be approximately 88 percent under the no-action

1 alternative and approximately 78 percent under the
2 Boundary 1 scenario.

3 In other words, the probability of exceeding
4 the standards under the baseline is 12 percent.
5 Whereas, it's approximately 22 percent under Boundary 1,
6 an increase of 10 percent under Boundary 1.

7 The question is whether the increase in model
8 exceedances of 10 percent is due to the proposed
9 California WaterFix operations or it is some modeling
10 anomaly. The petitioners have testified that the model
11 exceedances of D-1641 standards are due to modeling
12 anomalies and are not expected to occur in reality
13 because, in reality, the operators will adjust
14 operations to meet the objectives.

15 My testimony says that the petitioners have
16 not scientifically demonstrated this conclusion in a
17 quantitative manner.

18 Let's assume that this is a modeling anomaly
19 And in realtime, operators wouldn't meet it. It is
20 possible that operators could meet the standards even
21 under the proposed California WaterFix operating
22 conditions. But the ability to do so in realtime
23 depends on several conditions, such as the availability
24 of water upstream, the Delta salinity condition, and so
25 on.

1 So it's quite possible that there may be a
2 scenario in the future when there is there not
3 sufficient water available to meet the standards.

4 Even if one were to assume that water
5 availability will not be an issue in the future, still
6 the petitioners have not considered the potential water
7 supply impact of releasing additional freshwater to meet
8 standards during the periods when the modeling shows
9 exceedances.

10 To conclude, until further details are
11 presented in a technical manner on how these modeling
12 anomalies result in additional exceedances under the
13 project and how these exceedances may indicate a water
14 supply impact that is not currently evaluated, it is not
15 reasonable to dismiss the model exceedances as due to
16 anomalies.

17 Thank you.

18 MS. NIKKEL: That concludes our direct
19 examination.

20 CO-HEARING OFFICER DODUC: Thank you,
21 Ms. Nikkel.

22 DWR?

23 MS. MCGINNIS: Yes, I'll be right there.

24 ///

25 ///

1 --o0o--

2 CROSS-EXAMINATION

3 MS. MCGINNIS: Good afternoon,

4 Dr. Parvathinathan.

5 I have some questions for you about your
6 rebuttal testimony and what could be done to meet D-1641
7 standards daily adjustment and DSM2 modeling and the
8 analysis you did.

9 So, if we could have NDWA-301 page 3.

10 Okay. At lines 21 to 25, the sentence that
11 starts: "In reality, it is quite plausible that there
12 could be a scenario in the future when, under California
13 WaterFix operations, Delta water quality exceeds D-1641
14 objectives" -- I don't want to keep reading, but it's
15 not much more. But D-1641 objectives.

16 So my question is: Were you focusing on the
17 D-1641 water quality objectives at Emmaton?

18 WITNESS PARVATHINATHAN: Actually, I was -- my
19 discussion starts -- I think if you can go up to page --
20 the same page up to paragraph 8. I don't know if it's
21 paragraph -- it's 7 and 8.

22 I begin in 8 saying that illustrate -- is an
23 example. So I was trying to explain the concept there.
24 The petitioners have stated that the exceedances are due
25 to modeling anomalies. And just to illustrate my point,

1 I quoted this example. And this is just an illustrative
2 example and I was not specifically talking about
3 Emmaton.

4 MS. MCGINNIS: So the sentence at lines 21 to
5 25, are you talking about other locations or just
6 Emmaton?

7 WITNESS PARVATHINATHAN: Again, I hope I'm not
8 confusing anyone here. My point to is illustrate, using
9 this example, that you should not dismiss any
10 exceedances at anomalies without proper scientific
11 quantitative manner.

12 MS. MCGINNIS: Okay. Let's just talk about
13 Emmaton.

14 WITNESS PARVATHINATHAN: Okay.

15 MS. MCGINNIS: So are there other actions
16 besides releasing freshwater from upstream storages to
17 assist in meeting D-1641 water quality standards at
18 Emmaton?

19 MS. NIKKEL: Objection. I think it goes
20 outside the scope of the testimony, which is focused on
21 the sentence here on freshwater that would be required.

22 And I also would object that it's vague and
23 ambiguous as to "other conditions," I think I heard you
24 say.

25 CO-HEARING OFFICER DODUC: Ms. McGinnis, your

1 response?

2 MS. MCGINNIS: Well, the testimony is that a
3 large quantity of freshwater would be required to be
4 released from upstream storages in order to comply with
5 D-1641 objectives. And I'm asking if there are other
6 actions that could help to meet those objectives.

7 CO-HEARING OFFICER DODUC: Are you able to
8 answer?

9 WITNESS PARVATHINATHAN: I can definitely
10 answer that question, but is it possible that I can give
11 a -- some details on to how I came here, or is it --

12 CO-HEARING OFFICER DODUC: Go ahead, try that.

13 WITNESS PARVATHINATHAN: Okay. So this
14 paragraph, it starts with -- I put specifically two
15 important words, "plausible." So this all starts with
16 how we interpret the graph. The graph begins with two
17 important operations which is exceedances and no-action
18 alternative of 12 percent and exceedances in Boundary 1
19 of 22 percent.

20 So petitioners have stated in the beginning of
21 the modeling description that all models should be used
22 in comparative analysis. And in comparative mode, we
23 see an additional increased violation of 10 percent
24 under Boundary 1. And so that at this point, it is
25 about how to interpret this 10 percent. Is it due to

1 the project, or is it due to a modeling artifact or
2 anomaly, or is it a combination of both?

3 And petitioners have stated that it is both.
4 It is due to -- some of them are due to modeling
5 anomalies, and some of them, even if they would occur,
6 they would not really occur in the real world because
7 operators would make some adjustments to make sure that
8 D-1641 standards are under compliance. And I'm not an
9 expert in realtime operations to conclude how they would
10 meet the existing D-1641 compliance.

11 My point is a very technical point, which I
12 state that how they would meet is not my expertise. And
13 petitioners have not quantified, have not explained in
14 detail if this additional 10 percent are due to which
15 aspect. Is it -- what portion of the 10 percent is due
16 to modeling anomalies and what portion of it they think
17 that to be mitigated or that could be enforced in
18 realtime using some operations?

19 So that -- if you can go back to the first
20 paragraph. In paragraph 4 --

21 CO-HEARING OFFICER DODUC: Going back to the
22 paragraph that Ms. McGinnis was focusing on, what was
23 your intention with this paragraph?

24 WITNESS PARVATHINATHAN: Turn the page.

25 My intention is -- let's assume in the future

1 a situation where, according to the petitioners, there
2 could be an exceedance. And let's assume this were in a
3 particular month and we are facing a situation where we
4 are going to see exceedances. And the petitioners and
5 the operators normally in realtime, they would take
6 certain actions.

7 So in the Delta, it is -- salinity is always
8 mitigated by additional freshwater. The more
9 Sacramento -- the more freshwater is available and that
10 freshwater can push the salinity into the ocean and you
11 have a much better water quality. And that's how you
12 achieve D-1641 compliance.

13 My point is, when they say in realtime they
14 would be able to meet D-1641, it means that you have to
15 take some actions to make freshwater available in the
16 Delta at that point.

17 CO-HEARING OFFICER DODUC: But you're not
18 proposing a specific action?

19 WITNESS PARVATHINATHAN: Definitely not.

20 The next point I'm trying to make is the
21 petitioners have not explained how the freshwater would
22 be made available. It is quite likely that there won't
23 be much water available in upstream storages to meet
24 D-1641 compliance.

25 So by allowing violations to occur in the

1 model, you may have underestimated how much more
2 additional water you might need to meet D-1641
3 compliance.

4 To finally conclude and answer, I do not know
5 the specifics how they would operate. That is not my
6 scope. I was just trying to explain that an additional
7 volume of water is not quantified in this analysis that
8 might take to meet D-1641 compliance.

9 CO-HEARING OFFICER DODUC: Ms. McGinnis, I
10 might have to sustain Ms. Nikkel's objection if you're
11 going to further pursue this.

12 MS. MCGINNIS: Well, in his answer that he
13 gave just now, Dr. Parvathinathan says D-1641
14 exceedances are always mitigated by adding freshwater.
15 But he also said that there are modeling anomalies that
16 lead to those D-1641 exceedances.

17 And what I was trying to ask was if there any
18 other factors that can be used to address those D-1641
19 exceedances.

20 CO-HEARING OFFICER DODUC: That's not what his
21 testimony is about.

22 MS. MORRIS: Stephanie Morris, State Water
23 Contractors. Based on the testimony that Dr. Shankar
24 has given --

25 CO-HEARING OFFICER DODUC: I like that,

1 Dr. Shankar.

2 MS. MORRIS: I would like to move strike
3 paragraph 11 on the basis that he's testified that he
4 doesn't have any knowledge of operations, but he's
5 saying that the only way -- he's saying that the way to
6 comply with D-1641 is to make additional freshwater
7 releases.

8 And what Ms. McGinnis was trying to ask is,
9 are there other ways you can do it. And I believe I
10 heard him answer he doesn't know because he doesn't
11 operate the system. So he's not qualified to be making
12 opinion that that's the only way. And...

13 CO-HEARING OFFICER DODUC: Ms. Nikkel?

14 MS. NIKKEL: So I think there's a fine
15 distinction to be made here between what
16 Dr. Parvathinathan -- Dr. Shankar was testifying and
17 what Ms. Morris was characterizing.

18 And that is that Dr. Shankar testified that
19 he's not expert on operations nor is he offering any
20 testimony about how operators would meet the D-1641
21 standards.

22 However, he does have a general understanding
23 of how those operations work. He also has a general
24 understanding based on his expertise as to how -- how
25 salinity in the Delta can be reduced by the addition of

1 freshwater. And I think that's what he testified about,
2 and that's the basis for and the foundation for his
3 testimony in paragraph 11.

4 CO-HEARING OFFICER DODUC: Thank you,
5 Ms. Nikkel. Agreed. Objection overruled.

6 Now, Ms. McGinnis, we'll get back to you.

7 MS. MCGINNIS: Okay. I will move to my next
8 line.

9 Dr. Parvathinathan, are you --

10 CO-HEARING OFFICER DODUC: That was really
11 good. Not even Ms. Nikkel can say that.

12 MS. MCGINNIS: I practiced. I asked for
13 advice, and I wanted to get it right, so that's what I
14 did.

15 Are the CalSim model flows based on monthly
16 averages?

17 MS. NIKKEL: Objection. Vague and ambiguous.
18 What CalSim model flows are we talking about?

19 MS. MCGINNIS: The CalSim model flows that he
20 evaluated in preparing his rebuttal testimony.

21 WITNESS PARVATHINATHAN: CalSim produces
22 monthly output.

23 MS. MCGINNIS: Okay. Thank you.

24 And do you know whether the petitioners made
25 any daily adjustments in their DSM2 modeling in order to

1 meet the D-1641 water quality objectives at Emmaton?

2 MS. NIKKEL: I'm going to object. Seems to be
3 outside the scope of the testimony. So maybe help us
4 understand how this is related to the rebuttal testimony
5 being offered.

6 MS. MCGINNIS: Well, Dr. Parvathinathan in his
7 rebuttal testimony said that he reviewed the modeling
8 done by petitioners, and I'm trying to understand
9 whether -- let's see -- trying to understand what I can
10 understand here.

11 CO-HEARING OFFICER DODUC: Did you review DSM2
12 model results?

13 WITNESS PARVATHINATHAN: Definitely, yes.

14 CO-HEARING OFFICER DODUC: Okay.

15 MS. MCGINNIS: And do you know if daily
16 adjustments were made in the DSM2 model results?

17 WITNESS PARVATHINATHAN: Daily adjustments?
18 Let me put how I understand it. So the model uses daily
19 input, and you -- CalSim provides monthly output and
20 that is the flow output CalSim model that is provided as
21 input to the DSM2 model. And that is a desegregation of
22 the monthly output -- the daily.

23 MS. MCGINNIS: So once that data is in DSM2, I
24 understand you can do some adjustments so that it's more
25 representative of how the operators do things in

1 realtime. Is that incorrect?

2 MS. NIKKEL: I'm going to object as vague and
3 ambiguous on "some adjustments." And also those CalSim
4 inputs, I'm just not -- I think we can be more specific.

5 CO-HEARING OFFICER DODUC: Are you trying to,
6 Ms. McGinnis, find out to what extent he's familiar with
7 how the DSM2 runs were modeled?

8 MS. MCGINNIS: I'm trying to understand
9 whether, you know, why the daily adjustments were made.
10 If he doesn't know that daily adjustments were made,
11 then we can skip this.

12 CO-HEARING OFFICER DODUC: Dr. Shankar?

13 WITNESS PARVATHINATHAN: Thank you.

14 I didn't say I don't know about daily
15 adjustments. I just meant as a very broad English term.
16 And as I put it in for the previous question, there is a
17 desegregation of the monthly output into daily input.
18 So DSM2 cannot work on a monthly time frame and does
19 not. That's the desegregation. If you're talking about
20 that, yes, I am a very familiar with the desegregation
21 process. Desegregates the monthly to daily. Sorry.

22 MS. MCGINNIS: That's okay.

23 So if that desegregation is done to reflect
24 flow on a daily basis and that is done in an attempt to
25 meet the D-1641 water quality objectives, would that

1 desegregation be done to represent releases from
2 releasing freshwater from upstream storages?

3 THE WITNESS: Could you please repeat it
4 because there were multiple --

5 MS. MCGINNIS: Sure. And I appreciate your
6 patience with my modeling questions. So let's see.

7 So if the desegregation is done to -- in order
8 to have the model meet D-1641 water quality objectives
9 at Emmaton, would -- would desegregation represent
10 releases of freshwater from upstream storages?

11 MS. NIKKEL: Object. I think I understand the
12 question, but I want to be clear if we're talking about
13 CalSim meeting D-1641 or DSM2 meeting D-1641 objectives?

14 MS. MCGINNIS: Well, wherever the
15 desegregation happens. If it happens in DSM2, then
16 that's what I'm talking about.

17 WITNESS PARVATHINATHAN: I did not -- may I
18 answer?

19 CO-HEARING OFFICER DODUC: Please.

20 WITNESS PARVATHINATHAN: Sorry, I cannot
21 really exhibit -- I think in terms of numbers, so it's
22 difficult for me to get all the questions. Let me
23 provide an explanation as to how I understood the
24 question.

25 There is definitely an issue of mismatch

1 between CalSim and DSM2, especially when the standards
2 are not enforced throughout the month.

3 So is that is a possibility, that there is a
4 definite disconnect between CalSim II and DSM2 that
5 might result in violations of D-1641.

6 I don't know if I answered the question
7 correctly.

8 MS. MCGINNIS: That is helpful. I was trying
9 to -- the additional step that I added to the question,
10 which probably made it really confusing, was saying what
11 a modeler would be trying to represent when they do that
12 desegregation.

13 But I'm going to skip -- I'm going to skip
14 that. I'm happy with your answer there. And I'll move
15 to my final topic, which is: Have you ever done any
16 analysis yourself to see how changes in flow in the
17 Sacramento River affect water quality at Emmaton?

18 WITNESS PARVATHINATHAN: So I think this
19 question is specific to Emmaton.

20 MS. MCGINNIS: Yes.

21 WITNESS PARVATHINATHAN: So I've done several
22 model runs and run CalSim models and provide the outputs
23 to DSM2 to evaluate the salinity changes at different
24 locations, but I didn't have a need to specifically
25 study Emmaton in my experience. We do the Delta as a

1 whole, and we look at all the different compliance
2 locations in the Delta.

3 MS. MCGINNIS: And when you were doing that
4 analysis, did you change the flow in the
5 Sacramento River in order to see what effect that would
6 have on water quality at Emmaton?

7 MS. NIKKEL: Objection. Vague and ambiguous,
8 "that analysis." Dr. Shankar just testified that he's
9 done several analyses and that he generally looks at
10 multiple locations. I'm not sure which analysis we're
11 talking about.

12 CO-HEARING OFFICER DODUC: So, generally, when
13 you perform such analysis, do you adjust flows in order
14 to calculate impacts on salinity?

15 WITNESS PARVATHINATHAN: So, for example,
16 freshwater in Sacramento relates to salinity in the
17 Delta. An X amount of freshwater diversions from
18 Sacramento River results in an X amount of the salinity
19 impact.

20 I have done several projects where you try to
21 simulate the Delta salinity impacts due to an upstream
22 diversion of freshwater. And you run the model and you
23 check the -- you evaluate the DSM2 model results as to
24 understand if there are significant impacts.

25 And sometimes it shows that you have diverted

1 more water upstream and based on the salinity results.
2 So that we -- that's a feedback mechanism we take and we
3 go up to go to CalSim model and change the operations to
4 ensure that you are not really producing significant
5 salinity impacts in the Delta.

6 So in -- to answer your question, I have done
7 a similar analysis where you change upstream operations
8 and understand what is the effect of the changes in
9 upstream operations on Delta water quality.

10 MS. MCGINNIS: Thank you. Okay. That's all.

11 WITNESS PARVATHINATHAN: Okay.

12 CO-HEARING OFFICER DODUC: Ms. Morris?

13 Followed by Ms. Meserve, and then Mr. Herrick.

14 --o0o--

15 CROSS-EXAMINATION

16 MS. MORRIS: Thank you. I just have a couple
17 quick questions.

18 Dr. Shankar, again, thank you for allowing me
19 to call you that.

20 Instead of releasing more freshwater from
21 upstream reservoirs, wouldn't it be possible to reduce
22 SWP and CVP diversions and that would help in meeting
23 D-1641 water quality objectives at Emmaton?

24 MS. NIKKEL: Objection. Outside the scope of
25 the rebuttal testimony, and we just went through this.

1 CO-HEARING OFFICER DODUC: Yes, and he offered
2 an opinion. So overruled. He may offer another
3 opinion.

4 WITNESS PARVATHINATHAN: You're right.

5 MS. MORRIS: Isn't it true that reducing
6 pumping will not require freshwater releases from
7 upstream storages?

8 WITNESS PARVATHINATHAN: So it is not a very
9 straightforward answer. The reason is the water you --

10 MS. MORRIS: It's a pretty simple question.
11 Should I try to rephrase it? Because it's a very simple
12 question.

13 CO-HEARING OFFICER DODUC: Ms. Morris, what
14 was that question again?

15 MS. MORRIS: Isn't it true reducing pumping
16 does not require additional freshwater releases from
17 upstream reservoirs?

18 WITNESS PARVATHINATHAN: Can I give a longer
19 answer?

20 CO-HEARING OFFICER DODUC: Okay.

21 WITNESS PARVATHINATHAN: The reason -- let
22 me --

23 CO-HEARING OFFICER DODUC: Why are you
24 hesitating?

25 WITNESS PARVATHINATHAN: My hesitation is

1 reduction in exports does not mean an equal reduction in
2 freshwater releases.

3 MS. MORRIS: That wasn't my question.

4 WITNESS PARVATHINATHAN: Because the exports,
5 you're in the south of Delta location where there's a
6 complete mix of different sources of water. So you
7 may -- when you release -- when you reduce exports by a
8 certain volume, it does not equate to a -- equate to a
9 similar amount of reduction in freshwater releases,
10 because each of those rivers have different salinities
11 signatures. And when you -- south of Delta salinity is
12 very different from the salinity in the Sacramento River
13 or in the San Joaquin River.

14 And that's why I said it is not a one-to-one
15 relation. Changing direction exports does not equate to
16 upstream --

17 MS. MORRIS: I'll accept that it's not a
18 one-to one, but that really wasn't my question.

19 My question is: Isn't it true that if you're
20 not releasing -- if you are reducing exports, that does
21 not require any releases from upstream storage?

22 CO-HEARING OFFICER DODUC: One at a time.

23 THE WITNESS: Generally speaking, you're
24 right.

25 MS. MORRIS: Okay. Thank you. I have no

1 further questions.

2 CO-HEARING OFFICER DODUC: Thank you,

3 Ms. Morris.

4 Ms. Meserve?

5 MS. MESERVE: No questions.

6 CO-HEARING OFFICER DODUC: Mr. Herrick?

7 --o0o--

8 CROSS-EXAMINATION

9 MR. HERRICK: John Herrick for South Delta
10 parties. I just have a couple questions for
11 Dr. Parvathinathan. And I may refer to him as Dr. P, if
12 I may.

13 CO-HEARING OFFICER DODUC: I think before I
14 will allow Ms. Nikkel to move her exhibits into the
15 record, she will have to demonstrate that she can
16 pronounce her witness's last name.

17 MR. HERRICK: That is fair. Standing
18 objection.

19 Doctor, my questions just deal with the two
20 issues of the -- the anomalies and then operational
21 changes that might be needed to meet the standard.

22 Doctor, you comment in your testimony that
23 when the petitioners identify potential modeling
24 anomalies, that they should be clarified as to -- or
25 quantified rather than just expressed, correct?

1 You have to verbally answer me.

2 WITNESS PARVATHINATHAN: I'm sorry. Yes.

3 Sorry.

4 MR. HERRICK: It's all right.

5 Are the -- is the DSM2 model capable of being,

6 what, rerun or adjusted in order to determine whether or

7 not a result is, indeed, an anomaly or not?

8 WITNESS PARVATHINATHAN: It is capable, yeah.

9 MR. HERRICK: With regard to operational
10 changes, I think I can clear some of this up, if you
11 follow my questioning.

12 You give an example, of course, of a potential
13 operational action which may address an impact to water
14 quality or a violation of D-1641. And then you posited
15 not knowing how much it might take, how much water, one
16 doesn't know the effects, the other effects that might
17 arise, correct?

18 WITNESS PARVATHINATHAN: That's correct.

19 MR. HERRICK: So that's just an example,
20 correct?

21 WITNESS PARVATHINATHAN: That's right.

22 MR. HERRICK: There could be -- in order to
23 meet a standard, there could be possible actions of
24 upstream releases, correct?

25 WITNESS PARVATHINATHAN: That's one example.

1 MR. HERRICK: And one example might be changes
2 in exports from the South Delta?

3 WITNESS PARVATHINATHAN: Correct. That's
4 correct.

5 MR. HERRICK: And there could be others that
6 we're not thinking of right now, correct?

7 WITNESS PARVATHINATHAN: Or a combination of
8 all of those.

9 MR. HERRICK: But the point of your testimony
10 was that which option is used may have other effects
11 that are unexamined at this point?

12 WITNESS PARVATHINATHAN: Thank you. Yes.

13 MR. HERRICK: Now, is the modeling capable of
14 being, again, rerun or adjusted in order to determine
15 the effects of any of those choices of how to meet the
16 standard?

17 WITNESS PARVATHINATHAN: That's correct.
18 That's my point.

19 MR. HERRICK: And are you aware of any
20 criteria that's been presented in this proceeding by
21 which we, or the board, may determine which option is
22 chosen if, in fact, additional actions are taken to meet
23 a standard?

24 WITNESS PARVATHINATHAN: I didn't understand
25 because you said "criteria." I do not know if there is

1 any documentation of the different measures they would
2 take to meet compliance from what I understood.

3 CO-HEARING OFFICER DODUC: Hold on.

4 Ms. McGinnis?

5 MS. MCGINNIS: I just want to object to this
6 line of questioning. Mr. Herrick is asking similar
7 questions to what I was asking about other things that
8 might be done to meet criteria. And I was -- that was
9 ruled as outside the scope of this witness's rebuttal
10 testimony.

11 CO-HEARING OFFICER DODUC: I think we allowed
12 him to speculate. You just didn't, at the time -- let
13 me just say Mr. Herrick was more, I guess, direct in his
14 questioning.

15 MS. MCGINNIS: Fair enough. I just -- what I
16 remember is I -- I skipped some of my questions because
17 the witness doesn't have operational knowledge.

18 CO-HEARING OFFICER DODUC: He does not have
19 operational knowledge. Where, I believe, Mr. Herrick
20 was leading him is, based on his common knowledge, what
21 potential avenues are possible. And I believe that's
22 the extent to which he was able to answer from a
23 layperson perspective -- layperson/modeler perspective,
24 but not operational.

25 Correct?

1 WITNESS PARVATHINATHAN: That's correct.

2 MR. HERRICK: I just have one last question on
3 that line. The point of that last question was I'm
4 trying see if you as a modeler are able, from what's
5 been presented in this hearing, to determine what option
6 might be used to meet a standard and then examine the
7 effects of that choice.

8 WITNESS PARVATHINATHAN: No.

9 MR. HERRICK: Thank you. I have no further
10 questions. Thank you very much.

11 CO-HEARING OFFICER DODUC: Thank you,
12 Mr. Herrick.

13 That's all the cross-examiners I have noticed.

14 Not seeing anyone else, any redirect,
15 Ms. Nikkel?

16 MS. NIKKEL: No redirect.

17 CO-HEARING OFFICER DODUC: At this point,
18 shall you demonstrate your pronunciation of your
19 witness's last name?

20 MS. NIKKEL: I will do my darnedest. So I'd
21 like to move North Delta Exhibit NDWA-301 and NDWA-300
22 into the record, one of which is the testimony of
23 Dr. Parvathinathan.

24 CO-HEARING OFFICER DODUC: All right. Hold on
25 a second.

1 MS. MCGINNIS: I just have an objection to
2 NDWA-300. Mr. Kienlen's testimony doesn't add anything
3 to the record. It only states that he reviewed
4 Dr. Parvathinathan's testimony.

5 CO-HEARING OFFICER DODUC: I seem to recall
6 similar testimony submitted by petitioners in terms of
7 witnesses simply reviewing or attesting that they
8 contributed to someone else's testimony.

9 MS. MCGINNIS: I'm going to have to pass the
10 microphone.

11 MR. BERLINER: Sorry. Tom Berliner on behalf
12 of the DWR.

13 Mr. Kienlen did not testify that he assisted
14 Dr. Parvathinathan in preparing his testimony. He only
15 testified that he reviewed it. There's a big
16 difference. In other words, he did not assist; he just
17 reviewed it.

18 CO-HEARING OFFICER DODUC: Ms. Nikkel?

19 MS. NIKKEL: It's a fine distinction, although
20 one I would understand. I would say the testimony was
21 offered as -- as support for Dr. Parvathinathan's
22 conclusions based on Mr. Kienlen's review and his own
23 expertise. And he was here to offer assistance if it
24 was needed during the direct and cross-examination.

25 CO-HEARING OFFICER DODUC: Objection

1 overruled. We'll weigh whatever value that is in
2 considering the testimony.

3 With that, hearing no other objection,
4 Mr. Nikkel, your exhibits have been accepted. Thank you
5 both to your witnesses.

6 And I will not even try to pronounce
7 Dr. Shankar's last name. But appreciate your input.

8 MS. NIKKEL: Thank you.

9 CO-HEARING OFFICER DODUC: Group 21, I guess
10 we'll hear from Mr. Burke. I don't believe Mr. Burke
11 needs to take the oath.

12 TOM BURKE,
13 called as a witness by the Protestants, having
14 been previously duly sworn, was examined and
15 testified as follows:

16 CO-HEARING OFFICER DODUC: By my estimate, we
17 have about two to two and a half hours with Mr. Burke
18 today. So that will be the wrap-up for today. And with
19 some hopefully good cross, and any redirect, we might be
20 able to dismiss Mr. Burke after today, at least for now.

21 --o0o--

22 MR. RUIZ: Is SDWA-257 a true and correct copy
23 of your rebuttal technical report prepared for this
24 proceeding?

25 WITNESS BURKE: Yes.

1 MR. RUIZ: Is SDWA-258 a true and correct copy
2 of your rebuttal PowerPoint presentation?

3 WITNESS BURKE: Yes, it is.

4 MR. RUIZ: And is SDWA-259 a true and correct
5 copy of your written summary of your testimony?

6 WITNESS BURKE: It is.

7 MR. RUIZ: At this time, Mr. Burke, can you
8 please summarize the reason for and content of your
9 rebuttal testimony?

10 WITNESS BURKE: Yes. Again, good afternoon,
11 Chairman Doduc, board members, and staff.

12 My rebuttal testimony was developed because
13 during Part I-A, the petitioners attempted to
14 demonstrate that the operation of the Head of Old River
15 Barrier -- the petitioners attempted to demonstrate that
16 the operation of Head of Old River Barrier in
17 conjunction with the North Delta diversion will not
18 cause any injury on other legal users of water.

19 It's been asserted that any downstream change
20 in stage and depth of water or increase in salinity
21 below the barrier would be insignificant. It is my
22 expert opinion that evidence put forth by the
23 petitioners in this regard was incorrect and incomplete.

24 The purpose of my rebuttal testimony is to
25 summarize certain portions of the technical report which

1 respond to Dr. Tehrani's assumptions concerning the
2 impact the WaterFix on the state and water quality of
3 the South Delta.

4 In Dr. Tehrani's Exhibit 56, he states that:
5 "The greatest Delta water surface elevation reduction
6 resulting from the WaterFix occurred downstream of the
7 North Delta diversion and could be up to 1.2 feet in
8 change of depth."

9 I strongly dispute that Dr. Tehrani's
10 determinations are correct. And as demonstrated in my
11 case in chief, the change in water depth in the channels
12 downstream of the North Delta diversion is actually much
13 greater.

14 With respect to my specific rebuttal
15 testimony, I contend that Dr. Tehrani's claim that
16 reductions in water depths are limited to just the
17 channels downstream of the North Delta diversions is
18 incorrect.

19 In reality, there are South Delta channels
20 that experience reductions in depth of water beyond
21 the -- the amounts that Dr. Tehrani has stated that
22 occur downstream of the North Delta diversions. And
23 those reductions can last for longer periods of time
24 than stated by Dr. Tehrani.

25 And it should be noted that these water

1 surface elevation reductions are in the South Delta
2 channels at the opposite end of the Delta from the
3 North Delta diversions.

4 So the area that Dr. Tehrani referred to just
5 downstream of the North Delta diversions is not the only
6 area that's being affected by water surface elevation
7 reductions in the WaterFix alternatives.

8 The Head of Old River Barrier, as implemented
9 in Scenarios H3, H4, B2, and the preferred alternative
10 as proposed in the biological assessment as a
11 significant impact on the water levels and flow of the
12 South Delta.

13 Dr. Tehrani's Figure W5 of Exhibit 513 shows
14 little change in stage at the Old River at Tracy. This
15 misrepresents the actual stage change in the South Delta
16 channels as a result of the WaterFix.

17 In fact, as documented in my rebuttal
18 technical report, implementation of the Head of
19 Old River Barrier results in a significant reduction in
20 stage and flow in South Delta channels downstream of the
21 barrier.

22 To evaluate the change in stage in the
23 South Delta, I analyzed the data for the petitioners'
24 DSM2 models. The analysis consisted of comparing the
25 preferred alternative to the no-action alternative over

1 the 82-year period of record.

2 Based on that analysis, I found that the
3 change in depth of water in the South Delta channel and
4 the resulting flow from the implementation of the
5 Head of Old River Barrier changes can result in
6 reduction in depth of water of nearly 2 feet roughly
7 10 percent of the time.

8 It should be noted that a reduction depth of
9 water much smaller than this 2-foot level can result in
10 impacts to irrigators in the inner Delta area. The
11 impacts from a lowering of the water surface elevation
12 can include problems with irrigation equipment.

13 As the water level drops down, air could be
14 entrained into the intake of pumps. This airless
15 entrain turns into bubbles as the pump impellor spins.
16 These bubbles, when they collapse on themselves, create
17 really strong vibrations, almost akin to hitting the
18 impellor with a ball peen hammer and a chisel, creating
19 pockmarks in the impellor which eventually will cause
20 the impellor or the pump itself to fail.

21 This -- this can happen at small levels, like
22 bubbles within a pump, or it can happen even under
23 large-scale scenarios.

24 On the Colorado River at Hoover Dam, when they
25 first passed water through the diversion tunnels, they

1 actually had cavitations forming when the bubbles
2 collapsed. It was pulling pieces of concrete off the
3 side of the walls the size of small cars. So this
4 collapsing of these small bubbles has a huge vibrational
5 impact on the system that they're flowing through.

6 If the water level in the channels is lowered
7 enough, it can actually get to point where the
8 irrigators can no longer divert, resulting in damage to
9 the crops.

10 Lower water surface elevations create a
11 greater head over which the irrigators must now pump.
12 When the pumps -- the existing pumps that they have now
13 try to pump over that higher elevation, you get a
14 reduction in discharge. This now causes the irrigators
15 to have to pump for a longer period of time in order to
16 achieve the same volume of irrigation water.

17 CO-HEARING OFFICER DODUC: Please hold on a
18 second.

19 MS. ANSLEY: Hi. Jolie-Anne Ansley for the
20 Department of Water Resources. I'd like to object. A
21 lot of this is not in Mr. Burke's rebuttal testimony.

22 It took us a minute -- I'm sorry -- for our
23 slow response. But the impact to the impellers, the
24 Hoover Dam, the testimony on specific water users in the
25 South Delta and siphons, this is not in his SDWA-257 nor

1 his direct testimony, which I believe is 259.

2 CO-HEARING OFFICER DODUC: Before I ask
3 Mr. Ruiz and Mr. Herrick to respond, Ms. Ansley, do you
4 want to move the microphone up? I'm having lower back
5 pain just watching you.

6 Mr. Ruiz? Mr. Herrick?

7 MR. RUIZ: Mr. Burke is testifying as to the
8 impacts as significant decreases in water depth or water
9 stage, and he's summarizing those impacts to rebut
10 Mr. -- Dr. Tehrani's testimony that there are no
11 significant impacts with regard to water depth.

12 CO-HEARING OFFICER DODUC: Please point us to
13 where in his rebuttal testimony.

14 MR. RUIZ: His rebuttal testimony in his
15 technical report deals with various issues of graphs,
16 and it doesn't, as far as I can recall, directly get
17 into language with respect to some of the stuff that he
18 was talking about today. So that is not actually in his
19 rebuttal report, as far as I can recall.

20 CO-HEARING OFFICER DODUC: Mr. Burke?

21 WITNESS BURKE: There was a section in the
22 report where I discuss the impacts to pumping and the --
23 the problems that having a lower water surface elevation
24 on pumping would cause.

25 CO-HEARING OFFICER DODUC: Let's take a pause

1 here, Mr. Burke, and if you could point out that section
2 so that others might prepare for their
3 cross-examination.

4 Do we need to take a break while you search
5 for it?

6 MS. ANSLEY: I would just like to add also the
7 whole testimony on impacts to impellers and how exactly
8 that impacts equipment of irrigators, that whole part,
9 but also earlier he had referenced a lot of testimony by
10 Dr. Nader-Tehrani. And I believe none of that was
11 actually specified in his testimony or his technical
12 report with those references to particular exhibits or
13 claims.

14 CO-HEARING OFFICER DODUC: Okay. Let's do one
15 thing at a time.

16 Mr. Burke?

17 WITNESS BURKE: On page 10 of my technical
18 report, I go into the operation of pumps under lower
19 water surface elevation scenario.

20 CO-HEARING OFFICER DODUC: And then your
21 references to Dr. Nader-Tehrani.

22 WITNESS BURKE: Shall I pull out the
23 references that I will be referring to?

24 CO-HEARING OFFICER DODUC: Specific areas in
25 your rebuttal testimony to which you make those

1 references.

2 WITNESS BURKE: I believe on page 1 of my
3 technical record, I address Dr. Tehrani's assertion of
4 lack of impacts further downstream from the North Delta
5 diversions. Paragraphs 1 and 2.

6 MR. BEZERRA: That's right directly out of
7 Mr. Burke's technical report.

8 CO-HEARING OFFICER DODUC: While we review
9 that, we'll take your objection under consideration.

10 MS. MCGINNIS: Thank you.

11 CO-HEARING OFFICER DODUC: Let's allow
12 Mr. Burke to resume his testimony.

13 WITNESS BURKE: I'd like to go through some of
14 the slides that I have. SDWA-258.

15 Go to Slide No. 4. This slide is a time chart
16 showing the change in operations for the Head of
17 Old River Barrier comparing the preferred alternative to
18 the no-action alternative.

19 Let me briefly go over exactly how the barrier
20 operates and how it impacts hydrodynamics and hydraulics
21 downstream of the barrier.

22 When you put a barrier in -- and this
23 barrier's going in at the Head of Old River, it's
24 blocking off the San Joaquin River from Old River. When
25 the barrier is active, the barrier is completely

1 blocking off that flow or partially blocking off that
2 flow, depending on how it's set for that particular
3 time.

4 And then as the tidal cycle -- as the tidal
5 cycle works within the Delta, as the tide recedes,
6 there's no longer water coming from the San Joaquin
7 River to refresh the tide that's being pulled out in the
8 falling tide. Therefore, the water levels within the
9 Delta downstream of the barrier are decreasing now that
10 they closed the Delta off at this location from inflows
11 that would normally come in from the San Joaquin River.

12 So what they've done with modifications to
13 Head of Old River Barrier is they're extending the time
14 period for which that barrier will be active.

15 And if you look at this particular chart on
16 page 4, you'll see that for the spring period -- and
17 they'll be running the barrier during two separate
18 periods, the spring and the fall -- under the existing
19 condition or no-action alternative, the barrier is in
20 place between the middle of April to middle of May,
21 essentially one month.

22 Under the preferred alternative, the barrier
23 will be in place from January 1st through the middle of
24 June, basically, five and a half months. So a much
25 longer period of time for which it will be blocking

1 water entering the Delta causing the water surface
2 elevations downstream of the barrier to be at a reduced
3 stage.

4 In the fall when the barrier in place, under
5 the no-action alternative, it is in place roughly from
6 the middle of September to December 1st, about two and a
7 half months.

8 Under the preferred alternative, that time
9 period is actually being reduced. Now it's only going
10 to be in for basically one month from the middle of
11 October to middle of November.

12 So, overall, you're taking the barriers which
13 are under the no-action alternative in place for roughly
14 three and a half months out of the year to now they're
15 going to be in place six and a half months out of year.

16 Next slide, please.

17 To evaluate what those water surface elevation
18 reductions would be throughout the South Delta channels,
19 we looked at 16 different locations in the Delta to
20 evaluate the change in water surface elevations. Those
21 locations are shown on this map by red dots and labeled
22 1 through 16. They cover areas on Old River, areas on
23 Middle River, and San Joaquin River as well as Grant
24 Line Canal.

25 Slide No. 8, please.

1 This is an example of the change in water
2 surface elevation which is represented by subtracting
3 the no-action alternative from the preferred alternative
4 and looking at water years 1992 and 1993.

5 As you can see as you go along the plot, when
6 you're below zero, that means there's been a water out
7 surface evaluation decrease in the channel. And water
8 year 1992 is a critical water year; that was very dry.
9 1993 is considered a wet or above normal water year. So
10 you can see under both conditions there's still a
11 significant decrease in water surface elevation
12 downstream of the barrier.

13 Slide No. 11, please.

14 The stage reduction results that we present in
15 the PowerPoint presentation as well as the technical
16 report are basically based on the existing channel
17 geometry in the DSM2 model. The problem with that is
18 that over the last two decades, the areas of the channel
19 in the South Delta have been silting up. So as the silt
20 builds up into the channel, the depth of the water
21 decreases. You're not getting a corresponding increase
22 in water surface elevation.

23 So as this siltation occurs, the depth of
24 channel is decreasing. And when you look at the
25 reduction in water surface elevation between the

1 preferred alternative and the no-action alternative,
2 that decrease in channel becomes a greater and greater
3 percent of what's available at a particular location
4 because the depth now is -- is being decreased. And as
5 that depth decreases, they're having impacts on pumps
6 and siphons within the channel and the ability for
7 irrigators to perform their operations.

8 Slide 13, please.

9 These are some photographs that were taken in
10 April 2007 on Undine Road, U-N-D-I-N-E. And this is
11 obviously taken during low tide, but you can see that
12 the depth of water in the channel is quite low.

13 At this location, according to the DSM2 model,
14 at this low tide, there should be roughly 5 feet of
15 water in the channel. So DSM2, the channel geometry
16 that is present in there is not reflecting the true
17 geometry that exists at this site. If you were to take
18 this site and lower the water surface elevation another
19 half foot, which is about what would happen under the
20 preferred alternative at this site, you would have
21 almost no water in which to irrigate during low tide.

22 Next slide, please.

23 This is another picture looking upstream from
24 the bridge.

25 And next slide, please.

1 And, again, just another picture looking in
2 the opposite direction from the bridge. As you can see,
3 there's very little water in the channel. Lowering of a
4 half a foot elevation in this channel would probably dry
5 this channel out during low tide.

6 Slide 17, please.

7 While we're evaluating the change in stage
8 downstream of the Head of Old River Barrier, we're also
9 looking at the change in flow because the barrier itself
10 is stopping flow from coming in the San Joaquin River,
11 so that that change has now been that modified due to
12 that barrier, and we're trying to see what the result of
13 that modification was.

14 So we plotted up the daily change in flushing
15 flow. And flushing flow is the net positive flow
16 downstream from a particular location on daily basis.

17 And what we've done is we've --

18 MR. RUIZ: Looks like he'll probably just have
19 a few more minutes.

20 CO-HEARING OFFICER DODUC: Yes, we did take a
21 slight detour. So please go ahead and finish up.

22 WITNESS BURKE: I'll be quick.

23 As you see from this plot, this is plotting up
24 the 82-year period of record from '22 to 2003 showing
25 the change in flow as a percent of the flow in the

1 no-action alternative.

2 As you can see, during some periods, we have
3 an increase in flow. But the majority of periods
4 there's a decrease in flow going from roughly about
5 60 percent in decrease in flow, sometimes up to
6 100 percent decrease in flow. And this is for --
7 Site No. 2 is on the previous map that we showed.

8 That particular chart is kind of hard to read
9 so I decided to blow up one particular year so we could
10 see the details.

11 Go the next slide, please.

12 Here we can see what the change in percent --
13 the percent change in discharge is for a critically dry
14 year, which was 1991. For those lines that are below
15 zero, that means a reduction in discharge. And for
16 those lines above zero, it means a slight increase in
17 discharge. So you see, even though we have three
18 periods where there is an increase in discharge, the
19 majority of the year we have a decrease in discharge
20 ranging from 100 percent in November to 40 percent or so
21 from January through June.

22 Slide 21, please.

23 So, in summary, our evaluation of the Head of
24 Old River Barrier impacts on the changes they're making
25 to that. It should be noted that the barrier is in

1 place in the no-action alternative and it's in place in
2 the preferred alternative, the difference being the
3 modifications they've made to the time period for which
4 the barrier is active.

5 We see a -- numerous stage impacts to the
6 channels downstream, ranging up to 2 feet in depth for a
7 good 10 percent of the time, which is a significant
8 change in stage for those irrigators that are trying to
9 irrigate from those channels.

10 We found the model representation of the
11 correct inverters in question for the DSM2 model, that
12 the stage in geometry has not been updated to reflect
13 the siltation conditions that are presently occurring.
14 So if we were to actually incorporate those siltation
15 conditions into the DSM2 models, the results here would
16 look a lot worse. So this is actually the best-case
17 scenario given the changes in geometry that we've noted.

18 And looking lastly at the impacts to flushing
19 flow, the barrier, since it's cutting off the new flow
20 coming into the South Delta channels is now preventing
21 the water from flushing out and, in actuality, it's
22 causing a lot more negative and reverse flows to be
23 occurring within the Delta channels.

24 That concludes my presentation.

25 CO-HEARING OFFICER DODUC: Thank you,

1 Mr. Burke.

2 That was direct. I have estimated 60 minutes
3 for cross-examination. I would like to take a break for
4 the court reporter at around 3:00 o'clock.

5 Is that okay, Megan?

6 THE REPORTER: Yes. Thank you.

7 CO-HEARING OFFICER DODUC: So please find an
8 appropriate breaking point in your cross-examination to
9 do so.

10 MS. ANSLEY: That's fine. I think we'll be
11 less than the estimated 60 minute.

12 CO-HEARING OFFICER DODUC: How much less?

13 MS. ANSLEY: It's a little difficult to tell,
14 but I was actually thinking 30 to 40 minutes.

15 CO-HEARING OFFICER DODUC: Okay. If we get to
16 around 3:00 o'clock and you think you can wrap up in,
17 say, five to ten, then we'll be done.

18 MS. ANSLEY: Okay. It will take me just a
19 moment here to set up.

20 Jolie-Anne Ansley of the Department of Water
21 Resources. With me, of course, are Robin McGinnis and
22 Tom Berliner.

23 The topics I intend to cover for Mr. Burke
24 are -- I've got a follow-up question from something he
25 just said on cross regarding the times in which the

1 barriers are proposed to be installed under the
2 no-action alternative, as well as the preferred
3 alternative, one of the slides he showed from his
4 PowerPoint.

5 And then I have questions that fairly track
6 his technical report, which is SDWA-257. And these
7 questions are -- a couple questions regarding his use
8 and assumptions in DSM2. Then a couple questions
9 regarding the pictures or photos that he showed, which I
10 believe are Figures 6, 7, 8 from his technical report, a
11 couple questions regarding his stage reduction results,
12 and a couple questions regarding his flushing flow
13 results.

14 CO-HEARING OFFICER DODUC: All right. Please
15 begin.

16 --o0o--

17 CROSS-EXAMINATION

18 MS. ANSLEY: If we could bring up Mr. Burke's
19 PowerPoint SDWA-258. Is that correct, Mr. Burke?

20 WITNESS BURKE: That's correct.

21 MS. ANSLEY: And if you could help me out, on
22 one of these slides that one you just passed where you
23 show the time periods in which you believe the barriers
24 are installed under the no-action alternative and the
25 proposed alternative, is that what this slide shows?

1 WITNESS BURKE: That's correct.

2 MS. ANSLEY: So it is your understanding that
3 under the no-action alternative, there would be barrier
4 installation in the spring?

5 WITNESS BURKE: That's what the DSM2 models
6 proposed by the petitioners contains, that's correct.

7 MS. ANSLEY: Do you have a copy of your
8 original direct testimony in your technical report,
9 SDWA-278?

10 WITNESS BURKE: I might have that.

11 MS. ANSLEY: Well, we can bring it up on the
12 screen. I don't mean to hold up the proceedings.
13 SDWA-78 errata, page 4.

14 PDF page 6. Thank you, Robin. Can you stop
15 there and go back up?

16 So here you lay out the assumptions for the --
17 stop -- for the various WaterFix scenarios if you can
18 scroll down a little to the first one, which is the
19 no-action alternative.

20 A little further, please.

21 And do you see here 1E is the temporary
22 barrier installed in the fall months?

23 Does this refresh your recollection that
24 the -- under the no-action alternative, that the Head of
25 Old River Barrier is installed in fall months only?

1 WITNESS BURKE: That's not the way the DSM2
2 model was created for the biological assessment. The
3 DSM2 no-action alternative and the biological assessment
4 has a fall and spring head over barrier.

5 MS. ANSLEY: For the no-action alternative or
6 for the preferred alternative?

7 WITNESS BURKE: For both.

8 MS. ANSLEY: Okay. Turning to SDWA-257 and
9 your testimony, which is SDWA-259.

10 The index you identified in your rebuttal
11 testimony are fully related to the operation of Head of
12 Old River Barrier; is that correct?

13 MR. RUIZ: I'm just going to object to clarity
14 here. Are you questioning him on a specific document
15 that's not pulled up or just a general question?

16 MS. ANSLEY: It's just a general question
17 regarding the scope of his rebuttal.

18 WITNESS BURKE: Would you repeat the question,
19 please?

20 MS. ANSLEY: Sure. The impacts you identify
21 in your rebuttal testimony are solely related to the
22 operation of the Head of Old River Barrier; is that
23 correct?

24 WITNESS BURKE: Primarily related to the
25 operation of the Head of Old River Barrier. We were

1 evaluating preferred alternative. So other aspects of
2 that preferred alternative are intermixed within these
3 results. But I feel that the primary cause of that --
4 the changes that we're seeing to stage and discharge are
5 from the changes to the Head of Old River Barrier.

6 MS. ANSLEY: So, your intent in your rebuttal
7 testimony was to isolate the effects of the Head of Old
8 River Barrier?

9 WITNESS BURKE: That was my intent to the
10 greatest degree possible given that it's a complete
11 scenario which consists of many different deponents.

12 MS. ANSLEY: In running the analyses that you
13 present in SDWA-257, your technical report, did you
14 rerun DSM2 for the no-action alternative and the
15 preferred alternative or did you use the output from the
16 petitioners?

17 WITNESS BURKE: I believe we used the output
18 from the petitioners' submittal.

19 MS. ANSLEY: That's what you actually did?

20 WITNESS BURKE: I believe so. That's correct.

21 MS. ANSLEY: Okay. So if you have a copy of
22 your technical report, 257, looking at -- and we can
23 bring it up on the screen.

24 Starting on page 11 -- and that's the actual
25 page 11 -- of SDWA Exhibit 257, you present three

1 photos: Figure 6, 7, and 8.

2 Are we there?

3 WITNESS BURKE: Yeah. I'm there now. That's
4 correct.

5 MS. ANSLEY: Okay. Were these pictures taken
6 during low tide?

7 WITNESS BURKE: I'm assume that they were
8 taken during low tide, that's correct.

9 MS. ANSLEY: That is your assumption or that
10 you know that they were taken at low tide?

11 WITNESS BURKE: I wasn't there when the
12 pictures were taken, so I couldn't attest to the fact
13 that they were taken at low tide. But given the water
14 level I'm seeing is, I would assume they're at or near
15 low tide.

16 MS. ANSLEY: So you don't know if these were
17 taken at the low low tide for the day?

18 WITNESS BURKE: No, I don't.

19 MS. ANSLEY: Okay. Do you know if these were
20 taken on a particular day in which there were extreme
21 tides for the year?

22 WITNESS BURKE: No, I don't.

23 MS. ANSLEY: Okay. All three of these
24 photos -- Figures 6, 7, and 8 -- are taken at the same
25 location; is that correct?

1 WITNESS BURKE: Looking in different
2 directions, but the same location.

3 MS. ANSLEY: That would be Middle River at
4 Undine Bridge?

5 WITNESS BURKE: That's correct.

6 MS. ANSLEY: Does your testimony, either in
7 your direct testimony or your technical report here,
8 does it present evidence that similar shallow water
9 depth as you see in these photos occur at other places
10 in the South Delta?

11 WITNESS BURKE: Could you repeat that, please?

12 MS. ANSLEY: Sure. Does your rebuttal
13 testimony, which would be SDWA-259, and the technical
14 report, SDWA-257, present evidence that similar shallow
15 water depth as you present here in these photos occur at
16 other places in the South Delta?

17 WITNESS BURKE: We provided information within
18 SD-257 that shows that there's been significant
19 sedimentation that's been measured in gravimetric
20 surveys throughout much of Middle River and present that
21 in a plot, although we have no photographs of those
22 particular locations. This is the only location where
23 we have a photograph.

24 MS. ANSLEY: The plot you're referring to is
25 your Figure 10 on page 14?

1 WITNESS BURKE: That's correct.

2 MS. ANSLEY: But you have no other photos of
3 other locations?

4 WITNESS BURKE: No. These are the only photos
5 that we have.

6 MS. ANSLEY: Do you have any similar spots for
7 all of the study sites, Sites 1 through 16, that you
8 study in your rebuttal study?

9 WITNESS BURKE: Similar plots to what?

10 MS. ANSLEY: Figure 10.

11 WITNESS BURKE: No. Figure 10 was shown as an
12 example. We were seeing sedimentation within the
13 Middle River.

14 MS. ANSLEY: So this is just a stretch of the
15 Middle River?

16 WITNESS BURKE: That's all we selected, that's
17 correct.

18 MS. ANSLEY: Do you know how long a reach of
19 the Middle River this is?

20 WITNESS BURKE: It's roughly 50,000 feet.

21 MS. ANSLEY: And it corresponds to the
22 Middle River at Undine Bridge, roughly?

23 WITNESS BURKE: It starts at the mouth of the
24 Middle River at Old River and extends 50,000 feet
25 upstream from that point.

1 MS. ANSLEY: So Figure 6 was taken -- that's
2 on page 11, I believe. Figure 6 was taken on April 1st,
3 2007; is that correct?

4 WITNESS BURKE: That's correct.

5 MS. ANSLEY: Isn't it true that the Head of
6 Old River Barrier installation hadn't even been started
7 as of April 1st, 2007, when this picture was taken?

8 WITNESS BURKE: We didn't try to correlate the
9 picture when the Head of Old River Barrier was in place.
10 I intended to show the degree of sedimentation that's
11 occurring within the channel at shallow depths that the
12 irrigators are presently experiencing.

13 MS. ANSLEY: But I ask again, do you know
14 whether the Head of Old River Barrier was installed at
15 the time this photo was taken on April 1st, 2007?

16 WITNESS BURKE: I don't know whether it was
17 installed at that particular date, no.

18 MS. ANSLEY: But in Appendix A of your
19 SDWA-257, you present the dates in which the Head of Old
20 River Barrier was installed?

21 WITNESS BURKE: That's correct. That's
22 historical records for DWR.

23 MS. ANSLEY: If you look at page A1, could you
24 tell me, in Appendix A, if the Head of Old River Barrier
25 was installed as of this date?

1 WITNESS BURKE: Yes. We should be able to do
2 that.

3 MS. ANSLEY: Can we look at page A1?

4 WITNESS BURKE: What document?

5 MS. ANSLEY: SDWA-257, technical report,
6 Appendix A.

7 WITNESS BURKE: No. It looks like in 2007
8 that installation of the spring Head of Old River
9 Barrier was started on April 11 and finished on
10 April 20.

11 MS. ANSLEY: The Head of Old River Barrier was
12 not installed at the time that Figure 6 was taken,
13 correct?

14 WITNESS BURKE: It appear so, that's correct.

15 MS. ANSLEY: Staying with the same data to try
16 and speed it up, if you could look at the two pages
17 later on pages A3 if you need it.

18 WITNESS BURKE: Okay.

19 MS. ANSLEY: Isn't it true that on November 29
20 and November 30, 2007, the removal of the Head of Old
21 River Barrier had been completed?

22 WITNESS BURKE: I'm sorry. Repeat that,
23 please.

24 MS. ANSLEY: I'm sorry. What was your
25 question?

1 WITNESS BURKE: Could you repeat that, please?

2 MS. ANSLEY: Sure. Page A3. Back up.

3 Figure 7 was taken on November 29, 2007; is
4 that correct?

5 WITNESS BURKE: That's correct.

6 MS. ANSLEY: And Figure 8 was taken

7 November 30th of 2007; is that correct?

8 WITNESS BURKE: That's correct.

9 MS. ANSLEY: Okay. And in looking at page A3
10 in your appendix where you provide the installation and
11 removal date for the Head of Old River Barrier, could
12 you just confirm that on November 29th the removal of
13 the Head of Old River Barrier was complete?

14 WITNESS BURKE: It appears to have been
15 completed or -- the -- on November 29th.

16 MS. ANSLEY: I'm sorry?

17 THE WITNESS: Appears the removal was
18 completed on November 29th.

19 MS. ANSLEY: That's right. And so there was
20 no barrier in place on November 29th?

21 THE WITNESS: No, there wasn't.

22 MS. ANSLEY: Can be -- bring up Figure 6 again
23 on page 11 of this report. These are my final two
24 questions.

25 So scrolling down these three figures --

1 Figures 6, 7, and 8 -- these photos are not
2 representative of channel conditions during installation
3 of the Head of Old River Barrier; is that correct?

4 WITNESS BURKE: No. They were never intended
5 to document that. They were just intended to document
6 the siltation conditions that existed and the low water
7 depth conditions that exist at this particular spot.

8 MS. ANSLEY: Okay. I just have two more
9 questions on these photos and we're done with them.

10 At the time these photos were taken, do you
11 know what the flows were on the San Joaquin River?

12 WITNESS BURKE: No, I don't.

13 MS. ANSLEY: Do you have any understanding
14 whether such shallow depths as you see here in Figures 6
15 through 8 would occur under high flow conditions in the
16 San Joaquin River?

17 WITNESS BURKE: It all depends on how much
18 flow from the San Joaquin River was coming into
19 Old River and subsequently into Middle River.

20 MS. ANSLEY: When you say "depends on how much
21 flow," how much flow are you thinking from the
22 San Joaquin River?

23 WITNESS BURKE: It all depends on how much
24 flow is in the San Joaquin River, what the water surface
25 elevation is, and how it's distributed through the

1 channel network.

2 MS. ANSLEY: Okay. But you don't know the
3 flows at this particular time?

4 WITNESS BURKE: I don't know the flows on that
5 particular day, no.

6 MS. ANSLEY: So moving, I believe, a page or
7 two after these flows, the previous page, please.
8 Page 15, I believe, of your SDWA-257 -- I'm sorry.
9 Page 13.

10 Starting on page 13, you are asserting an
11 argument that the flow modeled in DSM2 in the
12 South Delta channels is inaccurate; is that correct?

13 WITNESS BURKE: I'm stating that existing
14 gravimetric data collected in the channels, specifically
15 in Middle River, do not match what's presently being
16 modeled in the DSM2 model.

17 MS. ANSLEY: On your Figure 10 on the next
18 page, you present survey data from 1997 through 1999; is
19 that correct?

20 THE WITNESS: That's correct.

21 MS. ANSLEY: Were you aware that the -- that
22 the 2009 calibration and validation of DSM2 included
23 stage flow and salinity in the Middle River?

24 WITNESS BURKE: I'm aware that it does, yes.

25 MS. ANSLEY: Okay. Moving to your stage

1 results.

2 CO-HEARING OFFICER DODUC: Ms. Ansley, at this
3 point, you have two topics remaining. How much time do
4 you think you need? Will it be beyond 10 minutes? If
5 so, I would like to give the court reporter a break.

6 MS. ANSLEY: It could be 10 to 15 minutes.

7 CO-HEARING OFFICER DODUC: We'll take our
8 break.

9 MS. ANSLEY: That's fine.

10 CO-HEARING OFFICER DODUC: We'll continue at
11 3:15.

12 (Off the record at 2:59 p.m. and back on
13 the record at 3:15 p.m.)

14 CO-HEARING OFFICER DODUC: All right. It is
15 3:15, we're back in session.

16 And Ms. Ansley.

17 MS. ANSLEY: Thank you.

18 I limited a couple questions, so I'm going to
19 go right to Table 4 on page 9.

20 WITNESS BURKE: The technical report?

21 MS. ANSLEY: SDWA Exhibit 257. Thank you.

22 So this table is entitled "Minimum Reduction
23 in River Stage Between the PA, Preferred Alternative,
24 and the NAA," correct?

25 WITNESS BURKE: That's correct.

1 MS. ANSLEY: These values are really
2 reductions in daily minimum stage; is that correct?

3 WITNESS BURKE: Yes. They are the reduction
4 in daily minimum elevation in the channel at that
5 location.

6 MS. ANSLEY: Okay. So to confirm -- so to
7 confirm this table and how this table was done over the
8 next few questions, the values in this table are your
9 calculated reductions in daily minimum river stage
10 between the preferred alternative and the no-action
11 alternative for different exceedance levels, correct?

12 WITNESS BURKE: It's the difference between
13 the preferred alternative and the no-action alternative
14 from the DWR models, from the BA.

15 MS. ANSLEY: To calculate these numbers --
16 and, please, this is to get this correct obviously, so
17 correct me if I'm wrong. To calculate these numbers,
18 you looked at the minimum daily stage for both
19 scenarios --

20 CO-HEARING OFFICER DODUC: I need you to slow
21 down for the court reporter's sake.

22 Why don't we start over a little slowly.

23 MS. ANSLEY: Thank you. I'm happy to. I do
24 have a fast-talking problem.

25 So, Mr. Burke, to calculate these numbers, you

1 looked at the minimum daily stage for the preferred
2 alternative and this no-action alternative on each day
3 in the 82-year period of record for DSM2; is that
4 correct?

5 WITNESS BURKE: That's correct.

6 MS. ANSLEY: And then you calculated the
7 difference between these two scenarios for each day,
8 correct?

9 WITNESS BURKE: That's correct.

10 MS. ANSLEY: And then you generated a subset
11 of days based on the days, per your understanding, the
12 HORB, the barrier was in place, correct?

13 WITNESS BURKE: I looked at the subset of days
14 where the barrier could be in place for the spring and
15 fall periods.

16 MS. ANSLEY: Right. A subset of days in which
17 the barrier could be in place under either of the
18 alternatives you were comparing?

19 WITNESS BURKE: That's correct.

20 MS. ANSLEY: And then from those daily
21 differences, you created your probability distribution?

22 WITNESS BURKE: That's correct.

23 MS. ANSLEY: Which is different from how the
24 DWR modeled stage differences; is that correct?

25 WITNESS BURKE: I'm not sure what you're

1 referring to when you say "how DWR modeled stage
2 differences."

3 MS. ANSLEY: Well, you first create a
4 probability distribution of stage for each scenario
5 separately and compared the two distributions. You
6 created a distribution from your daily differences; is
7 that correct?

8 WITNESS BURKE: That's correct. DWR was
9 looking at probability distribution of stage, whereas
10 I'm looking at probability distribution of the change in
11 stage due to the WaterFix project.

12 MS. ANSLEY: Right. You weren't comparing two
13 scenarios; you were comparing daily differences between
14 two scenarios?

15 WITNESS BURKE: Which is the same as comparing
16 two scenarios, to my knowledge.

17 MS. ANSLEY: Okay. And so you created your
18 subset of days in which there was Head of Old River
19 Barrier in place under either scenario. Your testimony,
20 therefore, didn't include water level changes in the
21 time periods from June 14th to 30th, July, August,
22 September 1st through 14th, and December, correct?

23 WITNESS BURKE: We're trying to isolate the
24 impact of the barrier itself. So looking at time
25 periods where the barrier wasn't in place wouldn't have

1 been very helpful.

2 MS. ANSLEY: And so the time periods you did
3 not look at then, because, according to you, the barrier
4 was not in place, were the dates that I just said? And
5 I'm happy to repeat them.

6 WITNESS BURKE: No, that's correct.

7 MS. ANSLEY: Are those dates in
8 June 14th through 13th, July, August, and the beginning
9 of September, are those the primary irrigation months in
10 the South Delta?

11 WITNESS BURKE: They are irrigation months,
12 but my understanding is that there's irritation
13 occurring in the Delta year-round.

14 MS. ANSLEY: Looking at your Table 4, largest
15 differences you found are for the sites you label as
16 Sites 1 and 2; is that correct?

17 WITNESS BURKE: That's correct.

18 MS. ANSLEY: And Sites 1 and 2 are the sites
19 closest to the Head of Old River Barrier; is that
20 correct?

21 WITNESS BURKE: That's correct. The effect of
22 the Head of Old River Barrier decreases the farther you
23 get away from the barrier itself.

24 MS. ANSLEY: And in the rest of the sites here
25 in Table 4 -- and I will note that Table 4 continues on

1 to the next page -- there are 16 sites. The rest of the
2 sites in Table 4 generally show reductions of less than
3 1 foot; is that correct?

4 WITNESS BURKE: For the 10, 20, and 50 percent
5 exceedance value, generally less than 1 foot for the
6 remaining sites. But it should be noted that those less
7 than 1 foot or three-quarters of a foot or half a foot
8 can be significant if the irrigator is having
9 difficulties irrigating the water level they have today.

10 MS. ANSLEY: Can I move to strike the latter
11 part of his answer as nonresponsive to my question?

12 CO-HEARING OFFICER DODUC: It's clarifying.
13 Overruled. We'll keep it.

14 MS. ANSLEY: And many of these sites as you
15 look at --

16 Thank you for agreements making the whole
17 table appear on screen.

18 Many of these sites actually show increases in
19 water stage; is that correct?

20 WITNESS BURKE: There are several locations
21 that show increase in water stage, especially on the
22 San Joaquin River because the barriers are diverting
23 water through the San Joaquin River from the Old River
24 system.

25 MS. ANSLEY: And Appendix C in your technical

1 report, SDWA-257, contains the graphs for each of your
2 16 sites; is that correct? Your exceedance graphs?

3 WITNESS BURKE: That's correct.

4 MS. ANSLEY: And isn't it true that all of
5 your sites under your calculations showed some
6 probability of increases in water stage?

7 WITNESS BURKE: I haven't looked at every
8 single site recently, but the majority of them do have a
9 small percentage that have an increase in stage, that's
10 correct.

11 MS. ANSLEY: Can we look at the -- the graph
12 on the previous page, page 8, I believe?

13 This is your exceedance plot for Site 1; is
14 that correct?

15 WITNESS BURKE: That's correct.

16 MS. ANSLEY: And Site 1 is the site closest to
17 the Head of Old River Barrier; is that correct?

18 WITNESS BURKE: That's correct.

19 MS. ANSLEY: And correct me if I read this
20 graph wrong, but does not this show that 35 percent of
21 the time there's an increase in stage under your
22 calculations?

23 WITNESS BURKE: Roughly 35 percent of time
24 slight increase in stage, that's correct.

25 MS. ANSLEY: Does this refresh your memory at

1 all of the Sites 1 through 16 showed to varying degrees
2 some probability of -- some time under which there is a
3 probability of increased water stage?

4 WITNESS BURKE: I'd have to go back and review
5 each site. I would generally say the majority, if not
6 all of them, have a small percentage of increase in
7 stage.

8 MS. ANSLEY: If you just give me a moment, I'm
9 going to see if I can find one graph so we don't have to
10 run through them all.

11 Can we go to PDF page 54 of this report?

12 Try the next page. We're looking at 11 --
13 I -- one more.

14 Looking at this graph, which is your
15 exceedance plot -- probability of stage reduction graph
16 for HORB-11, what this one is showing, if I read this
17 correctly, is that somewhat greater than 60 to
18 65 percent of the time there are increases in water
19 stage; is that correct?

20 WITNESS BURKE: This is Site 11, which is
21 adjacent to Clifton Court Forebay on the opposite side
22 of the Delta from the Head of Old River Barrier. And
23 it's showing a larger -- it's showing an increase in
24 stage as compared to the no-action alternative.

25 At this point in distance from the Head of Old

1 River Barrier, I would say that the barrier influence is
2 having less of an effect as South Delta exports are.

3 MS. ANSLEY: Give me a second, if I have any
4 more questions on this.

5 Going to page 15 of this report, SDWA-257, and
6 moving on to the topic of flushing flows. And I'm on my
7 last four questions. I'm sorry. We're not handy as we
8 should be.

9 I need the actual page 15 of his report.

10 Under No. 6, about the third line, you refer
11 to positive flushing flow. Do you see that?

12 WITNESS BURKE: I do.

13 MS. ANSLEY: When you refer to positive
14 flushing flow, are these net daily flows?

15 WITNESS BURKE: That's correct.

16 MS. ANSLEY: Okay. In your report, do you
17 provide any more information, such as the magnitude or
18 the tidal flow associated with this net daily flow?

19 WITNESS BURKE: No, we don't provide the DSM2
20 output because we tried that on the first submittal and
21 it was 912 pages long. We thought it wouldn't be useful
22 for people to review.

23 MS. ANSLEY: So you only provide the percent
24 differences in the net daily flow?

25 THE WITNESS: That's correct. But the actual

1 numbers are inside the DWR model results that are
2 packaged together.

3 So you have those data. I just extracted your
4 data from the DSS data tables from the BA models.

5 MS. ANSLEY: Do you provide your calculations?

6 WITNESS BURKE: The subtraction?

7 MS. ANSLEY: Okay. So what you did was took
8 the output and did the subtraction and created the
9 percents?

10 WITNESS BURKE: That's correct.

11 MS. ANSLEY: Okay. Did you do any further --
12 besides what you just mentioned, the subtraction to
13 create percent, did you do any further analysis to
14 demonstrate that the changes in what you call flushing
15 flow that you report on Table 5 would cause the water
16 quality problems that you describe on the bottom of
17 page 15?

18 WITNESS BURKE: Let me take a look at a
19 page 15 for a second and see exactly what I said.

20 MS. ANSLEY: It's pretty much the last
21 sentence or two there. Last couple sentences, last half
22 of that paragraph. You describe water quality impacts.

23 WITNESS BURKE: No, we didn't provide any
24 further analysis, just the fact that if the water is not
25 moving out of the Delta, it provides a greater duration

1 of time for the accumulation of salts, accumulation of
2 nutrients from the irrigation return flow, and longer
3 extended contact time for increase in temperature, which
4 could affect algae blooms. We didn't go into the effect
5 of each of these, but just we've created the basic
6 foundation for how those things could occur within the
7 water column by not moving the water out of the Delta.

8 MS. ANSLEY: But these are based on
9 differences in net -- these are based on differences in
10 net daily flows, right?

11 WITNESS BURKE: That's correct.

12 MS. ANSLEY: They do not -- you do not
13 establish a threshold of significance?

14 THE WITNESS: No. We weren't looking at
15 significance, just the conditions that could allow
16 impacts to occur.

17 MS. ANSLEY: Or whether the -- you're not
18 taking into account tidal flow?

19 WITNESS BURKE: This does take into account
20 tidal flow.

21 MS. ANSLEY: Because it's the net daily. So
22 the magnitude of the tide versus the flow from the
23 input, you don't take into account separately?

24 WITNESS BURKE: No, you wouldn't want to look
25 at them separately. You need to look at them together

1 to see what the net movement of water through the system
2 would be.

3 MS. ANSLEY: Okay. And this is my final
4 question, I believe.

5 Is it your understanding that under the
6 preferred alternative, the proposed permanent Head of
7 Old River gate is modeled to allow 50 percent of the
8 flow of what, let's say, the no-action alternative would
9 let through to pass in the spring months?

10 WITNESS BURKE: I've heard that said. The
11 model itself doesn't reflect that, though.

12 MS. ANSLEY: It is your understanding that
13 model does not reflect that?

14 THE WITNESS: I did not see that in the model
15 code as developed by DWR.

16 MS. ANSLEY: I have no further questions.

17 CO-HEARING OFFICER DODUC: Thank you,
18 Ms. Ansley.

19 I think you voiced some objections earlier to
20 Mr. Burke's verbal testimony. There was an objection
21 with respect to his verbal description, detailed
22 description, of impacts on pumping. That objection is
23 sustained. You did go into more detail than what was in
24 your written testimony, so we will disregard that
25 portion of your verbal testimony.

1 Your second objection dealt with references
2 verbally to Dr. Nader-Tehrani's work. And while his
3 written testimony did not specifically mention
4 Dr. Nader-Tehrani, it did refer to the petitioner. So
5 that objection is overruled.

6 MS. ANSLEY: Thank you.

7 CO-HEARING OFFICER DODUC: Next we have
8 Ms. Morris.

9 MS. MORRIS: I don't have any questions.

10 CO-HEARING OFFICER DODUC: None.

11 Ms. Akroyd?

12 MS. AKROYD: No cross.

13 CO-HEARING OFFICER DODUC: You are shortening
14 our day.

15 Ms. Meserve, unless you would like Mr. Keeling
16 to precede you, who is not even here.

17 MS. MESERVE: What will I do?

18 CO-HEARING OFFICER DODUC: By virtue of
19 Mr. Keeling not being here, does that mean he no longer
20 has cross-examination?

21 MS. MESERVE: For today?

22 CO-HEARING OFFICER DODUC: Yes.

23 MS. MESERVE: That's correct.

24 CO-HEARING OFFICER DODUC: After Ms. Meserve,
25 we will have Mr. Jackson. And that's all the

1 cross-examination I have.

2 MR. JACKSON: And I think I'll try to shorten
3 your day, so I'll pass.

4 CO-HEARING OFFICER DODUC: Ms. Meserve, we
5 could have had your witnesses here.

6 This is a plot by Mr. Herrick to get an early
7 day, isn't it?

8 MS. MESERVE: He has a golf date or something.

9 MR. HERRICK: On the record, I can't respond
10 to that stuff.

11 CO-HEARING OFFICER DODUC: Ms. Meserve is our
12 final cross-examiner today, then.

13 --o0o--

14 CROSS-EXAMINATION

15 MS. MESERVE: Osha Meserve for local agencies
16 of the North Delta, Group 19.

17 I have a few questions about the problems that
18 Mr. Burke testified about with respect to DSM2 and the
19 channels, channel shape, and then the effects of water
20 level changes on agriculture and also the flushing flow
21 portion of his testimony and his comparisons to the
22 no-action alternative. So I think it's only like 10 or
23 15 minutes.

24 Mr. Burke, good afternoon. Sorry I'm the only
25 one here bugging you.

1 WITNESS BURKE: Good afternoon.

2 MS. MESERVE: You, in your testimony, looked
3 at the problems with DSM2 in the way that it could
4 predict the -- the level of water in the channel you
5 were looking at; is that correct?

6 WITNESS BURKE: We looked at the problems of
7 DSM2 on whether or not the invert elevations are correct
8 and represent the challenges as they exist today. And
9 that would affect, not necessarily the level of water in
10 the channel, but the depth of water in the channel as
11 predicted in the model.

12 MS. MESERVE: Were you only looking at that
13 one channel, or are you aware of potential errors in the
14 invert elevations assumed for other channels in the
15 Delta?

16 WITNESS BURKE: I understand there's been
17 siltation at various locations in the Delta, but we
18 weren't trying to verify the entirety of the DSM2
19 models. We selected one river to evaluate in more
20 detail, and that was just Middle River. So we haven't
21 looked at other locations to determine whether that same
22 correlation exists.

23 MS. MESERVE: And, in your opinion, would
24 there be a way to correct these inaccuracies in what the
25 model is assuming with the invert elevations that you

1 found, at least in that one location?

2 WITNESS BURKE: Yes. You can go back in and
3 change the actual channel geometry to represent the
4 latest survey data that's been collected at each of
5 these locations.

6 MS. MESERVE: Are you aware of any effort to
7 make these kinds of corrections to DSM2?

8 WITNESS BURKE: I'm not aware of any
9 corrections that are presently ongoing with DSM2,
10 although I know DWR presently has a survey program in
11 place where they're trying to collect additional data.
12 But that's within the channels. When or how they're
13 going to use that information in DSM2 isn't clear yet.

14 MS. MESERVE: Looking at the broader picture,
15 how much does this concern you that there may be
16 incorrect elevation data relied upon for purposes of
17 making the comparisons that are made in the petitioners'
18 modeling?

19 THE WITNESS: Given the degree of siltation
20 and difference between the elevations that are presently
21 within the DSM2 model, I'm actually very concerned for
22 the section of river that we looked at because there's
23 3 to 4 feet of siltation that's occurred there.

24 And I know the model has gone through a
25 calibration process, but all that means is they just

1 keep adjusting the knob until they match the water
2 surface elevation observed. That doesn't mean they did
3 the calibration correctly; they just forced the model to
4 match.

5 And so we don't know whether or not we're
6 giving the correct velocities, water flow. But we do
7 know we are getting correct elevations because they made
8 that match in the calibration process. And that may be
9 one of the problems of why they're having trouble
10 calibrating the model to the South Delta condition.

11 MS. MESERVE: I know you were focused on the
12 South Delta in this, but according to DWR and DOI's case
13 in chief, that focus on whether diversions in the
14 Northern Delta would have as adverse water level
15 changes, do you think there could be some of these same
16 problems with the assumptions made in the Northern Delta
17 in order to calculate the comparisons to the no-action
18 alternative?

19 WITNESS BURKE: It's quite possible that
20 wouldn't exist there, although we didn't look into that
21 information.

22 MS. MESERVE: Are you aware of any means that
23 has been proposed by petitioners to avoid or mitigate
24 for in any way the water level changes from the Head of
25 Old River Barrier that's proposed in this project?

1 WITNESS BURKE: I haven't seen any mitigation
2 measures put forward to accommodate that.

3 MS. MESERVE: Is the area that you were
4 concerned with affected by Head of Old River Barrier, is
5 there any contract with DWR or any other agreement that
6 would help protect diverters in that area?

7 WITNESS BURKE: Not that I'm aware of.

8 MS. MESERVE: Looking at your testimony on the
9 flushing flows for the area you looked at, in this
10 testimony in particular, you didn't look at the full
11 range of scenarios, correct? You only looked at
12 alternative -- H3 Plus; is that correct?

13 WITNESS BURKE: We looked at the preferred
14 alternative as presented in the biological assessment,
15 and we decided to use that because it had a longer
16 period of record. We've always been concerned over the
17 short 16-year period that DWR has been using to evaluate
18 the WaterFix scenarios.

19 But for the BA, they took the DSM2 model and
20 they extended it out from 1922 to 2003. So you see the
21 full 82-year period of record, which better captures the
22 hydrologic variability and climate changes that occur on
23 a nature cycle within California.

24 MS. MESERVE: Would you be concerned that
25 under, say, for instance, the far end of the Scenario B1

1 that the changes in water level might be even more
2 severe in this area?

3 CO-HEARING OFFICER DODUC: Finally, an
4 objection. Ms. Ansley, you guys have been so quiet.

5 MS. ANSLEY: I believe that nothing in his
6 rebuttal testimony speaks to boundary runs. His
7 rebuttal testimony merely compares the no-action
8 alternative to the preferred alternative.

9 And that's it.

10 CO-HEARING OFFICER DODUC: Ms. Meserve, you
11 have been straying quite a bit, and they've been very
12 quiet. How are you able to link this to his rebuttal
13 testimony?

14 MS. MESERVE: Well, he clearly addressed the
15 one alternative -- or one scenario. And so I'm asking
16 him why he didn't look at the others and what he might
17 think about them.

18 CO-HEARING OFFICER DODUC: Why he didn't look
19 at the others is an appropriate question. But going
20 into further detail, I will sustain the objection.

21 Was there a particular reason, Mr. Burke, that
22 you did not look at the other alternatives?

23 WITNESS BURKE: Primarily because we thought
24 the longer period of record, the 82-year period, can
25 give you a better statistical analysis and probability

1 distribution for the differences that we're seeing in
2 stage and flushing flow from the Head of Old River
3 Barrier even though this isn't necessarily the
4 worst-case scenario being put forward in the WaterFix.

5 CO-HEARING OFFICER DODUC: Thank you.

6 MS. MESERVE: With respect to the flushing
7 flows being -- you found -- is it fair to say that you
8 found that flushing flows would be reduced even under
9 the H3 Plus scenario that you looked at in the BA
10 modeling, right?

11 WITNESS BURKE: Yes, we found flushing flows
12 to be greatly reduced for those areas within the first
13 few miles downstream of the Head of Old River Barrier.

14 MS. MESERVE: Would this make the conditions,
15 even in a year where there was, say, average rain, more
16 like a drought year, in your opinion, for those water
17 users?

18 CO-HEARING OFFICER DODUC: I'm not sure I
19 understand that question, Ms. Meserve.

20 MS. MESERVE: He's testifying as to the
21 reduced flushing flows, and I'm asking about what kinds
22 of water years he's -- he's referring to.

23 WITNESS BURKE: I --

24 CO-HEARING OFFICER DODUC: That's a difference
25 question. But Mr. Burke...

1 WITNESS BURKE: We didn't look at it in terms
2 of water year perspective, but we did make a few plots
3 looking at wet years, dry years, and average years. And
4 we found that dry years and average years produced about
5 the same amount of decrease in flushing flows. Wet
6 years a little less, I believe.

7 CO-HEARING OFFICER DODUC: Ms. Ansley?

8 MS. ANSLEY: I don't believe there are any
9 graphs in his testimony breaking anything down, any
10 analysis by water years. I be happy to be corrected.

11 CO-HEARING OFFICER DODUC: Mr. Burke?

12 WITNESS BURKE: We didn't break it down by
13 water years, per se, but we selected several years that
14 reflected a dry year, average year, a wet year.

15 CO-HEARING OFFICER DODUC: Thank you for the
16 clarification.

17 MS. MESERVE: In thinking about that analysis,
18 would you say in an average year, would that -- would
19 the -- under the scenario H3 Plus that you looked at,
20 would that make, say, an average year more like a
21 drought year?

22 CO-HEARING OFFICER DODUC: Mr. Burke, did you
23 look at enough average year to answer that question? It
24 seems to me like you selected a few years, but you did
25 not do an analysis by water year type. That's what you

1 just testified to.

2 WITNESS BURKE: Yes. I'm not sure I can
3 answer that question because it's kind of a strange
4 thing, the way the barrier is. When you place the
5 barrier, it has a specific effect downstream that kind
6 of separates it out from any particular water year type.
7 So I don't think I can answer that directly.

8 MS. MESERVE: I'll move on.

9 And you were comparing H3 Plus to the
10 no-action alternative, correct?

11 WITNESS BURKE: That's correct.

12 MS. MESERVE: And in your work in the -- for
13 this project, have you explored whether you, in your
14 professional opinion, believe that the no-action
15 alternative is a credible comparison point the way that
16 it's constructed?

17 WITNESS BURKE: We actually didn't look at the
18 no-action alternative in that respect to see whether or
19 not it was appropriate. We took it at face value as
20 being the base case to compare to Scenario 2.

21 MS. MESERVE: No further questions.

22 CO-HEARING OFFICER DODUC: Thank you,
23 Ms. Meserve.

24 Any other cross-examination?

25 Any redirect?

1 MR. HERRICK: I have a little redirect, if I
2 may.

3 --o0o--

4 REDIRECT EXAMINATION

5 MR. HERRICK: John Herrick for South Delta
6 parties.

7 If we could bring up SDWA-257 and start on
8 page 11, please.

9 CO-HEARING OFFICER DODUC: What particular
10 area are you focusing on?

11 MR. HERRICK: The redirect deals with
12 questions from Ms. Ansley that dealt with the timing of
13 the dates of the pictures in relation to whether or not
14 the barrier was in.

15 I have a question on the calibration issue
16 real quickly, although it's been mostly covered. And a
17 couple questions on this -- the -- some of his
18 probability charts that show increases in stage rather
19 than decreases.

20 CO-HEARING OFFICER DODUC: All good points.

21 Go ahead, Mr. Herrick.

22 MR. HERRICK: Mr. Burke, you see Figure 6,
23 page 11 of SDWA-257, on the screen there?

24 WITNESS BURKE: Yes, I do.

25 MR. HERRICK: And was it your intent when you

1 put this picture in there to show the effects of the
2 head barrier on water level at this location?

3 WITNESS BURKE: No, I wasn't try to show what
4 the water -- what the Head of Old River Barrier would do
5 to water level but, rather, show what the existing
6 condition is within the channel at this time.

7 MR. HERRICK: So this is the water
8 condition -- excuse me. This is the water level at
9 whatever the specific conditions were without a head
10 barrier?

11 WITNESS BURKE: That's correct.

12 MR. HERRICK: And is this a time when the
13 California WaterFix anticipates a head barrier being
14 installed as opposed to the current situation when it's
15 installed?

16 WITNESS BURKE: I'd have to take a look at the
17 plot.

18 MR. HERRICK: Is April one of the months that
19 the California WaterFix proposes to have the head
20 barrier in?

21 WITNESS BURKE: Yes, it is.

22 MR. HERRICK: And is April 1st generally the
23 time frame that the head barrier goes in under current
24 conditions?

25 WITNESS BURKE: That's correct.

1 MR. HERRICK: Is April -- did you --
2 April 15th was your general statement?

3 WITNESS BURKE: Yeah. I'm sorry. I misspoke,
4 myself. April 15th to May 15th is generally under the
5 existing condition when the barrier would go in.

6 MR. HERRICK: So the point of this picture is
7 illustrate the fact that the existing conditions are
8 poor for water level or water depth and that a head
9 barrier may exacerbate that condition, correct?

10 WITNESS BURKE: That's correct.

11 MR. HERRICK: Mr. Burke, you were asked a few
12 questions about DSM2 calibration. I forgot the year. I
13 think it was 2009. Do you recall those questions?

14 WITNESS BURKE: I don't recall specific
15 question, no.

16 MR. HERRICK: The calibration, you were asked
17 whether or not you recall -- whether you knew whether or
18 not DSM2 was calibrated.

19 THE WITNESS: Oh, that's correct. Yes, it was
20 calibrated in 2009 to the data available at that point.

21 MR. HERRICK: And your review of the DSM2
22 codes, I'll say the underlying model, indicates that the
23 calibration did not include an update of the channel
24 morphology or the channel bottoms correct?

25 WITNESS BURKE: No, it didn't.

1 MR. HERRICK: And you -- Ms. Ansley asked you
2 a couple question with regards to the fact that
3 sometimes your graphs or charts show an increase in
4 water stage. Do you recall that?

5 THE WITNESS: I do.

6 MR. HERRICK: And the -- would it be correct
7 to say that the water stages that are increased are
8 close -- are farther away from the Head of Old River
9 Barrier?

10 WITNESS BURKE: Yes. Generally, the further
11 away you get away from the Head of Old River Barrier,
12 the more you'll get an increase in difference between
13 the preferred alternative and the no-action alternative.
14 Or, conversely, if you're on the San Joaquin River,
15 you're always going to get an increase in head due to
16 the fact that the water is now being diverted to
17 Old River and continuing on to San Joaquin.

18 MR. HERRICK: You mentioned Site 11 in your
19 response to a cross-question as being a place where --
20 being far away from the head barrier, correct?

21 WITNESS BURKE: That's correct. Site 11 is on
22 the western side of the Delta, and the head barrier is
23 on the eastern side of the Delta.

24 MR. HERRICK: And do you know whether or not
25 the California WaterFix's proposal for decreased pumping

1 from the South Delta plant at certain times might
2 account for that increase in stage?

3 WITNESS BURKE: It's possible. We didn't
4 analyze that specific aspect of changes. The exports
5 will change the water surface elevation within that
6 reach.

7 MR. HERRICK: Mr. Burke, if there's a time
8 when water levels are higher under the California
9 WaterFix than under the no-action, does that somehow
10 undo the fact that you've specified times when the water
11 level's lower?

12 WITNESS BURKE: From my understanding of the
13 way water is used in irrigation is that when an
14 irrigator is trying to irrigate, they need the water
15 level at that particular time. If two months later in
16 the year the water level increases, it doesn't do them
17 any good if they need it at the time that the farming
18 needs irrigated.

19 MR. HERRICK: And lastly, Mr. Burke, in your
20 analysis, you didn't make any presentation about the
21 best-case scenario or how good it might be, but you were
22 analyzing what adverse impacts may or may not occur or
23 when they might occur, correct?

24 WITNESS BURKE: That's correct. We were
25 looking to see what impacts may occur from the WaterFix

1 scenario and, therefore, we had to look at times when
2 those impacts may occur.

3 MR. HERRICK: No further questions. Thank
4 you.

5 CO-HEARING OFFICER DODUC: Thank you,
6 Mr. Herrick.

7 Any recross?

8 I see Ms. Morris coming up.

9 MS. MORRIS: I have housekeeping.

10 CO-HEARING OFFICER DODUC: No recross?

11 All right.

12 Thank you, Mr. Burke.

13 You are done for now.

14 And Mr. Ruiz, Mr. Herrick, I expect you want
15 to wait to move your exhibits into the record?

16 MR. RUIZ: That's correct.

17 We talked about at the beginning that
18 Mr. Salmon will testify first thing tomorrow morning.

19 CO-HEARING OFFICER DODUC: All right.

20 MR. RUIZ: We'll move in exhibits at that
21 time.

22 CO-HEARING OFFICER DODUC: I'm going to want
23 to revisit time estimates, and I have learned to not
24 trust your time estimates for cross-examination.

25 All right. Ms. Morris?

1 MS. MORRIS: Since we appear to be moving
2 rather quickly, I want to inquire about if there has
3 been any changes in how the board -- how the hearing
4 officers plan to handle surrebuttals, other than the
5 April 13th order on page 5. I remember there was a
6 request for a written and additional time, so I was
7 hoping we could get some insight as to how we should be
8 preparing for that.

9 CO-HEARING OFFICER DODUC: We will get back to
10 next week about that. We'll see how next week goes.

11 Any other housekeeping item?

12 MR. JACKSON: I don't know whether this is a
13 good time to make an observation, it's -- rather than
14 housekeeping. It's that when this things starts every
15 morning, it's about equally between men and women. And
16 when it finishes, it's almost all women.

17 CO-HEARING OFFICER DODUC: I'm not sure how to
18 take that observation.

19 MR. JACKSON: More stamina.

20 CO-HEARING OFFICER DODUC: No comment.

21 All right. Let's take a look at what we have
22 in store tomorrow. Mr. Salmon up first. 15 minutes for
23 presentation.

24 MR. RUIZ: Five.

25 MR. HERRICK: Five minutes at most.

1 CO-HEARING OFFICER DODUC: What, at this time,
2 do we expect cross-examination to take for Mr. Salmon?

3 MS. MCGINNIS: 10 minutes for DWR, please.

4 CO-HEARING OFFICER DODUC: Anyone else?

5 All right. Salmon will go -- hold on. Is
6 someone getting up? No. Very quickly then.

7 Group 19, Ms. Meserve, how much time for your
8 testimony of your witnesses? 30 minutes, I hope, or
9 less.

10 MR. HERRICK: Yes, 30 minutes or less.

11 CO-HEARING OFFICER DODUC: And
12 cross-examination of LAND's witnesses. Well, LAND --
13 yes, Dr. Leinfelder-Miles and Mr. Ringelberg.

14 MS. MCGINNIS: 45 minutes for DWR.

15 MR. HERRICK: No more than 20 minutes for
16 South Delta Water Agency.

17 MS. MORRIS: Likely to have none, but I would
18 like to reserve 10 minutes.

19 CO-HEARING OFFICER DODUC: Okay. Then we'll
20 get to San Joaquin Tributary, Group 18, with
21 Sam Steiner. I don't see their attorney here, so we'll
22 just say 15 minutes.

23 Cross-examination of Mr. Steiner?

24 None?

25 MR. HERRICK: South Delta Water Agency,

1 perhaps 10 minutes, but no more than that.

2 MR. JACKSON: California Sportfishing
3 Protection Alliance, maximum of 15 minutes. Mr. Herrick
4 may do most of my questions.

5 CO-HEARING OFFICER DODUC: Thank you for that
6 caveat. So I won't be upset with you tomorrow.

7 MS. MESERVE: We're trying to avoid that.

8 LAND probably has five minutes.

9 CO-HEARING OFFICER DODUC: I promised the
10 City of Antioch and Stockton earlier this morning. I
11 wonder if it's too late for them to get Dr. Paulson
12 here.

13 MR. HERRICK: It's too late.

14 CO-HEARING OFFICER DODUC: Mr. Herrick, by my
15 estimate, that's going to barely take half a day.

16 MR. JACKSON: It's Friday.

17 CO-HEARING OFFICER DODUC: Any objections to
18 adjourning early?

19 All right. You guys twisted my arms.

20 We might have to adjourn early on Friday. And
21 we will regroup with Dr. Paulson next week.

22 All right. Thank you. See you tomorrow.

23 (Whereupon, the hearing was closed at

24 3:55 p.m.)

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