

1 BEFORE THE
2 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

3

4 CALIFORNIA WATERFIX WATER)
5 RIGHT CHANGE PETITION HEARING)

6 JOE SERNA, JR. BUILDING
7 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
8 COASTAL HEARING ROOM
9 1001 I STREET
10 SECOND FLOOR
11 SACRAMENTO, CALIFORNIA

12

13 PART 2 REBUTTAL

14

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17

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19 Pages 1 - 262

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21 Reported By: Candace Yount, CSR No. 2737, RMR, CCRR
22 (a.m. session)
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24 (p.m. session)

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APPEARANCES

CALIFORNIA WATER RESOURCES BOARD

Division of Water Rights

Board Members Present:

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

Staff Present:

- Andrew Deeringer, Senior Staff Attorney
- Conny Mitterhofer, Supervising Water Resource Control Engineer
- Jean McCue, Senior Water Resources Control Engineer
- Hwaesong Jin
- Kevin Long
- Megan Rasis

PART 2 REBUTTAL

For Petitioners:

California Department of Water Resources:

- James (Tripp) Mizell, Senior Attorney
- Duane Morris LLP
- By: Thomas Martin Berliner, Attorney at Law
- The U.S. Department of the Interior, Bureau of Reclamation, and Fish and Wildlife Service:
- Amy L. Aufdemberge, Assistant Regional Solicitor

- 1 APPEARANCES (Continued)
- 2 FOR PROTESTANTS AND INTERESTED PARTIES:
- 3 For Central Delta Water Agency, South Delta Water
4 Agency (Delta Agencies), Lafayette Ranch, Heritage
5 Lands Inc., Mark Bachetti Farms and Rudy Mussi
6 Investments L.P.:
- 7 Dean Ruiz
- 8 For Local Agencies of the North Delta, et al. (LAND):
- 9 Osha Meserve
- 10 For Sacramento County Water Agency, Glenn-Colusa
11 Irrigation District, Biggs-West Gridley Water District,
12 Carmichael Water District as well as Placer County
13 Water Agency and the County of Sacramento:
- 14 Aaron Ferguson
- 15 For San Luis & Delta-Mendota Water Authority and
16 Westlands Water District:
- 17 Daniel O'Hanlon
- 18 For California Sportfishing Protection Alliance,
19 California Water Impact Network, and AquAlliance:
- 20 Michael Jackson
- 21 For County of San Joaquin, et al.:
- 22 Thomas H. Keeling
- 23 For State Water Contractors:
- 24 Stefanie Morris
- 25 For San Luis & Delta-Mendota Water Authority:
- 26 Daniel J. O'Hanlon
- 27 For California Water Research:
- 28 Deirdre Des Jardins
- 29

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I N D E X

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AND SACRAMENTO COUNTY:

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CALIFORNIA SPORTFISHING PROTECTION ALLIANCE (CSPA),
CALIFORNIA WATER IMPACT NETWORK (CWIN), AND AQUALLIANCE
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1 Thursday, August 16, 2018 9:30 a.m.

2 PROCEEDINGS

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4 CO-HEARING OFFICER DODUC: All right. Good
5 morning, everyone. It is 9:30. Welcome back to this
6 hearing on the California WaterFix Project Water Rights
7 Change Petition.

8 I'm Tam Doduc. To my right is Board Chair and
9 Co-Hearing Officer Felicia Marcus. I believe we're
10 expecting Board Member Dee Dee D'Adamo to join us
11 shortly.

12 To my left right now is just Conny
13 Mitterhofer. I expect we'll be joined by Andrew
14 Deeringer as well.

15 We're assisted today by Mr. Long and
16 Miss Rasis.

17 I do see one new face. So, please take a
18 moment and take a look around, identify the exit
19 closest to you. In the event of an emergency, an alarm
20 will sound. We will evacuate using the stairs, not the
21 elevators, down to the first floor and meet in the park
22 across the street.

23 If you're not able to use the stairs, flag
24 down one of the safety people -- safety monitors I
25 guess they are called -- and you'll be directed into a

1 protective area.

2 Secondly, please speak into the microphone
3 because this hearing is being recorded and Webcasted.
4 Make sure that the microphone is on and that the green
5 light is lit, and begin by stating your name and
6 affiliation.

7 Finally, and most importantly, please take a
8 moment and put all your noise-making devices to silent
9 or vibrate.

10 All right. Any housekeeping matters?

11 MR. RUIZ: Good morning. Dean Ruiz for the
12 South Delta Water Agency parties.

13 I just am advising the Board on behalf of
14 Mr. Brodsky, or requesting or making the Board aware of
15 the fact that if the Save the California Delta
16 Alliance's spot comes up this week, which I'm not sure
17 it would, Snug Harbor would -- is requesting or is
18 willing to go and sub in Mr. Brodsky's spot because his
19 witnesses can't be here this week.

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

22 MR. RUIZ: You're welcome.

23 CO-HEARING OFFICER DODUC: Miss --

24 MS. MESERVE: In --

25 CO-HEARING OFFICER DODUC: -- Meserve.

1 MS. MESERVE: -- addition, I have an update on
2 the availability of the -- It's down in the 13th spot
3 which, again, we don't know whether it would come up
4 this week. It looks like it would come up next week.
5 And that's the panel of Tim Stroshane and Brandon
6 Nakagawa.

7 And Mr. Nakagawa's mother passed away in the
8 last couple days and he's left town. And he's actually
9 not going to be back -- He's out of state, in Hawaii
10 where his family lives. And he's going to be back
11 available on really the last three days of the month,
12 the 29th, 30th, and 31st.

13 So, I don't know how we'll accommodate that
14 but I hope we can.

15 CO-HEARING OFFICER DODUC: We definitely will
16 try. And if that means moving that panel to the end of
17 the order, we will do so.

18 MS. MESERVE: Thank you.

19 CO-HEARING OFFICER DODUC: Before we get to
20 the direct testimony of this panel, let me confirm what
21 I have in terms of cross estimates from yesterday.

22 I have Department of Water Resources and State
23 Water Contractors for 45 minutes; then Central Delta
24 Water Agency, which I assume now is Mr. Ruiz instead of
25 Mr. Herrick, for 10 to 15 minutes; then Contra Costa

1 County, Group 25, for 20; CSPA, Group 31, for 15;

2 Miss Des Jardins for 15.

3 That's all the cross I had from yesterday for
4 this panel.

5 MR. O'HANLON: Daniel O'Hanlon on behalf of
6 San Luis/Delta-Mendota Water Authority and Westlands
7 Water District.

8 I'll have about 10 minutes for this panel.

9 CO-HEARING OFFICER DODUC: And you are
10 Group 10 -- Group 4, I believe; right?

11 MR. O'HANLON: 4 and 5, yes. Thank you.

12 CO-HEARING OFFICER DODUC: Okay. With that,
13 Miss Meserve.

14 MR. BERLINER: Madam Chair --

15 CO-HEARING OFFICER DODUC: Or, Mr. --

16 MR. BERLINER: -- I may have -- On behalf of
17 DWR, I estimated 45 minutes. It may be closer to an
18 hour.

19 CO-HEARING OFFICER DODUC: And is that still
20 joint DWR and State Water Contractors?

21 MR. BERLINER: Yes.

22 And I'll have a motion before they start their
23 testimony.

24 CO-HEARING OFFICER DODUC: All right. Let's
25 hear your motion, Mr. Berliner.

1 MR. BERLINER: Thank you. Good morning.

2 Tom Berliner, Department of Water Resources.

3 I actually have two motions but they are
4 essentially on the same grounds.

5 I'm sorry. Maybe I should move a little over.

6 (Pause in proceedings.)

7 MR. BERLINER: Is that okay?

8 The testimony that's offered this morning by
9 these witnesses concerns adaptive management.

10 CO-HEARING OFFICER DODUC: Um-hmm.

11 MR. BERLINER: Adaptive management and the
12 availability of the primary documents on which they are
13 relying were actually available in 2017.

14 In fact, in Part 1 of this proceeding, Dr. Ed
15 Whitelaw presented testimony on adaptive management.
16 His testimony was more or less in the nature of an
17 overview and critique of the adaptive management
18 approach set forth in the Incidental Take Permit.

19 There are other documents that also contain
20 the Adaptive Management Program that were available at
21 that time.

22 In the case in chief in Part 2, CalSPA
23 witnesses, Mr. Shutes and Mr. Jennings, also presented
24 the their views on adaptive management.

25 The three testimonies are remarkably similar.

1 They cover the areas that they seem to all share
2 concerns about.

3 These same concerns are largely repeated by
4 these witnesses. The documents, with almost no
5 exception, upon which they rely were available prior to
6 this time; in fact, were introduced at the Board.

7 The one exception, if you will, to that is on
8 Page 22 of --

9 Is it Dr. Shilling?

10 WITNESS SHILLING: Yeah.

11 MR. BERLINER: Yes.

12 -- of Dr. Shilling's testimony, cites to some
13 general testimony of witness Christopher Earle on
14 behalf of the Department regarding an overview of
15 adaptive management that was contained in his rebuttal
16 testimony. But that mention on Page 22 of LAND-240
17 does not delve into any substance of his testimony.

18 His testimony also references at the very
19 beginning testimony of Dr. Marin Greenwood and Dr. Gwen
20 Buchholz, but essentially doesn't really do an analysis
21 of that.

22 What Dr. Shilling does, is, he sets up the
23 Adaptive Management Program, citing Water Board
24 Exhibit 107, which was introduced by CalSPA
25 substantially prior to this time and as part of their

1 case in chief -- and that's State Water Board
2 Exhibit 107 -- and then provides a critique and, in
3 fact, relies to a substantial extent, several pages
4 worth of discussion, on a -- I guess you would call it
5 a Law Journal article by an author Doremus, and that
6 same article is cited by Dr. Ed Whitelaw in his
7 testimony in Part 1.

8 So, this is all testimony that was more
9 appropriately offered in the case in chief, not in
10 rebuttal.

11 There's nothing in the testimony that's really
12 substantively new to rebuttal, and I did mention the --
13 the reference to -- to Dr. Earle's testimony, but it
14 does not present new information.

15 And . . . And that's the grounds for that one.

16 The --

17 CO-HEARING OFFICER DODUC: I'm sorry. As I
18 understand it: So your motion is to strike based on
19 the fact -- based on your assertion that it's
20 repetitive evidence?

21 MR. BERLINER: It is repetitive evidence and
22 it is evidence that should have been presented either
23 in Part 1 or their case in chief in Part 2. And I
24 think probably more appropriately in Part 2, but we did
25 have very similar testimony in Part 1 that was allowed.

1 But it seems to me that it probably was more
2 appropriate as case in chief in Part 2 --

3 CO-HEARING OFFICER DODUC: So --

4 MR. BERLINER: -- and not --

5 CO-HEARING OFFICER DODUC: -- let me further
6 understand.

7 Your mo -- Your argument is that it's
8 repetitive evidence that was submitted by different
9 parties, not these parties.

10 MR. BERLINER: Yes.

11 But my primary argument is that this is not
12 proper rebuttal. This is -- was presented by other
13 parties as part of their case in chief or in Part 1.

14 Therefore, the material that's relied on is
15 not new. It's material that's been available since
16 the -- the ITP's been available, since July 26 of 2017.
17 It could have been commented on long ago. And
18 there's -- there's really nothing new here that was
19 raised by Part 2 testimony by the Department.

20 So, this could have been part of their case in
21 chief, and should have been part of their case in
22 chief.

23 CO-HEARING OFFICER DODUC: Are you making any
24 assertions about whether it is responsive to the
25 rebuttal -- to the case-in-chief testimony in Part 2

1 that they are rebutting?

2 MR. BERLINER: They really aren't rebutting
3 testimony in Part 2. They are commenting on the
4 Adaptive Management Plan that was submitted as Water
5 Board Exhibit 107 that's been available since
6 introduced -- well, has been available since July 26th,
7 2017, and was introduced as an exhibit and cited by
8 witnesses for CalSPA as part of their case in chief.

9 So, this being parallel testimony to that, it
10 should have been presented as part of a case in chief.

11 CO-HEARING OFFICER DODUC: And does that
12 motion apply to both Dr. Shilling as well as
13 Mr. Stokely?

14 MR. BERLINER: Well, I made it as -- I'm
15 making it as two motions, because there are two
16 witnesses. Just -- I won't repeat any of this on -- on
17 Dr. (sic) Stokely's testimony.

18 But Dr. (sic) Stokely's testimony essentially
19 compares the Adaptive Management Program that's been
20 proposed here with his experience with an Adaptive
21 Management Program on the Trinity River and outlines
22 various concerns that he has regarding that program,
23 but, again, relies on the July 26, 2017, Incidental
24 Take Permit, which, at Attachment 5, is the Adaptive
25 Management Program which has not changed since that

1 time.

2 So, it's really the same grounds. This could
3 have been presented before or as a part -- as a part of
4 their case in chief. And there's nothing in particular
5 that this responds to that was raised in the Department
6 or Bureau of Reclamation's case in chief in Part 2.

7 So it's not proper rebuttal.

8 CO-HEARING OFFICER DODUC: Response, please.

9 MR. KEELING: Well, I think all of --
10 Miss Meserve and Mr. Ferguson and I all have something
11 to say on that.

12 Certainly, Mr. Berliner's correct that the
13 adaptive management -- much of the adaptive management
14 was available for comment.

15 We didn't comment on it. This testimony is
16 not comment; it's rebuttal.

17 The Board may recall, in Part 2, DWR presented
18 its case in chief, which is -- And I agree with
19 Mr. Berliner, that's the appropriate place for them to
20 have made their adaptive management argument.

21 We not only listened carefully to Dr. Earle
22 and Miss Buchholz and Mr. Greenwood as they talked
23 about the effectiveness of this Adaptive Management
24 Plan. We cross-examined them fairly extensively, you
25 may recall, on what it is about this decision-making

1 mechanism they think will be protective. What are its
2 deficiencies?

3 They testified. We reviewed their testimony.
4 We disagreed. And we put on a rebuttal case directly
5 addressing what we see as the -- the flaws in their
6 testimony, which -- which means the deficiencies in the
7 plan that they are promoting.

8 So, I think Mr. Ferguson and Miss Meserve want
9 to say something.

10 MS. MESERVE: Yes.

11 I would just add: With respect to the Part 1
12 argument of Mr. Berliner, I don't think that makes any
13 sense at all.

14 Part 2 is -- one of the hearing issues is
15 whether there's going to be reasonable effects of fish
16 and wildlife.

17 And so it's entirely appropriate to --
18 Apparently, it was appropriate to talk about adaptive
19 management in Part 1. That's done. That was back in
20 20 -- The case in chiefs for Part 1 were due in
21 September of 2016.

22 So, it's definitely a Part 2 issue.

23 And the -- With respect to whether it should
24 have been a case-in-chief presentation by Protestants
25 rather than rebuttal, that argument also doesn't make

1 sense because both Greenwood and Earle, as well as
2 Ms. Buchholz, their testimony repeatedly refers to
3 adaptive management as being the means by which there
4 will be beneficial outcomes for fish and wildlife, and
5 the effects wouldn't -- would not be unreasonable.

6 And, so, it is that extensive testimony, both
7 in the writings as well as in the testimony in the
8 transcripts -- that's all cited in these rebuttal
9 testimonies we're presenting today -- that addresses
10 those particular statements.

11 And, of course, it's necessary to go back to
12 the key documents in order to unpack how -- whether the
13 assertions made by Greenwood, Earle and Buchholz on
14 behalf of the Department are, in fact, credible. And
15 that's -- that's all this testimony does is -- is, walk
16 through the documents.

17 And -- And then, in -- in Doc -- Mr. Stokely's
18 case, using his experience with a specific
19 implementation of an Adaptive Management Plan that's
20 quite similar, talk about whether the assertions of
21 those wit -- three witnesses that were presented in
22 Part 2 case in chief by DWR are credible.

23 That's what this testimony's about and I think
24 it should be allowed.

25 MR. KEELING: And on the de -- On the issue of

1 repetitiveness, obviously, there's nothing repetitive
2 about the Trinity River example in Mr. Stokely's
3 testimony.

4 And when we start moving through
5 Dr. Shilling's testimony, it's -- there's nothing
6 repetitious. He refers to some of the same documents.
7 But he goes into great depth as to the deficiencies of
8 this plan as against the backdrop of the academic
9 literature on adaptive management and against the
10 backdrop of his own experience. None of that's
11 repetitious.

12 The subject matter has been addressed before
13 but not the particulars of the testimony.

14 CO-HEARING OFFICER DODUC: Mr. Ferguson,
15 anything to add?

16 MR. FERGUSON: Nothing to add. Thanks.

17 CO-HEARING OFFICER DODUC: Any final comment,
18 Mr. Berliner?

19 MR. BERLINER: Yes.

20 I think this is a situation where . . . it's a
21 little bit difficult to appreciate the lack of argument
22 that -- substantive argument that's actually in
23 Dr. Shilling's testimony with regard to the witnesses
24 that are presented.

25 You might be imagining, if you haven't read

1 the testimony -- I know --

2 CO-HEARING OFFICER DODUC: I have.

3 MR. BERLINER: -- the Hearing Officer has read
4 the testimony -- that you would see sprinkled
5 throughout the testimony remarks made by witnesses and
6 those same remarks being rebutted.

7 What you find primarily in this document is
8 some very brief up-front references, a very brief
9 reference on Page 22 to Dr. Earle.

10 And, essentially from a substantive
11 perspective, while names appear elsewhere, there's no
12 additional substantive aspect to it. It really relies
13 entirely as a critique on the Adaptive Management Plan
14 that's attached to the ITP.

15 The remark at Page 22 attributed to Dr. Earle
16 was that it was his conclusion that the Adaptive
17 Management Program was part of the basis of his finding
18 reasonable protection.

19 Dr. Shilling dismisses that and says, "Well,
20 all that does is meets the standard under the law."
21 There's no discussion about the -- the detail of
22 Dr. Earle's conclusions as to why he thinks it provides
23 reasonable protection.

24 So I think this is a case where scrutinizing
25 the testimony is in order and that -- I think if -- if

1 you do so, you'll find that this motion is proper.

2 CO-HEARING OFFICER DODUC: Anyone else want to
3 weigh in before we take a break to consider this?

4 Mr. Jackson.

5 MR. JACKSON: Yes.

6 I -- Simply because my witness's testimony,
7 Dr. Whitelaw, was mentioned.

8 We did -- We did bring up adaptive management
9 in -- in Part 1 and its effect on people's legal water
10 rights.

11 The testimony that we -- in a number of places
12 was -- I don't know. It was Mr. Deeringer or someone
13 in the staff office went through the testimony to make
14 sure there were no Part 2 issues in our Part 1
15 testimony and excised that.

16 In Part 2, we called -- we were -- We did not
17 have the benefit of being able to have Dr. Whitelaw
18 review the testimony in regard to adaptive management
19 because, simultaneously, we had to file with -- with
20 the . . . with the Petitioners.

21 So, at that point, there was no opportunity to
22 engage the testimony of the witnesses in regard to
23 adaptive management other than what these parties did.

24 I just wanted to point out that it doesn't
25 substitute for their opportunity to rebut.

1 MR. BERLINER: If I --

2 CO-HEARING OFFICER DODUC: Hold on, Mr. -- Let
3 Mr. Ruiz speak first.

4 MR. RUIZ: Yes. dean Ruiz for the South Delta
5 Water Agency parties.

6 I suspect this is going to be an issue with
7 other witnesses as well.

8 In this case, adaptive management, just
9 because it was part of their Part 1 case, it's clearly
10 a large theme and centers in the Part 2 case.

11 When we as Protestants, based on what we
12 elicit in cross-examination, when we decided to put on
13 a rebuttal case with regard to adaptive management, or
14 salinity, or whatever else it was, as long as -- They
15 don't get to dictate when they would like us to put
16 that information on.

17 As long as it's still part of the Part 2
18 rebuttal, we decide when we can put on the -- the
19 rebuttal -- the rebuttal case, rebuttal topics. It
20 doesn't -- It doesn't follow logically that, just
21 because it was part of Part 1, that it should have been
22 done then and not done now.

23 CO-HEARING OFFICER DODUC: Mr. Keeling.

24 MR. KEELING: And, if I may, along the lines
25 of comments by Mr. Ruiz and Mr. Jackson.

1 We did not know, until the Part 2 case in
2 chief of the Petitioners, how they were going to use
3 their Adaptive Management Program proposed. Certainly
4 the program was out there. We didn't know until we
5 heard their witnesses testify as to what the function
6 and scope of decision-making under adaptive management
7 would be.

8 It was then that we decided to -- We -- We had
9 to rebut that. We had no reason to put on a case about
10 adaptive management -- after all, we're not the
11 Petitioners -- before this rebuttal case.

12 CO-HEARING OFFICER DODUC: All right.

13 MS. MESERVE: Can I add just one quick thing,
14 too, is that it's really important that this testimony
15 that we're presenting today is, in particular, about
16 the Project that Petitioners are proposing. It's an
17 analysis of a part of the Permit package, basically,
18 which is the Draft Adaptive Management Plan, and that's
19 what these comments are about.

20 It's not an abstract discussion about, you
21 know, hypothetical or, you know, just a discussion that
22 is scholarly and separated from the Project. It's
23 about the Project and about the things Petitioners have
24 said the Project will accomplish with adaptive
25 management.

1 CO-HEARING OFFICER DODUC: All right. Any
2 question?

3 MR. DEERINGER: Yes. One for Mr. Keeling, or
4 whoever on the panel is able to field this.

5 I think you heard Mr. Berliner argue that,
6 aside from the occasional reference to the Petitioners'
7 Part 2 case in chief, really your witnesses' testimony
8 gets to -- rebuttal testimony gets to a different set
9 of issues, if I -- I'm understanding you correctly, and
10 please correct me if I'm wrong if I'm not.

11 That it's -- it's about the Adaptive
12 Management Program but that it's not necessarily
13 responsive to the issues that Petitioners raised in
14 Part 2 case in chief.

15 Am I understanding that argument correctly?

16 CO-HEARING OFFICER DODUC: I thought I asked
17 Mr. Berliner that question.

18 MR. BERLINER: I am not 100 percent sure where
19 you're going with this. Maybe you could expand on it a
20 little bit more.

21 MR. DEERINGER: Sure.

22 The -- And before I ask the panelist's
23 attorneys this question, I first want to make sure I'm
24 understanding their argument correctly.

25 The question I was about to ask was whether

1 they had any response to this idea that, you know,
2 really, they're dealing with a different set of issues
3 than what was raised during the case in chief in
4 Part 2.

5 MR. BERLINER: Simply . . . With the one
6 exception of the essentially passing remark by -- or
7 passing reference to Dr. Earle on Page 22, really the
8 answer is no.

9 The substance of these comments concerns a
10 critique of the Adaptive Management Program itself.
11 There was nothing in the testimony of the Department's
12 witnesses that raised new information about the
13 Adaptive Management Program.

14 It contains extensive provisions regarding
15 who, what, when and how, what the governance is,
16 who's -- who's reviewing ITP proposals or adaptive
17 management proposals, when -- what happens if we go
18 outside of our -- our operating ranges, and whether we
19 need to come back to the Water Board or whether new
20 Biological Opinions are required. It's a very
21 extensive program that is being critiqued.

22 And nothing has changed in the Adaptive
23 Management Program since the start of Part 2 of this
24 case.

25 So, they could have presented this -- and

1 should have presented this -- as their case in chief,
2 and we would have had an opportunity to rebut their
3 testimony as part of this rebuttal phase regarding
4 their critique of the Adaptive Management Program.

5 In other words, there's nothing new.

6 MS. MESERVE: I think, in -- in response to
7 your question -- I know Mr. Keeling has something to
8 add -- but, you know, in all three of DWR's Part 2
9 case-in-chief witness testimonies, there's at least --
10 especially in Dr. Earle and in Miss Buchholz, there's
11 very extensive -- well, mostly Dr. Earle, there's some,
12 like, eight pages of discussion of how the Adaptive
13 Management Plan is going to accomplish certain things
14 with respect to fish and wildlife.

15 And Miss Buchholz also has some very broad
16 statements on Page 8 of her testimony about how
17 adaptive management is going to do certain things.

18 And then Mr. Greenwood repeatedly refers to
19 adaptive management throughout his testimony as well as
20 being -- and probably Mr. Miller as well, but . . .

21 So it appears what the Department is
22 suggesting is that DWR should be allowed to put forth
23 broad statements and specific statements about the
24 effectiveness of adaptive management with respect to
25 Part 2 issues, and that somehow Protestants would be

1 precluded from responding to those, and that doesn't
2 make any sense.

3 MR. BERLINER: And --

4 CO-HEARING OFFICER DODUC: All right.

5 MR. BERLINER: And I'd point out that's not
6 the argument we're making.

7 MR. KEELING: Well, it -- it -- I'm sorry?

8 CO-HEARING OFFICER DODUC: Is there any
9 questions, or any additional questions?

10 MR. KEELING: I'd like to address the question
11 as well.

12 We're not here to rebut the Adaptive
13 Management Program, which is the subtext of
14 Mr. Berliner's.~Berliner's objection.

15 We're here to rebut Part 2 case-in-chief
16 testimony by DWR about that program, its use and its
17 effectiveness.

18 Until they raised that testimony, there was no
19 reason for us to raise our hand or even mention the
20 word "adaptive management." The idea that that should
21 have been our case in chief is absurd.

22 CO-HEARING OFFICER DODUC: All right. Enough.

23 We will take a break to consider this and we
24 will return shortly.

25 MR. BERLINER: Thank you.

1 CO-HEARING OFFICER DODUC: Thank you.

2 (Recess taken at 9:57 a.m.)

3 (Proceedings resumed at 10:03 a.m.):

4 CO-HEARING OFFICER DODUC: All right. We are
5 back in session.

6 Regarding Mr. Berliner's motion -- or
7 objection, I believe -- actually, it was probably both,
8 an objection and a motion -- the motion is denied.

9 We find this is proper rebuttal testimony in
10 response to case-in-chief testimony presented by
11 Petitioners.

12 Any issue of repetitiveness or other arguments
13 that Mr. Berliner raised will go to the weight in
14 considering this testimony.

15 And with that, we're now ready for these
16 witnesses to present their summaries of their
17 testimony.

18 MS. MESERVE: Thank you, Madam Hearing
19 Officer.

20 Today, Dr. Fraser Shilling and Mr. Tom Stokely
21 will provide testimony on adaptive management as
22 presented by San Joaquin County, Sacramento County and
23 Local Agencies of the North Delta.

24 First of all, from Dr. Shilling: Regarding
25 adaptive management, what it is, how the Adaptive

1 Management Plan for the Project would work and how it
2 wouldn't work.

3 Then we'll hear from Mr. Stokely, who has
4 experience with adaptive management in the Trinity
5 River Restoration Program regarding the same topics.

6 So, first, both these witnesses have already
7 taken an oath.

8

9 Thomas Stokely

10 and

11 Fraser Shilling,

12 called as witnesses by Local Agencies of
13 the North Delta, County of San Joaquin
14 and County of Sacramento, having been
15 previously duly sworn, were examined and
16 testified further as follows:

17 DIRECT EXAMINATION BY

18 MS. MESERVE: And, so, Dr. Shilling, is
19 LAND-240-Errata a true and correct copy of your
20 testimony?

21 WITNESS SHILLING: Yes.

22 MS. MESERVE: And is LAND-241 a true and
23 correct copy of your PowerPoint presentation?

24 WITNESS SHILLING: Yes.

25 MS. MESERVE: And are Exhibits LAND-242

1 through 247 and 250 through 260, along with all the
2 other citations in your testimony what you relied upon
3 in preparing it?

4 WITNESS SHILLING: Yes.

5 MS. MESERVE: And . . . Let's see. I'm just
6 going to go through Mr. Stokely now, too.

7 Is LAND-266-Errata a true and correct copy of
8 your written testimony?

9 WITNESS STOKELY: Yes.

10 MS. MESERVE: And LAND-268 is your PowerPoint?

11 WITNESS STOKELY: Yes.

12 MS. MESERVE: And LAND-269 through 281, along
13 with the other exhibits you cite, is what you relied
14 upon in preparing it?

15 WITNESS STOKELY: Yes.

16 MS. MESERVE: Okay. Let's go ahead and have
17 the PowerPoint presentation for Dr. Shilling, if we
18 could, and that's going to be LAND-241.

19 (Exhibit displayed on screen.)

20 WITNESS SHILLING: Good morning. Good
21 morning, Board Members and Hearing Officer.

22 I'm going to talk today about the request for
23 change in point of diversion for the Delta tunnels and
24 specifically related to the adaptive management process
25 as proposed in previous testimony by Department of

1 Water Resources.

2 I wanted to talk a little bit about my
3 experience with adaptive management to link to why I
4 would talk about this.

5 I received my Ph.D. in 1991 in aquatic
6 ecology.

7 My research at U.C. Davis for the last 20
8 years has focused primarily on improving use of
9 environmental information and decision-making.

10 Next slide, please. Sorry.

11 (Exhibit displayed on screen.)

12 WITNESS SHILLING: And in these domains, water
13 quality, water sustainability, mercury and fish, and
14 transportation and infrastructure ecology.

15 Research in these areas is mainly about how
16 data from monitoring processes and evaluating
17 conditions contributes to decision-making; studying how
18 natural systems work so research into how they work;
19 and then connecting research and monitoring to
20 management decisions, some of that through formal
21 decision support systems.

22 Doing this, I worked on various parts of
23 adaptive management in different levels of agency,
24 local, State and Federal, and also with NGOs and
25 international organizations. And this is in the

1 domains of water supply, water quality, land use and
2 transportation planning and delivery.

3 I've worked professionally in all areas of
4 adaptive management as it's typically described except
5 for actually making management decisions themselves or
6 partaking in the actions.

7 The -- My testimony -- My written and my
8 rebuttal testimony today is responding to the -- the
9 testimony about adaptive management process from
10 witnesses Earle, Buchholz and Greenwood.

11 And I'll use the scientific literature to --
12 as really the context for that pushback on -- on their
13 description of adaptive management, both in what it
14 should be like and also how it's actually described in
15 the adaptive management framework in the plan, and what
16 can make adaptive management succeed or fail in
17 response to their description of -- of the various
18 benefits that a program would bring.

19 I'll do this in -- A way of illustrating that
20 is in a list of what I consider fatal flaws, any one of
21 which could cause the program to fail and possible harm
22 wildlife, fish and people in the Delta.

23 Next slide.

24 (Exhibit displayed on screen.)

25 WITNESS SHILLING: And, actually, go the next

1 slide after that. I forgot to say "next slide."

2 So are you switching the slides?

3 MR. LONG: Yes.

4 WITNESS SHILLING: Okay. Thanks.

5 All right. So what does the literature say
6 about Adaptive Management Plans?

7 And some of this is reflected in the testimony
8 by DWR witnesses in a descriptive sense of what they
9 should do.

10 They should be structured and comprehensive.
11 This means that there should be a structured
12 decision-making process, it should be clear what that
13 is, and there should be -- the program should cover all
14 of the relevant domains in the decision-making process.

15 There should be -- The plan should allow
16 modification of management actions that might be taken
17 or that have been taken.

18 The plan should not be subject to bias and
19 political pressure. Typically, they're thought of as
20 science-based and -- and objective.

21 Monitoring and research and, particularly,
22 experimentation. So experimentally changing management
23 actions should be continuously funded for the whole
24 length of whatever the Project is. In this case, a
25 facility with an unknown time -- time span.

1 There should be firm triggers and guarantees.
2 And "firm" means that they are . . . you can't wiggle
3 out of them and they're attached to management actions,
4 responsive management actions.

5 Uncertainty should not be a shroud for
6 indecision. In other words, if we are uncertain about
7 how systems work or the effects of our actions on these
8 systems -- in this case the Delta water, aquatic and
9 land systems -- then we shouldn't use that uncertainty
10 to not decide to change something.

11 And, finally, that stakeholders should be
12 included in defining how the adaptive management
13 process works, and also evaluating the management
14 outcome, since "stakeholder" is defined here as people
15 who have a stake in the way the management system works
16 and the outcomes from that management system.

17 Next slide, please.

18 (Exhibit displayed on screen.)

19 WITNESS SHILLING: So, specifically, I'm going
20 to talk about these bullet points. And I have slides
21 following this one that talk about each one.

22 So, briefly, these -- I think -- I consider
23 these as critical limitations that are described as --
24 Well, they're not really described at all in -- in the
25 testimony as being flaws, but some of the ways that the

1 adaptive management framework in the plan would work
2 makes me think that these are -- these are critical or
3 fatal flaws.

4 The first is the narrow scope of the
5 framework.

6 The second is the narrow range of management
7 options permissible under the framework.

8 The third is committed water deliveries will
9 constrain or likely to constrain adaptive management
10 options, so flexibility.

11 There's a lack of committed adequate funding
12 for monitoring and research.

13 There are no meaningful triggers for abrupt --
14 meaning very rapid -- medium-term or long-term changes
15 in management.

16 The operational rules that are described are
17 insensitive to the kinds of stress you would expect.

18 Water Agencies with vested interests in the
19 outcome control much of the structured process.

20 And there's no rule for effective communities
21 and water users.

22 Next slide, please.

23 (Exhibit displayed on screen.)

24 WITNESS SHILLING: So, first, the narrow
25 scope.

1 So despite the testimony from Earle, DWR-1014,
2 the inclusion in the Mitigation Monitoring and
3 Reporting Program from DWR, which is State Water Board
4 111 and then State Water Board 110 findings of fact of
5 the construction phase of the Project.

6 Despite those and other environmental
7 considerations, the Adaptive Management Plan narrowly
8 focuses only on four listed species. So those previous
9 references, there's a wide scope of -- of activities
10 that -- that are -- that would seem to benefit and --
11 but only four listed fish species are included.

12 Not included are the Delta coequal goals,
13 as -- as broadly described, ensuring water supply
14 reliability, ecosystem health in a general sense beyond
15 the four species.

16 Also not included is:

17 The 15-year construction phase, which
18 definitely is something that could receive adaptive
19 management application:

20 Values and processes upstream of the intake.
21 So even though they're outside the -- the very narrowly
22 defined footprint of the Project, all the water coming
23 downstream that the water diversion depends on is
24 included in that area;

25 Part-time or full-time Delta aquatic organisms

1 outside the four species;

2 And then the communities in the Delta outside
3 of the actual water recipients of the deliveries.

4 So my testimony addresses -- I'll go through
5 where -- where I can and -- and talk -- This is in
6 reference to Earle's Part A section of his testimony
7 starting on Page 4.

8 The -- Next slide, please.

9 (Exhibit displayed on screen.)

10 WITNESS SHILLING: The second issue is that
11 there's a narrow range of management options.

12 So, even within just thinking about the four
13 listed species, the consequences of operations for
14 those will be evaluated and operations changed, in
15 theory, within the boundaries of preconceived
16 operational boundaries.

17 So these aren't -- These aren't wide
18 conditions that have been described. This is a narrow
19 set of conditions -- of management options that might
20 change; for example, the timing and the amount of
21 diversion.

22 The standard of performance for these
23 management options is cited the mini -- as the minimal
24 threshold in the ITP, Incidental Take Permit; in other
25 words, the Project operation only needs to maintain the

1 currently endangered state of the species, and there's
2 no requirement to go beyond that.

3 So there's no indication that any management
4 option will be considered other than changing delivery
5 timing and amounts outside -- around some preconceived
6 conditions.

7 There's also no indication that the Project is
8 intended to or will contribute to recovery of the four
9 listed species, let alone the other degraded conditions
10 that the Delta is well known for.

11 There's a larger obligation to go beyond this
12 bare minimum under the Delta Reform Act coequal goals.
13 And that's in contrast to Mr. Earle's proposition that
14 there will be beneficial outcomes for fish and wildlife
15 in the Delta, on Page 8 and starting on Page 4, Part A.

16 The committed water deliveries will con --

17 Oh, sorry. Next slide.

18 (Exhibit displayed on screen.)

19 WITNESS SHILLING: -- are likely to constrain
20 adaptive management options.

21 Even within the -- the proscribed boundaries
22 of the proposed plan, there's only a narrow range of
23 operational considerations where the withdrawals might
24 change slightly in amount and timing.

25 And it seems highly unlikely that this very

1 costly facility, if constructed, would not be used
2 almost continuously.

3 So the mana -- The likely management options
4 and ranges very -- is probably going to be very narrow,
5 especially given that there are non-State investors who
6 put up a con -- who will be putting up a considerable
7 amount of money who are going to want a return on that
8 investment.

9 In the last sentence on that slide, I'm
10 missing a comma somewhere. And what I mean by that
11 statement is that there's no reason to expect water
12 agencies and water interests to constrain maximum
13 deliveries through the facility.

14 Next slide, please.

15 (Exhibit displayed on screen.)

16 WITNESS SHILLING: There's a lack of committed
17 and adequate funding for monitoring and research.

18 And on Page 7, Earle refers -- references
19 monitoring and funding for -- for monitoring.

20 According to the literature, it's critical to
21 the success of adaptive management that you conduct
22 research and do experimental changes in management
23 actions to see what kind of impacts will take place on
24 valued and protected attributes.

25 Similarly, monitoring of prevailing conditions

1 before, during and after management is essential to
2 understanding whether ecosystem values are in decline
3 and the effects of previous and current management
4 actions.

5 Despite these mission-critical actions being a
6 required part of any adaptive management process,
7 there's no commitment to funding or carrying out any or
8 all of the research that's described.

9 Within some of DWR's testimony -- for example,
10 Greenwood, DWR-1012 -- there are examples given of
11 research that will happen as part of the adaptive
12 management process on Pages 38 and 40.

13 However, there's no funding commitment for
14 adequate monitoring, nor is adequate monitoring
15 described in the written adaptive management
16 documentation.

17 There's also no connection established between
18 research and monitoring and the management actions.

19 The long list of potential research reminds me
20 of the early days of CALFED when funding for research
21 projects and programs was dangled in front of
22 scientists like me at the university as a way to
23 mitigate our criticism of the program. And that's a
24 very cynical way to -- to handle monitoring and
25 researching in the adaptive management process.

1 Next slide, please.

2 (Exhibit displayed on screen.)

3 WITNESS SHILLING: Next slide, please.

4 (Exhibit displayed on screen.)

5 WITNESS SHILLING: There are no meaningful
6 triggers for abrupt, so short-term, medium-term or
7 long-term changes in management.

8 The legislature describes triggers as an
9 important link between the collection of information
10 for monitoring and research programs and the management
11 actions.

12 The Adaptive Management Plan does provide a
13 list of objectives which are equated to triggers, but
14 there's no link between the laundry list of objectives
15 and potential or anticipated changes in operation,
16 which we've already said -- which I've already said is
17 limited to the amount and timing of water deliveries.

18 This leaves the information resulting from
19 potentially funded monitoring dangling, disconnected
20 from management actions that may be necessary to
21 protect even the four listed species, let alone other
22 attributes of the Delta that we are legally supposed to
23 be protecting under the Delta Reform Act.

24 Next slide, please.

25 (Exhibit displayed on screen.)

1 WITNESS SHILLING: The operational rules are
2 likely to be insensitive to stress and change in the --
3 in the Delta.

4 The literature emphasizes that the range of
5 management actions that are available must be scaled to
6 the managed system and responsive to the condition --
7 the conditions and changes that are detected with
8 monitoring.

9 Even if we didn't have 20 years of intensively
10 studying the Delta, we would suspect that a combined
11 terrestrial and aquatic system of this size, with
12 urban, natural and agricultural land uses, and much of
13 the State's water supply going through it, would be
14 replete with wicked problems. And it is.

15 You would include a wide range of possible
16 management responses in any responsible Adaptive
17 Management Plan that could be triggered by an
18 uncertain -- currently uncertain range of changing
19 conditions, especially when you have an overlay of
20 climate change.

21 The Man -- The Adaptive Management Plan does
22 not include, and nor does the testimony from the three
23 witnesses that I list, does -- They don't include any
24 discernible attempt to address this complexity in a
25 meaningful way, the uncertainty that's likely to occur

1 in a very wide of continuing -- wide-ranging,
2 continuing wicked problems.

3 And that's addressed, in part, by Earle on
4 Page 5 to 6 in his reducing uncertainty testimony.

5 Next slide, please.

6 (Exhibit displayed on screen.)

7 WITNESS SHILLING: Water agencies with vested
8 interest in the outcomes control the process, although
9 there is an interagency management group through which
10 all the decisions will filter, which seems -- seems
11 like a good idea on its face.

12 Water delivery-oriented agencies dominate that
13 group. And that group functions at almost every step
14 in the structured process.

15 They all have a vested interest in the outcome
16 of the process, the Management actions, and, therefore,
17 they have an inherent conflict of interest in -- in the
18 adaptive management process itself.

19 The scientific literature addresses this issue
20 primarily as a governance problem. According to the
21 literature, failed adaptive management processes are
22 often ones that had closed and opaque decision-making.

23 Further, the prevailing opinion is that agency
24 bias and desire for control of the decision-making
25 process poses a threat to success because it unhooks

1 the process from the more objective and scientific
2 procedures that should underlie adaptive management and
3 reinforces the political nature of many management
4 actions.

5 This is discussed in -- to some degree by
6 Earle on Page 6 when he talks about the structured
7 process in the final agencies group, the IICG.

8 Next slide, please.

9 (Exhibit displayed on screen.)

10 WITNESS SHILLING: Finally, in -- in my
11 opinion, maybe the most important is that there's no
12 role for affected communities and water users.

13 The most -- One important conclusion in the
14 scientific literature on adaptive management is that
15 people with a stake in how the plan is formulated once
16 you go into it, or in the outcome of management, should
17 be included in the formulation of the plan, not as
18 informed bystanders kept up to date by other people's
19 decisions but as part of shared governance.

20 The most critical procedural issue, I think,
21 in the formulation of the Adaptive Management Plan is
22 the exclusion of these important stakeholders from the
23 process of coming up with the Adaptive Management Plan
24 and then, ultimately, its implementation.

25 Most large Adaptive Management Plans that have

1 been described in the literature include stakeholders,
2 to a large degree, and this is -- is a really excellent
3 way to reduce conflict in litigation.

4 Next slide, please.

5 (Exhibit displayed on screen.)

6 WITNESS SHILLING: And this is my final slide.

7 So, I have some recommendations, not that you
8 necessarily asked for them, but some ideas that came
9 out of looking through DWR's testimony and -- and the
10 various supporting documents.

11 The first is that we, or the larger we
12 collectively, should revisit the scope of the Adaptive
13 Management Plan to consider and cover the coequal goals
14 of the Delta Reform Act, which are pretty broad, and
15 include protections of the Delta as -- as a place, as a
16 part of the -- as part of the Adaptive Management Plan.

17 We should include a broader range of concerns
18 to be addressed beyond just four listed species.

19 We should include stakeholders and unbiased
20 agencies or maybe less-biased agencies in the
21 decision-making process and Bookham governance to
22 extend beyond the biased and vested interests that are
23 currently proposed to -- to run the process.

24 We should establish conditions to any permit
25 for firm triggers, guaranteed triggers. For example,

1 if there are negative impacts to people, wildlife or
2 fish -- and Earle talks about the plan being --
3 providing benefits to wildlife and fish in the Delta --
4 and if there's impacts to people and other communities
5 within or outside the Delta, we should start by turning
6 off the intakes. That should be a described option
7 with firm triggers associated with it.

8 Finally, we shouldn't defer hard decisions
9 about how to deal with uncertainty and firm triggers
10 and which management actions will be triggered to a
11 later planning process.

12 And within the range of actions, we should
13 include a cessation of operation of the facility.

14 Thank you.

15 MS. MESERVE: If we could have Mr. Stokely's
16 PowerPoint.

17 And if I might ask the Hearing Officer if we
18 could have a couple of extra minutes so Mr. Stokely
19 doesn't have to talk extremely fast. I think he's
20 under 15 minutes in his presentation.

21 CO-HEARING OFFICER DODUC: Yes. Actually, his
22 slide does have photos and whatnot, so I think it will
23 go pretty fast.

24 WITNESS STOKELY: Thank you.

25 (Exhibit displayed on screen.)

1 WITNESS STOKELY: My name is Thomas Stokely
2 and I'm very happy to be here to share my experiences
3 about the failure of adaptive management with the
4 Trinity River Restoration Program and how it relates to
5 the WaterFix Adaptive Management Program. I just had
6 to tell somebody.

7 Rebuttal -- My rebuttal testimony responds to
8 assertions by DWR witnesses Earle and Greenwood that,
9 due to adaptive management, the Petitioners' Project
10 will be reasonably protective of fish and wildlife.

11 Slide 2, please.

12 (Exhibit displayed on screen.)

13 WITNESS STOKELY: I'm going to give you
14 introduction and background, my Trinity River adaptive
15 management experience, some key principles for adaptive
16 management, why the proposed Adaptive Management Plan
17 for the tunnels is likely to fail, and why the
18 Petitioners' proposed use of adaptive management is
19 overly broad and inappropriate.

20 Slide 3, please.

21 (Exhibit displayed on screen.)

22 WITNESS STOKELY: Obviously, we're required by
23 law to include adaptive management for the Delta
24 conveyance structure. The Delta Adaptive Management
25 Plan includes actually the five same agencies that are

1 also on the Trinity Management Council: DWR, Bureau of
2 Reclamation, National Marine Fisheries Service, and the
3 U.S. Fish and Wildlife Service, and California
4 Department of Fish and Wildlife.

5 The Adaptive Management Plan will establish
6 the Interagency Implementation and Coordination Group,
7 the IICG, which will oversee development of the
8 Adaptive Management Plan.

9 Next slide, please.

10 (Exhibit displayed on screen.)

11 WITNESS STOKELY: My testimony focuses on the
12 serious deficiencies in the Delta tunnels' Adaptive
13 Management Plan as a future decision-making structure
14 and the unacceptably high likelihood that it will fail
15 to achieve its stated objectives to reasonably protect
16 fish and wildlife.

17 My critique of the Delta tunnels' proposed
18 Adaptive Management Plan is based largely on my
19 experience with the failure of the Trinity River
20 Restoration Program's Adaptive Management -- excuse
21 me -- Adaptive Environmental Assessment and Management
22 Program, AEAM, which is LAND-269. It's part of the
23 Trinity River Record of Decision. And I'll compare
24 that structure to the Delta tunnels.

25 When I was looking at the tunnels' Adaptive

1 Management Program, I relied very heavily on the
2 elements identified by the Delta Independent Science
3 Board, the DISB, as crucial to successful adaptive
4 management, and also the causes underlying failures.

5 In my opinion, the proposed Delta tunnels'
6 Adaptive Management Plan and the AEAM Program share
7 critically important deficiencies. In particular, they
8 both have fatally flawed decision-making processes with
9 built-in conflicts of interest.

10 Neither plan encourages meaningful stakeholder
11 and public support and participation in
12 decision-making. And both plans rely mistakenly on an
13 assumption of unlimited dedicated funding to implement
14 adaptive management.

15 My history with the Trinity River Restoration
16 Program goes back to 1988 when I was a County Planner
17 with Trinity County. I ran a small grant program under
18 the old Trinity River Task Force Trinity River
19 Restoration Program. I was also Assistant to the
20 Chairman of the Technical Coordinating Committee of the
21 Trinity River Task Force.

22 Later, in '94 to 2003, I was the CEQA lead
23 agency representative for the Trinity River Main Stem
24 Fishery Restoration EIS/EIR and also a Supplemental
25 EIS/EIR that ultimately led to implementation of the

1 Trinity ROD. It's kind of like 10 years on Groundhog
2 Day.

3 Following adoption of the 2000 ROD, I was also
4 Trinity County's alternate on the Trinity Management
5 Council, known as the TMC, which is very similar to the
6 IICG proposed for the Delta tunnels' Adaptive
7 Management Program.

8 I retired from Trinity County in late 2008
9 hoping to get away from it all, but then I was called
10 back into service in 2012 because my friend -- Well,
11 anyway, 2012.

12 So I was appointed by Interior Secretary Ken
13 Salazar to the Trinity Adaptive Management Working
14 Group. It's the Federal Advisory Committee for the
15 Restoration Program.

16 I represented commercial fishermen. Most of
17 my time on the group, I served as Vice-Chairman,
18 although during 2017, I also served as Chairman.

19 Next slide, please.

20 (Exhibit displayed on screen.)

21 WITNESS STOKELY: The documentations of
22 problems with the AEAM Program date back to 2004 with
23 this Trinity River Subcommittee Report -- TMC
24 Subcommittee Report, of which I was co-author.

25 Next slide, please.

1 (Exhibit displayed on screen.)

2 WITNESS STOKELY: There was also a situation
3 assessment by CER Associates in 2008. And actually
4 there were a number of suggestions there that were not
5 implemented.

6 Currently, there's a contract between the
7 Bureau of Reclamation and the Headwaters Corporation
8 for a TRRP program refinement review.

9 Next slide, please.

10 (Exhibit displayed on screen.)

11 WITNESS STOKELY: One is a report on goals and
12 objectives of the program.

13 Next slide, please.

14 (Exhibit displayed on screen.)

15 WITNESS STOKELY: Another is a summary of
16 interviews with program participants.

17 So Slide 9, please.

18 (Exhibit displayed on screen.)

19 WITNESS STOKELY: Again, I used State Water
20 Board 51 (reading):

21 "The Adaptive Management in the
22 Sacramento-San Joaquin Delta: How is it
23 used and how can it be improved?"

24 I used that to compare the two programs.

25 Next slide, please.

1 (Exhibit displayed on screen.)

2 WITNESS STOKELY: So they had eight
3 recommendations for a healthy Adaptive Management
4 Program.

5 I essentially looked at the first three, which
6 was:

7 Create a Delta Adaptive Management Team;

8 Support adaptive management with funding that
9 is dependable yet flexible;

10 And monitoring.

11 Slide 11, please.

12 (Exhibit displayed on screen.)

13 WITNESS STOKELY: I'm not going to read this.
14 But basically they talk about having a Delta Adaptive
15 Management Team that's really a team. It's not people
16 just working for their own agency but, in fact,
17 dedicated to the cause of adaptive management for the
18 Delta.

19 Next slide, please.

20 (Exhibit displayed on screen.)

21 WITNESS STOKELY: So, when I compared back to
22 the Trinity River Restoration Program, there was also
23 a -- The Trinity program has an Independent Science
24 Board and they issued a report in 2014. And they found
25 that, after 13 years of implementation, a formal

1 Adaptive Management Program was still needed.

2 Wow.

3 Next slide, please.

4 (Exhibit displayed on screen.)

5 WITNESS STOKELY: Let's see. Next one,
6 please.

7 (Exhibit displayed on screen.)

8 WITNESS STOKELY: Okay. So, the DISB had two
9 recommendations that are closely linked: Funding that
10 is dependable yet flexible; and also monitoring.

11 And they basically said, where they are not
12 accorded a high priority, adaptive management and
13 monitoring activities are like to languish when funds
14 are tight.

15 Moreover, available funds often come in
16 pulses, making it difficult to sustain the monitoring
17 data analysis and the evaluation that are essential to
18 doing adaptive management.

19 Slide 15, please.

20 (Exhibit displayed on screen.)

21 WITNESS STOKELY: So, comparing it back to the
22 Trinity program.

23 Basically, the Headwaters report of the
24 interviews of people with the Trinity program found
25 that science is a lower priority than construction

1 budgets.

2 And I have certainly found this to be the case
3 under both the current Trinity program as well as under
4 the old one. For instance, when there are cost
5 overruns, it usually comes out of the science and
6 monitoring budget.

7 Slide 16, please.

8 (Exhibit displayed on screen.)

9 WITNESS STOKELY: Conflict of interest.

10 This is a quote, again, from the Headwaters
11 report, and it basically suggested that it may be a
12 potential fatal flaw.

13 The Trinity Management Council, which is eight
14 members, they vote on the budgets that benefit their
15 own agencies in staffing and construction.

16 The TAMWG that I sit on has called them on
17 that many times, but there's been no change in it
18 because the voting rules of the group won't allow them
19 to change it without a unanimous vote.

20 So, it's kind of like we know it needs to be
21 fix but we can't get that group to fix it themselves.

22 Next slide, please.

23 (Exhibit displayed on screen.)

24 WITNESS STOKELY: Okay. This is from the
25 Department of Interior's technical guide for adaptive

1 management.

2 The very first step they say, stating that
3 stakeholders should be partners.

4 A key failure of the Trinity Adaptive
5 Management Program is that Interior did not follow its
6 own recommendations.

7 The TRRP stakeholders that were included in
8 the TAMWG that I sat on were never treated as equal
9 partners to make decisions. We made recommendations to
10 the management council and then the management council
11 would make its own decisions.

12 I won't go into all the decisions they made
13 that were inconsistent with the TAMWG recommendations,
14 but there were many.

15 Next slide, please.

16 (Exhibit displayed on screen.)

17 WITNESS STOKELY: And then, finally, to top it
18 all off, I mentioned this in the previous testimony
19 under cross-examination: That in November 2017, the
20 Interior Department disbanded the Trinity Adaptive
21 Management Working Group.

22 They said that the paperwork had not been
23 submitted to continue the group but, in fact, a Freedom
24 of Information Act request by the Eureka Times Standard
25 in this particular exhibit, LAND-271, found that, in

1 fact, the paperwork had been filed.

2 So, basically, Interior violated its own
3 guidelines for adaptive management and then actually
4 gave up any semblance of formal public participation in
5 the AEAM program with the elimination of the Federal
6 Advisory Committee.

7 Slide 19.

8 (Exhibit displayed on screen.)

9 WITNESS STOKELY: So in regard to the Delta
10 Independent Science Board, they found in their
11 questionnaire -- which they also did similar to
12 Headwaters. They found that all Respondents agreed
13 that monitoring is not adequately funded.

14 Slide 20.

15 (Exhibit displayed on screen.)

16 (Timer rings.)

17 CO-HEARING OFFICER DODUC: Go ahead and
18 finish, Mr. Stokely.

19 WITNESS STOKELY: Thank you. It'll be pretty
20 quick.

21 They also identified new investments are
22 needed for staff capacity, research capacity and stable
23 funding.

24 And the problem we always see is that if
25 there's not stable funding from another source, you

1 just take it, rob it from Peter -- take it from Peter
2 to pay Paul.

3 Next slide, please.

4 (Exhibit displayed on screen.)

5 WITNESS STOKELY: And then, as noted in
6 Jeffrey Michael's testimony, which is South Delta Water
7 Agency, there's considerable evidence that the WaterFix
8 is not financially feasible. I won't go into all the
9 details there. I'm sure you've heard it all.

10 But next slide.

11 (Exhibit displayed on screen.)

12 WITNESS STOKELY: This relates to a problem in
13 regard to meeting Water Code Section 85989, which
14 basically says there needs to be contractual . . .
15 contracts in place to secure the funding before the
16 Project is initiated.

17 And since they don't have the funding now for
18 the Project, let alone for adaptive management, there's
19 a really big question about whether adaptive management
20 will be adequately funded.

21 And if it's not adequately funded, how can
22 there be reasonable protection for fish and wildlife
23 and other public trust resources, or that approval of
24 the Project would not be contrary to the public
25 interest?

1 Next slide, please.

2 (Exhibit displayed on screen.)

3 WITNESS STOKELY: A key document that I
4 reviewed in preparing my testimony was the Attachment 5
5 to State Water Board 107, which is the proposed MOU for
6 the Interagency Implementation and Coordination Group.

7 And it's, again, similar to the Trinity
8 program. It excludes key stakeholders so they're not
9 considered in the decision-making process. And it's
10 very likely that adaptive management will fail because
11 of that.

12 In addition, a majority of the IICG members --
13 which is Bureau of Reclamation, DWR, and the State
14 Water Contractors, and San Luis Delta-Mendota Water
15 Authority -- they have a vested interest in increased
16 Delta exports, and they have a majority on that group.

17 Next slide, please.

18 (Exhibit displayed on screen.)

19 WITNESS STOKELY: In addition, the MO -- the
20 agreement for implementation proposes to have the
21 agencies operate by consensus with a lengthy
22 non-binding appeal process through establishment of an
23 Appeals Panel.

24 Some of the problems that undermine the AEAM
25 Program are also likely to undermine the Delta tunnels'

1 Adaptive Management Program.

2 First of all, the voting rules have been
3 clearly established as consensus. My experience in the
4 case of the Trinity is that the Trinity Management
5 Council uses a super majority. Either super majority
6 or consensus is often used to coerce a decision that is
7 to one or more members' advantage.

8 So, for instance, on the Trinity, you have to
9 have seven out of eight votes to pass a motion. If two
10 members don't like that motion, they can basically
11 filibuster it until everybody finally agrees to a
12 motion that they will agree to which will benefit them.

13 I can see the same thing kind of happen --
14 happening with the IICG. In fact, because of the
15 consensus requirement, it'll be even more difficult to
16 make decisions. And I can assure you, with that kind
17 of decision-making processor, you have very long
18 meetings, very frustrating meetings.

19 Next slide, please.

20 (Exhibit displayed on screen.)

21 WITNESS STOKELY: Then the public
22 participation, again, similar to the Trinity program,
23 is that they will have a -- a public group called the
24 CSAMP Policy Group, and it's proposed as a stakeholder
25 group, but it does not represent important Delta

1 interests, like Delta agriculture, or local public
2 agencies, and it includes only one representative of
3 in-Delta and upstream water users. As far as I know,
4 it's not a decision-making body, either.

5 So Slide 26.

6 I'm getting close.

7 (Exhibit displayed on screen.)

8 WITNESS STOKELY: This is one of the other
9 findings by the DISB in State Water Board 51:
10 Recognize where it's not appropriate.

11 And I think that, in this particular case,
12 the -- the Trinity program had some significant
13 advantages over the Delta tunnels in terms of adaptive
14 management yet even it failed to adapt -- to implement
15 an effective Adaptive Management Program.

16 In particular for the Trinity: Annual
17 instream flow volumes were fixed by water year; impacts
18 to land owners along the Trinity River were largely
19 mitigated by funding commitments for new bridges;
20 purchase of homes in the floodplain and replacement and
21 repair of water systems that would be damaged by river
22 flows. There was also some regulatory flexibility
23 provided by the Regional Board.

24 Thus, many controversial issues were resolved
25 and not subject to resolution through a consensus-based

1 adaptive management process.

2 For the proposed Delta tunnels' Adaptive
3 Management Program, they're proposing adaptive
4 management for issues that I believe may not be
5 appropriate for review through adaptive management.

6 For instance, they propose to use adaptive
7 management to mitigate farmland losses and address
8 water quality impacts.

9 It appears that the Delta tunnels' Adaptive
10 Management Plan is really being used to defer the
11 adoption of mitigation for significant unmitigated
12 impacts to loss of farmland, and water quality
13 impact -- impacts, with the result that significant
14 environmental and financial commitments are undefined
15 and unassured.

16 The Delta tunnels' Adaptive Management Program
17 also proposes to use adaptive management to resolve
18 numerous controversial issues. That would include
19 spring outflow, Fall X2 criteria, and South Delta
20 Operational Criteria.

21 Changing these parameters outside of the
22 permitting process could also affect other users of
23 water and members of the public who are not part of the
24 adaptive management process.

25 The Petitioners have deferred critical

1 decisions on a vast range of key operational challenges
2 that the Delta tunnels will face for implementation.

3 As proposed, the Delta tunnels' Adaptive
4 Management Plan does not include safeguards that would
5 ensure changes in operations are protective, or that
6 changes in operations developed under the Adaptive
7 Management Plan will not result in injury to public
8 trust resources, especially fish and wildlife or other
9 legal users of water.

10 In my opinion, the Plan's critical
11 deficiencies, including the lack of -- the lack of
12 meaningful opportunity for stakeholders, both water
13 users and environmental, to participate in the process,
14 the absence of dependable and flexible financing, and
15 the lack of clear and enforceable conflict of interest
16 provisions are failed to the Delta tunnels' Adaptive
17 Management Plan as proposed and should result in the
18 denial of the Petition.

19 Thank you.

20 CO-HEARING OFFICER DODUC: Thank you.

21 All right. With that, I will ask the
22 Department and State Water Contractor to come up for
23 their cross.

24 Miss Morris.

25 MS. MORRIS: Thank you.

1 While Mr. Berliner's coming up, I had a
2 request to clarify that, after this panel, we will move
3 to Mr. Shutes and Mr. -- and the other CSPA witness
4 directly after this and then to Mr. Burke?

5 Is that -- That's what I understand and I --

6 CO-HEARING OFFICER DODUC: My understanding
7 is, the -- the next rebuttal testimony will be
8 presented by CSPA with witnesses Cannon and Shutes, and
9 after that, it will be Mr. Burke.

10 MS. MORRIS: Okay. And then I wanted to
11 provide the Board with -- the Hearing Officers with an
12 update -- update on that cross-examination for CSPA.

13 I think we'd originally estimated 45 minutes,
14 but in going through it again last night, I think it's
15 really more like an hour and a half for the combined
16 Department and Water Contractors.

17 CO-HEARING OFFICER DODUC: And that would be
18 for Cannon and Shutes.

19 MS. MORRIS: That's correct.

20 And our original estimate I think right now
21 for Burke was two hours. That is still correct.

22 CO-HEARING OFFICER DODUC: All right. Given
23 that the estimate for cross-examination of this panel
24 by DWR and State Water Contractors is 45, and then I
25 believe San Luis/Delta-Mendota has requested 10

1 minutes, what I'd like to do is get through those two
2 cross-examinations and then take our lunch break.

3 But we'll see how it goes.

4 In any case, Mr. Berliner, I would like to
5 keep -- give the court reporter a break no later than
6 11:15.

7 MR. BERLINER: Okay.

8 CO-HEARING OFFICER DODUC: So if we could find
9 a nice breaking point in your cross-examination
10 questioning.

11 MR. BERLINER: I'll try to do that, and . . .

12 CO-HEARING OFFICER DODUC: And I don't believe
13 the microphone is on or --

14 MR. BERLINER: Yes.

15 CO-HEARING OFFICER DODUC: -- you need to get
16 it closer to you.

17 MR. BERLINER: I need to get closer.

18 And I believe I indicated that I thought cross
19 would be closer to an hour.

20 CO-HEARING OFFICER DODUC: Yes, which would
21 get us to about 11:45-ish and then --

22 Okay. With the break, maybe we will not get
23 to San Luis/Delta-Mendota, but we will proceed; okay?

24

25

1 CROSS-EXAMINATION BY

2 MR. BERLINER: Good morning, gentlemen. My
3 name's Tom Berliner, and I'm an attorney for the
4 Department of Water Resources. Welcome.

5 I'm going to start with you, Dr. Shilling.
6 And I'm going to be going through your testimony
7 basically from start to finish on the subjects that you
8 raise.

9 And in that regard, I'd like to start with
10 your PowerPoint presentation. And the slides weren't
11 numbered, but towards the very beginning was a list of
12 issues that you raised regarding --

13 (Exhibit displayed on screen.)

14 MR. BERLINER: There we go.

15 -- regarding Adaptive Management Plans.

16 I wanted to ask you about this list, if I
17 might.

18 WITNESS SHILLING: Is it this list?

19 MR. BERLINER: Yes.

20 WITNESS SHILLING: Okay.

21 MR. BERLINER: Okay. Before I do that,
22 though, I'd like to get a little background about --
23 about your experience -- hands-on experience with --
24 with Adaptive Management Plans.

25 WITNESS SHILLING: (Nodding head.)

1 MR. BERLINER: When did you first start
2 working on this proceeding?

3 WITNESS SHILLING: On this proceeding?

4 MR. BERLINER: Yes. The California WaterFix.

5 WITNESS SHILLING: I've given two previous
6 testimonies on other issues earlier this year, and so
7 I'm not sure exactly. I can look, because I'm sure the
8 first file I started is an indication of when I
9 started.

10 MR. BERLINER: So would --

11 WITNESS SHILLING: It's all right here.

12 MR. BERLINER: It would be roughly the
13 beginning of 2018 or the latter part of 2017.

14 WITNESS SHILLING: Yeah. Second half of '17 I
15 think is more -- is more accurate, yeah.

16 MR. BERLINER: Okay. And your initiation into
17 this was -- was in the context of preparing testimony;
18 is that correct?

19 WITNESS SHILLING: In terms of a formal
20 participation. I've been following it, like, all
21 Bay-Delta processes since '97 or '8, whenever I was
22 aware of the ROD and the initiation of the first -- the
23 early CALFED stuff.

24 MR. BERLINER: So you've sort of kept abreast
25 of --

1 WITNESS SHILLING: Kept abreast.

2 MR. BERLINER: -- CALFED, BDCP.

3 WITNESS SHILLING: Yeah, what are proposed HCP
4 and eventually the Delta tunnels.

5 MR. BERLINER: And when did you start working
6 on the testimony you're presenting today?

7 WITNESS SHILLING: Writing?

8 MR. BERLINER: No. Preparing for it. When
9 you first would say, "Well, you know, I'm giving it
10 some thought."

11 WITNESS SHILLING: Okay. So I'm going to look
12 it up since you've asked twice in a similar kind of
13 question.

14 MR. BERLINER: Sure.

15 (Pause in proceedings.)

16 WITNESS SHILLING: Looks like March or April
17 was the -- maybe April was the beginning of the
18 thinking about the adaptive management testimony.

19 MR. BERLINER: And were you hired at that
20 point by these attorneys to start working on that or
21 was it through some other means?

22 WITNESS SHILLING: It was through them.

23 MR. BERLINER: And when they hired you, what
24 did they tell you was the reason for hiring you?

25 WITNESS SHILLING: That there was a plan being

1 put forward by DWR. I think, by then, the testimony
2 had already taken place by the witnesses, and they
3 wanted somebody with -- a scientist with expertise in
4 different aspects of adaptive management to discuss
5 what was being discussed -- what was being put forward
6 by DWR.

7 CO-HEARING OFFICER DODUC: Mr. Berliner, may I
8 ask why this is important?

9 MR. BERLINER: Yes.

10 Dr. Shilling is presenting testimony as an
11 expert on adaptive management. And I want to -- I'm
12 going to get into some more specifics of his experience
13 with adaptive management.

14 But I wanted to find out sort of his level
15 of . . . exposure, if you will, to this process and
16 his -- his knowledge about the adaptive management
17 portion of the proceeding.

18 CO-HEARING OFFICER DODUC: All right.

19 MR. BERLINER: I'm not going to be lingering
20 on this.

21 CO-HEARING OFFICER DODUC: Thank you.

22 MR. BERLINER: And had you, prior to your
23 engagement, been reviewing program elements just
24 because of your own academic interest prior to that
25 time with respect to adaptive management?

1 WITNESS SHILLING: No, not the -- not that
2 component.

3 I was -- I had reviewed last -- starting last
4 year the . . . different Proposed Project elements that
5 might have different kinds of impacts in the Delta,
6 what those might mean to people.

7 I mean, I spent a fair amount talking about
8 noise and -- and communities nearby, potential impacts
9 on -- on wildlife and fish, potential water quality
10 impacts.

11 And that was -- that was most of the -- my
12 research prior to April.

13 MR. BERLINER: Were you involved in the
14 Comprehensive Everglades Restoration Project?

15 WITNESS SHILLING: No.

16 MR. BERLINER: Have you ever designed an
17 Adaptive Management Plan?

18 WITNESS SHILLING: I've contributed to an
19 adaptive -- an interesting General Plan, El Dorado
20 County, which isn't necessarily known for -- for things
21 like this.

22 But they wanted an adaptive component to their
23 General Plan in terms of wildlife habitat, connectivity
24 impacts to those from the General Plan activities, and
25 also for the Oak Woodlands Program.

1 They had to -- I think there was a Court Order
2 for them to revise their General Plan years ago, and --
3 and this process came out of that eventually.

4 And so they wanted a way of -- So there was a
5 Monitoring Plan and they wanted a way of revisiting
6 impacts in order to make better decisions. At least,
7 that was the theory of what we were doing.

8 MR. BERLINER: And was that --

9 WITNESS SHILLING: That's one example.

10 MR. BERLINER: And was that a -- an Adaptive
11 Management Plan along the lines of -- of what you
12 discussed in your testimony today with multifaceted how
13 decisions are made, governance issues, et cetera?

14 WITNESS SHILLING: Yeah. And a couple
15 different advisory committees. There was a
16 Political/Stakeholder Advisory Committee, there was a
17 Technical Advisory Committee. And then, ultimately,
18 the Board of Supervisors would make decisions about
19 whatever -- what kinds of decisions would be made in
20 response to new information.

21 MR. BERLINER: And was that a Monitoring Plan
22 or an adaptive management?

23 WITNESS SHILLING: The part that I worked on
24 most was the Monitoring Plan that was part of
25 the -- And it wasn't called an Adaptive Management Plan

1 for the General Plan.

2 But, essentially, they constructed an adaptive
3 management process as part of this component of the
4 General Plan. So it's just one part of the General
5 Plan for the county.

6 MR. BERLINER: I take it you never implemented
7 an Adaptive Management Plan.

8 WITNESS SHILLING: If you mean taking the
9 actions as a responsible agency, no, that's not my
10 role. I'm an academic.

11 (Pause in proceedings.)

12 MR. BERLINER: So, let's turn to the list that
13 we pulled up.

14 As I understand it, this is a general
15 literature review of elements that you would or might
16 find in an Adaptive Management Plan; correct?

17 WITNESS SHILLING: Not generically. I mean, I
18 didn't pick an impossible thing that one could include
19 because they weren't all relevant necessarily to what
20 was proposed here.

21 And so this was more, if you wanted to succeed
22 in the plan that was proposed in -- in the testimony by
23 DWR, then these are things that would be relevant.

24 MR. BERLINER: So these are things to think
25 about as part of the Adaptive Management Plan for the

1 WaterFix?

2 WITNESS SHILLING: I think, in the literature,
3 you'll find that they're not just think about, they're
4 do. You have to do them all, and they're not -- It's
5 not a menu to pick three out of five.

6 MR. BERLINER: Okay.

7 (Pause in proceedings.)

8 MR. BERLINER: And I know we have some
9 difference of opinion about -- about this Adaptive
10 Management Plan, and you're critical of it. So I don't
11 want to get into a debate with you about the extent to
12 which these are included or not included or adequately
13 included or inadequately included.

14 You know, there's very little point in arguing
15 with a university professor, so I won't engage in that.

16 WITNESS SHILLING: And I won't argue with you
17 about water law.

18 (Laughter.)

19 MR. KEELING: We have a good understanding.

20 On Page 6 of your testimony -- And if you have
21 it in front of you, feel free to take a look at it.

22 And, Mr. Long, if we could pull that up. I
23 believe it's LAND-240.

24 (Exhibit displayed on screen.)

25 MR. BERLINER: Thank you.

1 MR. LONG: All I have is LAND-240-Errata.

2 MR. BERLINER: Errata.

3 And down at the bottom of Page 6.

4 (Exhibit displayed on screen.)

5 MR. BERLINER: Scroll up just a touch.

6 (Exhibit displayed on screen.)

7 MR. BERLINER: That's it.

8 So, you indicated that the DWR witnesses
9 failed to provide evidence of the Plan's comprehensive
10 coverage of well-known issues in the Delta.

11 (Pause in proceedings.)

12 MR. BERLINER: And if it's helpful, we can
13 pull up the Adaptive -- the Adaptive Management Plan
14 from the ITP, but I expect you probably can answer
15 these questions without it. But if you'd like to see
16 it, let's by all means pull it up. So just indicate
17 whether you'd like to have it in front of you.

18 WITNESS SHILLING: Okay. I'll wait for your
19 questions.

20 MR. BERLINER: Isn't it correct that the key
21 uncertainties that are identified by the groups
22 studying the Delta ecosystem are based on current Delta
23 science in five areas of focus?

24 WITNESS SHILLING: I will pull it up. And if
25 you could tell me which page num --

1 MR. BERLINER: Sure.

2 WITNESS SHILLING: -- page number you're
3 referring to.

4 MR. BERLINER: So if we could pull up,
5 Mr. Long, State Water Board Exhibit 107, Attachment 5.

6 (Exhibit displayed on screen.)

7 MR. BERLINER: And go to Page 8.

8 (Exhibit displayed on screen.)

9 MR. BERLINER: That's it.

10 Oh, there's -- there's four.

11 WITNESS SHILLING: There's four on this page
12 and one on --

13 MR. BERLINER: And there should be one more.

14 If you could scroll down --

15 (Scrolling through document.)

16 MR. BERLINER: No, we're not going to quite
17 get it.

18 So, for purposes of my questions, it's -- it's
19 a pretty simple yes-no question.

20 Do we agree that there are -- there are five
21 focus areas that they've looked at?

22 WITNESS SHILLING: There are five focused
23 areas.

24 MR. BERLINER: And these are: Listed fish
25 performance; the Yolo Bypass; tidal wetland

1 restoration; riparian, channel margin and floodplain
2 restoration; and Delta outflow.

3 WITNESS SHILLING: Those are the titles of the
4 sections but the text within limits most of them to
5 just how each of those things impact listed specie --
6 listed fish species.

7 MR. BERLINER: Okay. We'll get to that.
8 You're a little ahead of me.

9 So, you've kind of anticipated one of my
10 questions.

11 You disagree with the scope of these five
12 focus areas; correct?

13 WITNESS SHILLING: No.

14 MR. BERLINER: You feel it should be broader?

15 WITNESS SHILLING: I don't disagree that the
16 scope exists. And I think if you went by the five
17 headings, you cover a lot of the issues in the Delta,
18 not all of them.

19 And -- But the fact that something like
20 riparian, margin and floodplain restoration is limited
21 to how they'll benefit listed terrestrial and -- and it
22 says "terrestrial" by the way, which is not a listed
23 fish species, terrestrial and fish species -- suggests
24 that these are -- and this is part of the -- giving the
25 illusion of a large comprehensive plan but, really, it

1 all comes back down to implementing four -- just those
2 four species.

3 So, the scope appears broad, but when you read
4 inside, you'll see that it's very limited and narrow.

5 MR. BERLINER: Okay. So, it -- Let's just be
6 clear.

7 You said it's if they don't exist. I think,
8 what you're saying, if I understand your response, is,
9 they exist as to certain species but not others.

10 WITNESS SHILLING: There's description for how
11 they would benefit certain species, but it's not at the
12 level that these subheadings would indicate which
13 covers a lot of different ecosystem domains in the
14 Delta.

15 I'm not sure if I'm answering your question.
16 You can tell me.

17 MR. BERLINER: Well, let's come back, if we
18 need to. I might be able to get to it another way.

19 (Pause in proceedings.)

20 MR. BERLINER: You're not critiquing the
21 current science of the Delta; correct?

22 WITNESS SHILLING: No, I'm basically not. I
23 mean, it -- There's not enough of it maybe or it's not
24 connected to management, but I think that's part of
25 what we're talking about today, too.

1 So I'm not -- I'm not critiquing their
2 results, the proc -- the methods used, although the
3 Delta Smelt methods are obviously up in the air,
4 but . . . how they're used in this process.

5 MR. BERLINER: Okay. And your critique is --
6 is not of the science itself but over the Adaptive
7 Management Plan and how it's using the science.

8 WITNESS SHILLING: How the -- It is or isn't.
9 Or you can't even tell. I mean, that's -- that's the
10 point, is that we have this very -- we have a lot of
11 information about the Delta. It's not clear that
12 there's a commitment to using that in an adaptive
13 management mood.

14 MR. BERLINER: So you're -- you're aware that
15 the participation on the Adaptive Management Plan
16 includes the State and Federal fish agencies; correct?

17 WITNESS SHILLING: Yes.

18 MR. BERLINER: Okay. And they also have
19 jurisdiction over terrestrial species; correct?

20 WITNESS SHILLING: They do, although their
21 jurisdiction here would be limited by the ITP, which
22 doesn't include those species.

23 MR. BERLINER: You're referring to the
24 Department of Fish and Wildlife -- correct? -- with
25 respect to the ITP?

1 WITNESS SHILLING: The ITP is special
2 monitoring service and NMFS, I think, because it's a
3 Federal Incidental Take Permit. The 2081 permit would
4 be DFW.

5 MR. BERLINER: Just want to make sure we're
6 talking . . .

7 Are you suggesting that Fish and Wildlife
8 Service is going to be ignoring terrestrial species or
9 not including all of them?

10 WITNESS SHILLING: I don't think Fish and
11 Wildlife Service staff, like many agency staff, will
12 ignore the things that under their purview.

13 But if they're within a stretch or it's
14 limited to just discussion of certain species, then
15 they're either -- they'll either toe that line -- You
16 know, that'll -- that'll be essentially what their --
17 their mission is, just to talk about that.

18 Now, if they go beyond that, that's great.
19 But as currently described, they -- they have to stay
20 within that box on the ICG which is just to talk about
21 these four listed species.

22 (Pause in proceedings.)

23 MR. BERLINER: Is it your understanding that
24 if there's a -- a Federal -- Federal protected species
25 either under the Endangered Species Act or the Magnuson

1 Stevens Act, that Fish and Wildlife won't be paying
2 attention to those species.

3 WITNESS SHILLING: I think they will be. And
4 maybe that would come up outside of -- through a
5 different consultation or a different permitting
6 process outside of the Adaptive Management Plan.

7 But that's part of the point, is that the
8 scope is so narrow that a lot of things will come up
9 outside of the Plan, and a lot of those have to do with
10 operation of the facility.

11 So if the operation of the facility is all
12 about just those four listed species, but the facility
13 is actually impacting all of these other things, then
14 you'll just end up with a fairly complicated set of
15 procedures surrounding the very narrow Adaptive
16 Management Plan.

17 MR. BERLINER: So your point is not that these
18 species would be ignored but that they might be dealt
19 with outside of the Adaptive Management Plan.

20 WITNESS SHILLING: If there's a way for that
21 to happen. If the -- If it's considered that the --
22 Everything about the facilities' impact is covered in
23 the Adaptive Management Plan, which is how it's
24 described and, actually, how do you pose the question
25 about these five elements? Isn't it broad?

1 So the appearance is that it broadly covers
2 those. The reality is that it deals with four listed
3 species, which is just one element of the Delta system.
4 Or four elements.

5 MR. BERLINER: Thank you. Appreciate that.

6 (Pause in proceedings.)

7 MR. BERLINER: Did I understand your
8 testimony: That you are suggesting that, in deciding
9 whether or not to construct the tunnels, that an
10 Adaptive Management Program should be developed?

11 WITNESS SHILLING: Yes. That was a great
12 opportunity to use adaptive management to understand
13 the potential impacts, the actual impacts, and the
14 potential benefits or not of the proposed mitigations,
15 and potentially change how everything is built along
16 the way as you go.

17 MR. BERLINER: I'm not clear on your critique
18 on that. I know that you cite the Doremus article
19 extensively. And she makes a point in her article
20 that, with major infrastructure projects, adaptive
21 management may have its place but it's not part of the
22 decision-making process, for instance, as to whether or
23 not to build a dam, or build tunnels, or what have you.

24 WITNESS SHILLING: She says it's typically
25 not. But she also says: Don't make irreversible

1 decisions and then attempt to do adaptive management.

2 MR. BERLINER: So, are you suggesting --
3 How -- How would you -- you suggest -- Well, let me, so
4 it's not so open-ended.

5 (Laughter.)

6 MR. BERLINER: Otherwise, I blow my time limit
7 big time.

8 You're not suggesting that tunnels be built
9 and then see how they behave and then decide whether or
10 not to operate them; correct?

11 WITNESS SHILLING: No, not exactly.

12 I'm proposing, actually, that, even before the
13 decision to build tunnels, you would do what a lot of
14 other systems do, and that's experiment with what's a
15 really good idea? What's really going to work? And
16 then do that thing.

17 So, even prior to the decision, you would
18 experiment with what's the best way to -- to respond to
19 climate change, to meet water demands to the south.

20 And, then, if it turns out that we can do some
21 of these flow changes, all the things that are proposed
22 to -- and -- and the proposition is that, if they have
23 no harm in the Delta, do those first before building a
24 \$45 billion facility, and so that you're sure about the
25 things that you're making irreversible decision about.

1 And then, once that decision's made, then the
2 construction phase, because it's so long and has so
3 many moving parts, it can also be adaptively managed.

4 I deal a lot with transportation, which is
5 thought of as a -- it's not possible to adaptively
6 manage, but adaptive management of transportation takes
7 place all the time. And it is a learning process
8 resulting in new management decisions.

9 Now, it's hard to move infrastructure, but
10 it's possible to change some of those decisions as you
11 go if you intentionally decide you're going to have a
12 learn-and-do process. And that was the point.

13 The National/State Water Board -- There's a
14 State Water Board document that brought up the
15 construction phase in just one brief sentence as a
16 possible application of adaptive management.

17 So I think that that -- those phases of the --
18 of the complete package of the facility, the
19 formulation of it, the construction of it, prior to
20 operation, all were places you could use adaptive
21 management.

22 MR. BERLINER: And I take it, since you've
23 been following this for awhile, you're aware of the
24 history of the Peripheral Canal, the CALFED efforts,
25 the BDCP efforts, all of those that analyzed various

1 ways of moving water through the Delta, around the
2 Delta, et cetera.

3 WITNESS SHILLING: Not exactly. I don't think
4 that that was ever an explicit experimental program, to
5 figure out what's the best way -- In other words, ask
6 the question in the way you -- you're implying it.

7 That would have been a big question.
8 Everybody would have noticed. And it would have
9 required a lot of money to really experiment with these
10 different things properly before making the decision.

11 I think that these decisions aren't made in
12 those places. They're made by people who can decide to
13 spend that amount of money.

14 MR. BERLINER: Are you aware that several
15 hundred million dollars was spent by the State and
16 Federal Contractors prior to arriving at a conclusion
17 that the WaterFix Project should be built? And that
18 those dollars were spent on researching different
19 alternatives and studying how they would work and
20 modeling them?

21 MR. KEELING: Objection: Relevance.

22 CO-HEARING OFFICER DODUC: Before you object,
23 Mr. Keeling, Mr. Berliner just articulated the exact
24 question I was thinking, so please don't object.

25 WITNESS SHILLING: All right. Well, I'll

1 consider it an answer to both of you, then.

2 MR. BERLINER: More -- More to the Board
3 Chair, the Hearing Officers.

4 WITNESS SHILLING: I wasn't aware of the price
5 tag. I was aware of the study.

6 I do a lot of modeling and modeling is not an
7 experimentation with management, it's not an
8 experimentation with ecosystem responses to management.

9 Models are as good as the data inputs,
10 obviously, and people running them.

11 I've seen some of the models that have come
12 out of the Delta tunnels' analyses. I don't think all
13 of them are that way. Probably, at least some of them
14 are -- are really good. But it doesn't mean that you
15 know what's going to happen when you -- you have --
16 when you conduct a certain experiment.

17 There are other large water infrastructure
18 processes in the U.S. that have used intentional
19 changes in water management to see responses in order
20 to determine what kinds of management actions should be
21 taken.

22 We didn't go through that. We -- We had
23 desktop modeling, essentially. There was -- There have
24 been analyses of the unintentional experiments that do
25 happen with nature and people's use of natural

1 resources. But the -- the modeling that you refer to
2 is not the same as the experimentation in adaptive
3 management.

4 CO-HEARING OFFICER DODUC: Perhaps I was
5 thinking of a different question, then, Dr. Shilling,
6 because I was thinking of more than just the modeling
7 that was done as part of various CEQA and environmental
8 documents. I was thinking more in terms of the decades
9 of discussions and analysis.

10 I mean, this issue of water conveyance has
11 been around for quite awhile.

12 WITNESS SHILLING: Um-hmm.

13 CO-HEARING OFFICER DODUC: But you don't view
14 those decades of experience as some form of adaptive
15 management?

16 WITNESS SHILLING: No. I think, actually, a
17 lot of the CALFED and BDC process was not termed
18 adaptive management but had a lot of elements of
19 adaptive management.

20 CO-HEARING OFFICER DODUC: Yes.

21 WITNESS SHILLING: Yeah.

22 But when you're -- But, in all of that, we
23 were -- or people were operating the South Delta
24 intakes on a -- there was a lot of spot-checks of what
25 are the im -- potential impacts, the actual impacts.

1 Sometimes they got turned off even.

2 But that was sort of incremental
3 learn-as-you-go, and at no point was there a however --
4 \$40 billion investment in a single facility that would
5 fundamentally change the flows through the Delta.

6 So, that's -- That -- Because of the scale of
7 this facility, it would demand a certain kind of
8 experimentation. For example, what's the worst-case
9 scenario for diversion? 40 percent of the flow at low
10 flows of the Sacramento? What's the consequence for X2
11 or for in-Delta water users or for Delta Smelt and
12 Salmon and so on.

13 So, there are things that are possible or
14 proposed in the Delta Tunnels Project that we don't
15 know about that the -- all the CALFED science and BDCP
16 science haven't told us.

17 CO-HEARING OFFICER DODUC: I return to you,
18 Mr. Berliner.

19 MR. BERLINER: Thank you. I'd be happy to tag
20 team with you anytime.

21 CO-HEARING OFFICER DODUC: Strike that.

22 (Laughter.)

23 MR. BERLINER: This might be a good time for a
24 break.

25 CO-HEARING OFFICER DODUC: Then let's go ahead

1 and take that break.

2 And we will return at 11 . . .

3 Would a short break be okay? 11:25?

4 THE REPORTER: Yeah, that's fine.

5 CO-HEARING OFFICER DODUC: Okay. 11:25.

6 (Recess taken at 11:13 a.m.)

7 (Proceedings resumed at 11:25 a.m.:)

8 CO-HEARING OFFICER DODUC: All right. 11:25.

9 We're back.

10 Mr. Berliner, please continue.

11 MR. BERLINER: Thank you.

12 (Pause in proceedings.)

13 MR. BERLINER: We were talking about the --
14 the scope of experimentation and study before deciding
15 to proceed with the tunnels.

16 Do you recall that?

17 WITNESS SHILLING: (Nodding head.)

18 MR. BERLINER: Are you -- You indicated
19 earlier that you were familiar with modeling. I take
20 it you're not a modeling expert, however; correct?

21 WITNESS SHILLING: It depends what you . . .

22 My computer's about to die, so I can't refer
23 to things on there anymore so you're going to have to
24 put it on the screen.

25 I have done a fair amount of GS modeling,

1 GS -- geospatial modeling, beginning in '98, '99.

2 MR. BERLINER: Okay.

3 WITNESS SHILLING: And a lot of it was
4 decisions -- Well, you can --

5 MR. BERLINER: Yeah. Let me ask a couple
6 specifics.

7 Are you familiar with the DSM-II model?

8 WITNESS SHILLING: Yeah. I have never run the
9 DSM-II model. I know how it works and --

10 MR. BERLINER: You know what it is.

11 WITNESS SHILLING: -- it's been in my world a
12 long time.

13 MR. BERLINER: Okay. Are you familiar with
14 the DSM-II modeling results that have been presented in
15 this proceeding regarding the comparative impacts of
16 the WaterFix as compared to the No-Action Alternative?

17 WITNESS SHILLING: This was in my preparations
18 for the last time I testified, and so it was last year
19 when I was reading through -- and I think it was in the
20 CEQA documentation -- and comparing likely different
21 flow conditions under different operational criteria or
22 under different hydrological regimes.

23 So I recall reading it but not the specifics.

24 MR. BERLINER: I'm not going to ask you about
25 specifics.

1 WITNESS SHILLING: Okay.

2 MR. BERLINER: I take it you're also familiar
3 with the CalSim model, then?

4 WITNESS SHILLING: Yes.

5 MR. BERLINER: And are you familiar with
6 SALMOD? Salmon model?

7 WITNESS SHILLING: I think I read about it,
8 but I'm not familiar enough to answer any specific
9 question.

10 MR. BERLINER: Well, so, in -- in general --
11 I'm not going to get into any specifics at all.

12 In general, though, are you familiar with the
13 fact that there were various alternatives looked at?
14 The -- The WaterFix is Alternative 4A H3+.

15 Are you aware that there's a whole string of
16 different alternatives about how this Project might be
17 operated?

18 WITNESS SHILLING: Yes.

19 MR. BERLINER: And you're aware that that was
20 not done through what you refer to in your testimony as
21 active adaptive management but through essentially
22 passive adaptive management; in other words, through
23 modeling?

24 WITNESS SHILLING: Well, passive adaptive
25 management is not modeling. There's not a one-to-one

1 relationship.

2 But the -- the range of alternatives were
3 essentially primarily constructed diversion
4 alternatives, mostly focused on the North Delta intake
5 with different ways of getting the water around down
6 south.

7 And those are modeling exercises for how you
8 could do something, but it's not the same as any of
9 the -- whether it's adaptive -- active adaptive,
10 passive adaptive, or the degraded form of trial and
11 error.

12 It's a desktop exercise to see what might
13 happen under different regimes that we think we can
14 predict to systems that we don't understand very well,
15 assuming that everybody plays ball.

16 That's not the same as active adaptive
17 management with experimentation where you actually
18 intentionally manipulate management or other conditions
19 to see what happens, or passive, which is where you see
20 how things are changing, and you attempt to modify
21 management to reduce impacts. So that's a
22 learn-as-you-go approach, which is passive, which
23 doesn't necessarily rely on models, although these days
24 models are brought into almost all of these decisions.

25 But certainly all three -- active adaptive

1 management, passive and trial and error -- involve
2 changes to the system, whether you're -- you're
3 making -- initiating those changes or you're responding
4 to changes that are occurring due to some other natural
5 or human enforcing.

6 MR. BERLINER: So, are you aware of the level
7 of analysis that has been going on regarding Delta
8 alternatives and all the different things that were
9 looked at -- tunnels, canals, through-Delta, around the
10 Delta -- as part of CALFED and moving into the BDCP?

11 WITNESS SHILLING: Yes.

12 MR. KEELING: Objection --

13 MS. MESESRVE: Asked and answered.

14 MR. KEELING: -- asked and answered.

15 Objection: Vague and ambiguous. That's a
16 mighty broad question.

17 CO-HEARING OFFICER DODUC: Mr. Berliner,
18 clarify.

19 MR. BERLINER: Sure.

20 I'm struggling a little bit with your
21 characterization that there hasn't been a lot of study
22 of these tunnels.

23 WITNESS SHILLING: I'm not sure I said that.

24 MR. BERLINER: Okay. Are you saying there
25 hasn't been enough study of the tunnels?

1 WITNESS SHILLING: No. I'm -- Maybe you're
2 challenged by the use of the word "study."

3 If you're -- We can study a lot of things with
4 desktop, and modeling, and so on, and we think we
5 understand how it might work, and so that could be a
6 form of study.

7 But adaptive management is not a desktop
8 exercise. It's a dynamic, iterative process of
9 learning/doing, learning/doing, et cetera.

10 MR. BERLINER: Well, that kind of goes to the
11 nature of -- of the question.

12 Is it not true that we've been experimenting
13 with different river flows -- Sacramento River flows,
14 San Joaquin River flows, American River flows --
15 through various proceedings that have been going on for
16 decades?

17 MR. FERGUSON: I'm going to object as vague
18 and ambiguous as well. I mean, it needs to be more
19 specific to a study if you're . . .

20 CO-HEARING OFFICER DODUC: Mr. --
21 Mr. Ferguson, I'm going to give Mr. Berliner a little
22 bit of leeway here because that was exactly the
23 question that I was trying to get Dr. Shilling to
24 answer.

25 Does he need to be more specific? I mean, I,

1 too, also referenced decades of --

2 WITNESS SHILLING: I can't --

3 CO-HEARING OFFICER DODUC: -- activity.

4 WITNESS SHILLING: -- be more specific since
5 you did.

6 CO-HEARING OFFICER DODUC: Because I'm still
7 trying to understand -- And now I'm usurping
8 Mr. Berliner, so we can stop the clock here.

9 But I'm still trying to understand what you
10 mean by adaptive management before making a decision on
11 the tunnel.

12 So help me understand that.

13 WITNESS SHILLING: Okay. So --

14 CO-HEARING OFFICER DODUC: Because I -- I'll
15 continue -- Because --

16 WITNESS SHILLING: I'm sorry.

17 CO-HEARING OFFICER DODUC: -- I think
18 Mr. Berliner is actually still reading my mind.

19 In the decades of activities, of water
20 management along -- about, you know, the Delta, we've
21 all seen various standards, various projects, various
22 efforts, and we've all learned from that and now we've
23 gotten to this point where there is this proposal.

24 WITNESS SHILLING: Um-hmm.

25 CO-HEARING OFFICER DODUC: So I, like

1 Mr. Berliner, I think, is trying to struggle to
2 understand what you mean by additional adaptive
3 management before making the decision.

4 WITNESS SHILLING: Um-hmm.

5 So, I'll -- I'll use an example maybe from
6 the -- from the Colorado River and then come back to
7 the Delta.

8 CO-HEARING OFFICER DODUC: Actually, you know
9 what? Rather than using an example, tell us what sort
10 of adaptive management activity you would like to see
11 before a decision is made to proceed with the Delta.

12 WITNESS SHILLING: Okay. So -- Okay. So I
13 would like to see something that was tried on the
14 Colorado River which was to experimental with changed
15 flows, see what the consequences were for listed fish,
16 for sediment movement, and then consequences for water
17 users. And so that experimental change in flows was
18 then used to inform future decisions about operations.

19 Now, they didn't -- They already had the dams
20 there, but they were changing flows because they had
21 listed systems they had to deal with.

22 And so we have here in the Delta several
23 rivers where you could experimentally -- intentionally
24 experimentally modify flows in a way that models might
25 anticipate, some things that might happen, and then

1 measure consequences.

2 The reality -- I don't know you very well, but
3 I know that you know that the last 20 years in the
4 Delta, we had a lot of unintentional experimentation at
5 the systems scale, and we had a few smaller-scale
6 intentional experiments.

7 But the scale of the water movement and the
8 scale of the possible impacts of the -- of the tunnels,
9 we've never had anything intentionally at that scale.

10 And what I mean by the "unintentional
11 experiments," and this is the -- the adaptive
12 management literature says you have to -- you know, you
13 have to pay attention to these, because things will
14 happen, and then we measure the changes in response to
15 those things that have happened.

16 If you think about the -- the way that the
17 CALFED and Bay-Delta pro -- science processes actually
18 happen on the ground, we never had continuous funding
19 just in case something happened.

20 You -- You got a science project funded,
21 whether you're an agency or academic, to study
22 something that might happen, or to study something that
23 happened last year and now we hope it'll happen again
24 during our three-year project period.

25 But all of that was -- it was reactive, and

1 there wasn't a -- a large and constant set of
2 monitoring and investigation so that, when
3 unintentional experiments did happen, we could measure
4 all of the effects that came out of that.

5 We were always late in the game. It was
6 dependent on individuals like me, in agencies or
7 academia, proposing to do something. So fairly ad hoc
8 and not part of an overall plan to say, hey, let's look
9 and see how things happen if we have an exceptionally
10 dry year or an exceptionally wet year.

11 We often -- We tried to take advantage of
12 those things happening, but it was never intentional.
13 It was always these unintentional, reactive experi -- I
14 mean, the experiments would happen and then we would
15 try to measure it in time before it ended.

16 That was the reality of -- of that -- of those
17 science programs.

18 So, what you could do here is, if there's a
19 proposed rate of diversion which has an impact on
20 flows, you could actually modify those flows, if you
21 could get a permit to do so, and see, is there take or
22 is there no take, or is there way more take than you
23 thought, or is there a benefit that you didn't
24 anticipate?

25 So we don't have those; right?

1 CO-HEARING OFFICER DODUC: Thank you.

2 WITNESS SHILLING: I mean --

3 CO-HEARING OFFICER DODUC: That was --

4 WITNESS SHILLING: -- I'm not aware that we
5 do.

6 CO-HEARING OFFICER DODUC: That was helpful.

7 WITNESS SHILLING: Okay.

8 CO-HEARING OFFICER DODUC: All right. Back to
9 you, Mr. Berliner.

10 MR. BERLINER: I said I wasn't going to
11 quarrel with a -- with a university professor,
12 but . . .

13 We have flows in California that -- that
14 change every year. You're well aware that there's no
15 such thing as a normal year in California. Normal in
16 California, I guess, is the abnormal.

17 We have wet years; we have dry years. We
18 don't tend to have years solidly in the middle over any
19 period of time.

20 And, for example, are you familiar with
21 the . . . temperature adjustments that went on during
22 the drought at the instigation of the National Marines
23 Fisheries Service concerning releases from Shasta?

24 WITNESS SHILLING: Um-hmm. Yes.

25 MR. BERLINER: And you're aware that, to your

1 point, NMFS got out ahead of the temperature issue and
2 mandated certain carryover storage and levels of
3 releases in order to protect coldwater pool.

4 WITNESS SHILLING: Yes.

5 MR. BERLINER: And those are the kinds of
6 things you're talking about; right?

7 WITNESS SHILLING: Those are related. Those
8 are individual actions related to certain listed fish
9 species and something that can be controlled, yeah.

10 MR. BERLINER: And you're aware that there are
11 numerous rivers that are -- that hold FERC licenses?

12 WITNESS SHILLING: Yes.

13 MR. BERLINER: And you're aware that each of
14 those rivers had to undergo study and look at different
15 alternatives regarding flow regimes?

16 WITNESS SHILLING: Well, that's a little
17 broad. What do you mean by "study"?

18 MR. BERLINER: Are you familiar with the FERC
19 licensing --

20 WITNESS SHILLING: Yes.

21 MR. BERLINER: -- process?

22 You're aware there are NEPA and CEQA documents
23 and Biological Opinions that are prepared?

24 WITNESS SHILLING: There are now for the ones
25 since NEPA and CEQA were established. There's also

1 licenses that preceded those.

2 MR. BERLINER: All of which are, at least in
3 California, expiring and going through relicense --

4 WITNESS SHILLING: Yes.

5 MR. BERLINER: -- right?

6 And all of those studies have to be done as
7 part of relicensing; correct?

8 WITNESS SHILLING: Studies have to be done.

9 There's not a clear definition of what studies have to
10 be done and what alternatives have to be considered,
11 including removing the facility itself.

12 MR. BERLINER: Have you been through a FERC
13 proceeding?

14 WITNESS SHILLING: I've tracked the FERC
15 proceedings on the Yuba, is the primary place that I've
16 looked at those.

17 MR. BERLINER: Then -- Well, Yuba's a complex
18 river.

19 Then I take it you're aware that the -- the
20 licensee comes forward with a proposal, stakeholders
21 come forward with their proposals, FERC staff comes
22 forward with its proposal, the fish agencies have their
23 proposals, and all of that goes through some sort of a
24 licensing process. And at the other end, the Federal
25 Energy Regulatory Commission has to make a decision.

1 You understand that?

2 WITNESS SHILLING: Yeah.

3 MR. BERLINER: And that occurs on all of those
4 rivers that have FERC licenses; right?

5 WITNESS SHILLING: Yes.

6 MR. BERLINER: So all of those rivers, to the
7 extent that they have FERC licenses on them, at least
8 from the dam downstream, have undergone rigorous study
9 regarding water management and fishery management;
10 correct?

11 MS. MESESRVE: Misstates the witness'
12 testimony.

13 And I don't see how this questioning is
14 relevant. This is not a FERC proceeding. And the way
15 that Mr. Berliner's asking the question is starting to
16 insert these other processes as if they have some kind
17 of relevance to Mr. -- Dr. Shilling's testimony.

18 CO-HEARING OFFICER DODUC: Mr. Berliner, I --

19 MR. BERLINER: I --

20 CO-HEARING OFFICER DODUC: Go ahead.

21 MR. BERLINER: These have relevance --

22 WITNESS SHILLING: Can I answer your question?

23 MR. BERLINER: No. You have to wait.

24 WITNESS SHILLING: Okay.

25 CO-HEARING OFFICER DODUC: Hold on.

1 MR. BERLINER: We have to get a ruling.

2 CO-HEARING OFFICER DODUC: Hold on.

3 MR. BERLINER: No. We have to get a ruling.

4 WITNESS SHILLING: Go ahead.

5 MR. BERLINER: The relevance is that we have a
6 Delta that is a product of a series of regulated
7 rivers.

8 The rivers that flow into the Delta are
9 largely regulated by either FERC license, or Bureau of
10 Reclamation dams or, to some smaller degree, Corps of
11 Engineer dams, all of which have undergone analysis.

12 The FERC dams, which comprise --

13 CO-HEARING OFFICER DODUC: Before you get into
14 too much detail, Mr. Berliner.

15 I believe Dr. Fraser (sic) is aware of all of
16 that. So I guess my question back to Dr. Fraser (sic):

17 Being aware of all these other programs that
18 have flow components, that do have flow requirements on
19 various tributaries and various rivers, I assume that's
20 not what you're referring to when you brought up flow
21 as an example of an adaptive management that you would
22 recommend.

23 So perhaps you can just directly answer that
24 question.

25 WITNESS SHILLING: I lost track of the

1 question.

2 But I have opinions --

3 CO-HEARING OFFICER DODUC: No, no. I'm sorry.

4 My question.

5 (Laughter.)

6 CO-HEARING OFFICER DODUC: Mr. Jackson.

7 MR. JACKSON: Before there's another question,

8 Dr. Shilling's first name is Fraser, because we're

9 going to have in the record a Dr. Fraser --

10 CO-HEARING OFFICER DODUC: Oh.

11 MR. JACKSON: -- who appeared to answer some

12 questions.

13 CO-HEARING OFFICER DODUC: Sorry.

14 MR. JACKSON: Thanks.

15 CO-HEARING OFFICER MARCUS: Dr. Fraser was on

16 Cheers.

17 CO-HEARING OFFICER DODUC: Dr. -- Yes.

18 Dr. Shilling.

19 See, this is what happens when I know

20 somebody.

21 Dr. Shilling, when you answered my previous

22 question, you mentioned flow --

23 WITNESS SHILLING: Um-hmm.

24 CO-HEARING OFFICER DODUC: -- as an example of

25 something that adaptive management approach might be

1 worth pursuing.

2 And then Mr. Berliner, I think, is trying to
3 present examples of systems where flows are a big
4 issue, where there are a lot of studies and
5 regulations, and there are adaptive management of flows
6 during the system.

7 Are we talking across each other or are you
8 referring to something else?

9 WITNESS SHILLING: I was referring to
10 intentional flow, manipulation, as an experiment, and
11 impacts on the Delta.

12 If you bring up these other rivers and their
13 FERC relicensing processes, I disagree that the studies
14 are rigorous as they're -- because they're not always,
15 and some of them are quite out of date compared to the
16 models that you brought up, Mr. Berliner. And they
17 aren't required to collectively manipulate their flows
18 and look at the impacts to the Delta.

19 So even if you go up watershed and look at
20 some of how flows are potentially changed -- and
21 there's really very few rivers where they've had to
22 experiment with flows to see what the impacts are --
23 they didn't all get together and manipulate flows to
24 see what the impact on the Delta would be as a
25 receiving water body.

1 They all operate in -- independently, whether
2 they're -- in all these different regimes, as a Basin
3 Plan, FERC relicensing, ES used for -- for different
4 Salmonids.

5 I mean, these are all independent studies and
6 potentially experiments and manipulations, again, those
7 are rare.

8 So it doesn't hold as an example of flow
9 manipulation looking at impacts on the Delta and
10 experimental precedent for active adaptive management.

11 MR. BERLINER: So, if I understand your point,
12 what you're suggesting is, before making this decision,
13 we should essentially take the Sacramento, San Joaquin
14 and east side stream systems and operate them as a unit
15 and experiment with different flows, rates of
16 diversion, temperatures, et cetera, and see how the
17 Delta reacts.

18 MR. KEELING: Objection: Mischaracterizes the
19 witness' testimony.

20 WITNESS SHILLING: (Nodding head.)

21 CO-HEARING OFFICER DODUC: Mr. Keeling, we're
22 just all trying to understand Dr. Shilling's point.

23 So if that is indeed incorrect, then
24 Dr. Shilling will correct it.

25 WITNESS SHILLING: Okay. I'm not sure why you

1 want to burn through this way, time, but that's fine.

2 So, if we went down that road, that example
3 or -- or -- of how you could change flows, then that
4 would be something that you could do in theory. I'm
5 not proposing that anybody do that.

6 I'm saying that we haven't done the
7 experiments, the intentional experiments, in the Delta
8 that you were referring to much earlier in your
9 questioning when you were looking at the different
10 alternatives.

11 We have sometimes studied the responses to
12 unintentional experiments, and sometimes we've
13 understood what happened in response to those and it's
14 increased our understanding.

15 But we haven't had any kind of coordinated
16 experimentation at the scale necessary to understand
17 the impact of this facility.

18 And if we go back to Doramus' article, she
19 says, sometimes you can't do things like that, in which
20 case maybe adaptive management is not the appropriate
21 response to the management question.

22 So, the flow manipulation for the Delta at
23 this scale probably would require some coordination --
24 the east side river scale -- and maybe we should have
25 been doing things like that.

1 I'm not proposing that. I'm just saying that
2 understanding the responses of the system to flow is
3 critical to understanding whether or not this Adaptive
4 Management Plan will be successful.

5 We haven't done that before, and I don't see
6 it proposed now, so we can't say that it's going to be
7 successful or, as Earle says starting at Page 4,
8 Section A of his testimony, that it will be beneficial
9 to wildlife and fish in the Delta.

10 MR. BERLINER: Okay. Thanks.

11 WITNESS SHILLING: Okay.

12 (Pause in proceedings.)

13 MR. BERLINER: On Page 15 of your testimony,
14 you allege that there's no version of the Delta Tunnel
15 Plan that's attempted to provide benefits to
16 communities within the Delta. You state that the
17 Project was intended as a -- an export project.

18 But isn't it also true that one of the
19 fundamental purposes of the Project was to restore and
20 protect the Delta ecosystem health as well as water
21 quality within the Delta?

22 MR. KEELING: Calls for speculation.

23 CO-HEARING OFFICER DODUC: Mr. Berliner.

24 MR. BERLINER: Well --

25 WITNESS SHILLING: And, actually, if you're

1 going to refer to my testimony, if you don't mind, if
2 you could just get up it on the --

3 MR. BERLINER: Oh, yes.

4 WITNESS SHILLING: -- screen because I can't
5 see it anymore.

6 MR. BERLINER: Yes.

7 (Exhibit displayed on screen.)

8 MR. BERLINER: Mr. Long, Page 15, Lines 7 to
9 12.

10 (Exhibit displayed on screen.)

11 WITNESS SHILLING: So, can you restate your
12 question?

13 MR. BERLINER: Sure.

14 (Pause in proceedings.)

15 MR. BERLINER: You state -- I'll try to
16 shorten this a little bit -- on Page -- on Line 8
17 (reading):

18 ". . . no version of the Delta Tunnels
19 Plan has attempted to provide benefits to
20 communities within the Delta. Rather,
21 effects have been characterized as
22 minimal, not 'mitigable' and
23 overridden . . . the project was not
24 conceived of, or designed as being
25 beneficial . . . and is instead intended

1 to facilitate export of water . . ."

2 That's a summary of -- of what you say.

3 WITNESS SHILLING: Um-hmm.

4 MR. KEELING: My question was, isn't it also
5 true that one of the fundamental purposes of the
6 Project was to restore and protect Delta ecosystem
7 health as well as water quality in the Delta?

8 WITNESS SHILLING: That might have been stated
9 as an objective, and even seems like it makes it
10 consistent with the coequal goals under the Delta
11 Reform Act, but -- and that's -- My earlier testimony
12 in Part 2 definitely went into that.

13 But in terms of the Adaptive Management Plan,
14 it doesn't really matter what the stated objectives are
15 if the end result of what's committed to in the Plan
16 doesn't actually address any of them.

17 There's no commitment in the Adaptive
18 Management Plan to address the needs of communities in
19 the Delta. There's no commitment to address the needs
20 of non-listed fish or wildlife in the Delta.

21 There's a commitment to avoid causing four
22 listed fish species to go extinct, which is a
23 requirement of the Take Permit, anyway.

24 (Pause in proceedings.)

25 MR. BERLINER: Are you familiar with the

1 Mitigation Monitoring Plan?

2 WITNESS SHILLING: Yes.

3 MR. BERLINER: And are you aware that the
4 Mitigation Monitoring Plan addresses a number of the
5 issues you just raised?

6 WITNESS SHILLING: It does address some of the
7 issues and, as indicated there, some of them are
8 indicated to -- or suggested that they're not
9 mitigable, or some of the impacts are overridden, and
10 so they don't necessarily occur as a -- something that
11 is mitigated.

12 (Pause in proceedings.)

13 MR. BERLINER: One of your criticisms was that
14 the construction phase of the WaterFix should have been
15 subjected to adaptive management; correct?

16 WITNESS SHILLING: It could have been, yes.

17 MR. BERLINER: Isn't it --

18 WITNESS SHILLING: It could still be.

19 MR. BERLINER: Isn't it true that most of the
20 information-gathering is scheduled to occur before the
21 construction occurs?

22 WITNESS SHILLING: What do you mean by
23 "information-gathering"?

24 MR. BERLINER: There -- Are you aware that
25 there are a number of -- a substantial number of

1 studies that have to occur before construction
2 commences?

3 MS. MESESRVE: Objection: Vague.

4 (Pause in proceedings.)

5 MR. BERLINER: Do you understand my question,
6 sir?

7 WITNESS SHILLING: It's broad, and I can begin
8 a narrative of my understanding of what's likely to
9 happen.

10 Is that what you --

11 MR. BERLINER: My question --

12 CO-HEARING OFFICER DODUC: I --

13 Mr. Berliner --

14 MR. BERLINER: -- was very simple.

15 CO-HEARING OFFICER DODUC: Mr. Berliner, I
16 understood the question, but perhaps, based on Mr. --
17 Dr. Shilling's rebuttal testimony, you could narrow
18 down that question a little bit.

19 MR. BERLINER: Sure.

20 (Pause in proceedings.)

21 MR. BERLINER: Mr. Long, if you could please
22 pull up the Adaptive Management Plan, which is attached
23 to the Incidental Take Permit, which is State Water
24 Board 107.

25 (Exhibit displayed on screen.)

1 MR. BERLINER: And it would be Appendix 8.

2 (Exhibit displayed on screen.)

3 MR. BERLINER: If you could go to Page 51,
4 please.

5 (Exhibit displayed on screen.)

6 MR. BERLINER: Do you need to attend to
7 something?

8 WITNESS SHILLING: I just wanted to plug in my
9 computer.

10 MR. BERLINER: Oh. There's a plug underneath
11 the desk.

12 WITNESS SHILLING: Oh, there is?

13 MR. BERLINER: Yeah. I don't know if it's
14 under every one, but several of them have plugs.

15 WITNESS SHILLING: That's going to help me
16 answer your questions.

17 MS. MESESRVE: Mr. Berliner, what page is
18 this?

19 MR. BERLINER: 51.

20 We used to have screens on the seats so it was
21 easier to see it, but . . .

22 MR. LONG: Do you know the .pdf page?

23 MR. BERLINER: You were on Page 51, I think,
24 before.

25 (Exhibit displayed on screen.)

1 MR. BERLINER: It's 51 to 55 is the complete
2 description.

3 CO-HEARING OFFICER DODUC: Is that the .pdf
4 page or the . . .

5 MS. MESESRVE: He said Attachment 8. I was
6 just having trouble finding it.

7 MR. BERLINER: You have to go to the website
8 and scroll through the website because they're each
9 separately linked.

10 (Pause in proceedings.)

11 CO-HEARING OFFICER DODUC: Do we have the
12 right document, Mr. Berliner?

13 MR. BERLINER: I think we do. I think we have
14 Attachment 8.

15 But I may have it wrong. It may be Page 55,
16 instead of .pdf 55, so if you jump ahead 45 pages.

17 (Exhibit displayed on screen.)

18 MR. BERLINER: So it's .pdf Page 55.

19 Why don't I ask my question. Then maybe we
20 can short-circuit this.

21 Are you aware that, as part of the Adaptive
22 Management Plan, there are studies that will be
23 occurring prior to construction?

24 WITNESS SHILLING: Yes.

25 MR. BERLINER: Are you aware of the nature of

1 those studies?

2 WITNESS SHILLING: Some of them. I don't
3 remember all of them. I remember reading about some
4 associated with the alignment and digging the tunnels
5 or digging the facilities along the tunnels or the
6 roadways to access those.

7 MR. BERLINER: And each of those elements will
8 be the subject of some studying to determine as to how
9 best to do that; correct?

10 WITNESS SHILLING: That's not my
11 understanding. I think that the studies are: Is there
12 something in the way that's protected that you have to
13 deal with, an archeological resource, Burrowing Owls,
14 whatever happens to be -- time of year for anadromous
15 fish.

16 So those aren't studies of the best way to do
17 it. Those are studies of potential impacts while you
18 do the thing you decided to do.

19 MR. BERLINER: Yes. I think your answer is
20 more accurate than what I was implying by my question.
21 Appreciate that.

22 But that includes, for instance, geotechnical
23 studies before starting construction of the tunnels,
24 for example.

25 WITNESS SHILLING: I think so.

1 MS. MESERVE: Objection: Vague.

2 I don't even understand what document

3 Mr. Berliner is asking questions off of, or how it's
4 relevant to the testimony at this point.

5 He's got the Fish Restoration Program
6 Agreement up on the screen.

7 CO-HEARING OFFICER DODUC: I think we've
8 decided to ignore the documents.

9 MR. BERLINER: Right.

10 CO-HEARING OFFICER DODUC: Yes.

11 And where were you in the questioning? I've
12 forgotten now.

13 MS. MESERVE: He's mentioned geotechnical
14 exploration, which I'm kind of at a loss as to how this
15 is relevant.

16 MR. BERLINER: It's just --

17 CO-HEARING OFFICER DODUC: If I remember --

18 MR. BERLINER: -- one of the types --

19 CO-HEARING OFFICER DODUC: -- correctly,

20 Mr. Berliner was following up on the line in
21 Dr. Shilling's testimony that he thought the adaptive
22 management process should be applied to the
23 construction activities.

24 And Mr. Berliner was going through, I believe,
25 examples of what he would -- might -- he might consider

1 as a form of adaptive management through these studies
2 that are being conducted before construction begins.

3 So at least that's my understanding of your
4 intention, Mr. Berliner.

5 MR. BERLINER: Yes.

6 CO-HEARING OFFICER DODUC: So it is relevant
7 to Dr. Shilling's testimony.

8 MR. BERLINER: Right.

9 WITNESS SHILLING: Is there a question?

10 MR. BERLINER: But I think you answered the
11 question, so . . .

12 CO-HEARING OFFICER DODUC: So let's move on,
13 quickly.

14 MR. BERLINER: Yeah.

15 And are you aware of the fish screen that's
16 going to be constructed?

17 WITNESS SHILLING: I'm aware that there's a
18 proposal for fish screens for the intakes.

19 MR. BERLINER: Are you aware of the analysis
20 that's going to have to take place in order to
21 determine the -- the type of fish screen that's going
22 to be constructed?

23 WITNESS SHILLING: I don't recall it.

24 MR. BERLINER: Are you aware that that's a
25 highly complex endeavor as to how that fish screen is

1 going to be constructed and operated?

2 WITNESS SHILLING: I assume so, although it
3 has its limitations.

4 For example, there was discussion in one of
5 the documents relevant to the fish screen construction
6 as to whether or not it would deal with Juvenile Delta
7 Smelt. And the conclusion was, they don't occur in the
8 area, anyway, so it didn't matter.

9 So, I assume from that, that they would
10 consider what kinds of -- of the four listed species,
11 what life stages and times of year, et cetera, that
12 those would be effective.

13 MR. BERLINER: As well as -- Correct.

14 As well as the type of . . .

15 Strike that. I'll move on.

16 (Pause in proceedings.)

17 MR. BERLINER: Are you aware that the Adaptive
18 Management Plan also involves tidal wetlands?

19 WITNESS SHILLING: It discusses it in what you
20 brought up earlier as some of the domains that might --
21 would be covered because of their uncertain
22 relationship with the different listed species that are
23 the target of the Adaptive Management Plan.

24 MR. BERLINER: Which listed species are you
25 referring to?

1 WITNESS SHILLING: The four listed species
2 that are the target of the Adaptive Management Plan:
3 Delta Smelt, Longfin Smelt, Green Sturgeon, and Chinook
4 Salmon.

5 MR. BERLINER: And are you aware that tidal --
6 tidal wetlands restoration goes well beyond those four
7 species?

8 WITNESS SHILLING: I'm aware, because I
9 studied tidal wetlands in the Bay, that, yes, that is
10 true.

11 But that doesn't mean that there's a
12 commitment to look at the benefits or impacts beyond
13 how they might benefit or impact the four listed
14 species vis-`-vis the operations of the facility.

15 MR. BERLINER: Well, for example, are you
16 aware that methylmercury is one of the considerations
17 in the Tidal Restoration Project?

18 WITNESS SHILLING: It was listed --

19 MS. MESERVE: Objection: Vague.

20 What's the Tidal Restoration Project you're
21 talking about? Because there is no restoration
22 component of this Project. It's mitigation.

23 MR. BERLINER: The Adaptive . . .

24 Difference of opinion. But I'm asking the
25 questions, and I don't know that that -- Are you

1 objecting to --

2 MS. MESERVE: I'm saying it misstates the
3 evidence and, so, if you can ask your question in a way
4 I that doesn't mischaracterize the -- whatever you're
5 talking about, that would be better.

6 (Pause in proceedings.)

7 WITNESS SHILLING: I was looking forward to
8 that question, though.

9 (Laughter.)

10 (Pause in proceedings.)

11 MR. BERLINER: Mr. Long, could we go to State
12 Water Board Exhibit 111, please.

13 (Exhibit displayed on screen.)

14 MR. BERLINER: And if you could go to
15 Page 4-39.

16 (Exhibit displayed on screen.)

17 MR. BERLINER: Could you scroll to the prior
18 page? There should be a number . . .

19 (Scrolling through document.)

20 MR. BERLINER: I'm looking for the number of
21 this.

22 Try going up another page.

23 (Scrolling through document.)

24 MR. BERLINER: Scroll up further. Sorry.

25 (Scrolling through document.)

1 MR. BERLINER: I believe that this is AMF20.

2 I'm just looking for something to confirm that.

3 Well, let's go back to 39.

4 (Exhibit displayed on screen.)

5 MR. BERLINER: Dr. Shilling, are you familiar
6 with the Avoidance and Mitigation Measures Plans?

7 WITNESS SHILLING: Yeah. In the MMRP?

8 MR. BERLINER: Yes.

9 WITNESS SHILLING: Yeah.

10 MR. BERLINER: So, are you aware, for example,
11 that -- I'll represent to you that this is AMM 20 --

12 I can't find the number on the pages
13 conveniently.

14 -- that it requires incorporation of the
15 results of surveys into the . . .

16 (Pause in proceedings.)

17 MR. BERLINER: Well, let me just ask this, a
18 more general question.

19 MS. MESERVE: Yeah. I want to object to this
20 question, because he's now moved to Sandhill Cranes.
21 They're definitely not covered in the ITP.

22 He was talking about restoration that was
23 required by the 2008-2009 Biological Opinions and the
24 uncertainties identified in the ITP --

25 CO-HEARING OFFICER DODUC: Hold on,

1 Miss Meserve.

2 I don't think he's actually asked a question
3 yet.

4 Have you?

5 MR. BERLINER: No. I was trying to but --

6 CO-HEARING OFFICER DODUC: Okay.

7 MR. BERLINER: -- I stopped.

8 (Pause in proceedings.)

9 MR. BERLINER: So, just to -- just to be
10 clear, we're talking about the AMM Plan, not the ITP,
11 not the Adaptive Management Plan.

12 Are you familiar with the Monitoring and
13 Mitigation Measures that are required under the AMM?

14 WITNESS SHILLING: I am familiar because I've
15 read through it, yes.

16 MR. BERLINER: Okay. And in that Plan,
17 various other species are going to be -- The impacts on
18 various species -- Or the expected impacts on various
19 species are going to be studied and mitigated; correct?

20 MS. MESERVE: Misstates the evidence. All the
21 impacts are not necessarily mitigated. Less than
22 significant.

23 And, also, this is an AMM, not a mitigation
24 measurement, which is different.

25 MR. FERGUSON: And I would object as vague and

1 ambiguous, the term "other." Relative to what?

2 CO-HEARING OFFICER DODUC: Mr. Berliner.

3 MR. BERLINER: I'll rephrase.

4 CO-HEARING OFFICER DODUC: And, Mr. Berliner,
5 we have now completed --

6 MR. BERLINER: Yeah.

7 CO-HEARING OFFICER DODUC: -- an hour.

8 How much additional questioning do you --
9 would you like to have?

10 MR. BERLINER: I have, actually, for this
11 witness very little. I'm just about done.

12 CO-HEARING OFFICER DODUC: And then?

13 MR. BERLINER: And then I have six questions
14 or eight questions for Dr. Shilling (sic).

15 CO-HEARING OFFICER DODUC: You have --

16 MR. BERLINER: I'm sorry, for Dr. (sic)
17 Stokely.

18 CO-HEARING OFFICER DODUC: Okay. So . . .

19 WITNESS STOKELY: I'm not a doctor.

20 MR. BERLINER: Mr. Stokely.

21 CO-HEARING OFFICER DODUC: So, Mr. Berliner,
22 another 10 minutes?

23 MR. BERLINER: I would think so.

24 CO-HEARING OFFICER DODUC: All right.

25 MR. BERLINER: Thank you.

1 (Pause in proceedings.)

2 CO-HEARING OFFICER DODUC: Ms. Morris.

3 MS. MORRIS: While Mr. Berliner's searching, I
4 had a housekeeping issue, but I can wait. I don't want
5 to interrupt if it's sufficient.

6 CO-HEARING OFFICER DODUC: The only person
7 you'd be disturbing is Mr. Berliner.

8 MR. BERLINER: That's fine.

9 MS. MORRIS: Then I'm okay at interrupting.

10 In going through Mr. Burke's testimony,
11 SDWA-323, on Pages 9 and 10, there's a map and
12 locations.

13 I -- I talked to Mr. Ruiz. There appears to
14 be mislabeling, or something wrong, and I'm unsure
15 about whether the data is correct or whether the
16 location is incorrect.

17 And so, to be more efficient in cross-exam,
18 Mr. Ruiz has agreed to have Mr. Burke submit tonight,
19 hopefully by, like, not later than 7 p.m., a Revised
20 Errata fixing that, not only on the map but as well as
21 SCW-324 on Page 10.

22 But that -- this would mean that Mr. Burke
23 would need to do his direct tomorrow morning, because
24 it would need to be based on the errata correcting
25 this.

1 And I do think that it will save a little bit
2 of time on the cross-examination, if -- if it's labeled
3 correctly.

4 And I can give you an example, if you prefer,
5 or if you want to -- I walked through it with Mr. Ruiz.

6 CO-HEARING OFFICER DODUC: That's fine.

7 Is that your understanding, Mr. Ruiz?

8 MR. RUIZ: Yes, that's fine. We agree to do
9 that.

10 And if there's a -- Well, I don't think we
11 were necessarily going to get to him, anyway, today,
12 but --

13 CO-HEARING OFFICER DODUC: Yeah. I'm looking
14 at the remaining cross-examination for this panel and
15 then an estimated three hours for their -- the next
16 panel with Mr. Cannon and Mr. Shutes.

17 So, I'm amenable to taking Mr. Burke up first
18 thing in the morning --

19 MR. RUIZ: Okay. Thank you.

20 CO-HEARING OFFICER DODUC: -- or as soon as
21 possible in the morning.

22 MR. RUIZ: We can do that.

23 CO-HEARING OFFICER DODUC: Mr. Berliner.

24 MR. BERLINER: You know what? In the interest
25 of time and efficiency, I'm going to move to

1 Mr. Stokely.

2 CO-HEARING OFFICER DODUC: All right.

3 MR. BERLINER: I think the rest of my
4 questions can be handled through briefing.

5 Mr. Stokely, thanks for your patience. I'm
6 aware of the hours, so I'm going to try to move through
7 this pretty quickly.

8 Do you have your testimony handy?

9 WITNESS STOKELY: Yes.

10 MR. BERLINER: Mr. Long, if we could pull up
11 Mr. Stokely's testimony.

12 It's LAND-266-Errata.

13 Whoops. You passed it. Go down.

14 There you go.

15 (Exhibit displayed on screen.)

16 MR. BERLINER: I'm referring to Page 19 of
17 your testimony, sir, starting at Line 6.

18 (Pause in proceedings.)

19 MR. BERLINER: On Page 19, Line 6, you discuss
20 the use of adaptive management to mitigate impacts to
21 farmland, citing the MMRP; correct?

22 WITNESS STOKELY: Yes.

23 MR. BERLINER: And this cite is to -- just to
24 be clear -- is to Mitigation Measure AG-1; correct?

25 WITNESS STOKELY: I'm not familiar with the

1 numbering of it, but I'll take your word for it.

2 MR. BERLINER: Okay. And -- And are you aware
3 that -- that this measure includes a long list of
4 potential actions or ways to minimize impacts to
5 farmland?

6 WITNESS STOKELY: You know, I'm not that
7 familiar with the -- that list, I'll confess.

8 MR. BERLINER: Okay. This may be faster than
9 I thought.

10 You contend that the Delta tunnels' Adaptive
11 Management Plan is being used to defer adoption and
12 mitigation; correct?

13 WITNESS STOKELY: Yes.

14 MR. BERLINER: Isn't it required that these
15 Plans -- that the Delta tunnels' Plans for adapted
16 mitigation -- adaptive monitoring . . . adaptive
17 management . . .

18 Let me start that over.

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

20 MR. BERLINER: Does it require that these
21 adaptive --

22 CO-HEARING OFFICER DODUC: Before you started
23 over, could you lower the microphone a little?

24 MR. BERLINER: Sorry.

25 CO-HEARING OFFICER DODUC: I'm having trouble

1 hearing you. Thank you.

2 MR. BERLINER: Is this better?

3 CO-HEARING OFFICER DODUC: Much better.

4 MR. BERLINER: Great.

5 Isn't it correct that the Adaptive Management
6 Plans require that these Tunnel Plans be developed
7 prior to the commencement of the construction?

8 WITNESS STOKELY: I'm not sure.

9 (Pause in proceedings.)

10 MR. BERLINER: Are you aware that these Plans
11 are supposed to be framed within an adaptive management
12 framework?

13 WITNESS STOKELY: Yes.

14 MR. BERLINER: And --

15 MS. MESERVE: Objection.

16 When you say "these Plans," which ones are you
17 talking about?

18 MR. BERLINER: For the tunnel -- The Adaptive
19 Management Plans for the tunnel.

20 MS. MESERVE: So you're off the Mitigation
21 Measures? I'm just making sure the witness understands
22 the question.

23 MR. BERLINER: Yes.

24 Did you understand the -- the question?

25 WITNESS STOKELY: Yes.

1 MR. BERLINER: Yeah.

2 Okay. And the -- We'll clarify here.

3 And the adaptive management framework is
4 separate from the AMP; correct?

5 WITNESS STOKELY: It's my understanding the
6 adaptive management framework is all part of the
7 Adaptive Management Plan, including the agreement
8 between the agencies for formation of the Interagency
9 Implementation and Coordination Group.

10 To me, it's all one Adaptive Management Plan.
11 There's a framework. You've got a -- You've got a
12 group that makes decisions. You've got a public
13 stakeholder group, the CSAMP. You've got all these
14 different things that you're supposed to look at that
15 are identified in the Mitigation Monitoring Plan.
16 Adaptive management is mentioned many, many times in
17 there.

18 MR. BERLINER: Okay. All right. And you're
19 also aware that there's going to be an Agricultural
20 Land Stewardship Plan?

21 MS. MESERVE: Misstates the evidence.

22 There's actually -- There's an option of an
23 Agricultural Land Stewardship Plan. There's also
24 option of other approach to ag management.

25 MR. BERLINER: Well, let's be specific.

1 Are you familiar with the Agricultural Land
2 Stewardship Plan?

3 WITNESS STOKELY: No.

4 MR. BERLINER: No.

5 (Pause in proceedings.)

6 MR. BERLINER: Are you familiar with
7 Mitigation Measures that are called for in various
8 Adaptive Management Plans or CEQA documents?

9 WITNESS STOKELY: Well, again, I reviewed the
10 Mitigation Monitoring Plan, and adaptive management is
11 certainly mentioned many times in there.

12 You know, when I was reviewing it, quite
13 frankly, I found it to be very vague. It didn't really
14 talk a lot about actually how it was going to work.

15 In my mind, it was really -- there was very
16 little substance to the discussion of adaptive
17 management in the documents that --

18 MR. BERLINER: That really wasn't my -- my
19 question. I'm on a much narrower point here, though I
20 appreciate your -- your critique. I understood that
21 from your testimony.

22 (Pause in proceedings.)

23 MR. BERLINER: I got thrown off a little by
24 your attorney's objection.

25 Let me try this again. Just -- I know this is

1 asked and answered but I don't recall your answer.

2 Are you familiar with the Agricultural Land
3 Stewardship Plan?

4 WITNESS STOKELY: No.

5 MR. BERLINER: Okay.

6 (Pause in proceedings.)

7 MR. BERLINER: Would you --

8 MS. MESERVE: Just to -- Just to clarify: I
9 have an objection because, again, he's misstating the
10 evidence.

11 The Mitigation Measure says that one of the
12 options would be to develop the Plan. So I'm not sure
13 why the witness would be familiar with a Plan that has
14 not been written.

15 CO-HEARING OFFICER DODUC: He answered he was
16 not familiar.

17 MS. MESERVE: Okay. We'll just . . .

18 MR. BERLINER: All I asked him was if he was
19 familiar with it.

20 MS. MESERVE: He couldn't be.

21 CO-HEARING OFFICER DODUC: Move on,
22 Mr. Berliner, please.

23 MR. BERLINER: I think he understood my
24 question.

25 (Pause in proceedings.)

1 MR. BERLINER: In your testimony, you state
2 that the Delta tunnels' Adaptive Management Plan is
3 being used to defer mitigation of water quality
4 impacts; is that correct?

5 WITNESS STOKELY: Yes.

6 MR. BERLINER: Okay. Such as impacts to
7 electroconductivity or salinity, and Microcystis;
8 correct?

9 WITNESS STOKELY: Yes. And selenium.

10 MR. BERLINER: Are you familiar with
11 Mitigation Measure WQ -- meaning water quality -- 11e?

12 WITNESS STOKELY: Mmm. I reviewed it but I
13 don't really recall what was in there, except that it
14 said we would look at adaptive management to deal with
15 this issue, which is -- to me, is a deferral.

16 (Pause in proceedings.)

17 MR. BERLINER: If I remind -- Perhaps I'll
18 remind you of the title of that measure and that might
19 help you recall.

20 WITNESS STOKELY: Could you bring it up on the
21 screen?

22 MR. BERLINER: Sure.

23 Water Board Exhibit 111, Page 2-13 to -14.

24 (Exhibit displayed on screen.)

25 MR. BERLINER: Does that look familiar to you,

1 sir?

2 WITNESS STOKELY: Yes.

3 (Pause in proceedings.)

4 MR. BERLINER: And this is not a proposed use
5 of adaptive management; correct?

6 WITNESS STOKELY: It says (reading):

7 "Implement Real-time Operations,
8 Including Adaptively Managing Diversions
9 in the North and South Delta
10 Intakes . . ."
11 It sure sounds like adaptive management to me.

12 MR. BERLINER: All right. So would you
13 consider this, then, an adaptive management measure?

14 WITNESS STOKELY: I would consider it a
15 Mitigation Measure that uses adaptive management to
16 justify having mitigated a potentially significant
17 impact.

18 MR. BERLINER: Okay.

19 (Pause in proceedings.)

20 MR. BERLINER: I have no further questions for
21 this witness.

22 CO-HEARING OFFICER DODUC: Thank you,
23 Mr. Berliner.

24 That concludes your cross?

25 MR. BERLINER: Yes, it does.

1 CO-HEARING OFFICER DODUC: All right.

2 MR. BERLINER: Appreciate the extra time.

3 CO-HEARING OFFICER DODUC: Mr. O'Hanlon, do
4 you still expect to only need about 10 minutes?

5 MR. O'HANLON: It would be helpful if I could
6 look at my notes. I think I may have a couple
7 questions based on the answers. Maybe not more than
8 20.

9 CO-HEARING OFFICER DODUC: 20. So you're now
10 expanding your request.

11 MR. O'HANLON: Not necessarily.

12 CO-HEARING OFFICER DODUC: In that case, then,
13 we're not going to proceed with you. We're going to
14 take our lunch break.

15 I thought, if it was short, and we could
16 complete it by 12:30, I would suggest we go but, that
17 being the case, I would like to take a lunch break.

18 MR. RUIZ: Stephen Siptroth for the Group 25
19 parties.

20 Just to clarify the timing of when Dr. Richard
21 Denton will be called. Is it safe to say it will be
22 tomorrow?

23 CO-HEARING OFFICER DODUC: Dr. Denton will
24 be -- will not be today.

25 MR. RUIZ: Okay.

1 CO-HEARING OFFICER DODUC: I don't know if
2 he'll be tomorrow but he'll not be today.

3 MR. RUIZ: Great. Thank you.

4 CO-HEARING OFFICER DODUC: All right. With
5 that, we will take our lunch break, and we will
6 return -- Why don't we return at 1:30.

7 (Lunch recess at 12:23 p.m.)

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1 I'd like to first start by asking you some
2 questions about your testimony in Revised LAND-240,
3 specifically at Page 21. Let's see. I'm not sure if
4 it's the PDF page. It should be -- yes, down at the
5 beginning. That's it. Thank you.

6 My questions all relate to this point that you
7 make in your testimony about the effect of what you
8 call "committed water deliveries and constraining
9 adaptive management."

10 All right. And is it your testimony here at
11 Page 21, and I believe it carries on to Page 22, that
12 commitments to deliver water may constrain adaptive
13 management?

14 WITNESS SHILLING: Yes.

15 MR. O'HANLON: All right. And is it your
16 understanding that adaptive management is included in
17 the Biological Opinions for the operations of the
18 Central Valley project and the State Water Project?

19 WITNESS SHILLING: Adaptive management as it
20 relates to the species of -- the target of the BiOp
21 yes.

22 MR. O'HANLON: Okay. For listed species?

23 WITNESS SHILLING: Yes, for listed species.

24 MR. O'HANLON: All right. And that's also
25 true of the Biological Opinion related to WaterFix?

1 WITNESS SHILLING: Yes.

2 MR. O'HANLON: All right. Now, I want to
3 clarify something that I wondered about reading your
4 testimony here. And that is you're not saying, are
5 you, that exports will not be reduced if -- even if a
6 reduction is required under the federal Endangered
7 Species Act?

8 WITNESS SHILLING: I'm saying that, because
9 the various permits rely on the Adaptive Management
10 Plan, as the draft as formulated and potentially a
11 final after permitting, that a permit condition --
12 permit conditions don't include not delivering water.
13 It relies on the Adaptive Management Plan to decide how
14 much water and, therefore, how the Adaptive Management
15 Plan is formulated will determine how much water is
16 delivered.

17 And so because the Adaptive Management Plan
18 and process is run by the IICG and that's of majority
19 water interests and water agencies, there will be a lot
20 of pressure to maintain deliveries. And since they are
21 the implementing entity for the Adaptive Management
22 Plan, then their interests, their biases are what's
23 going to really drive how the Adaptive Management Plan
24 is implemented.

25 MR. O'HANLON: Is it your understanding that

1 the Bureau of Reclamation is required to comply with
2 the Endangered Species Act in operating the Central
3 Valley Project?

4 WITNESS SHILLING: Yes.

5 MR. O'HANLON: And is it your understanding
6 the Department of Water Resources is required to comply
7 with provisions of the Endangered Species Act in
8 operating the State Water Project?

9 WITNESS SHILLING: Yes.

10 MR. O'HANLON: And you weren't meaning to
11 suggest anything otherwise in your testimony; is that
12 right?

13 WITNESS SHILLING: Well, compliance with the
14 acts doesn't mean that you can't cause harm. And
15 that's really the point of the incidental take permit
16 is that some harm can be caused.

17 And if a condition of the permit is that an
18 adaptive management process really takes care of making
19 sure that that harm isn't excessive, then the manner in
20 which that is implemented is critical. So it's not
21 enough to just say "we will comply with the act"
22 because the Act does allow take.

23 MR. O'HANLON: Okay. Just to be sure this
24 point is clear, you're not saying that, if the
25 Endangered Species Act required the projects to operate

1 in a certain way, that they would be free to operate
2 otherwise, correct?

3 WITNESS SHILLING: I have trouble following
4 the -- sorry.

5 MR. O'HANLON: Okay. Let me rephrase that.
6 Let me rephrase that.

7 I just want to be clear that you're not
8 purporting to say in your testimony that if -- if,
9 after following the processes in the Biological
10 Opinions, the project operators are required to operate
11 in a certain way, you're not saying that, because of
12 something in their contracts or something else, that
13 they'd be free to operate contrary to the Endangered
14 Species Act?

15 WITNESS SHILLING: No. I think they are free
16 to act contrary to the Endangered Species Act in terms
17 of principle because the Endangered Species Act
18 includes not causing extinction, recovery and that
19 those are other parts of the Endangered Species Act.
20 So as long as the permit that's from the Endangered
21 Species Act, as long as that includes a condition
22 that's being followed, then the entity can say, "We're
23 following the Endangered Species Act."

24 But the Delta smelt, for example, is covered
25 by the federal Endangered Species Act and is currently

1 going extinct, as far as we can tell. And the
2 facilities that may be or the different land and water
3 practices that may be causing that are supposed to be
4 complying with the Endangered Species Act, but we're
5 still having a functional extinction take place in
6 front of us.

7 So saying that you're following the ESA
8 doesn't necessarily mean you won't cause harm. Harm is
9 permissible, and it's not very well tracked in most
10 cases.

11 MR. O'HANLON: Have you investigated the
12 history and trend of contract deliveries to CVP
13 contractors since the early '90s?

14 WITNESS SHILLING: I've seen summary graphs of
15 Delta exports, if that's what you mean. And showing
16 the rate of exports and the -- how much water is coming
17 in, how much of it is going out, basically. So at the
18 summary level, yes.

19 MR. O'HANLON: Okay. You do mention the
20 history of Delta water exports in your testimony,
21 correct?

22 WITNESS SHILLING: Yes.

23 MR. O'HANLON: And that's at Page 22, Lines 2
24 and 3. What did you do to investigate the history of
25 Delta water exports?

1 WITNESS SHILLING: Looked at publications that
2 included charts showing the summary of Delta inflows,
3 Delta outflows to the ocean, and Delta outflows through
4 export.

5 MR. O'HANLON: Your testimony cites an exhibit
6 which we'll get to in a minute, LAND-260.

7 So did you consult that in connection with
8 your testimony?

9 WITNESS SHILLING: Yes.

10 MR. O'HANLON: Did you consult any other
11 documents in connection with your testimony?

12 WITNESS SHILLING: I think -- I don't remember
13 the LAND or State Water Board number, but Hutton 2017
14 also includes a description of inflows and outflows
15 from the Delta at the same summary level, and that was
16 another one.

17 I did look for it in the EIR, and I couldn't
18 find a -- the same kind of -- the breakdown that I was
19 looking for in terms of inflows, outflows over the
20 last, say, 50 years.

21 MR. O'HANLON: Did you consider the testimony
22 of Frances Mizuno in this proceeding?

23 WITNESS SHILLING: Not that I recall.

24 MR. O'HANLON: Did you consider the testimony
25 of Jose Gutierrez in this proceeding?

1 WITNESS SHILLING: Not that I recall.

2 MR. O'HANLON: Mr. Long, could we please have
3 LAND-260 on the screen. Thank you.

4 And is LAND-260, which is now on the screen,
5 is this the graph or information you referred to
6 earlier as having consulted in connection with your
7 testimony?

8 WITNESS SHILLING: Can you go up to see
9 whatever the title of this document is, Mr. Long? Or
10 is this the only page -- oh, excerpt from MAF. There we
11 go. Okay. Yes.

12 MR. O'HANLON: Now, you did not prepare
13 LAND-260, correct?

14 WITNESS SHILLING: No. I went -- I found
15 Moyle 2018 -- et al., 2018 and the chart that I liked
16 and referenced it. And that's what I wanted to get out
17 of it.

18 MR. O'HANLON: So you excerpted this from an
19 article written by Dr. Moyle and others, correct?

20 WITNESS SHILLING: Yeah. This -- yeah.

21 MR. O'HANLON: And that's what LAND-260
22 indicates at the bottom of the page there, correct?

23 WITNESS SHILLING: Yes.

24 MR. O'HANLON: Is that correct?

25 WITNESS SHILLING: Yes. Sorry.

1 MR. O'HANLON: Okay. Now, looking at
2 LAND-260, the red and blue bars in the figure show
3 total exports by the CVP and SWP each year from 1967 to
4 2016, correct?

5 WITNESS SHILLING: Yes.

6 MR. O'HANLON: And it also shows, through
7 graying, periods that the -- the people who prepared
8 this figure indicate show periods of drought, correct?

9 WITNESS SHILLING: Yes.

10 MR. O'HANLON: All right. Now, do you read
11 LAND-260 as showing that exports are reduced in drought
12 years?

13 WITNESS SHILLING: Yes, and I think that was
14 their conclusion also in the narrative.

15 MR. O'HANLON: Now, LAND-260 doesn't indicate,
16 however, whether or how -- or by how much total exports
17 were reduced in any of these years for the protection
18 of listed species, does it?

19 WITNESS SHILLING: No. That -- that figure
20 does not show that.

21 MR. O'HANLON: Okay. Thank you. I have no
22 further questions.

23 CO-HEARING OFFICER DODUC: Thank you,
24 Mr. O'Hanlon.

25 I don't see Mr. Ruiz. Can someone check out

1 in the hall for Mr. Ruiz? He's next for cross.

2 I'm trying to ascertain, did they hand off his
3 questions to you, Ms. Des Jardins?

4 MS. DES JARDINS: Yes, I believe they did.

5 CO-HEARING OFFICER DODUC: So you are
6 conducting cross-examination on behalf of Mr. Ruiz?

7 MS. DES JARDINS: Yeah, and myself.

8 CO-HEARING OFFICER DODUC: And yourself?

9 MS. DES JARDINS: Yeah.

10 CO-HEARING OFFICER DODUC: Okay.

11 MS. DES JARDINS: I believe I'm needing a
12 little more time because of the extra questions.

13 CO-HEARING OFFICER DODUC: So you are
14 conducting cross-examination on behalf of Central Delta
15 Water Agency and yourself, and that would be, by the
16 estimate that was provided, a total of 30 minutes?

17 MS. DES JARDINS: That would be about right.

18 It might be best, since I'm not an attorney
19 and I don't have any formal relationship, if I just had
20 half an hour for myself as a party, if that would be
21 acceptable? That would allow me to ask the questions.

22 CO-HEARING OFFICER DODUC: Let's do this,
23 Ms. Des Jardins.

24 MS. DES JARDINS: Yeah.

25 CO-HEARING OFFICER DODUC: You are now

1 representing Central Delta Water Agency, who requested
2 10 to 15 minutes for cross-examination of this panel.

3 MS. DES JARDINS: They didn't -- they just --
4 they suggested that I might be able to ask the
5 questions. They didn't ask me to represent them. So
6 I'm just --

7 CO-HEARING OFFICER DODUC: So you are -- hold
8 on. I'm just trying to get things clear for the
9 record.

10 MS. DES JARDINS: Yes.

11 CO-HEARING OFFICER DODUC: The questions that
12 you are asking, are they questions provided to you by
13 Mr. Ruiz?

14 MS. DES JARDINS: There are a number of
15 questions that I have. There's some that we did
16 discuss asking of -- so. . .

17 CO-HEARING OFFICER DODUC: And so you are
18 requesting 30 minutes --

19 MS. DES JARDINS: Yes.

20 CO-HEARING OFFICER DODUC: -- to ask all of
21 these questions?

22 MS. DES JARDINS: Yes.

23 CO-HEARING OFFICER DODUC: All right. Hold
24 on.

25 Now what?

1 (Sotto voce discussion between Mr. Deeringer
2 and Co-Hearing Officer Doduc)

3 CO-HEARING OFFICER DODUC: Go ahead.

4 MR. DEERINGER: Ms. Des Jardins, could we ask
5 that you segregate your questions for Mr. Ruiz from the
6 questions that are on your own behalf?

7 MS. DES JARDINS: How about if it -- is it
8 necessary for me to segregate those questions?

9 MR. DEERINGER: So the reason for that request
10 is that, if there are any objections that require you
11 to defend your right to ask them, that would put you in
12 a position of lodging legal argument on behalf of
13 either yourself or Mr. Ruiz's clients.

14 Now, if it's on your own behalf, that's
15 permissible, but the former, I think we may have some
16 other objections from the other parties.

17 MS. DES JARDINS: Yes. And I didn't -- that
18 was why I was concerned about getting into asking
19 questions --

20 CO-HEARING OFFICER DODUC: So --

21 MS. DES JARDINS: -- for another party.

22 CO-HEARING OFFICER DODUC: -- where I was
23 going, Ms. Des Jardins, is -- actually, this is going
24 to be my direction now.

25 You are -- according to my list and the order

1 of proceeding, Central Delta Water Agency is now up to
2 conduct cross-examination of this panel. If you have
3 questions to ask on their behalf, then you may take
4 this time do so. They requested 10 to 15 minutes, and
5 that's the time that I will give you to ask any
6 questions on behalf of Mr. Ruiz.

7 You will get your turn as the party known as
8 Deirdre Des Jardins later on in the order of
9 proceedings to conduct cross-examination.

10 MS. DES JARDINS: I wouldn't necessarily be
11 able to defend -- make any argument defending those
12 questions.

13 CO-HEARING OFFICER DODUC: Then are you hereby
14 withdrawing your request to ask questions on behalf of
15 Central Delta Water Agency?

16 MS. DES JARDINS: Yes, I believe I am.

17 CO-HEARING OFFICER DODUC: Thank you.

18 We now move on to Contra Costa County.

19 Did I miss out? Group 25 requested 20
20 minutes, and they withdrew that. All right. So then
21 we're on to Mr. Jackson for 15 minutes.

22 CROSS-EXAMINATION BY MR. JACKSON

23 MR. JACKSON: Yes, these questions are for
24 Dr. Shilling.

25 And I -- could we have Part 2 Rebuttal on the

1 screen for LAND-240.

2 MR. LONG: LAND-240-Errata is up on the
3 screen.

4 MR. JACKSON: Yeah, LAND-240-Errata. And I
5 believe it's -- the recommendations that are on Page --
6 at the end, I believe, 33. Up a little. All right.

7 Dr. Shilling, you had a series of
8 recommendations.

9 WITNESS SHILLING: In my PowerPoint.

10 MR. JACKSON: In your PowerPoint.

11 I'm sorry, the PowerPoint.

12 MS. MESERVE: LAND-241?

13 CO-HEARING OFFICER DODUC: It's on the last
14 page, Mr. Long.

15 MR. JACKSON: Yes. Sorry about that.

16 Dr. Shilling, these particular recommendations
17 indicate that you are recommending that we revisit the
18 scope of the project to consider and cover the coequal
19 goals of the Delta Reform Act.

20 What protections in the Delta do you believe
21 that need to be reconsidered from your review?

22 WITNESS SHILLING: Well, the scope, because
23 it's only dealing with four listed species then fails
24 to include everything that isn't those. And if we were
25 to just look at fish, then it's the other native fish

1 in the Delta; wildlife, all the terrestrial and
2 semi-terrestrial wildlife; and then, obviously, the
3 human communities and their uses, the agricultural use,
4 the local and cities.

5 So those I think are reasonable to include,
6 not because you would necessarily -- you're not going
7 to manage the town of Hood, but you're going to manage
8 the impacts of the facility on the town of Hood.

9 And so including all of those values that are
10 recognized for the Delta as part of the Adaptive
11 Management Plan that could be impacted by the facility
12 seems reasonable scope for the plan.

13 MR. JACKSON: So if you were designing a
14 program to do that, what would you do?

15 WITNESS SHILLING: That's a gigantic question,
16 Mr. Jackson.

17 Well, we -- as we discussed with
18 Mr. Berliner's questions there, we learned a lot in the
19 CalFed process, and there's a collection of lessons
20 learned, let's say, some of which are why maybe CalFed
21 didn't work. And then there's a variety of scientific
22 studies that have already been conducted. And I think
23 that that large repository of information gets us a
24 long way towards what a -- what I would consider a real
25 adaptive management plan for the Delta to look like.

1 So in other words, we don't have to start from
2 scratch. We can start from well above scratch with a
3 lot of accumulated knowledge and then include the
4 people who have a stake, have an obvious stake. Part
5 of the -- just the level of resistance to the permit
6 application is an indication of that.

7 So you start with the stakeholder concerns,
8 agricultural, municipal, and you include the mountain
9 of information that we've generated with the earlier
10 stages of whatever we called the CalFed process and the
11 Bay-Delta process. And then that would allow us to
12 formulate a set of options, a set of management actions
13 beginning, as I said in my testimony, with what kind of
14 facility would you actually create, what kinds of
15 pathways are appropriate, when is it to do something --
16 when is it appropriate to do something.

17 For example, if climate change guarantees us a
18 certain level of sea level rise and we know it's going
19 to invade the Delta and we will have a salty Delta, as
20 many people have said, then repositioning things does
21 make sense.

22 But if you do it in the context of things that
23 we are studying now actively and the stakeholders who
24 are impacted, then you're likely to come up with a
25 different set of management actions than if it's just

1 water interests who have only one interest, really, and
2 that's to get a diverted freshwater flow from the Delta
3 region, then, you know, including broader concerns,
4 you're going to have a broader scope.

5 That's the beginning. I won't go beyond that.

6 MR. JACKSON: You worked for CalFed during
7 those years?

8 WITNESS SHILLING: I never worked for CalFed
9 per se. I did -- I was part of a large ERP, ecosystem
10 restoration project, grant. And I was participating in
11 the watershed subcommittee and the environmental
12 justice subcommittee.

13 MR. JACKSON: Are you familiar with the Record
14 of Decision --

15 WITNESS SHILLING: Yes.

16 MR. JACKSON: -- for the CalFed project?

17 WITNESS SHILLING: Insomuch as one can be
18 familiar with an 800-page document.

19 MR. JACKSON: Did the Record of Decision
20 consider new infrastructure in the Delta?

21 WITNESS SHILLING: Yes.

22 MR. JACKSON: And what was the result of that
23 consideration about new infrastructure?

24 WITNESS SHILLING: Well, the actual result is
25 deferral, essentially, to see if we can figure out what

1 we could do in the Delta so that through-Delta flows
2 could be maintained, if that was a good idea, versus an
3 isolated facility.

4 And I think that we were heading in a
5 direction where you could have said -- the point I was
6 bringing up earlier, accumulated knowledge and
7 stakeholders, and then we get to a plan. I think we
8 were heading that way, and for various reasons ten
9 years ago, you know, it got shut down.

10 So the -- but the consideration was there.
11 And in some ways that might be what I meant by a
12 pre-construction phase use of adaptive management.
13 That's essentially what we were doing, but we just
14 didn't get to the end.

15 MR. JACKSON: Now, you indicated that you also
16 had some familiarity with the earlier BDCP project.

17 Did that have elements of what you were
18 talking about in terms of pre-construction adaptive
19 management?

20 WITNESS SHILLING: Well, I think that all of
21 these do, going back 20 years, and some of them
22 explicitly reference it as adaptive management. But
23 since I first became aware of it, the Bay-Delta
24 processes 20 years ago, every version of a plan for the
25 whole Delta has discussed collecting scientific

1 information -- collecting information scientifically
2 and then linking that to management decision-making,
3 choosing options.

4 That's almost always one of the -- one of the
5 objectives is to conduct studies or collect scientific
6 information and then consider a range of options and
7 then choose which way do we need to go.

8 MR. JACKSON: Do you know -- do you have any
9 idea why the BDCP project basically dropped ecosystem
10 solutions in favor of a new water facility?

11 WITNESS SHILLING: Because they could.

12 MS. MESERVE: Objection, misstates the
13 evidence. The BDCP had a large water facility within
14 it.

15 MR. JACKSON: No, I -- you're right, but I'll
16 rephrase the question.

17 Do you know why the general ecosystem portions
18 of BDCP were dropped in favor of the WaterFix?

19 CO-HEARING OFFICER DODUC: Mr. Jackson, help
20 me tie this back to Dr. Shilling's rebuttal testimony.

21 MR. JACKSON: Yes. In -- in his testimony
22 earlier, he talked about -- in adaptive management, was
23 talking about the processes over the last 20 years.
24 You asked him a couple of questions about, well, why
25 aren't we using what we learned over those periods of

1 time. And I'm trying to --

2 CO-HEARING OFFICER DODUC: My question was
3 whether he considered all those part of adaptive
4 management. I didn't go into the details of those
5 activities or whether they were good or bad or, you
6 know, all those other aspects.

7 I only wanted to know whether he would
8 consider part -- all of that -- all those previous
9 efforts as part of an adaptive management process.
10 That was the extent of my question, Mr. Jackson.

11 MR. JACKSON: And what I'm trying to do is to
12 sort of finish that by asking why CalFed went away, why
13 the ecosystem -- the ERP, which he worked on, and the
14 Section 10 permit part, leaving us with a brand-new
15 kind of project which is simply to build a set of
16 tunnels.

17 CO-HEARING OFFICER DODUC: Nope. That's
18 outside the scope of his rebuttal testimony.

19 MR. JACKSON: All right. Okay. I won't go
20 any further with that. Thanks.

21 CO-HEARING OFFICER DODUC: Thank you.

22 I'm often reminded by my attorney -- actually,
23 many attorneys that questions on cross -- responses to
24 cross-examination questions does not mean that you can
25 then cross outside the scope of rebuttal testimony.

1 I probably didn't say that the right way,
2 Mr. Deeringer. Would you like to say that in your
3 legal way?

4 MR. DEERINGER: Responses to questions on
5 cross do not expand the scope of cross, I think is what
6 I went with.

7 CO-HEARING OFFICER DODUC: That's what I have
8 been told, Mr. Jackson.

9 MR. JACKSON: And that -- okay. We're
10 covered.

11 CO-HEARING OFFICER DODUC: See, lawyers never
12 argue with lawyers; they just argue with engineers.
13 All right.

14 Ms. Des Jardins, you are up now for your
15 cross-examination.

16 MS. DES JARDINS: Does that extend to
17 scientists?

18 CROSS-EXAMINATION BY MS. DES JARDINS

19 MS. DES JARDINS: Dr. Shilling, I did have one
20 follow-up question.

21 So you were involved with the CalFed
22 ecosystem. You just testified that you were involved
23 with the CalFed ecosystem restoration program?

24 WITNESS SHILLING: Yeah. As a grant
25 recipient, yes.

1 MS. DES JARDINS: Was it your understanding
2 that science-based adaptive management was part of the
3 CalFed ecosystem restoration program?

4 WITNESS SHILLING: In some senses. It was
5 also that the Ecosystem Restoration Program was part of
6 CalFed's adaptive management approach.

7 MS. DES JARDINS: I see. And from your
8 experience with the CalFed Ecosystem Restoration
9 Program, did you feel that that adaptive management
10 approach was successful?

11 WITNESS SHILLING: No. Because it was
12 truncated, there wasn't really an ability to complete
13 cycles of learning and doing. And so, for example, our
14 project, which was right at the end of the ERP's
15 timeline, was to evaluate the success of previous
16 restoration projects. So it would be then to inform
17 future restoration.

18 And the program ended right after our --
19 not -- it was a coincidence, right after our project
20 ended. So there wasn't the ability to then complete
21 the cycle and renew, you know, new knowledge, new
22 management decisions.

23 MS. DES JARDINS: So that would have been sort
24 of the inform-adapt part of the cycle?

25 WITNESS SHILLING: Exactly, yeah.

1 So the restoration was built on, originally,
2 the idea that in order to continue permitted take and
3 water deliveries through the Delta, you would need to
4 mitigate it through restoration of ecosystem
5 components. I mean, I think it was called -- I think
6 it was described a little more flowery than that, but
7 essentially that was the bottom line.

8 And the -- but how that restoration took place
9 and whether or not it was effective in -- and,
10 therefore, mitigated some of the impacts of water
11 deliveries was not really -- was not evaluated
12 completely, or where it was evaluated well, it still
13 didn't complete the loop to new management decisions
14 because the program was ended.

15 MS. DES JARDINS: And then you referred to
16 zero-based management for the WaterFix project.

17 Does that mean that it's again starting from
18 scratch again?

19 WITNESS SHILLING: Can you -- you said --

20 MS. DES JARDINS: You referred to
21 zero-based --

22 WITNESS SHILLING: Zero-based?

23 MS. DES JARDINS: -- management previously for
24 the WaterFix project, zero-based. Okay. Maybe that's
25 not --

1 WITNESS SHILLING: Did I say that verbally?

2 MS. DES JARDINS: Yes.

3 WITNESS SHILLING: Okay. Maybe I used it -- I
4 didn't use the word "zero" that I'm aware of.

5 MS. DES JARDINS: Well, do you -- let me just
6 say it more directly.

7 WITNESS SHILLING: Okay.

8 MS. DES JARDINS: Do you think that the
9 WaterFix proposed management concerns took into account
10 those CalFed studies?

11 WITNESS SHILLING: Yes, I think that the --
12 there was a lot of accounting of what has been learned
13 before and description of that knowledge in the
14 supporting documentation for the Delta tunnels project.

15 The problem isn't the substantial description
16 of things that we suspect or know or the modeling. The
17 problem is connecting things that we are identifying as
18 problems with management actions that aren't going to
19 contribute to those problems or that can help to fix
20 those problems.

21 So the giant disconnect is between that
22 hundreds of millions of dollars of information and then
23 doing things that actually meet the coequal goals.

24 MS. DES JARDINS: Okay. And are you aware
25 your concern that there were no meaningful triggers for

1 changes in management across short- or long-term time
2 frames was shared by the Aquatic Science Peer Review
3 Panel for the NMFS BiOp?

4 WITNESS SHILLING: I don't know that they said
5 that, but I'm glad they did.

6 MS. DES JARDINS: Okay. And --

7 WITNESS SHILLING: Are you referring to the
8 ISB report?

9 MS. DES JARDINS: The -- the NMFS Aquatic
10 Science Peer Review.

11 WITNESS SHILLING: Okay. All right. No.

12 MS. DES JARDINS: Okay. And do you think that
13 part of the reason for the disconnect in the WaterFix
14 project is the involvement of the water agencies in the
15 development of that project in the current proposal?

16 WITNESS SHILLING: I mean, I suspect that
17 those kinds -- that that is the context for some of
18 these decisions, and part of that comes from long
19 experience with water-related decision-making process.

20 One of the articles I cited in my testimony is
21 one that I was a coauthor of about how these decisions
22 occur, who makes them and why, and the sort of power
23 dynamics in the Delta water decision-making.

24 So, yeah, I suspect that these things happen
25 this way, but I don't know for sure.

1 MS. DES JARDINS: I had a sort of specific --
2 you also mentioned sea level rise. And I wanted to ask
3 you in context of your opinion about the adaptive
4 management being involved in construction.

5 Wouldn't additional adaptive management
6 consider recent research on sea level rise?

7 WITNESS SHILLING: Yeah, you would think so.
8 And I'm not sure to what extent that was considered.

9 I understand that it's one of the stated
10 issues that -- sort of the context of moving the -- at
11 least getting an additional diversion to the north is
12 to escape the salinity effects of sea level rise as you
13 have more saltwater intrusion in the Delta.

14 Whether or not that plays a role in any
15 subsequent decisions, I'm not sure. And certainly as
16 the levee islands are more threatened due to sea level
17 rise, then that could change a lot of things, including
18 actually the position of X2 in relation to the new
19 intake proposal.

20 MS. DES JARDINS: If -- you might not be
21 familiar, but if sea level rise was substantially more
22 in -- at the proposed facilities was more than 18
23 inches, which is assumed, wouldn't that have
24 significant impacts on -- that would need to be taken
25 into account in adaptive management?

1 WITNESS SHILLING: Yes, but once the facility
2 is built, then it's no longer really possible to effect
3 that particular choice, obviously. And I -- I think
4 that the -- even though they used a fairly high level
5 of elevation for their project life span and potential
6 impacts, the projections today for sea level rise do
7 include three to four meters by 2100.

8 So if we assume that we don't want to have to
9 rebuild it -- if it gets built -- within 70 or 80
10 years, then it's even possible that it won't be in the
11 right spot even then.

12 MS. DES JARDINS: And if it isn't in the right
13 spot, wouldn't that create more conflicts with, for
14 example, salinity control in the Delta?

15 CO-HEARING OFFICER DODUC: Hold on. Hold on,
16 please.

17 WITNESS SHILLING: Yes, sorry.

18 CO-HEARING OFFICER DODUC: Mr. Mizell has an
19 objection.

20 MR. MIZELL: Yes, thank you.

21 I'm going to object as beyond the scope of his
22 rebuttal testimony. I don't believe that he's
23 discussed the appropriateness of the location of the
24 intakes in rebuttal.

25 MS. DES JARDINS: I would simply -- he did

1 suggest that adaptive management should be considered
2 in construction and that some specific -- this was a
3 specific example of how adaptive management might be --
4 might be better considered in construction.

5 And I just wanted to do one follow-up question
6 about what the effects of not using adaptive management
7 in construction -- on this particular issue would be.

8 CO-HEARING OFFICER DODUC: Did you,
9 Dr. Shilling, refer to the intake location in any
10 portion of your testimony?

11 WITNESS SHILLING: No, not specifically.

12 CO-HEARING OFFICER DODUC: Objection
13 sustained.

14 MS. DES JARDINS: Okay.

15 Another question about funding for the
16 project, are you aware that the current -- the
17 estimated cost of the project, whether it includes the
18 Adaptive Management Program or not?

19 WITNESS SHILLING: Do you mean the total Delta
20 tunnels construction cost or --

21 MS. DES JARDINS: Yeah, the --

22 WITNESS SHILLING: -- potential --

23 MS. DES JARDINS: -- total estimated WaterFix
24 project cost.

25 WITNESS SHILLING: Well, I've seen estimates

1 of construction cost of 18 billion and then total cost
2 including interest payments, so the total finance cost
3 of over 40 billion.

4 MS. DES JARDINS: Does any of that include the
5 Adaptive -- this Adaptive Management Program?

6 WITNESS SHILLING: I'm not aware of the
7 details of the -- of each of those estimates, just that
8 they are out there.

9 MS. DES JARDINS: Are your concerns that the
10 cost for the construction part of the project could
11 escalate?

12 CO-HEARING OFFICER DODUC: That is outside the
13 scope of his rebuttal testimony.

14 MS. DES JARDINS: Okay. The other -- so
15 when -- in your experience with the Ecosystem
16 Restoration Program, has there been issues of
17 sufficient funding for needed studies?

18 WITNESS SHILLING: Absolutely. And I think
19 the obvious biases - as a working scientist in these
20 area is that I never think there's enough money.

21 But beyond that parochial concern, if the --
22 considering the level of decision and the impact of the
23 decisions that are being made around the Delta and
24 water supply and delivery, the money wasn't there, and
25 I don't see it proposed here, committed, that you would

1 understand what was going on.

2 And that -- I mean, that could be in terms of
3 mercury methylation. It could be why Delta smelt don't
4 do well or even how best to measure them. There's a
5 wide range of under-funded things, and not just because
6 it's fun to study them but because you need that
7 information to make good decisions.

8 MS. DES JARDINS: Does that opinion -- are you
9 aware of the pelagic organism decline studies done
10 under CalFed?

11 WITNESS SHILLING: Yes.

12 MS. DES JARDINS: Does that opinion that
13 they're under-funded also extend to those studies?

14 CO-HEARING OFFICER DODUC: Outside the scope
15 of his rebuttal testimony.

16 MS. DES JARDINS: Okay. Do you feel that the
17 pelagic organism decline studies were taken into
18 account in this -- in the WaterFix proposal?

19 CO-HEARING OFFICER DODUC: You mean in the
20 adaptive management proposal?

21 MS. DES JARDINS: Yeah, yeah, yes.

22 The adaptive -- in the adaptive management?

23 WITNESS SHILLING: I don't because they --
24 although the -- the monitoring and the uncertainly
25 funded monitoring proposed in the adaptive management

1 project does discuss different ecosystem attributes
2 that are important to know about that are uncertain,
3 the only thing that's really committed to is
4 understanding whether or not a -- a certain level of
5 water delivery or timing is causing a decline to
6 extinction of one of the four listed species.

7 So that narrow definition of what's included
8 in the Adaptive Management Plan as the focus suggests
9 that that will be what ultimately the boundaries are
10 for what's monitored because there aren't requirements
11 to go beyond that in the -- for example, in the
12 incidental take permit. The adaptive management that's
13 described in there is wrapped around the success of the
14 four listed species and the effects of the deliveries
15 on the four listed species.

16 So something like a general study of pelagic
17 organism decline might be considered outside of the
18 scope of that.

19 MS. DES JARDINS: And by extension, would you
20 have a concern that the Adaptive Management Program
21 wouldn't have adequate information on ecosystem -- you
22 know, holistic ecosystem factors?

23 WITNESS SHILLING: Yes, and I think it's --
24 yes, I think that's true partly because, if you look
25 closely at like the terms and conditions of the permit

1 or the BiOps, Biological Opinion, and in the take
2 permit, there's no requirement that a certain level of
3 funding occur. And there's a strong suggestion that it
4 occur, but there's nothing that says it shall occur or
5 else you don't get your permit, you know.

6 So if that's the case and if you follow that
7 through, you end up with primarily studying the thing
8 that you said you -- your permit says you have to
9 study, and then anything outside of that is sort of
10 icing on the cake. And prior experience suggests that
11 the icing is the first thing to go.

12 So I would -- I doubt -- and now this is in
13 the context that I'm sure the -- the fish agencies
14 would say, "Well, you have to understand ecosystem
15 health to understand the impact on the listed species."
16 And the Delta Independent Science Board said that in
17 their analysis of the Adaptive Management Plan as well.

18 But if -- if that ends up being something
19 expensive or if the IICG doesn't necessarily want to
20 ask that question, then it's discretionary.

21 MS. DES JARDINS: And so just one follow-up
22 question on that.

23 You had previously indicated that you were
24 concerned that -- I believe that the water agencies
25 were sort of driving the Adaptive Management Plan. And

1 don't -- wouldn't they also drive how -- what studies
2 were funded?

3 WITNESS SHILLING: Yes, they are -- control
4 most parts of the decision loops that would decide
5 level of funding, what projects got funded, and then
6 also what to do about the outcome of the evaluations or
7 assessments from the projects. So they'll interpret
8 the data and make recommendations of funding levels and
9 which projects and then decide what to do. So they
10 stand at the helm of all of those decision moves.

11 MS. DES JARDINS: Do you think they would
12 be --

13 CO-HEARING OFFICER DODUC: I thought you had
14 one follow-up question.

15 MS. DES JARDINS: Okay. That's enough. Thank
16 you very much.

17 CO-HEARING OFFICER DODUC: Thank you.

18 That concludes all the cross-examination I
19 have. Do you wish to request redirect?

20 MR. KEELING: Could you give us a moment to --
21 thank you.

22 (Sotto voce discussion amongst Mr. Keeling,
23 Ms. Meserve, and Mr. Ferguson)

24 CO-HEARING OFFICER DODUC: Do you need more
25 time?

1 MS. MESERVE: Too many lawyers.

2 CO-HEARING OFFICER DODUC: Yes? No?

3 MR. FERGUSON: No, we're fine. No questions.

4 CO-HEARING OFFICER DODUC: All right. I

5 believe there's a question up here.

6 CO-HEARING OFFICER MARCUS: Yes, and I may be

7 asking this question as much for people listening as

8 for myself just to be clear.

9 So we had extensive rebuttal talking about

10 adaptive management generally, and I've obviously been

11 through that, and it's interesting to me. But I'm a

12 little unclear on what you're asking; I want to be

13 clear that I'm not guessing. Maybe this is just me

14 today, but I suspect I'm not alone.

15 So you have a conversation about what an ideal

16 adaptive management program could be in the Delta and

17 talk about prior things. You talk about issues and

18 Trinity that you saw as flaws. This is sort of like

19 thinking about a holistic adaptive management program.

20 You had a little colloquy with Mr. Berliner

21 about the difference between how you saw it as

22 purporting to be a bigger thing as opposed to adaptive

23 management that would come back to particular factors

24 or particular species. And we had discussion earlier

25 about -- when Dr. Earle was here about do they just get

1 to do it, or do they then go back to the governing
2 regulatory agencies to ask for permission.

3 So two different things that never got quite
4 resolved, and Mr. Berliner had extensive questions
5 about it overall. This maybe is why I'm getting
6 confused.

7 So I can't tell in your testimony to be sure
8 without me guessing; so I want to give you a chance to
9 say. Are you trying to assert it to undercut -- to
10 rebut the testimony that relied on this plan as
11 evidence of reasonable protection, or are you asking us
12 to do something else? Because you had a bunch of
13 recommendations for adaptive -- so I can't tell whether
14 you're saying somehow that we should order something as
15 part of this permit consideration.

16 So I honestly can't -- I apologize, but I
17 can't tell whether you're just trying to rebut and
18 undermine or actually saying we should do something
19 because we mixed this as permit, not -- and rightly so,
20 that both can talk about permit conditions at the same
21 time.

22 So I just want to be clear as I read it in
23 understanding why you presented it and what you were
24 trying to say because there's a lot there, but I still
25 can't figure out what the point and the ask is that you

1 have in mind.

2 WITNESS SHILLING: Is that to both of us?

3 CO-HEARING OFFICER MARCUS: Sorry. Very -- to
4 both of you. I'm sorry. It's a long wind-up, but
5 there's been a lot of material, a lot of questions.
6 And I've been struggling to hone it.

7 WITNESS STOKELY: Well, in my own case, I'm
8 asking you not to issue the permit and not to rely --
9 pardon?

10 CO-HEARING OFFICER MARCUS: No, sorry.

11 WITNESS STOKELY: I'm asking you not to issue
12 the permit and not to rely on a finding that the
13 Adaptive Management Program will reasonably protect
14 fish and wildlife. I specifically did not put any
15 recommendations in my testimony because I didn't want
16 you to think that I supported the project or that if
17 you put those conditions in there that then I would
18 think the project was okay.

19 WITNESS SHILLING: I can't remember why I put
20 recommendations in. It might just be in my nature, but
21 it -- you know, there's a -- for any of us sitting up
22 here, there's probably some oppositional, argumentative
23 nature to it, which is why we would agree to come in in
24 the first place.

25 And -- but the reason -- I mean, I like

1 turning on the tap and getting water. I happen to live
2 on a well, so it's a little easier. So I understand
3 the arguments for. And I live in a state that relies
4 on the agricultural activities in the San Joaquin
5 Valley that would receive a lot of the water, and Los
6 Angeles.

7 So the rationale for having reliability in
8 water supply makes perfect sense. It makes sense from
9 a human point of view, a survival point of view. The
10 question is always how, and it always has been how,
11 which is also related to who. Who gets to decide, and
12 then who's left holding the bag? How are you going to
13 do it often tells you who's going to get left holding
14 the bag for the impacts.

15 My picture -- I don't live in the Delta, but
16 my picture of living in the Delta with a facility is
17 that eventually people will leave, that it will be
18 difficult to practice agriculture. Land will be bought
19 out from under them, and it's just going to make it
20 more and more difficult. So the creation of a
21 sacrifice zone in a way, to me, is not good governance.

22 CO-HEARING OFFICER MARCUS: I understand.
23 It's probably not appropriate to do while -- long while
24 you're sitting here -- but what the direct purpose of
25 the testimony is. I'm not trying to cut you off.

1 WITNESS SHILLING: No, no, no. I get it.

2 CO-HEARING OFFICER MARCUS: And you're very
3 literate, so it's nice. But --

4 WITNESS SHILLING: I was told earlier by
5 somebody from one of the other agencies that I talk a
6 lot.

7 So the purpose of the recommendations --

8 CO-HEARING OFFICER DODUC: The purpose of the
9 rebuttal testimony, is it to undercut and just rebut
10 what people said or to ask us to do something?

11 WITNESS SHILLING: Right. So it's to critique
12 what's proposed because what's proposed is what will be
13 permitted. It's not like -- once the permits are
14 granted, then there's no guarantee of coming back and
15 let's redo the whole thing because it didn't seem to
16 work.

17 So I'm treating it as written. As written,
18 what's described is not good enough. It's according to
19 the scientific literature, in my opinion from working
20 in this place for 20 years -- "this place" being the
21 Delta and the tributary watersheds.

22 So I don't think it's adequate, and not only
23 that, I think it's got so many possibly fatal flaws. I
24 mean, obviously, I don't know, but possibly fatal flaws
25 that it suggests that it's too -- it's too -- that --

1 sensitive to something breaking and then resulting in
2 harm to the Delta. So I don't think it's good enough.

3 That leads me to, then, the -- actually trying
4 to do the other half of what you're saying is what
5 should you do about it.

6 I suspect there's a heavily conditioned
7 version of the adaptive management process that would
8 take care of a lot of these issues. I don't know
9 necessarily what that looks like. I think that, if
10 each of the things I brought up was addressed, then
11 obviously the things I think are most serious would be
12 taken care of. But there's a lot of experts in the
13 Delta, and so the conditioning would have to, you know,
14 consider that.

15 But I -- I think it's possible. And most of
16 the literature by people who looked at 20 or 30 years
17 of adaptive management planning say the same thing. We
18 see most adaptive management plans aren't done well.
19 And then there's the "And what should we do about it?"
20 And they tend to be the same recommendations over and
21 over which never get implemented. So then what do you
22 do? That's your job.

23 CO-HEARING OFFICER MARCUS: Thank you. That
24 helps.

25 MR. KEELING: Chair Marcus, to make sure I

1 understand your question. I'm not a scientist; I'm a
2 lawyer. I understood the question to be are these
3 recommendations part of your rebuttal or something
4 outside of your rebuttal? Is that what you were
5 asking?

6 CO-HEARING OFFICER MARCUS: No. I was just
7 trying to -- this was voluminous. There are a lot of
8 words here. There were a lot of discussion and then a
9 lot of questions that went beyond, but I didn't hear
10 the "here's the precise thing that we're trying to do."

11 Mr. Stokely's answer helped me put his in
12 context, too. But there was just a lot of discussion
13 about adaptive management, what would be nice, and the
14 Delta as a whole, and then a little bit of a
15 conversation about is it -- is what it's here limited
16 to -- "it's too narrow," is one of the things he said.

17 So I'm trying to -- I was just trying to
18 figure out how to place all of this in bringing in -- I
19 mean, presumably we'll see it in closing briefs, but we
20 spent a lot of time on it without it being pointed.

21 MR. KEELING: Thank you.

22 CO-HEARING OFFICER DODUC: On that note, thank
23 you, Dr. Shilling and Mr. Stokely.

24 WITNESS SHILLING: Thanks to you all.

25 CO-HEARING OFFICER DODUC: And why don't we

1 take a short break while the CSPA panel comes up,
2 Mr. Cannon and Mr. Shutes, and we will return at 2:35.

3 (Recess taken)

4 CO-HEARING OFFICER DODUC: All right. We are
5 back, and before we get to Mr. Jackson, I have a ruling
6 that I need to read.

7 This is in response to a motion to reconsider
8 our ruling striking portions of LAND-290 and PCFFA-202.
9 And we also have a related motion by Westlands Water
10 District to strike LAND-290 in its entirety.

11 We have reviewed the parties' papers on these
12 motions, and for the reasons I'm about to provide, we
13 are denying both motions. We find that Mr. Gutierrez's
14 Part 2 case-in-chief testimony opened the door to the
15 mixed issues of law and fact that the unredacted
16 portions of LAND-290 address. We accept his Part 2
17 case-in-chief testimony -- we accepted his testimony,
18 and no party objected to it.

19 Both that testimony and the unredacted section
20 of LAND-290 are relevant to Part 2 key hearing issues
21 for the same reason. They go to the magnitude of
22 impacts that may result from potential reductions in
23 South of Delta deliveries to contractors like
24 Westlands, which is relevant to the public interest.

25 When redacting LAND-290, we drew a line

1 between purely legal argument and proper rebuttal
2 testimony on mixed issues of law and fact, leaving
3 intact the discussion of issues that Mr. Gutierrez' own
4 testimony had raised. After reviewing the parties'
5 argument on this point, we believe we drew that line
6 correctly the first time.

7 We also have a clarification about earlier
8 ruling as to PCFFA-202. We posted a revised version of
9 the exhibit that redacted from Page 15, Line 22, to
10 Page 16, Line 4, even though our July 27th ruling did
11 not mention this redaction. That was an oversight, but
12 we did intend to redact that text in our July 27th
13 ruling. Both that text and the redacted portion on
14 Page 13 of PCFFA-202 consists of Mr. Oppenheim opining
15 on alleged omissions from the FEIR/FEIS for the
16 WaterFix project and whether petitioners have met their
17 burden of proof.

18 As our prior rulings have explained, argument
19 or interpretation of exhibits already in the record is
20 not proper rebuttal when it does not draw on a
21 witness's specialized expertise.

22 For future reference, oral rulings should be
23 shorter.

24 With that, Mr. Jackson, before you begin, let
25 me confirm for cross-examination for this panel, I have

1 Department of Water Resources and State Water
2 Contractors for 90 minutes. I have Group 4, San Luis
3 Delta-Mendota for 15, which is now a zero. I have
4 supposedly Mr. Herrick or Ruiz for Central Delta --
5 South Delta for 10; Mr. Keeling for 20; and
6 Ms. Des Jardins for 20.

7 Is that correct still?

8 MS. MESERVE: I also have about 20 minutes in
9 the Group 47 position. I'm sorry that didn't get to
10 you.

11 CO-HEARING OFFICER DODUC: All right. With
12 that, Mr. Jackson.

13 MR. JACKSON: Yes, Michael Jackson on behalf
14 of the California Sports Fishing Protection Alliance,
15 the California Water Impact Network, and AquAlliance,
16 who will be referred to for the rest of this testimony
17 as CSPA, et al. And I'll probably drop the "et al."
18 somewhere along the line.

19 CHRIS SHUTES and TOM CANNON,
20 called as Part 2 Rebuttal witnesses by
21 California Sports Fishing Protection
22 Alliance, the California Water Impact
23 Network, and AquAlliance, having been
24 previously duly sworn, were examined
25 and testified further as hereinafter set

1 forth:

2 DIRECT EXAMINATION BY MR. JACKSON

3 MR. JACKSON: Mr. Shutes, is CSPA-501 a true
4 and correct copy of your testimony on Part 2 issues
5 including effects on fish and wildlife, public trust,
6 and public interest in this matter?

7 WITNESS SHUTES: Yes, it is.

8 MR. JACKSON: Is your statement of
9 qualifications in evidence from Part 1 as Exhibit
10 CSPA-3?

11 WITNESS SHUTES: Yes, it is.

12 MR. JACKSON: And have you been previously
13 sworn?

14 WITNESS SHUTES: I have.

15 MR. JACKSON: Mr. Cannon, is CSPA-500 a true
16 and correct copy of your testimony on the Part 2
17 issues, effects on fish and wildlife, public trust, and
18 public interest?

19 WITNESS CANNON: Yes.

20 MR. JACKSON: And is your statement of
21 qualifications already in the record in Part 1, and I
22 presume Part 2 as well, as CSPA-7?

23 WITNESS CANNON: Yes.

24 MR. JACKSON: Mr. Shutes, did you prepare on
25 the direction of the CSPA executive director and staff,

1 CSPA-502?

2 WITNESS SHUTES: I did.

3 MR. JACKSON: And those are proposed permit
4 terms for the California WaterFix; is that correct?

5 WITNESS SHUTES: It is.

6 MR. JACKSON: And does Footnote No. 1 on
7 CSPA-501 indicate that the recommendation of the permit
8 terms does not diminish the opposition of CSPA, et al.,
9 to the WaterFix petitions?

10 WITNESS SHUTES: That's a correct statement.

11 MR. JACKSON: Mr. Shutes, would you summarize
12 your testimony -- your rebuttal testimony, please.

13 WITNESS SHUTES: Yes. Thank you very much.

14 Chris Shutes for the California Sport Fishing
15 Protection Alliance to summarize my Part 2 Rebuttal
16 testimony, CSPA-501.

17 My Part 2 Rebuttal testimony rebuts the Part 2
18 case-in-chief testimony of Dr. Greenwood and
19 Dr. Wilder, generally in their exhibit statements that
20 California WaterFix will provide reasonable protections
21 for fish.

22 On Pages 3 and 4 of my Part 2 Rebuttal
23 testimony, I cite the specific statements in Exhibits
24 DWR-1012 and DWR-1013 signed that I rebut.

25 On Page 2 of my Part 2 Rebuttal testimony, I

1 describe how petitioners rely on external documents as
2 a source of potential conditions for their proposed
3 project. I also describe the fact that petitioners
4 rely on adaptive management and real-time operations to
5 protect fish. I also describe that modeling is the
6 basis of opinions that California WaterFix will
7 reasonably protect fish.

8 Specifically, I describe on Page 3 how Witness
9 Dr. Greenwood bases his opinions in DWR-1012 on the
10 incremental effect of CWF H3+ relative to the No Action
11 Alternative. I also describe on Page 4 how Dr. Wilder
12 states that he similarly relies, in DWR-1013 signed, on
13 the incremental difference between CWF H3+ and the No
14 Action Alternative and that what he compared were
15 CalSim model runs.

16 As I state in my rebuttal testimony in
17 Part 2 -- my Part 2 case in chief focused on the need
18 for enforceable conditions in permit terms. In order
19 to provide an alternative to the applicant's approach
20 that I believe would provide better protection for fish
21 and wildlife, I provide for the Board's consideration a
22 table of permit terms, should the Board approve in some
23 form the present petition.

24 This table of recommended permit terms is
25 CSPA-502. As mentioned before by Mr. Jackson -- or in

1 a question/response to Mr. Jackson, that does not mean
2 that CSPA endorses the project.

3 In Exhibit CSPA-502, I would like to make
4 three corrections. In Issue 4 at the bottom of the
5 Page 1 --

6 And if we could pull that up, please, I
7 believe it would be helpful. Yes.

8 At the very bottom lines in the "Requirement"
9 column, which is the third column from the left, it
10 should read "900 cfs NDD 1500 cfs," and then scrolling
11 down please to the next page, "total NDD plus SDD."

12 In Issue 17, if we can pull that up, please.

13 CO-HEARING OFFICER DODUC: Hold on,
14 Mr. Shutes. I believe the Chair requested a
15 clarification.

16 WITNESS SHUTES: Yes.

17 CO-HEARING OFFICER DODUC: So my understanding
18 is that you would add the word --

19 Go back up, please. Go back down. Okay.
20 Right there. Stop.

21 WITNESS SHUTES: Right there.

22 CO-HEARING OFFICER DODUC: So after
23 "1500 cfs," you would add the words. . .

24 WITNESS SHUTES: ". . .total NDD plus."

25 CO-HEARING OFFICER DODUC: Thank you.

1 WITNESS SHUTES: In Issue 13, "Delta outflow,"
2 there should be a statement at the bottom of the
3 "Requirement" section, which is the third column from
4 the left, that states that, "for each of the conditions
5 shown, restrict NDD and SDD to minimum diversions (900
6 cfs NDD/1500 cfs NDD plus SDD) when the values shown
7 are not met."

8 Would you like me to repeat that?

9 CO-HEARING OFFICER DODUC: Actually, what I
10 would like you to do is submit an errata for this.

11 WITNESS SHUTES: I'd be glad to do that.

12 CO-HEARING OFFICER DODUC: Please.

13 WITNESS SHUTES: Thank you.

14 CO-HEARING OFFICER DODUC: Continue, but
15 submit an errata.

16 WITNESS SHUTES: We will be glad to do that.

17 And I would point out that this is similar to
18 the requirement that was stated in Issue 4, and it was
19 inadvertently left out of this part of the table.

20 And in Issue 17, on consideration -- and we'll
21 submit this as an errata -- it should read -- it should
22 read that, "The Board should develop OMR in this
23 proceeding for inclusion of permit terms; however,
24 CSPA, et al. do not have specific recommendations at
25 this time."

1 I would like to discuss for a moment the
2 percent of unimpaired flow requirement that is shown in
3 Issue 13. It's at the top of 13 in the second -- third
4 column from the left.

5 I considered simply leaving a general outflow
6 requirement to the update of the Bay-Delta Water
7 Quality Control Plan. However, that would leave
8 appropriate Delta flow criteria to a quasi-legislative
9 process rather than to an adjudicated process. That is
10 a concern.

11 On the other hand, no one in this proceeding
12 has presented any analysis of how a percent of
13 unimpaired requirement could be implemented in a way
14 that would augment flow and reasonably balance that
15 augmentation against water supply, storage, and other
16 impacts.

17 As I stated in my Part 2 case-in-chief
18 testimony, CSPA-202-Errata, the applicants ignored the
19 analysis in the Delta flow criteria report in their
20 Part 2 cases in chief. I consider that one bookend.
21 I believe it is appropriate to balance with the other
22 bookend, similar to the percent of unimpaired flow
23 identified in the 2010 Delta flow criteria report, as
24 protective of native fish and other aquatic species in
25 the Bay-Delta ecosystem.

1 As Mr. Jennings in CSPA-200 and Dr. Whitelaw
2 in CWIN-203 testified in their respective Part 2
3 case-in-chief testimonies, the Board needs to carry out
4 a formal public trust balancing to determine an
5 appropriate flow criteria for purposes of this
6 proceeding. I believe this now provides the Board with
7 the bookends.

8 I would like to briefly walk through and
9 highlight a few of the points in CSPA-502.

10 For Issue No. 1, fish screen velocity and
11 sweeping velocity, the values are identical to those
12 proposed by applicants. But of particular importance
13 is the frequency or what is shown under the "Season or
14 Frequency" column. Velocity should always apply on an
15 instantaneous basis.

16 For Issue No. 2, "Bypass criteria past NDD," I
17 would like to highlight frequency as well. Even if the
18 Board does not adopt the recommended flow values, it's
19 important that bypass requirements should apply on an
20 instantaneous basis. It is important not to lose such
21 details in focusing on the flow values. This detail
22 does not strike me as featuring clearly or at least
23 prominently in DWR-1143-Second Revision.

24 Issue 12 highlights the need to hold an
25 evidentiary hearing to improve the Central Valley

1 Project operation of the Upper Sacramento River, upper
2 section downstream of Keswick Reservoir, that is, and
3 Trinity Reservoir. The Board last visited this issue
4 almost 30 years ago. Mr. Cannon has identified
5 multiple issues with this operation.

6 Issues 14 and 15 would make the Board the
7 enforcing entity of conditions housed in Biological
8 Opinions and would make the Board the determining
9 regulator for adaptive management. The mechanism would
10 be conditions in the water rights permits, and changes
11 would be subject to triennial public hearings.

12 Issues 22 and 23 go to the real-time
13 provision -- provision of real-time and daily
14 information to the public about project operation.

15 Issue 25 addresses the need for transfers --
16 for conditions that govern transfers through export
17 facilities. Proponents have not addressed such
18 transfers or their effects.

19 These are a few of the areas that I wish to
20 highlight, and that concludes my summary. Thank you.

21 CO-HEARING OFFICER DODUC: Thank you,
22 Mr. Shutes.

23 MR. JACKSON: Mr. Cannon, would you please
24 summarize your testimony in CSPA-500.

25 WITNESS CANNON: Yes, I'll give a brief

1 summary. The overall purpose of my testimony is to
2 rebut the statements of Dr. Greenwood and Dr. Wilder in
3 their testimony.

4 Starting on Page 2, general comments on the
5 first section, I contend that neither NMFS, U.S. Fish
6 and Wildlife Service, or CDFW have concluded that the
7 proposed California WaterFix H3+ operations or
8 operations criteria are protective and thus would not
9 jeopardize the species.

10 Their entire testimony refers to the -- does
11 not refer to operations, but they do recognize
12 potential for adverse effects in both of their BOs, and
13 that's not recognized here.

14 Second part. The new OMR rules apply
15 regardless of the California WaterFix operations. I
16 still contend that the OMR E/I outflow and EC rules
17 governing South Delta diversions under 1641 should be
18 different if there are significant North of Delta
19 diversions.

20 Item No. 1 near the bottom, Page 2,
21 Dr. Greenwood and Dr. Wilder did not address the
22 grave -- gravely depressed population status of the
23 species, the adverse effects identified in the BOs of
24 the WaterFix, or the recovery -- or how recovery may be
25 accomplished.

1 Top of Page 3, Dr. Greenwood and Dr. Wilder
2 state that WaterFix will meet the standards in the
3 existing BOs for the State Water Project and Central
4 Valley Project, water quality standards, and criteria
5 stated in the water rights orders. They fail to
6 recognize that -- or state that such criteria have
7 often been ignored or weakened in recent years.

8 Moving on to the bottom of Page 4,
9 Dr. Greenwood stated that longfin smelt will be
10 reasonably protected by H3+ through inclusions of
11 spring outflow criteria. I contend that January and
12 February are very important to longfin smelt and they
13 would not be protected by the spring outflow criteria.

14 Moving on down to Page 11, Dr. Greenwood
15 stated that, "The first one is water temperature. An
16 assessment was done" on water temperature, showed that
17 there's little difference between CH H3+ and the
18 No Action Alternative and that the main driver was air
19 temperatures.

20 My response is that reductions in flow below
21 the North Delta Diversion will result at times in high
22 water temperatures due to several factors. The low
23 salinity zone will be further east in higher air
24 temperatures, is one factor. There's less influence of
25 the cooler Sacramento River water and more influence of

1 the warmer San Joaquin water, as pointed out by
2 Dr. Bryan in his testimony. Longer residence time
3 below the North Delta Diversion site will increase
4 water temperatures as well.

5 Middle of Page 13, I talk about Dr. Greenwood
6 stated in his opinion that salmonids and green sturgeon
7 will be reasonably protected by the North Delta
8 Diversion -- from North Delta Diversion effects because
9 of the screens.

10 I contend that larva and early juvenile
11 sturgeon will be highly susceptible to entrainment,
12 especially during the winter-spring flow pulses when
13 the larvae come down the Sacramento River from the
14 spawning grounds in the Middle and Upper Sacramento
15 River.

16 And Page 16, Dr. Greenwood stated, "And
17 there's also protection of, for example, pulses of fish
18 moving in," and that fish move into the Delta in
19 pulses. I contend that the North Delta Diversions may
20 increase the risk to migrating salmonids between the
21 pulses because the -- what he identifies as pulses is
22 the presence at Knights Landing, in the screw traps, of
23 salmon. That just means they'll be coming into the
24 Delta, and they still need protection at the North
25 Delta Diversion, possibly even more so without the flow

1 pulse.

2 Page 19 and 20, bottom of 19 regarding white
3 sturgeon, he states there's a significant relationship
4 with outflow in the spring and -- but the two
5 alternatives are similar. There's no difference in --
6 because of the similarity in spring outflow.

7 My response was that in Dr. Miller's
8 testimony, he showed where they were getting an
9 additional 800,000 acre-feet of exports with the North
10 Delta Diversion in a year like 2016. That is not
11 similar and that would have an effect on longfins and
12 sturgeon productivity.

13 On Page 20, Dr. Greenwood stated in his
14 opinion that there was -- the other species will
15 generally be protected by H3+. And I contend that the
16 fall-run salmon and the white sturgeon, splittail,
17 striped bass, and American shad are at much higher risk
18 than the listed species.

19 That concludes my summary.

20 CO-HEARING OFFICER DODUC: Thank you,
21 Mr. Cannon. All right.

22 At this time, I'll ask DWR -- or petitioners
23 to come up.

24 So, Mr. Mizell, I believe it was Ms. Morris
25 speaking on behalf of petitioners and State Water

1 Contractors who requested 90 minutes for
2 cross-examination.

3 Is that still a correct estimate?

4 MR. MIZELL: I believe that's going to be a
5 correct estimate. I do tend to speak a little bit
6 slower than Ms. Morris in some cases, so I will do my
7 best to meet that estimate but not confound the court
8 reporter.

9 CO-HEARING OFFICER DODUC: The reason I ask is
10 because I would like to give the court reporter another
11 short break around 3:45. So if you could find a nice
12 stop, pause point in your questioning, we would do so
13 then.

14 CROSS-EXAMINATION BY MR. MIZELL

15 MR. MIZELL: Okay. So these questions are
16 going -- I'm going to start with Mr. Cannon.

17 If we could bring up CSPA-500, please.
18 Thank you.

19 So, Mr. Cannon, I'm going to try and ask you
20 some questions initially that go towards the format of
21 your -- of your testimony, rebuttal testimony. I'm
22 only going to address the format briefly. So I'm not
23 going to spend a tremendous amount of time on it, but I
24 would like to try and understand your approach here.

25 So it appears that the format of your

1 testimony is that you have taken statements from
2 Dr. Greenwood and Dr. Wilder's oral testimony and
3 provided your response to these quotations; is that
4 correct, sir?

5 WITNESS CANNON: Yes.

6 MR. MIZELL: And on Page 1, Line 23, you say
7 that your responses are primarily responding to the
8 witnesses' oral presentations.

9 Is that a correct reading?

10 WITNESS CANNON: Primarily, yes, but also to
11 their case in chief.

12 MR. MIZELL: Mr. Cannon, I was unable to find
13 any citations to the written testimony of either
14 Dr. Wilder or Dr. Greenwood.

15 Did I miss any, or are there no citations to
16 the written testimony in your -- in your rebuttal?

17 WITNESS CANNON: I copied them right out of
18 the transcript.

19 CO-HEARING OFFICER DODUC: Are you asking
20 about the written exhibits, Mr. Mizell?

21 MR. MIZELL: I am. Any citations to the
22 written testimonies of Dr. Wilder or Dr. Greenwood?

23 WITNESS CANNON: Not in this, as I remember.

24 MR. MIZELL: Thank you.

25 Did you read the written testimony of

1 Dr. Greenwood, sir?

2 WITNESS CANNON: Yes.

3 MR. MIZELL: And did you read the written
4 testimony of Dr. Wilder?

5 WITNESS CANNON: Yes.

6 MR. MIZELL: Did you look up the citations and
7 references that were contained within Dr. Greenwood's
8 written testimony?

9 WITNESS CANNON: In a few cases, where I
10 wasn't already familiar with those citations.

11 MR. MIZELL: And the same question for
12 Dr. Wilder, did you look up the citations in his
13 written testimony?

14 WITNESS CANNON: The same answer.

15 MR. MIZELL: So, Mr. Cannon, by my count you
16 have approximately 50 responses contained in CSPA-500
17 and only about eight citations to evidence supporting
18 your statements.

19 Where would I be able to find the basis for
20 the remaining 42 responses?

21 WITNESS CANNON: Mainly in my direct testimony
22 on the case in chief. And otherwise, you'd assume they
23 were my opinion based on a strong background and
24 knowledge of this -- of the issues.

25 MR. MIZELL: So in the cases where you did not

1 cite to the -- any evidence beyond your own written
2 opinion, is it safe to assume that that is testimony
3 that's wholly repetitive of your case-in-chief
4 testimony?

5 WITNESS CANNON: Except in direct response to
6 a comment, it might be different. One of these oral
7 testimony comments from Dr. Greenwood or Dr. Wilder
8 that may have been different from their testimony, and
9 I might have changed the wording somewhat based on
10 their oral comment or testimony.

11 MR. MIZELL: Of the eight places that you cite
12 in your rebuttal testimony, six of those appear to be
13 to blog posts which have been submitted as CSPA-400,
14 -401, -402, -403, -463 and -503; is that correct?

15 WITNESS CANNON: Yes. It's to more clarify
16 and provide more information on the specific issue or
17 argument, and in some cases those have the appropriate
18 citations or information.

19 MR. MIZELL: Let's explore that for just a
20 brief moment.

21 If we could bring up CSPA-503, please. 503,
22 please?

23 And is this a blog post where you were the
24 author, sir?

25 WITNESS CANNON: Yes.

1 MR. MIZELL: And by my reading, it contains
2 three live links that go to a general CDFW survey page
3 and then two abstracts; is that your recollection?

4 WITNESS CANNON: Generally that's the case,
5 yes.

6 MR. MIZELL: And let's scroll down to the next
7 page, to the first survey graphic.

8 Sir, I was unable to find this graphic in any
9 of the cited works in your blog post. Do you provide a
10 citation for it?

11 WITNESS CANNON: Those were provided from this
12 post, not for the references identified. This was
13 taken straight out of IEP database, Internet site where
14 you can query and get these charts, except for my red
15 line which shows where X2 was.

16 MR. MIZELL: And where did you gather the data
17 for the X2 line that you drew on the graphic?

18 WITNESS CANNON: From these survey points on
19 that date, they give salinity, and I just approximated
20 where X2 would be based on the survey distribution.

21 MR. MIZELL: Did you do a calculation in order
22 to establish that red line?

23 WITNESS CANNON: No. I just used -- the two
24 surveys on either side of the red line were on either
25 side of X2. So I just drew the -- probably closer to

1 the left one because it was closer to X2.

2 MR. MIZELL: Thank you for that explanation.

3 If we could go back to CSPA-500, please, and
4 if we scroll to Page 2.

5 Section 2 extends from Page 2, Line 9 to
6 Page 3, Line 16, contains no references to the
7 testimony to which you're responding; is that correct?

8 WITNESS CANNON: That was a general response
9 to their testimonies.

10 MR. MIZELL: And it contains no citations or
11 quotations; is that correct?

12 WITNESS CANNON: That's right.

13 MR. MIZELL: Hearing Officer Doduc, I would
14 move to strike Section 2 in its entirety. That's
15 Page 2, Line 9 through Page 3, Line 16, for not being
16 responsive to a case in chief in a manner that allows
17 somebody to understand what -- specifically what
18 case-in-chief testimony is being responded to.

19 These are generalizations of Dr. Greenwood and
20 Dr. Wilder's statements in the witness's opinion, and
21 it does not allow for sufficient evaluation, given the
22 lack of citation or quotation.

23 WITNESS CANNON: The five bullet points are
24 quotes directly from his testimony. I tried to
25 summarize the long presentation in front of those.

1 CO-HEARING OFFICER DODUC: Mr. Jackson,
2 anything to add?

3 MR. JACKSON: Yes. Dr. Cannon's statement of
4 qualifications indicates that he's basically worked on
5 these issues for every agency in California, including
6 the Water Board, the Fish and Game, the -- various
7 things -- the Met.

8 The -- what he's doing is giving you an
9 abstract of what he got out of his review in his
10 professional opinion. And then after the abstract, he
11 goes through the quotes individually.

12 CO-HEARING OFFICER DODUC: That's my
13 understanding, Mr. Mizell. But this section is just a
14 general -- almost you could say summary. And then in
15 Section 3 he goes into specific detail pertaining to
16 the testimony that he is rebutting.

17 WITNESS CANNON: I also used the opportunity
18 to point out what they didn't include, which is very
19 important as well. Many of the points are what they
20 did not include.

21 CO-HEARING OFFICER DODUC: So, Mr. Mizell?

22 MR. MIZELL: Yes. I recognize that Mr. Cannon
23 has credentials, and I'm not questioning those. And
24 I'm not saying that he doesn't have the experience to
25 respond to the testimony of DWR witnesses.

1 The point I'm trying to base my objection on
2 and my motion to strike is that, without a citation,
3 there's no way to know precisely which portion of the
4 petitioners' case in chief he's responding to. And to
5 the extent that it is a summary, that was not my
6 reading. I believe there are statements within
7 Section 2 that are not contained within the pages
8 beneath where citations are provided.

9 CO-HEARING OFFICER DODUC: I'm sorry. Are you
10 suggesting that the general responses in Section 2 go
11 beyond the specificity that Mr. Cannon makes in
12 Section 3, that there are arguments he makes in 2 that
13 are not reflected in 3?

14 MR. MIZELL: In some cases, I believe that's
15 the case. And Mr. Cannon just responded that he did
16 add additional information addressing what he believes
17 are shortcomings in the witnesses' testimony, but he
18 has not tied them back to statements that were made by
19 the witnesses in the case in chief.

20 MR. JACKSON: The Section 3 is supportive of
21 the opinions that he developed in Section 2. Most
22 witnesses who testified have put their conclusions up
23 front. I think it was described as the old lawyer
24 trick. It's tell you what they're going to tell you,
25 tell you what --

1 CO-HEARING OFFICER DODUC: And then repeat.

2 MR. JACKSON: And then repeat it at the end.

3 CO-HEARING OFFICER DODUC: Yes.

4 MR. JACKSON: And it seemed to me that, given
5 the problems in regard to what's inside the scope and
6 outside the scope, that this pattern would be a very
7 reasonable way to respond.

8 CO-HEARING OFFICER DODUC: Actually, I found
9 Mr. Cannon's testimony very organized.

10 In any case, Ms. Meserve, your addition?

11 MS. MESERVE: Yes, I just wanted to support
12 the ability to have this type of testimony in the
13 hearing, and I would say that that is why we are
14 required to bring our witnesses forward for
15 cross-examination so that, if there are remaining
16 questions about the bases of the opinions expressed
17 therein, that the witness is available to answer them.
18 And I think that's right where we're at in this
19 proceeding.

20 CO-HEARING OFFICER DODUC: Hold on. We have
21 another speaker.

22 Ms. Des Jardins.

23 MS. DES JARDINS: I just wanted to point out I
24 don't think Mr. Mizell is stating that the summary
25 mischaracterizes the testimony, and if that is a

1 section -- the bullet points are a section that's
2 verbatim, it probably should have had a page number,
3 but it is not that difficult to pick out. So that's
4 different than having a summary that is not
5 representative of the testimony.

6 CO-HEARING OFFICER DODUC: I'm going to put
7 the onus back on you, Mr. Mizell, to show me an
8 example, at least to start with, of something you
9 believe is in Section 2 that is then not specifically
10 addressed in Section 3.

11 MR. MIZELL: In order not to delay us today, I
12 will accept that some of this may be within the more
13 detailed provisions. I think it would be maybe a
14 better use of time if I reviewed that off the record
15 rather than taking up your time here to cross-reference
16 the uncited material and -- into his testimony at this
17 time. Would that be permissible?

18 MR. JACKSON: I would object to that because
19 it's -- this is the time for cross-examination, if he
20 wants to cross on anything that's in here, Mr. Cannon
21 is available. And he and his family are leaving on
22 vacation over the weekend and won't be back until
23 September. And that's why we kindly asked you to move
24 us up, and here we are.

25 MR. MIZELL: I will -- I will cross on the

1 entirety of the testimony. I have no intention of
2 requesting that Mr. Cannon come back at a later date.

3 CO-HEARING OFFICER DODUC: All right.

4 MR. MIZELL: Mr. Cannon, if we might focus on
5 Page 2 at Lines 23 to 25, please.

6 WITNESS CANNON: Yes.

7 MR. MIZELL: Have you reviewed the testimony
8 of other DWR witnesses that address the existing
9 conditions of the species in the Delta?

10 WITNESS CANNON: Yes.

11 MR. MIZELL: And so your only contention on
12 Lines 23 to 25 is that the witnesses produced for
13 testimony about the California WaterFix do not speak to
14 existing conditions; is that a fair reading?

15 WITNESS CANNON: It goes back to their
16 statement that everything is reasonably protective, and
17 that does not reflect the grave conditions of these
18 populations.

19 MR. MIZELL: Are you aware that their
20 testimony was based on a comparative analysis that only
21 looked at the impact of the California WaterFix project
22 itself?

23 WITNESS CANNON: Yes, and I felt that
24 "reasonably protective" cannot be a conclusion based on
25 the severe state of these populations.

1 MR. MIZELL: Sir, if there's not a change
2 occurring --

3 WITNESS CANNON: How would you say that?

4 MR. MIZELL: -- how would you be able to say
5 it is the responsibility to further protect the
6 species?

7 WITNESS CANNON: I stated that the BOs
8 identified significant numbers of adverse effects as
9 well as I did, and that those -- admitting that those
10 adverse effects would still lead you to believe it's
11 reasonable protection given the state of the
12 populations just seemed unreasonable.

13 MR. MIZELL: So your opinion is based upon a
14 disagreement with the fact that the fish agencies
15 issued permits for this project and not based upon --

16 WITNESS CANNON: They issued incidental takes
17 not on the operations. They identified significant
18 adverse effects possibly from operations.

19 MR. MIZELL: And --

20 WITNESS CANNON: They made no statement as to
21 the effects of operations.

22 MR. JACKSON: Counsel, actually, in point of
23 fact, operations has -- they have not really permitted
24 the operations.

25 CO-HEARING OFFICER DODUC: I'm sorry,

1 Mr. Jackson. Hold on. Are you making an objection?

2 MR. JACKSON: Well, I'm objecting his
3 characterization assumes facts not in evidence.

4 MR. MIZELL: Am I going to be allowed to
5 cross-examine Mr. Jackson?

6 CO-HEARING OFFICER DODUC: Mr. Mizell, did you
7 hear Mr. Jackson's objection? Are you too busy
8 thinking of a snarky comment?

9 MR. MIZELL: I didn't say that it assumes
10 facts not in evidence.

11 CO-HEARING OFFICER DODUC: All right. So your
12 response to his objection?

13 MR. MIZELL: My response is that the
14 Department has been issued permits. So I disagree with
15 his assertion that it's facts not in evidence.

16 There are State Water Board exhibits that
17 represent the NMFS BiOp, the Fish and Wildlife Service
18 BiOp, and the California Fish and Wildlife ITP.

19 CO-HEARING OFFICER DODUC: Then your question
20 again is?

21 MR. MIZELL: Probably unproductive, so I'll
22 move on. This is why I let Ms. Morris do the
23 cross-examination.

24 CO-HEARING OFFICER DODUC: Feel free to hand
25 off the baton.

1 MR. MIZELL: So if we could go to Page 3,
2 please, Lines 11 and 12.

3 Mr. Cannon, in this statement, you state that
4 Dr. Greenwood and Dr. Wilder do not address how the
5 North Delta Diversion bypass flow would protect salmon
6 migrations, correct?

7 WITNESS CANNON: Yes.

8 MR. MIZELL: Have you reviewed DWR-1012?

9 WITNESS CANNON: Yes.

10 MR. MIZELL: Mr. Long, if we could bring up
11 DWR-1012, please, and if we could go to Page 39,
12 scrolling to the top of that page so that Mr. Cannon
13 can see the header. Thank you.

14 Sir, are you familiar with this section of
15 this testimony?

16 WITNESS CANNON: Yes.

17 MR. MIZELL: Isn't it true that, in this
18 section of Dr. Greenwood's testimony, he described the
19 North Delta Diversion flow criteria and how it would
20 protect migrating salmon?

21 WITNESS CANNON: Yes.

22 MR. MIZELL: And with respect to the
23 low-salinity zone, didn't Dr. Greenwood also discuss
24 the operational effects it would have on low-salinity
25 zone habitat?

1 WITNESS CANNON: In both cases, he made
2 statements as to what he felt the impacts were. I
3 disagree with both of them, as have other witnesses.

4 MR. MIZELL: But he did address them?

5 WITNESS CANNON: Yes.

6 MR. MIZELL: Thank you.

7 WITNESS CANNON: He addressed a lack of those
8 impacts. He didn't address that there are impacts.

9 MR. MIZELL: If we could go back to CSPA-500,
10 please, Page 3, Lines 13 and 14.

11 And here you say that Dr. Wilder and
12 Dr. Greenwood do not address how the new OMR
13 restrictions or South Delta export restrictions would
14 be protective; is that correct?

15 WITNESS CANNON: Yes, I was referring to --
16 what I considered new were 1143 Revision 2.

17 MR. MIZELL: And you're familiar with the
18 Final EIR, sir?

19 WITNESS CANNON: I read it a long while ago.
20 I'm much more familiar with 1143 Revision 2.

21 MR. MIZELL: Are you familiar the Biological
22 Assessments?

23 WITNESS CANNON: Yes, I read those a while
24 ago.

25 MR. MIZELL: How about the Biological

1 Opinions?

2 WITNESS CANNON: Yes, more recently I've read
3 those again.

4 MR. MIZELL: And the ITP?

5 WITNESS CANNON: Yes.

6 MR. MIZELL: Are you aware that all of those
7 documents include multiple analyses of the effects of
8 California WaterFix-related changes in outflow on the
9 species?

10 WITNESS CANNON: Yes, and in many cases they
11 identify potentially adverse effects of operations that
12 have not been identified.

13 MR. MIZELL: And that those also include the
14 analysis of effects of the California WaterFix on
15 species entrainment at the North Delta and the South
16 Delta diversion points?

17 WITNESS CANNON: Yes.

18 MR. MIZELL: If we could go back to CSPA-500.

19 If I could focus you on Lines 15 and 16 on
20 Page 3 here in the center of the screen.

21 Sir, are you familiar with the testimony of
22 Dr. Greenwood and Dr. -- well, not Dr. Wilder -- the
23 testimony of Dr. Greenwood that the Adaptive Management
24 Program would be subject to the ongoing jurisdiction of
25 the regulatory agencies that participate in it?

1 WITNESS CANNON: Are you assuming jurisdiction
2 of the regulatory agencies being the salmon and smelt
3 committees or their management? Certainly their
4 management have control over those. Their management
5 has the authority to make changes, yes.

6 MR. MIZELL: And that any -- any changes that
7 would be proposed out of the Adaptive Management
8 Program would require approvals by the fish agencies
9 who have jurisdiction over the species for which the
10 condition would be changed?

11 WITNESS CANNON: To make the changes, the
12 management teams would have to make that approval, yes.

13 MR. MIZELL: And you're aware of DWR testimony
14 that says it is not at DWR's discretion but at the
15 discretion of those regulatory agencies?

16 WITNESS CANNON: DWR is part of the management
17 team. They approve and disapprove as well as the other
18 agency. They work as a committee. I do not know how
19 they make their final decisions.

20 MR. MIZELL: So you're not familiar with the
21 testimony of Dr. Greenwood or Dr. Earle on this point?

22 WITNESS CANNON: I am very familiar with their
23 testimony. I just gave you my answer of what I think
24 the managed -- how the decisions are made.

25 MR. MIZELL: If we could go to Page 5, Lines

1 11 through 13.

2 You respond that reductions in Delta inflow
3 will increase the effects of the remaining South Delta
4 exports. Did you conduct any modeling to come to this
5 opinion?

6 WITNESS CANNON: I looked at many specific
7 cases in which -- that have occurred in the past, and I
8 portrayed how the North Delta Diversion would change
9 the situation if it were in place. And in all those
10 cases, the diversions and reductions in Delta outflow
11 would increase the effects on the South Delta exports
12 -- of the South Delta exports, having the North Delta
13 Diversion doing something at those specific times.

14 MS. MORRIS: Sorry. I'd like to move to
15 strike that answer as non-responsive. It didn't answer
16 the question.

17 The question was whether any modeling analyses
18 have been done, not an opportunity for the witness to
19 provide further justification for something that has no
20 citations in the record and is written as it is, which
21 is surprise testimony, and it doesn't allow us to
22 properly cross-examine the witness.

23 CO-HEARING OFFICER DODUC: Mr. Cannon, did you
24 understand the question that Mr. Mizell asked?

25 MR. CANNON: Yes. They suggested if I had

1 done any modeling.

2 No. I used actual data. I could not have
3 modeled the real-time operation of the South and North
4 Delta in those specific circumstances because the
5 models are monthly. I just couldn't use --

6 CO-HEARING OFFICER DODUC: Mr. Mizell --
7 sorry. What was your question, again?

8 MR. MIZELL: The question was did you conduct
9 any modeling to come to your opinion?

10 CO-HEARING OFFICER DODUC: And so the answer
11 is no.

12 WITNESS CANNON: If you consider data analysis
13 modeling and maybe some regressions -- it's not a DSM-2
14 model or anything like that. It is data modeling.

15 CO-HEARING OFFICER DODUC: And so, Mr. Mizell,
16 what do you mean by "model"?

17 MS. MORRIS: I'm sorry, because I still have a
18 motion to strike his answer, and I'd also like to
19 strike on the basis that he did not provide the data he
20 relied on in his response. There is no citation
21 whatsoever for this response. And we can't --

22 CO-HEARING OFFICER DODUC: If we can -- I'm
23 sorry -- handle your motions one at a time, Ms. Morris.

24 Mr. Jackson, would you like to respond to that
25 first motion, which I think is appropriate, but let's

1 hear your response.

2 MR. JACKSON: Clearly the word "model" in this
3 hearing has come to represent one specific way of
4 looking at data. The CalSim model, we've heard lots
5 and lots about what's right or wrong about that.

6 But historical analysis is a form of modeling
7 data, and projecting it into the future based on the
8 past is a form of modeling. And that's what he did.

9 CO-HEARING OFFICER DODUC: Okay. You know
10 what? You guys have totally confused me. So we're
11 going to strike everything.

12 And, Mr. Mizell, start over again. Ask that
13 question. We'll strike everything before this point --
14 I mean everything since Mr. Mizell asked the question
15 to which Ms. Morris objected to which I am now
16 directing you to go back.

17 MR. MIZELL: Okay. I will rewind the tape.

18 CO-HEARING OFFICER DODUC: Rewind, please.

19 MR. MIZELL: Did you conduct any --

20 Do I have to ask the exact same question, or
21 do you want me to be a little more clear to try --

22 CO-HEARING OFFICER DODUC: Be more clear in
23 terms of the word "modeling."

24 MR. MIZELL: Did you conduct any hydrologic
25 modeling to come to your opinion?

1 WITNESS CANNON: In making a determination
2 about Dr. Greenwood's statement on that protection from
3 South Delta entrainments will be maintained or
4 potentially increased above existing levels, I looked
5 at actual data from many particular circumstances that
6 include the hydrology and salvage, larval densities and
7 so forth to make my statement.

8 MS. MORRIS: So I would again move to strike
9 that testimony. This -- if you look at the response,
10 it's a statement. The witness just testified that he
11 relied on several historical data that he has not
12 provided in his --

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

14 I am overruling the motion to strike that
15 response. That response was to Mr. Mizell's question
16 to which he didn't define "model." Mr. Cannon
17 responded that he looked at data.

18 Now, if you want to explore further what that
19 data is and whether or not that meets your definition
20 of "model," then you may do so.

21 MS. MORRIS: May I respond? Respectfully, and
22 I do mean this -- I know sometimes that's a bad choice
23 of words.

24 The point of written testimony is to provide
25 the data that you rely on to draw opinions. And the

1 fact that the data or modeling, whatever the
2 interpretation is, is not provided in any way, shape or
3 form for us to look at --

4 CO-HEARING OFFICER DODUC: Ms. Morris --

5 MS. MORRIS: -- is not helpful.

6 CO-HEARING OFFICER DODUC: Has that been
7 established?

8 MS. MORRIS: Yes. There's absolutely no
9 citation provided that directs anybody to any data.

10 CO-HEARING OFFICER DODUC: Would you mind
11 asking Mr. Cannon that question, please.

12 MR. MIZELL: Certainly. Can you please point
13 me to where in your testimony you cite to the data that
14 you say you relied upon to compose the response on
15 Lines 11 through 13 of Page 5.

16 WITNESS CANNON: The data referred to here is
17 part of the analysis I did for my case in chief. I was
18 not able in rebuttal to provide new analysis and
19 information and charts and so forth. So I could not
20 provide that support for that statement specifically.

21 MS. MORRIS: Again, I don't know how we can
22 effectively cross-examine.

23 CO-HEARING OFFICER DODUC: All right. All
24 right, Ms. Morris. It will go to weight.

25 MS. MORRIS: That's my least favorite answer.

1 MR. MIZELL: If we could move on to Page 6,
2 focusing on Lines 16 through 22, please.

3 For your response on Lines 16 through 22,
4 where might I find data that you relied upon for this
5 statement?

6 WITNESS CANNON: Obviously, OMR restrictions
7 have not been protective of listed salmon and Delta
8 smelt.

9 MR. MIZELL: Sir, that's your conclusion.
10 Where is the data which you rely upon?

11 WITNESS CANNON: The status of the smelt and
12 salmon populations.

13 MR. MIZELL: In your response on Line 21, you
14 state -- and I will try and do an accurate quotation
15 here -- "Diversions will create a new interior Delta
16 hydraulic regime that reduces the potential benefit for
17 OMR protections."

18 Did you rely upon data to make that
19 conclusion?

20 MR. CANNON: Yes. My analysis, again, was
21 looking at restrictions in past conditions with OMRs
22 and looking at the hydrology that could be changed by
23 the North Delta Diversions, I came to these
24 conclusions.

25 MS. MORRIS: I would move to strike that

1 response as non-responsive. The question was where in
2 his testimony can we find the data that supports that
3 statement.

4 CO-HEARING OFFICER DODUC: All right.
5 Sustained.

6 Please answer, Mr. Cannon.

7 MR. CANNON: Please repeat the question,
8 please.

9 MR. MIZELL: Where might I find the data that
10 you relied upon for the statement in your testimony on
11 Page 6 between Lines 16 and 22?

12 WITNESS CANNON: Just 20 to 22, or 16 as well?

13 MR. MIZELL: 16 to 22. I'd like to know where
14 the data is to support that statement. I used as an
15 example your conclusion on Line 21 to 22.

16 WITNESS CANNON: Lines 16 to 18 refers to the
17 general status of the populations.

18 MR. MIZELL: Where might I find the data for
19 that? That's the question.

20 WITNESS CANNON: There are many places that
21 describe the status of the populations and the index of
22 abundance and the record lows. And I have several
23 posts, and some of them are in exhibits. It's a big
24 subject.

25 MR. MIZELL: If I might interrupt, sir.

1 Specifically these questions are where in your
2 testimony -- and that's what we've been exploring for
3 the past ten minutes.

4 Where in your testimony might I find the data
5 you used to support your statement on Lines 16 to 22 of
6 Page 6?

7 WITNESS CANNON: There's more than one
8 statement there, and I'd have to have different
9 information. We can go back to my original testimony,
10 and right now I can go back to the original testimony
11 and support Lines 16 to 18.

12 CO-HEARING OFFICER DODUC: Mr. Cannon, I
13 believe what Mr. Mizell is asking is where in this
14 rebuttal testimony do you reference that data?

15 WITNESS CANNON: In this rebuttal testimony,
16 I've only given my opinions. I'm not allowed to
17 present analyses and reformat and provide tables of
18 populations status or anything like that.

19 MS. MORRIS: I'd like to move to strike the
20 entirety of the testimony because it's -- other than
21 there are eight citations to something -- because it is
22 not accurate that you cannot provide the data to
23 support your opinions. It's only -- it has to be
24 within the scope of someone's -- it has to be
25 responding to someone else's testimony.

1 The analysis that you can provide on rebuttal
2 testimony is not limited to just saying what your
3 opinion is. It is almost -- and we might need more
4 time because we have to go now through each of these
5 statements and test where in the testimony the data is
6 if it's going to go to weight because we'll need to
7 make a record of each and every one of these statements
8 that make -- draw opinions that are opinions that would
9 require some data as the witnesses previously testified
10 to, except for I will note there's one or two where
11 it's just a question.

12 So to the extent that there is no analysis
13 provided and that we will be overruled then it goes to
14 the weight, we will need to step through each and every
15 single one of these statements to ask where the data
16 is, to create a record.

17 CO-HEARING OFFICER DODUC: Your response,
18 Mr. Jackson.

19 MR. JACKSON: Yes. The purpose of rebuttal is
20 to rebut statements in other people's testimony.

21 CO-HEARING OFFICER DODUC: True.

22 MR. JACKSON: The professional information of
23 a lifetime allows you to testify in regard to your
24 opinion. What he's pointing out is the flaw in the
25 opinion of Dr. Greenwood.

1 CO-HEARING OFFICER DODUC: And he is basing
2 his rebuttal on what kind of analysis, what kind of
3 data?

4 MR. JACKSON: They can ask him about that, and
5 he'll respond about that and --

6 CO-HEARING OFFICER DODUC: But --

7 MR. JACKSON: -- in most cases it's a lifetime
8 of review and a lifetime of working on these projects
9 in the Delta, not an abstract scientific game by people
10 who really --

11 CO-HEARING OFFICER DODUC: No commentary
12 necessary, Mr. Jackson.

13 Question, Mr. Deeringer?

14 MR. DEERINGER: Not at this time, no.

15 CO-HEARING OFFICER DODUC: Ms. Des Jardins.

16 MS. DES JARDINS: I would like to support
17 Dr. Cannon providing these opinions to the extent that
18 what he's describing is based on a conceptual model
19 that he's built as an expert. It's a model that
20 experts build in their own head from looking at data.

21 I don't see quantitative -- specific
22 quantitative conclusions that require detailed,
23 specific data. Perhaps there's some that have escaped
24 me, but I haven't seen any of these questions pointing
25 it out.

1 CO-HEARING OFFICER DODUC: Thank you.

2 WITNESS CANNON: May I add something?

3 CO-HEARING OFFICER DODUC: Oh, no.

4 Ms. Meserve.

5 MS. MESERVE: Just to point out as well with
6 respect to this particular example at least, I'm not
7 quite sure what the purpose of all this is. I think
8 everyone knows that the smelt and the salmon -- at
9 least some of the salmon runs are listed as threatened
10 or endangered. And so it's really -- doesn't seem to
11 be a good use of the time to talk about things that are
12 replete throughout the hearing record and to force -- I
13 don't think it's appropriate that Mr. Cannon would have
14 been required to put all of those citations in his
15 testimony in order to present the opinion.

16 As you stated, it could go to the weight, the
17 fact that he doesn't have as many citations here, but
18 this is not really in dispute, in my opinion

19 CO-HEARING OFFICER DODUC: Mr. Cannon.

20 WITNESS CANNON: Yes. If we go back to the
21 original statement I was referring to, Dr. Greenwood's
22 statement, he characterizes the operational criteria as
23 protective. My statement was in response to his
24 opinion that they were protective.

25 CO-HEARING OFFICER DODUC: Yes, and the crux

1 of this is on what basis did you make your --

2 WITNESS CANNON: I was questioning his basis
3 and providing my own opinion as to whether or not it's
4 protective.

5 CO-HEARING OFFICER DODUC: Mr. Jackson, before
6 I give Ms. Morris the final word.

7 MR. JACKSON: The response is, as the Hearing
8 Officer said at the start, is organized in a way that
9 it can be understood and organized in a way that is one
10 professional talking about what the other professional
11 forgot to do, which is part of rebuttal.

12 CO-HEARING OFFICER DODUC: Let me be very
13 clear. I commented on the organization. I did not go
14 into the merits of Mr. Cannon's testimony.

15 WITNESS SHUTES: May I add a comment on
16 something, please?

17 CO-HEARING OFFICER DODUC: Mr. Shutes.

18 WITNESS SHUTES: Many of the issues that
19 Ms. Morris is raising here were raised in exhibits
20 previously in CSPA. For example, the condition of
21 salmon is in CSPA-239. The condition of smelt are in
22 CSPA-437 and 440.

23 What I think the issue is perhaps more that
24 Mr. Cannon didn't reference those specifically and that
25 he didn't rely on anything or that there's nothing in

1 the record to support his testimony.

2 CO-HEARING OFFICER DODUC: All right.

3 Ms. Morris, I did want to take a break at 3:45, so we
4 will do that after you say what you need to say.

5 MS. MORRIS: Very concisely, just that if the
6 evidence or the data as the witnesses testified is not
7 provided, I cannot effectively cross-examine because I
8 can't test the veracity of that data or understand how
9 he came to that conclusion.

10 So, yes, one can provide opinions, but those
11 opinions cannot be tested or verified if there are no
12 data that I'm allowed to look at. And I cannot
13 cross-examine and just allow him now to say, "Oh, I
14 stated this data." I have not prepared for
15 cross-examination based on alleged evidence that is not
16 currently before the Board in his written testimony.

17 CO-HEARING OFFICER DODUC: All right. Thank
18 you. We will take a ten-minute break and return at
19 3:55.

20 (Recess taken)

21 CO-HEARING OFFICER DODUC: All right. It is
22 3:55. We are back in session.

23 Ms. Morris, your motion to strike is denied.
24 It will go to weight, which I understand means that we
25 will be spending a bit of time this afternoon going

1 through you various sections of Mr. Cannon's testimony.

2 Mr. Cannon, you are going to be asked very
3 direct questions by Mr. Mizell or Ms. Morris in terms
4 of where they may find the data to support the analysis
5 or the conclusion specified in your rebuttal testimony.

6 You are to answer succinctly, directly,
7 without going into other explanations, which
8 Mr. Jackson is able to do should he pursue redirect.

9 Before you continue, though, Mr. Mizell, let
10 me do a time check. You have 30 minutes remaining of
11 the first hour, which is normally what we allow people.
12 Do you anticipate needing more than 30 minutes?

13 MR. MIZELL: I'm going to propose something
14 that hopefully will get us a little bit further down
15 the road than going point by point. I think I can
16 conclude this with one general question. If I can get
17 a succinct answer, then I think I will conclude my
18 cross-examination of Mr. Cannon.

19 Then we can proceed with Mr. Shutes, and we
20 may be able to wrap up our cross-examination by 4:15,
21 4:20, so just shy of our first hour.

22 CO-HEARING OFFICER DODUC: All right. Let's
23 do that. Ask your one question, Mr. Mizell.

24 MR. MIZELL: Mr. Cannon, is it fair to assume
25 that, where you have not cited to anything in your

1 response, that there was no additional data besides
2 your case-in-chief testimony used to support that
3 statement?

4 WITNESS CANNON: In some cases, that's true.
5 In others, I actually went back and looked at things,
6 looked at data and hydrology data and survey data that
7 I hadn't looked at yet for that specific question.

8 MR. MIZELL: If we may have a moment, rather
9 than going through hours of points, we just are trying
10 to get answers to direct questions.

11 CO-HEARING OFFICER DODUC: I understand.

12 (Sotto voce discussion between Ms. Morris
13 and Mr. Mizell)

14 MR. MIZELL: So I would like to just have a
15 standing objection on the record as to the lack of
16 citation and the inability to ground-truth statements
17 and opinions by Mr. Cannon. And I understand that goes
18 to weight.

19 But it's the Department's position and
20 opposition to point-bounded statements that we're
21 objecting -- objecting to that approach. It can just
22 be a standing objection on the record, and it goes to
23 weight.

24 MS. MORRIS: State Water Contractors would
25 join in that objection as to each statement in CSPA-500

1 that is a response and includes Mr. Cannon's opinion
2 but includes no citation of which there are only eight
3 sections of responses that have any citation at all.

4 CO-HEARING OFFICER DODUC: And Mr. Deeringer,
5 what do we do with a standing objection?

6 MR. DEERINGER: We note it for the record.

7 CO-HEARING OFFICER DODUC: Mr. Jackson.

8 MR. JACKSON: And I would like to note for the
9 record that I have a -- and in order to save the time,
10 I have a standard response, which is that an expert is
11 allowed to give an opinion if the expert is qualified.
12 They're required to cross-examine him in regard to the
13 formation of his opinion. And I just put it on the
14 record, and we'll --

15 MS. MORRIS: We are not required to read
16 somebody's mind. If a citation is not provided to back
17 up an opinion, we assume there is no citation and no
18 data was relied upon. And that is -- if the Board and
19 Hearing Officers are willing to allow that to go to
20 weight, a standing objection will suffice. If it
21 isn't, then we do need to step through this for the
22 record.

23 CO-HEARING OFFICER DODUC: We'll note that as
24 a standing objection, and we'll note Mr. Jackson's
25 response as well.

1 MS. MORRIS: Thank you. I have a few
2 questions for Mr. Shutes, but before I do that I would
3 like to move to strike permit -- proposed permit
4 conditions in CSPA-502. This was a cite to Mr. Shutes'
5 testimony -- or, sorry, exhibit.

6 CO-HEARING OFFICER DODUC: I'm sorry. You are
7 moving to strike the entirety of CSPA-502?

8 MS. MORRIS: No. I was just going to walk you
9 through which portions, which permit conditions.

10 CO-HEARING OFFICER DODUC: And your
11 explanation as to why.

12 MS. MORRIS: I'm going to do that
13 individually.

14 CO-HEARING OFFICER DODUC: Okay.

15 MS. MORRIS: And I will move quickly, but they
16 all are outside of the scope because they do not have
17 any relation to California WaterFix.

18 MR. MIZELL: Not all the conditions, but the
19 conditions she will list.

20 MS. MORRIS: I'm going to go through them,
21 that they don't have a relationship to WaterFix but
22 rather are relating to existing operations or things
23 that exist without WaterFix.

24 So the first one is --

25 CO-HEARING OFFICER DODUC: Ms. Morris.

1 MS. MORRIS: Yes.

2 CO-HEARING OFFICER DODUC: I'm going suggest,
3 to be even more efficient, that you submit this in
4 writing so that Mr. Jackson and others may have a
5 chance to respond.

6 As you know, the Board has been very
7 encouraging of -- of submitting proposed permit terms,
8 and it is something that we take very seriously. So
9 rather than rush through this and hear oral arguments
10 for it, chances are very good I will ask for it in
11 writing anyway, so let's just do that.

12 MS. MORRIS: So I'm fine. I'm happy to do
13 that. My -- the one thing is that these are really --
14 I might need to do cross-examination on the basis of
15 them if they're not stricken.

16 And I've been trying to be very judicious in
17 what I choose to move to strike. And, for example,
18 that's why I wanted to walk through Permit Condition 6,
19 is to incorporate COA and not to -- it's a permit
20 condition not to allow coordinated operations
21 agreements to be amended, and that -- because this
22 clearly has nothing to do with WaterFix.

23 There's other -- so I'm happy to do it in
24 writing, and I will. But I might -- guess I'll just
25 use the time to cross-examine on those and move to

1 strike on the record.

2 CO-HEARING OFFICER DODUC: You should
3 cross-examine on those and not assume that they will be
4 stricken.

5 MS. MORRIS: I would never assume that.

6 CROSS-EXAMINATION BY MS. MORRIS

7 MS. MORRIS: Mr. Shutes, I would like to ask
8 you, on Page 1 of CSPA-502 regarding the bypass
9 criteria permit condition, you cite to CSPA-500. My
10 question is very specific. Do you have a page citation
11 to CSPA-500 for the basis of that permit condition?

12 WITNESS SHUTES: Which number? Please?

13 MS. MORRIS: 3.

14 WITNESS SHUTES: 3?

15 I didn't list it.

16 MS. MORRIS: Thank you.

17 WITNESS SHUTES: I can find it.

18 MS. MORRIS: Do you have a page citation for
19 NRDC-58 in that same Column 3?

20 WITNESS CANNON: I believe it's toward the
21 back of the testimony, but I don't have a page
22 citation.

23 MS. MORRIS: Looking at Permit Condition 6,
24 Coordinated Operation Agreement, also referred to as
25 COA.

1 WITNESS SHUTES: Yes?

2 MS. MORRIS: The permit condition appears to
3 state that DWR and the Bureau should not be allowed to
4 re-negotiate COA outside of an evidentiary process.

5 Are you aware that COA is a water right
6 settlement between the United States Bureau of
7 Reclamation and the Department of Water Resources?

8 WITNESS SHUTES: Yes.

9 MS. MORRIS: Is the State Water Resources
10 Control Board a party to that contract?

11 WITNESS SHUTES: Not to my knowledge.

12 MS. MORRIS: Is it typical for contracts, in
13 your knowledge, to be subjected to an evidentiary
14 proceeding before they can be amended between the
15 parties to the contract?

16 WITNESS SHUTES: It's not typical.

17 MS. MORRIS: Are you aware that COA was
18 approved by Congress?

19 WITNESS SHUTES: No, I wasn't aware of that.

20 MS. MORRIS: Do you understand the process for
21 how changes to COA can be made?

22 WITNESS SHUTES: No.

23 MS. MORRIS: Are you aware of any changes --
24 any documents that provide evidence that changes to COA
25 are being made because of California WaterFix?

1 WITNESS SHUTES: Because of California
2 WaterFix?

3 MS. MORRIS: Yes.

4 WITNESS SHUTES: If there are any, I don't
5 recall them.

6 MS. MORRIS: Looking at CSPA-502, Page 7,
7 Permit Condition 13 --

8 WITNESS SHUTES: Yes.

9 MS. MORRIS: -- for Delta outflow, have you
10 done an analysis of the water supply impacts of this
11 proposed regulation or permit term -- sorry, strike
12 "regulation" -- permit term?

13 WITNESS SHUTES: I think you would need to
14 break it down into pieces.

15 MS. MORRIS: But my question is have you done
16 it, yourself? That's my question.

17 WITNESS SHUTES: I would say that with
18 Rio Vista flow I have a general idea of what would
19 happen. I would say that --

20 MS. MORRIS: Did you do a water supply
21 analysis?

22 WITNESS SHUTES: No.

23 MS. MORRIS: Okay. Looking at --

24 MR. JACKSON: I'm going to object to that
25 question and move to strike both the question and the

1 answer.

2 I've been trying to get a water supply
3 analysis into this record since it started, and I still
4 think it's a duty. But to now tell us that we need to
5 do a water supply analysis seems to me to be outside
6 the scope of the rebuttal testimony.

7 MS. MORRIS: Do you want me to -- I'm happy to
8 respond.

9 CO-HEARING OFFICER DODUC: Go ahead, respond
10 so that we have it in the record, Ms. Morris.

11 MS. MORRIS: I didn't ask -- I didn't say they
12 had to do a water supply analysis. I asked on that
13 permit condition if they had looked at what the water
14 supply impacts would be. And the answer was no.

15 CO-HEARING OFFICER DODUC: Understood.

16 Overruled.

17 MS. MORRIS: Looking at that same exhibit,
18 CSPA-502, Permit Condition 17, on OMR, you appear to be
19 asking the Board to put a permit condition in to
20 include an explicit standard for OMR in the update of
21 the Water Quality Control Plan; is that correct?

22 WITNESS SHUTES: As I stated in my oral
23 testimony, on consideration, we believe that the Board
24 should deal with that in this proceeding. However, we
25 don't have a specific recommendation for what it is.

1 MS. MORRIS: But you're aware that OMR
2 requirements exist today absent of California WaterFix,
3 correct?

4 WITNESS SHUTES: Yes, I'm aware of that. They
5 exist in the Biological Opinion, as I understand it.
6 And I believe they should be placed in permit terms.

7 MS. MORRIS: So your request isn't necessarily
8 because of the -- I'm sorry. Strike that.

9 Your request isn't for OMR to be put in the
10 Water Quality Control Plan permits -- strike all of
11 that. Let me start again. Sorry.

12 Your request for that is not because of
13 WaterFix; it's because you believe that those OMR
14 requirements should be placed in the water rights
15 permits or as part of the Water Quality Control Plan,
16 correct?

17 WITNESS SHUTES: I think it's both.

18 MS. MORRIS: Looking at CSPA-502, Page 9,
19 Permit Condition 20 on Clifton Court operations, have
20 you done any analysis of impacts to water levels for
21 this proposed permit condition?

22 WITNESS SHUTES: No.

23 Page what? What -- sorry. Which reference
24 was that, please? What page was it?

25 MS. MORRIS: It was Page 9, Permit

1 Condition 20.

2 WITNESS SHUTES: I only have eight pages.

3 MS. MORRIS: Oh, I'm sorry, Page 7.

4 WITNESS SHUTES: Okay.

5 MS. MORRIS: Looking at Permit Condition 21
6 regarding fish screens at Clifton Court Forebay --

7 WITNESS SHUTES: Yes?

8 MS. MORRIS: -- are you aware that Clifton
9 Court Forebay and Jones Pumping Plant are not proposed
10 to be changed with California WaterFix?

11 WITNESS SHUTES: I'm aware of that. I believe
12 that it's an existing condition that needs to be
13 corrected. And I think that, as part of appropriate
14 delta flow criteria and restoring the Delta ecosystem
15 pursuant to the Delta Reform Act, this is something
16 necessary and that building a new diversion without
17 dealing with this longstanding festering issue is like
18 letting your house run down and then putting a
19 double-wide next door without remediating what you have
20 in the first place.

21 MS. MORRIS: I would move to strike everything
22 after "I'm aware."

23 CO-HEARING OFFICER DODUC: Sustained.

24 MS. MORRIS: Looking at Permit Condition 22,
25 "Gauging and Reporting" on that same page of CSPA-502,

1 are you aware that 15-minute data are already available
2 for the South Delta exports calculation?

3 WITNESS SHUTES: Yes.

4 MS. MORRIS: Looking at the next permit
5 condition, 23, are you aware that daily salvage data
6 are already reported at the South Delta exports on
7 California Department of Fish and Wildlife's website?

8 WITNESS SHUTES: Yes.

9 MS. MORRIS: Mr. Cannon, are you familiar with
10 the GCID fish screens, Glenn-Colusa Irrigation District
11 fish screen?

12 WITNESS CANNON: Yes, in general. I don't
13 remember many of the specifics. I did at one time.

14 MS. MORRIS: And, Mr. Shutes, are you aware of
15 any surveys or information being reported at the
16 Glenn-Colusa Irrigation District diversion point?

17 MR. JACKSON: I'm going to object to this line
18 of questioning on the -- the refrain of outside the
19 scope of their testimony on rebuttal.

20 CO-HEARING OFFICER DODUC: Ms. Morris.

21 MS. MORRIS: So I was just going to show that
22 the fish screens of a similar size exist and that there
23 are no data recorded for those. So I'm just trying to
24 lay a foundation and trying to understand the basis of
25 why he believes this should be a permit condition.

1 CO-HEARING OFFICER DODUC: Can you just ask
2 that?

3 MS. MORRIS: No.

4 CO-HEARING OFFICER DODUC: Lawyers.

5 Overruled, Mr. Jackson, since now I understand
6 where she's going.

7 WITNESS SHUTES: Okay. So can we repeat what
8 the standing question is, please?

9 MS. MORRIS: Is the data reported, the fish
10 survey data, reported at the Glenn-Colusa Irrigation
11 District diversion point?

12 WITNESS SHUTES: Is the fish data reported?

13 MS. MORRIS: Yes.

14 WITNESS SHUTES: I don't know.

15 MS. MORRIS: Looking at Permit Condition 25
16 regarding transfers through North Delta and South Delta
17 facilities, are you aware that proposed transfers have
18 review already?

19 WITNESS SHUTES: Yes, I'm aware of them. I've
20 been critical of them on many occasions and on many
21 counts.

22 MS. MORRIS: And you're aware that many of
23 them are reviewed by the State Water Resources Control
24 Board?

25 WITNESS SHUTES: Many of them are. Many of

1 them, such as those by settlement contractors, are not.

2 MS. MORRIS: And those that are not reviewed
3 by the State Water Resources Control Board are subject
4 to CEQA, are they not?

5 WITNESS SHUTES: I believe so, but I'm not
6 sure that in -- it would depend. As I understand it,
7 many transfers that are done under temporary urgency
8 petitions, those are not subject to CEQA. And there
9 are many of them, and they're done serially. So those
10 would not be subject to CEQA.

11 MS. MORRIS: But the temporary urgency ones
12 are subject to the Board's jurisdiction, are they not?

13 WITNESS SHUTES: Yes, and I've been critical
14 of that process in many cases as well.

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

17 CO-HEARING OFFICER DODUC: All right. Thank
18 you.

19 How are you doing, Mr. Cannon and Mr. Shutes?

20 WITNESS SHUTES: I can't remember how
21 Mr. Bourez put it yesterday, but doing fine, thanks.

22 WITNESS CANNON: Fine.

23 CO-HEARING OFFICER DODUC: All right. I do
24 not see Mr. Ruiz here, so we'll skip him. And we'll
25 get to Mr. Keeling.

1 And are you still estimating 20 minutes,
2 Mr. Keeling?

3 MR. KEELING: No. Tom Keeling for San Joaquin
4 County Protestants. I have just a couple of questions.
5 Who knows? It may spin off to a couple of others, but
6 I will be very surprised if I'm up here for more than
7 five minutes.

8 CO-HEARING OFFICER DODUC: All right. That
9 way, perhaps we can get through today so the witnesses
10 don't have to come back. We'll see.

11 CROSS-EXAMINATION BY MR. KEELING

12 MR. KEELING: My questions are all for
13 Mr. Shutes, and they concern two of the issues on
14 CSPA-502.

15 So, Mr. Long, if we could put up 502. And
16 let's -- if you could put up Issue No. 15, please, so
17 we have exact language before us.

18 Mr. Shutes, good afternoon.

19 WITNESS SHUTES: How are you, Mr. Keeling?

20 MR. KEELING: Probably better than you at this
21 point.

22 On the far right, under Issue 15, you see the
23 words, "SWRCB must have approval of changes in
24 Biological Opinions and ITP and exercise that approval
25 in a public hearing."

1 My question -- I have some questions about
2 this. Why is that important, in your view?

3 WITNESS SHUTES: There are a number of reasons
4 that that's important.

5 First of all, right now, as I understand the
6 Adaptive Management Plan to be framed, most of the
7 activities take place behind closed doors. It allows a
8 large amount of discretion to fishery agencies and
9 water operators to change what amounts to operating
10 criteria for the new project.

11 There's no review, that I understand, by the
12 State Water Board. And so basically it becomes a -- a
13 license to change the requirements for permit, and
14 that's the end of it.

15 I'm also concerned, as I note on the following
16 page at the bottom, about affected stakeholders, that
17 there are not any -- that there's no public oversight.
18 And by that I mean both general public oversight and
19 oversight by representatives of the public interest.

20 MR. KEELING: Mr. Shutes, you've been
21 listening to quite a bit of the testimony for the last
22 two years. You have heard, have you not, the
23 petitioners assure the Board that they're going to
24 comply with all applicable laws, have you not?

25 WITNESS SHUTES: I have.

1 MR. KEELING: You've heard them say that
2 they're going to comply with all applicable regulations
3 and orders of the Board, have you not?

4 WITNESS SHUTES: I've heard that.

5 MR. KEELING: Why is that not good enough?

6 WITNESS SHUTES: Because many of the things as
7 proposed and with which the Board is going to require
8 petitioners to comply are so squishy that they can
9 change in the long-term, in fact, more or less
10 indefinitely.

11 The fact -- the idea that you can -- that
12 someone will -- if the requirement is simply to create
13 an adaptive management program, for example, if that is
14 a requirement, that is an extremely open-ended
15 requirement. And one can be said to be complying with
16 the law by creating that program.

17 But what the substance of that program is and
18 what it's actually done, what it actually does is
19 something out of the control of the approving entity
20 unless the approving entity maintains clear and defined
21 oversight going into the future.

22 MR. KEELING: Mr. Long, could you scroll to
23 Issue No. 1.

24 Thank you.

25 Mr. Shutes, in Issue No. 1, in the fourth

1 column from the left, the words read, "Velocities
2 should apply always on an instantaneous basis." Do you
3 see that language?

4 WITNESS SHUTES: I do.

5 MR. KEELING: In this context, what did you
6 mean by "on an instantaneous basis"?

7 WITNESS SHUTES: That at any given moment, the
8 velocities must be met or the facilities should not be
9 operated to divert.

10 As I understand it, there is significant
11 technical problems, both with determining what the
12 velocity is and with complying. And in the various
13 documents and -- that petitioners have referenced and
14 in the testimony that they have presented, I have not
15 seen clarity about what the requirement is or how
16 compliance is going to be achieved.

17 MR. KEELING: Let me follow up with that. Why
18 is it important that velocities should apply always on
19 an instantaneous basis?

20 WITNESS SHUTES: Because it only takes a short
21 amount of time to have a problem with the fish if the
22 fish is impinged or entrained or whatever. And as
23 these velocities no longer seek -- no longer are
24 achieved and a tidal cycle or because of some other
25 event -- mostly I think it would be having to do with

1 tidal cycles -- then that's the point of vulnerability.
2 And that point of vulnerability needs to be addressed.

3 MR. KEELING: Do I understand your testimony
4 correctly to mean as well that, to your knowledge,
5 there is currently no proposal in the program to track
6 on an instantaneous basis?

7 WITNESS SHUTES: If there is, it is not clear
8 to me. And it has to be made clear, both what the
9 requirements is and how compliance can be assured.

10 MR. KEELING: Mr. Shutes, thank you very much.
11 That concludes my cross-exam.

12 CO-HEARING OFFICER DODUC: Thank you,
13 Mr. Keeling.

14 Ms. Des Jardins is next.

15 MS. MESERVE: May I go next?

16 CO-HEARING OFFICER DODUC: Unless she is
17 swapped with Ms. Meserve.

18 Ms. Meserve and Ms. Des Jardins are the two
19 remaining parties to conduct cross-examination. And we
20 do have a hard stop at 5:00, so if we must, we will ask
21 you to return tomorrow.

22 MS. MESERVE: Most of my questions are also
23 for -- regarding the permit terms, which either witness
24 could answer.

25 CO-HEARING OFFICER DODUC: Before you begin,

1 Ms. Meserve, and I'm not sure if this is appropriate to
2 bring up, but what is -- I'm looking to the lawyers
3 around me.

4 What would be the appropriate scope of
5 cross-examination for proposed terms and conditions?
6 These terms and conditions cover a very broad range of
7 topics. And Mr. Keeling's questions, in particular, he
8 was very concise and succinct and efficient; however, I
9 can imagine that delving into each of these proposed
10 terms could take us back into a very long discussion.

11 So while we have left it somewhat open and
12 undefined -- because we do encourage the submission of
13 proposed terms and conditions -- I guess I am just
14 alerting parties who are planning to conduct
15 cross-examination on proposed terms and conditions that
16 I don't necessarily -- I won't necessarily welcome the
17 reopening of every facet of topics that we have covered
18 during the course of this hearing under the guise of
19 cross-examination.

20 I'm not suggesting you will do that,
21 Ms. Meserve, but it is something that is now on my
22 mind.

23 MS. MESERVE: Okay. I'll proceed. And, yeah,
24 I mean, I think I can be within the time estimate I
25 gave, if that's any solace.

1 CROSS-EXAMINATION BY MS. MESERVE

2 MS. MESERVE: Okay. So I also had a question
3 about the "instantaneous" comments the Item No. 2. And
4 I was wondering with respect to that recommendation
5 that -- if you were aware of Mr. Valles' statement two
6 days ago that it would be necessary to send a diver
7 down in order to see what the approach velocities were.

8 CO-HEARING OFFICER DODUC: Ms. Morris.

9 MS. MORRIS: Objection, outside the scope of
10 the permit terms. Mr. Valles' testimony is clearly not
11 Mr. Shutes' testimony over permit conditions.

12 CO-HEARING OFFICER DODUC: What is your
13 intention in asking that question, Ms. Meserve?

14 MS. MESERVE: Sure. I'm probing the witness
15 regarding his knowledge of -- and what was new
16 information to me, of the state of the fish screen
17 design and whether it's part of the design or not to be
18 able to make these particular instantaneous decisions
19 that have been recommended.

20 CO-HEARING OFFICER DODUC: So rather than
21 referring to Mr. Valles' testimony, why don't you
22 instead ask Mr. Shutes how he believes this condition
23 might be enforced.

24 MS. MESERVE: Sure.

25 CO-HEARING OFFICER DODUC: Or how it might be

1 complied with.

2 WITNESS SHUTES: So part of the reason I put
3 this in and I put it in up front is because I don't
4 know how it would be enforced or that it would be
5 complied with.

6 However, this is rebuttal testimony.
7 Mr. Greenwood represented that the approach velocity
8 was going to be 0.2 feet per second and that the
9 sweeping velocity would be 0.4 feet per second or
10 greater.

11 And I don't know -- I don't -- absent the
12 ability to actually assure that condition, I do not see
13 how Mr. -- Dr. Greenwood, excuse me, can represent that
14 the condition would be reasonably protective of fish.

15 I believe it's incumbent upon the petitioners
16 and the construction people, should this be
17 constructed, to provide a design and review that
18 demonstrates conclusively that what Dr. Greenwood
19 represented is in fact something that they will be able
20 to do.

21 CO-HEARING OFFICER DODUC: Thank you.

22 WITNESS SHUTES: And that's why I included
23 this.

24 CO-HEARING OFFICER DODUC: Got it.

25 Ms. Morris?

1 MS. MORRIS: I'm sorry. I would move to
2 strike. The question was about Permit Condition No. 2.
3 That's what Ms. Meserve asked about, which is bypass
4 criteria.

5 MS. MESERVE: It's actually No. 1.

6 MS. MORRIS: And Item No. 1 is the approach
7 velocity. They are separate permit conditions.

8 CO-HEARING OFFICER DODUC: I believe -- at
9 least I was looking at No. 1.

10 MS. MESERVE: Yeah, I mean, I was -- I looked
11 at No. 2, and then I see No. 1 also has the similar.
12 So I think it's really the same question whether you're
13 looking at 2 or 1. You're talking about trying to
14 maintain certain velocities and bypass criteria on an
15 instantaneous basis is what's been recommended. So I
16 think it is the same.

17 CO-HEARING OFFICER DODUC: In any case, I
18 don't believe Mr. Shutes knows about how -- how
19 velocity would be determined.

20 WITNESS SHUTES: I don't know how velocity
21 would be determined. I have a better idea of how a
22 bypass requirement would be measured. That would be
23 done with a gauge, and it would be reported as such.

24 I'm still unclear as to where the location of
25 the gauge would be and how that would be constructed to

1 assure the bypass criteria. It's not evident to me,
2 and it was not evident to me subsequent to the
3 presentation of DWR-1143 if the requirement is
4 instantaneous or not. I did not know that when I
5 prepared this because that had not yet been produced.

6 However, I think it's important. And if the
7 petitioners have an alternative proposal, it should be
8 clear about what it is and what the rationale is.

9 MS. MESERVE: And just to use a hypothetical
10 rather than someone else's testimony, if the approach
11 to ensuring the -- the Permit No. 1 suggestion to
12 velocities was to send a diver down three times or four
13 times a year and check it and then adjust the baffles,
14 would you consider that to be instantaneous?

15 MS. MORRIS: Objection --

16 CO-HEARING OFFICER DODUC: Ms. Morris.

17 MS. MORRIS: -- incomplete hypothetical,
18 assumes facts not in evidence.

19 MS. MESERVE: I thought it was kind of
20 complete. The hypothetical is that in order to
21 maintain --

22 CO-HEARING OFFICER DODUC: Ms. Meserve --
23 Ms. Meserve, I would rather you not reference someone
24 else's testimony.

25 Mr. Shutes has already answered that he does

1 not know how the condition would be enforced, complied,
2 and so I suggest you move on, unless you want more
3 specificity from him regarding what he means by
4 "instantaneous."

5 MS. MESERVE: By "instantaneous," do you mean
6 every second of the year this would be able to be
7 measured as long as there was water being diverted?

8 WITNESS SHUTES: I believe the goal would be
9 to assure that measurement -- excuse me. Strike that.

10 I believe the goal would be that -- to assure
11 that the velocities were appropriate whenever water was
12 being diverted. How you would go about determining
13 that or calibrating it to the satisfaction of the
14 Board, to begin with, or other technically competent
15 persons, I am not sure.

16 MS. MESERVE: Then looking at permit --
17 suggested condition No. 3 discusses a bypass criteria
18 of 7,000 cfs in the July-to-September time frame. This
19 is 2,000 cfs more than we see in the DWR proposed
20 initial operating criteria.

21 Why did you suggest that 2,000 cfs increase?

22 WITNESS SHUTES: I believe the number was
23 derived as something that's often cited and what
24 Mr. Cannon believes is protective of the low salinity
25 zone. And that would be the goal of that -- the

1 particular term, probably in combination with the
2 requirement for salinity in -- in Permit Term 4. It's
3 hard to say what would be controlling.

4 MS. MESERVE: Mr. Long, could look at the
5 exhibit I just gave you for CSPA in that folder, which
6 is FSL-61. And maybe just zoom out so both can be
7 shown.

8 Mr. Shutes, this I pulled off of USGS, and
9 this is the three-month period for the last two years,
10 2016 and 2017.

11 WITNESS SHUTES: Could you blow that up a
12 little, please, Mr. Long?

13 MS. MESERVE: Or maybe look at it one at a
14 time, I'm sorry.

15 WITNESS SHUTES: Thank you.

16 MS. MESERVE: And just to ask you about this
17 proposed permit term, I wanted to look at the average
18 daily flow at Freeport under current conditions without
19 North Delta Diversions.

20 So do you see there that, with respect to
21 2016, I believe, that the average daily flow is from
22 about 11,000 to the 20,000 cfs?

23 CO-HEARING OFFICER DODUC: Ms. Morris.

24 MS. MORRIS: I would just object that this is
25 outside the scope, really, to -- the witness -- I'm

1 going to your scope question. I think that it's fair
2 to ask about how he came to it. But to put additional
3 evidence into the record and ask him about that when he
4 didn't put that in as part of his basis in his table,
5 is outside the scope of his testimony.

6 CO-HEARING OFFICER DODUC: Mr. Jackson.

7 MR. JACKSON: Yes. The -- the Board Hearing
8 Officers have been talking about "does anybody have
9 recommended permit terms" from the beginning.

10 We put down what we knew and something in a
11 little box about why for your use.

12 If you don't want this process, I mean, then
13 we won't do it. But we can't --

14 CO-HEARING OFFICER DODUC: Mr. Jackson, it's
15 not a matter of what you do. It's the matter of what
16 others do with what you present to us and how far that
17 takes us.

18 So I'm going to, without consulting with my
19 Co-Hearing Officer, define a scope right now. And that
20 is, when you present proposed conditions, explanation
21 of those conditions and the identification of
22 supporting evidence in the record for those proposed
23 conditions are acceptable, at least during this period
24 of rebuttal.

25 We will, I'm sure, discuss surrebuttal at a

1 different time. But for rebuttal phase, for
2 cross-examination during rebuttal, we will limit the
3 scope to explanation of the condition as proposed by,
4 in this case, Mr. Shutes and CSPA, and identification
5 of evidence currently in the record to support that
6 proposed condition.

7 We are not going to get into arguments in
8 favor or against particular proposal conditions, at
9 least not in this stage of cross-examination of
10 rebuttal testimony.

11 MS. MESERVE: Are you aware, Mr. Shutes, that
12 a 7,000 cfs flow in the Sacramento River at Freeport
13 would be well below the average flow under current
14 conditions in this location?

15 CO-HEARING OFFICER DODUC: Strike that.

16 MS. MESERVE: I'm trying to --

17 CO-HEARING OFFICER DODUC: No. Ask him about
18 his proposal and his supporting -- or the supporting
19 evidence in the record to support his proposal. That's
20 what I'm limiting you to.

21 MS. MESERVE: When you suggested 7,000 cfs
22 bypass flow, did you consider what the current flows at
23 that same time in those same months are currently in
24 the river?

25 CO-HEARING OFFICER DODUC: Mr. Shutes, I can't

1 remember now. When you presented CSPA-502, what was
2 the justification for your proposal of the bypass flow?

3 Can we put back 502.

4 WITNESS SHUTES: I'm sorry. I -- what was the
5 specific justification, or what was the justification
6 for the exhibit?

7 CO-HEARING OFFICER DODUC: Hold on.

8 502 -- let's go back.

9 MS. MESERVE: We've -- yeah, so 502 lists
10 CSPA-500 and NRDC-58.

11 CO-HEARING OFFICER DODUC: Condition 3, do you
12 recall what the specific in evidence in the record is
13 to support that --

14 WITNESS SHUTES: Yes. It was from
15 Dr. Rosenfeld, and it was from Mr. Cannon, too. And it
16 relates to a sort of minimal value to protect the low
17 salinity zone.

18 CO-HEARING OFFICER DODUC: And that was the
19 basis of your proposal?

20 WITNESS SHUTES: Correct. And -- yes.

21 CO-HEARING OFFICER DODUC: Thank you.

22 WITNESS SHUTES: And I'll answer her question
23 if you want; if not I won't.

24 CO-HEARING OFFICER DODUC: No.

25 MS. MESERVE: And then in making the

1 recommendation of 7,000 cfs, did you consider the
2 potential for increased incidence of harmful algal
3 blooms from having this low flows in the river during
4 the June-to-September time period?

5 CO-HEARING OFFICER DODUC: Ms. Morris.

6 MS. MORRIS: Objection, outside the scope that
7 was just defined. He clearly just stated what it was,
8 and it had nothing to do with harmful algal blooms.

9 MS. MESERVE: May I confirm a couple of other
10 things that wouldn't have been considered or -- I'm
11 trying to understand where it came from. He cited --

12 CO-HEARING OFFICER DODUC: He cited it, and he
13 answered.

14 MS. MESERVE: That was for the low salinity
15 zone, and that was the consideration.

16 CO-HEARING OFFICER DODUC: Is that correct,
17 Mr. Shutes?

18 WITNESS SHUTES: Excuse me?

19 CO-HEARING OFFICER DODUC: Would you like to
20 repeat what you just said in terms of the evidence to
21 support Condition No. 3?

22 WITNESS SHUTES: Yes. It has to do with the
23 protection of the low salinity zone in this location.

24 CO-HEARING OFFICER DODUC: And that's all?

25 WITNESS SHUTES: That's it.

1 CO-HEARING OFFICER DODUC: Thank you.

2 MS. MESERVE: And that would not include, for
3 instance --

4 CO-HEARING OFFICER DODUC: Move on,
5 Ms. Meserve.

6 WITNESS SHUTES: I would point out that the
7 Condition No. 4, as I pointed out before, having
8 that --

9 CO-HEARING OFFICER DODUC: Hold on. Hold on.
10 Is that in response to a question?

11 WITNESS SHUTES: It is in --

12 CO-HEARING OFFICER DODUC: Before I get an
13 objection.

14 Ms. Meserve?

15 MS. MESERVE: I think the --

16 WITNESS SHUTES: I think it is, in part. And
17 can I explain why?

18 CO-HEARING OFFICER DODUC: Sure.

19 WITNESS SHUTES: Part of the -- the question
20 was why choose that value?

21 CO-HEARING OFFICER DODUC: Mm-hmm.

22 WITNESS SHUTES: And part of the calculus in
23 choosing that value was that there was also another
24 value.

25 CO-HEARING OFFICER DODUC: Ah, excellent.

1 Okay.

2 WITNESS SHUTES: And that value is shown in
3 Condition 4. And I believe that would probably address
4 many of Ms. Meserve's concerns.

5 MS. MESERVE: And so just so I'm clear, so I
6 can understand, the low salinity zone is aimed at
7 fish -- the -- protecting fish species --

8 WITNESS SHUTES: Correct.

9 MS. MESERVE: -- not other beneficial uses?

10 WITNESS SHUTES: Not directly.

11 MS. MESERVE: All right. And, let's see,
12 moving on to -- oh. Do you -- in the Item 3 as well
13 you -- you have the 900 cfs minimum North Delta
14 diversions there. Did you -- why didn't you consider
15 reducing those minimum diversions to less than 900 cfs?

16 WITNESS SHUTES: I accepted the minimum
17 diversions that the petitioners advanced. Partly
18 that's through my understanding of the need to maintain
19 some water in a diversion facility. That's the best I
20 can answer.

21 MS. MESERVE: So you didn't independently
22 investigate whether it was necessary to maintain 900
23 cfs at all times?

24 WITNESS SHUTES: I did not.

25 MS. MESERVE: On Item No. 15, which is the

1 Adaptive Management, I was wondering, you've pointed
2 out that the State Water Board would have approval of
3 changes in the BiOps and the ITP under your proposal.

4 WITNESS SHUTES: Yes.

5 MS. MESERVE: Are there other entities than
6 the State Water Board that you would think would --
7 should participate in the changes in the permits under
8 adaptive management? Or I guess I should say, did you
9 consider?

10 WITNESS SHUTES: Can you repeat the question,
11 please?

12 MS. MESERVE: You listed -- you called out
13 State Water Board in particular with respect to these
14 changes that could happen under Adaptive Management in
15 Suggestion 15. Did you consider the inclusion of other
16 entities in the approval of those changes?

17 CO-HEARING OFFICER DODUC: Ms. Morris.

18 MS. MORRIS: Objection as to relevance. The
19 State Board is issuing the permit, so it makes sense
20 that they would be listed. But Mr. Shutes' opinions
21 about other agencies that should be listed would be
22 outside the scope of this hearing as well as irrelevant
23 to the hearing.

24 CO-HEARING OFFICER DODUC: Do you have an
25 opinion, Mr. Shutes?

1 WITNESS SHUTES: Part of what I say is
2 affected stakeholders need to be engaged in technical
3 and policy decisions. That's on the following page in
4 the same category. I didn't specify which affected
5 stakeholders.

6 As far as the fisheries agencies go, I assume
7 that they're going to be involved in decisions relating
8 to biological opinions and incidental take permits.
9 And as I understand it, the water supply agencies,
10 namely the State and Federal projects, are also going
11 to be involved because of any structure, so I don't
12 think it's necessary to include them.

13 I do think that part of the reason I said
14 public -- review by the State Water Board in a public
15 evidentiary hearing is that would provide at least some
16 measure of public review and input and scrutiny.

17 Again, as I stated at the beginning, this is
18 not an exhaustive list. And it does not encompass all
19 of the potential problems with adaptive management or
20 any of the other potential conditions that relate to
21 this proposed project.

22 Other people have much more expertise and are
23 much more detailed in their analysis of that. But I
24 think this at least, one, creates the -- some kind of
25 context for enforceability. And that was my focus in

1 this table.

2 MS. MESERVE: And so with respect to sort of
3 looking at your Item 16 and 15 together, could the
4 inclusion of affected stakeholders be reasonably
5 included in the Adaptive Management Program in your
6 opinion?

7 WITNESS SHUTES: I think they should be. I
8 don't think that that in itself guarantees a good
9 outcome or an appropriate one. A lot has to do with
10 structure.

11 But I think it's important that -- and I do
12 not underestimate the enormity of this -- of
13 participating in such either real-time operations or
14 adaptive management. That's one of the reasons I said
15 it needs technically competent and funded chaperons. I
16 think "funded" is very important.

17 And there needs to be some mechanism because,
18 frankly, many representatives of the public interest,
19 even fisheries agencies, do not have the staff or the
20 funding to participate at this time.

21 MS. MESERVE: And then looking at Item 21, you
22 recommend state-of-the-art fish screens at Clifton
23 Court Forebay. Isn't it true that the South Delta
24 Diversions -- strike that.

25 Is one of the reasons that you suggest this

1 that the South Delta Diversions would be continued to
2 operate under the proposed project?

3 CO-HEARING OFFICER DODUC: Ms. Morris.

4 MS. MORRIS: I'm just going to object, and I
5 know you probably -- as outside the scope of this
6 hearing because it is not being modified.

7 CO-HEARING OFFICER DODUC: Sustained.

8 MS. MESERVE: But the operations are part of
9 this proposal.

10 CO-HEARING OFFICER DODUC: Mr. Shutes, perhaps
11 if you could explain the basis of your proposal.

12 WITNESS SHUTES: The question -- and I'm not
13 going to revisit what I said in my direct Part 2
14 testimony or open the door to DWR to go back to what
15 the appropriate scope of permit terms is.

16 I proposed fish -- I proposed measures that I
17 believe will be protective, reasonably protective of
18 fish and wildlife. I believe this is one of them.
19 There are operations -- and it goes to the overall
20 operation of the State and Federal projects.

21 There's been a disagreement in this hearing
22 about what the -- what the scope of permit conditions
23 are and what the scope, in fact, of the consideration
24 of the Board is in this proceeding. I'm not going to
25 opine on that.

1 I just said -- in effect, I voted with my feet
2 and proposed what I believe is a protective condition.
3 And it goes in part to restoring the Delta ecosystem
4 pursuant to the Delta Reform Act. And it also goes to
5 appropriate Delta flow criteria.

6 MS. MESERVE: And with respect to this
7 suggested condition, do you think there are viable
8 designs available to reduce take at Clifton Court?

9 MS. MORRIS: Objection, outside the scope of
10 this hearing. Again, 21 clearly says the basis for it
11 is existing salvage facilities kill countless fish. It
12 says nothing about WaterFix, and it's not being
13 modified by WaterFix.

14 CO-HEARING OFFICER DODUC: Sustained.

15 MS. MESERVE. Looking at Item No. 27, you
16 suggest having the E/I ratio applied to inflow directly
17 upstream of the North Delta Diversion. Currently where
18 is inflow measured to the Delta for purposes of
19 E and I?

20 WITNESS SHUTES: As I understand it --

21 CO-HEARING OFFICER DODUC: Currently,
22 Ms. Morris.

23 WITNESS SHUTES: -- it's measured at Freeport.

24 MS. MORRIS: Which is outside the scope of his
25 rebuttal testimony because he's talking about the E/I

1 at the North Delta -- for the North Delta Diversion.

2 CO-HEARING OFFICER DODUC: Where are you going
3 with the question, Ms. Meserve?

4 MS. MESERVE: My next -- it's just -- I was
5 going to ask about it would be a change. The E/I ratio
6 that's proposed that he's saying he disagrees with
7 would be a change in the point of compliance.

8 CO-HEARING OFFICER DODUC: That's not what I
9 see.

10 MS. MESERVE: He disagrees with the proposed
11 change of the --

12 CO-HEARING OFFICER DODUC: No, no, no, no.
13 Look at what he's proposing.

14 MS. MESERVE: Right now --

15 CO-HEARING OFFICER DODUC: Just ask the
16 question on what he's proposing.

17 MS. MESERVE: He says it should count upstream
18 of the North Delta Diversions. Right now --

19 CO-HEARING OFFICER DODUC: So ask the
20 question, without referencing -- ask the question,
21 Ms. Meserve.

22 MS. MESERVE: So do you disagree with -- does
23 this recommendation disagree with the proposal to
24 change the point of compliance for E and I to a
25 different location downstream of the proposed North

1 Delta Diversions?

2 WITNESS SHUTES: It does.

3 MS. MESERVE: Why do you think the inflow
4 should be measured directly upstream of the proposed
5 North Delta Diversions?

6 WITNESS SHUTES: I don't believe that the
7 petitioners have demonstrated that changing the E/I
8 will be reasonably protective of fish.

9 I really see it as a way to just get more
10 water. And I'm not persuaded by their argument that --
11 for the underlying rationale of the export-to-inflow
12 ratio. I believe that there is more than just
13 entrainment, as they've portrayed, as a rationale -- as
14 petitioners have portrayed as their rationale for --
15 for changing the point of compliance.

16 MS. MORRIS: Objection, that misstates
17 previous testimony. It's a characterization of other
18 people's testimony.

19 CO-HEARING OFFICER DODUC: It's his
20 characterization.

21 MS. MESERVE: And, Mr. Cannon, I just have one
22 question for you about your Paragraph 11. So that's in
23 CSPA-500 -- it's on Page 11, I'm sorry. And it's down
24 toward the bottom. And you're -- you discuss the
25 sediment being lost to the North Delta Diversions.

1 And my question is are you aware of any
2 successful sediment reintroduction plans to restore
3 sediment of the scale proposed here in this project?

4 WITNESS CANNON: I'm not qualified to answer
5 that. I'm not aware of any.

6 MS. MESERVE: So when you say it would be
7 costly, do you believe that it's actually feasible to
8 reintroduce back about 11 percent of the sediment back
9 into the river as estimated in the EIR?

10 WITNESS CANNON: It certainly would be costly
11 given the amounts that they predicted.

12 MS. MESERVE: But you're not aware of any
13 projects of that scale that are successful?

14 WITNESS CANNON: I couldn't answer that
15 question. Maybe.

16 MS. MESERVE: No further questions. Thank
17 you.

18 CO-HEARING OFFICER DODUC: Thank you,
19 Ms. Meserve.

20 Ms. Des Jardins.

21 CO-HEARING OFFICER DODUC: At this time, do
22 you anticipate requesting redirect, Mr. Jackson?

23 MR. JACKSON: No. My wife wants me to come
24 home.

25 CO-HEARING OFFICER DODUC: Please express my

1 gratitude to your wife.

2 MR. JACKSON: I will. I've told her about
3 you.

4 CO-HEARING OFFICER DODUC: Well, then,
5 Ms. Des Jardins, you have about nine minutes, unless
6 you would like these witnesses to return tomorrow for
7 your cross.

8 MS. DES JARDINS: I presume that Mr. Jackson
9 would not like to return tomorrow.

10 MR. JACKSON: Hm-mm.

11 CROSS-EXAMINATION BY MS. DES JARDINS

12 MS. DES JARDINS: Okay. Well, then, let's
13 please pull up Exhibit CSPA-502. And I'd like Page 2,
14 please, Term 6.

15 And Mr. Shutes, I believe it says here -- you
16 refer to DWR and the Bureau of Reclamation
17 renegotiating COA. Are you aware that Reclamation is
18 renegotiating the COA?

19 WITNESS SHUTES: Yes.

20 MS. DES JARDINS: And is this why you proposed
21 this permit term?

22 WITNESS SHUTES: Actually, the underlying
23 reason for this permit term is lack of clarity about
24 whose water is going to be diverted at this facility,
25 under what water rights it's going to be diverted, and

1 in fact, whether this in some way makes a new water
2 right or not.

3 And there is a tendency, I have found,
4 personally, my opinion, for the State and Federal
5 projects to not be terribly clear about the basis of
6 right for any particular act or -- and to -- if you
7 will pardon the unartful term, mush their water rights
8 together and do an accounting sometime later.

9 And until there's clarity about who's
10 diverting and what's being diverted, both COA and JPOD,
11 in No. 7, I believe -- without putting some kind of
12 limitations on them at this proceeding, it opens the
13 door to more liberal and unbounded exercise of water
14 rights for both the State and Federal projects. And
15 that's the concern that I'm trying to address.

16 Whether -- you know, the source of water is
17 really the question. What's the source of water for
18 these diversions?

19 CO-HEARING OFFICER DODUC: Well, Mr. Berliner.

20 MR. BERLINER: I'm going to object and request
21 that the response of Mr. Shutes be stricken from the
22 point where he started to expound on his views about
23 the sharing of water by the projects. It's
24 non-responsive to the question.

25 MR. JACKSON: Can I be heard on that?

1 MS. DES JARDINS: My next question --

2 CO-HEARING OFFICER DODUC: Hold on.

3 Mr. Jackson.

4 MR. JACKSON: At the risk of not getting to go
5 home, the permit -- proposed permit terms are ours --

6 CO-HEARING OFFICER DODUC: Yes.

7 MR. JACKSON: -- for the reasons that we
8 state. If you decide to do something different, then
9 our -- we'll just crumple this up and throw it away.
10 But it's an opportunity to show you what we think.

11 And Mr. Shutes can't justify -- you know, he's
12 kind of bound to what his clients think.

13 CO-HEARING OFFICER DODUC: I think -- and I'm
14 going to jump in here, Mr. Jackson because hopefully we
15 will get more proposed terms and conditions throughout
16 this hearing. And so I think it's important to try to
17 establish some scope right away.

18 So what I'd like to do is focus Mr. Shutes'
19 testimony on these proposed terms and conditions. And
20 I believe it's okay for him to explain the condition
21 and for him to point to evidence in the record to
22 support the proposed condition but not make argument
23 for a condition.

24 So I am sustaining Mr. Berliner's objection,
25 granting his motion, whatever the appropriate

1 terminology is.

2 MS. DES JARDINS: Mr. Shutes, I would like to
3 ask you about Condition 7, and I'd like to draw you
4 to -- your attention to the top of Page 3.

5 Can we scroll down, please? The J Points of
6 Diversion.

7 Where it states, "D1641 authorized JPOD
8 without considering North Delta Diversion," can you
9 explain why that's a concern to you?

10 CO-HEARING OFFICER DODUC: Explain the
11 condition?

12 MS. DES JARDINS: Explain the condition -- he
13 does list this as a concern, you know.

14 CO-HEARING OFFICER DODUC: Explain the
15 condition that you are proposing, but please don't make
16 arguments.

17 MS. DES JARDINS: Yeah. Maybe I should scroll
18 back up to the top of Page 7.

19 WITNESS SHUTES: I think that the -- what
20 Ms. Des Jardins called out is a rationale. It may not
21 be an argument. I'm not sure how I can answer
22 without --

23 CO-HEARING OFFICER DODUC: Being
24 argumentative?

25 WITNESS SHUTES: Without, you know, going

1 beyond simply a factual answer.

2 CO-HEARING OFFICER DODUC: What in -- what
3 evidence in the record supports this proposed
4 condition?

5 WITNESS SHUTES: I think -- the issue was
6 called out in my Part 1 testimony about the source of
7 water and water rights and whose water rights and on
8 the basis of right for the diversion. So that's part
9 of the reference here.

10 I believe in PCFFA-161 is Ms. Des Jardins'
11 discussion of -- it has to do with JPOD, but I don't
12 recall the details of it right now.

13 MS. DES JARDINS: Mr. Shutes, I'd also like to
14 ask you about the requirement for reporting of
15 15-minute data. Term 22 on Page 7, you require
16 reporting of hourly and 15-minute diversions [sic] past
17 the North Delta Diversions and South Delta Diversions.

18 Are you aware that the California Data
19 Exchange Center --

20 CO-HEARING OFFICER DODUC: Beyond the scope.

21 MS. DES JARDINS: -- currently --

22 CO-HEARING OFFICER DODUC: Beyond the scope.

23 MS. DES JARDINS: -- does not report --

24 CO-HEARING OFFICER DODUC: Beyond the scope.

25 MS. DES JARDINS: Excuse me --

1 CO-HEARING OFFICER DODUC: Ask him --

2 MS. DES JARDINS: -- but --

3 CO-HEARING OFFICER DODUC: No. Ask him to
4 explain the proposed condition or point to evidence in
5 the record to support it.

6 MS. DES JARDINS: I would -- Mr. Shutes, I
7 would like to impeach the concurrence you made with
8 Ms. Morris' statement that DWR reports 15-minute data
9 at the South Delta Diversions.

10 And I'd like to put up Exhibit DDJ- --

11 CO-HEARING OFFICER DODUC: No, this is not a
12 time for you to make arguments. You are --

13 MS. DES JARDINS: I'm sorry, but --

14 CO-HEARING OFFICER DODUC: -- going beyond --

15 MS. DES JARDINS: -- I do have the right to --

16 CO-HEARING OFFICER DODUC: You are going
17 beyond the scope that I have set out for
18 cross-examination based on proposed terms and
19 conditions.

20 MS. DES JARDINS: Thank you. I would like to
21 raise -- I would like to raise an objection that
22 Ms. Morris put this false testimony in the record.

23 MS. MORRIS: I would object to that statement.
24 I don't testify. I ask questions, and the witnesses
25 provided an answer.

1 MS. DES JARDINS: It was a misleading and
2 inaccurate question, and it elicited false testimony.

3 CO-HEARING OFFICER DODUC: Not -- done. It is
4 4:59.

5 MS. DES JARDINS: All right.

6 CO-HEARING OFFICER DODUC: Your objection is
7 overruled.

8 MS. DES JARDINS. Okay. Then the other
9 thing --

10 CO-HEARING OFFICER DODUC: And untimely.

11 MS. DES JARDINS: -- I'd like to ask about is
12 the Rio Vista flow requirements --

13 WITNESS SHUTES: Very quickly.

14 MS. DES JARDINS: The Rio Vista flow
15 requirements? The 10,000 cfs?

16 WITNESS SHUTES: Yes.

17 MS. DES JARDINS: Thank you.

18 WITNESS SHUTES: What number?

19 MS. DES JARDINS: Permit Term 13, on Page --
20 13, yeah, there we go -- and your recommendations for
21 Rio Vista flow requirements.

22 WITNESS SHUTES: What about them?

23 MS. DES JARDINS: Why do you recommend these?

24 CO-HEARING OFFICER DODUC: What is the basis
25 of --

1 MS. DES JARDINS: What is the basis of your
2 recommendation?

3 CO-HEARING OFFICER DODUC: In the record.

4 WITNESS SHUTES: In part, it's the Delta flow
5 criteria report. And there are other recommendations
6 in the record, I believe, that the Rio Vista flow, July
7 through November, came from Dr. Rosenfeld in his
8 testimony.

9 CO-HEARING OFFICER DODUC: Thank you. It is
10 now 5:00 o'clock. If you have --

11 MS. DES JARDINS: Thank you.

12 CO-HEARING OFFICER DODUC: I was going to say,
13 if you have more, then Mr. Shutes and Mr. Cannon will
14 have to return tomorrow.

15 MS. DES JARDINS: Do I have more, Mr. Jackson?

16 No? Okay.

17 CO-HEARING OFFICER DODUC: In that case, thank
18 you, Mr. Cannon, and thank you, Mr. Shutes.

19 We are adjourned until 9:30 tomorrow.

20 (Whereupon, the proceedings adjourned
21 at 5:01 p.m.)

22

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1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF MARIN)

4 I, DEBORAH FUQUA, a Certified Shorthand
5 Reporter of the State of California, do hereby certify
6 that the foregoing proceedings (Pages 128 through 261)
7 were reported by me, a disinterested person, and
8 thereafter transcribed under my direction into
9 typewriting and which typewriting is a true and correct
10 transcription of said proceedings.

11 I further certify that I am not of counsel or
12 attorney for either or any of the parties in the
13 foregoing proceeding and caption named, nor in any way
14 interested in the outcome of the cause named in said
15 caption.

16 Dated the 12th day of September, 2018.

17

18

DEBORAH FUQUA

19

CSR NO. 12948

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1 State of California)
)
2 County of Sacramento)

3

4 I, Candace L. Yount, Certified Shorthand Reporter
5 for the State of California, County of Sacramento, do
6 hereby certify:

7 That I was present at the time of the above
8 proceedings;

9 That I took down in machine shorthand notes all
10 proceedings had and testimony given;

11 That I thereafter transcribed said shorthand notes
12 with the aid of a computer;

13 That the above and foregoing is a full, true, and
14 correct transcription of said shorthand notes, and a
15 full, true and correct transcript of Pages 1 - 127;

16 That I am not a party to the action or related to
17 a party or counsel;

18 That I have no financial or other interest in the
19 outcome of the action.

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21 Dated: September 12, 2018

22

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24 Candace L. Yount, CSR No. 2737

25