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BEFORE THE
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA WATERFIX WATER)
RIGHT CHANGE PETITION)
HEARING)

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

PART 1

Friday, April 28, 2017
9:00 A.M.

VOLUME 38

Pages 1 - 254

Reported By: Deborah Fuqua, CSR No. 1248

Computerized Transcription by ProCAT

1 APPEARANCES:
2 CALIFORNIA WATER RESOURCES BOARD
3 Division of Water Rights
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6 Felicia Marcus, Chair and Co-Hearing Officer:
7 Dorene D'Adamo, Board Member
8 Staff Present
9 Samantha Olson, Senior Staff Attorney
10 Conny Mitterhofer, Senior Water Resources Control Engr.
11 Kyle Ochenduzsko, Senior Water Resources Control Engr.
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14 Mark Cowin, Director
15 James (Tripp) Mizell, Senior Attorney
16 Cathy Crothers, Assistant Chief Counsel
17 Ken Bogdan, Senior Attorney
18 Duane Morris, LLP
19 By: Thomas Martin Berliner, Attorney at Law
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22 and Fish and Wildlife Service
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25 State Water Contractors
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27 Adam Kear
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31 (Continued)

1	APPEARANCES (continued)
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3	Cities of Folsom and Roseville, San Juan Water District, and Sacramento Suburban Water District
4	
5	Ryan Bezerra
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6	Placer County Water Agency
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7	Kelley Taber
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8	Sacramento Valley Water Users, North Delta Water Users
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9	Kevin O'Brien
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1

2 APPEARANCES (continued)

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PROTESTANT'S

- NONE MARKED THIS SESSION -

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1 Friday, April 28, 2017 9:30 a.m.

2 PROCEEDINGS

3 ---000---

4 CO-HEARING OFFICER DODUC: Good morning,
5 everyone. It is 9:30. Welcome back to the State Water
6 Board's Water Rights Hearing on the Petition regarding
7 the change in points of diversion for the California
8 WaterFix project.

9 I am Tam Doduc. With me to my right is Board
10 Chair and Co-Hearing Officer Felicia Marcus. And I
11 believe Board Member DeeDee D'Adamo will be joining us
12 shortly.

13 To my left filling in for Dana Heinrich today
14 is Samantha Olson, and to her left are Conny
15 Mitterhofer and Kyle Ochenduszko.

16 We are also being assisted today by Ms. McCue
17 and Mr. Baker.

18 Because it's Friday, let's make this short.
19 If you don't know -- to borrow the phrase that the
20 Chair used at our last meeting, if you don't know the
21 complete general announcement by now, talk to someone
22 next to you, because they should. And I will just say
23 that -- the only one that I will say is to please make
24 sure that your own and other noise-making devices are
25 on silent, vibrate, or do not disturb.

1 All right. With that, before we continue with
2 Ms. Meserve's cross-examination of this panel, are
3 there any housekeeping matters, scheduling matters that
4 we need to discuss?

5 Specifically, Mr. Mizell and Mr. Berliner, we
6 expect to hopefully be done with this panel shortly,
7 this morning sometime. And then you have, I think, a
8 slew of witnesses come up on your next panel, which I
9 believe will take quite a bit of time to present their
10 direct testimony. So it is -- I'm sorry. That's not
11 true.

12 Ms. Sergent is coming up next, and then she
13 will undergo cross-examination. So that will probably
14 take us until late afternoon at the absolute earliest,
15 upon which, then, you will present your remaining
16 Panel 2 witnesses. And they will present their direct
17 testimony, and that will take some time, I believe
18 several hours.

19 So it's likely that we may not get to all of
20 your remaining Panel 2 witnesses until next week in
21 terms of their direct testimony.

22 And my understanding is you are proposing that
23 Mr. Munevar would go last in terms of presenting his
24 direct testimony, last in this --

25 MR. MIZELL: In this panel, that's correct.

1 Mr. Munevar and Ms. Parker have a joint presentation.
2 They will present it -- Ms. Parker's testimony really
3 fits best about a third of the way into Mr. Munevar's
4 testimony. So they would present last in Panel 2. The
5 expectation is, time frame-wise, it is unlikely we will
6 reach them today.

7 They will both be available for
8 cross-examination of their testimony --

9 CO-HEARING OFFICER DODUC: Along with the rest
10 of --

11 MR. MIZELL: -- along with the rest of the
12 panel next Thursday if the timing works out the way we
13 are expecting.

14 If in the unlikely situation we do proceed all
15 the way through Mr. Leahigh and Dr. Nader-Tehrani's
16 direct testimony today, Dr. Chilmakuri helped to
17 prepare Mr. Munevar's testimony. And he is prepared to
18 step the Board through the testimony. But Mr. Munevar
19 will be available for cross-examination based on his
20 testimony at the appropriate time.

21 CO-HEARING OFFICER DODUC: Thank you,
22 Mr. Mizell. I very much appreciate that rearrangement.

23 And then assuming we get through all of your
24 Panel 2, you still have two other witnesses in Panel 3
25 to present, correct?

1 MR. MIZELL: We have two other witnesses for
2 Panel 3. We are -- so that there aren't going to be
3 surprises, we are working through some contractual
4 obligations that may need to be broken and damages paid
5 to get Chris Thornberg, Dr. Thornberg here next Friday,
6 if that is the timing. If it is after next Friday, I
7 believe we have a bit more flexibility in his schedule.
8 So I'm still working through those facts at the moment,
9 and I will endeavor to keep you apprised of the latest
10 developments.

11 CO-HEARING OFFICER DODUC: That would be
12 great. We will make sure to take some time at the
13 beginning of each hearing day to go over the logistics.

14 Mr. Bezerra.

15 MR. BEZERRA: Thank you very much. I just
16 want to understand a pretty simple point.

17 Do we expect to get through cross-examination
18 of this large panel that includes the modelers today?
19 It sounds like not.

20 CO-HEARING OFFICER DODUC: It is unlikely,
21 given what I expect to be the remaining
22 cross-examination of this panel as well as the
23 presentation of direct rebuttal and cross-examination
24 of Ms. Sergeant.

25 MR. BEZERRA: Okay. Because what Mr. Mizell

1 just said about Ms. Parker and Mr. Munevar having
2 interlocking testimony, then those of us who are early
3 in the order for cross-examining those witnesses have
4 to try to figure out how to cross-examine them
5 appropriately. And it doesn't sound like we have any
6 guarantee Mr. Munevar is actually here today to undergo
7 cross if we get to that panel.

8 CO-HEARING OFFICER DODUC: I somehow doubt
9 that we will get to cross today.

10 MR. BEZERRA: Okay.

11 MR. MIZELL: If I may make a clarifying point,
12 I did not intend to imply that they have interlocking
13 testimony. We are having them present together because
14 it is an efficient way of presenting the information.
15 Their testimony stands alone as it was submitted in
16 their exhibits.

17 CO-HEARING OFFICER DODUC: So let me walk
18 through the scheduling again.

19 We have Ms. Meserve, Ms. Taber, and then
20 Ms. Des Jardins, to my knowledge, unless there are some
21 latecomers who are following them in that order, to
22 conduct cross-examination of this panel.

23 Upon the conclusion of this panel, Mr. Mizell
24 will call forth Ms. Sergent for direct rebuttal as well
25 as any cross-examination.

1 Upon her -- conclusion of her presentation and
2 cross-examination, he will bring up the remainder of
3 his Panel 2 to present their direct rebuttal. And in
4 the order of that presentation, Mr. Munevar and Ms. --

5 MR. BERLINER: Parker.

6 CO-HEARING OFFICER DODUC: -- Parker will
7 present last in that final panel of Panel 2. And my
8 expectation, given the timeline --

9 MR. BEZERRA: Yes?

10 CO-HEARING OFFICER DODUC: -- and given the
11 fact that I think it's Friday and none of us would
12 object to perhaps leaving a little early, that we will
13 not get through all of those direct presentation today,
14 which means that we will resume on Thursday. And at
15 the earliest, I expect, your cross-examination of the
16 remainder of his Panel 2, which would include
17 Mr. Munevar and Ms. Parker, would begin at the earliest
18 on Thursday.

19 MR. BEZERRA: Thank you. I -- you don't know
20 how much I appreciate that clarification.

21 CO-HEARING OFFICER DODUC: Believe me, it
22 helps me too.

23 MR. BEZERRA: And I do believe it's Friday
24 because I didn't wear a tie.

25 CO-HEARING OFFICER DODUC: Oh, Brownie points

1 for you, Mr. Bezerra.

2 All right. Before we -- yes, thank you,
3 Ms. Meserve. I was about to ask you to come up because
4 my understanding is you have -- well, I don't know if
5 you have something else, but at least staff informed me
6 that you actually have a question or a request
7 regarding surrebuttal.

8 MS. MESERVE: Yes. Good morning.
9 Osha Meserve for Local Agencies of the North Delta and
10 other parties.

11 Yes. I wanted to bring up now, while we're
12 getting toward the middle maybe or the end of DWR's
13 rebuttal case, the issue in your April 13th ruling
14 regarding the timing of surrebuttal and -- so that it
15 might be considered now and perhaps further guidance
16 could be provided to the --

17 CO-HEARING OFFICER DODUC: Thank you. I like
18 a lot of headway to consider these things.

19 MS. MESERVE: Excellent. So my understanding,
20 and we've discussed also in your announcement, that
21 surrebuttal would begin immediately after the parties
22 present their rebuttal testimony. And as a practical
23 matter, it's very -- we received the rebuttal cases;
24 we've all been preparing for cross. We've been -- you
25 know, we're working hard on that right now. I think

1 all parties would agree.

2 Of course, we are on notice that we need to
3 prepare our surrebuttal testimony, and we are working
4 on that as well.

5 I would suggest that -- I believe that we're
6 going to get through -- we had 16 hearing days each for
7 the petitioner's case in chief and then the
8 protestants' cases in chief in the Part 1A. And I
9 believe we're going to get through Part 1B, the
10 rebuttal, quite a bit more quickly than that. And
11 we've got a lot of hearing dates that have been
12 scheduled out through the summer.

13 And I would suggest that you and the other
14 Hearing Officers and Board Staff consider whether it
15 would be appropriate to have a set date from the
16 conclusion of Part 1A to have surrebuttal testimony due
17 so that the parties could have time to do that work,
18 honestly, and submit it and then still leave time for
19 presentation of the surrebuttal testimony, which I
20 believe should be winnowed down further because it's
21 simply responding to the rebuttal testimony.

22 So my concern is that by having it begin
23 immediately, that there will be insufficient time for
24 all parties to prepare responsive surrebuttal testimony
25 and to have enough time to, quote, write a shorter

1 letter, if I might entreat you, that we might be able
2 to winnow it down and make it more useful for the Board
3 as well.

4 CO-HEARING OFFICER DODUC: Thank you,
5 Ms. Meserve.

6 Does anyone wish to join in or object or
7 otherwise comment on what Ms. Meserve has said?

8 Mr. Berliner?

9 MR. BERLINER: Yes. Question, because maybe
10 I'm misunderstanding the order. I did not think that
11 testimony was due in advance for surrebuttal and that
12 we were going to go just straight through it and our
13 witnesses would be ready and would testify.

14 CO-HEARING OFFICER DODUC: That is your --
15 that is correct, Mr. Berliner. My understanding is
16 Ms. Meserve is requesting that there be some time in
17 between the conclusion of rebuttal to prepare and
18 submit surrebuttal.

19 Is that correct, Ms. Meserve?

20 MS. MESERVE: Yes.

21 MR. BERLINER: So I get the "prepare" part but
22 not the "submit" part because I thought we were --the
23 submittal would actually be testimony, nothing in
24 advance.

25 MS. MESERVE: So in order to submit -- I mean,

1 to have an expert appear and talk about, say, HABS, you
2 know, we would need to work with those experts to
3 develop that testimony and then submit it. Apparently
4 -- would it be oral only? Is that what you're
5 intending?

6 MR. BERLINER: Yes.

7 MS. MESERVE: So, yeah. I think I'm
8 understanding that. I think I'm just looking for a
9 brief reprieve to do a better job at that.

10 CO-HEARING OFFICER DODUC: I understand,
11 Ms. Meserve. It's our standard practice in, shall we
12 say, previous, less complicated water rights proceeding
13 that we go from actually the presentation of cases to
14 rebuttal without actually taking a break and submitting
15 rebuttals ahead of time. The rebuttals are typically
16 done on a live basis as we proceed with the hearing.

17 Obviously, in this case, we took a break for
18 rebuttal, and our plan was to resume our standard
19 practice with surrebuttal because, as you've noted and
20 Mr. Berliner noted, it should be even more focused and
21 more narrowly defined as we go into surrebuttal.

22 But we understand your request, and we will
23 take it under advisement.

24 MR. BERLINER: We have no objection to a gap
25 between the two if the parties feel like they need the

1 time. I mean, days certain are kind of nice to have,
2 so whichever way you go is fine with us.

3 CO-HEARING OFFICER DODUC: Great. Others?

4 MS. DES JARDINS: I just briefly wanted to say
5 I strongly support Ms. Meserve's request. I believe
6 there's some very in-doubt technical issues. And to
7 identify and focus on the most important ones for
8 surrebuttal takes a little evaluation. And I think
9 it's appropriate. Thank you.

10 CO-HEARING OFFICER DODUC: Mr. Bezerra?

11 MR. BEZERRA: Yes, thank you.

12 Those of us who are here for the Sac Valley
13 water users, we caucused very briefly. We think it may
14 make sense if you consider this. But let's -- if we
15 can wait a week or so to figure out what we're doing
16 and see how far we get through the rebuttal and the
17 cross, we think it may make sense. And we think it
18 this may fit well within the scheduled hearing dates,
19 given how rapidly we seem to be proceeding.

20 So it may make sense to have perhaps some kind
21 of, let's say, compromise where we fit the surrebuttal
22 into the schedule.

23 If there is some period of time between the
24 end of rebuttal and the beginning of surrebuttal,
25 perhaps some kind of limited submission deadline, for

1 instance, like some kind of submittal of summaries --
2 otherwise, you'll have a lot of surrebuttal testimony
3 potentially presented live with a fair amount of
4 evidentiary objections and maybe not the most efficient
5 process.

6 So we think Ms. Meserve's proposal makes some
7 sense, but we think it would be useful for everybody to
8 take a little time to figure out exactly how that may
9 work. It may be that we or someone can propose a
10 stipulation to the Board that would suggest how that
11 would actually work if we have a little time to think
12 about it.

13 CO-HEARING OFFICER DODUC: All right.

14 MR. BEZERRA: Thank you.

15 CO-HEARING OFFICER DODUC: Ms. Taber.

16 MS. TABER: So the City of Stockton also joins
17 in Ms. Meserve's request, particularly in Stockton's
18 case where the petitioner, on rebuttal, submitted
19 extensive technical reports and information. Stockton
20 would appreciate both a date certain and also the
21 opportunity to provide written surrebuttal testimony in
22 addition to oral testimony.

23 And we're fine with not doing that in advance,
24 doing it at the same time as the start of the
25 surrebuttal phase, whatever schedule works. But I just

1 wanted to make clear that, particularly in Stockton's
2 case, there was so much new information we feel that
3 some advance notice and appropriate time would be
4 appropriate under those circumstances. Thank you.

5 CO-HEARING OFFICER DODUC: All right.

6 Mr. Keeling, the only one -- oh, not the only
7 one wearing a tie today.

8 MR. KEELING: Sleeveless.

9 The San Joaquin County protestants join in
10 Ms. Meserve's request.

11 CO-HEARING OFFICER DODUC: I somehow would be
12 shocked if you didn't. In fact, I was surprised you
13 didn't make the request first and she would join in.

14 In any case, thank you all for that
15 discussion. Again, we'll take it under advisement and
16 let you know.

17 And before we begin with -- oh, and this
18 resume is Ms. Meserve's cross-examination.

19 Ms. Des Jardins, I need to share something
20 with you so that you may prepare for your
21 cross-examination of this panel which will follow
22 Ms. Taber.

23 As a party in this proceeding who submitted
24 the appropriate NOI, yes, you do have the opportunity
25 to conduct cross-examination, but your

1 cross-examination must be effective, must be
2 productive, and must add value and relevance to the
3 proceedings, to the record, and to help us make our
4 decision.

5 As Hearing Officer, I am responsible for
6 ensuring that, in order to assure an efficient
7 proceeding but also to ensure fairness to all the
8 parties participating and to the witnesses who are
9 undergoing cross-examination.

10 Unfortunately, your cross-examination to date
11 have been less than efficient and productive. So
12 please note that I am now setting an initial time limit
13 for your cross-examination at 15 minutes with
14 consideration of extension upon showing of cause and on
15 demonstration of effectiveness of your
16 cross-examination.

17 I believe that is only fair to the rest of the
18 parties and to the proceedings in general. I wanted
19 you to be aware of that before you start your
20 cross-examination of this panel.

21 MS. DES JARDINS: I would like to raise an
22 objection to the procedure. I do believe that my
23 cross-examination of Mr. Milligan was effective. It
24 did go into some detail that was extremely important.

25 CO-HEARING OFFICER DODUC: Ms. Des Jardins,

1 now is not the time to discuss this. I have informed
2 you of my decision and my direction on this matter.
3 You are free to submit any objection you wish, but now
4 is not the time.

5 MS. DES JARDINS: All right.

6 CO-HEARING OFFICER DODUC: With that,
7 Ms. Meserve, please continue with your
8 cross-examination.

9 MS. MESERVE: Thank you.

10 MICHAEL BRYAN, ELLEN PREECE,
11 DOUGLAS M. OWEN,
12 called as petitioner's rebuttal
13 Panel 2 witnesses, having been
14 previously duly sworn, were examined
15 and testified further as hereinafter
16 set forth:

17 CROSS-EXAMINATION BY MS. MESERVE

18 MS. MESERVE: Good morning. Let's see. Could
19 we look at Land 91, please, which should be -- and go
20 down to Page 198. This is Table 8-60-A from the Final
21 EIR, and I believe it's the same or similar to what was
22 in the Draft for the Revised Draft EIR.

23 In general -- sorry. First, do you recognize
24 this table, Mr. Bryan or Dr. Bryan?

25 WITNESS BRYAN: Yes.

1 MS. MESERVE: In general terms, comparing the
2 no action alternative model results to the other
3 alternatives such as Alternative 4, would you say that
4 residence time is increased or decreased as a result of
5 implementation of new diversions on the Sacramento
6 River?

7 WITNESS BRYAN: From my review of the
8 residence time information, it increases in many areas
9 of the Delta. It also increases in some. But in
10 general, more -- there's more increases than decreases.

11 MS. MESERVE: And that would make sense from a
12 scientific perspective if you are removing large
13 quantities of water from a river, correct?

14 WITNESS BRYAN: Yeah, if you -- if you reduce
15 flows, you expect residence time to go up.

16 MS. MESERVE: Okay. Now, the Final EIR
17 includes additional discussion of residence time as we
18 discussed yesterday, correct?

19 WITNESS BRYAN: Yes.

20 MS. MESERVE: And the Final EIR added
21 discussion about how there was uncertainty with respect
22 to the weight of residence time in an analysis of HABS
23 formation; is that correct?

24 WITNESS BRYAN: Yes, that's correct.

25 MS. MESERVE: Could we look at DWR-818,

1 please, Page 17. This is your testimony. And on
2 Lines 10, you state -- oops. Sorry.

3 You state that residence times may not occur
4 as modeled because realtime operations would be used.

5 Are you aware of any performance standards or
6 other enforceable measures that would require
7 operations to prevent formation of HABS?

8 WITNESS BRYAN: No, I'm not. The reason that
9 that statement was put in there is because there are
10 obviously a lot of requirements on the Bureau and DWR
11 in operating the projects. And they operate the
12 projects to meet D1641 water quality standards
13 deliveries --

14 MS. MESERVE: I'm sorry. It's a yes-or-no
15 question.

16 WITNESS BRYAN: Well, it requires some
17 explanation.

18 CO-HEARING OFFICER DODUC: I would like to
19 hear the explanation.

20 WITNESS BRYAN: So there are many -- there are
21 other less rigid things you might say that the
22 operators in the project need to consider in operating
23 the project, again, to meet deliveries, to meet water
24 quality standards, so on and so forth.

25 But there's also discretion by the operators

1 to use realtime options. It's one of the reasons that
2 we have as much realtime monitoring in the Delta as we
3 have. There's discretion upon -- on releases within
4 the constraints of water availability. And so it's --
5 it's my understanding that operators in the system
6 would not simply operate the system in a manner that
7 would stagnate the Central or South Delta resulting in
8 water quality issues, including, like, adverse
9 microcystis blooms.

10 Realtime operations would recognize those
11 factors, and operations would reasonably accommodate a
12 balance between the North and South Delta diversions to
13 operate the entire system to best protect beneficial
14 uses. That's why that statement was put in there.

15 MS. MESERVE: So, Dr. Bryan, are you saying
16 that protestants should just trust the operators that
17 they will avoid these things, even though there is no
18 requirement to do so?

19 MR. MIZELL: Objection, misstates the
20 witness's testimony.

21 CO-HEARING OFFICER DODUC: Well, that's
22 actually what he said.

23 MS. MESERVE: I think if you look at the
24 history of how the system's been operated and the
25 compliance record with meeting water quality standards

1 when water availability allows, there is a track record
2 that the system is attempted to be operated in the best
3 manner possible to protect beneficial uses. That's --
4 that's what I've seen. That's my understanding, and
5 that's why I communicated that in my testimony.

6 MS. MESERVE: I won't go into -- we've already
7 discussed some of the counters to that. But you do
8 agree that sometimes there are exceptions to the
9 standards made here at the Water Board and that there
10 is dispute about the compliance record of the
11 operators?

12 WITNESS BRYAN: Yes, I'm aware of that.

13 MS. MESERVE: Let's look at that same page,
14 Line 18 through 21. This refers to the substantial
15 times of HABs swims with residence time and location.
16 If, as was discussed yesterday, you chose no locations
17 to study that that wouldn't -- that were different in
18 that they were not in the main link channel, how do you
19 square that decision with this statement here?

20 WITNESS BRYAN: Could you be more specific in
21 your question?

22 MS. MESERVE: This statement here appears to
23 be saying that the location is very important with
24 respect to the size of the HABs. And the decision to
25 only look at locations within the main stem of the

1 river or channel appears in conflict with that
2 statement.

3 So I'm asking you if you have an explanation
4 for that beyond what we've already heard.

5 WITNESS BRYAN: I don't think it's in conflict
6 with it. What this statement is getting at is that any
7 given location in the Delta, we have various locations
8 from the main stem of the rivers which have -- by
9 definition, they're a rivering environment flowing
10 downstream; they have relatively low residence times --
11 to, as we discussed yesterday, there may be some
12 backwater sloughs that may have tremendously long
13 residence times.

14 So the way that residence time affects
15 microcystis, as I explained yesterday, is that in a
16 rivering system -- I talked a lot yesterday about
17 velocity and how it's the driver of in-channel
18 turbulence and mixing, which dictates the outcome of
19 competition between microcystis and other algae.

20 Sort of by definition, if you have a flowing
21 rivering environment, you have a low residence time.
22 So let's say you have a channel and you have low
23 residence time. You have high turbulence and mixing,
24 and you just don't get microcystis blooms being
25 dominant there. That's what we see in the Sacramento

1 River. Upstream in Rio Vista, we don't see -- in fact,
2 we just don't see problem microcystis blooms because
3 the river flows so quickly; it's highly turbid and has
4 low residence times. So even if you increase residence
5 time somewhat in that river through lower flow, we
6 still wouldn't expect to see, all of a sudden, a
7 problematic microcystis bloom to occur there.

8 Sort of the opposite end of that spectrum is
9 the backwater slough. Backwater sloughs are very calm
10 water environments, stable water column. That's
11 exactly where microcystis probably is -- many of the
12 blooms that are occurring in the Delta -- and of course
13 we have a tremendous hydrodynamic mixing in the Delta.
14 Much of the microcystis blooms that occur probably are
15 occurring in those slowest water environments, those
16 backwater sloughs. They occur there today; they would
17 occur there in the future under the no action
18 alternative; they would occur there in the future under
19 the California WaterFix alternative.

20 So what I was trying to explain is that there
21 seems to be a perception that, as residence time goes
22 up, there's a linear relationship to increased harmful
23 algal blooms, and that's not really the case. You have
24 to look more at the specific environment and understand
25 the nuances of that -- hydrodynamics in that

1 environment to understand how any incremental change in
2 residence time would or would not change microcystis
3 blooms there between a no action alternative scenario
4 and a California WaterFix scenario.

5 MS. MESERVE: Dr. Bryan, yesterday, however,
6 we discussed that the outputs of the DSM-2 model also
7 don't account for the lower velocity portions of the
8 main stem of the river or the channel that it's
9 providing data for, correct?

10 WITNESS BRYAN: I don't think I would
11 characterize it as it doesn't account for them. It's
12 an average velocity across the channel. So the model
13 is taking into account any channel -- when you get the
14 highest velocities in the center of the channel, you
15 get lower velocities on the sides because of the
16 roughness coefficient, the drag in the channel margins.
17 So it takes all of that into account and provides an
18 average velocity across the channel.

19 So by comparing average velocities across the
20 alternatives, if those average velocities are not
21 changing, as you -- as you reduce or increase flows,
22 you're always going to have the lowest velocities on
23 the channel margins. You're always going to have the
24 highest velocity on what we call the thalweg of the
25 channel, the middle of the channel.

1 So you're always going to have that. But if
2 you're not seeing substantial difference in the average
3 velocities between alternatives, I wouldn't expect
4 there to be a unique, different relationship on the
5 channel margins. I wouldn't expect a given reduction
6 in flow, if it has virtually no change in average
7 velocity, to all of a sudden, you know, have
8 substantial change on the channel margins.

9 So although the DSM-2 model does not
10 specifically provide different velocities for different
11 sections of the channel, I still think it was a useful
12 tool in the way in which I applied it.

13 MS. MESERVE: Would you think that a more
14 thorough study might try to look specifically at those
15 channel margins to determine -- to actually
16 specifically address that issue rather than make a
17 guess?

18 MR. BERLINER: Objection as to the use of the
19 word "thorough study."

20 MS. MESERVE: Sorry.

21 Would you think that, for future research, it
22 would be helpful to look at a specific -- at the
23 specific portion of the channel that is in the margin
24 as a study area for harmful algal blooms?

25 WITNESS BRYAN: That's an interesting

1 question. I'm not sure, to be honest with you. I
2 think that, even in large rivers like the Sacramento
3 River, you're always going to have side channels,
4 backwater, you know, slough-type areas. You're going
5 to have channel margin areas that have substantially
6 lower velocities than the main channel.

7 Microcystis, as we talked yesterday, needs to
8 have a numerous number of factors come together in
9 order to form blooms. So from my perspective, if
10 you're looking at a rivering environment, any of the
11 channels, the main stem rivers or the channels in the
12 Delta, if during the summertime those conditions come
13 together and microcystis blooms form in the channel
14 margins today, they will form in the channel margins
15 under any operational scenario of the project. It's
16 simply because the channel margins are sufficiently
17 slow in velocity that allow them to form there.

18 I think my analysis was looking at how, when
19 we look at the Delta, we already have many areas in the
20 Delta that have microcystis blooms today. What I was
21 rebutting were claims that said with the California
22 WaterFix being implemented, blooms would increase in
23 the Delta; they would become larger in magnitude and
24 more widespread.

25 So the approach that I took of looking at ten

1 different locations across the Delta and looking at --
2 with the best tool available, looking at velocity
3 profiles and seeing whether the California WaterFix
4 would change those velocity profiles is the best way
5 that I know how to analyze and answer that question.

6 MS. MESERVE: Looking at -- if we could look
7 at DWR-653, Page 34. That's your -- the report on
8 HABs.

9 WITNESS BRYAN: Which page did you mention?

10 MS. MESERVE: I'm sorry, 34. It's the third
11 paragraph.

12 Do you have that there? It says that the
13 table -- let's see. The nine locations selected for
14 temperature were based primarily on the availability of
15 modeled temperature data.

16 And my question is, is given the factors
17 influencing HABs formation that we've discussed, as a
18 scientist, is just the availability of data for those
19 locations a proper basis for selection of locations in
20 the abstract?

21 WITNESS BRYAN: Well, to start my answer, it's
22 sort of common knowledge among those of us that
23 practice water quality in the Delta that, when you
24 release water in the reservoirs far upstream, the water
25 coming out of the reservoirs is indeed, in temperature,

1 often colder because of cold water pool, et cetera.
2 And the water warms up as it comes down the system.
3 And by the time it enters the Delta, it's either in
4 equilibrium or fairly close to being in equilibrium
5 with the ambient environment temperatures.

6 So as the waters flow into the Delta and --
7 from the San Joaquin and mix with the Sacramento and
8 the Delta channels, the temperatures are not expected
9 to differ very much within the Delta, depending on how
10 you're operating the system. So I went into my
11 analysis knowing that and knowing that we would expect
12 very minor temperature differences in the Delta based
13 on the California WaterFix operational scenario
14 compared to the no action.

15 So I then went to the modelers and said, "I
16 need to demonstrate what I think I understand from
17 having worked in the Delta and reading other folks'
18 work about temperatures in the Delta and how they are
19 or are not influenced by operations of the system.
20 Please provide me with what you have in terms of
21 modeled locations so that I can work with those,
22 analyze those, make exceedance plots to demonstrate my
23 point.

24 So going into that, my point was that I did
25 not feel that the operation to the California WaterFix

1 would have substantial effects on Delta temperatures.
2 I then used available modeling locations within the
3 Delta to demonstrate that point.

4 So, yes, I do think it was reasonable to work
5 with the available modeling that I had at hand to
6 demonstrate that point.

7 MS. MESERVE: Let's go into the modeling a
8 little bit. In your testimony and DWR-653 as well, it
9 asserts that protestants have not submitted evidence
10 supporting their claims of injury.

11 We discussed earlier, you're aware that the
12 burden is not on protestants to show no injury? You're
13 aware of that, correct?

14 WITNESS BRYAN: Yes, I am.

15 MS. MESERVE: And isn't it true that your
16 materials are based entirely on comparative modeling
17 outputs prepared for the project in the form of DSM-2
18 modeling?

19 WITNESS BRYAN: No, it's not all DSM-2
20 modeling. DSM-2 modeling was used for a variety of
21 things, including the velocity assessment, but
22 temperature modeling was also used to assess
23 temperature.

24 MS. MESERVE: However, the temperature
25 modeling was prepared separate from your efforts, and

1 you've just worked with the outputs, correct?

2 WITNESS BRYAN: Yes, the temperature modeling
3 that I primarily worked with was either developed
4 originally for DWR's case in chief or for the
5 biological assessment for the California WaterFix.

6 MS. MESERVE: And is it your opinion that
7 there aren't models already in place to assess --
8 excuse me -- formation of HABs? There are no existing
9 models in place; is that correct?

10 WITNESS BRYAN: You mean for our Delta?

11 MS. MESERVE: That's right. Thank you.

12 WITNESS BRYAN: Yes, it's my understanding
13 that we do not have models that have been developed to
14 predict the formation or duration or magnitude of
15 cyanoHABs in the Delta; that's correct.

16 MS. MESERVE: And as part of your work, did
17 you review the assumptions behind the model scenarios
18 in the temperature models or in DSM-2?

19 WITNESS BRYAN: Would you repeat that.

20 MS. MESERVE: As part of your work on this
21 portion of the project, did you review the assumptions
22 included in the modeling for DSM-2 and the temperature
23 model, for instance?

24 WITNESS BRYAN: Do you mean the assumptions
25 that are defining the scenarios? Is that what you

1 mean?

2 MS. MESERVE: Yes.

3 WITNESS BRYAN: My -- my analysis was based on
4 the -- the alternatives are defined by DWR and the
5 Bureau. The modelers depict those scenarios via the
6 assumptions that they put into the modeling. And I
7 received the output of that, of those modeling
8 simulations, and make my analyses and comparisons.

9 CO-HEARING OFFICER DODUC: So the answer is
10 no?

11 WITNESS BRYAN: So the answer is no, I did not
12 conduct the modeling, and so I had no reason to analyze
13 the input assumptions.

14 MS. MESERVE: And do you have any opinion as
15 to whether the likelihood of the scenarios as they were
16 constructed for the model would be similar to actual
17 future operations?

18 WITNESS BRYAN: It's -- it would be my opinion
19 that, if DWR and the Bureau and their modelers defined
20 a set of input parameters to define a scenario that's
21 meant to represent the proposed project, such as 4A, it
22 is intending to represent operations in that project,
23 yes, I would assume that.

24 MS. MESERVE: Could we look at DWR-1,
25 Slide 10.

1 MR. HUNT: Would you like 1-Errata?

2 MS. MESERVE: I'm sorry?

3 MR. HUNT: Would you like 1-Errata?

4 MS. MESERVE: Oh, I'm sorry. Yes, 1-Errata.

5 CO-HEARING OFFICER DODUC: And where are you
6 going with this, Ms. Meserve? Because he has testified
7 that he did not analyze the assumptions or the
8 alternatives. He simply used the results from the
9 modeling of those alternatives.

10 MS. MESERVE: I simply want to dig one
11 question further into the flexibility proposed by
12 petitioners with respect to operation. He just said in
13 this -- his response that he expected they would
14 operate it according to one of the defined
15 alternatives.

16 CO-HEARING OFFICER DODUC: Is that what you
17 said?

18 WITNESS BRYAN: No. I said that it was my
19 opinion and assumption that, when the modelers define a
20 modeling scenario to depict, let's say, 4A H3, that
21 that definition in the model, the assumptions that go
22 into the model are depicting an operation that is
23 different from the other scenarios. So by definition,
24 when you set up a modeling run, your input assumptions
25 are to define the operational scenario.

1 MS. MESERVE: And -- but it's correct also
2 that the petitioners aren't under any obligation to
3 operate the project as defined in the model, correct?

4 WITNESS BRYAN: I think --

5 CO-HEARING OFFICER DODUC: That's --

6 MR. BERLINER: I object to that question on
7 the grounds of vagueness. We've had a lot of testimony
8 here about various requirements that are -- I'm going
9 to use the word "hard-wired," even though that's not
10 quite the accurate term.

11 But there are project requirements that are in
12 the models. So to say that the model doesn't include
13 obligations of the projects would be inaccurate. The
14 models have requirements in them to which --
15 flood-to-flow rule curves, regulations, et cetera, that
16 they have to operate to.

17 I'm not objecting to the line of questioning,
18 but this question is very broad and vague.

19 MS. MESERVE: Withdrawn.

20 CO-HEARING OFFICER DODUC: Thank you.

21 MS. MESERVE: Do you understand that, with
22 respect to all the scenarios except for B1 in the
23 model, they were set -- the model was set to always
24 comply with the D1641 salinity standard?

25 WITNESS BRYAN: That's one of the priorities

1 of the model system, to meet D1641 standards, yes.

2 MS. MESERVE: Yet you're aware that standard
3 is not always met, correct?

4 WITNESS BRYAN: I guess I -- I'm -- I would
5 like to -- if this line of questioning is going to
6 continue to be a modeling line of questioning, I would
7 like to defer to the panel, the modelers that are
8 coming after us. It seems a little far afield of my
9 testimony.

10 CO-HEARING OFFICER DODUC: Ms. Meserve, I
11 would suggest you move on.

12 MS. MESERVE: Let's see. Is it -- so in your
13 statements on Page 11 of 653 and I believe elsewhere,
14 you state that there's no -- the protestants have
15 provided no evidence that the tunnels would decrease
16 flows; is that correct?

17 WITNESS BRYAN: Do you have a certain line
18 that you'd like me to look at?

19 MS. MESERVE: I'm sorry. This is going to be
20 DWR-653 again, Page 11. Down at the bottom, it says
21 that the witnesses did not provide any evidence to
22 support their claims.

23 WITNESS BRYAN: Yes, I see it.

24 MS. MESERVE: Okay. So I'd like -- then I'd
25 like to look at DWR-5, Slide 25, which is the

1 operational criteria for the project that was used in
2 the modeling. This is the bypass flow requirements.

3 Now, with the caveat that we've discussed,
4 that there are other criteria in addition to the bypass
5 flows, wouldn't the diversion of up to 9,000 cfs
6 leaving at -- under this rule, 5,000 cfs in the river,
7 isn't that evidence of reduced, decreased flows?

8 WITNESS BRYAN: Yes, if you divert flows out
9 of the North Delta diversions, you'll have less flow
10 downstream; that's correct.

11 MS. MESERVE: Let's talk about sedimentation.
12 This is Opinion 7. Yesterday you discussed with
13 Mr. Keeling that the EIR assumes removal of 82,000 to
14 252,000 cubic feet of dry sediment per year.

15 Isn't that evidence that there would be less
16 sedimentation -- or less sediment in the system as a
17 result of project?

18 MR. MIZELL: Objection, asked and answered.
19 We went through several questions about sedimentation
20 load yesterday.

21 CO-HEARING OFFICER DODUC: We did,
22 Ms. Meserve. Is there any new aspect to this that
23 you're exploring?

24 MS. MESERVE: Yes. Dr. Bryan has stated that
25 the protestants have submitted no evidence that there

1 would be reduced sedimentation. And I'm merely
2 pointing to petitioner's case in chief to show that
3 there is evidence in the case in chief that there would
4 be less sediment in the system.

5 CO-HEARING OFFICER DODUC: But that would be
6 evidence in the petitioner's case in chief. It does
7 not negate his statement that protestants have not
8 submitted data.

9 MS. MESERVE: Point taken.

10 CO-HEARING OFFICER DODUC: So you're moving
11 on. Okay. Thank you.

12 MS. MESERVE: In keeping with the sediment,
13 given the information in the EIR regarding the amount
14 of sediment removed in the sedimentation basins under
15 the project, wouldn't it have been possible to do some
16 analysis of the reduction in sediment as it relates to
17 HABs formation?

18 WITNESS BRYAN: The EIR/EIS, as I mentioned
19 yesterday, did -- in Chapter 8, Water Quality, did
20 analyze the effect of the California WaterFix on total
21 suspended solids and turbidity. The conclusion from
22 that analysis was that the California WaterFix would
23 not significantly reduce turbidity within the Delta.
24 And I spoke at length to that yesterday.

25 In addition, in my oral presentation

1 yesterday, I shared with you findings from
2 Patricia Lehman's most recent research on HABs in the
3 Delta. Her 2017 paper where we have -- she observed a
4 very large microcystis bloom in 2014 and talked about
5 in that paper that San Joaquin River flows, as an
6 example, were threefold lower in 2014 than they were in
7 the wet years than they were in 2004 and 2005. Yet,
8 when you look at the detailed tables in her paper,
9 turbidity was not significantly different at the
10 various Delta locations that she assessed between 2004
11 and '5 in wet years and 2014, despite that threefold
12 reduction in flow.

13 So that, in my opinion, further backs up our
14 analysis in the EIR, which indicates that we don't
15 think that turbidity will be substantially reduced, if
16 even measurably reduced, in the Delta with the
17 California WaterFix relative to turbidities that would
18 occur under the no action alternative.

19 MS. MESERVE: But the water quality analysis
20 did not specifically consider the amount of sediment
21 that would be removed through the intakes, correct, in
22 the context of water quality?

23 WITNESS BRYAN: Yes, we did consider that.

24 MS. MESERVE: I believe yesterday you
25 testified that you were not aware of this calculation

1 of the amount of sediment. And since you were the lead
2 preparer of the water quality chapter, wouldn't that
3 mean that you didn't consider those specific
4 calculations?

5 WITNESS BRYAN: What was presented yesterday
6 was not from the water quality chapter. It was from a
7 different chapter in the EIR/EIS. And my statement was
8 I was not familiar with it because I did not prepare
9 that section of the EIR/EIS.

10 MS. MESERVE: But doesn't the EIR/EIS --
11 looking for it here.

12 Doesn't it -- it states without any type of
13 quantitative analysis that there would be no reduction
14 in sedimentation.

15 MR. MIZELL: I'm going to object to this. At
16 this point, we're now digging into details of the
17 EIR/EIS, which is well beyond what Dr. Bryan had in his
18 rebuttal testimony.

19 We had explored the data and the assumptions
20 behind his testimony, but the nuances of the EIR/EIS I
21 think go well beyond that.

22 CO-HEARING OFFICER DODUC: I would agree.

23 Ms. Meserve, please -- actually, you're
24 running out of time, so please wrap up your
25 cross-examination.

1 MS. MESERVE: Just to point out on -- excuse
2 me -- Page 37 of your report, which is DWR-643, in the
3 first full paragraph, it states that there would be
4 minimal effects on solids. But you've -- I think
5 you've confirmed that you didn't actually consider the
6 information in this other chapter. That's what I'm
7 getting at. That's the question. It's a yes-or-no
8 question.

9 WITNESS BRYAN: We did consider the fact that
10 diversions at the North -- North Delta diversions would
11 remove sediment from the river. That was considered in
12 the qualitative assessment that we conducted for
13 turbidity and ESS in the EIR/EIS.

14 MS. MESERVE: But it was a qualitative
15 assessment only; correct?

16 WITNESS BRYAN: That's correct.

17 MS. MESERVE: Now, with respect to Opinion 10,
18 which is on Page 24 of -- let's see. I think that must
19 be back on DWR-81, your testimony. If we can have you
20 look at that.

21 It refers to a sediment reintroduction plan
22 that may help address, apparently, Stockton's issues.
23 What plan is being referenced here?

24 WITNESS BRYAN: Can you indicate a line that
25 you're reading from?

1 MS. MESERVE: Line 19.

2 WITNESS BRYAN: And what's your question?

3 MS. MESERVE: What -- it's sort of a vague
4 reference here, and I would like to know what is the
5 sediment reintroduction plan that you're referencing
6 here specifically?

7 WITNESS BRYAN: My recollection is that was --
8 comes from discussion in the biological assessment for
9 the California WaterFix.

10 MS. MESERVE: Are you aware of any specific
11 mitigation measure or environmental commitment or other
12 proposal that discusses what the sediment
13 reintroduction plan is, or is it simply in the
14 biological assessment that we're seeing it?

15 WITNESS BRYAN: And my recollection is the
16 biological assessment is what -- where we retrieved
17 this type of information. And it's just my
18 understanding from that that there's consideration of a
19 sediment reintroduction plan basically as necessary to
20 mitigate any adverse effects for Delta smelt, which
21 wants turbid water in the Delta.

22 It would also potentially -- well, that's the
23 main reason that it was introduced in the biological
24 assessment, is because Delta smelt require turbid
25 water. And so to the -- to the degree that the parties

1 felt that sediment reintroduction plan was necessary,
2 it was brought up in the biological assessment.

3 MS. MESERVE: Wouldn't the inclusion of such a
4 plan in the biological assessment tend to -- tend to
5 mean that there is a significant amount of sediment
6 being removed from the system?

7 WITNESS BRYAN: My read of that whole issue is
8 because Delta smelt are an endangered species, kind of
9 on their last legs, if you will, in the Delta, that it
10 was a measure that was brought forward in an abundance
11 of caution to do everything possible to not adversely
12 affect that species.

13 I think my understanding is it's still
14 uncertain as to whether any such program will go
15 forward or, if a program like that goes forward, at
16 what level, so on and so forth.

17 MS. MESERVE: So is it appropriate to point to
18 that plan as somehow addressing the concern that
19 Stockton has regarding its water supply if it's totally
20 uncertain?

21 WITNESS BRYAN: What's the concern?

22 MS. MESERVE: The concern I have is that this
23 plan is being referenced as something that is going to
24 happen and as if it would be helpful with respect to
25 the Stockton water supply. And you just stated that it

1 may or may not happen. So how should we consider the
2 sediment reintroduction plan at all?

3 CO-HEARING OFFICER DODUC: Ms. Meserve, you
4 should -- my opinion, you should consider it in the
5 context of this paragraph, which is that the
6 reintroduction plan is being proposed even though there
7 are less-than-significant impact being determined by
8 Dr. Bryan for CEQA purposes.

9 MS. MESERVE: I will wrap up quickly here.
10 Just a few more questions. May have five minutes?

11 CO-HEARING OFFICER DODUC: To wrap up?

12 MS. MESERVE: Yes.

13 CO-HEARING OFFICER DODUC: Please.

14 MS. MESERVE: Now, on Opinion 5, which is in
15 the DWR-8 that's summarized in the PowerPoint, it
16 states that channel velocities -- it states in a
17 definite way that channel velocities would not be
18 altered in a manner to make hydrodynamic conditions
19 substantially more conducive to microcystis blooms.

20 You're aware that the modeling is simply
21 comparative, correct, between alternatives, and that it
22 does not attempt to predict an outcome?

23 MR. MIZELL: I'm going to object --

24 CO-HEARING OFFICER DODUC: We had a lengthy
25 discussion about this yesterday. So next question,

1 Ms. Meserve.

2 MS. MESERVE: Just to conclude, at the end of
3 our discussion yesterday, you stated that you -- to
4 summarize, and I'll try to be correct here, that you
5 felt your job was to provide information to the hearing
6 officers upon which they could make the ultimate
7 determinations as to injury; is that fair?

8 WITNESS BRYAN: I think, if -- my recollection
9 of what I said was that my job, so to speak, in
10 rebuttal testimony was to perform factual analyses to
11 the other parties' made claims. As you've indicated
12 that the burden of proof is not on them, so many
13 parties would identify in their testimony what they
14 were concerned about, so to speak.

15 And it was my job to then analyze those issues
16 to determine whether there would be the impacts
17 occurring due to the California WaterFix for which they
18 were concerned about.

19 In doing those impact assessments, I provide
20 information that indicates whether an adverse affect
21 would occur, whether it's a water quality effect,
22 whether it's a harmful algal bloom effect. And then I
23 indicated that I thought it was more of a legal,
24 regulatory determination to go from that factual impact
25 assessment, that the Board would make their finding on

1 whether that constituted injury to a legal user of
2 water.

3 MS. MESERVE: And so is it -- would it be
4 correct to state that your testimony doesn't make any
5 conclusions regarding whether there would be injury
6 from increased harmful algal blooms as a result of the
7 project?

8 MR. MIZELL: Objection, asked and answered.
9 The testimony is pretty plain, and it stands on its
10 own. I don't think we need the witness to interpret
11 whether or not he is treading on the Board's toes in
12 terms of the ultimate question of fact here.

13 CO-HEARING OFFICER DODUC: Sustained.

14 MS. MESERVE: I have no further questions.

15 CO-HEARING OFFICER DODUC: Ms. Taber. And you
16 have requested, I believe, up to an hour.

17 I would like to take a break for the court
18 reporter around -- are you okay around 10:45, another
19 15 minutes?

20 THE REPORTER: Yes, that would be perfect.

21 CO-HEARING OFFICER DODUC: Okay. So please
22 find a natural break in your line of questioning to
23 take a break then.

24 CROSS-EXAMINATION BY MS. TABER

25 MS. TABER: Good morning. I'm Kelley Taber.

1 I'm here on behalf of the City of Stockton. My
2 questions will be primarily directed to Dr. Bryan
3 regarding his testimony about the impacts on the City
4 of Stockton's water supply. My examination will
5 generally cover Dr. Bryan's experience, his familiarity
6 with the City's water treatment operations, his
7 methodology, his application of various factors that
8 are relevant to his impact determination, and some
9 questions regarding the specific constituents in his
10 analysis.

11 And at the outset, I'd like to address a small
12 sort of housekeeping procedural matter. I -- in an
13 attempt to shorten my cross-examination, the City did
14 have a number of questions related to the source
15 material that Dr. Bryan relied on. And I've conferred
16 with Mr. Mizell, and it is acceptable to the
17 petitioners if the City submits a written request to
18 obtain some of the documents and data that Dr. Bryan
19 relied on and to clarify some of the -- identity of
20 some of the sources in it.

21 So if that's acceptable to the Hearing
22 Officers, we'll proceed that way to answer those
23 questions.

24 CO-HEARING OFFICER DODUC: That is very
25 acceptable and very appreciated. Thank you.

1 MS. TABER: Great. Thank you.

2 Good morning, Dr. Bryan.

3 WITNESS BRYAN: Good morning.

4 MS. TABER: Dr. Bryan, did anyone work with
5 you in preparing your testimony or your written report,
6 expert report related to the City of Stockton?

7 WITNESS BRYAN: Yes. I had assistance from my
8 staff.

9 MS. TABER: And did your staff draft any
10 portion of the testimony?

11 WITNESS BRYAN: They -- the text, the drafting
12 of the text of the report was something that I did.
13 Staff helped produce figures, helped produce tables,
14 things of that nature.

15 MS. TABER: Did anyone outside of your firm
16 assist in the drafting the testimony?

17 WITNESS BRYAN: Not in drafting the testimony
18 but I think reviewing it.

19 MS. TABER: Who was that?

20 WITNESS BRYAN: DWR legal.

21 MS. TABER: Who at DWR legal?

22 WITNESS BRYAN: Mr. Mizell.

23 MS. TABER: Okay. Thank you.

24 Dr. Bryan, you hold degrees in toxicology and
25 fisheries biology; is that correct?

1 WITNESS BRYAN: That's correct.

2 MS. TABER: And in your testimony in your CV,
3 you cite experience designing and implementing field
4 and modeling studies to evaluate the impacts of
5 wastewater treatment plant discharges on water
6 beneficial uses. Aside from your work on the
7 California WaterFix project, do you have any experience
8 evaluating the effective changes in source water
9 quality on municipal water suppliers?

10 WITNESS BRYAN: I'm sure I do somewhere in my
11 background. I don't know that I'm recalling it at the
12 moment in terms of -- you're talking about specifically
13 analogous to this analysis?

14 MS. TABER: Other than the work that you
15 performed in this proceeding or for the EIR.

16 WITNESS BRYAN: Well, most of the analyses
17 that I do are for various types of projects. We do a
18 lot of work for wastewater treatment plants but also
19 other types of projects. So when we analyze water
20 quality, we're always looking at -- particularly in the
21 EIR/EIS context, we're looking at how water quality
22 changes and how the changes would adversely affect
23 beneficial uses of the water. So I frequently have the
24 need to analyze changes in water quality and how those
25 changes would adversely affect the M and I beneficial

1 use because it's just one of the beneficial uses I need
2 to assess in an EIR. So I'll leave it at that.

3 MS. TABER: Thank you. Do you have any
4 professional experience with drinking water treatment
5 plant operations?

6 WITNESS BRYAN: No, I do not.

7 MS. TABER: Do you have any education in
8 hydrodynamics?

9 WITNESS BRYAN: What do you mean by
10 "education"?

11 MS. TABER: Professional training or
12 coursework in the study or application of
13 hydrodynamics?

14 WITNESS BRYAN: I've certainly studied the
15 application of hydrodynamics in my career, yes.

16 MS. TABER: Could you briefly describe what
17 that experience is, how you obtained that?

18 WITNESS BRYAN: We've been talking about it in
19 the last -- yesterday and today, looking at output from
20 DSM-2-type models, looking at how channel velocities
21 relate to turbulence and mixing, how that can affect
22 aquatic life, things of that nature.

23 MS. TABER: Okay. Let's move on to some
24 questions about -- if we could put up, Mr. Baker [sic],
25 please, Stockton's cross-examination, Exhibit 31, which

1 is the written testimony of Dr. Bryan that was
2 previously submitted. It's DWR-81.

3 And if we could go to Page 20. Thank you.

4 Dr. Bryan, in your written testimony here,
5 starting at Line 23, you offered the opinion that
6 California WaterFix would not alter water quality at
7 the City of Stockton's water treatment plant intake
8 location in the San Joaquin River for identified
9 constituents of concern in a manner that would cause
10 adverse impacts to the municipal and industrial supply
11 of beneficial uses at this river location.

12 And then you go on to explain the basis for
13 your opinion, and in doing so, you references a variety
14 of factors. And my questions are going to address the
15 application of those factors in reaching your opinions.

16 Initially, your opinion refers to adverse
17 impacts to the municipal and beneficial use at the
18 City's intake location. And elsewhere in your opinion,
19 you make reference to impacts to the municipal and
20 industrial beneficial use of the San Joaquin River.

21 Is it your opinion that the California
22 WaterFix project would have no adverse impact on the
23 municipal and industrial use in general, or is your
24 opinion based on Stockton's specific use for its
25 diverted water for its M and I use?

1 WITNESS BRYAN: My opinion on that is really
2 both. In the EIR/EIS, we concluded that the California
3 WaterFix -- from all of the water quality analyses that
4 we conducted, that the California WaterFix would not
5 result in a significant adverse impact to the M and I
6 use of the Delta, including the San Joaquin River,
7 including the reach from which the City diverts.

8 And then in this rebuttal testimony, to
9 address the City's concerns that they raised, we were
10 able to go to the modeling and output modeling from the
11 DSM-2 model for a number of constituents that they were
12 concerned about at their actual intake location and do
13 a further analysis using data specifically at their
14 intake location.

15 And I came to the same conclusion that
16 although there will be changes in water quality due to
17 the California WaterFix, that those changes would not
18 rise to the level that would result in a significant
19 adverse impact to the beneficial use.

20 MS. TABER: Thank you. And that opinion with
21 regard to Stockton's specific use, was that based on
22 the manner -- the criteria that applied to the City's
23 drinking water treatment plant operation --

24 WITNESS BRYAN: Yes.

25 MS. TABER: -- and the facilities? Okay.

1 In your report, which is Exhibit DWR-643 --
2 sorry -- 652, you state that water quality at
3 Prisoner's Point and Buckley Cove are representative
4 for purposes of assessing the effects of the California
5 WaterFix project water quality at the City of Stockton
6 intake even though the specific water quality itself is
7 not identical to the quality at the City's intake
8 location.

9 Is water quality at these two locations,
10 Prisoner's Point and Buckley Cove, representative of
11 conditions at the City of Stockton's intake all the
12 time?

13 WITNESS BRYAN: So what I was indicating and I
14 believe what you're referring to -- if you want to
15 bring it up, we can be more specific about it.

16 But just from memory, the statement that I was
17 making is that part of their concern raised by the City
18 of Stockton was because the EIR/EIS did not analyze
19 water quality specifically at their intake location,
20 that the EIR/EIS analysis was inadequate to assess the
21 effects of the California WaterFix on their use of
22 water for M and I purposes.

23 And what I was explaining is that the way in
24 which the EIR/EIS analyses was done is it was set up
25 entirely to look at how the changes -- this is what we

1 were talking about yesterday, is when we do these
2 impact assessments, we first start with how -- what are
3 the effects of a project, what are the environmental
4 changes? In the case, what are the water quality
5 changes?

6 And we had 11 different assessments locations
7 across the Delta for the EIR/EIS. And from looking at
8 the magnitude of those changes at those 11 different
9 locations, we can understand, for example -- I'll just
10 use chloride for an example.

11 Chloride would change -- obviously, when you
12 have a project of this magnitude and you're mixing
13 Sacramento and San Joaquin River water differently
14 within the Delta, chloride concentrations will change
15 throughout the Delta.

16 We analyzed and documented those changes. We
17 looked at the frequency with which chloride standards
18 for D1641 would be met under the alternatives, the no
19 action versus the California WaterFix. And we
20 recognized that chloride in the Delta comes primarily
21 from seawater intrusion. That's why the D1641
22 standards are on the west side of the Delta.

23 So if those are met and chloride levels are
24 adequate on the west side of the Delta, they certainly
25 will not be adversely affected due to seawater

1 intrusion on the east side of the Delta.

2 So all of these things are taken into account
3 to come to an impact determination for the Delta as a
4 whole.

5 So even though water quality differs by
6 location across the Delta, what the determination was
7 in the EIR/EIS is whether the California WaterFix would
8 have a significant adverse impact, using chloride for
9 an example.

10 On -- and now we get to the beneficial use.
11 On the municipal and industrial beneficial use for
12 which the chloride standard is set in D1641 -- so even
13 though the water quality differs at Buckley Cove,
14 Prisoner's Point, the actual water quality on a
15 day-in-day-out basis, if we don't expect the beneficial
16 use to be adversely affected in the San Joaquin River
17 based on analysis of a couple of locations, we also
18 would not expect it to be adversely affected at the
19 City's intake. So that was the approach taken in the
20 EIR/EIS.

21 In this rebuttal testimony, because the City
22 of Stockton had concerns and wanted to know more about
23 water quality and whether those same conclusions would
24 be reached if we looked at water quality specifically
25 at their location, that's what the rebuttal testimony

1 did, is it output the additional information for their
2 specific location and, you might say, did an additional
3 or implemental analysis to that which was done through
4 the EIR. And that's what's presented in my rebuttal
5 testimony.

6 MS. TABER: Okay. Thank you for that
7 explanation. My question was a little more focused.

8 Am I correct in interpreting your answer would
9 be no to the question whether water quality at those
10 two locations is representative of the conditions at
11 the City's intake all the time?

12 WITNESS BRYAN: I gave the long explanation
13 because we're not saying that the water quality at
14 those locations is representative of the water quality
15 -- exact water quality, like concentration of chloride.

16 What we're saying is the effect of the
17 California WaterFix on that parameter relative to what
18 that parameter would be under the no action
19 alternative, as determined from Buckley Cove and
20 Prisoner's Point, that conclusion would be
21 representative for the City's diversion location. So
22 there's a distinction there.

23 MS. TABER: Right. Again, so I guess I
24 interpret that to be "no" as to the question whether
25 the water quality is representative of the conditions

1 at intake, not the change in water quality, but the
2 existing or future water quality at Prisoner's Point
3 and Buckley Cove.

4 But I'll move on because we're spending a lot
5 of time on that.

6 CO-HEARING OFFICER DODUC: Before you move on,
7 though, it is 10:46.

8 MS. TABER: Oh, okay. I'm sorry. I didn't
9 anticipate such a lengthy response to my question. But
10 I'm happy to break right now, or --

11 CO-HEARING OFFICER DODUC: Unless you have,
12 like, one final follow-up to this line.

13 MS. TABER: No.

14 CO-HEARING OFFICER DODUC: Okay. Then let's
15 go ahead and take our break now, and we will return at
16 11:00 o'clock.

17 (Recess taken)

18 CO-CHAIR DODUC: All right. It is 11:00
19 o'clock. We are resuming.

20 Ms. Taber, please continue.

21 MS. TABER: Thank you.

22 Dr. Bryan, in forming your opinion about
23 whether the water quality changes that you identified
24 at the City of Stockton's intake location would
25 adversely affect the City's use of the water that it

1 diverts, did you consider the specific treatment
2 facility and technologies that are employed by the
3 City?

4 WITNESS BRYAN: Yes.

5 MS. TABER: Are you familiar with the City's
6 existing water treatment plant technology?

7 WITNESS BRYAN: Yes.

8 MS. TABER: And does that include -- are you
9 familiar with the City's methods for pretreatment of
10 drinking water?

11 WITNESS BRYAN: Yes.

12 MS. TABER: What's your understanding of the
13 City's pretreatment method?

14 WITNESS BRYAN: Ozonation.

15 MS. TABER: Thank you. If the WaterFix
16 project caused a change in water quality for the City
17 under its current treatment processes would you
18 consider that to be an adverse impact?

19 WITNESS BRYAN: So is your question if the
20 water quality changed relative to the national
21 interpret the I have.

22 MS. TABER: Correct.

23 WITNESS BRYAN: Which a sufficient magnitude
24 that it was up usable by the City.

25 MS. TABER: Correct.

1 WITNESS BRYAN: Yeah, that would -- I would
2 consider that to be an adverse impact. Certainly to
3 the City, and if -- you know if the City's not able to
4 divert and treat water for municipal and beneficial use
5 then yeah, I would think that that would be an adverse
6 impact.

7 MS. TABER: Thank you. Throughout your
8 testimony for various constituents, you more
9 specifically opined that substantial long-term
10 degradation is not expected that would result in
11 adverse affects on the municipal and industrial water
12 supply beneficial use.

13 How do you define substantial degradation in
14 the context of municipal beneficial use of water?

15 WITNESS BRYAN: Well, in the analysis, we
16 looked at things constituent by constituent. So -- but
17 in general, what happens with a project like this
18 where, again, you're operating the system differently
19 and therefore the hydrodynamics of the two rivers --
20 the main stem Sacramento and the San Joaquin -- are
21 different, you get different mixing in the interior
22 Delta locations, their intake being one of those
23 locations.

24 And so what happens is it's never as simple as
25 it all goes in one direction. So if you look at the

1 modeled period of record, sometimes chloride will be
2 better as their intake location, for -- for the
3 California WaterFix versus what would occur there under
4 the no action alternative. Other times, it would be
5 worse. So what we look at is, throughout the modeled
6 period of record -- that's why we use exceedance plots
7 a lot, probability of exceedance -- is we look for the
8 frequency with which different levels of chloride --
9 again, using that as an example -- would be exceeded.

10 So if -- you guys have all seen a lot of
11 exceedance plots. If the lines fall on top of each
12 other, it's saying that the frequency with which you
13 get any given chloride level between the two
14 alternatives is about the same.

15 If -- and we can also do averages; we can have
16 tables. We don't always just look at exceedance plots;
17 we can look at tables. We can have annual averages.
18 We can look at period averages. We can see what that
19 water quality is over time. And I tend to look at
20 degradation of water quality over time to make a
21 degradation -- opinion on degradation because, again,
22 it can be dynamic day to day. It can be better at one
23 location one day and worse the next day and so on and
24 so forth.

25 So those degradation opinions are really based

1 on the long-term water quality throughout the year,
2 year in, year out, over the period of record.

3 MS. TABER: So in your opinion, does
4 degradation have to be both substantial and long-term
5 to result in an adverse effect to a municipal water
6 supply user?

7 WITNESS BRYAN: Well, as I just said, when I
8 assess degradation in general, it tends to be over
9 long-term time frame because, again, if things are
10 dynamic, it doesn't make a lot of sense to -- you know,
11 look at one week or one day where it's going one
12 direction, make an impact call, and of course the very
13 next day it's going the opposite direction. So we tend
14 to look over the longer term.

15 But if water quality were, you know, to be
16 changed so radically for a shorter period of time,
17 impacts can also occur over shorter periods of time.

18 MS. TABER: Okay. Thank you.

19 Did you try to determine on a daily basis what
20 the maximum daily change in any water quality
21 constituent would be at Stockton's intake under any of
22 the WaterFix interpretive scenarios?

23 WITNESS BRYAN: Again, the analysis that I
24 performed relied heavily on probability exceedance
25 plots. What we don't want to do with these models is

1 compare a given day under the no action alternative to
2 a given day under California WaterFix. The models
3 really aren't appropriate to do that with.

4 So it's more of a probabilistic
5 statistical-type analysis, where you're looking at the
6 frequency with which water quality standards are
7 approached or exceeded, or even if they're not water
8 quality objectives or criteria, it's just levels of
9 interest to the assessor, what is the frequency with
10 which they may be instated under one scenario versus
11 another.

12 MS. TABER: Okay. So am I correct in
13 understanding that you did not calculate or evaluate
14 individual daily constituent levels under the WaterFix
15 project at the City's intake?

16 WITNESS BRYAN: Yeah, that's correct.

17 MS. TABER: So with regard to the frequency
18 explanation that you gave, just to make sure I
19 understand, how much more frequent would a substantial
20 increase in a pollutant concentration have to occur in
21 order to constitute an adverse effect to a municipal
22 supply in your opinion?

23 WITNESS BRYAN: When I get to making impact
24 determinations, it's not just the frequency of a change
25 but the magnitude has to come in as well. So you can

1 have a scenario where you have almost throughout the
2 entire period of record -- so very high frequency with
3 which the constituent may be higher in concentration
4 but it's not sufficiently high to cause adverse effects
5 to the beneficial use.

6 So even though the frequency of increase of
7 that constituent is high, again, technically you could
8 say there's degradation of constituent X 100 percent of
9 the time. If there's still tremendous dissimilar
10 capacity -- a good example of this in my testimony was
11 nitrate -- the alternative mixing of the Sacramento and
12 San Joaquin River waters, the San Joaquin is much
13 higher in nitrate than is the Sacramento River.

14 So very -- when the California WaterFix mixes
15 the waters the way it does relative to the no action
16 alternative, nitrate would be higher at the City of
17 Stockton's intake most of the time compared to the no
18 action alternative.

19 But the drinking water MCL for nitrate is 10,
20 and the highest level that would ever occur at their
21 intake would be about 1.6. So there's tremendous
22 dissimilar capacity between what would occur and the
23 levels that we're concerned about. So that would be an
24 example where, again, it's not just frequency; it's got
25 to be frequency in magnitude to get to that impact.

1 MS. TABER: Thank you.

2 Mr. Baker, could you please put up Stockton's
3 Exhibit 32 and put up Page 23.

4 And I have been editing my questions as I go
5 along. So the exhibit numbers that I'm referencing now
6 will not be our final exhibit numbers. We'll reconcile
7 that in the final list that we submit. I was prepared
8 for a different order and length of approach.

9 MR. OCHENDUSZKO: Thank you, Mr. Hunt, for
10 bringing that up.

11 MR. BERLINER: If I could just request, since
12 you're going to change the number, if you could give a
13 full identification.

14 MS. TABER: We will. We will make it clear.
15 And just to be clear, everything that we are including
16 is already in the record, so we're not introducing
17 anything new today.

18 So this -- I have a few questions about
19 chloride, Dr. Bryan. So with regard to the various
20 constituents of concern to the City, your expert report
21 and your testimony stated that the project-related
22 increases in constituent concentrations would not be of
23 the frequency or magnitude that would cause substantial
24 degradation or exceedance of the applicable
25 250-milligram-per-liter MCL on a mean monthly basis and

1 thus would not adversely impact the municipal
2 beneficial use.

3 Your water quality report, which we have here,
4 DWR-652, shows chloride impacts by year type. And if
5 you look at Figure 14 from your report, which should be
6 up here, you can see at the bottom of Page 23, it also
7 appears that the maximum monthly chloride
8 concentrations for the Boundary 1 scenario will be
9 higher than for the other California WaterFix
10 scenarios; is that correct.

11 WITNESS BRYAN: That's correct.

12 MS. TABER: And they'll be higher than for the
13 no action alternative; is that correct?

14 WITNESS BRYAN: Yeah, that's correct. For
15 about 1 percent of the time, they would be higher.

16 MS. TABER: Okay. And the maximum monthly
17 chloride concentration in wet years is simulated to be
18 more than 350 milligrams per liter; is that correct?

19 WITNESS BRYAN: For Boundary 1, a very small
20 percent of the time; that's correct.

21 MS. TABER: Okay. And would you consider that
22 to be a significant impact, that increase?

23 WITNESS BRYAN: No, I would not.

24 MS. TABER: And why would you consider that
25 not to be a significant impact to the City of Stockton

1 as a diverter of water?

2 WITNESS BRYAN: In part because of the
3 frequency with which it occurs. It occurs almost
4 never. You can see it's that green line on the graph
5 on the right. It just sort of spikes up.

6 And part of what came into my consideration is
7 when you look at the -- the orange and red lines,
8 which -- and red and blue lines, in particular, which
9 are Alternative 4A-H3 and Alternative 4A-H4, those were
10 showing throughout the distribution chloride levels
11 below a hundred. So that's the project that's being
12 proposed is 4A-H3, 4A-H4.

13 Boundary 1 is just that. It's a boundary
14 condition that's being considered. It's being
15 considered to provide operational flexibility that the
16 operations may go that far.

17 But they may not go that far. And so what the
18 modeling -- once you define, as we said earlier, the
19 input parameters to define Boundary 1, then the model
20 just blindly abides by those input parameters. So
21 you'll see spikes like this.

22 But you'll recall in DWR's case in chief,
23 there was extensive discussion about the modeling
24 sometimes shows exceedances of D1641 standards that we
25 don't think are necessarily going to happen because it

1 gets back to that realtime operations, that the
2 operators are smarter and more capable of operating the
3 system than is the model in depicting all the nuances
4 that they consider in realtime operations.

5 So the fact that that is as rare as it is, and
6 the fact that Alternative 4A-H3 and H4 never, in this
7 graphic, exceed 100 milligrams per liter all went into
8 my determination that that would not be a significant
9 impact.

10 MS. TABER: Thank you. And am I correct that
11 -- in recalling that there is not a D1641 compliance
12 point on this for municipal use on the San Joaquin
13 River near the City's intake?

14 WITNESS BRYAN: Yeah, that's correct.

15 MS. TABER: So what do you think is
16 responsible for the high chloride concentrations that
17 are shown here for Boundary 1?

18 WITNESS BRYAN: I would have to defer that
19 question to the modelers at -- on Panel 2.

20 MS. TABER: Okay.

21 Mr. Baker, could we please put up Stockton's
22 Exhibit 31, which is DWR-81, Dr. Bryan's testimony
23 going to Page 23.

24 And, Dr. Bryan, I have some questions about
25 your analysis of dissolved organic carbon. And your

1 opinion there was that the WaterFix project would not
2 result in substantial degradation of water quality with
3 respect to dissolved organic carbon.

4 So in your testimony, you also offer the
5 opinion that source water dissolved organic carbon
6 levels within the range of 4 to 7 milligrams per liter
7 are acceptable for drinking water suppliers. And you
8 state -- this is at Page 23, I believe it's Lines 4 to
9 5 here that, under project operations, organic carbon
10 levels will, quote, "nearly always remain within the
11 4-to-7-milligram-per-liter range."

12 Do you know how many days the project would
13 cause organic carbon levels to fall outside of the
14 4-to-7-milligram-per-liter range at Stockton's intake?

15 WITNESS BRYAN: No. As I said earlier, I
16 didn't do a day-to-day analysis.

17 MS. TABER: Then you also state that organic
18 carbon levels will be exceeded in wet and normal
19 years -- this is on Lines 8 to 11 -- that the frequency
20 and magnitude with which the organic carbon levels
21 would be above 7 milligrams per liter would be nearly
22 the same between the WaterFix project and the no action
23 alternative. And can you explain what you mean
24 specifically by "nearly the same"?

25 WITNESS BRYAN: You would need to pull up one

1 of the graphics in DWR-652. So let me --

2 MS. TABER: That would be Stockton's
3 Exhibit 32.

4 WITNESS BRYAN: If we looked at Page 43 in
5 DWR-652, which is a Figure 38.

6 It should be the bottom figure there, if you
7 zoom in on the bottom of Page 43, that bottom figure,
8 38. So you can see in this probability exceedance
9 plot; you can also see it in the box and whisker plots
10 on the left is that occasionally dissolved organic
11 carbon will exceed 7.

12 But as you'll notice -- and you can again see
13 it perhaps -- I guess you can pick your preference on
14 the graphic. You can see it in both the left and the
15 right graphic. It exceeds 7, but it exceeds 7 for
16 basically all the scenarios.

17 And that's a function of, in the wet years,
18 the higher flows is the rivers are bringing more
19 organic carbon down in the Delta. So under those
20 higher water conditions, the frequency with which
21 you'll get dissolved organic carbon above 7 is about
22 the same in all the scenarios.

23 MS. TABER: Thank you.

24 Could we put up Stockton's Exhibit 33, which
25 is a slide from -- it's DWR-8. And none of these are

1 the errata exhibits that I've included. And go to
2 Slide 43; please. Okay. Thank you.

3 So Slide 43 presents temperature of the San
4 Joaquin River at Prisoner's Point as a cumulative
5 probability diagram that was, as I understand it,
6 generated from model dated spanning the 1922 to 2003
7 time frame, and it plots the preferred alternative with
8 the no action alternative.

9 Can you confirm -- and this may have been
10 answered previously, but I wasn't sure. What model was
11 used to generate the model temperatures that are
12 plotted here?

13 WITNESS BRYAN: It's a Bureau of Reclamation's
14 temperature model.

15 MS. TABER: And not CalSim II or DSM-2? Were
16 those inputs to the temperature model?

17 WITNESS BRYAN: CalSim II is an input to that.

18 MS. TABER: Okay. And what was the time step
19 of the model output?

20 WITNESS BRYAN: Mean monthly.

21 MS. TABER: Okay, thank you. Dr. Bryan, is
22 there a relationship between modeled temperature and
23 residence time?

24 WITNESS BRYAN: There can be. In a system
25 like ours, particularly in the summertime as flows are

1 reduced and residence time increases, water is moving
2 more slowly through the channels; it's heating up due
3 to ambient air temperature. Unless the water in those
4 channels is already at equilibrium with the ambient air
5 temperature, then there would be much less change but
6 there can be.

7 MS. TABER: Okay. Would you generally expect
8 higher water temperatures in critical or dry water year
9 conditions?

10 WITNESS BRYAN: Yes, in general.

11 MS. TABER: Okay. And would those critical or
12 dry water year conditions also be the times when
13 residence times in the Delta would be the longest?

14 WITNESS BRYAN: Yes. Oftentimes they are due
15 to lower flows.

16 MS. TABER: Okay. Thank you. And then you
17 present the temperature modeling results as an
18 exceedance probability diagram. Can this be used to
19 tell us how water temperatures will change in critical
20 years?

21 WITNESS BRYAN: Yes. The critical years are
22 all included in the 1922 through 2003 period of record.
23 But in my written technical report, we also looked at
24 it by water year type. So I just didn't -- in the
25 interest of time, didn't present all the different

1 graphics. But they are looked at by water year type as
2 well.

3 MS. TABER: Okay. And can we tell from your
4 report whether there are any August -- Augusts during
5 the 82-year simulation period that see a greater
6 increase in temperature than what is shown in this plot
7 here on -- from the Prisoner's Point information?

8 WITNESS BRYAN: So I'm not sure I follow your
9 question.

10 MS. TABER: So do we have information in your
11 report whether -- regarding the temperatures results
12 for August, the month of August, in each of the 82
13 years?

14 WITNESS BRYAN: So what this graphic shows you
15 is that, in the San Joaquin River at Prisoner's Point
16 during August over the 82-year hydrologic period of
17 record of 1922 through 2003, all the water year types
18 that occur, in any given August in that period of
19 record, you can see monthly temperatures as low, in
20 this location, as low as about 19 3/4 degree, if you
21 look at the lower left side of the graphic, and they
22 can be as high as about 22 3/4 of a degree on the top
23 right side.

24 So what -- the reason the probability
25 exceedance plots are used for this type of analysis and

1 they're so powerful is what this is telling us is that
2 the range of temperature we expect to see in any given
3 August over time is exactly the same for the two
4 scenarios. It ranges between just below 20 to just
5 above 22. And the frequency with which any given
6 temperature within that range occurs is about the same.
7 That's what it's telling us.

8 MS. TABER: So there is no single August
9 within that period that would see a greater increase in
10 temperature than is shown on the plot?

11 WITNESS BRYAN: As I said before, we don't
12 like to make those types of comparisons with the
13 models. It's really not an appropriate way to look at
14 the data.

15 The appropriate way to look at the data is
16 what I just described, is it's telling you from a
17 probabilistic standpoint that, in August at this
18 location, year in and year out, you're going to see an
19 average temperature somewhere between 19 1/2
20 and 22 1/2. And the frequency with which, let's say,
21 you see 21 degrees is about, you know, 25 percent of
22 the time would be 21 degrees or less. About 75 percent
23 of the time, it would be higher than 21 degrees.

24 So that's -- that's how we interpret these
25 graphics.

1 MS. TABER: Okay.

2 I have relatively few questions remaining.

3 Can -- I think we are -- can we please put up

4 Stockton's Exhibit 34, which is DWR-653.

5 MR. HUNT: 653 or 652?

6 MS. TABER: No, 653, Stockton 34. We can go

7 to Page 37, please. Thank you.

8 So, Dr. Bryan, this section of the report,

9 Section 4.3, which goes from pages 37 to 39, you're

10 discussing the effects of California WaterFix on

11 residence time in the Delta. And it appears to be a

12 literature review of some residence time studies that

13 were related to the Delta; is that correct?

14 WITNESS BRYAN: I just want to make sure we

15 are in the same spot. So DWR-653, Page 37, yeah, it

16 looks like we are.

17 MS. TABER: Okay.

18 WITNESS BRYAN: Okay. So which paragraph are

19 we --

20 MS. TABER: Section 4.3, this whole section

21 just in general, in -- did you conduct a literature

22 review of residence time studies related to the Delta,

23 and is that reflected in this report? Just trying to

24 clarify.

25 WITNESS BRYAN: I guess what's confusing to

1 me, you keep mentioning 4.3 and I don't see 4.3.

2 MS. TABER: Okay. Maybe I have the section
3 number incorrect.

4 WITNESS BRYAN: I want to make sure we're
5 speaking to the same.

6 MS. TABER: I'm sorry. I have the wrong page
7 number. So I guess we should go up to Section 4.3. I
8 apologize. Must have made a typo.

9 I'll just -- to speed this up, I'll just ask
10 did you conduct a literature review of residence time
11 studies related to the Delta in preparing your analysis
12 of residence time in DWR-653?

13 WITNESS BRYAN: We looked at residence time
14 analyses that were conducted as a part of the
15 biological assessment for the California WaterFix. And
16 I talked about that fairly extensively yesterday.

17 When -- in evaluating residence time on
18 harmful algal blooms in the Delta, we -- as you can see
19 in this exhibit from its literature cited section, we
20 cite numerous scientific papers from microcystis and
21 cyanobacterial studies in the Delta. Pretty much all
22 of those studies will talk at -- to some degree about
23 residence time.

24 So your specific question I believe is did we
25 do a literature review about residence time? We

1 certainly reviewed the literature on what is known
2 about microcystis in the Delta, what controls it; we
3 talked about that extensively yesterday. Pretty much
4 each and every one of those articles will talk about
5 residence time. So to that extent, I guess we could
6 say that in a way we did --

7 MS. TABER: Mm-hmm.

8 WITNESS BRYAN: -- literature review on
9 residence time.

10 MS. TABER: Thank you. And I apologize that
11 the question was vague, but thank you for your
12 patience.

13 I have a question that I just want to clarify,
14 a question about an exhibit that Ms. Meserve asked
15 about. It was -- we can put up Stockton's Exhibit 35,
16 which was Table 8-60A from the Final EIR.

17 Great. And -- again, this table calculates
18 average or presents average residence times for areas
19 within the Delta. Did you consider these calculations
20 in your analysis of the effects of the WaterFix project
21 on residence time you prepared for your testimony and
22 opinion in this proceeding?

23 WITNESS BRYAN: Yes.

24 MS. TABER: Okay. Would an increase in
25 residence time during warm summer or fall months result

1 in an increase in water temperature?

2 WITNESS BRYAN: Like I said previously, it
3 can. If -- if the water temperatures are not already
4 in an equilibrium with the ambient environment in
5 flowing water systems, if you slow that water down,
6 give it more time to heat up in the sun, it can raise
7 the temperature.

8 Other times, if the residence time is already
9 long, it's already in equilibrium with ambient, it
10 won't change much if you increase the residence time a
11 little bit more. It's a little bit site specific.

12 MS. TABER: Okay. I think some of my
13 questions were covered yesterday.

14 How about if we go to Exhibit Stockton 36,
15 which is Figure 8 point -- I believe it's 8.0B from the
16 Final EIR. This table shows that on a scale of 1 to --
17 maybe we could expand that a little bit -- 1 to 4,
18 14 of the 18 proposed operational scenarios show a
19 maximum potential increase for microcystis production
20 in the Delta. And did you consider this table and
21 these results showing that the 14 of the 18
22 alternatives result in a maximum severity of impact in
23 your analysis that you prepared and opinion for this
24 proceeding?

25 WITNESS BRYAN: So could you rephrase the --

1 MS. TABER: Rephrase it? Okay.

2 WITNESS BRYAN: I'm not sure what your
3 question is.

4 MS. TABER: So it's my understanding that this
5 exhibit shows that 14 of the 18 proposed project
6 operational alternatives will result in the maximum
7 impact, and by that, the maximum potential for
8 increased microcystis blooms in the Delta. And did you
9 consider that in your -- in preparing your expert
10 testimony regarding the impacts?

11 Actually, let me rephrase that. Sorry.

12 This table -- I guess I'll say this table
13 portrays information about microcystis growth potential
14 that seems to conflict with your analysis in DWR-653,
15 where you concluded the project will not impact
16 microcystis growth.

17 Do you believe that the information presented
18 in this table 8-0B is incorrect?

19 WITNESS BRYAN: Well, it's apples and oranges
20 because this table is talking about many of the
21 operational scenarios.

22 If you could pull that figure down, we could
23 see the top.

24 These are all the various scenarios that were
25 evaluated in the Draft EIR, and those have 65,000 acres

1 of tidal habitat restoration in them. And that would
2 radically change hydrodynamics in the Delta relative to
3 what I analyzed for this rebuttal testimony for the
4 proposed project 4A-H3 and 4A-H4. So they're really
5 two different things.

6 MS. TABER: Okay. So the -- which of the
7 alternatives in here and the findings accurately
8 reflect the range of operation -- the potential impacts
9 under the range of operational scenarios that are
10 described in the petitioner's case in chief?

11 MR. MIZELL: I'm going to object. This is
12 discussing the Final EIR/EIS and the range of
13 alternatives contained in that, not Dr. Bryan's
14 testimony.

15 CO-CHAIR DODUC: Perhaps you would like to
16 reframe that to the applicability of his rebuttal
17 testimony.

18 MS. TABER: Well, his rebuttal testimony did
19 address the conclusions in the Final EIR/EIS and
20 restated that his conclusions as to a number of
21 different factors were consistent with his findings in
22 the Final EIR/EIS. So I just was trying to understand
23 which of these -- if this -- how this information in
24 this table related to his opinion.

25 It seems to show a more significant -- in

1 fact, he's provided some clarification that perhaps
2 these results are no longer applicable to the proposed
3 range of operations. But I -- I was trying to get some
4 clarify about that.

5 CO-CHAIR DODUC: Were these results,
6 Dr. Bryan, or these alternatives, were any of them
7 considered by you in forming your rebuttal testimony?

8 WITNESS BRYAN: My rebuttal testimony was much
9 more specific. It didn't necessarily -- simply cook
10 book findings from the EIR. It was very, very specific
11 to address the concerns raised by other parties.

12 And it -- as far as microcystis goes, it was
13 the most thorough analysis that has been done to date.
14 It goes beyond what was done in the EIR/EIS. So,
15 again, to me, they're a little bit two different
16 things.

17 But I will also confirm for the record that
18 our finding for Impact Water Quality 32, Effects on
19 Microcystis Bloom Formation Resulting From Facility
20 Operation and Maintenance in the Final EIR, starting on
21 Page 8-979, that impact conclusion there comes to a
22 less than significant finding for the California
23 WaterFix effects on microcystis in the Delta. And that
24 is consistent with my findings for this rebuttal
25 testimony.

1 MS. TABER: Okay. And that finding would
2 encompass the full range of operational scenarios
3 proposed or presented in the proceeding, correct?

4 WITNESS BRYAN: Yes.

5 MS. TABER: Okay.

6 WITNESS BRYAN: As the California WaterFix is
7 proposed in these proceedings.

8 MS. TABER: Meaning the range of operations
9 between Boundary 1 and Boundary 2.

10 WITNESS BRYAN: Yes.

11 MS. TABER: Okay. Thank you. I have a
12 question regarding Exhibit DWR-730, which is Stockton's
13 Exhibit 37. And, Mr. Baker, I think it would be
14 helpful if you could pull that up, please, and go to
15 Page 5.

16 And I apologize. I didn't have the chance to
17 highlight the language, but I'll try to be specific.
18 DWR-730 is a report by Mitrovich, et al., 2011. And
19 it's also cited in Exhibit DWR-653 -- oh, okay. It's
20 not cited in there. I apologize.

21 So it's -- the question I have is 730 is a
22 report by Mitrovich, et al., from 2011. And there's
23 also a document that you cite in your report, DWR-653,
24 at Mitrovich, et al., 2003.

25 And are you aware that the Mitrovich 2003

1 analysis and the Mitrovich 2011 analysis looked
2 specifically at anabaena and not microcystis?

3 WITNESS BRYAN: I think I'll defer this
4 question to Dr. Preece.

5 WITNESS PREECE: So when we were putting
6 together the critical flow values that could disrupt
7 cyanobacterial blooms, there's not a lot of scientific
8 literature out there. And so we looked at how
9 cyanobacteria blooms as a whole could be affected by a
10 varying flow velocity. So we focused on microcystis as
11 much as possible, but we cited as important to include
12 this as well because anabaena is also a cyanobacteria
13 or a harmful algal bloom species.

14 MS. TABER: Okay. Thank you. And so would it
15 be your opinion, then, the studies that are based on
16 the results for anabaena would be indicative of the
17 behavior of microcystis?

18 WITNESS PREECE: Not necessarily, but they are
19 both cyanobacteria species, so they do share certain
20 qualities.

21 MS. TABER: Do you know what some of those
22 specific qualities are that they share?

23 WITNESS PREECE: The same five things that we
24 mentioned. It's residence time, velocity, and
25 temperature, and salinity and then a radiance. Those

1 all affect cyanobacteria similarly, literally. There
2 are differences between species, but oftentimes
3 cyanobacteria are looked at as a group.

4 WITNESS BRYAN: The only thing I was going to
5 add is that one of the key characteristics is what
6 we've talked extensively about is that microcystis and
7 other cyanobacteria have a life history strategy that
8 allows them to more effectively compete with other algae
9 for resources of nutrients and light. And flows and
10 turbulence and mixing disrupts that life history
11 strategy of cyanobacteria in general.

12 WITNESS PREECE: One further point. In the
13 rebuttal testimony that we prepared, the other people
14 suggested that we should look beyond microcystis
15 because occasionally other cyanobacteria species do
16 appear in the Delta. So this study helps address their
17 concerns.

18 MS. TABER: Does anabaena appear in the Delta?

19 WITNESS PREECE: Occasionally, although
20 microcystis is the predominant harmful algal bloom
21 species. But occasionally anabaena has been
22 documented.

23 MS. TABER: Okay. Thank you. And are you
24 aware that Mitrovich in the two studies and also Long,
25 2011, which was a study cited in your reports performed

1 their studies in rivers?

2 WITNESS PREECE: Yes. So we realized that
3 there's no Delta-specific velocity information. And
4 that's why we had to look at the worldwide literature.
5 Once again, literature is limited on flow velocities.
6 This is something that is gaining momentum in the
7 literature, and more information is being produced.
8 But we had to use the best available science.

9 MS. TABER: Thank you. And do you know if the
10 rivers that were the subject of their studies were
11 tidally influenced?

12 WITNESS PREECE: I don't believe that they
13 were tidally influenced.

14 MS. TABER: Okay. So if they were not tidally
15 influenced, then the river flow velocities would be
16 relatively steady over the course of a day and move
17 water in only one direction; is that correct?

18 WITNESS PREECE: So in these studies generally
19 the flow is moving in one direction. But that's not
20 always the case because wind is sometimes incorporated
21 into the movement of the water and that can move many
22 directions.

23 WITNESS BRYAN: I just want to add to that.
24 It really doesn't matter to microcystis which direction
25 the flow is going. What matters is the turbulence in

1 mixing. What matters is whether their life history
2 strategy of floating up to the top and getting all that
3 light at the top. Forming their bloom, shading out
4 their competitors, that's what they're trying to do.

5 So whether the channel is flowing right to
6 left or left to right, you're going to get turbulence
7 either way. And so that's why in my analyses you saw
8 some graphics that said absolute velocities.

9 So we didn't do averages and average out a
10 negative and positive flow that was both substantial
11 and you'd get a zero value and that would lead you to
12 believe there was zero flow, zero movement; that's not
13 the case.

14 As you saw in those graphics, the frequent --
15 or the amount of time where you have zero flow, even in
16 a tidal channel, is very, very low, just a matter of
17 minutes at slack tide, and then it's going to move in
18 either direction. And it's that movement throughout
19 the day that continues to provide that turbulence and
20 mixing that really affects where the microcystis gets a
21 foothold in a given location or if it gets out-competed
22 by the other algae.

23 MS. TABER: Okay. Thank you. That was that
24 was helpful and answered a number of additional
25 questions.

1 So I think I have only one more question. And
2 if we could look at -- let's see, Stockton's
3 Exhibit 34, which is DWR-653 -- I'm sorry, Mr. Baker.
4 I couldn't figure out a strategy for organizing my
5 questions to keep a single exhibit up without having to
6 go back and forth.

7 But if we could look at Page 30, Figure 19.

8 Okay. Thank you. So Dr. Bryan, in this
9 figure, can you explain what you mean by, in the title
10 of "Absolute Values of Daily Velocities on a 15-minute
11 Time Step"?

12 WITNESS BRYAN: Yes, that's what I just
13 referred to in my previous comment is that, because
14 these -- this is a tidal channel and flows go in both
15 directions, what you'll often see in literature is
16 you'll see discussion of reverse flows. So there will
17 be negative signs in front of the flow and things of
18 that nature.

19 We just took the absolute value, meaning we
20 dropped the negative, we dropped whether it was going
21 left to right or right to left, and we just focused on
22 what the velocity in the channel is. And that's what
23 this figure shows.

24 MS. TABER: So is that the absolute velocity
25 of the 15-minute simulated velocity data?

1 WITNESS BRYAN: Yeah, simulated using DSM-2.

2 MS. TABER: And you didn't calculate -- did
3 you calculate a daily average velocity?

4 WITNESS BRYAN: We did not present any daily
5 average velocity plots. We did -- the plot above it
6 will show you for the same location the daily maximum
7 flow. And then this is that probability exceedance
8 plot that shows you on a 15-minute time step what the
9 velocities would be at this location over the course of
10 the period of record.

11 MS. TABER: Okay. All right thanks. I think
12 I said that was my last question, but after conferring
13 with Mr. Mizell, I think I need to ask one more
14 clarifying question about something that I cannot --
15 may not be able to obtain through a direct request to
16 DWR.

17 And I apologize that I'm not -- I may not have
18 a page citation. Actually, probably -- perhaps I do.
19 Are we still on DWR-653? Can we go to Page 5.

20 Okay, great.

21 So if you look about halfway down through the
22 first full paragraph towards the right side, there's a
23 sentence that begins, "Although this information is not
24 specifically available for Central Valley Waters" --
25 and this citing Mitrovich, et al., 2003, Zhang 2007,

1 and Long 2011 -- quote, "as cited in Zhang, et al.,
2 2015," does this mean that your reliance on the 2003,
3 2007, and 2011 papers was based on the discussion of
4 them in Zhang, et al., 2015? Or did you review the
5 preceding three, Mitrovich, Zhang, and Long studies as
6 well?

7 WITNESS BRYAN: Where it says "Long, et al.,
8 2011 as cited in Zhang, et al., 2015" that particular
9 reference would be that the point that Long, et al.,
10 2011 was making was -- or I'm sorry, that Zhang, et al.
11 Had made a point -- let me get this right for you.

12 MS. TABER: It's maybe one of those Oxford
13 comma questions.

14 WITNESS BRYAN: So Zhang, et al., 2015 cited a
15 finding from Long, et al., 2011. That's what that
16 means.

17 MS. TABER: Okay. So did you obtain the
18 original -- each of these original papers and review
19 them, the Two Zhang studies, Mitrovich, and Long?

20 WITNESS BRYAN: Usually when we cite something
21 like is provided there, that was because we didn't --
22 at the time that we wrote that, didn't have a hold of
23 the Lang [sic], et al., 2011 paper.

24 MS. TABER: Did you subsequently obtain that
25 study? The Long or Lang -- Long?

1 WITNESS BRYAN: I don't recall there was so
2 much literature that we reviewed I can't answer that
3 off the top of my head.

4 MS. TABER: Okay. I think that concludes my
5 questioning. Thank you for your patience.

6 CO-CHAIR DODUC: Thank you, Ms. Taber.

7 All right. That was the last of the sort of
8 informal grouping of Groups 24, 21, 19, and 22.

9 Next I have on my list is Ms. Des Jardins, who
10 is Group No. 37. Is there any other group between 24
11 and 37 wishing to conduct cross-examination?

12 (No response)

13 CO-CHAIR DODUC: Is there any other group at
14 all after Group 37?

15 (No response)

16 CO-CHAIR DODUC: All right. In that case,
17 Ms. Des Jardins, you are our last cross-examiner for
18 this panel. And I see Ms. Sergent waiting in the back.

19 We will likely not get to you until after our
20 lunch break.

21 CROSS-EXAMINATION BY MS. DES JARDINS

22 MS. DES JARDINS: Can we pull up DDJ-183,
23 please.

24 I have some follow-up questions for --
25 whoops. My name is Deirdre Des Jardins with California

1 Water Research. And I had some follow-up questions on
2 the Mitrovich study.

3 So Mr. Bryan, you said the Mitrovich study
4 supported the use of velocity. But I notice that it's
5 -- it said a flow release of 3,000 megaliters per day
6 was effective at removing an established cyanobacterial
7 bloom, and total cyanobacterial numbers declined from
8 over 100,000 to less than 1,000 milliliters within a
9 week. Flow releases were effective at mitigating
10 cyanobacterial growth through either suppression or
11 persistent stratification or through dilution and
12 translocation of cells."

13 So this study appears to be equally about flow
14 as about velocity.

15 WITNESS BRYAN: Well, the two are directly
16 related.

17 MS. DES JARDINS: Let's scroll down a little
18 bit further. There we go.

19 This study builds on a simple flow and
20 stratification model developed for anabaena circinalis
21 growth in the unregulated Barwon-Darling River.

22 So this is primarily a flow model; is it not?

23 WITNESS PREECE: If you refer to Page 239, is
24 says, "The use of greater discharges of 3,000 ml a
25 day," and then in parentheses "velocity of 0.31 meters

1 per second."

2 MS. DES JARDINS: But you took the velocity
3 point 3 and it was associated with the flow, was it
4 not? And the model is primarily about the effects of
5 flow releases on -- on harmful algal blooms.

6 WITNESS BRYAN: So what you have to understand
7 about these studies is, when you talk about flow, flow
8 is just the, you know, cubic feet per second. It's a
9 volume of water moving through a channel.

10 So every channel is different in size. Right?
11 So you can have a very small channel and have a very
12 small volume of water flowing through it and generate a
13 high velocity. Conversely, you can have the opposite.

14 Because the factor that effects microcystis
15 and its competition with other algae, as we've been
16 discussing, is turbulence and mixing, it's difficult to
17 understand turbulence and mixes from a volume of flow
18 perspective. To look at flow, if you look at the
19 Sacramento River, for example, and you say there's
20 15,000 cfs or there's 5,000 cfs, we don't understand
21 what that means in terms of turbulence and mixing in
22 that channel. So we need to get to things like
23 velocity.

24 And so it's common for these researchers to
25 talk about what they did, their methodologies, their

1 flows and everything. But the common language that we
2 all use is velocity. And that's what we were
3 extracting from these papers.

4 MS. DES JARDINS: Isn't it a hypothesis,
5 though, that velocity is the key variable that you're
6 extracting from these papers? It's a hypothesis that
7 flow -- that velocity and -- average channel velocity
8 is a key factor in development of and persistence of
9 these blooms; is it not?

10 WITNESS BRYAN: I would say it's well beyond
11 the hypothesis. Once upon a time, it was -- when folks
12 were first starting to study cyanobacteria and
13 understand how they competed with other algae -- in
14 science, we always start with hypotheses. We do
15 studies to provide information to support and reject
16 those hypotheses.

17 But this is not really a new issue. It's been
18 studied extensively. One of the best papers out there
19 is the Huisman 2004 paper, in my opinion, that really
20 does a great job of identifying that this turbulence
21 and mixing is the driver of what disrupts the
22 microcystis's life history strategy and why we see --
23 what was confusing to early researches is why did we
24 see a big bloom here and not a big bloom there? Why
25 did we see a big bloom this year in this water body but

1 not the subsequent year?

2 And as we've talked extensively, it's not just
3 turbulence and mixing. That's very important. But
4 it's these other major driving factors; they all have
5 to come together for microcystis to be able to
6 effectively out-compete other algae. So it's a very
7 complex arena, and it takes the scientists time to sort
8 these things out.

9 But I think the velocity and how it affects
10 turbulence and mixing and how turbulence and mixing
11 affects microcystis is well beyond the hypothesis
12 stage.

13 MS. DES JARDINS: I would like to go to
14 DDJ-18, which is DWR-653 with highlighting. And I'd
15 like to go to Page 8, which is pdf Page 14. And I've
16 got some highlighting. Just a sec.

17 So if you say based on the current state of
18 science regarding HABs in the Delta, it was not
19 possible to develop and use a calibrated and verified
20 model to evaluate flow-bloom relationships within the
21 Delta.

22 But here, you're referring to a paper where
23 they developed and used a flow-bloom relationship for
24 the Darling Basin, the Lower Darling River.

25 MR. MIZELL: Objection, there's no question

1 pending.

2 MS. DES JARDINS: What -- so why do you -- why
3 are you saying that you couldn't develop and use a
4 calibrated and verified model for flow-bloom
5 relationships for the Delta? And how is that different
6 from this paper, which develops and using [sic] you
7 refer to for the Darling -- Lower Darling River?

8 WITNESS BRYAN: Couple of points to make. The
9 reason that this is in the rebuttal testimony is
10 because -- in response to Mr. Ringelberg's comments
11 that the practitioners should have used -- that the
12 Bureau or DWR should have used a flow-based model to
13 predict how the California WaterFix would affect
14 cyanobacteria in the Delta and that we were deficient
15 in our analyses for not doing so.

16 So in rebuttal to that statement what this is
17 saying is there is no such model developed for the
18 Delta at this time. That doesn't mean that there
19 aren't flow-bloom-type models developed in other parts
20 of the world, other rivers. There are. But we have
21 not developed one for the Delta.

22 MS. DES JARDINS: Isn't what you're presenting
23 a velocity bloom model?

24 WITNESS BRYAN: In my testimony, I have
25 focused on velocity because I felt it was a better

1 parameter than flow to compare among the alternatives
2 to evaluate changes in turbulence and mixing, which is
3 really the driver that affects the species that we're
4 concerned about.

5 MS. DES JARDINS: Is that model calibrated?

6 MR. MIZELL: Objection, vague. Which model?

7 MS. DES JARDINS: Is the velocity bloom model
8 that you developed and presented in these reports, is
9 that calibrated?

10 MR. MIZELL: Objection, misstates the
11 evidence. Dr. Bryan has indicated he didn't develop a
12 comprehensive model but presented testimony.

13 MS. DES JARDINS: There's some very specific
14 estimates in here of velocity and bloom relationships
15 and based on thresholds of significance.

16 Dr. Bryan is saying that he believes that
17 algal blooms will occur. So the question is, are those
18 thresholds of significance, are they based on a
19 calibrated model?

20 MR. MIZELL: Objection, asked and answered.

21 CO-CHAIR DODUC: Dr. Bryan, your methodology
22 that you used, would you consider it to be widely
23 accepted methodology that is -- that has been validated
24 and peer reviewed in some way?

25 WITNESS BRYAN: Yeah, I would describe the

1 methodology that I used -- I would not describe it as a
2 flow or a velocity-based model that you would go out
3 and calibrate. I wouldn't describe it that way.

4 It's a step back of that because we're not
5 there yet in our Delta. Folks are working on
6 development of such models, but we just don't have
7 sufficient information yet.

8 So when you're not able to develop and
9 calibrate a model, you have to start with the first
10 order principles. So one of the first order principles
11 that we talked about a lot yesterday and today is this
12 fact that microcystis does not like a turbulent, well
13 mixed water column. It cannot out-compete other faster
14 growing algae that can grow at lower light levels and
15 so on and so forth. So it also likes --

16 CO-CHAIR DODUC: We do not need to have that
17 all repeated.

18 WITNESS BRYAN: Yeah. So what I did is I
19 simply looked at velocity exceedance plots. And if
20 you're worried about microcystis getting a foothold and
21 causing blooms in areas where it's not blooming and
22 causing bigger worse blooms where it is blooming today,
23 due to the California WaterFix, we've all greed that
24 it's the slower velocities and the calmer water that it
25 seeks.

1 So those velocity exceedance plots, what's
2 particularly informative of them is on the right side
3 of the graphics where the velocities are the lowest is
4 where all the lines fall on top of each other, along
5 the center areas that I looked at.

6 So that's very important in that, the
7 California WaterFix, will it affect velocities in
8 various channels? Yes, we saw that. We saw it in many
9 of the graphics. But will it substantially increase
10 the frequency with which the low velocities occur? No,
11 it will not. So it's really a first order principle
12 type analysis.

13 MS. DES JARDINS: I would like that go to pdf
14 Page 19 in this document. It's document Page 13.

15 Document Page 13, yeah. And I've got some
16 highlighting. And it says that velocities will be
17 above -- scroll down just a little. Maybe I don't have
18 the page quite correct.

19 Velocity -- there -- shows that -- Sacramento
20 River at Freeport. DSM-2 modeling output shows that
21 daily maximum velocity would be above 1.0 feet per
22 second, frequency which in any given velocity exceeded
23 would be greater than that for the NEA.

24 So you have very specific velocities and very
25 specific threshold of significance of 1.1 feet per

1 second.

2 What kind of errors are there on those
3 velocities that you're using to reach your conclusions?

4 CO-CHAIR DODUC: Are you able to answer that,
5 given that you are using the output from the DSM-2
6 model?

7 WITNESS BRYAN: First, thank you for that.
8 And I would like to defer any detailed error bars and
9 that type of discussion to the modelers in the next
10 panel.

11 But just to clarify the one foot per second is
12 simply a description of what the model output shows.
13 It's not a threshold of significance per se, as you've
14 described it.

15 MS. DES JARDINS: I'd like to go back to --
16 just -- so it's document Page 11. Yeah, I think it's
17 -- no. It's pdf Page 11. Sorry. Document page --
18 scroll back. I think it's document Page 8,
19 highlighted. Okay. Stop.

20 Go back further. Yeah.

21 Okay. "Although this information is not
22 specifically available for Central Valley waters, a
23 number of studies report critical velocity rates that
24 disrupt microcystis blooms to be within point 1 to 1.3
25 feet per second range." Isn't that a description of a

1 threshold of significance based on the scientific
2 literature?

3 WITNESS BRYAN: So I wouldn't use the term
4 "threshold of significance." I would use -- "Although"
5 just to read this. "Although this information is not
6 specifically available for Central Valley waters, a
7 number of studies report critical velocity rates that
8 disrupt microcystis blooms to be in the 0.1 to the
9 1.3-foot-per-second range."

10 So all that's really saying -- and I did use
11 that as a cornerstone in my analysis. All that's
12 saying is we need some parameter to understand
13 turbulence and mixing in the receding water. So what's
14 very clear the literature from studies in rivers,
15 studies in lakes where they've increased circulation in
16 lakes, what's very clear is, when you disrupt
17 microcystis' ability to control its buoyancy and where
18 it is in the water column, it loses the competition
19 with other algae. Well, how much turbulence and mixing
20 do you need?

21 This type of information that we've been able
22 to glean from the literature gives us a metric to look
23 at our own channels in the -- river channels in the
24 Delta and understand that, when we get up into this
25 repairing, when we have very calm water down at point 1

1 slack tide, obviously that's a very calm, stable water
2 column, microcystis can do very well.

3 But as you move the water around, we had to
4 have some metric to understand how much movement do you
5 need to disrupt that life history strategy. And what
6 the scientific literature says is this range. And so
7 that's the range we looked at.

8 Now, we didn't necessarily choose a specific
9 number as a threshold of an impact or a threshold of
10 significance. You recall in my testimony, in my oral
11 testimony, what I gleaned from this is that, when
12 velocities increase above about point 2 feet per
13 second, as they get higher, it -- they create more
14 turbulence and mixing, and so that hydrodynamic
15 situation becomes increasingly less favorable for
16 microcystis.

17 So when we finally got into the analyses with
18 the exceedance plots, it's that comparative analysis.
19 Is the California WaterFix substantially reducing, by
20 both frequency and magnitude, velocities in the
21 channel? Or conversely, are the lines falling on top
22 of each other in the graphic showing that whatever
23 frequency or whatever velocity those channels are
24 experiencing, particularly on the low end of the
25 velocity range under the no action alternative they're

1 also experiencing under the California WaterFix
2 scenario or vice versa. So that was the approach to
3 the signals.

4 MS. DES JARDINS: Dr. Bryan, I wanted to ask
5 you --

6 CO-CHAIR DODUC: Ms. Des Jardins --

7 MS. DES JARDINS: I do have a follow-up
8 question.

9 CO-CHAIR DODUC: On this particular item?

10 MS. DES JARDINS: Yes.

11 CO-CHAIR DODUC: And then do you need -- do
12 you have other aspects that you are wishing to explore?

13 MS. DES JARDINS: Ummm --

14 CO-HEARING OFFICER DODUC: What would be
15 those --

16 MS. DES JARDINS: I think I've gotten to most
17 of it with this. So, yeah --

18 CO-CHAIR DODUC: Thank you. Then ask your
19 follow-up.

20 MS. DES JARDINS: -- there's actually two
21 parts to this follow-up question, though, which I would
22 like to get to.

23 So isn't this -- when you pull these studies
24 in which you're doing your evaluation, isn't this flow
25 in river channels that you're getting as range of

1 velocities from? And isn't that different than the
2 peak tidal velocity and tidally influenced channels
3 that you're using to draw your conclusions?

4 CO-HEARING OFFICER DODUC: That has been asked
5 and answered.

6 MS. DES JARDINS: Okay. And secondly, did you
7 ever validate your inference? Did you ever look at was
8 this model predictive in the Delta of where you had --
9 for example, in 2000, which is a DSM-2 output and it's
10 a CalSim II output, did you ever look at did you get --
11 did this predict where you would get harmful algal
12 blooms? Is there any verification of the model?

13 MR. MIZELL: I'm going to object as to vague.
14 Which model is she referring to?

15 MS. DES JARDINS: There's a model -- the model
16 here is you have a velocity prediction. You pull the
17 velocity from DSM-2, and you assume if it's -- if it's
18 over 1 foot per second, peak tidal velocity, that you
19 don't get a harmful algal bloom.

20 Did you look at this, for example, in any --
21 in the 2000 microcystis bloom or any other microcystis
22 bloom in the Delta?

23 MR. MIZELL: Objection as to compound and
24 vague.

25 MS. DES JARDINS: Did you look at this as

1 to -- did you look at this model and the prediction it
2 made as it looked at the velocity prediction and see if
3 it predicted -- if it verified whether it was accurate
4 in predicting the presence or absence of microcystis?

5 MR. MIZELL: Objection as to misstating the
6 witness's testimony if Ms. Des Jardins is referring to
7 a model developed by Dr. Bryan. As to any other model,
8 vague and ambiguous.

9 CO-CHAIR DODUC: Mr. Mizell, I see where she's
10 going, and actually I think it's a good question.

11 Perhaps I might reframe that to ask,
12 Dr. Bryan, if this finding that is stated here or this
13 -- this statement based on these other studies, how
14 confident are you that it is applicable to the Delta in
15 terms of the formation of microcystis blooms?

16 WITNESS BRYAN: I think it's very applicable,
17 like I mentioned before. There's -- you can see cited
18 here, there's a number of studies that we drew upon to
19 glean this information. And if you want to use an
20 example, we can look at the Sacramento River.

21 So --

22 CO-CHAIR DODUC: Well, we'll get there. When
23 you say "look at," did you actually -- and I think this
24 is what Ms. Des Jardins was asking. Did you actually
25 go out, use this as a hypothesis, and actually test

1 areas in the Central Valley waters to determine the
2 actual applicability of these statements?

3 WITNESS BRYAN: And that's what I was just
4 getting to. So we didn't physically go out and do
5 field studies.

6 CO-CHAIR DODUC: Okay.

7 WITNESS BRYAN: But we're looking at the
8 studies that others have done. So Patricia Lehman, who
9 has led the studies of microcystis in the Delta, one of
10 her statements is that, when you get north of Rio Vista
11 or actually Antioch, well -- I'm sorry, Rio Vista on
12 the Sacramento River, when you get north of that, you
13 just don't see much in the way of microcystis blooms.

14 So when you go up north of Rio Vista and you
15 get into the main channel of the Sacramento River, it's
16 typically flowing at a foot per second or so. We have
17 some graphs in the testimony for Freeport. And that's
18 part of the reason that those are in there is to show
19 how high the velocities are in the main stem Sacramento
20 River and also to rebut comments made by the City of
21 Sacramento that said when the -- the California
22 WaterFix is implemented, that it would increase
23 microcystis blooms in lower Sacramento River, upstream
24 of their Sacramento River Water Treatment Plant.

25 The velocities are so high in the Sacramento

1 River relative to this range of point 1 to 1.3 feet per
2 second that we get a very turbulent channel, a very
3 turbulent channel in the main stem Sacramento River.
4 And that is a key reason why we do not see microcystis
5 blooms in that -- in that section of the Sacramento
6 River. So it does fit our system.

7 MS. DES JARDINS: I wanted to ask a follow-up
8 question which is, so you describe a kind of
9 qualitative testing of this velocity threshold
10 relationship where you said you look at it in some
11 locations and you believe that it -- it is consistent
12 with the absence in those locations, and one of them is
13 the main stem Sacramento River.

14 Is this qualitative evaluation the only kind
15 of testing that you've done?

16 WITNESS BRYAN: Again, our -- my assessment is
17 very literature based, scientific literature based. So
18 we did not go out and conduct field studies. But the
19 scientific community has done that, and we've cited the
20 world's literature on looking at this very topic.

21 So the point 1 to 1.3 feet per second is not a
22 range that we pulled out of a hypothesis that we made
23 or one small investigation that we made. This is what
24 the world's literature on this topic is saying.

25 And when I look at that range, and I look at

1 the velocities in my analysis at the nine different
2 Delta locations, ten different Delta locations, it fits
3 very, very well. Where we see in microcystis blooms in
4 our Delta year in and year out of the magnitude that
5 we're concerned about are where there's very low
6 velocities a large percent of the time.

7 Where we do not see microcystis blooms, as I
8 just mentioned, in the main stem of the Sacramento
9 River, the velocities are in the high end of this
10 range. And that -- it's very explanatory. It makes
11 sense relative -- what we see in the Central Valley
12 makes perfect sense --

13 CO-CHAIR DODUC: Thank you. And now we are
14 repeating and repeating and repeating.

15 Thank you, Ms. Des Jardins.

16 MS. DES JARDINS: Yeah, and I did have --
17 there was one other question. That I wanted to --

18 CO-CHAIR DODUC: This will be your final
19 question.

20 MS. DES JARDINS: And that is -- so in looking
21 at this, this is obviously very sensitive to -- your
22 conclusions are very sensitive to the velocity
23 predictions of your model which is driven both by DSM-2
24 and by the CalSim inputs, which are the boundary
25 conditions. So what kind of confidence, what kind of

1 estimates do you have of the error bars on those
2 velocity estimates?

3 CO-CHAIR DODUC: And you have deferred that
4 questions to the modelers.

5 Thank you, Ms. Des Jardins.

6 MS. DES JARDINS: I did want to say the
7 modelers did not provide any testimony about velocity.

8 CO-CHAIR DODUC: They have yet to testify.
9 Thank you.

10 MS. DES JARDINS: They did not submit any as
11 part of rebuttal.

12 CO-CHAIR DODUC: They have yet to testify.
13 You may cross-examine them at that time.

14 MS. DES JARDINS: Okay. Thank you.

15 CO-CHAIR DODUC: Mr. Mizell, did you have
16 redirect? And if so, which points would you like to
17 cover?

18 MR. MIZELL: We do have a couple of questions
19 for redirect. Because this will generate a potential
20 for additional cross, it may be best to take our lunch
21 break.

22 CO-CHAIR DODUC: Yes, I believe that is sound
23 suggestion. We will take our lunch break, and we will
24 resume at 1:15.

25 (Whereupon, the luncheon recess was

1 taken at 12:15 p.m.)
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AFTERNOON SESSION

(Whereupon, all parties having been
duly noted for the record, the
proceedings resumed at 1:16 p.m.)

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CO-HEARING OFFICER DODUC: Good afternoon,
everyone. It is 1:16, and we are resuming.

And before we get back to Mr. Mizell,
Mr. Ochenduszko, you have a reminder for everybody?

MR. OCHENDUSZKO: Just very briefly. For all
the folks that are bringing up presentations and things
on USB drives in addition to, you know, the exhibit
identification index that I know you're all dutifully
including on those USB drives, please give those to the
hearing staff as early as possible, preferably before
the hearing starts, just so that we can have everything
queued up and make sure that it works, as opposed to
some people have been dropping them off immediately
before they begin their cross-examination. So the
earlier, the better, included with the EII.

Thank you very much for your time.

CO-HEARING OFFICER DODUC: Thank you.

Mr. Mizell, what particular points were you
hoping to address in your redirect?

MR. MIZELL: Thank you. I'd like to briefly

1 address the expertise issue of the remaining witnesses
2 on algae and microcystis. I'd like to address the
3 temperature modeling that was used in Dr. Bryan's
4 testimony, and I'd like to address the informative
5 value of daily data as explored by Ms. Taber.

6 CO-HEARING CHAIR DODUC: All right. Thank
7 you. Please proceed.

8 REDIRECT EXAMINATION BY MR. MIZELL

9 MR. MIZELL: Dr. Bryan, yesterday you were
10 asked by Ms. Meserve a question about your expertise in
11 algae. In response, you indicated that you have a few
12 years' experience studying algae.

13 But isn't it true that you have more
14 experience in this field than you initially answered?

15 WITNESS BRYAN: Yes. I'm sorry. I think I
16 misunderstood the question when it was asked.

17 My study of algae actually goes back to the
18 mid 1980s.

19 MR. MIZELL: Thank you. Both yesterday and
20 today, questions -- there were questions asked about
21 the expertise behind the testimony of Dr. Bryan.

22 Dr. Preece, you helped prepare Dr. Bryan's
23 microcystis testimony, and you have expertise --
24 extensive expertise in microcystis, correct?

25 WITNESS PREECE: Yes, I do. I completed my

1 dissertation on cyanobacteria, harmful algal blooms,
2 and their associated toxins. And I have six
3 peer-reviewed publications on cyanobacteria and harmful
4 algal blooms and their associated toxins. And then
5 also I have two additional peer-reviewed publications
6 on water quality.

7 MR. MIZELL: Thank you. I'll move on to the
8 temperature modeling.

9 In response to questions from Ms. Taber about
10 the temperature modeling used in your testimony, you
11 indicated that the temperature model was a USBR model.

12 Isn't it true that your testimony utilizes two
13 temperature models, one being where the Delta
14 temperatures are output to DSM-2 and the other the
15 upstream temperatures as output to the USBR model?

16 WITNESS BRYAN: Yes, that's correct.

17 MR. MIZELL: Thank you.

18 Last question is about the daily values.
19 Ms. Taber asked whether you analyzed daily data in your
20 testimony, and you indicated that you analyzed mean
21 monthly data.

22 Isn't it true that daily data would not have
23 added useful information to your testimony?

24 WITNESS BRYAN: Yeah, I think that is true.

25 The drinking water MCLs for some of the key

1 constituents that the City identified as being
2 concerned with, the total trihalomethanes, for example,
3 chloride electrical conductivity or EC, those are all
4 to be met on an annual average basis from a regulatory
5 compliance perspective.

6 So -- and with organic carbon, there is no
7 objective; bromide, there is no objective. So I think
8 the mean monthly approach was adequate.

9 MR. MIZELL: That concludes my redirect.

10 CO-HEARING CHAIR DODUC: Mr. Mizell, if you
11 would indulge me, I glanced away for a moment and
12 totally missed your question with respect to the
13 temperature modeling.

14 MR. BERLINER. Yes, the -- do you want me to
15 repeat the question verbatim?

16 CO-HEARING CHAIR DODUC: If you would, please.

17 MR. MIZELL: Okay.

18 In response to the questions from Ms. Taber
19 about the temperature modeling used in your testimony,
20 you indicated that the temperature model was a USBR
21 model. Isn't it true that your testimony utilizes two
22 temperature models, one where the Delta temperatures
23 are outputs of DSM-2 and the other where upstream
24 temperatures are outputs of the USBR model?

25 WITNESS BRYAN: And the answer to that is yes.

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

2 All right.

3 Any cross-examination?

4 (No response)

5 CO-HEARING OFFICER DODUC: There are no
6 takers, Mr. Mizell.

7 Does that conclude your rebuttal for these
8 witnesses?

9 MR. MIZELL: It does.

10 CO-HEARING OFFICER DODUC: Thank you both so
11 very much.

12 And I want to say, Dr. Bryan, my undergraduate
13 degree was in bioengineering, and if I'd had the
14 fortune of having you as my biology teacher, I may well
15 have ended up in the biological side of that degree.
16 So I thoroughly enjoyed your explanation. Thank you
17 very much.

18 WITNESS BRYAN: Thank you. We would have
19 loved to have you in the biological side.

20 MR. HERRICK: Move to strike.

21 (Laughter)

22 CO-HEARING OFFICER DODUC: All right. Thank
23 you very much.

24 And with that, I don't believe there were any
25 objections voiced with respect to various testimony and

1 exhibits. Okay. And I don't believe there were --
2 actually, there were quite a number of modeling-related
3 questions that were referred to the modeling panel.

4 MR. OCHENDUSZKO: So there were -- on my
5 record, we have questions from Ms. Taber that were
6 referred to the modelers specifically regarding
7 Figure 14 and DWR-652, and -- let's see, the -- from
8 Ms. Des Jardins about the modeling errors and the
9 sediment introduction plan, the look into the
10 biological assessment.

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

13 MS. DES JARDINS: I did --

14 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
15 identify yourself, please.

16 MS. DES JARDINS: My name is Deirdre
17 Des Jardins with California Water Research.

18 And I did have objections to two of the
19 reports submitted by Dr. -- being by Dr. Bryan and
20 associated with his testimony.

21 CO-HEARING OFFICER DODUC: Okay. Go ahead and
22 voice them now.

23 MS. DES JARDINS: My objection is that I don't
24 believe that they conform with Evidence Code 801(b) as
25 interpreted by the California Supreme Court in 2012 in

1 Sargon Enterprises versus the University of Southern
2 California.

3 I don't believe that he included sufficient
4 evidence with the reports on either corroborating the
5 assumptions used in the thresholds of significance or
6 corroborating the errors in the modeling inputs to show
7 that they were reasonable for his arriving at those
8 opinions.

9 So I do not believe that either of those --
10 either 650- -- DWR-651 or DWR-653 meets those
11 requirements, and I object on those grounds.

12 CO-HEARING OFFICER DODUC: Thank you. Your
13 objections are noted.

14 Any immediate response at this time,
15 Mr. Mizell or Mr. Berliner?

16 MR. BERLINER: I would note that the rules of
17 evidence at the Water Board are substantially different
18 than the rules of evidence in court proceedings. We've
19 been through that before. The Board has issued orders
20 on that before.

21 I don't want to get into the substance of the
22 concern that Ms. Des Jardins expressed regarding the
23 reports, other than I've just noted, noted the
24 difference in standards here.

25 And I'm not suggesting that these reports are

1 in any way deficient as far as being appropriate for a
2 court proceeding. In fact, I would suggest that they
3 are sufficient for a court proceeding, particularly
4 when coupled with the witnesses' testimony.

5 CO-HEARING OFFICER DODUC: Thank you. We will
6 take that under advisement.

7 And now, Mr. Mizell, your next witness.

8 MR. MIZELL: Yes, our next witness will be
9 Ms. Maureen Sergent. And Ms. Sergent has appeared
10 before you before, so she is under oath.

11 CO-HEARING OFFICER DODUC: But I think she has
12 since then retired.

13 MAUREEN SERGENT,
14 called as a rebuttal witness by the
15 petitioner, having been previously
16 duly sworn, was examined and testified
17 further as hereinafter set forth:

18 CO-HEARING OFFICER DODUC: Congratulations.

19 WITNESS SERGENT: That's correct. Well, sort
20 of. After this, I might feel more retired.

21 DIRECT EXAMINATION BY MR. MIZELL

22 MR. MIZELL: Ms. Sergent, is DWR Exhibit 77 a
23 true and correct copy of your rebuttal testimony?

24 WITNESS SERGENT: Yes, it is.

25 MR. MIZELL: Thank you. Will you please

1 summarize for the hearing officers your written
2 rebuttal testimony.

3 WITNESS SERGENT: First, before I do that, I
4 would just like to note that there are a couple of
5 typographical errors in my testimony, one of which I'd
6 like to point out on Page 16 of my testimony at the end
7 of Line 27. And it's in regard to the ECCID, in
8 reference to the ECCID agreements.

9 Where it says "Attachment B," it should have
10 actually said "Attachment C." Both attachments are in
11 that agreement. However, Attachment C is the one that
12 is applicable when the peripheral canal would have been
13 operational, and therefore it's the one I was referring
14 to in light of this. It doesn't change any of the
15 analysis. It doesn't change any of the conclusions.

16 But if the Board would like, I can -- we can
17 submit with that correction. Like I said, it doesn't
18 change any of the analysis or conclusions.

19 CO-HEARING OFFICER DODUC: I mean, I don't
20 believe your testimony has page numbers.

21 WITNESS SERGENT: That is correct. When you
22 pull it up on a pdf, you will see it on Page 16.

23 It was one thing -- something happened between
24 the final and the one that was printed out, and none of
25 us caught the fact that the page numbers disappeared.

1 CO-HEARING OFFICER DODUC: Pdf does amazing
2 things, mysterious things.

3 WITNESS SERGENT: Yes, it does.

4 And if we could pull up DWR-7. I'm not going
5 to go all the way through my PowerPoint. I'm just
6 going to briefly summarize my written testimony.

7 But Page 2 of DWR-7, essentially it's just the
8 overview. It has the main points that I'm going to
9 address, so I thought I would put it up while I'm doing
10 my summary.

11 So the purpose of my testimony is to provide
12 information to rebut, essentially, three claims made by
13 parties opposing the approval of the California
14 WaterFix petition: one, that the petition will in
15 effect initiate a new water right; two, that the
16 petition should be denied because the permits have
17 expired; and, three, that operation of the California
18 WaterFix facilities will injure other legal users of
19 water.

20 Certain parties have claimed that it will in
21 effect initiate a new water right because it will
22 change the quantities of water we can divert or the
23 sources of water. I believe DWR-submitted information
24 to show that that is factually incorrect.

25 The petition is consistent with Water Code

1 Section 1701, which provides that a permittee or
2 licensee can petition the Board for a change in point
3 of diversion and the Board can approve that change if
4 it can make the required findings.

5 The petition will not change -- or approval of
6 the petition will not change the maximum combined rates
7 of direct diversion, diversion to storage, or
8 re-diversion of stored water from the Delta including
9 through the California WaterFix facilities.

10 The source of water will not change. The
11 sources will stay the same as those that are shown in
12 the existing authorized permits, including the Hood
13 location which is the currently authorized point of
14 diversion in the two permits that only include the
15 Delta channels as a source of water. The proposed
16 points of diversion are in the same general vicinity as
17 the Hood point of diversion.

18 The SWP permits have not expired, the Board
19 has taken no action to revoke those permits, and DWR
20 continues to operate consistent with the terms and
21 conditions of those permits. DWR has filed a petition
22 for extension of time to those permits. It filed that
23 in 2009. And that will be addressed through a separate
24 process before the Board.

25 And a number of parties, both upstream of the

1 Delta and within the Delta, have claimed that operation
2 of the California WaterFix will result in injury to
3 their water rights, primarily during dry periods. And
4 to support those claims, they pointed to modeling done
5 by MBK Engineers and Exponent to show that, at times
6 and at certain locations, there will be changes in the
7 water quality or water levels in the Delta or changes
8 in upstream storage.

9 The California WaterFix does not change any of
10 the upstream operational criteria and will not affect
11 the ability of DWR to meet the contractual obligations
12 to the settlement contractors on the Feather. Both the
13 MBK and the DWR modeling demonstrate that the
14 contractual amounts will be provided to the Feather
15 River Settlement Contractors.

16 DWR conducted extensive modeling to
17 demonstrate that operation of the California WaterFix
18 facilities can -- will not substantially degrade water
19 quality in the Delta and the facilities can be operated
20 to meet the requirements in D1641, which the Board has
21 determined are protective of ag and M and I beneficial
22 uses.

23 It's important to note that demonstration of a
24 change in and of itself it is not sufficient to support
25 a claim of injury under an individual water right. As

1 the State Water Board articulated in its reasoning for
2 approving the 2015 Temporary Urgency Change Petition of
3 the projects, diverters are not entitled to have water
4 released from upstream reservoirs to provide better
5 water quality than would exist under natural conditions
6 and are not entitled to better water quality than is
7 necessary to allow them to put the water to use to
8 which they are entitled.

9 During dry periods, the projects are typically
10 making supplemental storage releases to maintain water
11 quality and flow criteria which provides incidental
12 benefit to substantial portions of the Delta,
13 particularly during the critically dry period. And
14 under such conditions, the water quality is improved
15 over what would otherwise exist, and the supplemental
16 storage releases also improve the water levels in the
17 area of the North Delta diversions.

18 Diverters are not entitled, however, to demand
19 that these incidental benefits to water quality and
20 water levels remain unchanged, and I do not believe
21 that the enhanced water quality and water levels
22 supported by storage releases during these dry periods
23 are the appropriate baseline from which to assess
24 potential injury.

25 It's also important to note that DWR executed

1 settlement agreements with a number of parties both on
2 the Feather River and in the Delta specifically to
3 address the potential impacts due to the operation of
4 the State Water Project including the North Delta
5 diversion at Hood and the Through Delta facility, which
6 at that time was referred to as the Peripheral Canal.

7 The North Delta diversion and Through Delta
8 facility have been planned components of the SWP since
9 they were originally issued. They're on the original
10 maps that are on file with the Water Board, and this
11 has been a component since 1972.

12 The parties to the settlement agreements
13 consented to the operation of the State Water Project,
14 including the Peripheral Canal, in consideration of the
15 benefits that were provided as part of those settlement
16 agreements. The settlement agreements remain
17 protective for the diverters within those service
18 areas, and operation of the California WaterFix will
19 not alter any of the provisions of any of those
20 settlement agreements.

21 And DWR is committed to continue to meet the
22 terms and conditions of those settlement agreements as
23 it has done historically. And I think we've
24 demonstrated that we have a good record of complying
25 with the terms and conditions of those settlement

1 agreements.

2 So in summary, I think the information
3 provided by DWR and Reclamation supports a decision by
4 the Board that it will not in effect initiate a new
5 water right, the permits have expired, and that it can
6 be operated without injuring other legal users of
7 water.

8 And that concludes my brief summary.

9 CO-HEARING OFFICER DODUC: Thank you,
10 Ms. Sergeant.

11 Any other questions, Mr. Mizell?

12 MR. MIZELL: No. At this time, we can proceed
13 to cross-examination.

14 If the hearing officers might indulge me, can
15 we get a confirmation of the estimated time?

16 Mr. Leahigh has arrived, but he is under a lot
17 of stress with his workload. So I would like to allow
18 him to do other things if we're thinking of going for
19 two hours and 55 minutes, which was the initial
20 estimate.

21 CO-HEARING OFFICER DODUC: I am about to do
22 that right now. Actually, since I don't have that
23 initial list, I will ask everyone to come back up
24 again. If you intend to conduct cross-examination,
25 identify yourself, including your group number to help

1 facilitate my record-keeping, and your estimated time.

2 MR. COOPER: Dustin Cooper on behalf of
3 Anderson Cottonwood Irrigation District and other
4 protestants part of Group 7. I anticipate
5 approximately 30 minutes.

6 MS. SMITH: Rebecca Smith on behalf of North
7 Delta Water Agency. That's Group 9. I anticipate
8 about 30 minutes.

9 MR. RUIZ: Dean Ruiz on behalf of South Delta
10 Water Agency parties. I anticipate about 20 minutes.

11 CO-HEARING OFFICER DODUC: And what group
12 number are you?

13 MR. RUIZ: We are 21.

14 CO-HEARING OFFICER DODUC: It's a test.
15 Twenty minutes, you said, or thirty?

16 MR. RUIZ: Twenty to thirty, but probably
17 closer to twenty.

18 CO-HEARING OFFICER DODUC: Mr. Herrick said 30
19 yesterday. He thinks less of your efficiency than you
20 do.

21 MR. RUIZ: I note that.

22 MS. WOMACK: Suzanne Womack, Clifton Court LP.
23 Fifteen minutes.

24 CO-HEARING OFFICER DODUC: Fifteen? Okay.

25 MR. WASIEWSKI: Tim Wasiewski, for the San

1 Joaquin Tributaries Authority, No. 18. About ten
2 minutes, please.

3 MR. KEELING: Tom Keeling for the San Joaquin
4 County protestants. I have no questions, but I wanted
5 to remind the hearing officers about the arrangement
6 that was made with Ms. Spaletta, my co-counsel
7 yesterday. And so I won't know until I guess Monday or
8 Tuesday what her decision is.

9 CO-HEARING OFFICER DODUC: All right. Thank
10 you.

11 MR. EMRICK: Matthew Emrick, City of Antioch,
12 Group 27. About 15 to 20 minutes.

13 MR. JACKSON: Michael Jackson, Group 31, on
14 behalf of CWIN, CSPA and Aqua Alliance, and I would
15 estimate between 45 minutes and one hour.

16 MS. DES JARDINS: Deirdre Des Jardins for
17 California Water Research, and between 15 and 25
18 minutes. Group 37.

19 MS. MESERVE: Osha Meserve, Lands, Group 19,
20 15 minutes.

21 CO-HEARING OFFICER DODUC: Fifteen or fifty?

22 MS. MESERVE: Fifteen.

23 CO-HEARING OFFICER DODUC: Thank you.

24 Mr. Mizell, did you do the math?

25 MR. MIZELL: About three hours.

1 CO-HEARING OFFICER DODUC: All right. I think
2 it is safe for Mr. Leahigh to de-stress himself.

3 MR. MIZELL: I certainly appreciate it.

4 CO-HEARING OFFICER DODUC: All right. Group
5 No. 7, you're up first.

6 CROSS-EXAMINATION BY MR. COOPER

7 MR. COOPER: Good afternoon. My name is
8 Dustin Cooper on behalf of nine protesting parties.
9 Those are Anderson-Cottonwood Irrigation District,
10 Reclamation District No. 1004, Western Canal Water
11 District, Richvale Irrigation District, Butte Water
12 District, Plumas Mutual Water Company, Paradise
13 Irrigation District, South Feather Water & Power
14 Agency, Nevada Irrigation District. I'm also the lead
15 questioner on behalf of Group 7, the Sacramento Valley
16 Water Users.

17 I've handed out, Ms. Sergeant, a document that
18 I've identified as MLF-6. It's your testimony with
19 some highlights of some text that I want to question
20 you on. And I've also added page numbers so we can
21 more easily reference the document.

22 So if you, Mr. Baker, wouldn't mind, go to
23 Page 7 of MLF-6. The section heading there -- oh, and
24 Madam Hearing Officers, my questions will concern this
25 Section 4, "Operation of the California WaterFix Will

1 Not Injure Other Legal Users." I have a series of
2 questions on this section of Ms. Sergeant's testimony.

3 I will then also have a series of questions on
4 DWR-7. That is Ms. Sergeant's PowerPoint presentation,
5 specifically the slide entitled "No Injury to Other
6 Legal Users: Feather River Settlement Agreements Are
7 Protective."

8 CO-HEARING OFFICER DODUC: Thank you.

9 MR. COOPER: Ms. Sergeant, focusing on the
10 title of your Section 4, Page 7 of MLF-6, "Operation of
11 the California WaterFix Will Not Injure Other Legal
12 Users," the legal users you are testifying to, are they
13 only those legal users identified in your rebuttal
14 testimony?

15 WITNESS SERGENT: My rebuttal testimony is
16 limited to the parties that I address in my testimony.

17 MR. COOPER: Is it fair to say that your
18 opinion that the California WaterFix will not injure
19 other legal users is based on your understanding of how
20 the California WaterFix project will be operated?

21 WITNESS SERGENT: In part.

22 MR. COOPER: So partly yes, partly no. Let's
23 explore the part "no."

24 Why do you say that in part your answer's no?

25 WITNESS SERGENT: I didn't -- I think that

1 misrepresents what I meant.

2 It's due in part to how the California
3 WaterFix will be operated. It's also due in part to my
4 understanding of what other water right holders might
5 be entitled to under their water right.

6 MR. COOPER: Okay. Let's maybe drill down a
7 little bit.

8 So when you -- when you say that partly your
9 conclusion is based on how the project will be
10 operated, what operational assumptions specifically are
11 you relying on?

12 WITNESS SERGENT: Well, when I looked at the
13 California WaterFix, I looked at the -- I reviewed the
14 operational criteria for the operation of the
15 facilities themselves, and I reviewed the modeling
16 results for the proposed operation of California
17 WaterFix.

18 MR. COOPER: Are you relying on the concept of
19 realtime operations?

20 WITNESS SERGENT: I think, as I discussed in
21 my direct testimony, we looked at -- I basically relied
22 on my understanding of realtime operations and my
23 review of the modeling results provided by
24 Mr. Nader-Tehrani and Mr. Munevar, and as well as my
25 understanding of -- general understanding of water

1 rights.

2 MR. COOPER: Are you relying on the operations
3 as they were described in the rebuttal testimony of
4 Mr. Leahigh?

5 WITNESS SERGENT: I have read the rebuttal
6 testimony of Mr. Leahigh. I'm relying on, like I said,
7 my understanding of realtime operations. I believe in
8 my direct testimony I referenced Mr. Leahigh's
9 testimony and his description of operations.

10 MR. COOPER: In your opinion, is there any
11 California WaterFix operational scenario that could
12 possibly result in injury to legal users of water?

13 MR. BERLINER: I'm going to object as to
14 vagueness on that question.

15 Are you asking with regard to proposals that
16 have been put forth by the petitioners or any possible
17 operational scenario that could exist?

18 MR. COOPER: I'm asking -- she just went
19 through a series and answered a series of questions on
20 various operational scenarios that she relied on in
21 developing her testimony, and I'm asking if there's any
22 of those operational scenarios that she could envision
23 resulting in an injury to legal users of water.

24 MR. BERLINER: Thank you.

25 WITNESS SERGENT: My opinion was based on the

1 operational scenarios that the Department is putting
2 forward as its proposed operation. I did not expand
3 beyond that to evaluate any other proposed operational
4 scenarios. And I did not see anything in the
5 information provided for the Department's proposed
6 project that would lead me to believe there would be an
7 injury to other legal users of water.

8 MR. COOPER: Okay.

9 Mr. Baker, would you please scroll down to the
10 bottom of Page 7.

11 Ms. Sergeant, Lines 4 through 26, I won't read
12 it, but please read it to yourself, and let me know
13 when you're ready.

14 WITNESS SERGENT: I've read it.

15 MR. COOPER: Okay. You've mentioned the
16 phrase "water right permits."

17 Is it your understanding that many of the
18 water rights of the various Feather River entities are
19 based on pre-1914 and riparian water rights?

20 WITNESS SERGENT: Yes.

21 MR. COOPER: And these entities would not have
22 water right permits; isn't that correct?

23 WITNESS SERGENT: That is correct. It was a
24 term used generally to indicate the underlying water
25 rights of the -- of those parties.

1 MR. COOPER: Okay. Thank you.

2 Is it your understanding that Western Canal
3 Water District holds pre-1914 water rights for both
4 natural flow and storage and facilities owned by
5 Pacific Gas and Electric Company?

6 WITNESS SERGENT: It's my understanding that
7 Western Canal holds pre-1914 water rights to direct
8 diversion, natural flow rights, and that they have
9 contractual rights through PG&E for water released from
10 storage. But PG&E continues to hold those storage
11 rights.

12 MR. COOPER: Okay. Are you familiar with the
13 Joint Water Districts' Middle Fork project?

14 WITNESS SERGENT: You mean the project that
15 was being proposed at the time that this agreement was
16 under consideration?

17 MR. COOPER: Yes.

18 WITNESS SERGENT: Generally, I'm aware that it
19 was being proposed.

20 MR. COOPER: Are you aware that the Joint
21 Water Districts relinquished their water rights for the
22 Middle Fork project and in exchange received an
23 additional 35,000 acre-feet of water in drought years
24 as defined in their diversion agreement?

25 WITNESS SERGENT: I'm aware that the water

1 rights that had been -- or the applications that had
2 been submitted were withdrawn as part of this. I'm not
3 aware of any -- whether or not any quantity in the
4 contract was specifically in consideration of what
5 might have been developed by that. And it's my
6 understanding that that stretch of the river was
7 declared wild and scenic prior to this contract having
8 been executed, and therefore the project would not have
9 been able to proceed.

10 So I don't have an opinion as to whether or
11 not there was -- any quantity that's in this contract
12 was in consideration for amounts that might have been
13 developed there.

14 MR. COOPER: Okay. Mr. Baker, please scroll
15 to Page 8, Lines 5 through 8.

16 Ms. Sergeant, let me know when you're ready for
17 a question.

18 WITNESS SERGENT: Okay.

19 MR. COOPER: Okay. The six agencies you
20 reference in this testimony, in your opinion, do these
21 six agencies hold prior rights to water as compared to
22 the water rights of the State Water Project?

23 WITNESS SERGENT: Yes, to the natural flow of
24 the Feather River.

25 MR. COOPER: Mr. Baker, would you please

1 display State Water Resources Control Board Exhibit 6.

2 This is DWR Water Right Permit 16478.

3 Page, I believe, 49 of 51 of the document,
4 scroll down to Paragraph 11.

5 And, Ms. Sergeant, would you please read
6 Term 11, and let me know when you're done.

7 WITNESS SERGENT: Okay.

8 MR. COOPER: Is DWR proposing any changes to
9 this existing permit term as part of this proceeding?

10 WITNESS SERGENT: No. Excuse me, no.

11 MR. COOPER: Will DWR continue to comply with
12 this term if the California WaterFix project is
13 constructed and operational?

14 WITNESS SERGENT: Yes, as we currently do.
15 We're not proposing to change that operation.

16 MR. COOPER: Mr. Baker, if we can return to
17 the exhibit identified as MLF-6. And scroll down to
18 Lines 16 through 18 of Page 8. Okay.

19 Ms. Sergeant, you state here that the
20 settlement agreements provide for a defined water
21 supply but they do not create a right to Oroville
22 storage.

23 When you say "defined water supply," what do
24 you mean by that?

25 WITNESS SERGENT: I mean that each of those

1 settlement agreements has a quantity that's to be
2 provided by DWR or made available by DWR based upon the
3 schedules submitted by the various districts. And
4 there are specific provisions in the agreements that
5 define when those quantities can be reduced under --
6 those are both based -- those are based on inflow to
7 Oroville.

8 MR. COOPER: I interpret your answer as you
9 referring only to the irrigation season portion of
10 those contracts. Do you agree?

11 WITNESS SERGENT: That is correct. Some of
12 those contracts, not all of them, but some of those
13 contracts also state that, in the November through
14 March or April time period, the diverters can request
15 an unspecified amount of water for beneficial purposes.

16 MR. COOPER: So the amount of water available
17 to these Feather River entities depends on whether it
18 is a drought or not as defined in the agreements,
19 correct? And my question --

20 WITNESS SERGENT: Under the agreements, yes.

21 MR. COOPER: And that question was limited to
22 the irrigation season. Is that still your answer?

23 WITNESS SERGENT: That's correct.

24 MR. COOPER: Does the amount of water
25 available under the -- to these agencies under the

1 diversion agreements depend on any other variable?

2 WITNESS SERGENT: Not that I'm aware of.

3 MR. COOPER: Is the amount of water available
4 to the Feather River entities, be it a drought or
5 non-drought year, under the diversion agreements
6 limited by the actual amount of inflow coming into Lake
7 Oroville?

8 WITNESS SERGENT: The -- they're based upon
9 Bulletin 120 quantities, the estimates of inflow to
10 Oroville.

11 MR. COOPER: You're referring to the drought
12 definition, correct?

13 WITNESS SERGENT: Yeah. And those are the
14 only conditions under which the quantities specified in
15 the agreements can be reduced.

16 MR. COOPER: Would DWR draft storage at Lake
17 Oroville if necessary to satisfactory the water
18 supplies set forth in the diversion agreements?

19 WITNESS SERGENT: I believe we discussed this
20 quite a bit under my direct, and I indicated that DWR
21 does at times provide water that comes from project
22 storage to meet the demands of the settlement
23 contractors. However, there is no specific storage
24 level or operational scenario or end-of-season storage
25 level that must be maintained to comply with the

1 agreements.

2 MR. COOPER: Under such circumstances where
3 DWR is drafting storage to honor the contract
4 quantities, would you then agree that the Feather River
5 entities have a contractual right to stored water
6 deliveries from Lake Oroville?

7 WITNESS SERGENT: I believe the contractors
8 have a contractual right to a quantity of water and
9 it's at DWR's discretion as to how it provides that
10 quantity of water.

11 MR. COOPER: Mr. Baker, would you please
12 display the exhibit that's been entered into evidence
13 as MLF-42. I believe it may be under -- let's try
14 "Butte Water District." If we can go to Page 6, scroll
15 down; the last paragraph.

16 Ms. Sergent, do you see the last paragraph on
17 Page 6 of this document that starts with "The
18 Department shall...?"

19 WITNESS SERGENT: I do.

20 MR. COOPER: Please read that to yourself and
21 let me know when you're ready for a question.

22 WITNESS SERGENT: Okay.

23 MR. COOPER: Why, in your opinion, does the
24 agreement require DWR to maintain the maximum possible
25 stored water consistent with the flood control criteria

1 and will make no releases prior to June 1 of any year
2 except for the power contracts listed if these agencies
3 do not have a right, a contractual right, to stored
4 water?

5 MR. BERLINER: Objection, relevance.

6 CO-HEARING OFFICER DODUC: Mr. Cooper?

7 MR. COOPER: I believe Ms. Sergent has
8 testified that these agencies, notwithstanding DWR's
9 occasional practice to draft storage for deliveries,
10 that these agencies do not have a contractual right to
11 storage. I'm asking Ms. Sergent, given this
12 contractual language, how she can maintain that
13 opinion.

14 CO-HEARING OFFICER DODUC: Ms. Sergent, are
15 you able to answer?

16 WITNESS SERGENT: The only answer I can give
17 is I've looked at this before and looked at the
18 agreement, and it's my understanding that this was done
19 for power-generation purposes. And I can't offer an
20 opinion beyond that.

21 MR. COOPER: Mr. Baker, can we please return
22 to Page 9 of the document identified as MLF-6. Page 9,
23 Lines 2 through 4.

24 Ms. Sergent, when you make the highlighted
25 statement here, are you relying on the testimony of

1 other DWR or Reclamation witnesses?

2 WITNESS SERGENT: I was relying on the results
3 provided by the DWR modeling and the results shown in
4 the MBK modeling.

5 MR. COOPER: Did you personally review the
6 modeling prepared by MBK Engineers on behalf of the
7 Sacramento Valley water users?

8 WITNESS SERGENT: I just reviewed some of the
9 output, some of the graphical output.

10 MR. COOPER: You have not been tendered as a
11 modeling expert in this proceeding; isn't that correct?

12 WITNESS SERGENT: That is correct.

13 MR. COOPER: When you say that the demands of
14 the settlement contractors are met, what demands are
15 you specifically referring to?

16 WITNESS SERGENT: I'm referring to the
17 schedules that have been -- or the -- what is -- what
18 they're entitled to under the settlement agreements,
19 the quantities that are estimated based upon the inputs
20 to the modeling, the -- shows that there's no shortage
21 provided to the settlement contractors.

22 MR. COOPER: Using the terminology of the
23 agreements, is that only the irrigation season or both
24 the irrigation and the so-called fall water season of
25 the contracts?

1 WITNESS SERGENT: I'm speaking primarily of
2 the irrigation season.

3 MR. COOPER: So does your statement then apply
4 at all to the fall water provision of the contract?

5 WITNESS SERGENT: I don't -- I don't see
6 anything in the proposed operation of the California
7 WaterFix that would affect the amount of water
8 available in the non-irrigation season either.

9 MR. COOPER: You used the phrase "demands."
10 When you use that phrase, do you mean the same
11 as the deliveries that would be available to these
12 agencies under the diversion agreements?

13 WITNESS SERGENT: I do.

14 MR. COOPER: Is it your understanding that the
15 modeling performed by MBK Engineers on behalf of the
16 Sacramento Valley water users showed that irrigation
17 season deliveries to the Feather River entities are met
18 in all California WaterFix scenarios?

19 WITNESS SERGENT: It's my understanding in
20 looking at it, there's no difference between the
21 water -- the quantities available under any of the
22 WaterFix scenarios.

23 MR. COOPER: I'm going to ask the same
24 question with respect to the fall water provision of
25 some of the contracts.

1 Is it your understanding that the modeling
2 performed by MBK Engineers on behalf of the Sacramento
3 Valley water users show that the fall water season
4 deliveries of the Feather River entities are met in all
5 California WaterFix scenarios?

6 WITNESS SERGENT: As I said before, I was
7 primarily referring to the irrigation season. I don't
8 have an opinion with respect to the MBK modeling on the
9 non-irrigation season.

10 MR. COOPER: If modeling showed that it was
11 possible that California WaterFix operations resulted
12 in reduced fall water deliveries to these Feather River
13 entities, would you consider that to be an injury to
14 the legal user of water?

15 WITNESS SERGENT: The only condition under
16 which I could see a potential -- the potential for
17 reducing what might be available outside the irrigation
18 season would be a year such as we had in 2015, and that
19 was a challenge for every component of the hydrologic
20 system.

21 And with respect to an injury to their water
22 rights, I wouldn't consider it an injury to their water
23 rights. The underlying water rights are to natural
24 flow. It was quite clear in that year that, until it
25 started raining again, the inflow to Oroville was

1 extremely low and well below what the demands were.

2 I can't say whether it would be a contractual
3 issue between the Department and those entities, but I
4 would not consider it an injury to their underlying
5 water rights.

6 MR. COOPER: But you're not offering an
7 opinion, as you say, on the matter of the contractual
8 issue, correct?

9 WITNESS SERGENT: That's correct.

10 MR. COOPER: We can change to my second topic
11 of questions.

12 And, Mr. Baker, if you would display DWR-7. I
13 don't have the -- I don't believe there's page numbers,
14 but it's the slide titled "No Injury to Other Legal
15 Users: Feather River Settlement Agreements Are
16 Protective."

17 Yes, thank you.

18 Ms. Sergeant, do you see the line there that
19 says, "DWR has sole discretion over Lake Oroville
20 operations"?

21 WITNESS SERGENT: Yes, I do.

22 MR. COOPER: Does DWR have discretion to
23 operate Lake Oroville in a manner that would violate
24 the terms of the Feather River diversion agreements?

25 WITNESS SERGENT: I think, as I've stated a

1 number of times, DWR operates to meet the demands of
2 the settlement contractors before it determines any --
3 the water that might be available to our SWP
4 contractors. Our operators balance many, many
5 different demands on the system.

6 And I -- I'm not going to speak to what
7 Mr. Leahigh might have to do in an extremely
8 challenging hydrologic condition, but he has to use and
9 DWR has to use its discretion to meet all of its
10 obligations given the water supply that's available.

11 But no, we do not operate in a manner to
12 violate the terms of those settlement agreements.

13 MR. COOPER: If DWR must draft storage at Lake
14 Oroville if necessary to comply with the terms of the
15 diversion agreements, does DWR have discretion to
16 refuse to do so?

17 MR. MIZELL: Objection, incomplete
18 hypothetical.

19 MR. COOPER: Do you understand the question?

20 WITNESS SERGENT: I believe it's asking the
21 same thing as the last question that I just answered.
22 So I'm not quite sure how this is different than what
23 you had just asked me. I mean --

24 MR. COOPER: Would you offer the same answer?

25 WITNESS SERGENT: I would.

1 MR. COOPER: Does DWR have discretion to
2 operate Lake Oroville in a manner consistent with the
3 operations modeled by MBK Engineers on behalf of the
4 Sacramento Valley Water Users?

5 WITNESS SERGENT: I think that, if you're
6 going to ask what discretion our operators have, it
7 would be best to probably ask John Leahigh.

8 MR. COOPER: Does DWR have the discretion to
9 operate Lake Oroville in conjunction with the
10 California WaterFix project in a manner that more
11 aggressively relies upon re-diversion of previously
12 stored water?

13 CO-HEARING OFFICER DODUC: Same answer?

14 WITNESS SERGENT: Yes.

15 MR. COOPER: That is, your you are deferring
16 to Mr. Leahigh?

17 WITNESS SERGENT: Yes. I think if you have
18 direct operational questions, Mr. Leahigh will be here
19 next week, and he would be the best one to answer those
20 questions.

21 MR. COOPER: Okay, then.

22 I'm going to ask this last question but I'm
23 anticipating a similar answer.

24 Does DWR have the discretion to operate Lake
25 Oroville in a manner that reduces the reliability of

1 Lake Oroville in providing water supplies set forth in
2 the Feather River diversion agreements?

3 WITNESS SERGENT: Same answer.

4 MR. COOPER: Okay. Do you see your bullet
5 point a little further up, "CWF does not alter
6 Agreement terms or upstream operational criteria"?

7 WITNESS SERGENT: Yes, I do.

8 MR. COOPER: If, as you testified, DWR has
9 sole discretion over Lake Oroville operations, isn't it
10 true that DWR has discretion to alter the upstream
11 operational parameters for the California WaterFix?

12 WITNESS SERGENT: I believe that we've stated
13 quite a few times that the proposed operation of the
14 California WaterFix that's before the Board right now
15 in our petition, in the modeling, and our environmental
16 documents does not alter the upstream operational
17 criteria. Alteration of the upstream operational
18 criteria would be independent of the California
19 WaterFix project.

20 MR. COOPER: Is it at least possible that DWR
21 may alter the upstream operational parameters for the
22 California WaterFix?

23 MR. BERLINER: Objection, calls for
24 speculation.

25 CO-HEARING OFFICER DODUC: And also we've been

1 here and done that.

2 Move on, Mr. Cooper.

3 MR. COOPER: Just give me a moment. I

4 believe --

5 CO-HEARING OFFICER DODUC: Sustained for my

6 counsel's benefit.

7 MR. COOPER: Okay. I believe that's all my

8 questions -- if you'll give me just a moment to review

9 my notes.

10 Yes, that concludes my cross-examination.

11 Thank you.

12 CO-HEARING OFFICER DODUC: Thank you,

13 Mr. Cooper.

14 Our next up is Group No. 9 for 30 minutes.

15 Are you okay with going -- I'm addressing the

16 court reporter -- 30 minutes? Okay? All right.

17 Then we'll take a break after Group 9

18 completes its cross-examination.

19 CROSS-EXAMINATION BY MS. SMITH

20 MS. SMITH: Hi. Good afternoon, Ms. Sergeant.

21 Thank you again for coming in on your retirement to

22 chat with us. We appreciate it.

23 Hearing Officers, I intend to discuss

24 Ms. Sergeant's qualifications to interpret the North

25 Delta contract and the requirements of the contract

1 that are addressed in her rebuttal testimony. I
2 anticipate about 30 minutes.

3 I'm Rebecca Smith with North Delta Water
4 Agency, not Dustin Cooper.

5 MS. SERGENT, are you an attorney?

6 WITNESS SERGENT: I am not.

7 MS. SMITH: And did you draft the 1981
8 contract?

9 WITNESS SERGENT: I did not.

10 MS. SMITH: Were you involved in the
11 negotiations of the 1981 contract?

12 WITNESS SERGENT: I was not.

13 MS. SMITH: Did you work at DWR at the time
14 the 1981 contract was signed?

15 WITNESS SERGENT: I did not.

16 MS. SMITH: So then you have no personal
17 knowledge of the intent of the parties in drafting that
18 contract, correct?

19 WITNESS SERGENT: I have -- since 1991, I've
20 worked for Department in a capacity that required that
21 I review both the agreements and historical documents
22 related to those agreements and the execution and
23 negotiation of those agreements, so.

24 MS. SMITH: Okay. And I heard that from your
25 testimony. But at the time the contract was actually

1 prepared and drafted, you were not involved, correct?

2 WITNESS SERGENT: That's correct.

3 MR. BERLINER: Objection, asked and answered.

4 CO-HEARING OFFICER DODUC: Let's just let her
5 get through this.

6 But, yes, let's move on, please.

7 MS. SMITH: Okay. All right.

8 Do you have the authority to execute contracts
9 like this?

10 WITNESS SERGENT: Myself to execute a
11 contract? No. That would be someone above my pay
12 grade at DWR, yes.

13 MS. SMITH: Okay. But you have testified that
14 you have -- you're involved in DWR's performance of the
15 contract, 1981 contract?

16 WITNESS SERGENT: I don't directly administer
17 this contract, but I have been tasked to review the
18 contract, and -- with respect to various issues that
19 have come up related to diversions by the particular
20 parties or similar to that sort of thing, I've had to
21 review and provided opinions related to that.

22 MS. SMITH: Okay. So thank you for that.

23 What I'm hearing you say, then, is you have no
24 personal knowledge of how the terms of the contract are
25 actually carried out; is that correct?

1 WITNESS SERGENT: No, that's not correct.
2 There is a group within the office that I work in,
3 SWPAO, that administers the contract, and I have worked
4 closely with the staff in that group that administers
5 the contract. And I'm asked to participate in
6 meetings, discussions, evaluations whenever issues come
7 up related to underlying water rights or -- or
8 sometimes the provisions of the contract.

9 MS. SMITH: Okay. So as to the day-to-day
10 administration of the contract, you are not involved;
11 is that correct?

12 WITNESS SERGENT: I do not do the day-to-day
13 administration of contract; that is correct.

14 MS. SMITH: All right. So at this time I'm
15 going to move to strike Ms. Sergent's testimony
16 regarding the interpretation of the 1981 contract on
17 the basis that she's not qualified as an expert in
18 contract interpretation and she doesn't administer the
19 contract day to day.

20 This testimony is irrelevant to the issue of
21 potential injury under the contract. Without the
22 personal knowledge, she's not in a place to testify for
23 it.

24 CO-HEARING OFFICER DODUC: Mr. Mizell,
25 Mr. Berliner, I assume you will have something to say.

1 MR. BERLINER: Yes. We went through this in
2 Part 1 already. And at that time, the Board found that
3 Ms. Sergent was qualified to render her opinions
4 regarding this contract. We gave the questioner some
5 leeway to ask these questions, but we are hoeing ground
6 that's already been gone over and already been ruled
7 upon.

8 CO-HEARING OFFICER DODUC: Yes, we have
9 covered her qualifications extensively in Part 1A.

10 MS. SMITH: All right. I'm just preserving my
11 record.

12 CO-HEARING OFFICER DODUC: So noted, but don't
13 be surprised if it's overruled.

14 MS. SMITH: Okay. That's fine.

15 Mr. Baker and Ms. McCue, would you mind
16 pulling up the contract, DWR-306.

17 And as they're doing this, Ms. Sergent, you've
18 testified that DWR is not obligated to provide water
19 quality any better than what's specified in this
20 agreement; is that correct?

21 WITNESS SERGENT: Yes.

22 MR. BERLINER: Objection. With -- in what
23 context?

24 MS. SMITH: So I'm looking at your testimony
25 on -- it's Page 11 of the pdf, 7 to 9. And I believe

1 that's actually a direct quote, "DWR is not obligated
2 to provide water quality any better than that specified
3 in the 1981 contract," as to North Delta?

4 WITNESS SERGENT: Yes. It's my understanding,
5 based on my understanding of the contract, that DWR is
6 not required to enhance water quality in North Delta
7 better than what is specified in the contract.

8 MS. SMITH: Okay. So let's talk about the
9 water quality that the contract provides.

10 Can we go to Article 2A of the contract? It's
11 going to be on the second page.

12 There we go. You see it up there on the upper
13 left.

14 So as I read that, the State will provide --
15 State Water Project will provide water qualities at
16 least equal to the better of standards adopted by the
17 State Board as they may be established or the criteria
18 established in this contract; is that correct?

19 WITNESS SERGENT: Yes.

20 MS. SMITH: That's your understanding, too?

21 WITNESS SERGENT: That's my understanding.

22 MS. SMITH: And D1641 contains water quality
23 objectives adopted by the State Board, correct?

24 WITNESS SERGENT: Correct.

25 MS. SMITH: So you would agree that the

1 contract obligates DWR to provide the better of the
2 contract objectives and the D1641 objectives?

3 WITNESS SERGENT: As the contract provides.

4 MS. SMITH: Okay. And then when a temporary
5 urgency change petition, for example, relaxes the
6 requirements of D1641, the contract provisions still
7 apply, correct?

8 WITNESS SERGENT: Correct.

9 MS. SMITH: And you've testified that DWR
10 intends to comply with the contract in the future,
11 correct?

12 WITNESS SERGENT: Yes.

13 MS. SMITH: To your knowledge, has anyone
14 affiliated with the petitioners performed a modeling
15 analysis to determine whether the State Water Project
16 or CVP operations with California WaterFix in place
17 will cause the water quality requirements of the 1981
18 contract to be exceeded more often than is the case
19 without California WaterFix in place?

20 WITNESS SERGENT: We've conducted water
21 quality modeling that covers the area of the North
22 Delta contract. And the -- we've looked at the
23 modeling results, and those modeling results do not
24 provide any indication that it will be more difficult
25 as -- I mean, we discussed this in my direct testimony

1 -- would not make it any more difficult to meet the
2 terms and conditions of the contract under the
3 operation of the California WaterFix.

4 MS. SMITH: Okay. So let's -- I recall that
5 we discussed this in your direct, and I want to be
6 cautious that we're not going to be re-treading that
7 ground. Let's drill down on that a little bit, though.

8 You said that there's been a modeling analysis
9 performed, and here I'm talking about an output result.
10 I recall in your direct testimony that we talked about
11 graphical representations, for example, that were
12 prepared there.

13 Have you brought any of those with you today?

14 WITNESS SERGENT: I do have a copy of the
15 graphics that were provided to me by Mr. Nader-Tehrani.
16 And I just want to clarify that there was not a
17 separate modeling analysis done. This is the DSM-2
18 modeling that was done by the -- done for the
19 California WaterFix. It's the same modeling that
20 Mr. Kienlen used in his analysis that was presented by
21 North Delta.

22 I simply asked Mr. -- Dr. Nader-Tehrani if he
23 could provide the same sort of graphical
24 representations that he provided for Emmaton or Jersey
25 Point at the compliance locations of the North Delta.

1 MS. SMITH: Okay. And so just so we're all
2 understanding and on the same page, these graphical
3 representations, these are ones that have not been
4 introduced into evidence or provided in this hearing
5 yet, correct?

6 WITNESS SERGENT: That's correct.

7 MS. SMITH: Can we review those documents?

8 WITNESS SERGENT: Certainly. And they will be
9 provided -- I mean, we can provide a copy now, or
10 Dr. Nader-Tehrani was directed by Chair Doduc to
11 provide those with his testimony, and he is prepared to
12 do that as well.

13 CO-HEARING OFFICER DODUC: Let's wait for his
14 testimony.

15 MS. SMITH: I would just ask that -- you know,
16 we plan to ask questions about this -- this result that
17 she's reviewed. I think we're entitled to see it
18 before so that we can ask appropriate questions to
19 Ms. Sergent while she's here.

20 CO-HEARING OFFICER DODUC: To what extent,
21 Ms. Sergent, are you familiar enough with what --

22 WITNESS SERGENT: If you would like, I can
23 explain how I used those graphical representations to
24 make my conclusions with respect to North Delta. And
25 then at that point, if you feel like you want to see

1 those, I do have a copy with me, and copies could be
2 made; or we can wait until Dr. Nader-Tehrani.

3 CO-HEARING OFFICER DODUC: Any objection,
4 Mr. Mizell, to introducing those now?

5 MR. MIZELL: No objection.

6 It should be noted that these are simply
7 graphics that were produced using the data that's been
8 available for quite some time.

9 CO-HEARING OFFICER DODUC: All right. Then we
10 will go ahead and do that, please.

11 WITNESS SERGENT: And I just want to clarify.
12 I have one copy. If you'd like to see it, we can have
13 copies made for everyone. We were prepared to have
14 them presented with Dr. Nader-Tehrani. I mean, we can
15 make extra copies now, but I didn't anticipate
16 providing them as part of my testimony because they
17 were going to be provided as part of
18 Dr. Nader-Tehrani's.

19 CO-HEARING OFFICER DODUC: All right. Hold on
20 a second.

21 It's very possible, Ms. Sergeant, that you will
22 be asked to come back on Thursday anyway in order to
23 address Ms. Spaletta's cross-examination. Will you be
24 available next week when Dr. Nader-Tehrani is here to
25 be cross-examined then as well?

1 WITNESS SERGENT: Yes, I would be.

2 CO-HEARING OFFICER DODUC: Perhaps that might
3 be better.

4 MR. MIZELL: We can do that. Would it be
5 limited to questions regarding these graphics?

6 CO-HEARING OFFICER DODUC: Correct.

7 MR. MIZELL: Thank you.

8 MS. SMITH: We would ask that those -- can
9 those exhibits, since we know that they're coming, can
10 they be provided today?

11 CO-HEARING OFFICER DODUC: Yes, you can do
12 that. But it's just not practical right now to have
13 copies for all of us.

14 MS. SMITH: Understood. Understood.

15 CO-HEARING OFFICER DODUC: And you understand,
16 Ms. Smith, that when Ms. Sergent returns, your
17 cross-examination or any other cross-examination, for
18 that matter, of her will be limited to these graphics?

19 MS. SMITH: Yes, I understand. Thank you.

20 So have you ever reviewed modeling results
21 regarding water levels under WaterFix operations as to
22 North Delta and the North Delta contract?

23 WITNESS SERGENT: I looked at the water-level
24 results provided by Dr. Nader-Tehrani.

25 MS. SMITH: Okay. And were those offered here

1 in the hearing?

2 WITNESS SERGENT: Yes, they were.

3 MS. SMITH: All right. So I think we're going
4 to move on to talk about --

5 Can you -- can we pull up Ms. Sergent's
6 testimony? I'm looking at Page 11 of the pdf. And I'm
7 looking at Lines 20 to 22.

8 So here, starting at Article 4(b), I hear you
9 say Article 4 of the agreement provides that DWR shall
10 compensate diverters within North Delta Water Agency
11 for crop losses where the water quality objectives in
12 the agreement are not met.

13 Is that -- that's still your testimony?

14 WITNESS SERGENT: Yes.

15 MS. SMITH: Great. So let's look at -- I'd
16 like to look at Article 4(b) of the agreement, please.
17 Let's look at Section 4. Back up. Section 4 right
18 there.

19 If you want to take a moment to read that
20 section, you may let me know when you're ready.

21 CO-HEARING OFFICER DODUC: Ms. Smith, what
22 section are we talking about?

23 MS. SMITH: So, sorry. It's Sub 4. So it's
24 4(b), Sub 4. There you go. Starting "When the drought
25 emergency exists."

1 WITNESS SERGENT: All right.

2 MS. SMITH: You ready? Okay. So as I read
3 that section, compensation is provided under specific
4 circumstances; is that right?

5 WITNESS SERGENT: That's correct. This
6 portion of my testimony is referring to when the
7 drought emergency conditions are in effect.

8 MS. SMITH: Okay. So it's -- you would say
9 it's true that not all water quality exceedances of the
10 contract would be compensated; is that correct?

11 WITNESS SERGENT: The conditions under which
12 DWR has had problems meeting the water quality criteria
13 would be the critically dry years. There have been
14 other minor exceedances. When I looked at the past,
15 however, they were of very short duration and there
16 were no claims filed.

17 CO-HEARING OFFICER DODUC: Okay. So the
18 claims process -- I'll represent to you the claims
19 process was initiated in 2015.

20 Are you aware of any other time in the
21 contract's history where the claims process was used
22 under Article 4?

23 WITNESS SERGENT: There was a claims process
24 that was conducted during the 1990s drought as well.

25 MS. SMITH: Okay. But no other time during

1 the history of the contract?

2 WITNESS SERGENT: There were no other claims
3 filed as far as I'm aware. Based on my discussions
4 with the people who have processed these, there were no
5 other claims filed by North Delta with respect to not
6 meeting -- any damages based on not meeting the water
7 quality objectives.

8 MS. SMITH: Okay. So I hear you saying that
9 there were no claims filed based on water quality
10 objective exceedances, but I'm asking a slightly
11 different question, and so I want to make sure we
12 understand each other.

13 Were the drought emergency provisions that
14 caused the claims process to begin, were those in place
15 in any other time during the contract's history, to
16 your knowledge?

17 MR. BERLINER: Objection, relevance.

18 MS. SMITH: I think it's certainly relevant.
19 We've discussed the fact that Ms. Sergent's rebuttal
20 testimony has addressed the compensation available to
21 diverters. Article 4 is the section that's cited by
22 Ms. Sergent that allows diverters and North Delta folks
23 who were injured to recover some compensation. I think
24 it's important that we drill down exactly when that
25 compensation is available and when it's not.

1 MR. MIZELL: That might be the case. However,
2 that's about respective use of the contract term, not
3 the historic use of that drought emergency provision.

4 CO-HEARING OFFICER DODUC: Oh, they're linked.
5 The objection is overruled.

6 WITNESS SERGENT: As I just said, it's my
7 understanding based on my review -- I was not involved
8 directly in this, but yes, there was compensation in
9 the '90s drought as well. There was another emergency
10 claims process, and there were a whole host of issues
11 that were wrapped up into those -- that claims process,
12 but it was implemented in the '90s as well.

13 MS. SMITH: Okay. So would a TUCP authorizing
14 temporary relaxation of the D1641 water quality
15 objectives, that would not trigger the drought
16 emergency process by itself, would it?

17 WITNESS SERGENT: In and of itself, I can't --
18 no, that would not initiate the drought emergency. The
19 conditions under which we typically be asking for a
20 TUCP would indicate that we are in the midst of a
21 drought. But that alone -- I think it would depend on
22 whether or not the water quality objectives could be
23 met. It's not dependant -- the contract is not
24 dependant on a TUCP.

25 MS. SMITH: Okay. So would operation of

1 California WaterFix during non-drought times, that
2 would not trigger the drought emergency claims under
3 the contract, correct?

4 MR. BERLINER: Objection. Vague as to any
5 reference regarding operations and what conditions
6 might be existing at the time.

7 CO-HEARING OFFICER DODUC: Ms. Smith?

8 MS. SMITH: At any time; general operations of
9 the California WaterFix project.

10 MR. BERLINER: Same objections. We don't have
11 any parameters on this question. It's an incomplete
12 hypothetical.

13 CO-HEARING OFFICER DODUC: Ms. Smith, ask your
14 question again for me.

15 MS. SMITH: As you understand the operational
16 parameters that we've been given for WaterFix as you
17 evaluated the project, did you identify any point at
18 which the drought emergency provisions would have been
19 triggered due to those operations under the contract?

20 CO-HEARING OFFICER DODUC: Do you mean if it
21 had been applied?

22 WITNESS SERGENT: I'm sorry. I'm not
23 understanding your question.

24 MS. SMITH: So let me try it another way. Let
25 me try it another way because it's complicated.

1 Would any impacts of the project of California
2 WaterFix's operations trigger the drought emergency
3 provisions in the contract?

4 WITNESS SERGENT: The drought emergency
5 provisions in the contract are triggered by the
6 specific criteria that's contained in that agreement
7 based on the Four-River Index and, you know, a Water
8 Board emergency order.

9 MS. SMITH: So the WaterFix operations are not
10 part of that criteria?

11 WITNESS SERGENT: They would not in and of
12 themselves trigger a drought emergency, no.

13 MS. SMITH: Okay. Would an emergency
14 declaration of a drought by the Governor alone trigger
15 a claims process?

16 WITNESS SERGENT: Again, the claims process is
17 triggered by specific criteria in that agreement based
18 on Four-River Index and Water Board emergency orders.

19 MS. SMITH: Okay. Reductions in water quality
20 that are outside a drought emergency don't trigger this
21 claims process, correct?

22 WITNESS SERGENT: If -- if there are
23 exceedances when we're not in a drought emergency? Is
24 that what you're asking?

25 MS. SMITH: Yeah, a drought emergency -- as

1 defined by the contract, a drought emergency, if
2 there's an exceedance that is outside the scope of
3 those drought emergency conditions, are they
4 compensated?

5 WITNESS SERGENT: That would be something that
6 would have to be discussed with -- between DWR and
7 North Delta as far as if there are significant
8 exceedances or exceedances that would result in crop
9 losses.

10 In looking at the history of compliance with
11 this contract, the only years in which there have been
12 issues related to exceedances of these contract
13 quantities have been limited to Three Mile Slough.
14 None of the other criteria have been exceeded. It's
15 been limited to a small area between Three Mile Slough
16 and Rio Vista.

17 There's nothing in the California WaterFix
18 operational criteria that, in those drier year types,
19 would substantially change the water quality criteria,
20 and so I don't think it's reasonable to expect that
21 there would be an increase in exceedances in years
22 outside those critically dry years.

23 MS. SMITH: Okay. And you're basing that
24 determination in part upon the graphical
25 representations in the modeling that you just provided

1 us today?

2 WITNESS SERGENT: In part, right, on the
3 modeling results, the criteria that are contained in
4 the contract, and the compliance history with the
5 contract.

6 MS. SMITH: Okay. So if WaterFix caused an
7 exceedance outside of a drought emergency condition,
8 that wouldn't trigger compensation, correct, under
9 contract?

10 WITNESS SERGENT: It would not trigger drought
11 emergency, but I can't say whether or not North Delta
12 and -- how DWR and North Delta would address that.

13 MS. SMITH: Okay. So nothing in -- we
14 referenced that -- Section 4 of the contract or the
15 contract generally waives North Delta's right to claim
16 an injury as a result of the project's operation; isn't
17 that correct?

18 WITNESS SERGENT: I'm not the one to answer
19 that question. That sounds like a legal question to
20 me.

21 MS. SMITH: Okay. I'm he going to check my
22 notes and then -- all right.

23 So let's go to the pdf of Ms. Sergent's
24 testimony on Page 14, and here I'm looking at Line 12.

25 And you've testified here that the Peripheral

1 -- or the contract was considered to be a settlement
2 with respects to the impacts of the Peripheral Canal;
3 is that correct?

4 WITNESS SERGENT: In addition to the State
5 Water Project as a whole and that being a component of
6 the State Water Project, yes.

7 MS. SMITH: Okay. And were the impacts of the
8 Peripheral Canal ever analyzed?

9 MR. MIZELL: Objection, relevance.

10 WITNESS SERGENT: I'm not aware of what
11 analysis was done for the Peripheral Canal.

12 MS. SMITH: Is there any way to know if those
13 impacts are the same or similar to the WaterFix?

14 WITNESS SERGENT: I don't have an impact
15 analysis. All I can say is that the capacity of the
16 Peripheral Canal is approximately 22,000 cfs. The
17 impact of the current proposal is three intakes of
18 3,000 cfs. So I would not anticipate that impacts
19 associated with the current facility would be any
20 greater than the impacts associated with the facility
21 that was proposed at the time this agreement was
22 executed.

23 MS. SMITH: Okay. So -- but without an
24 impacts analysis, you don't really -- you can't really
25 say with certainty, can you?

1 MR. MIZELL: Objection. This has gone well
2 beyond the scope of Ms. Sergent's rebuttal testimony.

3 CO-HEARING OFFICER DODUC: Actually, it's
4 fair, but I think she's answered it sufficiently in
5 terms of what limited information she has with respect
6 to any analysis referring to the Peripheral Canal.

7 So move on, please.

8 MS. SMITH: All right. So I think we're
9 almost wrapped up here.

10 The contract doesn't expressly state that
11 performance of the contract would avoid injury to water
12 users in the Delta if the canal or WaterFix were ever
13 operated, correct?

14 WITNESS SERGENT: The agreement specifies the
15 obligations of the parties, and the Department is
16 complying with the agreement.

17 And as part of the agreement and the benefits
18 associated with it, right in the introduction to the
19 contract, it acknowledges that at times the operation
20 of the State Water Project improves water quality and
21 at times it diminishes water quality. And this is
22 considered to be the vehicle to address the impacts
23 associated with the operation of the State Water
24 Project. In consideration, North Delta consents to the
25 operation of the State Water Project.

1 So I believe it is the settlement to address
2 issues associated with the operation of the State Water
3 Project. And DWR works very closely with North Delta
4 on a regular basis to address issues that come up.

5 MS. SMITH: Can you tell me where in the
6 contract it references the Peripheral Canal?

7 WITNESS SERGENT: It's -- references the
8 definition of the State Water Resources development
9 system in the Water Code, and a Delta diversion of
10 three Delta facilities is a component of that.

11 It's -- it was a component of the application
12 to the State Water Board at the time that the permits
13 were issued. The -- and it has continued to be a
14 component of the State Water Project since that time.
15 And it was a component of the State Water Project at
16 the time that this agreement was executed.

17 MS. SMITH: So -- but just to be clear, neither
18 the Peripheral Canal nor WaterFix are expressly called
19 out in the contract?

20 WITNESS SERGENT: No unit of the State Water
21 Project is expressly called out in the North Delta
22 contract. It's referred to as the State Water Project
23 or the State Water Resources Development System.

24 MS. SMITH: So that's a "no," correct?

25 MR. MIZELL: Asked and answered.

1 CO-HEARING OFFICER DODUC: She answered it,
2 Ms. Smith.

3 MS. SMITH: Okay. That's all my questions.
4 Thank you.

5 CO-HEARING OFFICER DODUC: Thank you.

6 With that, we will take our break, and we will
7 resume at 2:45.

8 (Recess taken)

9 CO-HEARING OFFICER DODUC: All right. We are
10 resuming.

11 And, Mr. Mizell, do you have an offer to make?

12 MR. MIZELL: I do. Thank you. I was able to
13 obtain an electronic copy of the graphics that we
14 distributed to North Delta Water Agency. And if it is
15 efficient sufficient in --

16 CO-HEARING OFFICER DODUC: Would you hold on a
17 second. Thank you.

18 MR. MIZELL: If it's the Board's pleasure, we
19 can ask North Delta to continue their cross-examination
20 on those graphs and thereby avoid having to call
21 Ms. Sergent back for that purpose.

22 CO-HEARING OFFICER DODUC: All right.

23 Please come back up.

24 MS. SMITH: Hello again. So we just have a
25 few questions on these. I want to make sure we're --

1 CO-HEARING OFFICER DODUC: Ms. Smith, let me
2 ask you since -- even though the court reporter hasn't
3 said anything, let me ask you to slow down just a
4 little bit so that I can follow you a little bit
5 better.

6 MS. SMITH: I will. My apologies.

7 CO-HEARING OFFICER DODUC: Thank you.

8 You should speak up.

9 MS. SMITH: Thank you. I'm well caffeinated
10 today.

11 So, Ms. Sergeant, I'd like to ask you a couple
12 of questions just so we can understand what we're
13 looking at here.

14 So I see this titled "Monthly Average EC
15 Values." And so as I understand it, these are looking
16 purely at changes to EC, correct, and variations there?

17 WITNESS SERGENT: Right.

18 MS. SMITH: And it's at each of the North
19 Delta Water Agency compliance points, correct?

20 WITNESS SERGENT: Right.

21 MS. SMITH: Did you look at any modeling
22 results to consider whether these changes in EC will
23 result in exceedances of North Delta contract
24 objectives?

25 WITNESS SERGENT: What I did was I looked at

1 these results at each of the compliance locations. I
2 looked at the history of compliance with the North
3 Delta Water Agency contract, and I looked at the
4 criteria contained in the North Delta Water Agency
5 contract to see if any of these graphics would indicate
6 an effect of the California WaterFix that would make it
7 more difficult or more likely that those might be
8 exceeded.

9 MS. SMITH: So --

10 CO-HEARING OFFICER DODUC: Ms. Smith, I'm
11 sorry. Before you continue, just so we don't get
12 confused later on, has this been identified as an
13 exhibit?

14 MR. MIZELL: This has not yet been identified
15 as an exhibit. We will serve the service list with
16 this document. I suppose we could select a number and
17 serve it with a number at that time. I would to have
18 look at which are available. Maybe something in the
19 900s.

20 CO-HEARING OFFICER DODUC: I'm going to turn
21 over to staff and counsel.

22 How do we make sure that when we refer to this
23 later on we're able to recognize it?

24 MS. OLSON: I think it's best to pick an
25 exhibit number now.

1 MR. MIZELL: So can we go with DWR-920 -- or
2 901? It doesn't really matter as long as it's after
3 900.

4 CO-HEARING OFFICER DODUC: Why are there two
5 900s?

6 MR. MIZELL: The zip file is large enough that
7 it had to be broken into two parts in order to transmit
8 it to the FTP server.

9 CO-HEARING OFFICER DODUC: So let's make this
10 DWR-901.

11 MR. MIZELL: Okay.

12 MS. SMITH: Okay. Thank you.

13 MS. OLSON: All the graphics will be within a
14 single exhibit?

15 MR. MIZELL: That's correct.

16 MS. OLSON: Okay.

17 CO-HEARING OFFICER DODUC: Thank you.

18 (Petitioner's Exhibit DWR-901 marked for
19 identification)

20 CO-HEARING OFFICER DODUC: Ms. Smith, my
21 apologies. Please continue.

22 MS. SMITH: That's fine. It's good to be
23 clear on this.

24 So we are now looking at newly named Exhibit
25 DWR-901. And I want to step back for a little bit

1 because we kind of lost our train here.

2 This -- can you tell me what this depicts?

3 WITNESS SERGENT: This is a graphical
4 depiction of the monthly average EC for the no action
5 alternative and the four scenarios evaluated. It's a
6 representation in the same manner as the ones that were
7 provided in DWR-513. It's just at additional
8 locations, the exact same treatment of the information.

9 MS. SMITH: And those additional locations are
10 the North Delta compliance?

11 WITNESS SERGENT: That's correct.

12 MS. SMITH: Correct. So did you look at any
13 -- and we -- I asked this question, and I don't think I
14 quite tracked your answer, so I'd like to just make
15 sure that we're clear here.

16 Did you look at any data that would have -- or
17 modeling analysis that would have demonstrated when
18 these increases in EC might have exceeded the
19 objectives in the North Delta contract?

20 WITNESS SERGENT: There was no separate
21 modeling done with the North Delta Water Agency
22 criteria. And those criteria, you know, are quite
23 complex and vary quite a bit.

24 What I did was I took the information from
25 these. I looked at the changes of the trends. I

1 looked at the criteria that were in the contracts.
2 Again -- and I looked at the history of compliance with
3 the North Delta Water Agency contract to see under
4 current operation where there had been issues with
5 exceedances, and I looked to see if the results
6 indicated to me that it might make compliance more
7 difficult.

8 MS. SMITH: So the contract criteria, though,
9 vary year to year and are not static on an annual
10 basis, correct?

11 WITNESS SERGENT: That's correct. They vary
12 by month and they vary by water year type or -- well,
13 they vary by Four-River Index.

14 (Reporter interruption)

15 WITNESS SERGENT: Four-River Index.
16 Four-River Index or Four-Basin Index.

17 MS. SMITH: And these results are not on an
18 annual basis, correct?

19 WITNESS SERGENT: They're monthly results for
20 the period shown on the graphic, the DSM-2 modeling,
21 the same as modeling that was done for the rest of
22 California WaterFix.

23 MS. SMITH: So same as the modeling that was
24 done for the rest of California WaterFix, they're on a
25 16-year average, correct?

1 WITNESS SERGENT: They're a monthly average
2 for the -- yes, that's correct.

3 MS. SMITH: Over the 16-year period?

4 WITNESS SERGENT: Over the 16-year period. So
5 there are years when it would be higher; there are
6 years when it would be lower. I was not looking at any
7 more detail than that because I wanted to see if they
8 indicated a change that was dramatic or might make it
9 more difficult to comply.

10 MS. SMITH: Okay. So let's look at Three Mile
11 Slough if we can.

12 And that would be -- keep scrolling.

13 WITNESS SERGENT: That's down towards the end.

14 MS. SMITH: I apologize. Our pages are in a
15 different order.

16 So if you could stop here.

17 So I see under the Boundary 1 analysis for
18 Three Mile Slough an increase in EC in September. The
19 North Delta contract still applies in September,
20 correct?

21 WITNESS SERGENT: You'll hear quite a bit more
22 about this from Dr. Nader-Tehrani.

23 The Boundary 1 changes that you see are
24 related to the exclusion of X2. And so this is -- that
25 boundary doesn't have X2, and that's why you see those

1 spikes. What I was looking at was the proposed
2 project, which is H3 to H4. Whether or not X2 is
3 retained or not later on is something that is
4 independent of the WaterFix. So my conclusions were
5 based on the California WaterFix proposal.

6 MS. SMITH: Okay. So as I look at that
7 September increase, then, you would agree that the
8 North Delta water contract objectives are in place in
9 September, correct?

10 WITNESS SERGENT: They are in place in
11 September.

12 MS. SMITH: And as I understand your testimony
13 here today, you didn't do any separate quantitative
14 analysis of whether those contract objectives would be
15 exceeded in September?

16 WITNESS SERGENT: Well, I looked at the
17 changes that were shown on average in September. And
18 if you look at the North Delta Water Agency contract,
19 September is a month when the objectives go up
20 considerably.

21 The minimum objectives in the wetter year
22 types, it's 1.5. This shows, you know, it's around
23 1.4, between 1.4 and 1.5. This is an average. And so
24 there are years when it would -- higher or lower. But
25 it did not exceed the criteria that is contained -- the

1 lowest EC criteria that's contained in that contract.

2 So it did not appear even there to be
3 something that would indicate it would be more
4 difficult to meet the water quality criteria in that
5 contract.

6 MS. SMITH: Does that historical analysis
7 account for climate change?

8 WITNESS SERGENT: The historical --

9 MS. SMITH: That you based this --

10 WITNESS SERGENT: Our exceedance graph.

11 MS. SMITH: -- graph.

12 WITNESS SERGENT: I'm looking at the change
13 from the no action alternative. The no action
14 alternative does include climate change. So I'm
15 looking for a likelihood of whether or not the
16 exceedances would increase. And the no action
17 alternative here and the results here do include
18 climate change.

19 MS. SMITH: Okay. So I hear what you're
20 saying about the projects that you've modeled.

21 But the data, as I understand it, that feeds
22 into this graphical representation that we've gotten is
23 based on that 16-year average. And that data, that
24 16-year average, is not -- does that data account for
25 climate change?

1 MR. MIZELL: Objection. This gets into the
2 inputs to the model and really should be deferred to
3 the modelers to discuss.

4 MS. SMITH: Okay. That's fine. We'll ask the
5 modelers.

6 So that analysis that you did based on your
7 historical review, you've looked at the history of
8 compliance with the contract.

9 And did you account for climate change in
10 terms of your future compliance with the contract?

11 WITNESS SERGENT: I looked at the compliance
12 locations where DWR had -- had difficulty in meeting
13 the criteria in the contract. I can't say that I
14 looked at climate change in the historical -- our
15 historical compliance. Historical was historical.

16 MS. SMITH: Okay. Okay. So your answers to
17 these questions here today as to the data that makes up
18 the analysis and the level of quantitative analysis you
19 did, that's consistent for each of these compliance
20 points, right?

21 We talked about Three Mile Slough. But, for
22 example, if we were to look at Rio Vista, the same
23 responses would apply?

24 WITNESS SERGENT: Yes. And those were,
25 essentially, the only two I even looked at. The --

1 there is essentially no change in any of the other
2 locations. And those are -- have historically been --
3 been well under the criteria contained in the contract.

4 So there was nothing to indicate there would
5 be a change in compliance with it.

6 MS. SMITH: Can we pull up Rio Vista? I think
7 it's Page 1 of this document. Oh, down -- it's right
8 below Walnut Grove. Oh, no, it's not.

9 WITNESS SERGENT: Go up. There we go.

10 MS. SMITH: So to confirm, you looked at Three
11 Mile Slough and Rio Vista, predominately?

12 WITNESS SERGENT: I looked at all of them.
13 None of the other ones indicated that there was any
14 significant change, and so the focus -- I focused on
15 these two.

16 MS. SMITH: And so here we see some
17 substantial increases in EC in September, October,
18 November, correct?

19 WITNESS SERGENT: EC, again, the Boundary 1,
20 which relates to not having X2, it is independent of
21 the operation of California WaterFix. So when you look
22 at the proposed project, the only ones where you see a
23 significant change is September.

24 MS. SMITH: So as we look at those, I want to
25 confirm again that the contract was in place during

1 those months at Rio Vista and operative?

2 WITNESS SERGENT: That's correct. And again,
3 the change that you see is related to X2, and
4 Dr. Nader-Tehrani will address that.

5 MS. SMITH: And we'll chat with
6 Dr. Nader-Tehrani. I won't ask you to testify as to
7 modeling, I promise.

8 So is your opinion here based on the
9 Boundary 1 analysis?

10 WITNESS SERGENT: I think, as I mentioned
11 before, that my opinions are based on the project that
12 the Department proposed to the Water Board, which is
13 the H3 to H4.

14 MS. SMITH: So the answer is no?

15 WITNESS SERGENT: The answer is I looked at
16 all the results, and when I focused my opinion on the
17 ability to continue to meet the criteria contained in
18 the contract, I primarily focused on H3 to H4.

19 MS. SMITH: Okay. Thank you.

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

22 Next is Group -- I'm sorry -- 18, the San
23 Joaquin Tributaries Authority.

24 CROSS-EXAMINATION BY MR. WASIEWSKI

25 MR. WASIEWSKI: Good afternoon. Tim Wasiewski

1 for the San Joaquin Tributaries Authority. The only
2 area that I want to go into is injury to legal users of
3 water.

4 If we could pull up Ms. Sergent's testimony
5 which I think is Page 20. That's 20. Could you scroll
6 down? I think it's the part that starts with
7 Subsection 5 titled "Other Delta Diverters."

8 WITNESS SERGENT: I believe you mean Page 21?

9 MR. WASIEWSKI: Is it 21? I must have counted
10 wrong. Yes, that's it. Thank you.

11 Lines -- starting at Lines 16, Ms. Sergent, do
12 you see where it says, "Demonstration of a change in
13 water quality alone is not sufficient to support a
14 claim of an injury to an individual's water rights"?
15 Do you see that?

16 WITNESS SERGENT: I do.

17 MR. WASIEWSKI: Do you understand in this
18 proceeding that it's not the burden of the protesting
19 parties to demonstrate that they have not been injured
20 by the project?

21 WITNESS SERGENT: I understand that the
22 Department has to put forward the information to
23 demonstrate that there won't be an injury to other
24 legal users of water. Yes.

25 MR. WASIEWSKI: Okay. And now the second

1 sentence following that one which starts, "If DWR and
2 Reclamation are operating the projects such that water
3 quality objectives in D1641 are being met..." do you
4 see that?

5 WITNESS SERGENT: Yes.

6 MR. WASIEWSKI: Then it goes on from there.

7 I want to -- I want to figure out what you
8 mean by those two sentences put together.

9 Do you mean to say that, if the projects
10 comply with the water quality objectives that are in
11 D1641 and which are imposed by the Board under the
12 Porter-Cologne Act, that they cannot cause an injury to
13 other legal users of water?

14 And you can put aside if there's a separate
15 contract in place. I'm talking about a party that
16 would not have a contract with DWR.

17 WITNESS SERGENT: My understanding, based on
18 my time and working with water rights, is that a water
19 right holder is entitled to what would be available
20 absent upstream storage releases depending on whether
21 they have an appropriative or riparian right or the
22 water quality that's necessary to put the water to
23 which they're entitled to beneficial use.

24 So the Department doesn't make a determination
25 as to what water quality is necessary to protect

1 beneficial uses. That's the Board's responsibility,
2 and it has done that with its Water Quality Control
3 Plan. And the Department operates to meet those
4 requirements.

5 And, however, there are many times, and I
6 particularly focus on the dry periods because that has
7 been -- those have been the periods when most of the
8 parties have indicated that there is a concern about
9 potential injury to other water users. And --

10 MR. WASIEWSKI: Okay.

11 WITNESS SERGENT: -- those dry periods are
12 periods when the projects are making substantial
13 storage releases to meet these objectives.

14 MR. WASIEWSKI: Okay. I'm not concerned about
15 the dry periods. I guess I'm just concerned about is
16 it your position that setting the water quality
17 objectives in the Porter-Cologne Act sets the sort of
18 parameters or barriers upon which the determination of
19 an injury is dependent?

20 MR. MIZELL: Objection. Misstates her
21 testimony.

22 MR. WASIEWSKI: No, I wasn't stating it. I
23 was asking her if that was what it was.

24 WITNESS SERGENT: It's my understanding that
25 the Water Board has set the criteria which is necessary

1 to protect the beneficial uses, and that is set to make
2 the best beneficial use of the water supply available.
3 And so there has -- you know, there's standards that
4 are set to protect those uses. And I believe that the
5 Water Board itself has stated that water users are --
6 water right holders are entitled to the level of water
7 quality that's necessary to put those beneficial --
8 that water to beneficial use.

9 MR. WASIEWSKI: Is that the same definition of
10 "no injury," being able to put it -- sorry -- being
11 able to put it to beneficial use?

12 WITNESS SERGENT: My understanding -- I'm
13 providing you with my understanding of what would be
14 necessary to avoid injury to other legal users of
15 water. And that would be either the water quality that
16 they would get absent storage releases or the water
17 quality that's necessary to put that water to
18 beneficial use, the water to which they're entitled
19 under their water right.

20 MR. WASIEWSKI: Okay. I think I understand
21 your position.

22 If the Board were to adjust the water quality
23 objectives in the Porter-Cologne Act, would it be
24 simultaneously redefining what would constitute an
25 injury to the legal users of water who rely on that

1 water quality?

2 WITNESS SERGENT: I think that's beyond what I
3 need to be determining --

4 MR. WASIEWSKI: If you don't know, that's
5 fine.

6 WITNESS SERGENT: -- here. That's something
7 that I'm not prepared to provide an opinion on right
8 now.

9 MR. WASIEWSKI: Okay. If the Board were to
10 change which parties were responsible for meeting water
11 quality objectives under the Porter-Cologne Act, is it
12 your position that the Board would simultaneously be
13 changing who's capable of causing an injury to other
14 users of water from a water quality standpoint?

15 MR. MIZELL: Objection, speculative, and calls
16 for speculation based on a future hypothetical.

17 CO-HEARING OFFICER DODUC: You may answer that
18 you do not know.

19 WITNESS SERGENT: My answer is the same as my
20 answer to the last question.

21 MR. WASIEWSKI: Okay. Are you familiar with
22 Water Code Section 13241 which requires the Board to
23 establish water quality objectives that ensure the
24 reasonable protection of beneficial uses of water?

25 WITNESS SERGENT: I'm aware that that is the

1 Water Board's responsibility, to set the water quality
2 objectives.

3 MR. WASIEWSKI: Yeah. I'm just asking if
4 you're familiar with it.

5 And so you know that the law, then, does not
6 require that water quality objectives be set at a level
7 that ensures no injury to other legal users of water?
8 Do you understand that?

9 MR. MIZELL: Objection, goes beyond the scope
10 of the rebuttal testimony.

11 MR. WASIEWSKI: Her rebuttal testimony, I
12 think --

13 CO-HEARING OFFICER DODUC: Talks about injury,
14 yes.

15 Please answer to the best that you can. If
16 you do not know, just --

17 WITNESS SERGENT: I'm not prepared to make a
18 legal determination as to what the Water Board
19 criteria -- how they're going to be set, what they're
20 going to require.

21 MR. WASIEWSKI: Okay. I guess this is the
22 last question. Is it your opinion, then, that -- no
23 legal users of water will be injured by the California
24 WaterFix, is that opinion dependant upon the assumption
25 that the objectives set forth in D1641 will be met?

1 WITNESS SERGENT: Again, it's not only D1641,
2 meeting D1641.

3 MR. WASIEWSKI: So I'll stop you right there
4 because I'm willing to qualify it further. And I don't
5 want to talk about water quantity or anything.

6 But from a water quality perspective alone, is
7 your opinion that other legal users of water will not
8 be injured from a water quality standpoint, assuming
9 D1641 is met?

10 WITNESS SERGENT: I guess I don't know how to
11 answer it differently than I already have.

12 The Department is operating to meet the
13 criteria that the Water Board has set as the standard
14 that will protect other water users. And in my
15 experience and working with water rights, operating to
16 meet those objectives is what has been used as a -- as
17 a test for injury to other legal users.

18 MR. WASIEWSKI: Okay. Thank you. That's all
19 I have.

20 CO-HEARING OFFICER DODUC: Thank you.

21 Ms. Meserve, you're up next.

22 CROSS-EXAMINATION BY MS. MESERVE

23 MS. MESERVE: Thank you. I have just a couple
24 of questions touching on the contract discussion in the
25 testimony as well as the water quality standards

1 compliance, just very briefly, and the reliance on the
2 modeling and the placement of the diversion in relation
3 to other diversions.

4 Good afternoon, Ms. Sergeant.

5 On Pages 7 through 21 of your testimony, which
6 is DWR-77, you discuss the various contracts and your
7 opinion that they would address the potential concerns
8 that might otherwise occur under -- if the petition was
9 granted. Do you acknowledge that water users may have
10 additional rights separate from any contracts that they
11 have with DWR?

12 WITNESS SERGENT: The agreements don't alter
13 the underlying water rights of the diverters within
14 these. However, the -- the agencies that we have
15 agreements with executed these agreements recognizing
16 that the State Water Project would at times improve and
17 at times reduce the water quality that was available.
18 And this was considered to address those specific
19 impacts, the impacts of the operation of the State
20 Water Project.

21 MS. MESERVE: And looking at the supplemental
22 petition filed by the petitioners on September 11th,
23 2015, Exhibit C, which lists thousands of water users
24 within the Delta, and as well as considering all the
25 protestants in this proceeding that are outside the

1 Delta, would you agree that there are water rights
2 holders with potential injuries from this change
3 petition that have no contract?

4 WITNESS SERGENT: There are many parties that
5 divert water from the watershed that don't have a
6 contract, but I disagree that I think they will be
7 injured by the project. But there are many parties
8 that divert water that is not -- that are not under
9 contract with the Department.

10 MS. MESERVE: Your testimony also claims that
11 a change in water quality is insufficient to show an
12 injury. If -- I'm sorry, starting again.

13 The testimony refers -- on Page 21 the way I
14 marked it -- to D1641 as the target for providing the
15 water quality.

16 But aren't there other types of injuries that
17 could be of concern to a water user that may not be
18 encompassed in D1641?

19 WITNESS SERGENT: I believe we talked about
20 this. This relates to water quality. We've -- I've
21 also talked about water levels.

22 MS. MESERVE: What about if there was a new
23 pollutant of concern or other problems such as harmful
24 algal blooms that is not addressed in D1641? Couldn't
25 that also potentially injure a water user?

1 WITNESS SERGENT: I believe the algal bloom
2 issue has been addressed extensively, and the
3 California WaterFix is not introducing any of the
4 constituents that you're talking about.

5 The area, the timing of the period that we're
6 talking about where there is the concern about the
7 algal blooms, from what I understand, I'm not
8 testifying as to anything related to those. All I'm
9 testifying as to the time frame, as I understand it,
10 when these are a concern such as July-August time
11 frame.

12 In all but the wettest years, when I
13 understand the algal blooms are not an issue, Term 91
14 is in effect. And the water quality would actually be
15 worse if the projects were not supporting water quality
16 and flow objectives in the Delta.

17 So no, I don't believe that operation of the
18 California WaterFix will contribute to injuries
19 associated with those sorts of things, given the period
20 of time that the parties have expressed a concern over
21 some of these issues.

22 MS. MESERVE: But you're not here testifying
23 as to harmful algal blooms, are you?

24 WITNESS SERGENT: I am not. I believe you
25 have already heard that testimony.

1 MS. MESERVE: So just to go back to my
2 original question just to make sure that we get it
3 covered, there are constituents or pollutants or other
4 phenomenon of concern that may be outside D1641 that
5 could be potential injuries, correct?

6 WITNESS SERGENT: I believe those have been
7 addressed in -- by other parties before the Board.

8 MS. MESERVE: Now, with respect to the
9 modeling, your testimony relies on the outcomes of
10 comparative modeling done for the EIR and for the BA as
11 the basis for many of your conclusions, correct?

12 WITNESS SERGENT: In part, that's correct.

13 MS. MESERVE: The various scenarios and
14 alternatives selected for analysis, however, are just
15 examples of how the project might be operated as
16 compared -- might affect water quality and other
17 parameters as compared to each other, correct?

18 WITNESS SERGENT: And the no action
19 alternative.

20 MS. MESERVE: And with respect to the no
21 action alternative, do you degree that the no action
22 alternative is probably the most important comparison
23 point against which the other scenarios or alternatives
24 would be compared?

25 MR. BERLINER: Objection, beyond the scope and

1 relevance. This is a modeling question.

2 MS. MESERVE: Ms. Sergeant has testified that
3 she relied on the outputs of the modeling and the
4 comparisons between the different scenarios in order to
5 make her conclusions.

6 CO-HEARING OFFICER DODUC: So in your
7 analysis, did you view -- how do you view the
8 importance of the no action alternative?

9 WITNESS SERGENT: I -- I was not involved in
10 coming up with what the no action alternative was. And
11 so what I looked at was the results of the no action
12 alternative, and I compared -- I looked at the
13 comparison of the results of the various alternatives
14 which had the same baseline -- from what I understand,
15 the same baseline information as far as climate change.

16 There were variations in flow and criteria in
17 some of those, and I looked at the comparison between
18 the proposed project and the no action alternative, but
19 I did not look -- I did not make a separate analysis of
20 what might have been a better no action alternative or
21 a different no action alternative. That was --

22 MS. MESERVE: And just thinking about the bar
23 charts that we looked at with the -- two groups ago,
24 many of those charts just show bars that look exactly
25 like each other, whether there's the project or without

1 it, correct?

2 WITNESS SERGENT: That's correct, indicating
3 that the California WaterFix operation has no impact on
4 the water quality at that location, does not alter the
5 water quality at that location.

6 MS. MESERVE: Do you have any understanding of
7 the assumptions that were made in the underlying NAA
8 that created that baseline scenario for this
9 comparison?

10 MR. BERLINER: Objection, relevance.

11 CO-HEARING OFFICER DODUC: No. She's answered
12 "no."

13 MS. MESERVE: If it turns out that the NAA
14 scenario is not similar to future conditions without
15 the project, wouldn't those comparisons be fairly
16 useless?

17 MR. BERLINER: Objection, relevance, beyond
18 the scope of this witness's expertise.

19 CO-HEARING OFFICER DODUC: Well, it actually
20 is relevant, but I don't think she can answer it.

21 Ms. Sergeant?

22 WITNESS SERGENT: Again, I think there's been
23 far more discussion about the no action alternative and
24 the comparative nature of the modeling and the results.
25 And I don't have anything additional to contribute on

1 the modeling.

2 MS. MESERVE: Would petitioners be constrained
3 to actually operate according to any of the specific
4 scenarios or alternatives that were modeled if this
5 petition is granted?

6 MR. BERLINER: Objection, asked and answered.

7 CO-HEARING OFFICER DODUC: Move on,
8 Ms. Meserve.

9 MS. MESERVE: Would you agree that the
10 proposed diversions are upstream on the Sacramento
11 River from the current South Delta diversions?

12 MR. BERLINER: Objection, asked and answered.

13 CO-HEARING OFFICER DODUC: These are all
14 questions that are pretty basic, Ms. Meserve.

15 Was there a point?

16 MS. MESERVE: I will follow up with my next
17 question, how about.

18 With the different location, would that create
19 the potential for impacting more or additional water
20 users than the current place of diversion does?

21 MR. BERLINER: Objection. It's vague as to
22 "different location" of what.

23 MS. MESERVE: The -- like as I was trying to
24 establish, it's upstream on the Sacramento River, and
25 so I'm simply trying to address -- get Ms. Sergent to

1 confirm that that impacts additional water users than
2 the project -- or potentially impacts additional water
3 users than would have previously been impacted under
4 the current diversion location.

5 WITNESS SERGENT: There are certainly
6 additional users between the current South Delta
7 diversion and the proposed North Delta diversion.

8 And the whole point of the modeling work and
9 all of the other environmental work that's been done by
10 the Department is to demonstrate that operation of
11 those facilities at the North Delta diversion will not
12 adversely impact or result in an injury to those users
13 between the North Delta diversion or downstream of the
14 North Delta diversion with respect to the Delta.

15 Of course, other work was done with respect to
16 upstream analysis as well. But that is the point of
17 what we are trying to provide to the Board.

18 MS. MESERVE: There are additional -- many
19 additional diversions than would be -- potential to be
20 impacted today?

21 WITNESS SERGENT: Is that a different question
22 than what you had just asked? I'm not clear what it --

23 MS. MESERVE: I'll move on.

24 WITNESS SERGENT: -- what else you're asking.

25 MS. MESERVE: I think it's clear enough.

1 And do you have any expertise or knowledge
2 about the quality of water necessary to grow crops in
3 the Delta?

4 WITNESS SERGENT: I believe we've talked about
5 this in my direct. I'm not an agronomist.

6 MS. MESERVE: No further questions.

7 CO-HEARING OFFICER DODUC: Thank you,
8 Ms. Meserve.

9 Up next is Mr. Ruiz. Let's see if you can be
10 more efficient than Mr. Herrick believes you are.

11 MR. RUIZ: At this point, it's going to be
12 much more efficient. I'm mindful of the lateness of
13 the day and, frankly, the skill of this witness.

14 CROSS-EXAMINATION BY MR. RUIZ

15 MR. RUIZ: Good afternoon, Ms. Sergeant. Dean
16 Ruiz for the South Delta Water Agency parties. I just
17 have a few questions, and they pertain to, briefly, the
18 topic of the issue of their -- or, apparently, your
19 indication that there's no new water right incidental
20 benefit, and just a couple of questions regarding
21 Term 91.

22 Before I start, I just wanted to say that,
23 like other protestants, I want to preserve my right to
24 file a motion to strike. I believe most of the
25 testimony of Ms. Sergeant is repetitive and

1 inappropriate for rebuttal. But I'm not going to go
2 through that now; do that later. I know we're late in
3 the day.

4 CO-HEARING OFFICER DODUC: But I appreciate
5 the heads-up.

6 MR. RUIZ: Thank you.

7 Ms. Sergeant, with respect to Section 2 --
8 Page 2, Section 2 of your testimony, you made the
9 statement that you didn't -- you feel like this doesn't
10 result in a new water right, correct?

11 WITNESS SERGENT: That's correct.

12 MR. RUIZ: Would the currently proposed
13 project, the CWF project, allow the projects to export
14 water that they are currently unable to export under
15 existing permit and regulatory limitations, in your
16 opinion?

17 WITNESS SERGENT: There are certainly
18 restrictions due to the biological opinions that limit
19 how much surplus flow the projects can divert. And one
20 of the purposes of the North Delta diversion is to
21 address some of those limitations and fisheries issues.

22 So there are times when they would -- the
23 Department would be able to divert water that they
24 can't under the current regulatory restrictions; that
25 there is no change in the permitted quantities, and

1 there's no change in any of the other restrictions
2 contained in the permits.

3 MR. RUIZ: Referring to your testimony on
4 Page 5, beginning at Line 23, you make reference to the
5 Peripheral Canal and the previous vote on that topic,
6 the referendum.

7 Upon what legal basis do you conclude that the
8 1982 referendum on the Peripheral Canal does not
9 legally prevent DWR from pursuing this project,
10 specifically the North Delta divisions?

11 MR. MIZELL: Objection, beyond the scope of
12 the rebuttal testimony.

13 CO-HEARING OFFICER DODUC: I'm reading the
14 last sentence there.

15 And, Mr. Ruiz, is it your intent to ask her
16 the basis of her determination that it has no effect?

17 MR. RUIZ: That is specifically my intent,
18 yeah.

19 CO-HEARING OFFICER DODUC: Okay.

20 WITNESS SERGENT: What I mean by the -- this
21 reference in my testimony is that the vote regarding
22 the Peripheral Canal did not alter the Department's
23 water rights permits, and it did not remove the Hood
24 authorized point of diversion from the Department's
25 permits. And to my knowledge, it did not prevent the

1 Department from pursuing an alternate proposal for
2 diversion at that location.

3 MR. RUIZ: And that is based on your own
4 understanding, your own knowledge?

5 WITNESS SERGENT: It's based on my
6 understanding and the work that the Department has been
7 doing since that time.

8 MR. RUIZ: Referring to Page 13 of your
9 testimony, beginning at about Line 8, your testimony,
10 you reference that the projects make supplemental
11 storage releases that improve water quality in the
12 Delta. Isn't it correct that those releases are
13 mandated by various federal and state statutes and
14 regulations?

15 WITNESS SERGENT: The Department is required
16 to currently -- under its water right permit, to meet
17 the objectives contained in D1641, which is a
18 regulatory requirement, and the project operates to
19 meet those requirements.

20 MR. RUIZ: So with respect to Term 91, that's
21 a permit or license condition which follows the fact
22 that the Department is required to meet these specific
23 regulatory requirements; is that correct?

24 WITNESS SERGENT: Term 91 was implemented to
25 protect the storage releases that DWR and Reclamation

1 make to meet the requirements. The reason the
2 Department is required -- and if you read D1641, you'll
3 see -- the language in D1641 states that on a temporary
4 basis DWR and Reclamation are required to meet these
5 requirements until such time as the Board would make
6 another determination as far as responsibility.

7 So to protect the storage releases made to
8 meet these requirements, because the sole obligation
9 rests with DWR -- at the moment rests with DWR and
10 Reclamation to protect those storage releases from
11 diversion by others downstream, the Water Board
12 implemented Term 91 to protect those releases for the
13 intended purpose.

14 MR. RUIZ: Would you agree that neither DWR or
15 the Bureau of Reclamation can export any water until
16 they do in fact make -- satisfy the regulatory and
17 statutory requirements that are placed upon them?

18 WITNESS SERGENT: I'm not sure what regulatory
19 and statutory requirements you're talking about, and I
20 don't believe that I went into any of that in my
21 testimony as well.

22 MR. RUIZ: Well, I just want to look at --

23 WITNESS SERGENT: Specifically, I mean.

24 MR. RUIZ: I just want to look at -- if you
25 can refer to Page 23 of your testimony, beginning about

1 Line 11 where you say, "In managing the SWP to provide
2 water to its contractors, DWR operates its facilities
3 to meet all statutory" -- I'm sorry -- "operates its
4 facilities to meet all statutory and regulatory
5 requirements imposed on the SWCP prior to satisfying
6 delivery obligations?"

7 WITNESS SERGENT: Yes, that's correct. And
8 that is how the project operates.

9 MR. RUIZ: When you say "all statutory and
10 regulatory requirements," to what are you referring?

11 WITNESS SERGENT: I'm referring to any of the
12 requirements currently imposed on the State Water
13 Project operations. As I listed here, it includes
14 D1641 and the biological opinions.

15 MR. RUIZ: Do those -- when you say "all," do
16 those statutory and regulatory requirements also apply
17 to or include South Delta water quality objectives for
18 agriculture?

19 WITNESS SERGENT: They are contained in D1641,
20 and the projects operate to meet the requirements. If
21 they cannot be met, then we notify the Water Board the
22 reason why they cannot be met.

23 And the Water Board has determined that, if it
24 is beyond the control of the projects, then it is not
25 considered a violation of D1641.

1 MR. RUIZ: Do you know if the South Delta
2 water quality objectives were violated at any time in
3 the past ten years?

4 WITNESS SERGENT: They -- there have been
5 exceedances in the last ten years.

6 MR. RUIZ: Were there exceedances last year?

7 WITNESS SERGENT: I can't tell you right now.
8 I believe that there were exceedances at certain
9 periods, but I couldn't tell you when they were or to
10 what extent they were or the reason for those
11 exceedances.

12 MR. RUIZ: Did the projects continue to export
13 water to their contractors during these times of
14 exceedances?

15 WITNESS SERGENT: As I indicated, the projects
16 operate to meet those to the extent we can. And to the
17 extent that the Department doesn't have any control
18 over those objectives and the operation of the projects
19 do not cause those exceedances or contribute to those
20 exceedances, the Board has determined that -- we notify
21 the Board. The Board reviews it, and if it is beyond
22 the control of the projects, it is not determined to be
23 a violation.

24 So there is no requirement to discontinue
25 exports because there are times when discontinuing

1 exports would not contribute to meeting those.

2 However, if you want to get into any further
3 detail, I would suggest questions for John Leahigh, who
4 will be here next week.

5 MR. RUIZ: Well, I just want to be clear in
6 what your answer is, and I appreciate that. Your
7 rebuttal testimony is pretty clear where it says that
8 DWR operates to meet all these requirements prior to
9 satisfying the delivery obligations.

10 WITNESS SERGENT: If you would like, we can
11 pull up D1641 and you can look at the language that's
12 included in that particular term where it states that,
13 if there is an exceedance, we shall notify the Board.
14 The Board will look at it, and if it's determined it's
15 beyond the control of the projects, it's not considered
16 a violation.

17 MR. RUIZ: I appreciate that.

18 CO-HEARING OFFICER DODUC: I think you've
19 repeated it three times now. Yes.

20 MR. RUIZ: We don't need to do that. Thank
21 you.

22 Referring to Page 22 of your testimony --
23 let's see. That would be at about Line 18 through 22.

24 When you refer to -- now, what are you
25 referring to, actually, when you refer to the term

1 "incidental benefit to diverters in the Delta"? How is
2 it, in your opinion, that Delta diverters are
3 incidental beneficiaries of these supplemental releases
4 that you indicate the projects make?

5 WITNESS SERGENT: The water quality in the
6 Delta, in significant portions of the Delta, would
7 continue to degrade. If upstream storage releases were
8 not made to maintain those water quality objectives and
9 flow releases, there would be additional salinity
10 intrusion into the Delta, causing a degradation in
11 water quality. The water quality is maintained better
12 than what would exist absent those releases.

13 MR. RUIZ: About the last question here.

14 You say during Term 91, water quality in
15 substantial portions of the Delta would continue to
16 degrade. When you say "substantial portions," what are
17 you -- specifically are you referring to?

18 WITNESS SERGENT: It depends on the year type.
19 In a critically dry year such as we had in 2015, water
20 quality degradation could extend well into the Central
21 and even to the North Delta.

22 In years where there are just the summer dry
23 periods, the impact might be more limited to the
24 Western Delta or South-Central Delta areas.

25 So it depends on the -- it depends on the flow

1 from the various tributaries and the water year type.

2 MR. RUIZ: I have no further questions.

3 CO-HEARING OFFICER DODUC: Thank you,
4 Mr. Ruiz. I believe you were even more efficient than
5 Mr. Herrick.

6 All right. Mr. Emrick.

7 MR. MIZELL: Hearing Officer Doduc, I've been
8 reserving Dr. Nader-Tehrani here in the hearing room
9 just in case we needed additional testifiers today.
10 Can --

11 CO-HEARING OFFICER DODUC: No, I will not.

12 MR. MIZELL: -- I release him?

13 Thank you very much.

14 CO-HEARING OFFICER DODUC: Because Mr. Jackson
15 is up next, and he's estimating 45 to 60 minutes.

16 CROSS-EXAMINATION BY MR. EMRICK

17 MR. EMRICK: Good afternoon, Board Members,
18 staff.

19 Ms. Sergeant, I've only got about four or five
20 questions. They're just going to be clarification
21 questions.

22 If I could have Ms. Sergeant's testimony put
23 on, Exhibit 77. And if I could have you go to pdf
24 Page 20, and if we can scroll down to the bottom of
25 Page 20.

1 Ms. Sergent, starting at Page -- excuse me --
2 Page 20, Line 28, and then going to Page 21, you talk
3 about Antioch's support for claim of injury focusing on
4 Boundary 1.

5 Isn't it true that Ms. Jennifer Pierre
6 testified that, in order to determine whether there was
7 going to be harm from the project, a claimant should
8 focus on Boundary 1 and Boundary 2?

9 MR. MIZELL: Objection, goes beyond the scope
10 of the rebuttal testimony.

11 MR. EMRICK: Well, Ms. Sergent is indicating
12 that -- I think she's implying that Antioch is
13 improperly focusing on Boundary 1 and it should be
14 looking at Alternative 4A, H3 -- excuse me -- H3 and
15 H4. And there was testimony from Ms. Pierre that, in
16 order to determine injury, you should look at
17 Boundary 1 and Boundary 2.

18 CO-HEARING OFFICER DODUC: Do you recall that
19 testimony?

20 WITNESS SERGENT: If I can clarify that the
21 claim of injury was related to the Boundary 1 results,
22 not the boundary -- they -- looking at the broad range,
23 the only area where there was injury indicated was the
24 Boundary 1 analysis.

25 I'm not saying that we shouldn't look at more

1 than the Boundary 1. I'm just saying that the claim of
2 injury appeared to focus on -- in Antioch's position,
3 on the Boundary 1 analysis.

4 MR. EMRICK: And then if I could have you
5 scroll up on Page 20, start with Line 12.

6 This deals with the term of the agreement,
7 1968 agreement between Antioch and DWR; is that
8 correct?

9 WITNESS SERGENT: That's correct.

10 MR. EMRICK: Yeah. And there was an
11 extension; I believe it's DWR-310.

12 We don't need to put that up.

13 But an extension to 2028; is that correct?

14 WITNESS SERGENT: That's correct.

15 MR. EMRICK: And after 2028, the contract goes
16 to a year-to-year basis; is that correct?

17 WITNESS SERGENT: After the -- the earliest
18 that it can be terminated by a party is 2028.

19 MR. EMRICK: And after that time, it can be
20 terminated upon 12 months' written notice by either
21 party?

22 WITNESS SERGENT: It can be terminated by 12
23 months' notice. The testimony includes the language
24 and the description of the original agreement because
25 that original expiration date was 2008.

1 And so it was included to indicate the manner
2 in which both parties continued to operate and express
3 willingness to extend that agreement. And DWR is
4 committed to continue to work with Antioch under the
5 agreement.

6 MR. EMRICK: That's where my question actually
7 goes is there's a statement.

8 If we could scroll up a little bit to
9 Lines 26, 27 of Page 20.

10 You state in your testimony that DWR has
11 consistently stated that it will continue to meet the
12 terms of the Antioch agreement; is that correct?

13 WITNESS SERGENT: Yes.

14 MR. EMRICK: Then would DWR, to your
15 knowledge, be willing to commit to a permit term that
16 would state that it could not terminate the agreement
17 during the life of the WaterFix project?

18 CO-HEARING OFFICER DODUC: I think,
19 Mr. Emrick, you know by now that they have not proposed
20 any terms, and Ms. Sergent is definitely not going to
21 agree to any terms, sitting right here.

22 MR. EMRICK: It's just that --

23 CO-HEARING OFFICER DODUC: Unless you want to
24 surprise me?

25 WITNESS SERGENT: No. I was just going to say

1 that my answer here would be the same as my answer was
2 under direct testimony.

3 MR. EMRICK: It's just the implication is that
4 DWR would not terminate. And I just wanted to make
5 clear that it does have the power to terminate, and it
6 has not committed to any extension beyond 2028; is that
7 correct to your knowledge?

8 WITNESS SERGENT: It's not -- to my knowledge,
9 there haven't been any discussion. I shouldn't say --
10 I have not been involved in any discussions between DWR
11 and Antioch with respect to an extension beyond the one
12 that was negotiated just a few years ago.

13 MR. EMRICK: Thank you. That's all I have.

14 CO-HEARING OFFICER DODUC: Thank you,
15 Mr. Emrick.

16 Mr. Jackson, you are up.

17 Are you doing okay? Asking the court
18 reporter.

19 THE REPORTER: Oh, yes.

20 CO-HEARING OFFICER DODUC: Mr. Jackson has a
21 lengthy cross-examination, so if you need to take a
22 break, let me know -- around 4:00, maybe?

23 THE REPORTER: Sure, just five minutes would
24 be fine.

25 MR. JACKSON: I don't know whether or not you

1 want me to respond to the lengthy statement, but I've
2 watched the cross-examination of this witness on a
3 number of occasions, and 15 minutes of questions
4 invariably ends up with an hour's worth of answers.

5 So I want to get my questions done, and if the
6 answers are crisp, then it won't take me all that time.
7 We can't always control how much time.

8 CO-HEARING OFFICER DODUC: Got it. Okay.

9 And, Mr. Jackson, I make that comment simply
10 to make sure the court reporter gets a break. It
11 wasn't meant to criticize you in any way.

12 MR. JACKSON: Okay. Thank you. And I didn't
13 mean to be overly sensitive, but it's been a long week.

14 CO-HEARING OFFICER DODUC: Although I will
15 always continue to applaud Mr. Herrick for his
16 efficiency.

17 MR. JACKSON: Mr. Herrick is a gem of a
18 person.

19 MR. HERRICK: Move to strike.

20 MR. JACKSON: Granted.

21 CO-HEARING OFFICER MARCUS: I think we'll have
22 to address that in our final ruling.

23 CO-HEARING OFFICER DODUC: Yes.

24 CROSS-EXAMINATION BY MR. JACKSON

25 MR. JACKSON: Could you put up, Mr. Baker,

1 DWR-77. All my questions will be from her testimony.

2 And would you go to the last page.

3 I'll start at the conclusion and work back,

4 and it may be faster that way.

5 Ms. Sergeant, you are -- are you the only

6 witness that DWR has put forward in this case in regard

7 to the question of water rights?

8 WITNESS SERGENT: I am the witness put forward

9 for the water rights portion of the testimony, yes.

10 MR. JACKSON: And to your knowledge, there's

11 been no other witness?

12 WITNESS SERGENT: Not to my knowledge, unless

13 someone appeared that I wasn't aware of.

14 MR. JACKSON: Are you testifying in this

15 situation for the Bureau as well as their water rights

16 expert?

17 WITNESS SERGENT: I am not.

18 MR. JACKSON: So you are more familiar with

19 the system from Oroville than you are from Shasta?

20 WITNESS SERGENT: I don't believe that was any

21 part of my testimony. I think I tried to make it clear

22 in my testimony that I am providing rebuttal testimony,

23 not necessarily any more expansive testimony. I'm

24 providing rebuttal testimony with respect to DWR's

25 water rights and contracts.

1 MR. JACKSON: But limited to DWR

2 WITNESS SERGENT: Correct.

3 MR. JACKSON: Okay. The first line in your
4 conclusion seems to me to be incorrect. So I'm going
5 to ask you a couple of questions.

6 Have you reviewed the petition?

7 WITNESS SERGENT: Yes.

8 MR. JACKSON: You indicate that it's limited
9 to a request to add three new points of diversion to
10 the listed DWR and Reclamation water rights?

11 WITNESS SERGENT: That's correct.

12 MR. JACKSON: Are the -- are you testifying
13 for Reclamation in regard to its water rights? Did I
14 get that wrong?

15 WITNESS SERGENT: The statement is merely --
16 that sentence is merely stating what's in the petition.
17 I'm making no claims as to what Reclamation's water
18 rights are or any changes related. I'm just stating
19 what's in the petition.

20 MR. JACKSON: All right. Well, there are
21 other things in the petition as well, for instance,
22 changes installing the Head of Old River barrier,
23 getting a permit for that.

24 Do you know anything about that?

25 WITNESS SERGENT: The permit for the Head of

1 Old River barrier is not a -- I mean, we're not
2 requesting a change in our water right right now, to my
3 knowledge.

4 MR. JACKSON: It also includes a change in the
5 location of the measurement for inflow that moves the
6 monitoring station --

7 MR. MIZELL: Objection, misstates --

8 MR. JACKSON: -- to below the present?

9 MR. MIZELL: Objection. Misstates the
10 petition, assumes facts not in evidence.

11 CO-HEARING OFFICER DODUC: Hold on.

12 Let me ask, Mr. Jackson, where this is leading
13 to?

14 MR. JACKSON: Well, where it's leading to is
15 this is not simply a request to add three new points of
16 diversion and re-diversion. It affects the whole
17 California water system. This is not a -- and there
18 are different changes in terms of inflow and how it's
19 measured. There are -- a request to install a Head of
20 Old River barrier. We went through all of that in
21 direct, but not with her.

22 MR. MIZELL: To the extent that Mr. Jackson
23 seeks to redefine the project that was petitioned for,
24 I can't stop him from making those claims, but that is
25 well beyond Ms. Sergent's testimony in rebuttal, and

1 it's not the position of the Department.

2 MR. JACKSON: Well, the conclusion drawn by
3 this witness is that this is nothing more than a change
4 in -- to add --

5 CO-HEARING OFFICER DODUC: Actually, I think I
6 say that in my introduction every morning as well.

7 MR. JACKSON: That it's nothing more than a
8 change in --

9 CO-HEARING OFFICER DODUC: Not that it's
10 nothing more, but the purpose of the hearing is to
11 consider the petition to add points -- to change points
12 of diversion and re-diversion by the two permit
13 holders.

14 So I'm not sure where you're going with this.

15 MR. JACKSON: Well, where I'm going with this
16 is that --

17 CO-HEARING OFFICER DODUC: I think we all
18 appreciate the complexities that are involved, and I'm
19 sure Ms. Sergent appreciates those complexities as
20 well. So -- but the -- at its face value, I don't
21 believe, unless you would like to convince me
22 otherwise, that this is an incorrect statement.

23 MR. JACKSON: Well, I'll -- that's for the
24 brief. I was just trying to find out if there was
25 anything more, if she would acknowledge that there were

1 more. Evidently not.

2 CO-HEARING OFFICER DODUC: That this is a
3 complex petition?

4 WITNESS SERGENT: Certainly I would
5 acknowledge it's a complex petition, and I believe
6 there may be some confusion over some assumptions that
7 were made in the modeling and something that -- as far
8 as the info of export ratio and what was requested in
9 the petition, but I don't believe that there is
10 anything in the first statement that I believe is
11 incorrect.

12 MR. JACKSON: All right. Thank you.

13 I was giving her an opportunity.

14 You indicate in -- at Line 5 in your
15 conclusion that information provided by DWR supports a
16 decision that the petition will not in effect initiate
17 a new water right, and the rest of the sentence that
18 everybody can read concludes with "not injure other
19 legal users of water."

20 What information are you relying on?

21 MR. BERLINER: Objection, asked and answered.

22 CO-HEARING OFFICER DODUC: I -- Mr. Jackson,
23 is there a specific piece of information she has
24 presented in her testimony that you would like to drill
25 down on? Because that's, in essence, the entirety of

1 her testimony -- that I hope you're not asking her to
2 repeat.

3 MR. JACKSON: I'm not. I'm going to avoid --
4 I mean, one of the reasons I wanted to start with the
5 conclusions is that will tell me where in the rest of
6 this document my questions are relevant.

7 The information provided by DWR, does she mean
8 everything in the record?

9 CO-HEARING OFFICER DODUC: I believe -- you
10 may answer. My understanding is it's focused on what's
11 in your rebuttal testimony.

12 MR. JACKSON: Is there information that she
13 was given outside of this hearing, outside of what I've
14 seen?

15 CO-HEARING OFFICER DODUC: Ms. Sergeant?

16 WITNESS SERGENT: No.

17 MR. JACKSON: No new information?

18 WITNESS SERGENT: I believe that the
19 Department has submitted all of its information that we
20 are relying on with respect to the petition before the
21 Board.

22 MR. JACKSON: And all of that that you're
23 relying on to ask the Board to say that none of us are
24 injured is in the record; is that correct?

25 MR. BERLINER: Objection, vague and ambiguous.

1 I mean, we're in the middle of hearing. So are you
2 asking about evidence that's been submitted in total or
3 evidence that's been submitted to date?

4 MR. JACKSON: To date, because as I understand
5 it, we're in the rebuttal phase of the first part of
6 a -- of the elements of 1701.

7 MR. BERLINER: Well, the only reason I raised
8 the objection is because there's a temporal issue here.
9 We have additional witnesses to go. So I'm just
10 concerned the question's vague as to the reference that
11 you're asking this witness to respond to.

12 MR. JACKSON: I'm asking the witness whether
13 or not the sentence that she wrote on Page 5 -- on
14 Line 5 through Line 8, the information provided by DWR,
15 is it the information that is presently in the record?

16 WITNESS SERGENT: Maybe I can just respond by
17 saying that DWR believes that the modeling done, the
18 environmental work done, the information, the testimony
19 that we are providing before the Board supports the
20 decision by the Board that it will not injure other
21 legal users of water.

22 At the conclusion of this hearing, all of that
23 information that we are relying on that the Board will
24 be able to rely on will be information that is
25 submitted into the record and available to the Water

1 Board.

2 MR. JACKSON: So some of it may come in later?

3 WITNESS SERGENT: Well, I believe since we are
4 not completed with Part 1 that, yes, there will be
5 information to come in later.

6 MR. JACKSON: Are you coming back in Part 2?

7 WITNESS SERGENT: I am not anticipating coming
8 back in Part 2. Part 2 deals with the fisheries
9 issues, and so...

10 MR. JACKSON: All right. So you are relying
11 for your opinion on what you've reviewed of your
12 testimony and other testimony that is in the record as
13 of today?

14 WITNESS SERGENT: I'm relying on the modeling
15 results, the contracts that I've reviewed, the
16 information that I've been provided as discussed in my
17 direct testimony. This portion of my testimony is to
18 address some additional issues, and I believe I cite
19 the information that I rely on there.

20 I guess I'm at a loss as to what you're
21 looking for or where -- where you're -- what you're
22 trying to get beyond what I've already indicated I've
23 relied on.

24 MR. JACKSON: On Line 11, you indicate that
25 "In managing the SWP to provide water to its

1 contractors, DWR operates its facilities to meet all
2 statutory and regulatory requirements imposed on the
3 SWP prior to satisfying delivery obligations."

4 Is this sentence limiting the duty to meet
5 statutory and regulatory requirements prior to
6 satisfying delivery obligations only including the
7 contractors, or does it include everyone else with a
8 priority right higher than the projects?

9 WITNESS SERGENT: There are many regulatory
10 and statutory objectives that the Department -- or
11 requirements the Department has to meet. Many of those
12 are not related to our State Water Project contractors.
13 Those requirements are spelled out in our long-term
14 settlement agreements.

15 We operate to D1641. We operate consistent
16 with the biological opinions. We certainly operate
17 consistent with, you know, our water rights permits,
18 our conditions on meeting the area of origin, the
19 county of origin. And I believe that we operate
20 consistent with all of those requirements. Those are
21 permit terms that we operate consistently with.

22 MR. JACKSON: All right. And if I added to
23 the list the Delta Protection Act and the Delta Reform
24 Act, would you agree that you have -- that DWR has an
25 obligation, State Water Project has an obligation to

1 operate consistent with those state laws?

2 MR. MIZELL: Objection, calls for a legal
3 conclusion. Goes beyond the scope of this --

4 MR. JACKSON: This is the only legal person
5 they put up. So how else are you going to --

6 WITNESS SERGENT: Can I just say that this was
7 all addressed -- I mean, these very same questions were
8 asked during direct, and I believe those questions have
9 all been asked and answered.

10 Would you like me to give an additional answer
11 to that or I --

12 CO-HEARING OFFICER DODUC: Why don't you just
13 go ahead and say "yes."

14 WITNESS SERGENT: Yes.

15 CO-HEARING OFFICER DODUC: Thank you.

16 WITNESS SERGENT: Well, I'd like to clarify
17 that. I mean, I believe that Mr. Jackson and the
18 Department have very different interpretations of what
19 is required to meet the Delta Protection Act, but the
20 Department operates consistent with what it feels its
21 obligations are.

22 MR. JACKSON: To -- including the Delta
23 Protection Act and the Delta Reform Act?

24 WITNESS SERGENT: I believe I just answered
25 that question.

1 CO-HEARING OFFICER DODUC: She did.

2 MR. JACKSON: And that answer was, then,
3 "yes"?

4 CO-HEARING OFFICER DODUC: (Nods head) With
5 her caveat which we will not repeat.

6 MR. JACKSON: Yes.

7 Now, calling your attention to Section 5,
8 Other Delta Diverters, it's -- it talks about the
9 claims of injury of a number of folks, including CSPA
10 and others. And you make the statement that
11 demonstration -- on Line 17 in the second paragraph,
12 "The demonstration of a change in water quality alone
13 is not sufficient to support a claim of injury to an
14 individual's water rights."

15 What is the basis of that opinion in statute?

16 WITNESS SERGENT: The basis, if you're asking
17 what the basis of my opinion here is, as I responded to
18 earlier questions, the basis of that is my
19 understanding of what a water right user -- based on my
20 experience in working with water rights, what a water
21 right user is entitled to under its water rights, which
22 depends on whether they have a riparian right or an
23 appropriative right. If they have a riparian right,
24 that would entitle them to what would be available with
25 the natural flow.

1 MR. JACKSON: Let me -- you've said that a
2 number of times, both on direct and now on rebuttal and
3 to me and others.

4 The -- you -- let's take the Delta -- the
5 Delta Protection Act, which has a certain -- which has
6 requirements in it that requires the projects to
7 provide water quality protection, salinity control for
8 agriculture in the Delta, correct?

9 WITNESS SERGENT: My understanding of the
10 Delta Protection Act, it does provide that the projects
11 -- before exporting water, there is certainly a
12 salinity control obligation -- or requirement in the
13 Delta Protection Act. And the projects do provide
14 substantial salinity control. But I do believe both
15 the Water Board, although I don't want to speak for the
16 Water Board, but certainly the courts --

17 MR. JACKSON: Good, because I don't either.

18 WITNESS SERGENT: My understanding of rulings
19 specifically related to -- certain claims disagree that
20 the Department -- that there is a particular salinity
21 standard that must be met or that Delta -- in-basin
22 uses -- users under their water right have a right to
23 demand storage releases to meet any particular salinity
24 level in the Delta.

25 And I do believe that Judge Robie has included

1 that in a couple of his decisions. Now, I believe the
2 Department is meeting its obligations with respect to
3 that.

4 MR. JACKSON: And your basis of belief is a
5 review of Judge Robie's decisions?

6 WITNESS SERGENT: Among other things.

7 MR. JACKSON: The -- you -- on this item down
8 at Line 26, and you began a long quote from the TUCP as
9 part of your -- part of your support for your position,
10 correct?

11 WITNESS SERGENT: Actually, that's not a quote
12 from the petition. That's a quote from the order
13 issued by the Water Board approving that petition.

14 MR. JACKSON: Right. Yes. So it starts with
15 the words "Riparian and appropriative water rights
16 holders with rights to divert water below project
17 reservoirs only are entitled to divert natural and
18 abandoned flows."

19 You've worked on the Feather River. I heard
20 you answering questions. You're fairly familiar with
21 that. And you sell water to the Feather River
22 contractors -- DWR does, correct?

23 WITNESS SERGENT: No, that's not correct.

24 Are you referring to the settlement
25 contractors?

1 MR. JACKSON: I'm referring to the settlement
2 contractors.

3 WITNESS SERGENT: No, we do not sell water to
4 the settlement contractors.

5 MR. JACKSON: All right. And they use -- but you
6 deliver water to them, and they use it?

7 WITNESS SERGENT: We deliver water to the
8 settlement contractors under the provisions of those
9 contracts. Yes, that's correct.

10 MR. JACKSON: And some of that water runs back
11 into the Feather River, correct?

12 WITNESS SERGENT: Right.

13 MR. JACKSON: And that's then abandoned flow?

14 MR. MIZELL: Objection. Calls for a legal
15 conclusion.

16 CO-HEARING OFFICER DODUC: What is your
17 opinion, Ms. Sergeant, since you included it in your
18 testimony?

19 WITNESS SERGENT: I didn't speak to whether or
20 not any of the return flows are abandoned flows, but I
21 think there is some confusion here with Mr. Jackson.

22 When -- maybe I could just clarify generally.

23 By the time we get down to the Delta, the
24 Department operates such that the water quality
25 requirements and objectives in the Delta are met. We

1 do not prevent anyone upstream of that point from
2 diverting water under their water rights. The only
3 time those are restricted is if the Water Board takes
4 an action that might restrict those water rights.

5 So every diverter upstream of that point is
6 entitled to divert the water that they need under those
7 water rights. By the time we get down to the Delta, if
8 the Department is not operating under Term 91, natural
9 flow is sufficient to meet those requirements. If it's
10 operating under Term 91, then we are making
11 supplemental storage releases to meet those, meaning
12 that the natural flow is insufficient to meet the water
13 quality objectives.

14 And it means that, at some point, the system
15 has run out of natural flow and supplemental storage
16 has to be released. If people continue to divert
17 additional water, additional supplemental storage would
18 have to be released. So --

19 MR. JACKSON: So we've -- I asked about one
20 thing, and you conflated it with three things.

21 The one I asked about and -- which was
22 abandoned flows on the Feather River, and you talked
23 about natural flows, and you talked about the -- some
24 other things.

25 I just want to specifically talk about

1 abandoned flows.

2 Did you consider in your -- well, first of
3 all, DWR, after they deliver it to Western Canal, it's
4 Western Canal's water, right?

5 MR. MIZELL: Objection. Calls for a legal
6 conclusion.

7 We're getting to a point where we have gone
8 beyond her rebuttal testimony. She does not discuss
9 the color of the water once it's delivered or once it's
10 returned to the river. She mentions abandoned flows
11 only in the context of whether or not it's protective
12 of other water rights downstream.

13 So to discuss these sorts of nuances between
14 deliveries made or return flows back to the river goes
15 well beyond the rebuttal testimony.

16 CO-HEARING OFFICER DODUC: Mr. Jackson?

17 MR. JACKSON: The relevance of this line of
18 questioning is that there are substantial abandoned
19 flows delivered to -- by the projects to their
20 contractors. The contractors attempt to use all of the
21 water they can, but some of it flows back into the
22 stream as abandoned flows from every river leading into
23 the Delta.

24 The abandoned flows could be picked up at the
25 present location in the Delta. By moving the location

1 of the Delta to the North Delta, you are completely
2 changing who's got the first shot at the abandoned
3 flows, and that's an injury.

4 CO-HEARING OFFICER DODUC: What I'm seeing
5 here is she is referencing a State Board -- she is
6 actually quoting a State Board order. And while you
7 may disagree with that, I'm not sure that you -- it's
8 appropriate to disagree with it with her. She's simply
9 quoting what's in the TUCP.

10 MR. JACKSON: Well, I'm trying to ask her, as
11 a water rights expert for DWR, whether DWR claims that
12 this is their water. I mean, we've been hearing the
13 claim that water released from Oroville is able to be
14 picked up again and nobody else can touch it. But
15 there are large releases from Oroville that go through
16 a certain part --

17 CO-HEARING OFFICER DODUC: If I may make a
18 suggestion. I don't see how -- explain to me how that
19 relates to the point that she's making here in her
20 rebuttal testimony.

21 MR. JACKSON: I'm trying to show that the
22 point she's making here is incorrect and irrelevant to
23 this situation, to their claim that they have a right
24 to change the point of diversion in a way that will not
25 -- that they -- that they have a right to change the

1 point of diversion in a way that won't injure or change
2 the relationship of other people's water rights to the
3 projects.

4 CO-HEARING OFFICER DODUC: Now you've confused
5 me because I don't believe that was reflected in
6 Ms. Sergeant's testimony, which I did read.

7 MR. JACKSON: I think Ms. Sergeant is using
8 this particular quote from the State Board as
9 justification for limiting water right holders to only
10 the natural flows necessary to provide water quality
11 for their purposes of use. They're not entitled to
12 have water released from upstream storage in order to
13 provide better water quality than would exist under
14 natural conditions.

15 But that's not the only water that's coming
16 into the Delta that would be affected in terms of
17 ability to take it by the change in this point of
18 diversion. You'd to have go through all of the rest of
19 us.

20 CO-HEARING OFFICER DODUC: To the degree that
21 I could follow that, it sounds to me that it's a purely
22 legal issue that perhaps might be served better in a
23 brief of some kind. So I'm not quite following the
24 probative value of this line of questioning if you're
25 focusing on just that legal issue, and she is not a

1 legal expert.

2 MR. JACKSON: Well, and -- but she's used this
3 legal issue to argue that nobody in the Delta is
4 entitled to water coming in if it came out of one of
5 the project reservoirs, and those reservoirs dominate
6 every river system in the Central Valley.

7 CO-HEARING OFFICER DODUC: Ms. Sergeant.

8 WITNESS SERGENT: Maybe -- there is clearly
9 some confusion, and maybe I can clarify for
10 Mr. Jackson.

11 At the time I'm referring to --

12 CO-HEARING OFFICER DODUC: Actually, clarify
13 for me.

14 WITNESS SERGENT: Okay. He seems to be under
15 the perception that we are --

16 CO-HEARING OFFICER DODUC: Rather than
17 interpreting his perception, why don't you just --

18 WITNESS SERGENT: All right. At the time when
19 Term 91 is in effect, the quantities being diverted by
20 the projects are less than the amount of storage that
21 is being released.

22 CO-HEARING OFFICER DODUC: And that, you have
23 said in your testimony.

24 WITNESS SERGENT: Yes. And quantities of --
25 additional quantities of water are being released to

1 maintain water quality and flow objectives. So the --
2 and at that time, the Department is not preventing
3 other diverters from diverting water. However, if
4 those supplemental storage releases were not made, the
5 water quality that would be available to those other
6 diverters in the Delta would be less than what is being
7 provided.

8 And so the point of my testimony is that those
9 diverters do not have a right to demand that we make
10 supplemental storage releases to maintain a water
11 quality that would exist in the absence of project
12 storage. Hope that was a little more clear.

13 CO-HEARING OFFICER DODUC: And I understood
14 that from your written testimony.

15 MR. JACKSON: And I understand that from her
16 written testimony.

17 What I'm asking her about now is the quote
18 from -- and it is from a Board order about abandoned
19 flows because they are not releases in the character
20 that she just talked about. These are different forms
21 of inputs to the streams in the Central Valley.

22 And I'm asking her whether or not they do --
23 I'm coming to the point where I -- where the next
24 question would be do you calculate how much of the flow
25 coming in during the -- into the Delta from the rivers

1 tributary to the Delta, in months of agricultural use,
2 do you calculate what is being released from the
3 reservoirs for the purposes of salinity control or
4 other legal requirements? Do you separate that out
5 from abandoned flows?

6 MR. MIZELL: I'm going to object.

7 CO-HEARING OFFICER DODUC: I don't know if
8 she --

9 Go ahead. Object

10 MR. MIZELL: I'm going to object as being
11 beyond her rebuttal testimony. This is a question that
12 could be directed to the operators if Mr. Jackson so
13 chooses, but it is well beyond Ms. Sergent's testimony.

14 CO-HEARING OFFICER DODUC: I will sustain that
15 objection, Mr. Jackson.

16 And as you ponder on that, I did promise the
17 court reporter a five-minute break.

18 So let's go ahead and take our break now, and
19 we will resume at 4:17.

20 (Recess taken)

21 CO-HEARING OFFICER DODUC: All right. If
22 everyone will take your seats, we will resume.

23 Mr. Jackson, let me see if I can offer this.

24 We've established that Ms. Sergent is not an
25 attorney; that her testimony is what it is. And she

1 does offer some opinion that lends to a lot of legal
2 issues that I believe you would like to explore.

3 I don't know that getting her to answer those
4 legal -- answer questions regarding those legal
5 definitions and legal interpretation is of a lot of
6 probative value at this point. I would suggest that
7 you save those arguments for an eventual brief later on
8 at the conclusion of this hearing, rather than trying
9 to dissect her testimony legal issue by legal issue.

10 MR. JACKSON: Well, I do understand that
11 I'm -- you run a risk in a hearing like this of
12 antagonizing the Hearing Officer.

13 CO-HEARING OFFICER DODUC: As long as you do
14 it sweetly, Mr. Jackson.

15 MR. JACKSON: And not having -- and having
16 evidence uncontroverted appear in the middle of your
17 court case.

18 And so when there are broad statements like
19 have been made here, by not finding out what they're
20 based on, there's a factual predicate to most legal
21 issues. And that's all I'm trying to establish.

22 I don't care if she agrees with me. I care
23 much more about whether you do.

24 But the point is, I can't let this stuff go
25 uncontroverted even though it doesn't impress the

1 Hearing Officer.

2 CO-HEARING OFFICER DODUC: It's not a matter
3 of impressing the Hearing Officer, though I appreciate
4 that. It's a matter of trying to get the most value
5 out of cross-examination and trying to get the most
6 value out of the witness's answer.

7 And I am struggling, as she is, to answer your
8 question when she doesn't have the legal background
9 upon which to do so.

10 MR. JACKSON: Well, she draws legal
11 conclusions.

12 CO-HEARING OFFICER DODUC: And as in a prior
13 ruling that we issued when objections were filed, I
14 guess, based on Part 1A exhibit and testimony, I will
15 refer you back to that ruling, which I might ask
16 Ms. Heinrich to summarize. But we essentially
17 acknowledge and ruled that we will accept legal opinion
18 offered by witnesses, and we'll take that into
19 consideration.

20 But I assure you we're not just going to take
21 her legal or un-legal opinion at face value. There is
22 a process that we will go through. There's a process
23 that all of you will go through in terms of responding
24 to any legal concerns with respect to her assertion and
25 her testimony.

1 But we will still, as in the previous ruling,
2 acknowledge that she may offer those opinions. We will
3 accept those opinions and consider them and weigh them
4 and then reach our own conclusions.

5 MR. JACKSON: I understand. And I'll try to
6 go through the remaining areas that the person put
7 forward to set up DWR's and the Bureau's, to a certain
8 extent, legal position and only deal with what I think
9 are factual predicates to the legal questions.

10 CO-HEARING OFFICER DODUC: Let's -- okay. We
11 will explore that.

12 MR. JACKSON: And we'll see how we do.

13 Calling your attention to the permits called
14 out on the next two pages from where we were. Whoops.
15 no. I'm sorry. I'm on Page 4 of your testimony.
16 Thank you.

17 Ms. Sergeant, for the purposes of writing this
18 rebuttal testimony, you reviewed permit 16748?

19 WITNESS SERGENT: As you can see, I had
20 mentioned before I started that there are a number of
21 little typos in my testimony, that they don't change
22 any of the testimony.

23 Clearly Permit 16478, as you'll see later in
24 that line, it -- the "16748" is just a typo. It's
25 referring to Permit 16478, which is mentioned in that

1 same line, just over at the right-hand side.

2 MR. JACKSON: The -- you indicate that the
3 authorized points of diversion include Oroville,
4 Thermolito as well as three locations in the Delta:
5 Clifton Court Forebay, Tracy Pumping Plant, and the
6 Delta water facility's point of diversion near Hood.

7 To your knowledge, was the Hood diversion --
8 has the diversion been built?

9 MR. BERLINER: Objection, asked and answered.

10 MR. JACKSON: To your knowledge, has the -- I
11 take it that means no.

12 MR. BERLINER: No. It's an objection.

13 CO-HEARING OFFICER DODUC: Okay. Hold on.

14 What was the question again, Mr. Jackson?

15 MR. JACKSON: Has the Hood diversion been
16 built?

17 CO-HEARING OFFICER DODUC: No.

18 MR. JACKSON: The --

19 CO-HEARING OFFICER DODUC: Okay, wait. I can
20 answer the question. That's not a good sign,
21 Mr. Jackson.

22 MR. JACKSON: Well, I find it an encouraging
23 sign.

24 The -- is it DWR's position that the -- that
25 the diversions under Permit 16478 can be either at

1 Oroville or at some location in the Delta, the same
2 water?

3 WITNESS SERGENT: That's correct. That's
4 what's provided for in the permit.

5 MR. JACKSON: And so if it is diverted at
6 Oroville, it lessens the amount of water that can be
7 diverted from that right downstream?

8 WITNESS SERGENT: Permit 16478 authorizes the
9 direct diversion of up to 1400 cfs. That water can be
10 diverted at Oroville, or it can be directly diverted in
11 the Delta. It does not reflect water that can be
12 diverted to storage which is limited to diversion to
13 storage in Oroville.

14 So if we divert water to storage in Oroville,
15 it does not reduce the amount of water that we can
16 directly divert in the Delta.

17 But with respect to direct diversion, yes, the
18 rate at which we can directly divert is 1400 cfs, to
19 the extent it's available at Oroville. So the maximum
20 rate of direct diversion under this permit is 1400 cfs.

21 MR. JACKSON: Okay. And that is true for each
22 of the other permits that you've listed here?

23 WITNESS SERGENT: What is true?

24 MR. JACKSON: That you have the flexibility to
25 divert either from the Feather River or the Delta

1 channels?

2 WITNESS SERGENT: That's not correct.

3 MR. JACKSON: All right. What's not correct
4 about that?

5 WITNESS SERGENT: Well, if you'll go through,
6 you look at it, Permit -- the first permit we just
7 discussed, the source of water is just the Feather
8 River.

9 If you go to the next permit, 16479 has two
10 sources of water. It includes both the Delta channels
11 and Oroville. So there is an amount of water we are
12 allowed to directly divert from the Delta channels, up
13 to 6185 cfs. We can also directly divert another
14 quantity of, like, 1360 cfs from the Feather River,
15 which can be diverted either at Oroville or at the
16 Delta.

17 If you look at the last two permits, 16481 and
18 16482, they include only the Delta channels as a source
19 of water.

20 MR. JACKSON: What definition are you using
21 for the words "Delta channels"?

22 WITNESS SERGENT: I'm using the definition
23 that was included in the permits. It's the channels
24 that are within the legal Delta.

25 MR. JACKSON: All right. And so the -- the

1 view is that the -- you have no diversion right on the
2 Sacramento River, correct?

3 WITNESS SERGENT: That portion of it within
4 the Delta, as is shown in the permits.

5 MR. JACKSON: Under the concept of Delta
6 channel. Now, in 16481 and 16482, the source of water
7 in those permits is identified as Italian Slough and
8 the Sacramento-San Joaquin Delta channels?

9 WITNESS SERGENT: That's correct.

10 MR. JACKSON: Where is Italian Slough?

11 WITNESS SERGENT: It's in the southern portion
12 of the Delta.

13 MR. JACKSON: And presently up until this
14 time, all of the water diverted in the Delta has been
15 diverted in -- in the channels at Clifton Court.

16 MR. MIZELL: Objection as to vague and
17 ambiguous. Is that water diverted by the Department
18 and under which diversion point?

19 CO-HEARING OFFICER DODUC: Clarify,
20 Mr. Jackson.

21 MR. JACKSON: I'm trying to -- trying to
22 identify that all of the water that has been diverted
23 on the basis of the Delta channel diversion and the
24 redirection of water under Permit 16479 from the --
25 from the Feather River or the Delta channels has been

1 taken from Clifton Court.

2 WITNESS SERGENT: Currently, we divert under
3 these permits at Clifton Court. We also can re-divert
4 water that was diverted to storage at Oroville. We can
5 re-divert at the North Bay Aqueduct. Those are the
6 existing facilities that we can -- we can also divert
7 at the Tracy Pumping Plant -- I'm sorry -- Jones.

8 MR. JACKSON: Yeah, right. Your testimony on
9 the next page is that existing DWR permits include a
10 North Delta point of diversion. We've been through
11 that before. And so I only want to ask you whether or
12 not DWR had a period of time in which they were
13 required to put all of the water they were claiming to
14 beneficial use?

15 WITNESS SERGENT: I think we went over this
16 fairly extensively on direct --

17 MR. JACKSON: Right.

18 WITNESS SERGENT: -- and cross of that.

19 The permits, as all permits do, contain dates
20 on which construction shall be complete and the water
21 put to full beneficial use.

22 We filed a petition for time extension to --
23 in 2009. And as I mentioned, that petition for time
24 extension is before the Board, and it will be dealt
25 with in a separate proceeding before the Board.

1 MR. JACKSON: But on its face, it gave you
2 until 2009?

3 WITNESS SERGENT: And as is standard practice,
4 if we felt like more time was necessary, we filed a
5 petition with the Water Board which is common amongst
6 many who hold water rights permits.

7 MR. JACKSON: You indicate on Line 15 and 16
8 of the next page that the SWP is not complete.

9 What is DWR's -- what is your understanding
10 from that as what would be required to complete the
11 SWP?

12 WITNESS SERGENT: Currently we are
13 constructing facilities at the southern end of the
14 State Water Project to allow the greater use of SWP
15 water by the southern contractors.

16 And the last remaining element that I am aware
17 of at the moment of the northern facilities, as far as
18 significant new facilities, is the North Delta
19 diversion and the California WaterFix facilities.

20 However, that doesn't mean that there won't be
21 other construction associated with the State Water
22 Project. It's a large facility, and I can't say now
23 whether there aren't going to be other facilities
24 proposed in the future as a component of the State
25 Water Project.

1 MR. JACKSON: The -- so it's unknown when or
2 if the State Water Project would ever be complete?

3 WITNESS SERGENT: Again, this is all going to
4 be part of the petition for change.

5 As we stated in our petition for change, we
6 filed a short-term petition for change to allow the
7 BDCP process, as it was called at that time, the
8 documents to go forward.

9 And we indicated that we would be using the
10 information obtained in that process to petition for a
11 longer-term change. That would give us the ability to
12 project further into the future what those demands
13 ultimately would be and the time frame.

14 CO-HEARING OFFICER DODUC: Mr. Jackson --

15 MR. JACKSON: So when you say --

16 CO-HEARING OFFICER DODUC: Hold on,
17 Mr. Jackson. An observation here, and I'm observing it
18 because of the time on the clock.

19 Whether it's a combination of your questioning
20 or Ms. Sargent's skill at responding, but she seems to
21 be repeating things that are right there in her
22 testimony and -- which I've read, which I'm sure we all
23 have read.

24 So I will again say that there is -- has been
25 very little additional value that has been added in the

1 course of this questioning and answer. I just want to
2 make sure you're aware that the time is running out.

3 MR. JACKSON: Yeah. No, I'm aware that time
4 is running out, and I'm trying to give the witness an
5 opportunity to add anything that she thinks is valuable
6 to certain statements that she's made in her testimony,
7 and it's of value to me.

8 CO-HEARING OFFICER DODUC: For her to repeat
9 what she has --

10 MR. JACKSON: For her to not -- to either
11 confirm or add.

12 CO-HEARING OFFICER DODUC: Ms. Sergeant, can
13 you confirm everything that you've provided in your
14 written rebuttal testimony?

15 WITNESS SERGENT: Yes. That is the entirety
16 of my rebuttal testimony.

17 CO-HEARING OFFICER DODUC: The entirety?

18 WITNESS SERGENT: Yes.

19 MR. JACKSON: On Line 22 and Line 23, in the
20 four minutes and five seconds left, you indicate that
21 DWR has not yet delivered full contract amounts and has
22 clearly stated the demand is expected to grow in the
23 future.

24 What is your basis for believing that demand
25 for State Water Project water out of the Delta will

1 continue to grow in the future?

2 WITNESS SERGENT: I believe that I just made
3 the statement in general that the demand for State
4 Water Project water will continue. It's based on
5 projected growth within the State Water Project service
6 area.

7 Again, this is all part of the petition for
8 time extension, and this information is what was
9 included in that petition for time extension.

10 MR. JACKSON: So if you don't get the petition
11 for time extension or if the Delta Reform Act's
12 requirement that there be less reliance on the Delta in
13 the future happens, are we simply anticipating more and
14 more pumping in a water supply that isn't going to --

15 CO-HEARING OFFICER DODUC: I can hear the
16 objection coming.

17 MR. BERLINER: Yes.

18 CO-HEARING OFFICER DODUC: Speculative, and
19 Ms. Sergent does not need to answer.

20 Mr. Jackson, next question.

21 MR. JACKSON: On the next page, the operation
22 of the CWF will not injure other legal users, you
23 indicate that you provide information to demonstrate
24 that a change in water quality or water levels alone is
25 not sufficient to support a claim of injury.

1 Assuming a change in water quality and water
2 levels, what else would be required, in your opinion,
3 to support a claim of injury by any water user in the
4 Delta with a priority of right above that of the
5 projects?

6 MR. BERLINER: Objection, beyond the scope of
7 the rebuttal testimony.

8 MR. JACKSON: I just read it out of her
9 testimony.

10 CO-HEARING OFFICER DODUC: Do you have
11 anything in addition to offer, Ms. Sergeant?

12 WITNESS SERGENT: No. I believe I've -- I've
13 discussed this topic substantially, and this -- my
14 statement here goes to the fact that, if there is
15 insufficient water available, both natural and
16 abandoned flow, whatever water shows up in the Delta,
17 if that is insufficient to maintain a certain level of
18 water quality, then the Department -- the water users
19 are not entitled to demand supplemental storage
20 releases to support a higher level of water quality.

21 MR. JACKSON: What does the word "alone" mean
22 in that sentence?

23 WITNESS SERGENT: Meaning that, in and of
24 itself, by itself, it's not the only test to determine
25 if there will be an injury to another legal user.

1 MR. JACKSON: But it is part of the test?

2 WITNESS SERGENT: Certainly you look to see if
3 there has been a change, and then you look to see if
4 the change is something that would result in an injury
5 to another legal user.

6 MR. JACKSON: And that was my bell.

7 CO-HEARING OFFICER DODUC: Ms. Des Jardins.

8 CROSS-EXAMINATION BY MS. DES JARDINS

9 MS. DES JARDINS: Thank you.

10 So I'm Deirdre Des Jardins with California
11 Water Research. And I wanted to ask some questions
12 about meeting the terms and conditions of the current
13 permit and how they would apply to the WaterFix. I
14 also had some questions about the permits themselves,
15 but I think a lot of that was covered by Mr. Jackson.

16 So, yeah, let's pull up DDJ-184.

17 So on Page 3 of your testimony, you refer to
18 terms and conditions of the permits.

19 Do I need to bring that up, or can I just ask
20 you about Condition 5?

21 So I'd like to skip down to Page 19 of pdf.

22 Yeah. Scroll down, please. It should say "Permit
23 Term 5," and then Part C. Yeah.

24 So there were -- when the JPOD was approved,
25 there were stages of increase. And it said, "In

1 Stage 2, permittee will be authorized to divert or
2 re-divert water for any purpose authorized under the
3 above permit subject to the following...an operations
4 plan to protect fish and wildlife and other legal users
5 of water."

6 And I'm wondering, have you considered that
7 operations plan? Is it going to change any with the
8 new diversions?

9 MR. BERLINER: Objection, beyond the scope,
10 relevance.

11 MS. DES JARDINS: You do say that terms and
12 conditions will apply. I can go back to your
13 testimony.

14 WITNESS SERGENT: Excuse me. I mean, yes, we
15 will comply with the terms and conditions. This term
16 relates to JPOD and requires an operations plan. DWR
17 has prepared an operations plan.

18 If you have any specific questions related to
19 the operations plan, you'll need to ask John Leahigh.

20 MS. DES JARDINS: Okay. Let's go down to
21 Term D. "The plan shall include operating criteria to
22 ensure that use of the Joint Point of Diversion does
23 not significantly impact aquatic resources in upstream
24 areas due to changes in flow, water temperature, and
25 reservoir waters levels."

1 MR. MIZELL: Objection, asked and answered.

2 CO-HEARING OFFICER DODUC: Actually, that
3 wasn't even a question.

4 MS. DES JARDINS: Was -- is that something
5 that you believe has been addressed?

6 CO-HEARING OFFICER DODUC: I would suggest you
7 save that for the operations people.

8 MS. DES JARDINS: Okay. Let's go to permit
9 Term 10. And it states, "No direct diversion,
10 diversion to storage, or re-diversion of stored water
11 shall be made until description and location of each
12 point of diversion and statement of the quantity of
13 water to be diverted is filed with the State Water
14 Board."

15 Do you feel that you have made sufficient
16 description of a quantity of water to be diverted in
17 different seasons?

18 MR. BERLINER: Objection, asked and answered.
19 We dealt with these conditions in Part 1A.

20 MS. DES JARDINS: I don't believe you did in
21 any detail, and in fact I think there was some
22 questions about it.

23 CO-HEARING OFFICER DODUC: I'm sorry. How are
24 you -- what are you -- what aspect of her rebuttal
25 testimony are you exploring?

1 MS. DES JARDINS: She said they're complying
2 with the current terms and conditions, and I've looked
3 for this.

4 Do you think this doesn't apply, or it does
5 apply and you've provided it?

6 CO-HEARING OFFICER DODUC: I believe she's
7 answered that they operate to try to comply with all
8 the terms and the requirements that are imposed upon
9 them. I don't think you will get her to answer
10 otherwise.

11 MS. DES JARDINS: This is very specific, and
12 it says "a statement of quantity of water."

13 Is that filed with this permit? Is it going
14 to be filed later and, if so, where is it?

15 MR. BERLINER: This -- I object to the
16 question. This permit term was included in the
17 original permit and was complied with years ago. This
18 has nothing to do with WaterFix.

19 MS. DES JARDINS: It's specifically with
20 respect to a change of diversion. It's not necessarily
21 complied with earlier. The Board has to make a finding
22 that the tunnels are essentially the original
23 Peripheral Canal which is described in the permits.

24 CO-HEARING OFFICER DODUC: I don't believe
25 that is the case. The objection is sustained.

1 MS. DES JARDINS: All right. Then I just said
2 I'd like to bring up -- let's see. I'd like to go back
3 to -- I'd like to go to permit Exhibit SWRCB-9, Page 7,
4 which is Permit 16482. SWRCB-9, yeah.

5 Go to Page 7. Scroll down. No, it's up
6 higher. I'm sorry. It's pdf Page 7. Up. Up more.
7 Previous page. There we go.

8 Maximum -- so under this permit, the water
9 appropriated shouldn't exceed 1.1 million acre-feet per
10 year. Are you aware that the direct diversion from the
11 Delta channels for the other two permits are 6185 cfs
12 for 16479, I believe you listed. And for 16481, it's
13 2115 cfs. And so I get a total, after you've exceeded
14 -- after you've put 1.1 million acre-feet in San Luis,
15 of 8500 cfs, of right to appropriate directly from the
16 Delta, and that's exclusive of water that's available
17 at Oroville.

18 And have you -- I haven't seen that
19 disaggregated in this application. Have you looked at
20 that at all?

21 MR. BERLINER: Objection, relevance. Permits
22 speak for themselves.

23 MS. DES JARDINS: This is the actual permit,
24 and I'm looking at the individual permits.

25 Would you like me to go to the other ones?

1 CO-HEARING OFFICER DODUC: If your question to
2 Ms. Sergent is are they complying with their permit
3 terms and conditions --

4 MS. DES JARDINS: No, no. This has to do with
5 the total rate of -- allowable maximum rate of direct
6 diversion and will the 9,000 cfs be -- will the total
7 rate of direct diversion from the Delta -- there is a
8 maximum rate on these permits.

9 CO-HEARING OFFICER DODUC: And she has
10 testified that -- actually, many have testified that --
11 over and over again, thank you, that they are not
12 seeking to expand, increase upon the -- the limits that
13 are currently in their permits.

14 MS. DES JARDINS: I don't see that the modeled
15 operations have looked at these quantities. So that's
16 where -- what I'm looking for is if -- if it has shown
17 that this would require some disaggregation of the
18 permits and water that's available at the Feather River
19 and water that's being appropriated in the Delta. And
20 I looked closely at the operations, and it's extremely
21 difficult. It's not disaggregated. I was asking if
22 that information is available.

23 CO-HEARING OFFICER DODUC: I don't believe she
24 has that information, if -- you're asking if the
25 modeling results are aggregated?

1 MS. DES JARDINS: I believe that it just looks
2 at flows flowing past the new diversions, and there's a
3 certain amount that's diverted. And it doesn't look at
4 these kind of quantities. That's -- just -- I was
5 going to see if it was any place else in your
6 application and the information that you've provided.

7 CO-HEARING OFFICER DODUC: So on Page 3 of her
8 rebuttal testimony, Ms. Sargent reports that they are
9 currently authorized to divert up to a maximum combined
10 rate of 10,350 cfs from the Delta by direct diversion.

11 Is that the information you're seeking?

12 MS. DES JARDINS: It's direct diversion,
13 diversion to storage, and re-diversion. That includes
14 -- I'm not -- that includes release of stored water
15 from Oroville. The permits separate out stored water
16 and water appropriated from the Delta.

17 So -- and I think this is a point that's -- I
18 guess has been missed, and I was just wanting to verify
19 that with Ms. Sargent.

20 CO-HEARING OFFICER DODUC: I'm afraid I don't
21 understand the value of the point.

22 MS. DES JARDINS: Question, it's only because
23 rates of direct diversion are -- rates of direct
24 diversion from a water source, that's the appropriated
25 right in the Delta. That's the only -- it's only

1 relevant to the extent the Board is considering the
2 appropriative right in the Delta separate from the
3 appropriative right in the Feather River at Oroville.
4 So it is a fine point.

5 I can move on because it seems like there's no
6 information available on it.

7 CO-HEARING OFFICER DODUC: Please go on to
8 your next point.

9 MS. DES JARDINS: Okay.

10 CO-HEARING OFFICER DODUC: Since it looks like
11 we are unable to answer your question.

12 MS. DES JARDINS: Yes.

13 WITNESS SERGENT: I just wanted to clarify.
14 Was there a question before me?

15 MS. DES JARDINS: Yeah. The question --

16 WITNESS SERGENT: I hadn't heard a ruling on
17 the objection, so -- I thought there was an objection,
18 and I hadn't heard a ruling on the objection. So I
19 didn't realize --

20 MS. DES JARDINS: Well, let me ask --

21 CO-HEARING OFFICER DODUC: Objection
22 sustained.

23 MS. DES JARDINS: Okay. Okay. I would -- I
24 would like -- I would like to raise that question and
25 get an answer that the information isn't here. And to

1 the extent that I'm not allowed to just get the answer,
2 that answer, I do object.

3 CO-HEARING OFFICER DODUC: I think we're still
4 struggling to understand what the question is.

5 MS. DES JARDINS: The question is there's a
6 appropriative right in the Delta? I get that it's 1.1
7 million acre-feet annually to storage at San Luis. And
8 after that, between Permit 16479 and 16481, the direct
9 diversion in the Delta is a total of 8,000 -- it's 6185
10 plus 2115 cfs, and that's a right of direct diversion
11 there, not including re-diversion and not including
12 water that would be available at Oroville Dam.

13 And my question is is that information --
14 there's not just -- is that information available
15 anywhere to show that the appropriation by the new
16 diversion of stored -- of water that's directly in the
17 Delta is within -- by the State Water Project is within
18 that limit?

19 CO-HEARING OFFICER DODUC: If you do not know,
20 Ms. Sergeant, then perhaps this might be a question for
21 the operations people.

22 WITNESS SERGENT: No. I can state that all
23 the water that's being proposed to be diverted through
24 the facilities is within the permitted quantities
25 authorized in the permits at the locations where water

1 is authorized to be either directly diverted or
2 diverted to storage.

3 CO-HEARING OFFICER DODUC: And I believe
4 Ms. Des Jardins would like to have that information or
5 at least is asking where she might find that
6 information. That's what she's looking for.

7 WITNESS SERGENT: Well, if I can just add that
8 this issue of whether or not we had disaggregated by
9 our individual permits was asked on direct.

10 And the response was that there's no
11 additional value to be gained by determining whether or
12 not the water that is being directly diverted at the
13 North Delta diversions is water that is available on
14 the Feather River but being directly diverted at the
15 North Delta diversion, or whether it's water that's
16 being available -- that's available in the Delta
17 channels.

18 And I believe there's a confusion as to
19 whether or not, from the Delta channels, we are only
20 allowed to divert the 6185 and the 2115 from the two
21 Delta permits.

22 We are also allowed to -- as I discuss in my
23 testimony -- to directly divert from the Delta
24 channels, for the first time, the water that's
25 available at Oroville.

1 So we did not disaggregate by permit because
2 there was -- there's no added value. We're looking at
3 what the impacts would be associated with diverting
4 these quantities of water that are available under our
5 permits and what the impacts associated with that is.
6 We have committed that we are not going to be going
7 beyond the quantities that are permitted. And I
8 believe our modeling and the information that we've
9 submitted demonstrates that.

10 MS. DES JARDINS: Thank you. The problem is
11 it's difficult to tell that the water really is
12 available at Oroville at the times that you're
13 diverting at 10,000 -- that you're diverting at, at
14 that location. And that's -- that's what I was seeking
15 to find, particularly because I believe you're trying
16 to transfer the entire 10,300 cfs there, although it
17 exceeds the physical capacity.

18 WITNESS SERGENT: I think some issues are
19 being conflated, and I think there's some confusion.

20 But again, all I can say is that, when we are
21 directly diverting -- I think there's some confusion
22 between diverting to storage, the ability to divert to
23 storage, and the ability to directly divert.

24 We are diverting water to storage at Oroville.
25 If there's additional water available to directly

1 divert in the Delta -- I mean, these conditions would
2 be surplus conditions. If we are storing at Oroville
3 and there is additional water available, we're
4 releasing that, and it's available in the Delta. The
5 Delta is in surplus. Or if it's not in surplus
6 conditions, we are releasing water from Oroville
7 storage that was previously diverted.

8 So everything that we have submitted to date
9 is within the provisions that are currently authorized
10 in our permits; the limits, the sources, and the points
11 of diversion.

12 MS. DES JARDINS: Ms. Sergeant, are you aware
13 of the definition of "surplus" in the modeling, and
14 have you reviewed that with the modelers of surplus
15 water available in the Delta?

16 WITNESS SERGENT: If you have questions
17 related specifically to definitions in the modeling, I
18 would suggest that you defer those to the modelers.

19 MS. DES JARDINS: So you're saying that this
20 answer is answered in the modeling of surplus water
21 available in the Delta, and then it takes into account
22 this limit? Is that your understanding?

23 WITNESS SERGENT: I'm using my definition of
24 "surplus water" in the Delta, which is -- which means
25 that all of the objectives and the water rights of the

1 upstream water right holders have been met and there is
2 water in addition to what is necessary to meet all
3 those demands.

4 CO-HEARING OFFICER DODUC: And that is where I
5 need to cut you off.

6 If you have -- do you have additional points
7 for cross-examination? Because your time has run out.

8 MS. DES JARDINS: I do have additional points,
9 and I also have one follow-up question I wanted to ask
10 her about the difference between in-basin use, meeting
11 in-basin use, and -- which would mean water's
12 available, and an actual limit on -- on what --

13 CO-HEARING OFFICER DODUC: And what are your
14 additional points that you wanted to pursue?

15 MS. DES JARDINS: The other one is I wanted to
16 ask if she knew -- on DWR-901, if she had an idea of
17 what the errors are in the estimate of EC which was
18 referred to.

19 CO-HEARING OFFICER DODUC: I don't believe she
20 can answer that question.

21 MS. DES JARDINS: And are the operators going
22 to answer it?

23 CO-HEARING OFFICER DODUC: A modeler might be
24 able to.

25 MS. DES JARDINS: Are the modelers going to

1 answer it?

2 CO-HEARING OFFICER DODUC: The modeler might
3 be able to.

4 MS. DES JARDINS: Because if that
5 information --

6 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
7 I'm sorry. It is 5:00 o'clock, and the webcast is
8 about to cut off. So I will consider this completion
9 of your cross-examination of Ms. Sergeant. You will
10 have other questions for the modeler and potentially
11 the operations witnesses that will follow next week.

12 MS. DES JARDINS: The problem is that I don't
13 believe this is in the scope of what the modelers
14 presented as rebuttal testimony. So -- and this is not
15 like --

16 CO-HEARING OFFICER DODUC: If it's not within
17 the scope of their rebuttal testimony, then you may not
18 ask it.

19 MS. DES JARDINS: Then I would have to object
20 to --

21 CO-HEARING OFFICER DODUC: Then you may file
22 your objection.

23 MS. DES JARDINS: Yeah.

24 CO-HEARING OFFICER DODUC: With that,
25 Ms. Womack, I do apologize, but we do have a hard stop

1 at 5:00. So, Ms. Sergeant, I am asking you to return on
2 Thursday starting at 9:30. We're meeting in Sierra.
3 And Ms. Womack will begin her cross-examination, and
4 perhaps Ms. Spaletta. Thank you.

5 (The proceedings recessed at 5:00 p.m.)

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