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BEFORE THE
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA WATERFIX WATER)
RIGHT CHANGE PETITION)
HEARING)

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

PART 1A

Thursday, August 18, 2016

9:00 A.M.

Volume 11

Pages 1 - 284

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APPEARANCES

CALIFORNIA WATER RESOURCES BOARD

Division of Water Rights

Board Members Present:

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

Staff Present:

Diane Riddle, Environmental Program Manager
Dana Heinrich, Senior Staff Attorney
Kyle Ochendusko, Senior Water Resources Control Engineer

PART I

For Petitioners:

California Department of Water Resources:

James (Tripp) Mizell
Thomas M. Berliner

The U.S. Department of the Interior:

Amy L. Aufdemberge, Esq.

INTERESTED PARTIES:

For Bogle Vineyards/Delta Watershed Landowner Coalition,
Diablo Vineyards and Brad Lange/Delta Watershed Landowner
Coalition, Stillwater Orchards/Delta Watershed Landowner
Coalition:

Osha Meserve

For San Joaquin Tributaries Authority, The (SJTA), Merced
Irrigation District, Modesto Irrigation District, Oakdale
Irrigation District, South San Joaquin Irrigation
District, Turlock Irrigation District, and City and
County of San Francisco:

Tim O'Laughlin

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APPEARANCES (Continued)

INTERESTED PARTIES (Continued):

For County of Solano:

Peter Miljanich

For City of Antioch:

Matthew Emrick

For Save the California Delta Alliance:

Michael Brodsky

For California Sportfishing Protection Alliance (CSPA),
California Water Impact Network (C-WIN), and AquAlliance:

Michael Jackson

Chris Shutes

For California Water Research:

Deirdre Des Jardins

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MILLIGAN, RON

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HOLDERMAN, MARK

ANDERSON, MICHAEL

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1 Wednesday, August 18, 2016 9:00 a.m.

2 PROCEEDINGS

3 ---000---

4 CO-HEARING OFFICER DODUC: (Banging gavel.)

5 Good morning everyone. It's 9:00 a.m. Welcome
6 back to the WaterFix Petition hearing.

7 I'm Tam Doduc, Hearing Board Officer. To my
8 right is Board Chair Felicia Marcus, Co-Hearing Officer
9 for this item. We had Board member Dee Dee D'Adamo here
10 and I assume she'll be back as well. To my left are
11 staff for the hearing team, Dana Heinrich, Diane Riddle
12 and Kyle Ochenduszko. We also have other staff assisting
13 us today.

14 A couple quick announcements:

15 Locate the exit closest to you. In the event
16 of an alarm, we will evacuate. Go down the stairs to the
17 first floor and exit to the park across the street. If
18 you are not able to use the stairs, you will be directed
19 to a protected vestibule.

20 This hearing is being recorded and Webcasted.
21 We have a court reporter here with us today, so when you
22 provide your comments today, please spoke -- speak into
23 the microphone and please identify yourself and your
24 affiliation.

25 Please take a moment right now and put all your

1 noise-making devices on vibrate, silent, do not disturb.

2 And if you think they are that way, please check.

3 All right. Before we resume cross-examination
4 of Panel 3, I would like to address the request to extend
5 the September 1st deadline for submittal of testimony and
6 exhibits for Part IB of the hearing.

7 We have reviewed the request submitted and the
8 oppositions filed by the Department of Water Resources
9 and others, and have decided not to grant an extension.

10 The State Water Board's usual practice, even in
11 enforcement proceedings, is to require all parties to
12 submit the written testimony and exhibits for their cases
13 in chief at the same time.

14 For this hearing, we bifurcated Part I and
15 required Petitioners to present their case in chief in
16 advance of the other parties. Staggering the hearing in
17 this matter gave other parties the benefit of more
18 information for the purpose of developing their own cases
19 in chief, and it also gave participants in Part IB of the
20 hearing more time to prepare their testimony and
21 exhibits.

22 The original deadline for all parties' written
23 testimony and exhibits was March 1st, 2016. When we
24 bifurcated the hearing, the deadlines for parties other
25 than Petitioners was extended to May 16, 2016.

1 Subsequently, we extended the deadline for Petitioners to
2 May 31st and extended the deadline for Part IB
3 participants to September 1st.

4 Therefore, the parties submitting cases in
5 chief for Part IB of the hearing will have had nearly 10
6 months to develop their testimony and exhibits since the
7 Original Hearing Notice was issued on October 30th, 2015.

8 The parties will have had three months since
9 the Petitioners to put in their written testimony and
10 exhibits for Part IA.

11 While we understand the resource limitations of
12 many of the parties, this amount of time should be
13 adequate for Part IB parties to develop their cases in
14 chief.

15 A number of parties have argued that they need
16 more time to review and respond to the Revised Biological
17 Assessment released earlier this month and to information
18 provided during cross-examination.

19 To the extent that the parties do not have
20 enough time to respond to information provided during
21 cross-examination in their cases in chief, they will have
22 the ability to do so during rebuttal.

23 In addition, we have stated that we may revisit
24 Part I hearing issues if information presented in Part II
25 of the hearing, including the Biological Assessment, has

1 a material bearing on Part I issues.

2 So, for the reasons that I have outlined, the
3 request for an extension of the submittal deadline for
4 Part IB are denied.

5 All of the deadlines for Part IB of the
6 hearing, including the September 1st deadline for written
7 testimony and exhibits, remain unchanged.

8 With that, we are waiting to resume with
9 cross-examination of this panel, and we will -- Well,
10 before we do.

11 Miss Meserve?

12 MS. MESERVE: Good morning. Osha Meserve for
13 Bogle, Lange, Stillwater Orchards, Diablo Vineyards.

14 I just had a procedural question regarding the
15 Hearing Officer's ruling.

16 I have a question regarding the, I think,
17 expected release of a Final EIR, and maybe within a
18 couple of weeks, according to the update we received from
19 the Petition -- from the Petitioners.

20 And I am wanting to know, with respect, if
21 there's a way to clarify whether the mitigation measures
22 that have been discussed in cross-examination, such as
23 Ag-1, GW-1, GW-5 and GW-11, for instance, which have been
24 purported to address some of the injuries to legal users
25 of water, if those are going to be changed, because

1 that's another moving target that -- that we're dealing
2 with and since that wasn't addressed I just wanted to
3 raise that point.

4 I don't know if it can be addressed now, but,
5 you know, we are really struggling to keep up with how
6 these -- these things are changing and be able to present
7 a coherent case in chief for the Protestants.

8 Thank you.

9 CO-HEARING OFFICER DODUC: Thank you for
10 raising that. We will keep that in mind as we proceed.

11 And whoever just had that ding, put your -- I
12 heard a ding when Miss Meserve was talking. Put your
13 machine on silent, please.

14 It came from this side of the room
15 (indicating).

16 CO-HEARING OFFICER MARCUS: Do you remember the
17 Bionic Woman that wore that thing?

18 MR. BERLINER: Wow, that's pretty good.

19 CO-HEARING OFFICER DODUC: It just shows how
20 intensely I'm listening to all of you.

21 All right. With that, Mr. O'Laughlin, you may
22 start your cross-examination of this panel.

23 MR. O'LAUGHLIN: Thank you, Hearing Officer
24 Doduc. First of all, thank you for giving me the day off
25 on Friday. I appreciate that.

1

2

JOHN LEAHIGH, RON MILLIGAN,

3

MARK HOLDERMAN and MICHAEL ANDERSON,

4

called as a witnesses by the Petitioners, having

5

previously been duly sworn, were examined and

6

testified further as follows:

7

CROSS-EXAMINATION BY

8

MR. O'LAUGHLIN: Most of -- Mr. Leahigh, why

9

don't we start on Page 2 of your testimony, Line 5.

10

And I just want to get clarified.

11

It talks about (reading):

12

"This coordination includes scheduling SWP

13

exports . . . upstream . . . in coordination with

14

the CVP's scheduling of pumping at Jones Pumping

15

Plant and releases from Lake Shasta and Folsom Lake

16

in accordance with the Coordinated Operations

17

Agreement."

18

In that statement, do you mean to exclude New

19

Melones Reservoir from the Coordinated Operations

20

Agreement?

21

WITNESS LEAHIGH: Well, the New Melones

22

Reservoir is not explicitly in -- as part of the

23

Coordinated Operating Agreement.

24

MR. O'LAUGHLIN: Okay. Is the Friant facility

25

in the Coordinated Operations Agreement?

1 WITNESS LEAHIGH: No, it is not.

2 MR. O'LAUGHLIN: Are Buchanan Reservoir in the
3 Coordinated Operation Agreement?

4 WITNESS LEAHIGH: No.

5 MR. O'LAUGHLIN: Is Hidden in the Coordinated
6 Operation Agreement?

7 WITNESS LEAHIGH: No.

8 MR. O'LAUGHLIN: Are San Joaquin River Exchange
9 Contractors' deliveries included within the Coordinated
10 Operation Agreement?

11 WITNESS LEAHIGH: No.

12 MR. O'LAUGHLIN: Thank you.

13 The -- Line Number 10, you talk about the
14 CVP -- the SWP and CVP (BiOps) for the Projects.

15 In regards to this Project, do -- is it your
16 understanding that the OCAP BO for the CVP includes New
17 Melones Reservoir?

18 WITNESS LEAHIGH: My understanding is, there's
19 some aspects of the BiOps that affect operations at New
20 Melones, but not being the Operation Officer, I can't be
21 sure.

22 MR. O'LAUGHLIN: So my next question, then --
23 Actually, you led right into it.

24 So, you put down in Line Number 15 and 16 that
25 your testimony concerns the SWP and CVP collectively.

1 Are you representing the Central Valley Project
2 here today?

3 WITNESS LEAHIGH: No, I am not.

4 MR. O'LAUGHLIN: In fact, if I have questions
5 regarding the Central Valley Project, you would probably
6 defer those questions to Mr. Milligan; is that correct?

7 WITNESS LEAHIGH: Yes, I would.

8 MR. O'LAUGHLIN: So, Mr. Milligan, back to the
9 last question.

10 Is it your understanding that the -- there is
11 an OCAP Biological Opinion for the Central Valley Project
12 that is applicable to New Melones Reservoir?

13 WITNESS MILLIGAN: We don't use the term
14 "OCAP," but there is a Biological Opinion for the
15 long-term operation, the coordinated operation of the CVP
16 and the State Water Project, and that does include the
17 operations of New Melones.

18 MR. O'LAUGHLIN: Okay. In regard to New
19 Melones Reservoir, were there RPAs that were put forth by
20 the National Marines Fishery regarding the operation of
21 New Melones Reservoir?

22 WITNESS MILLIGAN: Yes.

23 MR. O'LAUGHLIN: Okay. And, currently, is it
24 your understanding that the New Melones Reservoir, that
25 Reclamation is trying to implement the RPAs to the best

1 of its ability under the requirements of the Biological
2 Opinion?

3 WITNESS MILLIGAN: Yes.

4 MR. O'LAUGHLIN: So let's talk a little bit
5 about New Melones Reservoir.

6 Were you here previously in regards to the
7 testimony by Mr. Leahigh when he showed the exceedance
8 charts in regards to various locations for water quality
9 in the Delta?

10 WITNESS MILLIGAN: Yes.

11 MR. O'LAUGHLIN: Were -- Did Mr. Leahigh ask
12 you to do a chart for compliance at Vernalis?

13 WITNESS MILLIGAN: No.

14 MR. O'LAUGHLIN: Okay. Is there a reason that
15 Reclamation didn't do a compliance chart showing
16 compliance at Vernalis for water quality and flow
17 objectives?

18 WITNESS MILLIGAN: The submittal was focused
19 more on the operations as they might relate to the
20 California WaterFix and the proposed operations around
21 that and the questions around salinity at that part of
22 the Western Delta and outflow questions, so that's why
23 the focus of the pie charts and the compliance was
24 structured the way it was.

25 MR. O'LAUGHLIN: So, currently now, does

1 Reclamation have the ability to meet D-1641 requirements
2 at Vernalis for New Melones?

3 WITNESS MILLIGAN: Not under all conditions.

4 MR. O'LAUGHLIN: And, in fact, over the last
5 several years, Reclamation has applied for Temporary
6 Urgency Change Petitions for flow requirements at
7 Vernalis; is that correct?

8 WITNESS MILLIGAN: Due to extreme drought, yes.

9 MR. O'LAUGHLIN: And, in fact, in the recent
10 State Board Temporary Urgency Change Petition, it says
11 that Reclamation -- this is Condition 4 (reading):

12 "Reclamation shall submit a proposal to the
13 Executive Director by November 1st, 2016,
14 identifying how it plans to address its difficulty
15 meeting D-1641 San Joaquin River flow requirements
16 until such time as the State Board updates and
17 implements the San Joaquin River flow objectives."

18 So has Reclamation come up with a plan on how
19 they're going to meet the D-1641 flow requirements?

20 WITNESS MILLIGAN: It's not complete yet.

21 MR. O'LAUGHLIN: Do you -- Do you know if --
22 when the San Joaquin River Agreement was in place, if the
23 San Joaquin River Agreement flows were the same as the
24 1995 Water Quality Control Plan flows called for in
25 D-1641?

1 WITNESS MILLIGAN: My recollection of what was
2 in the Control Plan is somewhat geared to my
3 understanding of Table 3 in the current D-1641, and so I
4 don't recall if those are exactly the same.

5 But Table 3 flows are different than what was
6 in the San Joaquin River Agreement.

7 MR. O'LAUGHLIN: In the submittal that was done
8 for both the Petition and the modeling in this case, it
9 states that D-1641 flows will be complied with as well as
10 the OCAP BO flows.

11 And my question is, are you -- are those
12 applicable at -- both at New Melones for the modeling and
13 the work that was done for this Petition?

14 WITNESS MILLIGAN: I am not sure that the
15 modeling -- I think that's a -- for the most part as it
16 related to flows, as to the outflow for D-1641 in terms
17 of overall Delta, but the modeling was somewhat
18 suppressed as it related to the San Joaquin River and the
19 New Melones operations.

20 MR. O'LAUGHLIN: And how was it suppressed?

21 WITNESS MILLIGAN: I would say it was somewhat
22 suppressed because, as you pointed out, difficulties with
23 being able to meet the D-1641 flow objectives, and
24 with -- without something like the San Joaquin River
25 Agreement in place and a lack of control by Reclamation

1 to be able to meet those flows exclusively with releases
2 for New Melones, and also to be able to have a long-term
3 operation that could continue to meet objectives, you
4 know, through the 80-year simulation that was in CalSim.

5 MR. O'LAUGHLIN: Do you know -- Did you have
6 any input in the modeling for the New Melones Reservoir?

7 WITNESS MILLIGAN: This is something that the
8 Modelers were struggling with, and we did meet a number
9 of occasions as to how best to represent the San Joaquin
10 in light of the supported Petition for the WaterFix.

11 MR. O'LAUGHLIN: Right.

12 Can you explain to me, then, about a -- in your
13 discussions with the Modelers, how you wanted the
14 San Joaquin River represented? It would probably
15 shortcut me to continue to ask a bunch of questions on
16 each river.

17 WITNESS MILLIGAN: I would have liked to have
18 seen a much more robust, full representation of the
19 San Joaquin River Basin in any of the planning stages
20 that we do.

21 But given the number of assumptions that would
22 have to be made to do that for this particular task, I
23 think decisions were made to represent what was under
24 control with Reclamation in terms of meeting the
25 Biological Opinion terms and continuing to make sure that

1 we modeled to meet the base flow requirements, as well
2 as -- at Vernalis, as well as the salinity requirements,
3 and hold that particular operation steady through the
4 no-action and the various options that were presented to
5 the Board in the package, recognizing that our thoughts
6 are that the WaterFix should not change any of those
7 operations, and that the subsequent of water reaching the
8 Delta from the San Joaquin would -- may not be exactly
9 what we would see in the future depending on how
10 operations on the other two Plan tributaries, but that,
11 for comparative purposes and trying to evaluate impacts,
12 this would be a reasonable baseline.

13 MR. O'LAUGHLIN: So a little bit more about the
14 baseline.

15 When -- When the modeling was done, did it take
16 into account the San Joaquin River Restoration flows?

17 MR. MIZELL: If I may just -- I recognize that
18 on Friday we went over some of these objections -- it may
19 come out of my mouth -- and the Board's preference that I
20 limit the number of objections that I state.

21 So I'd like to just put on the record, for my
22 client's representation, an objection to discussing the
23 baseline and existing operations as those, I believe, are
24 beyond what's properly before the Board.

25 But I don't mean to derail this line of

1 questioning. I just wanted it noted for the record that
2 I just raise a standing objection to existing operations
3 and the compliance with laws, such as the San Joaquin
4 Restoration Act and what not.

5 CO-HEARING OFFICER DODUC: So noted.

6 For the record, Mr. O'Laughlin, do you want
7 to -- Actually, please state your -- your rationale for
8 this line of questioning and develop that statement to
9 the point that you're pursuing.

10 MR. O'LAUGHLIN: Yeah. It's pretty simple. I
11 just want to understand what exactly the baseline is so
12 then I can understand what the Proposed Project is, and
13 so then I will understand what the Delta is between the
14 two of them.

15 CO-HEARING OFFICER DODUC: Thank you. Now that
16 we've got this settled, please continue.

17 MR. O'LAUGHLIN: Thank you.

18 Okay. So are San Joaquin Restoration flows
19 included in the analysis?

20 WITNESS MILLIGAN: I don't have the table of
21 assumptions in front of me, and I may, for a more
22 complete answer on this, have to refer back to the -- to
23 the Modeling Group.

24 But my understanding is, yes, and to what the
25 assumption's about, the timing and the various quantities

1 of restoration flows that would actually reach past,
2 let's say, Sac Dam on the San Joaquin River, I do not --
3 I do not recall exactly what those were.

4 There were some nuances about what point in
5 time in the future the program would look like, and that,
6 I don't know off the top of my head.

7 MR. O'LAUGHLIN: Thank you.

8 And moving forward in time: If the San Joaquin
9 River Restoration Program goes forward and comes to
10 fruition and this Project moves forward and comes to
11 fruition, is there an understanding in the modeling or
12 any analysis in the modeling of how San Joaquin River
13 Restoration flows will be handled when they get the
14 Delta?

15 WITNESS MILLIGAN: My understanding -- and,
16 again, this may need some additional clarity from the
17 modeling folks -- is that to the degree that those waters
18 are entering the San Joaquin River and that they would
19 reach Vernalis, the assumptions that go with that, it
20 would be -- To the degree that we're able to recapture
21 those within whatever operating criteria are developed
22 for this Project, we would account for those but they
23 would not be offered any additional consideration beyond
24 just other available water to -- to the two Projects.

25 MR. O'LAUGHLIN: So, stating that in another

1 way maybe would be is that if that water were coming --
2 were to come past Vernalis, the San Joaquin River
3 Restoration flows past Vernalis at a future date in time,
4 they would be treated as any other unregulated water
5 entering the Delta in regards to how the CVP and SWP
6 would divert and divide that water up.

7 MS. AUFDEMBERGE: Objection: That calls for a
8 legal conclusion.

9 CO-HEARING OFFICER DODUC: Mr. O'Laughlin,
10 please repeat the question for me.

11 MR. O'LAUGHLIN: It's an operation question.
12 It's simple.

13 If water comes down from the San Joaquin River
14 flows and it hits Vernalis, is it going to be treated as
15 unregulated flow into the Delta?

16 CO-HEARING OFFICER DODUC: Please answer.

17 WITNESS MILLIGAN: My understanding, using that
18 term, is no. I think that the water . . .

19 Well, I'll leave my answer as, no, I don't
20 believe it would be un -- treated as unregulated flow.

21 MR. O'LAUGHLIN: Would it be treated as CVP
22 Project water?

23 MS. AUFDEMBERGE: Objection: Calls for a
24 conclusion.

25 MR. O'LAUGHLIN: Well, he operates every day in

1 the Delta, and he needs to determined what water is or
2 isn't CVP water, SWP water, or unregulated waters. It's
3 a pretty straightforward question.

4 CO-HEARING OFFICER DODUC: Thank you.

5 Please answer, Mr. Milligan.

6 WITNESS MILLIGAN: My understanding -- and we
7 haven't really had water to the Delta from the program
8 that we'd have to deal with in this fashion -- is that
9 the Board entered their permitting to the term "salinity"
10 loosely, has protected that flow down to the Delta.

11 And to the degree that it can be picked up
12 within the regulatory construct of water leaving the
13 Delta, that it's protected in that context.

14 I think, from an operational standpoint, it's a
15 volume of water that's mixed with the other water that
16 has come in from the Delta that is unregulated, and
17 that -- that the rules would not change as to whether
18 that's water that can be picked up or not.

19 MR. O'LAUGHLIN: All right.

20 CO-HEARING OFFICER DODUC: And there's a whole
21 series of questions within the CVP that still need to be
22 answered as to, is there a priority for that within our
23 CVP operations, and that's a question that's yet to be
24 determined.

25 MR. O'LAUGHLIN: All right. Okay. And so then

1 in regards to -- Flipping to the other side of the aisle,
2 on New Melones.

3 So when New Melones reaches -- releases water
4 to meet water quality at Vernalis, or flows at Vernalis,
5 when that water passes Vernalis, how currently does the
6 CVP and SWP treat that water when it enters the Delta?

7 WITNESS MILLIGAN: That's been treated as we
8 would unregulated flows.

9 MR. O'LAUGHLIN: Okay. And then you have an
10 agreement between you, so, like, if New Melones releases
11 a thousand cfs, it goes past Vernalis, how is that
12 thousand cfs split between the CVP and SWP under the
13 current operating regulating criteria?

14 WITNESS MILLIGAN: That would depend on the
15 situation of the overall inflows to the Delta, but what
16 types of criteria are controlling.

17 MR. O'LAUGHLIN: Okay. And is there a normal
18 split of 65-35?

19 WITNESS MILLIGAN: If it were excess
20 conditions, there would be no splitting of it. It's in
21 the increments of a thousand, as I think I understand --

22 MR. O'LAUGHLIN: Yes.

23 WITNESS MILLIGAN: -- your example.

24 Excess conditions, there would be no sharing.
25 It would just be an additional increment of water that

1 goes out flow.

2 If it were balanced conditions, it may be
3 75-25.

4 MR. O'LAUGHLIN: Okay. In addition to the
5 modeling that was done, so, what modeling assumptions
6 were used for the Merced River?

7 WITNESS MILLIGAN: This may be -- again, I
8 think if you want the panel -- the level of depth for the
9 CalSim experts to -- to say. But it would be the Cal
10 set -- CalSim set of inflows for hydrology and the base
11 representation there, I -- If your question is, was some
12 visibly making about their releases on that particular
13 Project, they kind of comport with their current FERC
14 requirements.

15 MR. O'LAUGHLIN: And the same question in
16 regards to the Tuolumne River.

17 WITNESS MILLIGAN: It would be a very similar
18 answer.

19 MR. O'LAUGHLIN: So, as you sit here today,
20 based on the Draft EIR/EIS, the Biological Assessment,
21 and the Petition that has been put forth for the Project,
22 are there any additional flows that Reclamation is
23 looking to acquire or obtain as part of this Petition
24 from the San Joaquin River?

25 WITNESS MILLIGAN: Not that I'm aware.

1 MR. O'LAUGHLIN: Mr. Leahigh, would your
2 testimony concur with Mr. Milligan's opinion in regards
3 to that question?

4 WITNESS LEAHIGH: Yes, I have the same answer.

5 MR. O'LAUGHLIN: Thank you.

6 I'm going to switch gears for just a second.

7 In cross-examination -- And this is for
8 Mr. Leahigh -- in regards to some questions asked by
9 Miss Spaletta last week, and I thought I heard you answer
10 the question -- you expressed an opinion that your
11 written testimony was based on -- wholly on H3.

12 Your written testimony is based more than just
13 on H3; is that correct? It includes H4; right? Your
14 written testimony?

15 WITNESS LEAHIGH: My -- My testimony offered --
16 I offered an opinion on both H3 through H4. We -- The
17 specific work that my staff did, as far as the example we
18 laid, out was H3.

19 MR. O'LAUGHLIN: But your -- your overall
20 testimony is from H3 through H4; correct?

21 WITNESS LEAHIGH: That's correct.

22 MR. O'LAUGHLIN: Okay. Now, there's a spring
23 outflow requirement in regards to H4; is that correct?

24 WITNESS LEAHIGH: That's correct.

25 MR. O'LAUGHLIN: Okay. And how much -- how

1 much flow is required for the spring outflow requirement?

2 WITNESS LEAHIGH: Well, the -- the -- the flow
3 would vary depending on how wet a year it is, with an
4 upper end cap of 44,500 as far as a requirement.

5 MR. O'LAUGHLIN: Can you put SJTA Exhibit
6 Number 6 up on the screen, please.

7 (Document displayed on screen.)

8 MR. O'LAUGHLIN: And if you could scroll down.

9 (Scrolling down document.)

10 MR. O'LAUGHLIN: Okay. Right there.

11 MR. OCHENDUSZKO: Mr. O'Laughlin, for the
12 record, can you please identify what you're showing on
13 the screen right now?

14 MR. O'LAUGHLIN: Yes. This is SJTA Exhibit
15 Number 6. This is the Draft EIR/EIS 4.1, Page 6.

16 I just wanted to be clear that H4 is what's set
17 forth in Lines 29 through 30 where it's talking about a
18 spring outflow requirement that is going to be developed
19 by willing sellers and willing buyers.

20 Are -- Are these -- In other words, is the
21 willing seller/willing buyer thing the same as the spring
22 outflow thing you've been talking about, or are they
23 different things?

24 WITNESS LEAHIGH: No. I think the
25 requirement . . .

1 The requirement stands on its own. I think
2 it's possible --

3 MR. O'LAUGHLIN: Wait. Sorry. Sorry to
4 interrupt but that's -- I'm confused.

5 What's the requirement?

6 WITNESS LEAHIGH: Well, the flow criteria.

7 MR. O'LAUGHLIN: Oh, the flow criteria. This
8 spring outflow criteria stands by itself. Okay.

9 WITNESS LEAHIGH: Correct. It may or may not
10 require -- I mean, there could be other ways to meet the
11 requirement.

12 MR. O'LAUGHLIN: Okay. But in the Draft
13 EIR/EIS, it states that you're going to get it from
14 willing sellers and willing buyers.

15 Did you -- Did you actually model willing
16 sellers and willing buyers for the spring outflow? I
17 haven't been able to find it. That's why I'm asking.

18 WITNESS LEAHIGH: That would be a question for
19 the Modelers, but I -- I don't believe they -- they
20 modeled willing sellers and willing buyers as far as
21 meeting that requirement.

22 MR. O'LAUGHLIN: And you haven't -- As you sit
23 here today, you're unaware of any contracts that have
24 been entered into between willing sellers and willing
25 buyers to make this spring outflow water available; is

1 that correct?

2 WITNESS LEAHIGH: No, I'm not aware of any
3 agreements.

4 MR. O'LAUGHLIN: Are you aware of any
5 agreements, Mr. Milligan?

6 WITNESS MILLIGAN: No, I'm not.

7 MR. O'LAUGHLIN: Regarding the spring outflow,
8 and back to Mr. Leahigh:

9 Did you actually model the spring outflow
10 requirement as part of your Petition here today?

11 WITNESS LEAHIGH: No, I didn't -- I didn't --
12 My staff did not. The example we did was H3, so it did
13 not have this specific requirement that you're talking
14 about here as far as H4.

15 I -- I relied upon the modeling results as far
16 as my opinion on H4.

17 MR. O'LAUGHLIN: Okay. So did H3 include a
18 spring outflow component?

19 WITNESS LEAHIGH: H3 . . . H3 did not include
20 the spring outflow criteria.

21 MR. O'LAUGHLIN: Okay. Did -- So, how were you
22 able to -- What's your opinion, then, on the spring
23 outflow in regards to where the water would be developed
24 to make the spring outflow available?

25 WITNESS LEAHIGH: So, the Modelers assumed as

1 part of the H4 scenario that the -- well, in some cases,
2 just the natural flows would meet the criteria.

3 MR. O'LAUGHLIN: Correct.

4 WITNESS LEAHIGH: There were different layers
5 of actions that would be taken in order to meet the
6 requirement if natural flows were insufficient.

7 So, the first action would be a reduction in
8 exports. If -- If that reduction was not sufficient to
9 meet the outflow requirement, then there would be
10 additional releases from Lake Oroville up to a point.

11 MR. O'LAUGHLIN: So the evidence that -- or the
12 presentation that we have in front of the Board right
13 now, what is -- in your understanding, what -- how much
14 reduction would occur at the exports in order to
15 accomplish the spring outflow criteria?

16 WITNESS LEAHIGH: So, if necessary, there was a
17 reduction to -- I believe it was a combined 1500 cfs
18 export in order to meet the intended outflow requirement.

19 MR. O'LAUGHLIN: And then, if I understand your
20 testimony correctly, if -- if you got to 1500 at the
21 combined exports and you still weren't meeting the spring
22 outflow requirement, you then went to Lake Oroville to
23 release water to meet the requirement; is that correct?

24 WITNESS LEAHIGH: That's correct.

25 MR. O'LAUGHLIN: Okay. Now, you put a caveat

1 at the end of the Lake Oroville, and you said, "up to a
2 certain limit."

3 What -- What did you mean by that? Or if I
4 misstated that, you could rephrase it whatever way you
5 wanted.

6 WITNESS LEAHIGH: No, that's -- that's correct.

7 So the modeling does assume that additional
8 flows would come to Lake Oroville -- from Lake Oroville
9 as long as storage -- projections of storage were -- were
10 at least 2 million acre-feet by the end of May.

11 MR. O'LAUGHLIN: End of May?

12 WITNESS LEAHIGH: Yes.

13 MR. O'LAUGHLIN: Thank you.

14 Is there a reason in regards -- Was it for
15 modeling purposes to show that it was possible to meet
16 the spring outflow criteria that only Oroville was used
17 rather than the combined CVP and SWP operations upstream?

18 WITNESS LEAHIGH: Yeah. My understanding,
19 the -- the goal in developing the criteria for the spring
20 outflow was to provide as great an outflow during that
21 period as possible without having upstream effects. And
22 that was one of the reasons that Lake Oroville steps in
23 to make those releases, at least during that period in
24 the spring, and it's also why it was -- so that it would
25 not be impacts to the CVP reservoirs.

1 And there was a reason it was limited -- the
2 response from Oroville was limited in order to ensure
3 that Lake Oroville could -- could get to the -- end up at
4 the end of the year in the same place as far as storage
5 so that there would not be an end-of-season storage in
6 Lake Oroville.

7 MR. O'LAUGHLIN: So, let's say,
8 hypothetically -- just hypothetically. It's a perplexing
9 issue to me.

10 If Oroville released 200,000 acre-feet to meet
11 the spring outflow, and you still met your 2 million
12 acre-feet, then as far as the CVP -- I mean, the SWP is
13 concerned, there would be no additional requirements from
14 Shasta or Folsom? Or is this an accounting methodology,
15 that you get it cleaned up later on based on a
16 spreadsheet?

17 WITNESS LEAHIGH: Well, so this is the area
18 that -- As far as the accounting, this is the part, as
19 far as the responsibility for this requirement and how it
20 relates to CVP export versus SWP export later in the
21 season, that -- that part of this has not been worked
22 out.

23 So, physically, the releases would be made from
24 Lake Oroville, but as far as how that's accounted for as
25 far as the splits between the two Projects and how we

1 would manage our exports later in the year, is -- is the
2 piece of this that has not worked out yet.

3 MR. O'LAUGHLIN: So, when -- when you make
4 releases from Oroville, you deliver water to the Feather
5 River contractors; right? The SWPs.

6 WITNESS LEAHIGH: That's part of the purposes
7 for releases from Lake Oroville, yes.

8 MR. O'LAUGHLIN: Now, you don't -- At Oroville,
9 you don't release water to meet the settlement contracts
10 for, let's say, GCID; correct?

11 WITNESS LEAHIGH: We don't meet -- GCID being a
12 Sacramento settlement contractor.

13 We don't make the releases directly, but it is
14 a -- it is -- there's an accounting to the extent that
15 they're part of the in-basin uses. It does reflect in
16 the COA accounting.

17 MR. O'LAUGHLIN: So, depending on where you sit
18 in this Sacramento River Basin, what Project gets stuck
19 with meeting the spring outflow requirement could have an
20 impact on the ability for those contracts to be met in
21 the future; correct?

22 WITNESS LEAHIGH: No, I don't believe so.
23 That's -- That's not what the modeling shows. The
24 modeling shows that there would not be any impacts to any
25 of the settlement contractors or the upstream storages.

1 MR. O'LAUGHLIN: In regards to the modeling
2 that was done, did -- when you operated Oroville to
3 release the additional water to meet the spring pulse
4 flow, did you commit additional storage space in -- in
5 Lake Oroville?

6 WITNESS LEAHIGH: Yes. So the storage levels
7 in Oroville, under those years where additional flows
8 were required from Oroville to meet this spring outflow
9 requirement, storages in Oroville would be temporarily
10 lower than they would have been otherwise. But by the
11 end of the season, end of September, the storages will
12 have recovered to the same -- the same level as -- as
13 before.

14 MR. O'LAUGHLIN: Okay. So, Mr. Milligan, this
15 question's for you.

16 Based on the testimony by Mr. Leahigh, is it
17 Reclamation's intent to make any of the spring pulse
18 flow -- I mean, the spring outflow requirement a
19 condition of the New Melones Project?

20 WITNESS MILLIGAN: That's not my understanding,
21 so I don't believe so.

22 MR. O'LAUGHLIN: The -- Is it your
23 understanding that Reclamation would be amenable to a
24 Permit condition that allowed -- stated that no
25 additional water would be released to meet the spring

1 outflow requirement as set forth for -- in the EIR/EIS?

2 MR. BERLINER: Objection: This is a policy
3 matter. It's beyond the scope of this panel's expertise.

4 CO-HEARING OFFICER DODUC: And I think
5 Mr. Milligan has answered as such in his previous
6 testimony.

7 So please move on, Mr. O'Laughlin.

8 Unless he wishes to change his testimony at
9 this time?

10 WITNESS MILLIGAN: No. That would be
11 consistent with my previous.

12 MR. O'LAUGHLIN: Can you -- At this time, can
13 you put up SJTA Number 12, please.

14 (Document displayed on screen.)

15 MR. O'LAUGHLIN: Mr. Milligan, this has been
16 marked SJTA Number 12. It's a draft of the DWR white
17 paper as regards to water transfers.

18 Are you familiar with this document?

19 And you can scroll down further if you need
20 more.

21 (Scrolling down document.)

22 WITNESS MILLIGAN: I think we need a little bit
23 more.

24 (Scrolling down document.)

25 WITNESS MILLIGAN: I am aware of various white

1 papers for transfers.

2 MR. O'LAUGHLIN: Okay. Stop right there.

3 Okay. All right. Mr. Leahigh, are you
4 familiar with the DWR white paper that's been marked as
5 SJTA Exhibit Number 12?

6 WITNESS LEAHIGH: Yes. Yeah, I am somewhat
7 familiar with this.

8 MR. O'LAUGHLIN: Okay. So, are -- are you
9 familiar with the refill criteria that's required of
10 various transfers when stored water is released to meet a
11 water transfer objective and DWR and Reclamation require
12 that the Operator of the facility that released the
13 stored water for transfer has a refill criteria inserted
14 into the Permit terms and conditions for the transfer?

15 WITNESS LEAHIGH: Well, I'm generally familiar
16 with that.

17 MR. O'LAUGHLIN: So, explain to me: Is there a
18 request by DWR in regards to the Petition that you
19 submitted here today as to whether or not DWR will have a
20 refill criteria for Lake Oroville in regards for the
21 additional storage that you're going to release in the
22 storage space that you've created for senior water right
23 holders downstream?

24 WITNESS LEAHIGH: I don't believe the
25 operations portrayed in the modeling from Lake Oroville

1 to meet a proposed spring outflow requirement under H4
2 would be applicable to a water transfer application as --
3 as you suggest.

4 MR. O'LAUGHLIN: Okay. And can you explain why
5 that -- why you believe it's not applicable?

6 WITNESS LEAHIGH: Well, the way this criteria
7 is being proposed is that this would be -- this would be
8 met by the Projects, this -- this H4 spring outflow
9 criteria.

10 MR. O'LAUGHLIN: Yeah, I understand that. But
11 in regards to releasing additional stored water, you will
12 be creating a space in Lake Oroville for this Project
13 that otherwise would not occur except for the granting of
14 this Petition.

15 So what I want to know is, are you amenable to
16 a refill criteria for senior water right holders
17 downstream to protect themselves from your refill up in
18 Lake Oroville?

19 MS. AUFDEMBERGE: Same objection.

20 CO-HEARING OFFICER DODUC: Thank you.

21 Please move on, Mr. O'Laughlin.

22 MR. O'LAUGHLIN: Well, no. I want an answer to
23 the question.

24 It's -- It's -- The question is whether or not
25 there is going to be a refill criteria for the hole

1 that's created in Lake Oroville.

2 CO-HEARING OFFICER DODUC: When you say
3 "criteria," are you suggesting -- Because obviously these
4 witnesses have been asked numerous times about potential
5 criteria for the Permit as a condition of granting this
6 Petition, to which their response, as coached by their
7 attorney, has been it's a policy call that's beyond their
8 expertise.

9 MR. O'LAUGHLIN: Oh.

10 CO-HEARING OFFICER DODUC: So when you're
11 asking about criteria, what specifically are you talking
12 about?

13 MR. O'LAUGHLIN: You know what? I'm going to
14 pull up my thesaurus and come up with a different word.

15 Okay. So, let's try a different way.

16 If you're -- If I understood your testimony
17 correctly, you will be releasing stored water at certain
18 times to meet the spring outflow objective; correct?

19 WITNESS LEAHIGH: Not necessarily releasing
20 stored water but allowing unstored water to pass through
21 the reservoir.

22 MR. O'LAUGHLIN: Well, okay. Now you're being
23 cute.

24 Look, I get it. So -- So, here's the deal:

25 You've got unregulated flow. You've got re-op

1 flow, but at some times in some years, you're going to be
2 releasing stored water from Oroville to meet this outflow
3 criteria; is that correct?

4 WITNESS LEAHIGH: I would have to look at the
5 modeling to see if that is indeed the case.

6 MR. O'LAUGHLIN: Okay. Take a look at the
7 modeling and --

8 WITNESS LEAHIGH: I know it is affecting the
9 storages, but I can't agree with your statement that it
10 would be storage releases --

11 MR. O'LAUGHLIN: Okay.

12 WITNESS LEAHIGH: -- without looking at the
13 model.

14 MR. O'LAUGHLIN: Well, let's take a break and
15 look at the model. That's fine with me.

16 CO-HEARING OFFICER DODUC: Okay.

17 MR. BERLINER: Can we do that during the break,
18 or do you need to do it now?

19 MR. O'LAUGHLIN: No. I'll move on. He can do
20 it during the break.

21 MR. BERLINER: Great.

22 MR. O'LAUGHLIN: That's -- That's not a
23 problem. I've got more questions.

24 CO-HEARING OFFICER DODUC: Let's get back on
25 topic here, Mr. O'Laughlin.

1 You're trying to reframe your question.

2 MR. O'LAUGHLIN: No. I got it. He's going to
3 look at the modeling and we're good to go.

4 CO-HEARING OFFICER DODUC: Okay.

5 MR. O'LAUGHLIN: Then we'll find out if they
6 created a hole in Oroville or not. And then we can ask
7 the rest of the questions.

8 Mr. Leahigh, in regards to your example that
9 you gave earlier in your testimony, you stated that you
10 used this past year as a prime example of water --
11 unregulated water entering the Delta that could have been
12 picked up by the North Delta Diversion facilities.

13 Do you remember that example?

14 WITNESS LEAHIGH: Yes.

15 MR. O'LAUGHLIN: I want to move upstream
16 because this follows on the last question that we discuss
17 had.

18 Clearly, the Project as envisioned -- and put
19 forth in front of the Board -- envisions the releases of
20 water from Folsom, Oroville and Shasta -- stored
21 releases -- stored water releases from Shasta, Oroville
22 and Folsom that can be re-diverted at the North Delta
23 facilities; is that correct?

24 WITNESS LEAHIGH: I think I testified that that
25 could be possible in some years, probably wetter years.

1 MR. O'LAUGHLIN: Right.

2 Okay. Then -- Now, there are time periods
3 where there are -- there's water entering into the
4 upstream storage facilities Shasta, Oroville and Folsom
5 that you re-op and release.

6 Is that part of the water -- It's not stored
7 water; okay? Is that part of the water that you're
8 looking to recapture at the North Delta facilities?

9 WITNESS LEAHIGH: I'm not sure that I quite
10 follow.

11 MR. O'LAUGHLIN: Sure. It's pretty easy when,
12 let's say, you have a requirement -- I'll give you an
13 example.

14 So, if we were to look at, like, say, Shasta
15 and the inflow's 1,000 cfs and the outflow's 10,000 cfs
16 and the 9,000 cfs has been stored for more than 28 days
17 in Shasta, 9,000 acre -- 9,000 cfs would be stored water
18 releases and the 1,000 cfs would be a bypass of flow to
19 meet requirements.

20 Would you agree with that?

21 WITNESS LEAHIGH: With that hypothetical?
22 Sounds -- Sounds correct.

23 MR. O'LAUGHLIN: Okay. Now, at some times,
24 there's water that comes into the reservoirs and its
25 residency time is not 28 days and you release it.

1 Would you -- Would -- Are the Projects looking
2 to -- If they're -- that time -- If that were to occur at
3 certain times in certain years, and it was possible to
4 pick that water up, would the Projects look at diverting
5 that water at North Delta Diversion facilities?

6 WITNESS LEAHIGH: It -- It would depend on the
7 circumstances.

8 MR. O'LAUGHLIN: Right. There's a -- There's a
9 myriad of circumstances.

10 But given all -- If all the operating criteria
11 were in place and all the rules were being met, and you
12 were bypassing water that was -- that's been in their
13 facilities for 15 days, and you had the opportunity to
14 pick it up, I'm assuming as a Project Operator you would
15 pick it up at the North Delta facilities if it was
16 available.

17 WITNESS LEAHIGH: Not necessarily. We would be
18 doing our usual evaluation of whether we had sufficient
19 stored water to meet all the other requirements,
20 including our deliveries to our settlement contractors
21 and other -- meeting other objectives throughout the
22 remainder of the year.

23 MR. O'LAUGHLIN: I'm sorry. I must not be
24 being very clear. So let me try again.

25 No, this is not that you're releasing stored

1 water. This is water that's kind of unregulated where
2 you're on the cusp of -- Let's say you have to meet a
3 Flood Control Criteria and you've only had the water in
4 storage for 15 days, so it's not stored water, and it's
5 not bypass flows because it's not coming in on the day
6 that it's being released.

7 Are you looking at that water level to let it
8 pass facilities at Shasta, Oroville and Folsom and pick
9 it up at the North Delta facilities?

10 WITNESS LEAHIGH: I'm not sure that I have
11 enough information to answer this question.

12 MR. O'LAUGHLIN: Okay. That's a perfectly good
13 answer. There's nothing wrong with that.

14 Okay. So now I've got to -- Moving on your
15 statement about this year.

16 Now, in your statement, you -- you made a
17 distinction between waters that the CVP and SWP could
18 control upstream and the water that would have been
19 available in the Delta for diversion at the North Delta
20 Diversion facilities; is that correct?

21 WITNESS LEAHIGH: I believe so.

22 MR. O'LAUGHLIN: Okay. So -- And let's just
23 make the math simple here.

24 So, let's say this past year that Shasta,
25 Oroville and Folsom were releasing 3 acre-feet total;

1 okay? And that water's going into the system.

2 And let's say, hypothetically, in the Delta,
3 there was -- at the North Delta Diversion facilities,
4 there was 10 acre-feet.

5 So the way that the Project's designed, if you
6 could do it correctly, you would try to capture that 7
7 acre-feet. As long as the bypass flows are being met,
8 the outflow criteria are being met, everything else is
9 being met, you'd try to pick up that additional 7;
10 correct?

11 WITNESS LEAHIGH: Again, I don't know if I have
12 all the information I need on your hypothetical.

13 But if we're meeting all the other criteria,
14 all of the other obligations, and this is excess flow,
15 then I wouldn't see a reason why we wouldn't pick it up.

16 MR. O'LAUGHLIN: Great.

17 So, now, in regards to this excess flow, I'm
18 trying to determine in your mind: Where is the excess
19 flow coming from in order for you to pick it up at the
20 North Delta facilities? And you can go by tributaries,
21 if you want.

22 WITNESS LEAHIGH: So, in our example, the
23 excess flow is coming from various sources. It's coming
24 from -- directly off from precipitation in the Sacramento
25 Valley. It's coming from un -- unregulated tributaries

1 that feed into Sacramento Valley; so, for example, south
2 fork of the Yuba River. It's not a matriculation on that
3 particular tributary.

4 It's also coming -- At times it was coming from
5 required passthrough from Shasta, Oroville and Folsom for
6 us -- in order to meet our Flood Control requirements.
7 It could have been coming from minimum in-stream release
8 requirements.

9 So a combination of all these things would have
10 been the source of the unstored water available.

11 MR. O'LAUGHLIN: Okay. In regards to -- Let's
12 move downstream, then, and look at the first example --
13 one of the examples you gave of the unregulated
14 tributaries.

15 Let's pick a good one. Let's pick Mill Creek.

16 So is -- Would Mill Creek being an unregulated
17 tributary that would continue to have water that may be
18 needed to be accessed to the Delta where you would pick
19 it up?

20 WITNESS LEAHIGH: Yes, it could.

21 MR. O'LAUGHLIN: Does -- Does DWR have any
22 facilities on Mill Creek to regulate or control water?

23 WITNESS LEAHIGH: No.

24 MR. O'LAUGHLIN: Would the same response be
25 true for Deer Creek?

1 WITNESS LEAHIGH: I think that's the same
2 response.

3 MR. O'LAUGHLIN: In fact, there's -- there's a
4 myriad of streams and tributaries downstream of Shasta
5 and Oroville, Folsom to which the CVP and SWP have no
6 control or projects on those facilities; correct? On
7 those tributaries. Sorry.

8 WITNESS LEAHIGH: Yes.

9 MR. O'LAUGHLIN: Switching subjects. Can you
10 put up SJTA number 10, please?

11 (Document displayed on screen.)

12 MR. O'LAUGHLIN: And you can scroll down.

13 (Scrolling down document.)

14 MR. O'LAUGHLIN: You can keep scrolling down if
15 you want.

16 (Scrolling down document.)

17 MR. O'LAUGHLIN: Stop.

18 MS. RIDDLE: Did you identify these?

19 MR. O'LAUGHLIN: Yes. SJTA Number 10 is DWR
20 and the Bureau letter to National Fishery for Section 7
21 consultation on the coordinated Long-Term Ops, and then
22 there's a similar one for U.S. Fish and Wildlife.

23 Mr. Milligan, are you familiar with this
24 letter?

25 WITNESS MILLIGAN: I didn't get to see the date

1 of the letter.

2 (Scrolling to top of document.)

3 WITNESS MILLIGAN: Yes.

4 MR. O'LAUGHLIN: Can -- Can you tell us what
5 this letter is?

6 WITNESS MILLIGAN: It says, "Request for
7 Re-initiation of Federal" -- It's for the long-term
8 coordination of the two Projects.

9 MR. O'LAUGHLIN: There's a similar one that
10 went to U.S. Fish and Wildlife Services; is that correct?

11 WITNESS MILLIGAN: That's correct.

12 MR. O'LAUGHLIN: So -- Now, my understanding as
13 we sit here today, that it -- So, we were talking earlier
14 about -- I called it the OCAP BO, and you corrected that
15 and you said it had to do with the long-term operations
16 of the CVP and SWP; is that oppose --

17 WITNESS MILLIGAN: It's just the title
18 that's -- On that particular consultation package, that
19 was the title that was used.

20 MR. O'LAUGHLIN: Okay. So, as we sit here
21 today, DWR and Reclamation have asked NBS and U.S. Fish
22 and Wildlife for an opinion on the whole entire
23 integrated CVP/SWP operations; correct?

24 WITNESS MILLIGAN: We've requested to
25 re-initiate that consultation process.

1 MR. O'LAUGHLIN: Okay. All right. And so if
2 that process is going to move forward, then is it
3 possible that the assumptions that were part of the
4 Petition regarding the current OCAP BO requirements may
5 change?

6 WITNESS MILLIGAN: This is possible.

7 MR. O'LAUGHLIN: I have another -- This is a
8 scheduling issue, and if you don't know the answer to
9 this, it's fine.

10 And Mr. Leahigh, if you have a different
11 understanding, you can jump in at any time.

12 So how -- how is the consult -- consultation
13 for the WaterFix Project going to go forward now that the
14 two Projects have requested consultation for the entire
15 Project? Are they going to run simultaneously?

16 Or is the -- the large project -- so the CVP
17 SWP operating one -- going to go first and then they're
18 going to go back and do the WaterFix on top of it?

19 How -- How's all this going to work, if you
20 know?

21 WITNESS MILLIGAN: That's still to be worked
22 out. This is a fairly recent request for re-initiation.
23 And we are in the process of initiating -- or
24 consultation on the WaterFix component. So I think that
25 there's certainly a staffing concern that goes with this.

1 So I don't think we know exactly the sequence.

2 But I do believe the WaterFix Biological
3 Assessment figures' done and is in -- now in the hands of
4 both Federal fishery agencies, that they're doing their
5 best to do their consultation on that as we speak.

6 So they're much, much further along in that
7 particular process.

8 MR. O'LAUGHLIN: So, do you have any
9 understanding, though -- And I understand that the
10 Biological Assessment was finalized and sent to them.

11 Do you have any understanding of that they're
12 going to finish that process first and then do the
13 long-term consultation or do the long-term consultation
14 first and then finish the WaterFix; do you know?

15 WITNESS MILLIGAN: I do not know for sure.

16 MR. O'LAUGHLIN: Mr. Leahigh, would you agree
17 that, in regards to the Petition that has been put forth
18 by the CVP and SWP in this matter, that it assumes the
19 current what I will call the Biological Opinions from NBS
20 and U.S. Fish and Wildlife regarding the long-term
21 operations of the Project; is that correct?

22 WITNESS LEAHIGH: Yes. My understanding is,
23 this request for re-initiation is based on the current
24 operations of the two Projects.

25 MR. O'LAUGHLIN: Okay. And the Petition you

1 made was based on what are the current Biological
2 Opinions that have been issued for the long-term
3 operations of the Project; correct?

4 WITNESS LEAHIGH: That would be my
5 understanding.

6 MR. O'LAUGHLIN: And if you go through this
7 process, it is possible that you're -- the conditions to
8 operate the Projects pursuant to the Endangered Species
9 Act, both from NBS and U.S. Fish and Wildlife Service may
10 differ than the Petition in front of the Board; is that
11 correct?

12 WITNESS LEAHIGH: I suppose that would be
13 possible.

14 MR. O'LAUGHLIN: Okay. Well, and, in fact,
15 were you taken -- were you surprised at all this year
16 when you were asked for an additional 2 to 300,000
17 acre-feet of outflow by U.S. Fish and Wildlife Service to
18 meet the Endangered Species Act?

19 WITNESS LEAHIGH: I don't know. I don't know
20 that we were formally asked. I don't know if we were
21 formally asked for that.

22 MR. O'LAUGHLIN: Okay. You -- You may -- Okay.
23 So -- So -- But wasn't -- wasn't the basic gist of the
24 request that, if you don't give us two to 300,000
25 acre-feet of additional outflow, that we're going to seek

1 re-consultation?

2 WITNESS LEAHIGH: I'm not aware of any
3 discussions of that nature.

4 MR. O'LAUGHLIN: So, as we sit here today, U.S.
5 Fish and Wildlife Service has asked for an additional 2
6 or 300,000 feet of outflow and that's currently not in
7 your Petition to the -- this Petition to the State Water
8 Resources Control Board; is that correct?

9 WITNESS LEAHIGH: That's not part of what is in
10 this Project, no.

11 MR. O'LAUGHLIN: So -- So, maybe you can help
12 me. I'm trying to figure out, as a water user, how I can
13 determine what the impacts to my water right is and yet I
14 don't know where the spring outflow's coming from. I --
15 You're in the middle of consultation with NBS and U.S.
16 Fish and Wildlife which may change. Your EIR/EIS isn't
17 done yet.

18 How do we know what the number is or where
19 these flows are coming from? And I'm not being
20 argumentative. I'm just trying to figure out how -- how
21 we come up with the knowledge that we could respond in a
22 meaningful manner to your Petition?

23 WITNESS LEAHIGH: I don't know what flows
24 exactly you're talking about.

25 MR. O'LAUGHLIN: The --

1 WITNESS LEAHIGH: I mean, the Petition is based
2 on our current regulatory environment with the new
3 infrastructure as proposed.

4 MR. O'LAUGHLIN: Well, let me ask -- So, I -- I
5 understand that.

6 But the flow range is this (indicating). How
7 do I know what flows you're proposing at what point in
8 time and from what tributaries?

9 And you're telling us, as we -- And we just
10 went through this. We don't know where the spring
11 outflows are coming from. You still have to go to U.S.
12 Fish and Wildlife Service and NBS for Biological
13 Opinions.

14 Isn't that key information necessary? Because
15 your Petition, the premise of it is your OCAP --
16 operating percent to the OCAP BO.

17 MR. MIZELL: I'm going to object to misstating
18 the witness' testimony.

19 John has explained where the spring outflows in
20 the H4 come from.

21 MR. O'LAUGHLIN: I get that. But what I'm
22 trying understand is, your Petition is premised on the
23 OCAP BOs; right?

24 WITNESS LEAHIGH: I'm sorry. Say that again?

25 MR. O'LAUGHLIN: Your Petition to the State

1 Water Resources Control Board and the flow criteria
2 you've put forward, you've said that you're going to
3 operate pursuant to the OCAP BOs; right?

4 WITNESS LEAHIGH: We will operate to whatever
5 regulations are required of us.

6 MR. O'LAUGHLIN: Okay. And we know what the
7 OCAP BO is as -- today; correct?

8 WITNESS LEAHIGH: Yes.

9 MR. O'LAUGHLIN: Okay. But now that the suite
10 consultation has been initiated, it may change.

11 WITNESS LEAHIGH: Yes. We have no idea to what
12 degree and what form.

13 MR. O'LAUGHLIN: Okay. So, as part of your
14 Petition, how do we know if you're going to operate
15 pursuant to the OCAP BOs? How do we know where this
16 water is going to come from based on criteria -- on OCAP
17 BO RPAs that haven't been resolved yet?

18 WITNESS LEAHIGH: Where what water is coming to
19 come from?

20 MR. O'LAUGHLIN: To meet the new OCAP BOs. Are
21 you just going to --

22 WITNESS LEAHIGH: What -- What are the
23 requirements of the new OCAP BOs?

24 CO-HEARING OFFICER DODUC: Hold on.

25 WITNESS LEAHIGH: I mean, I -- Okay.

1 MR. O'LAUGHLIN: Well, no. The question is:
2 Do you -- Do you know what the new requirements of OCAP
3 BOs are?

4 WITNESS LEAHIGH: I do not know.

5 MR. O'LAUGHLIN: Okay.

6 WITNESS LEAHIGH: I don't know if there will
7 be.

8 MR. O'LAUGHLIN: So we don't know either way.

9 WITNESS LEAHIGH: Correct.

10 MR. O'LAUGHLIN: I agree with that.

11 So I have another question: In regards to this
12 Project, did you -- did you, Mr. Milligan, look at the
13 upcoming Water Quality Control Plan?

14 WITNESS MILLIGAN: What specifically?

15 MR. O'LAUGHLIN: Sure.

16 In regards to -- Are -- Are you aware of the
17 State Board's endeavor to change the water quality
18 control for the Sacramento-San Joaquin Bay Delta.

19 WITNESS MILLIGAN: Yes.

20 MR. O'LAUGHLIN: Okay. And, in fact, the State
21 Board initiated that process in 2006; is that correct?

22 WITNESS MILLIGAN: Yes.

23 MR. O'LAUGHLIN: All right. And I -- I'm
24 curious as to the Draft EIR/EIS in the testimony put
25 forward here today why there hasn't been an analysis of

1 the Water Quality Control Plan in the context of
2 WaterFix.

3 WITNESS MILLIGAN: Are you speaking of the
4 Draft EIS/EIR as it relates to the WaterFix?

5 MR. O'LAUGHLIN: Yeah.

6 WITNESS MILLIGAN: And why that did not include
7 some analysis of the changed flow plan?

8 MR. O'LAUGHLIN: Yes.

9 WITNESS MILLIGAN: I -- I do not know.

10 MR. O'LAUGHLIN: Okay. Do you know who would
11 know?

12 WITNESS MILLIGAN: I think I would probably --
13 Maybe that would be an Operations question.

14 But it may have been a question for -- for
15 those who were preparing the environmental documents.

16 MR. O'LAUGHLIN: Okay. Well, let's see --
17 Let's see.

18 Look -- So we do have one -- We had a draft
19 environmental document that hit the street in 2012 from
20 the State Water Resources Control Board, the Water
21 Quality Control Plan, and it called for unimpaired flows,
22 and it had a preferred alternative of 35 percent
23 unimpaired flow on the Stanislaus River.

24 Has Reclamation done any analysis of what would
25 happen at New Melones Reservoir with -- between -- with

1 the WaterFix requirements of trying to meet D-1641, OCAP
2 BO Table 2e flows, and trying to meet an unimpaired flow
3 obligation as well?

4 WITNESS MILLIGAN: There may have been some
5 analysis, but I'm not sure what the status of it is.

6 MR. O'LAUGHLIN: Okay. And if you did that,
7 you did it internally within Reclamation, or did you
8 submit it as part of your Petition here today?

9 WITNESS MILLIGAN: It would have been system
10 internal work that was done, not part of the Petition.

11 MR. O'LAUGHLIN: Mr. Leahigh, are you aware of
12 any analysis done by the Department of Water Resources to
13 ascertain whether -- what the impacts of the State Water
14 Resources Control Board Water Quality Control Plan would
15 be in the context of California WaterFix?

16 WITNESS LEAHIGH: No, I'm not aware of any
17 analysis on the Preliminary.

18 MR. O'LAUGHLIN: Do you know why any analysis
19 was not done by DWR in regards to the change in the Water
20 Quality Control Plan being done by the State Board?

21 WITNESS LEAHIGH: I don't know. For one, it's
22 not final.

23 MR. O'LAUGHLIN: So, is it your understanding
24 that, pursuant to CEQA, that you have to have a final
25 regulation or rule before doing -- dealing with the CEQA

1 documentation.

2 MR. MIZELL: Objection: Calls for a legal
3 conclusion.

4 MR. O'LAUGHLIN: If you know.

5 WITNESS LEAHIGH: No. I'm not an expert on
6 CEQA, no.

7 MR. O'LAUGHLIN: Do you know -- Has anyone from
8 your staff talked to anyone at the State Board about how
9 the Water Quality Control Plan substitute environmental
10 document was going to be integrated or coordinated with
11 the California WaterFix Draft EIR/EIS?

12 WITNESS LEAHIGH: No, nobody from my staff that
13 I'm aware.

14 (Timer rings.)

15 CO-HEARING OFFICER DODUC: Mr. O'Laughlin?

16 MR. O'LAUGHLIN: Yes.

17 CO-HEARING OFFICER DODUC: Do I dare hope that
18 you're done?

19 (Laughter.)

20 CO-HEARING OFFICER DODUC: Let me rephrase
21 that.

22 MR. O'LAUGHLIN: And I'm being nice today.

23 CO-HEARING OFFICER DODUC: What additional line
24 of questioning do you wish to pursue?

25 MR. O'LAUGHLIN: I have about four or five more

1 lines.

2 Actually, if we could take our morning break
3 now, and if Mr. Leahigh can look at that modeling
4 question and come back, I'd probably -- If we took a
5 break, I'd be probably done by 11:00.

6 CO-HEARING OFFICER DODUC: What are these four
7 or five lines of question you're going to pursue?

8 MR. O'LAUGHLIN: I have question about other
9 people's testimony.

10 CO-HEARING OFFICER DODUC: I'm sorry. Other
11 people's testimony?

12 MR. O'LAUGHLIN: Um-hmm. Yes.

13 CO-HEARING OFFICER DODUC: Oh, you mean of the
14 Petitioners' testimony.

15 MR. O'LAUGHLIN: Yes.

16 I have questions in regards to appropriate -- a
17 subject near and dear to my heart, appropriate Delta flow
18 criteria.

19 CO-HEARING OFFICER DODUC: Okay. There's only
20 so much you can do with that, you realize.

21 MR. O'LAUGHLIN: We'll see.

22 CO-HEARING OFFICER DODUC: All right.

23 MR. O'LAUGHLIN: I'm not prejudging it one way
24 or the other, but I do have appropriate questions. You
25 asked where I was going.

1 I have questions regarding Delta outflow. I
2 have some questions regarding modeling assumptions based
3 on current actions that are occurring in the
4 Sacramento-San Joaquin Delta. So probably around 11:00,
5 ballpark-ish.

6 CO-HEARING OFFICER DODUC: All right. Let's go
7 ahead and take our 15-minute break, then --

8 MR. O'LAUGHLIN: Perfect.

9 CO-HEARING OFFICER DODUC: -- and we'll resume
10 at 10:25.

11 MR. O'LAUGHLIN: Thank you.

12 (Recess taken at 10:11 a.m.)

13 (Proceedings resumed at 10:25 a.m.)

14 CO-HEARING OFFICER DODUC: (Banging gavel.)

15 Can we go ahead and set the timer for 35
16 minutes. I'm going to hold Mr. O'Laughlin to his word.

17 MR. O'LAUGHLIN: An attorney to his word?
18 That's hilarious.

19 (Laughter.)

20 CO-HEARING OFFICER DODUC: I have high
21 standards for you, Mr. O'Laughlin.

22 MR. O'LAUGHLIN: Probably you and my mom are
23 the only two.

24 CO-HEARING OFFICER DODUC: Begin when ready.

25 MR. O'LAUGHLIN: Ready. Okay.

1 Mr. Leahigh, on Page 4 of your testimony,
2 Lines 8 through 11.

3 WITNESS LEAHIGH: Yes.

4 MR. O'LAUGHLIN: Have you had an opportunity to
5 review that testimony?

6 Is -- Is -- It says (reading):

7 "The SWP also operates within its Water Right
8 Permits."

9 It basically says that you're not going to
10 change for the WaterFix.

11 Is that the basis for your finding that -- or
12 your opinion that there's no injury to legal users of
13 water?

14 WITNESS LEAHIGH: No, I don't think that in
15 itself is a -- is a -- is what brings me to that
16 conclusion, no.

17 MR. O'LAUGHLIN: Okay. What other documents or
18 data or facts do you rely on that there is no injury to
19 legal users of water?

20 WITNESS LEAHIGH: My conclusion that we would
21 continue to be able to meet all the Water Quality Control
22 Plan standards to -- at least as effectively as we have
23 in the past.

24 MR. O'LAUGHLIN: And when you -- When the
25 modeling was done for this process, did it include -- the

1 modeling and your ability to meet the standards, you --
2 you included within that the ability to have two CVPs;
3 correct?

4 WITNESS LEAHIGH: No, I don't believe that was
5 part of the modeling.

6 MR. O'LAUGHLIN: So the modeling that was done
7 for, say, New Melones Reservoir, you disagree with
8 Mr. Milligan's testimony that the model was suppressed at
9 New Melones and that, in fact, D-1641 were met under all
10 terms and conditions at New Melones?

11 WITNESS LEAHIGH: Well, Mr. Milligan's probably
12 looked at the New Melones operations closer than I have
13 in the modeling, so I would -- I would defer to whatever
14 his thoughts are on that.

15 MR. O'LAUGHLIN: Okay. We're going to skip
16 around a little bit and get some questions resolved.

17 Did you have a chance to look at the data to
18 see whether or not stored water would be released under
19 H4 to meet the spinoff flow requirement?

20 WITNESS LEAHIGH: I made a good-faith effort to
21 find it. It's not something that can be gleaned from any
22 of the exhibits.

23 It would be in the EIR/EIS, and I was unable to
24 find it within the 15 minutes' break.

25 MR. O'LAUGHLIN: Could you help me, then -- And

1 not to spend a huge amount of time on this.

2 Can you try and point me in a direction --
3 because I've been trying to find the results -- where I
4 should be looking?

5 WITNESS LEAHIGH: I think -- I think my
6 understanding was Appendix 5, if I have that correctly,
7 is where -- where -- That's where I was looking.

8 MR. O'LAUGHLIN: Okay. Thank you.

9 MR. MIZELL: It's before the Board. It's
10 Appendix 5A.

11 MR. O'LAUGHLIN: Thank you for your help.
12 Appreciate that.

13 Can we put up SJTA Exhibit Number 2.

14 (Document displayed on screen.)

15 MR. O'LAUGHLIN: And if you could scroll down
16 on that.

17 (Scrolling down document.)

18 MR. O'LAUGHLIN: Stop right there.

19 Mr. Milligan, I'll represent to you that this
20 is DWR Exhibit 514. This is excerpts. This is, I
21 believe, Page 4.

22 Based on your previous testimony -- take a
23 chance to review this -- would you agree with this
24 depiction of the modeling that was done for CalSim in
25 regards to the WaterFix Project?

1 WITNESS MILLIGAN: Could you scroll up so I can
2 see what the headings are?

3 MR. O'LAUGHLIN: Oh, absolutely. Go right
4 ahead.

5 (Scrolling up document.)

6 WITNESS LEAHIGH: And where did this document
7 come from?

8 MR. O'LAUGHLIN: This is DWR-514. If it
9 doesn't look familiar or you're not --

10 WITNESS MILLIGAN: I believe in earlier
11 testimony, we were looking at some tables reflective of
12 Modeling assumptions.

13 MR. O'LAUGHLIN: Right.

14 WITNESS MILLIGAN: But no action -- no action
15 versus H3 set of criteria, H4.

16 This table seems to be referring to some CalSim
17 changes from 2010 to -- to some later versions. And
18 obviously on the San Joaquin River, there were some
19 adjustments within that as well, so --

20 MR. O'LAUGHLIN: Right.

21 Like, one of them is the Vernalis Adaptive
22 Management Plan no longer exists.

23 WITNESS MILLIGAN: That's correct.

24 MR. O'LAUGHLIN: That's easy.

25 If you could scroll down to Page 14.

1 WITNESS MILLIGAN: If I could --

2 MR. O'LAUGHLIN: Oh, sure.

3 WITNESS MILLIGAN: If I could --

4 MR. O'LAUGHLIN: Yeah.

5 WITNESS MILLIGAN: -- take the liberty of -- In
6 discussing with some of the folks that were familiar with
7 the modeling that was submitted to the Board and for the
8 environmental documents, that the -- there was a lot of
9 discussion back and forth about how to represent the
10 Restoration Program of potential flows. And it was
11 pointed out to me that, in the submittals, it actually
12 flows from the Restoration Program.

13 The modeling language that would have allowed
14 that to be incorporated into the model was actually
15 turned off. So the best that we can tell right now, that
16 there were -- San Joaquin River Restoration Program
17 closed, are not represented in either the no action or
18 the -- with the Project alternative.

19 MR. O'LAUGHLIN: Thank you. That's my
20 understanding as well.

21 Okay. Scrolling down to Item -- down to the
22 next page, which is, I think, Number 14 -- Page 14 from
23 514.

24 (Document displayed on screen.)

25 MR. O'LAUGHLIN: So there was a lot of

1 discussions about capacities and capabilities and
2 everything.

3 But would it be fair to say that this chart
4 accurately depicts the amount of water that may be
5 exported or might be exported based on the various
6 alternatives that have been proposed, Mr. Milligan?

7 WITNESS MILLIGAN: Is -- This chart is -- again
8 is an Exceedance Probability Chart, and it shows the
9 range of what combined exports of the two Projects would
10 be with a No-Action Alternative, H3 set of criteria, the
11 H4, and then the two broader boundary discussions.

12 So, this -- this try -- tries to represent the
13 range of what could occur.

14 MR. O'LAUGHLIN: All right. So on an
15 exceedance curve basis, it may be possible under -- I
16 believe it's H3 that there is more capability to take
17 some more -- divert some more water than it would under
18 the NAA.

19 WITNESS MILLIGAN: There's certainly a number
20 of periods of time where that's the case. It's hard to
21 tell when they crisscross at the drier end of the
22 spectrum or not.

23 MR. O'LAUGHLIN: Right.

24 WITNESS MILLIGAN: But that's cumulative over
25 seasons. This -- This chart is kind of the annual

1 amounts.

2 MR. O'LAUGHLIN: Yes. Thank you.

3 Okay. Can we throw up SJTA Number 3, please.

4 (Document displayed on screen.)

5 MR. O'LAUGHLIN: Ah, yes.

6 This is from the State Water Resources Control
7 Board. It's the Sacramento-San Joaquin River Basin's
8 plan to -- curve for -- curtailment, and it's dated
9 6/10/2015.

10 Mr. Leahigh, have you ever seen this document
11 before?

12 WITNESS LEAHIGH: No, I don't believe so.

13 MR. O'LAUGHLIN: Okay. Mr. Milligan, have you
14 seen this document before?

15 WITNESS MILLIGAN: It does not look familiar.
16 Maybe it's just the graphics. I may have seen something
17 like that. I can't read the text.

18 MR. O'LAUGHLIN: (Laughing.)

19 WITNESS MILLIGAN: I think I've seen something
20 like this before but not this specific document.

21 MR. O'LAUGHLIN: Okay. Are you aware of in the
22 last several years where the State Water Resources
23 Control Board has undertaken an analysis of trying to
24 determine when supply and demand matches up with flows in
25 the Sacramento-San Joaquin and Bay-Delta?

1 WITNESS MILLIGAN: Was that to me?

2 MR. O'LAUGHLIN: Yes.

3 WITNESS MILLIGAN: Yes, I am aware that they
4 endeavored to do that during the last couple drought
5 years.

6 MR. O'LAUGHLIN: And this is one of the
7 analyses that they performed.

8 Did -- Has -- If any of you aware -- I'll start
9 with you first, Mr. Milligan.

10 Has Reclamation made an analysis of downstream
11 demand in regards to the changes in the -- that may
12 happen due to WaterFix and when supply and demand are
13 necessarily in the Sacramento River Basin?

14 WITNESS MILLIGAN: Could you repeat your
15 question?

16 MR. O'LAUGHLIN: Sure.

17 WITNESS MILLIGAN: I just got a little lost.

18 MR. O'LAUGHLIN: No, no. I was a little lost,
19 too. It was a little long.

20 What I'm trying to get at is, the testimony
21 provided so far to date, I haven't seen any analysis of
22 where the water right holders are in the Sacramento or
23 San Joaquin Bay-Delta system, more an analysis of their
24 demand at various times of the year.

25 Do you know if that -- such an analysis was

1 done by Reclamation as part of this Petition?

2 WITNESS MILLIGAN: I'm not aware of anything
3 other than what's kind of more colloquially part of the
4 CalSim representation of demands in the Sac Valley and
5 San Joaquin.

6 MR. O'LAUGHLIN: Mr. Leahigh, do you know if
7 DWR's done a -- located, either in the Sacramento or the
8 San Joaquin or in the Delta, the senior water right
9 holder and the demands of the senior water right holders
10 based on year type for the analysis of injury to legal
11 users of water?

12 WITNESS LEAHIGH: Yeah. I know that there are
13 gross assumptions on these numbers in the modeling, but I
14 don't know specifically what kinds of adjustments may
15 have been made for various types of years. That would be
16 a question for the Modelers.

17 MR. O'LAUGHLIN: Okay. Another Modeling
18 question.

19 All right. Can we switch to SJTA Number 14
20 now, please.

21 MS. RIDDLE: Before we leave that document, you
22 said it was a State Water Board document? Is it from a
23 State Water Board exhibit or . . .

24 MR. O'LAUGHLIN: No. It's a State Board
25 document that was produced in another matter and it's

1 labeled at the bottom.

2 MS. RIDDLE: Oh.

3 MR. O'LAUGHLIN: But it's going to be our
4 exhibit.

5 MS. RIDDLE: Thank you.

6 MR. O'LAUGHLIN: Sure. SJTA 14.

7 (Document displayed on screen.)

8 MR. O'LAUGHLIN: And you can scroll down on
9 this one if you want. I think it's highlighted.

10 (Scrolling down document.)

11 MR. O'LAUGHLIN: I'm only interested in this
12 section. You may be interested in others.

13 Have you had an opportunity to review that,
14 Mr. Leahigh?

15 WITNESS LEAHIGH: Yes.

16 MR. O'LAUGHLIN: Are -- Are you familiar with a
17 complaint that was lodged by the State Water Contractors
18 with the State Water Resources Control Board?

19 WITNESS LEAHIGH: Yes.

20 MR. O'LAUGHLIN: Did you -- Did your -- Did the
21 Department of Water Resources supply information to the
22 State Water Contractors that formed the basis of this
23 complaint?

24 WITNESS LEAHIGH: Not that I'm aware of.

25 MR. O'LAUGHLIN: Okay. Would you agree with

1 the statement that (reading):

2 "The State Water Contractors are injured by
3 south of San Joaquin diverters because approximately
4 100 to 300,000 acre-feet of unlawful diversion
5 causes, the jointly-operated SWP," blah blah blah.

6 Would you agree with that, that they're
7 illegally diverting 100 to 300,000 acre-feet in the
8 Delta?

9 WITNESS LEAHIGH: I'm not familiar with the
10 specifics of how these numbers were developed.

11 MR. O'LAUGHLIN: Okay. Do you know if, as part
12 of the Petition that was made for -- for this Petition,
13 if the modeling assumed that the illegal diversions would
14 continue to be met, or was there modeling done to cut the
15 illegal diversions off?

16 WITNESS LEAHIGH: Yeah, I -- It is a modeling
17 question.

18 MR. O'LAUGHLIN: If you know.

19 THE WITNESS: Yeah. I -- I don't know.

20 MR. O'LAUGHLIN: Do you know if the Department
21 has a position regarding whether or not the diversions
22 that occurred in 2015 -- 2014 and 2015 were, in fact,
23 illegal diversions in the Delta?

24 WITNESS LEAHIGH: I think there was some
25 question about it. I don't think we've taken a

1 position --

2 MR. O'LAUGHLIN: Now --

3 THE WITNESS: -- specifically on this. At
4 least, I'm not aware.

5 MR. O'LAUGHLIN: Now, as a Project Operator --
6 so we're moving forward in time -- if -- if your
7 understanding is that people were taking your water
8 illegally, then you as the Project Operator upstream have
9 to do one or two things: A, cut them off; or, B,
10 continue to release water to meet their demand and then
11 meet your outflow demand; correct?

12 MR. MIZELL: I'm going to object to these set
13 of questions under relevance.

14 I'm not sure what the hypothetical about a
15 future enforcement action on Delta use has to do with the
16 California WaterFix.

17 And if we could constrain the questions to
18 maybe what the assumptions are under the modeling and how
19 we treat in-basin demand, that would -- I would have no
20 objection to that.

21 But when we get into calls about illegal use of
22 water, we haven't asserted any complaints about illegal
23 use of water at this time, and I don't think it's
24 necessarily informative to what the witnesses are
25 testifying about.

1 CO-HEARING OFFICER DODUC: Mr. O'Laughlin.

2 MR. O'LAUGHLIN: Well, that's a shocking
3 statement by DWR's attorney for --

4 CO-HEARING OFFICER DODUC: No commentary,
5 please. Just provide your rationale.

6 MR. O'LAUGHLIN: Well, so, here's the deal:

7 If they're making a Petition to the State Water
8 Resources Control Board, and they have assumptions in
9 their baseline conditions on how they're operating now
10 and how they're going to operate in the future, one of
11 the key components of that is in-Delta demand.

12 And since we're here talking about injury to
13 legal users of water, one of the things that we have to
14 understand is, how does DWR view these -- well, the State
15 Water Project contractor views them as illegal. I don't
16 know how DWR views them, or Reclamation.

17 But can you imagine -- I mean, this is an
18 additional 300,000 acre-feet of water which could have
19 serious impacts both on upstream operations and
20 downstream operations.

21 And I'm just trying to understand what is the
22 basis of the Petition. So if it's -- they're not going
23 to release water for those people in drier years, then we
24 need to know that. And if they are, great.

25 CO-HEARING OFFICER DODUC: All right,

1 Mr. O'Laughlin, I will allow the question.

2 Please answer to the best of your ability.

3 WITNESS LEAHIGH: Well, I mean, DWR cannot
4 curtail these folks. This would be the Board -- This
5 would be the job of the Water Board perhaps.

6 So, again, this is a Modeling assumption and I
7 can't -- I don't know exactly what the assumptions were.

8 MR. O'LAUGHLIN: Okay. So I'll ask the
9 Modelers that.

10 But here's my question to you: As an
11 Operator -- as you operate today, though -- you operate
12 to meet the Delta outflow demand that's set in -- in the
13 requirement.

14 And if that water is taken in the process,
15 rightly or wrongly, you have to make up for it in order
16 to meet our outflow demand as an Operator; correct?

17 WITNESS LEAHIGH: Yes, we are operating to meet
18 the Water Quality Control Plan objectives. We think our
19 responsibility is only to meet other diversions that are
20 legal in the system, but we don't have control over
21 whether only legal diverters are taking water.

22 MR. O'LAUGHLIN: All right. One more quick
23 question:

24 When the modeling assumptions were done, is it
25 your understanding, or do you know, how the water being

1 released to meet Delta outflow is treated in the
2 modeling?

3 WITNESS LEAHIGH: I'm sorry. In what respect?

4 MR. O'LAUGHLIN: Sure.

5 Is -- Does the modeling try to re-capture or
6 control the water that's being released for Delta
7 outflow?

8 WITNESS LEAHIGH: Did we recover the water
9 that's being used for Delta outflow?

10 MR. O'LAUGHLIN: Okay. Let me ask it a
11 different way.

12 You release water from your upstream reservoirs
13 that is re-diverted at Jones and Banks; correct?

14 WITNESS LEAHIGH: At times.

15 MR. O'LAUGHLIN: At times, yes, exactly.

16 And -- And as part of your criteria, when
17 you're releasing water, a component of that goes to Delta
18 outflow; correct?

19 WITNESS LEAHIGH: Yes.

20 MR. O'LAUGHLIN: Okay. Now --

21 WITNESS LEAHIGH: It can, yes.

22 MR. O'LAUGHLIN: It can.

23 THE WITNESS: Um-hmm.

24 MR. O'LAUGHLIN: Okay. Now, when you're --
25 Because there's natural flow that may occur, and other

1 things, and other people's releases that all contribute
2 to Delta outflow, but there may be times when we release
3 water in order to meet Delta outflow.

4 So here's my question: When you're releasing
5 water to meet Delta outflow, does DWR try to re-capture
6 that water downstream?

7 WITNESS LEAHIGH: The water that's released for
8 outflow --

9 MR. O'LAUGHLIN: Yes.

10 THE WITNESS: -- is south of Golden Gate.
11 There's no -- There's no way we can re-capture that water.

12 MR. O'LAUGHLIN: Can we throw up SJTA Number 8,
13 please.

14 (Document displayed on screen.)

15 MR. O'LAUGHLIN: Actually, I have a question
16 for Mr. Anderson.

17 So . . . I think Mark feels left out.

18 Mr. Anderson, real quickly. We've been talking
19 about flows and unimpaired flows and talking about, you
20 know, 80 years of hydrology.

21 So I put up on the screen for you some work
22 we've done on the Stanislaus River showing the breakdown
23 of hydrology by year types based on the last hundred, 80,
24 40, and so forth.

25 And you'll notice that in the -- the last 40

1 years it starts getting drier, the last 20 years it gets
2 a little more dry, and then unfortunately for all of us
3 in the last 10 years it gets even drier.

4 Is there any opinion you can render about
5 whether or not the trend that we're seeing on the
6 Stanislaus River would comport to the general under --
7 your general understanding of climate change in the
8 San Joaquin River Basin?

9 WITNESS ANDERSON: No. From the standpoint
10 that California has the largest year-to-year variability
11 in terms of -- based on hydrologic outcome, and to
12 determine long-term trends that rise to a sense of
13 statistical significance becomes very challenging because
14 of that large variability, because you compare trend to
15 variability. And when the variability exceeds a trend,
16 it becomes difficult to tribute.

17 MR. O'LAUGHLIN: What do you call statistical
18 variable that's significant?

19 WITNESS ANDERSON: Oh, so that's actually a
20 mathematical criteria using your choice of methods, where
21 the value of the trend is compared to a test value at a
22 certain, let's call it, level of significance, either
23 5 percent or 10 percent.

24 MR. O'LAUGHLIN: Right.

25 WITNESS ANDERSON: And the test determines

1 whether or not that trend outweighs the variability
2 within the system.

3 And what that implies is that a trend could
4 possibly be related to variability on scales that took a
5 little longer in the system rather than a long-term
6 trend.

7 And while we've seen long-term trends in most
8 systems that relate to the timing of the flows, we have
9 yet to see long-term trends that we would identify
10 associated with the climate change, associated with a
11 declining flow over the year.

12 MR. O'LAUGHLIN: Do you know, as far as the
13 modeling that was done for -- And I'll focus on the
14 San Joaquin River side of things.

15 Do you know if the modeling done for the
16 San Joaquin River side of the hydrology for the
17 California WaterFix included a climate change scenario?
18 For hydraulics.

19 WITNESS ANDERSON: I understand that there were
20 climate change scenarios implied, but I was not involved
21 in them and there will be somebody on the Modeling Panel
22 that was.

23 MR. O'LAUGHLIN: And, so, if I asked the
24 Modeling Panel, they'd be able to tell me what they
25 looked at as far as what their understanding of the

1 hydrology would be, when the runoff would occur, whether
2 it occurred later or earlier, and temperature, those
3 types of things?

4 WITNESS ANDERSON: They would be able to tell
5 you how they treated that, yes.

6 MR. O'LAUGHLIN: Okay. Thanks.

7 So, do you -- Well, I'll ask modeling. Sorry.
8 I was going to ask -- Never mind.

9 Can you throw up SJTA Number 15, please.

10 (Document displayed on screen.)

11 MR. O'LAUGHLIN: And scroll down.

12 (Scrolling down document.)

13 MR. O'LAUGHLIN: So, this is an excerpt from
14 Maureen Sergent's testimonial, DWR 53. I forget the page
15 number -- it's marked -- at lines -- There you go.
16 Page 11.

17 Okay. Lines 10 through -- 10 through 15.

18 If you could read that, Mr. Leahigh and
19 Mr. Milligan.

20 Have you had an opportunity to view that?

21 WITNESS LEAHIGH: Yes.

22 WITNESS MILLIGAN: Yes.

23 MR. O'LAUGHLIN: All right. Mr. Milligan
24 first.

25 It states here that such water users do not

1 have a right to stored water releases.

2 But the -- the thing that's interesting to me
3 is that it says that since there's changes -- Although
4 there may be changes in storage level of releases, these
5 would not injure legal users because it's my
6 understanding that it's going to be stored water released
7 at all time.

8 So, it implies that only stored water is being
9 released from upstream projects at all times after water
10 is stored or moved or through the system.

11 That's just not correct; is it?

12 WITNESS MILLIGAN: If I follow the question,
13 obviously there's water that is -- Mr. Leahigh testified
14 to earlier -- water that is coming in and being passed
15 through, if you will.

16 And then there's some periods of time where
17 there's maybe some slight re-operation of the timing of
18 that released water, so water that's released may not
19 fall in the category of, quote, previously stored water.

20 MR. O'LAUGHLIN: Thank you.

21 Would you disagree with that statement,
22 Mr. Leahigh?

23 WITNESS LEAHIGH: No. I -- I don't know the
24 exact context of -- of this particular statement in the
25 testimony, but I -- I think a big part of this is that --

1 I think there's -- Well, I won't -- I won't speculate as
2 to what this is talking about, settlement contractors.

3 But the -- the commitment is to the deliveries
4 to these folks, not necessarily the storage of water.

5 MR. O'LAUGHLIN: Okay. So let me ask again:

6 Do you disagree with Mr. Milligan's statement
7 in regards to this?

8 WITNESS LEAHIGH: Well, what I heard him say,
9 that at times deliveries are made from storage
10 withdrawals and at other times it's delay of passing
11 through unstored flow. That part of the -- That part of
12 his response I was listening to.

13 MR. O'LAUGHLIN: Okay. And then the third
14 component you left out was inflow that's coming in that
15 may not be regulated at all. That's just part of the --

16 WITNESS LEAHIGH: Yes, that's -- that could be
17 part of the picture as well, yes.

18 MR. O'LAUGHLIN: So, do you know if DWR's done
19 any analysis that, based on the California WaterFix
20 Petition, what water would -- what water would be
21 released from its upstream reservoirs at any given point
22 in time due to the WaterFix Project that may change from
23 stored water releases to other water releases?

24 WITNESS LEAHIGH: I'd have to give that some
25 thought.

1 Offhand, I -- I couldn't say.

2 MR. O'LAUGHLIN: Okay. Thank you.

3 Real quickly. Mr. Milligan, is it your
4 understanding that the Central Valley Project is
5 specifically required to meet the salinity requirements
6 at Vernalis?

7 WITNESS MILLIGAN: Yes.

8 MR. O'LAUGHLIN: Okay. Is New Melones
9 Reservoir required to meet the interior Delta salinity
10 standards?

11 Reclamation's Permits. If you know.

12 WITNESS MILLIGAN: The exact linkage to exact
13 Permits, not off the top of my head.

14 MR. O'LAUGHLIN: Thank you.

15 How is water from the Tuolumne and Merced
16 Rivers that is currently being released pursuant to FERC
17 treated after it passes Vernalis?

18 And that's for you, Mr. Milligan.

19 WITNESS MILLIGAN: "Treated" is probably --
20 Treated the modeling or, say, day-to-day operations?

21 MR. O'LAUGHLIN: Day-to-day operations today.

22 WITNESS MILLIGAN: It would be viewed as just
23 water -- abandoned water in the system from the purposes
24 of coordinating operations between the CVP and the State
25 Water Project.

1 MR. O'LAUGHLIN: If we could throw up SJTA
2 Number 16, please.

3 (Document displayed on screen.)

4 MR. O'LAUGHLIN: So, starting right there, it
5 says -- This is SJTA Number 16. This is the California
6 WaterFix change Petition excerpts. This is Page 11 and
7 12 from the Petition.

8 If you can scroll to the next page.

9 (Scrolling down document.)

10 MR. O'LAUGHLIN: Thank you.

11 So, I have some questions on this.

12 If you'd scroll back up to the preceding
13 sentence.

14 (Scrolling up document.)

15 MR. O'LAUGHLIN: It -- This is -- Did you --
16 Did you draft this Petition, Mr. Leahigh?

17 WITNESS LEAHIGH: No.

18 MR. O'LAUGHLIN: So, it says (reading):

19 "Consideration of this Petition under Water
20 Code 85086(c)(2) should occur within the existing
21 regulatory framework . . . provided by . . .
22 D-1641."

23 So, is it your understanding that the
24 appropriate Delta flow criteria is D-1641?

25 WITNESS LEAHIGH: All I know is that's part of

1 our -- That's the assumption that's part of our Petition.

2 MR. O'LAUGHLIN: That the appropriate Delta
3 flow criteria includes D-1641.

4 WITNESS LEAHIGH: Our Petition includes D-1641.

5 MR. O'LAUGHLIN: No, I know that.

6 But -- But what I'm trying to understand -- I
7 under -- Your Petition has D-1641, and it has OCAP, it
8 has this 200,000 acre-feet spring pulse flow requirement.
9 It has unmet -- unknown requirements for -- There's free
10 consultation and all this other stuff.

11 But what I'm trying to understand right here is
12 what you're trying to say as far as -- It says (reading):

13 "Consideration . . . under the existing
14 regulatory framework . . . of D-1641."

15 So does that mean the Department views
16 appropriate Delta flow criteria as D-1641, or is it
17 D-1641 and something more?

18 WITNESS LEAHIGH: I -- I -- I don't know what
19 the Department's position is with relate -- as it relates
20 to the Water Code section stated there.

21 MR. O'LAUGHLIN: Okay. So who from DWR is
22 going to testify and tell us what the appropriate Delta
23 flow criteria are as part of the Petition?

24 If you know.

25 WITNESS LEAHIGH: I don't know.

1 MR. O'LAUGHLIN: Okay. So, so far, we -- Have
2 you been present for the other witnesses that have
3 testified, Mr. Leahigh?

4 WITNESS LEAHIGH: For some.

5 MR. O'LAUGHLIN: Okay. I haven't heard in any
6 of the written testimony, or anything so far, a position
7 by the Department as to what the appropriate Delta flow
8 criteria is. Have you?

9 WITNESS LEAHIGH: I have not.

10 MR. O'LAUGHLIN: Okay. Well, so, my question
11 is, it's a requirement -- Your understanding is, it's a
12 requirement of the law -- right? -- to have this
13 appropriate Delta flow criteria as part of the Petition?

14 MR. MIZELL: Objection: Calls for a legal
15 conclusion.

16 MR. O'LAUGHLIN: If you know.

17 WITNESS LEAHIGH: I don't know for sure.

18 MR. O'LAUGHLIN: Okay. Well, we're here. I'm
19 having a hard time, so that I'm going to try to advise my
20 client after we get done.

21 Who -- Who's going to tell me what DWR believes
22 is the flow criteria that's going to be met by DWR as
23 part of the appropriate Delta flow criteria?

24 WITNESS LEAHIGH: I think the thought is that
25 this would come out during the course of this hearing.

1 MR. O'LAUGHLIN: It's just going to pop up?

2 When will that -- When will that happen?

3 CO-HEARING OFFICER DODUC: Mr. O'Laughlin, I
4 think you're going to --

5 MR. O'LAUGHLIN: I'm not being snide --

6 CO-HEARING OFFICER DODUC: You're not going
7 further --

8 MR. O'LAUGHLIN: -- but --

9 CO-HEARING OFFICER DODUC: You're not going
10 much further with him on this.

11 MR. O'LAUGHLIN: Well --

12 CO-HEARING OFFICER DODUC: You're running out
13 of time.

14 MR. O'LAUGHLIN: No, there's a couple more
15 questions I have in regards to this because --

16 I'm not trying to be snide, and I apologize
17 because I know you're trying to do your best to respond
18 to that one. It was a cheap shot.

19 But -- But my -- my problem -- I think
20 everybody's problem as we're sitting here -- is, we're
21 trying to grasp with is the flow component that we're
22 supposed to be looking at, where that water's coming
23 from, and how it's moving through the system.

24 And, quite honestly, this -- whether you
25 believe me or not, I don't -- or whether you want to look

1 at this, it does appear that appropriate Delta flow
2 criteria are part of the Petition.

3 In fact, they say in their Petition that
4 they're going to propose an appropriate Delta flow
5 criteria. You required them, as part of our -- the
6 orders, that they -- they present it.

7 So the Modeling Team ain't going to do it. So
8 who's going to do it?

9 I mean, we're almost done with their case in
10 chief. So I'm getting déjà vu here from another
11 proceeding that just recently occurred where we're down
12 this track and nobody's come forward to tell us what's
13 the elephant in the room. What is it that you're trying
14 to do here?

15 That's all we want to know. That's -- That's
16 all we're trying to determine. I'm not -- If they just
17 tell us it's 5,000 cfs for 31 days and it's at this
18 point, at that point, we'd all be fine.

19 But it's -- We're sitting here in the dark.
20 And he can't testify to it, and I understand why, but how
21 am I supposed to put on my case in chief if I don't know
22 what the criteria was.

23 CO-HEARING OFFICER DODUC: And now is not the
24 time to make your arguments.

25 MR. O'LAUGHLIN: I know.

1 CO-HEARING OFFICER DODUC: Go ahead and ask
2 your questions.

3 MR. O'LAUGHLIN: Okay. I'll ask my questions.

4 CO-HEARING OFFICER DODUC: But, again, you are
5 running out of time, and repeating the same questions
6 again will not get you a different answer.

7 MR. O'LAUGHLIN: No, I -- I -- I understand. I
8 just have -- And thank you for your indulgence and your
9 time. And I know that was a statement rather than a
10 response, and I appreciate that.

11 CO-HEARING OFFICER DODUC: So I can strike it
12 from the record?

13 MR. O'LAUGHLIN: If you'd like, that would be
14 fine.

15 So, scroll down to the next part, please.

16 (Scrolling down document.)

17 MR. O'LAUGHLIN: So this one -- This section
18 now says -- this clause says that, "Flows presented by
19 Alternative 4(a)" -- so we know what those are, and --
20 And those are beyond those required by D-1641. It says
21 those -- It says, "satisfy the appropriate Delta flow
22 criteria to be considered by the Board."

23 So are all the 4 -- Is it DWR's position that
24 all the 4(a) alternatives -- all of them -- satisfy the
25 appropriate Delta flow criteria?

1 (Timer rings.)

2 MR. MIZELL: I'm going to object here.

3 I'd just like to put on the record I have a
4 standing objection on issues on Part I, and now we're
5 going to go to the basis of what is considered under
6 85086(c)(2).

7 CO-HEARING OFFICER DODUC: All right. It's
8 noted.

9 And the witness has already said he did not
10 prepare this material, so just --

11 MR. O'LAUGHLIN: If he can answer it.

12 CO-HEARING OFFICER DODUC: -- answer to the
13 best of your ability. If you don't know, you don't know.
14 And then I'll ask Mr. O'Laughlin to wrap up.

15 WITNESS LEAHIGH: Well, I don't know, but I
16 understand that the whole scheduling of Part II was to
17 follow the issuance of BiOp, and that would tell the
18 forum what the usual flow criteria would be, because --
19 within a range which we're in a range as proposed.

20 MR. O'LAUGHLIN: So, one -- If I may, one
21 followup on that.

22 CO-HEARING OFFICER DODUC: (Nodding head.)

23 MR. O'LAUGHLIN: So it's your understanding --
24 And I appreciate that response.

25 So later, when the BiOps are issued not only

1 for the long-term operation of the CVP which may change
2 but also for California WaterFix, we may -- that may fall
3 within 4(a).

4 WITNESS LEAHIGH: Our expectation is that the
5 BiOp that we're expecting on California WaterFix will
6 fall within 4(a), yes, as testified to by Jennifer
7 Pierre.

8 MR. O'LAUGHLIN: Perfect. Okay. So this is
9 good stuff.

10 So if -- What happened -- What is DWR's
11 position if NBS and U.S. Fish and Wildlife Service do not
12 give you a BiOp that falls within 4(a)?

13 WITNESS LEAHIGH: That's not our expectation.

14 MR. O'LAUGHLIN: No, I realize it's not your
15 expectation. But, unfortunately, like the 200 to 300,000
16 acre-feet this summer was not your expectation.

17 So, if it's outside of your 4(a) criteria, what
18 is DWR's position vis-à-vis this Petition?

19 WITNESS LEAHIGH: I don't know.

20 MR. O'LAUGHLIN: Thank you. Thank you very
21 much. Thank you, panel.

22 Thank you, Hearing Officer Doduc and Marcus.
23 Appreciate it.

24 Yup, all done. Thank you.

25 CO-HEARING OFFICER DODUC: Thank you,

1 Mr. O'Laughlin. It's been a pleasure, as always.

2 I believe we're now up to Group Number 25.

3 How much time do you think you'll need?

4 MR. MILJANICH: Maybe 10 minutes.

5 CO-HEARING OFFICER DODUC: Thank you.

6 Please begin when you're ready and identify
7 yourself for the record, please.

8 MR. MILJANICH: Okay. I'm Peter Miljanich.

9 CO-HEARING OFFICER DODUC: Your microphone is
10 not on.

11 MR. MILJANICH: I can tell. Thank you.

12 I'm Peter Miljanich. I'm an attorney for
13 Solano County. I am grouped with Contra Costa County for
14 purposes of cross-examination with -- And my
15 understanding is that they're not going to have a
16 representative here for cross-examination of this panel
17 today.

18 CROSS-EXAMINATION BY

19 MR. MILJANICH: Good morning, gentlemen on the
20 panel.

21 So, I have just a couple questions for you --
22 it'll be a lot shorter than Mr. O'Laughlin -- and they're
23 related to what I'll call governance of the decisions
24 made as part of real-time operations and also Adaptive
25 Management.

1 So, understanding the Hearing Officer's
2 admonition to be efficient, I'm going to ask some pretty
3 direct questions, but I'll just trust that if you need
4 any other context or to refresh your memory from any of
5 the other exhibits or testimony, you'll let me know.

6 So my first direct question is: How, if at
7 all, will the real-time operational decision-making
8 process proposed as part of this Project include the
9 participation of my client Solano County or any of the
10 other four Delta counties?

11 And Mr. Leahigh, you can answer that first if
12 you'd like.

13 WITNESS LEAHIGH: Well, by the real-time
14 operations, I think you're referring to the . . .

15 A number of the criteria as part of this
16 Project are similar to the current implementation of the
17 BiOps as it -- with regards to Old and Middle River flow
18 criteria.

19 I think what's envisioned here is a very
20 similar process, which is . . . number of fishery
21 workgroups feeding information to a Management Team with
22 regards to conditions that would affect Delta smelt, for
23 example, or NBS' species.

24 Those various workgroups would feed into the
25 Management Team, which would consist of essentially the

1 Projects and the fishery agencies, and to set the
2 appropriate -- or the recommendations on setting the
3 appropriate levels of fishery protection and with the
4 final authority resting on those fishery agencies that
5 would have authorities to set -- have the charter for
6 protection of the various species. And so my
7 understanding, that would be a similar -- similar type
8 setup with WaterFix.

9 MR. MILJANICH: Is that your understanding as
10 well, Mr. Milligan, that essentially how this Real-Time
11 Operations Team works will be the same with the Project
12 as without?

13 WITNESS MILLIGAN: I'm not aware of -- with the
14 current proposal of the WaterFix, that there would be a
15 significant change.

16 MR. MILJANICH: As the Real-Time Operations
17 Team works now, does that include the Delta counties? Do
18 they participate in that process?

19 WITNESS LEAHIGH: No, they do not.

20 MR. MILJANICH: As the institutional embodiment
21 of millions of Delta residents, is it your opinion that
22 they should?

23 WITNESS LEAHIGH: Well, this aspect -- this
24 aspect of the operations really has to do with
25 implementation of the Endangered Species Act and 28-1

1 permitting to the State. So I think the appropriate
2 folks are involved in that.

3 MR. MILJANICH: So it's your understanding that
4 the Delta counties wouldn't have the expertise to
5 participate in that process?

6 WITNESS LEAHIGH: There -- There are other --
7 There are other groups that also informs the Management
8 Team, which would include other stakeholders.

9 So, for example, there's a -- what's called
10 currently Delta -- I forget the name -- Delta Conditions
11 Team, and so that does include -- that would be an
12 opportunity for other folks to be involved in providing
13 input into the process and -- and to what appropriate
14 levels of operations could be.

15 So there is an opportunity for non-Agency
16 representatives to give some input into the process.

17 MR. MILJANICH: Are the State Water Contractors
18 involved in this process more closely than just on the
19 Delta Conditions Team?

20 WITNESS LEAHIGH: I believe the Delta -- So,
21 yes, certainly they are involved in the Delta Conditions
22 Team, and I'm not aware of any other aspect as far as
23 their involvement.

24 MR. MILJANICH: Okay. Are you aware of any
25 requests by the Delta counties in the last three to four

1 years to participate in -- more closely in the Real-Time
2 Operations Team, on the operation of the Projects?

3 MR. BERLINER: Objection: Relevance.

4 CO-HEARING OFFICER DODUC: Mr. Miljanich?

5 MR. MILJANICH: We can withdraw it. I'll move
6 on.

7 Mr. Leahigh, is your understanding the same as
8 Mr. Milligan's?

9 MR. BERLINER: Same objection.

10 MR. MILJANICH: I can withdraw that as well.

11 I guess what I meant to ask, Mr. Milligan, is:
12 My earlier questions were with the Coordination Team, the
13 real-time mitigations.

14 Does that reflect your understanding as well?

15 WITNESS MILLIGAN: Yes. But I think I would
16 probably expand a little bit.

17 There are a lot of things that feed into the
18 ultimate operation of the Projects that go to, let's say,
19 individuals contacting Reclamation about concerns on
20 river flows, or lake levels, or conditions in the Delta
21 that we take into account.

22 There are a number of teams that have been
23 formed somewhat formally within the construct of the
24 Biological Opinions that help inform us on particular
25 aspects of operations that are very specific to fishery

1 conditions.

2 So, you know, I think Reclamation has had a
3 pretty long-standing desire to -- to -- to solicit input,
4 and particularly from parties that want to formalize that
5 in a certain way. We find the right place to put it. We
6 don't necessarily -- And in a more efficient way to do
7 that.

8 Obviously, with our specific contractors, of
9 course, there are going to be times where we talk and
10 coordinate our operations to decide what flexibility they
11 may have within their needs that would help facilitate us
12 in the operation.

13 Ultimately, Reclamation has to make the call on
14 how we operate the Central Valley Project, and the
15 Department of Water Resources has to make the call at the
16 end of the day how to operate the State Water Project,
17 and we take all this stuff into consideration.

18 So that's the day-to-day operational piece and
19 kind of the ultimate -- My mind's -- You do get a lot of
20 input and there's lots of things happening in the system,
21 I mean, particularly today and it's -- Sometimes they're
22 conflicting and we need to figure out how to minimize
23 that.

24 MR. MILJANICH: Okay. I'd like to ask you a
25 very similar question about the proposed Adaptive

1 Management process or changing the -- potentially
2 changing the operational criteria.

3 Proposed as part of this Project, is that going
4 to include the Delta counties?

5 WITNESS MILLIGAN: That, I don't know, at least
6 as it relates to myself.

7 My understanding -- And this is maybe
8 somewhat -- terms that are used may be within the
9 WaterFix arena -- is that the Adaptive Management
10 discussions are more -- It wouldn't be happening as --
11 very seldom do they occur in the course of a particular
12 season.

13 It would be a series of things to think about
14 how to change the criteria for the operations as we move
15 forward.

16 So it's a little bit out of our real-time
17 operations realm and has a lot of science, feedback,
18 analysis and adjustments as you go forward.

19 So, I don't know what that process will
20 ultimately entail. I haven't been that close to how --
21 That's -- That has kind of crystallized over the various
22 years.

23 MR. MILJANICH: You don't have any sense of how
24 you or your office would participate in that Project?

25 WITNESS MILLIGAN: Probably in the question of,

1 does something need to be changed?

2 Let's assume something would need to be
3 adjusted, or thought it should, because of, let's say,
4 the response of the species or of the system from the
5 ecosystem standpoints for Tuolumne, for example.

6 So there may be a question, does something need
7 to be adjusted within the Adaptive Management range?

8 I think the Operators would then be asked, you
9 know, for some of their insights as to how to make
10 changes, and what would be an implementable approach to
11 get a different outcome. And that would probably be with
12 Operators that have some input.

13 But we're not there actively monitoring the
14 species to collect the data that would be informative to
15 the Adaptive Management range.

16 MR. MILJANICH: And you wouldn't be comfortable
17 speculating about what the other parts of the process
18 would look like apart from your own.

19 WITNESS MILLIGAN: I'm not, no.

20 MR. MILJANICH: Mr. Leahigh.

21 WITNESS LEAHIGH: No, I don't have anything to
22 add to what Mr. Milligan described.

23 MR. MILJANICH: No plans to include the Delta
24 counties in those Adaptive Management process?

25 WITNESS LEAHIGH: Well, I can't speak for the

1 Adaptive Management process. Our involvement would be
2 limited to the extent that Mr. Milligan talked about in
3 terms of implementation of any new criteria that comes
4 out of the Adaptive Management process.

5 MR. MILJANICH: Okay. Thank you.

6 Okay. I think that's all I have for you.

7 Thanks.

8 CO-HEARING OFFICER DODUC: Thank you very much.

9 Group Number 26 . . . is not here.

10 27?

11 MR. EMRICK: I'm just going to check. Is the
12 mic still on?

13 CO-HEARING OFFICER DODUC: I can hear you.

14 MR. EMRICK: I'll say good morning --

15 CO-HEARING OFFICER DODUC: Actually, maybe not.

16 MR. EMRICK: There's a green light and a bright
17 green light, so I'll go with the bright green light.

18 I'll say good morning to the Board, Board
19 staff, and to the panel. I'm Matthew Emrick. I
20 represent the City of Antioch in these proceedings. I've
21 just got a few questions.

22 CROSS-EXAMINATION BY

23 MR. EMRICK: If I could, I would like to maybe
24 start off with having DWR errata Page 19 put on the
25 screen, if that's possible. DWR-4 errata, Page 19.

1 Okay. These will be questions for Mr. Leahigh.

2 (Document displayed on screen.)

3 MR. EMRICK: This depiction in your PowerPoint
4 shows the Compliance Stations for 1641; is that correct?

5 WITNESS LEAHIGH: It shows a subset of the
6 Compliance Locations, yes.

7 MR. EMRICK: These are in the Western Delta; is
8 that correct?

9 WITNESS LEAHIGH: That's correct.

10 MR. EMRICK: And of the three stations shown
11 there, the only one that is used to determine M&I
12 standards is Contra Costa Rock Slough; is that correct?

13 WITNESS LEAHIGH: That's correct. Of the three
14 shown there, Contra Costa Rock Slough is the only M&I.

15 MR. EMRICK: And if I could have State Water
16 Resources Control Board 21, Page 181 displayed.

17 This is going to be D-1641, and I'm going to be
18 looking for -- It's State Board Exhibit 21, Page 181.

19 (Document displayed on screen.)

20 MR. EMRICK: Page 181, I'm sorry.

21 (Document displayed on screen.)

22 MR. EMRICK: Thank you very much.

23 And, Mr. Leahigh, this -- this, is it not, a
24 description of the standard, the M&I standard, for
25 compliance with D-61 -- D-1641?

1 WITNESS LEAHIGH: Yes, this is the -- the table
2 that deals with the M&I standards within D-1641.

3 MR. EMRICK: And, if I'm not mistaken, that
4 standard allows it to be met both at Rock Slough and at
5 Antioch; is that correct?

6 WITNESS LEAHIGH: That's correct.

7 MR. EMRICK: Have you ever attempted, in the
8 time you've been with DWR, to have met the D-1641
9 standard at Antioch?

10 WITNESS LEAHIGH: No, we have not. We have in
11 places where we have a contractual agreement with
12 Antioch, where we compensate them depending on what the
13 actual water quality conditions turn out to be.

14 MR. EMRICK: So, if I was to say to you and
15 question, let's say, in the time you've been with -- with
16 the Department of Water Resources, you haven't operated
17 to meet the M&I standard in Antioch because of the
18 contract you have with Antioch; is that correct?

19 WITNESS LEAHIGH: Well, we don't attempt to
20 meet it because it's -- for one, it's not required to
21 meet it per D-1641. The requirement is one at either
22 location. And typically, it would be much less costly in
23 terms of water -- water supply for the entire system if
24 we meet it at Rock Slough.

25 MR. EMRICK: Correct. So it would be more

1 costly than asking the opposite question, to meet that
2 standard in Antioch; is that correct?

3 WITNESS LEAHIGH: That's correct.

4 MR. EMRICK: For the WaterFix Project, do you
5 have any plans to change that situation to try to meet
6 D-1641 M&I standards at Antioch?

7 WITNESS LEAHIGH: No, and to my knowledge, we
8 would continue to have the existing contract in place as
9 well, as far as compensation.

10 MR. EMRICK: Do you -- Do you know when that
11 agreement with Antioch expires?

12 WITNESS LEAHIGH: Offhand, I don't.

13 MR. EMRICK: Would it be refresh your
14 recollection if I told you it expires in 2028?

15 WITNESS LEAHIGH: Yeah. I didn't recall the
16 date.

17 MR. EMRICK: Maybe I can have the staff -- if I
18 could ask to put up DWR Exhibit 310.

19 (Document displayed on screen.)

20 MR. EMRICK: And if I could have you scroll
21 down.

22 (Scrolling down document.)

23 MR. EMRICK: Okay. So we're looking at what is
24 an extension of the agreement between DWR and the City of
25 Antioch. This is DWR Exhibit 310.

1 And under Item 1 under the heading Agreement,
2 Article I says that there (reading):

3 ". . . Shall be . . . no determination . . .
4 prior to September 30, 2028."

5 Are you familiar with that extension, that date
6 at all?

7 WITNESS LEAHIGH: I think I was aware there
8 was -- there was an -- an extension, but specifics, I
9 wasn't -- I didn't recall.

10 MR. EMRICK: You weren't involved in the
11 negotiation of that extension?

12 WITNESS LEAHIGH: I was not involved in it.

13 MR. EMRICK: Do you -- If I was to ask you to
14 generally describe the terms of the agreement between DWR
15 and Antioch, the mutual agreement, which I believe was
16 dated 1968, could you briefly tell me what your
17 understanding of that agreement is?

18 MR. BERLINER: Objection: Best evidence rule.
19 The agreement speaks for itself.

20 MR. EMRICK: Well, as an Operator, do you have
21 any --

22 CO-HEARING OFFICER DODUC: Mr. -- Yeah, I was
23 going to say.

24 Mr. Emrick, rather than going over what the
25 agreement says, you could just ask the question of the

1 witness in terms of what you're trying to get to in
2 bringing up this agreement.

3 MR. EMRICK: Sure.

4 The purpose of the agreement, is it not, is to
5 compensate Antioch from harm from the operation of the
6 existing DWR facilities; is that correct? Is that
7 what --

8 CO-HEARING OFFICER DODUC: I think he covered
9 that already, so let's move on.

10 MR. EMRICK: Yeah.

11 Do you know what the term "compensation" is for
12 the City of Antioch under that agreement, the 1968
13 agreement? Do you have an understanding?

14 WITNESS LEAHIGH: I -- I -- I know there is a
15 formula that's used to determine what the compensation is
16 from -- for any begin year.

17 MR. EMRICK: Would it refresh your recollection
18 if I told you or said that that compensation compensated
19 City of Antioch for one-third of the harm to its water
20 supply?

21 MR. BERLINER: Objection: Best Evidence Rule.

22 CO-HEARING OFFICER DODUC: Just --

23 MR. EMRICK: I'm just asking if it refreshes
24 your recollection.

25 CO-HEARING OFFICER DODUC: Mr. Emrick, again,

1 we've established that there's agreement. We've
2 established that it is in effect through September 30,
3 2028. We've established that the witness is actually not
4 familiar with the details of this agreement and was not
5 involved in its negotiation, so please move on.

6 MR. EMRICK: Thank you.

7 If DWR is meeting M&I requirements at Rock
8 Slough, it doesn't necessarily mean that they're meeting
9 them at Antioch; is that correct?

10 WITNESS LEAHIGH: That's correct.

11 CO-HEARING OFFICER DODUC: You should have
12 objected, Mr. Berliner. I would have sustained you.

13 MR. BERLINER: I'll give him that one.

14 MR. EMRICK: Are you familiar with an agreement
15 that was entered into between Department of Water
16 Resources and Contra Costa Water District approximately
17 March 24th, 2016?

18 WITNESS LEAHIGH: Only very generally.

19 MR. EMRICK: Okay. From an Operations
20 standpoint, are -- for the upcoming WaterFix Project,
21 are -- is there anything specifically or in particular
22 you're going to have to do in order to meet the
23 conditions under the new CCWD/DWR agreement?

24 WITNESS LEAHIGH: Yes. My understanding is
25 that we would be conveying some water for Contra Costa

1 from . . .

2 One of the locations would be the North Delta
3 Diversion Point perhaps.

4 MR. EMRICK: Does -- Do you know what the
5 quality of that water is required to be under the
6 agreement?

7 WITNESS LEAHIGH: I don't recall offhand.

8 MR. EMRICK: Would it refresh your recollection
9 if I told you it was 30 parts per million?

10 WITNESS LEAHIGH: I -- I don't remember the
11 number.

12 MR. EMRICK: With respect to what you know
13 about the WaterFix Project and the North Delta Diversion,
14 would it be possible to make a diversion at the North
15 Delta Diversion facility such that you could convey water
16 of a quality of 30 parts per million to Contra Costa
17 Water District?

18 WITNESS LEAHIGH: I haven't done any analysis
19 on that.

20 MR. EMRICK: Are you aware of any other
21 agreements that have been entered into that may affect
22 the operation of the WaterFix Project in the last year or
23 so?

24 WITNESS LEAHIGH: I'm not aware of any other.

25 MR. EMRICK: Is it your opinion that, overall,

1 the WaterFix Project will reduce reliance on the Delta
2 from an operational standpoint?

3 WITNESS LEAHIGH: No, I don't think that's my
4 understanding.

5 MR. EMRICK: When you're testing for salinity,
6 it's primarily based on chloride levels; is that correct?

7 WITNESS LEAHIGH: For the M&I objectives, it's
8 typically in terms of chloride.

9 MR. EMRICK: Right.
10 You don't specifically have tests for bromides;
11 is that correct? At least at Rock Slough; is that
12 correct?

13 WITNESS LEAHIGH: Specifically, we don't look
14 at that constituent because it's not one of the Water
15 Quality Control Plan objectives and we're focused on the
16 Water Quality Control Plan objectives in operations.

17 MR. EMRICK: Does DWR look at bromides for its
18 own diversions at Clifton Court Forebay?

19 WITNESS LEAHIGH: I believe we have some
20 readings for bromides at Clifton Court.

21 MR. EMRICK: And why -- why would DWR test for
22 bromides for its own water diversions, if you know?

23 WITNESS LEAHIGH: I don't know for sure. I
24 think it is a constituent that is of interest to M&I
25 users.

1 MR. EMRICK: In determining your conclusions
2 today about -- or in your testimony about compliance in
3 the future with D-1641, did you consider any of the
4 following projects in coordination with the WaterFix
5 Project:

6 The South Delta Improvement Program?

7 WITNESS LEAHIGH: No, I don't believe that's --
8 That's not the purview of the assessment.

9 MR. EMRICK: Do you know whether that program
10 is still proposed or not?

11 WITNESS LEAHIGH: I'm actually going to turn
12 over to my colleague here who's more directly involved
13 with that program.

14 MR. EMRICK: Thank you.

15 MR. HOLDERMAN: The South Delta Improvement
16 Program is on the back burner, so to speak. It's not
17 dead as some people might think.

18 We continue to install rock barriers in lieu of
19 permanent gates, but the gates aren't off the table.
20 There's some regulatory requirements that we had to meet
21 under the Long-Term Operations BiOp that we've been
22 working on and will eventually be completed, and at that
23 point, the Department will have to make a determination
24 whether they want to continue moving forward with purple
25 gates or some other alternative.

1 MR. EMRICK: Okay. But for the purposes of
2 your testimony, Mr. Leahigh, you didn't consider the
3 South Delta Improvement Program; is that correct?

4 WITNESS LEAHIGH: That's correct.

5 MR. EMRICK: How about the Two Gates Project?

6 WITNESS LEAHIGH: That -- That was not
7 considered, no.

8 MR. EMRICK: How about the Three Mile Slough
9 Permanent Gate?

10 WITNESS LEAHIGH: No.

11 MR. EMRICK: Is there anyone on the panel that
12 knows whether or not those programs or projects are still
13 proposed? They're still on the websites, including --
14 and I might just get to it -- the French Trap Project
15 also.

16 MR. HOLDERMAN: The right people to answer that
17 aren't here on the panel. The French Trap Project
18 alternative is the Three Mile Slough gate, but I don't
19 know the status on that and whether that's going forward
20 or not.

21 MR. EMRICK: Okay. But for the purpose of your
22 testimony, Mr. Leahigh, you didn't consider any of those
23 Projects when making your conclusions that the WaterFix
24 Project would be able to meet D-1641 standards?

25 WITNESS LEAHIGH: It was not included as part

1 of the modeling, no.

2 MR. EMRICK: And then I had one question for
3 Mr. Milligan.

4 Mr. Milligan, are you aware of any agreement or
5 contract between the City of Antioch and the Bureau of
6 Reclamation that would provide mitigation to the city for
7 any of the operations from the Central Valley Project?

8 WITNESS MILLIGAN: No, I'm not.

9 MR. EMRICK: Okay. Thank you.

10 That's all I have. Thank you.

11 CO-HEARING OFFICER DODUC: Thank you,
12 Mr. Emrick.

13 Group Number 28 . . . is not here.

14 29 . . . is not here.

15 Mr. Brodsky, we got to you.

16 MR. BRODSKY: Thank you, ma'am.

17 CO-HEARING OFFICER DODUC: Group Number 30.

18 And as you're coming up, Mr. Brodsky, assuming
19 that your cross-examination will take more than half an
20 hour, keep in mind that I would like to take a lunch
21 break sometime after -- after noon.

22 MR. BRODSKY: Okay.

23 CO-HEARING OFFICER DODUC: So I'll leave it to
24 you to suggest a good breaking point --

25 MR. BRODSKY: Okay.

1 CO-HEARING OFFICER DODUC: -- on your cross.

2 How much time do you anticipate needing?

3 MR. BRODSKY: I anticipate one hour with a
4 possible request for a half-hour extension if we're being
5 fruitful.

6 CO-HEARING OFFICER DODUC: Okay. Well, if you
7 can finish by 12:30, then we won't need to take a lunch
8 break, but if not, then we will take a lunch break.

9 MR. BRODSKY: Okay.

10 CO-HEARING OFFICER DODUC: I mean, we'll take a
11 lunch break, we just won't break up your
12 cross-examination is what I meant.

13 A little incentive there.

14 CROSS-EXAMINATION BY

15 MR. BRODSKY: Good morning. Michael Brodsky on
16 behalf of Save the California Delta Alliance.

17 And I'd like to direct my first question to
18 Mr. Leahigh.

19 Leahigh is the correct pronunciation; right?

20 WITNESS LEAHIGH: That's -- That's correct.

21 MR. BRODSKY: Okay. Got it.

22 CO-HEARING OFFICER MARCUS: Very good. Thank
23 you.

24 MR. BRODSKY: Okay. In your written testimony
25 at Page 18, Lines 4 to 5, you say that (reading):

1 "Allocations to SWP water supply contractors
2 were 35 percent, 5 percent and 20 percent of
3 requested demand for the years 2013, '14 and '15,
4 respectively."

5 And I just want to ask some questions to
6 understand exactly what those amounts are.

7 And just to assure the Chair, I'm not going to
8 lay a lot of foundation in my questioning but just a
9 couple right now and, after that, I'm going to be very
10 direct.

11 So, am I correct in understanding that DWR
12 operates the State Water Projects and holds water rights,
13 and you deliver the water to various contractors,
14 public -- Public Water Agencies throughout the state
15 under long-term supply contracts?

16 WITNESS LEAHIGH: Yes.

17 MR. BRODSKY: And those -- those agencies that
18 you deliver to are what you're referring to as water
19 supply contractors in your written testimony there at
20 Line 4.

21 WITNESS LEAHIGH: Yes.

22 MR. BRODSKY: And the water supply contracts
23 specify amounts of water to be delivered to the
24 contractors.

25 WITNESS LEAHIGH: Well, there's a -- there's a

1 maximum amount of supply that's been contracted for.

2 MR. BRODSKY: Okay. And that -- Is it -- That
3 maximum amount of supplies contracted for, is that what
4 we refer to as full contract amounts?

5 WITNESS LEAHIGH: Yes.

6 MR. BRODSKY: And in recent years, the State
7 Water Project has not had the ability to deliver full
8 contract amounts very often, if at all.

9 WITNESS LEAHIGH: That's correct, very low
10 percentages over the last couple years.

11 MR. BRODSKY: So is the 35 percent, the
12 5 percent and the 20 percent, is that percent of full
13 contract amounts, or what is that percent of exactly when
14 you say "requested demand"?

15 WITNESS LEAHIGH: Yeah. That -- That is the
16 percent of requested demand, although the requested
17 demand is typically about the same as the full contract
18 amount.

19 MR. BRODSKY: Okay. So, roughly.

20 WITNESS LEAHIGH: Roughly.

21 MR. BRODSKY: And is it true that there are a
22 number of regulatory constraints that have contributed to
23 your inability to deliver full contract amounts in recent
24 years?

25 WITNESS LEAHIGH: Yes, regulatory constraints

1 have had some impact on that capability. The drought has
2 been probably the bigger driver within the last three
3 years.

4 MR. BRODSKY: Okay. And then prior to the last
5 three years, would you say that a big driver was the
6 regulatory constraints?

7 WITNESS LEAHIGH: It -- It varies from year to
8 year as far as -- Yeah, it depends on the year.

9 MR. BRODSKY: Okay. The regulatory constraints
10 are a substantial impediment to delivering full accurate
11 amounts. Would you agree with that? In some years?

12 WITNESS LEAHIGH: Yes, they certainly are part
13 of the constraint to delivering a full contract amount.

14 MR. BRODSKY: Okay. And one of those
15 regulatory constraints is the requirement that you reduce
16 or even in some cases completely stop pumping at the
17 South Delta Points of Diversion when the Delta smelt are
18 present.

19 WITNESS LEAHIGH: Well, it's not that specific,
20 but -- but generally implementation of the BiOp for Delta
21 smelt will impact our export capabilities from the South
22 Delta, yes.

23 MR. BRODSKY: Because you have to reduce, or
24 you -- you -- you can divert less water at the South
25 Delta Points of Diversion because you have to observe the

1 constraints on the Delta smelt.

2 WITNESS LEAHIGH: Yes, that's generally
3 correct.

4 MR. BRODSKY: Okay. And another one of the
5 regulatory constraints, is it correct that the Fall X2
6 that's imposed by Federal Biological Opinions is a
7 constraint on delivering full contract amounts?

8 WITNESS LEAHIGH: Yes. So that is one of the
9 actions as part of the Delta Smelt BiOp. It's not
10 implemented very often. It's only implemented in
11 above-normal water years and there's actually only been
12 one of those since -- since the Smelt BiOp was adopted.

13 MR. BRODSKY: Okay. And can you explain what
14 Fall X2 is?

15 WITNESS LEAHIGH: Yes. So Fall X2 is an action
16 in the 2008 Delta Smelt BiOp that has as an objective
17 higher flows in the September, October, November period.
18 It relates to X2 position in the Suisun Bay.

19 MR. BRODSKY: Okay. And X2 -- So it's --
20 Correct me if I'm wrong: "X2" would refer -- the "X"
21 term is the distance in kilometers traveling on the
22 east -- eastward on the east-west axis upriver from the
23 Golden Gate Bridge, and "2" is the point where near
24 bottom salinity reaches two parts per thousand.

25 WITNESS LEAHIGH: Two parts per thousand,

1 correct.

2 MR. BRODSKY: And so if X2 equals 70, that
3 means -- and that's basically where salt water gives way
4 to fresh; is that correct?

5 WITNESS LEAHIGH: Well, it's one measure as to
6 how to define interface between fresh water and salt
7 water.

8 MR. BRODSKY: Right. So if I'm in my boat, I'm
9 traveling upriver from the Golden Gate Bridge, if I go
10 70 miles and then I reach the point -- I drop my meter
11 down into the water and it's two parts per thousand, then
12 X2 is equal to 70 at that point; is that correct?

13 WITNESS LEAHIGH: Essentially, that's the idea,
14 yeah.

15 MR. BRODSKY: Right. And so with X2 -- and the
16 way that you meet X2 -- In other words, we've got this
17 line where -- where essentially salt water is giving --
18 giving way to fresh, and if we specify, for example, that
19 X2 is equal to 80, then that line was farther upriver.
20 That saltier water is then allowed to move farther into
21 the Delta; is that correct?

22 WITNESS LEAHIGH: The higher the number of the
23 X2, the further salt -- salt water is allowed to come
24 into the Delta, yes.

25 MR. BRODSKY: Right. And so if you have a

1 regulatory requirement that X2, say, has to be at 70,
2 let's just say for example, and at -- at that moment,
3 it's actually at 80, the way you would push it 10 miles
4 out to sea -- in other words, to make the Delta
5 fresher -- is that you would release more water from your
6 upstream reservoirs.

7 WITNESS LEAHIGH: Well, we would either reduce
8 our -- our exports or increase releases from upstream or
9 a combination thereof.

10 MR. BRODSKY: And, so, meeting that X2
11 requirement competes with exports.

12 WITNESS LEAHIGH: It can, yes.

13 MR. BRODSKY: Okay. Thank you.

14 All right. And so is it correct that one of
15 the project objectives of CWF is to restore the ability
16 of the SWP to deliver full contract amounts?

17 WITNESS LEAHIGH: I believe it's to restore
18 our -- I can't remember exactly how that objective is
19 stated, but --

20 MR. BRODSKY: Let's take a look at --

21 WITNESS LEAHIGH: -- somewhere along those
22 lines.

23 MR. BRODSKY: I'm not trying to trick you so
24 let's look at it.

25 It's SWRCB-3 at Page ES-5.

1 MR. BERLINER: While we're taking the break, X2
2 refers to kilometers, not miles.

3 MR. BRODSKY: I meant miles, correct.

4 That's SWRCB-3 and that's at Page 5. And I
5 believe that's one of DWR's exhibits.

6 (Document displayed on screen.)

7 MR. BRODSKY: And then if we can scroll down a
8 little bit, there's Project Objectives is there, and then
9 among the list of the Project Objectives, the last bullet
10 point on the page -- there we go (reading):

11 "Restore and Protect.

12 "Restore and protect the ability of the SWP and
13 CVP to deliver up to full contract amounts when
14 hydrologic conditions result in the availability of
15 sufficient water," et cetera, "consistent with
16 regulatory constraints and all other requirements."

17 WITNESS LEAHIGH: Correct.

18 MR. BRODSKY: And that -- that is still a
19 project objective.

20 WITNESS LEAHIGH: Yes.

21 MR. BRODSKY: Okay. So, by moving a Point of
22 Diversion away from the South Delta -- in other words,
23 moving it away from the south from the smelt's range,
24 that contributes to achieving the project objective of
25 delivering full contract amounts.

1 Is that correct?

2 WITNESS LEAHIGH: Well, the modeling would
3 indicate that that's correct for some of the scenarios
4 that are being analyzed but not necessarily all of them.

5 MR. BRODSKY: Which scenarios is it not correct
6 for?

7 Can I strike that and ask:

8 Is that correct for between H3 and H4?

9 WITNESS LEAHIGH: It -- It's correct for H3.
10 H4, it's not clear on what that will do to SWP
11 capabilities. Essentially, the modeling shows that
12 combined SWP/CVP deliveries are about equal to No-Action
13 Alternative.

14 MR. BRODSKY: Okay. Could we put -- just to
15 aid this testimony -- I believe it's Page 10 of DWR-1,
16 the slide that has the H3 and the H4 and the Boundary 1
17 and Boundary 2? I'm going from memory.

18 (Document displayed on screen.)

19 MR. BRODSKY: I think that's it.

20 (Scrolling down document.)

21 MR. BRODSKY: There it is.

22 MS. RIDDLE: Just for the record, we called it
23 DWR-1 Errata, Page 10.

24 MR. BRODSKY: Okay. Thank you very much.

25 So, just to recap, a moment ago, you said,

1 operating at H3, moving the Point of Diversion away from
2 the smelt's range does contribute to the Project
3 Objective of delivering full contract amounts.

4 WITNESS LEAHIGH: Yes. The modeling shows that
5 there -- there is an increase in CVP/SWP to delivery
6 capability versus the No-Action Alternative under H3.

7 MR. BRODSKY: And then would that -- As we move
8 towards Boundary 1, which is toward lower outflows, when
9 you move to Boundary 1, is that also true, that moving
10 the Point of Diversion contributes away from the smelt's
11 range, contributes to the Project Objective of delivering
12 full contract amounts?

13 WITNESS LEAHIGH: Yes. I believe that's for
14 Boundary 1.

15 MR. BRODSKY: Okay. And as we move toward
16 Boundary 1, there's less outflow.

17 WITNESS LEAHIGH: I think generally -- Yeah,
18 generally that's true, is my understanding.

19 MR. BRODSKY: Okay.

20 WITNESS LEAHIGH: Depending on the time of year
21 maybe but I think generally that's true.

22 MR. BRODSKY: Alternative 8 is the high
23 outflow. That was based on the State Water Board's
24 comments. That was the high outflow scenario.

25 And then Boundary 2 (sic) was, you didn't think

1 you could get -- get -- quite get to Alternative 8, and
2 then Boundary 2 is as close as you thought that you'd
3 possibly ever get to -- to that high outflow; is that
4 correct?

5 WITNESS LEAHIGH: Yeah. Generally, that's how
6 this is lay -- this chart is laid out, that higher flows
7 are going to the right in terms of the different
8 scenarios.

9 MR. BRODSKY: Okay. Good.

10 Then could we take a look at Page 15 of this
11 same exhibit.

12 (Document displayed on screen.)

13 MR. BRODSKY: So at Boundary 1, which is the
14 lower outflow end of the range, we see that Fall X2 is
15 eliminated. In the column under Fall X2, it says "No."

16 Is that correct?

17 WITNESS LEAHIGH: Yeah, I see that, yes.

18 MR. BRODSKY: Okay. So when we're operating at
19 Boundary 1, we have no Fall X2 requirement.

20 WITNESS LEAHIGH: That's correct.

21 MR. BRODSKY: Okay. Then can we go back to
22 Page -- Page 10.

23 (Document displayed on screen.)

24 MR. BRODSKY: So where between H3 and
25 Boundary 1 does the X2 get eliminated, if you know?

1 WITNESS LEAHIGH: Well, those are two discrete
2 scenarios, so I don't know. There's -- I don't believe
3 there's a continuum in between the two. It's essentially
4 on or off in terms of Fall X2 between the two scenarios.

5 MR. BRODSKY: So, it was my understanding that,
6 you know, through the soon-to-be-unveiled Adaptive
7 Management Program, that you had hoped that the Project
8 could operate anywhere on a continuum between Boundary 1
9 and Boundary 2; is that not correct?

10 Are you saying that there's only one, two,
11 three, four -- there's only five possible operating
12 scenarios and nothing in between?

13 WITNESS LEAHIGH: I think -- No. I think that
14 characterization is generally correct, that the Adaptive
15 Management process could move the operating criteria
16 between Boundary 1 and Boundary 2.

17 MR. BRODSKY: So -- So, the operating criteria
18 could be a little 10 percent to the left of H3 at some
19 point.

20 WITNESS LEAHIGH: This is really just a
21 schematic, a general representation, yeah.

22 MR. BRODSKY: So we'll let the cross-examiners
23 come back to it.

24 WITNESS LEAHIGH: Sorry.

25 MR. BRODSKY: Do you know who prepared this

1 slide?

2 WITNESS LEAHIGH: I don't.

3 MR. BRODSKY: It's a good slide.

4 So what I'm trying to ask is: Since, under
5 Adaptive Management, there's a range of possibilities you
6 might be operating anywhere between Boundary 1 and H3, we
7 don't know where between there Fall X2 would get
8 eliminated?

9 WITNESS LEAHIGH: Well, this -- So these
10 different scenarios aren't looking as just Fall X2.
11 They're also looking at Old and Middle River flow
12 criteria. They're looking at numerous criteria.

13 So it's kind of hard to pick out just one
14 specific --

15 MR. BRODSKY: All right.

16 WITNESS LEAHIGH: -- criteria and say where it
17 lands on the chart.

18 MR. BRODSKY: Okay. So, just to summarize and
19 then I'll move on:

20 We know that operating at Boundary 1, there
21 would be no Fall X2. At H3, there would be a Fall X2,
22 and we're not quite sure where it goes away in between
23 those.

24 WITNESS LEAHIGH: Well, I could either -- It
25 could be part -- Through the Adaptive Management process,

1 it could be a requirement of the Project or Projects, or
2 perhaps not, or perhaps something in between the current
3 requirement. Some -- Some partial implementation, let's
4 say.

5 MR. BRODSKY: Okay. But at -- But at
6 Boundary 1 on your -- on your chart, you show that it's
7 eliminated. Under Fall X2, you say "No."

8 WITNESS LEAHIGH: That's right. That's the
9 assumption for Boundary 1.

10 MR. BRODSKY: Okay. And the elimination of
11 Fall X2 contributes to project objective of restoring
12 full contract amounts; is that correct?

13 WITNESS LEAHIGH: Project supplies are
14 sometimes needed to meet the Fall X2, and so that would
15 offset other uses of that stored water, yes.

16 MR. BRODSKY: And I believe the Fall X2 is the
17 key driver of Project operations; is it not?

18 WITNESS LEAHIGH: Fall X2? I wouldn't say
19 necessarily it's a key driver of operations. It
20 certainly has an effect, but I wouldn't call it a key
21 driver.

22 MR. BRODSKY: Could we take a look at
23 SWRCB-104.

24 MR. OCHENDUSZKO: Mr. Brodsky, do you have a
25 page citation for SWRCB-104?

1 MR. BRODSKY: It's 3-83.

2 MR. OCHENDUSZKO: Thank you.

3 (Document displayed on screen.)

4 MR. BRODSKY: Then if we can scroll down a bit.

5 (Scrolling down document.)

6 MR. BRODSKY: So it says there are (reading):

7 "Two key drivers of SWP/CVP operations, Fall X2
8 and spring outflow, as well as many of the
9 individual operational components described below,
10 are designed to adapt two developing scientific
11 information as a consequence of the level of
12 uncertainty associated with those criteria."

13 So my understanding of that is that since
14 Fall X2 is a key driver, or at least that's what this --
15 You don't have to agree with that. Certainly, you're the
16 Operator of the Project.

17 Do you agree with that?

18 WITNESS LEAHIGH: Well, in this context, I
19 agree with it. It's -- Because it's talk -- It's
20 referencing the -- the two actions that are being
21 toggled, if you will, as part of the scenarios.

22 MR. BRODSKY: Right.

23 WITNESS LEAHIGH: So, in this context, I would
24 agree it is one of the two drivers.

25 MR. BRODSKY: Okay. And eliminating it

1 contributes to the ability to restore delivery of full
2 contract amounts. We already said that. I don't need to
3 repeat that again.

4 CO-HEARING OFFICER DODUC: (Nodding head.)

5 MR. BRODSKY: Okay. All right. So I'm going
6 to move to a different line of questioning.

7 I just want to know, do you want -- do you want
8 to stop for lunch or do you want me to take the next
9 module?

10 CO-HEARING OFFICER DODUC: Let's -- Well, do
11 you still think you can finish by 12:30?

12 MR. BRODSKY: I don't know. It depends on how
13 fast it goes. I --

14 CO-HEARING OFFICER DODUC: How -- What are --
15 What are your remaining lines of questioning?

16 MR. BRODSKY: I'm going to look at his exhibit
17 DWR-411, which showed the -- the operational flexibility
18 added by the North Delta intakes.

19 I'm going to look at impacts on downstream
20 flows of -- of the North Delta impacts.

21 I'm going to look at the Project's ability to
22 provide enhanced flexibility and operations.

23 And I'm going to look at the feasibility of
24 certain conditions that might be imposed with regard to
25 operations.

1 CO-HEARING OFFICER DODUC: Let's go ahead and
2 take our lunch break, then.

3 MR. BRODSKY: Okay.

4 CO-HEARING OFFICER DODUC: We'll resume at
5 1 p.m.

6 MR. BRODSKY: And then I'm also going to go to
7 the climatologist. Has anybody questioned the
8 climatologist yet?

9 CO-HEARING OFFICER DODUC: Oh, yes.

10 MR. BRODSKY: Okay.

11 CO-HEARING OFFICER DODUC: But I'm sure he'll
12 look forward to your questions.

13 MR. BRODSKY: I don't want him to feel bored.

14 WITNESS ANDERSON: Thank you.

15 (Luncheon recess was taken at 12:00 p.m.)
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1 Wednesday, August 18, 2016 1:00 p.m.

2 PROCEEDINGS

3 ---000---

4 CO-HEARING OFFICER DODUC: (Banging gavel.)

5 Okay. Good afternoon, everyone. It's

6 1 o'clock and we're back in session.

7 Before we resume with your cross-examination,

8 Mr. Brodsky, I understand there's some questions on

9 procedural matters?

10 Maybe there are not.

11 MR. BRODSKY: I could ask one.

12 CO-HEARING OFFICER DODUC: Mr. Brodsky.

13 MR. BRODSKY: So, in regard to your remarks

14 this morning denying the extension request, you said

15 something about rebuttal witnesses.

16 CO-HEARING OFFICER DODUC: (Nodding head.)

17 MR. BRODSKY: Is it correct to understand that

18 a party who cross-examines in Part IA but does not put on

19 a case in Part IB may call a rebuttal witness in Part IB?

20 CO-HEARING OFFICER DODUC: I'll let you talk to

21 counsel.

22 MR. BRODSKY: It's my understanding that the

23 rebuttal witness is really a function of

24 cross-examination.

25 CO-HEARING OFFICER DODUC: Cross-examination,

1 correct, but . . .

2 MS. HEINRICH: I'm very sorry but I missed the
3 question.

4 MR. BRODSKY: A party who cross-examines in
5 Part IA but does not put on a case in chief in Part IB,
6 may they call a rebuttal witness at the conclusion of
7 Part I?

8 MS. HEINRICH: Yes.

9 MR. BRODSKY: Thank you.

10 CO-HEARING OFFICER DODUC: Mr. Jackson.

11 MR. JACKSON: Yes, thank you very much. I'm
12 sorry I was cutting up in the audience.

13 The procedural question I have is that a number
14 of questions have been asked today that will
15 substantially limit or reduce my cross-examination, and
16 I'm up after Mr. Brodsky.

17 CO-HEARING OFFICER DODUC: I'm very glad to
18 hear that, Mr. Jackson.

19 MR. JACKSON: The problem, as was pointed out
20 to me by smarter people than me, is that by relying on
21 those questions and answers, if a party settles out, is
22 that testimony going to remain in the record?

23 CO-HEARING OFFICER DODUC: Yes, it is.

24 MR. JACKSON: Then it's going to be a shorter
25 cross-examination.

1 CO-HEARING OFFICER DODUC: And I like my answer
2 even more. Thank you.

3 There was a question, I believe, regarding
4 whether we would get to the Modeling Panel this week.

5 My answer to that will be no. I think we
6 will -- we'll need today as well as part, if not all, of
7 tomorrow to go through the cross-examination of this
8 panel.

9 In the event that we do finish this panel early
10 tomorrow, I'll ask Petitioners to have your final member
11 of the Engineering Panel available for cross-examination
12 before we begin the Modeling Panel. I believe he is back
13 and available now?

14 MR. MIZELL: He is back and available.

15 And for purposes of bringing him back, what we
16 had considered was bringing him, along with his Panel
17 Members, back in order to provide the public with the
18 fullest opportunity to get an answer to their questions
19 such that we don't end up in a situation where he also
20 says he doesn't know, and the questioner feels as though
21 they would have wanted to ask something different to the
22 remaining Panel Members.

23 CO-HEARING OFFICER DODUC: So you're proposing
24 to bring the entire Engineering Panel back but have
25 questions be directed specifically to your last member,

1 unless others can answer.

2 MR. MIZELL: If the last member isn't able to
3 answer and it would inform the Board to have an answer
4 given by one of the other Panel Members, we hope the
5 questions for the missing panel member would be limited
6 to those raised -- those topics raised the other day
7 during the cross-examination which would be geotechnical,
8 flood and -- and earthquake.

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

11 Again, have -- please have them available as
12 early as tomorrow but definitely before we get to the
13 Modeling Panel.

14 MR. MIZELL: Okay.

15 CO-HEARING OFFICER DODUC: Thank you.

16 With that, Mr. Brodsky, please resume your
17 cross-examination.

18 MR. BRODSKY: Thank you.

19 So, let's see. Let's go on to the next topic.

20 And if we could see DWR-411.

21 (Document displayed on screen.)

22 MR. BRODSKY: And, Mr. Leahigh, you -- did you
23 prepare this slide?

24 WITNESS LEAHIGH: Yes. My staff prepared it at
25 my direction.

1 CO-HEARING OFFICER DODUC: I don't believe your
2 microphone is on.

3 WITNESS LEAHIGH: Yes, my staff prepared it at
4 my direction.

5 MR. BRODSKY: Again, it's a good slide. AND we
6 may disagree with some of the contentions, but it's a
7 good representation of what you're trying to say.

8 So, is it correct that you're -- you're
9 demonstration in this slide that an additional 1.2
10 million acre-feet of diversion would have been possible
11 during this period of time if CWF had been in place as
12 opposed to what existing conditions are now?

13 WITNESS LEAHIGH: Yes. Just to clarify: If
14 CWF had been in place and operated under Scenario H3.

15 MR. BRODSKY: Okay. Very good.

16 So, does that mean that 1.2 million acre-feet
17 less water would flow in the Sacramento River downstream
18 of the North Delta Diversions?

19 WITNESS LEAHIGH: Yes. What's depicted on the
20 graph is the reduction in Delta outflow, and the dotted
21 blue line is a result of the additional diversions
22 associated with the WaterFix H3.

23 MR. BRODSKY: And so those additional
24 diversions occur at the new -- new Points of Diversion
25 near Hood on the Sacramento River far upstream of where

1 the existing Points of Diversion are.

2 WITNESS LEAHIGH: Yes.

3 MR. BRODSKY: And so then downstream of those
4 new Points of Diversion, there would be 1.2 million
5 acre-feet less water flowing down the Sacramento River
6 because it would have been diverted . . . over that
7 period of time.

8 WITNESS LEAHIGH: Yes. It's hard to -- It's
9 hard to say that it would be the entire 1.3 when you say
10 down the Sacramento River.

11 Certainly there would be less outflow and much
12 of that would be, as far as less flow down the Sacramento
13 River. Some of that flow would have made its way cross
14 Delta through, say, Georgiana Slough, Three Mile Slough,
15 through the tidal action, but most of it would probably
16 have resulted in a reduction in Sacramento flow.

17 MR. BRODSKY: Okay. Let's just, maybe to make
18 sure we're clear, take a look at -- Do we have a good
19 slide that shows the position of the intakes? Can you
20 recall offhand?

21 WITNESS LEAHIGH: It is probably part of
22 Jennifer Pierre's PowerPoint, so DWR-1 or 2.

23 (Document displayed on screen.)

24 MR. BRODSKY: All right. So if we look at
25 DWR-1, Page 8.

1 (Document displayed on screen.)

2 MR. MIZELL: This is Page 8 of the corrected
3 water diversion.

4 MR. BRODSKY: Oh, I only have the old one.

5 (Document scrolled down.)

6 MR. BRODSKY: That's it.

7 So we see in the upper left-hand corner there
8 the three orangish dots are the new intakes; is that
9 correct?

10 WITNESS LEAHIGH: Yes.

11 MR. MIZELL: If you could scroll up to the
12 first copy of Page --

13 (Document scrolled up.)

14 MR. BRODSKY: There we go.

15 MR. MIZELL: Okay. The second copy there.

16 MR. BRODSKY: Right. Thank you very much.

17 So we've got Intake 2, Intake 3 and Intake 5,
18 and we're heading downstream from -- Intake 2 towards
19 Intake 5 is going downstream; is that correct?

20 WITNESS LEAHIGH: That's correct.

21 MR. BRODSKY: And so immediately downstream of
22 Intake 5, there would be 1.2 million acre-feet less water
23 flowing in the Sacramento River at that point over the
24 period demonstrated in your Slide 411.

25 WITNESS LEAHIGH: Yes, immediately downstream

1 of Intake 5.

2 MR. BRODSKY: Right. And some of that
3 1.2 million acre-feet, if it had not been diverted, would
4 flow down the Sacramento past -- past Rio Vista, some of
5 it would go through the -- perhaps through the Cross
6 Delta Canal, some of it would head down Steamboat Slough,
7 some of it might hit on Miner Slough --

8 WITNESS LEAHIGH: That's correct.

9 MR. BRODSKY: -- to various locations in the
10 Delta.

11 WITNESS LEAHIGH: Right.

12 MR. BRODSKY: Okay. Thank you.

13 So is it correct, then, as a consequence of
14 meeting the project objectives, that less water will flow
15 in that Sacramento River downstream of Intake 5 when CWF
16 is in place?

17 WITNESS LEAHIGH: Yes, generally, that's
18 correct.

19 MR. BRODSKY: Okay. And would you agree that
20 that constitutes a substantial change in Delta flows
21 compared to existing conditions? In other words, as
22 CW -- Let's be specific.

23 I suppose operating between H3 and H4, that the
24 fact that there'll be less water flowing down the
25 Sacramento River -- and we just discussed that some of

1 that water would have gone down Steamboat Slough, some
2 would have gone down the Sacramento River, found its
3 way -- would have found its way to various places in the
4 Delta.

5 Would that constitute a substantial change in
6 Delta flows?

7 WITNESS LEAHIGH: Well, during the time periods
8 that the North Delta Diversions would be operated, it
9 would have to be under higher flow scenarios. So it --
10 It wouldn't be to the degree -- I guess it depends on the
11 word "substantial."

12 So it would kind of depend on what the actual
13 conditions were at the time. As my example, I
14 illustrated the additional diversions as it relates to
15 water quality in the Delta.

16 There was very little effect, if any, during
17 the period of time when the diversions were being --
18 would have been utilized under this hypothetical
19 operation for this spring, for an example.

20 MR. BRODSKY: And so you -- you picked one
21 period of time, and it was at a period of high flow in
22 the spring, to give your demonstration.

23 WITNESS LEAHIGH: Yes. And there -- there
24 probably wasn't anything that was that far outside the
25 norm that we would see in a typical year, as far as

1 higher unregulated flows occurring in the -- in the
2 winter/spring period. That's often the case.

3 MR. BRODSKY: Okay. So it's my understanding
4 that, over the course of operation of CWF over, you know,
5 many years, as it's proposed, obeying its operating rules
6 with all regulatory standards in place, that it will, if
7 it's operated as it's allowed and towards the project
8 objective of restoring full contract amounts, that it
9 will cause substantive changes in hydrodynamics
10 throughout the Delta.

11 Do -- Do you agree with that?

12 WITNESS LEAHIGH: It -- It will change them to
13 some extent. I think the testimony is, it will not
14 inhibit our ability to meet the Water Quality Control
15 Plan objectives, however.

16 MR. BRODSKY: Okay. All right. I'd like to
17 take a look at . . . at the Draft BA. I think that's --
18 Let's see.

19 That's SWRCB-104.

20 (Document displayed on screen.)

21 MR. OCHENDUSZKO: As a point of clarity,
22 SWRCB-104 is the Final BA.

23 MR. BRODSKY: That's the one I'm referring to.

24 MR. OCHENDUSZKO: Thank you.

25 MR. BRODSKY: I think -- How should we refer to

1 that, Mr. Berliner? It's the revised Draft BA is what
2 you're calling it.

3 MR. MIZELL: I believe you can refer to it as
4 the Submitted BA.

5 MR. BRODSKY: Submitted BA. Okay. Submitted
6 BA.

7 And if we could look at Page 3-83 of that
8 document.

9 (Document displayed on screen.)

10 MR. BRODSKY: That -- Just up a little bit.

11 (Document scrolled up.)

12 MR. BRODSKY: So that paragraph, the last
13 paragraph beginning with operations (reading):

14 "Operations under the PA" -- which is the
15 proposed action California WaterFix -- "may result
16 in substantial change in Delta flows compared to the
17 expected flows under . . . existing Delta
18 configuration . . ."

19 Would you agree with that?

20 WITNESS LEAHIGH: Yeah, to the extent that
21 "substantial" is kind of a qualitative description.

22 MR. BRODSKY: Okay.

23 WITNESS LEAHIGH: Sure.

24 MR. BRODSKY: All right. Thank you.

25 And then on my thumb drive that I provided to

1 the projectionist, Item Number 7. If we could take a
2 look at that.

3 (Document displayed on screen.)

4 MR. BRODSKY: And this is the Aquatic Science
5 Peer Review that was commissioned by CWF proponents.

6 And if we can turn to Page 3.

7 (Document displayed on screen.)

8 MR. BRODSKY: The first sentence at the top
9 there:

10 "The new water dual conveyance facilities
11 proposed as part of CA WaterFix Project would create
12 substantial changes in the aquatic environment of
13 the Lower San Joaquin and Sacramento Rivers, the
14 Delta, and downstream estuarian areas."

15 Would you agree with that?

16 WITNESS LEAHIGH: Again, that -- Well, it's a
17 very similar statement as the last one that you just
18 showed. And, again, "substantial" is a subjective term.

19 MR. BRODSKY: Okay. Then if we could turn to
20 Page 15 of this document.

21 (Document displayed on screen.)

22 MR. BRODSKY: Scroll down under 2.1.

23 (Document scrolled down.)

24 MR. BRODSKY: Up.

25 (Document scrolled up.)

1 MR. BRODSKY: Yeah (reading):

2 "The panel believes the PA will create more
3 than an incremental change to the Bay-Delta system.
4 It will effect major changes in hydrodynamics and
5 associated transport throughout the system
6 downstream of the North Delta Diversions, with
7 uncertain consequences for fish and their critical
8 habitat."

9 So this uses terms different than
10 "substantial." It says, "major changes in
11 hydrodynamics."

12 Would you agree with that?

13 WITNESS LEAHIGH: Well, this document gets to
14 the effects on fish and wildlife of the Project, which
15 I'm not prepared to talk to as part of this -- this part
16 of the hearing.

17 In terms of the M&I and agricultural uses,
18 because of the fact that we will continue to meet the
19 Water Quality Control Plan objectives, I wouldn't
20 necessarily -- I don't see the changes as being
21 significant in that regard.

22 MR. BRODSKY: Okay. So I've been asking
23 specifically about the major changes in hydrodynamics,
24 not their effect on fish or their effect on M&I uses.

25 Hydrodynamics are the way the water flows

1 through the Delta, the rate it flows, what the flow
2 patterns are, the time of flows; is that correct? Do I
3 understand the term "hydrodynamics" correctly?

4 WITNESS LEAHIGH: Sure.

5 MR. BRODSKY: And so without worrying about
6 how -- who it's going to affect and how, do you agree
7 that there will be major changes in the way the water
8 flows throughout the Delta downstream of the new intakes?

9 MR. BERLINER: I'm going to object: By
10 definition of Mr. Brodsky's question -- I'm going to
11 object: By definition of Mr. Brodsky's question, he's
12 removed it from Part I. So if it's not relevant to
13 Part I, object on relevance.

14 CO-HEARING OFFICER DODUC: Mr. Brodsky.

15 MR. BRODSKY: I'm going to get whether it
16 injures legal uses. Right now, I'm just trying to
17 establish the fact that the North Delta Intakes will
18 substantially affect the way water flows throughout the
19 Delta, and then I'll take it one step at a time after
20 that.

21 CO-HEARING OFFICER DODUC: Okay. Let's --
22 Let's get that.

23 Mr. Leahigh -- Leahigh, sorry -- please answer.

24 WITNESS LEAHIGH: Well, I think there is a
25 qualitative term here, "major," and I think it -- major

1 effects, it depends on the context on -- on what kind of
2 effects you're talking about.

3 So, I think it -- I think it matters in what
4 context you're talking about changes to hydrodynamics.

5 MR. BRODSKY: Do you think that it'll have
6 major effects on the rate and timing of flow downstream
7 of the intakes in the -- in the Sacramento River?

8 WITNESS LEAHIGH: No, I don't believe so.

9 MR. BRODSKY: Okay. I'd like to turn your
10 attention to . . . Let's take a look at Page 3-84 of the
11 Submitted BA.

12 MS. RIDDLE: Excuse me. Do you want to mark
13 this for identification? The last Item Number 7 that you
14 had on your flash drive.

15 MR. BRODSKY: Number 7? I have the entire
16 document and I would like to offer that into evidence at
17 the conclusion of my cross-examination, so . . .

18 CO-HEARING OFFICER DODUC: So let's mark it for
19 identification purposes.

20 MS. RIDDLE: It would be SCDA-1 or --

21 MR. BRODSKY: Okay.

22 MS. RIDDLE: Is that okay?

23 CO-HEARING OFFICER DODUC: Okay.

24 MR. BERLINER: I'm sorry. What was the
25 designation?

1 MS. RIDDLE: SCDA-1.

2 (Save the California Delta Alliance
3 Exhibit 1 marked for identification)

4 MR. BRODSKY: Okay. So if we could go --
5 scroll up to the top of this page.

6 (Document scrolled up.)

7 MR. BRODSKY: Well, actually, there, that's
8 good.

9 So this is -- this is bypass flow criteria for
10 the operations of CWF; is -- Is that correct? Is that
11 your understanding of what this document is portraying?

12 WITNESS LEAHIGH: Yes, that's what it looks
13 like.

14 MR. BRODSKY: And is it correct that the way
15 bypass flow criteria works, that it's an operating rule
16 or restriction on CWF that you have to allow a certain
17 amount of water to continue flowing down the Sacramento
18 River after the new intakes have diverted whatever
19 they're going to divert?

20 WITNESS LEAHIGH: That's correct. In fact, if
21 the flows are not reaching a certain threshold, there
22 would -- would not be any diversions from the North
23 Delta --

24 MR. BRODSKY: Right.

25 WITNESS LEAHIGH: -- Diversion Point.

1 MR. BRODSKY: And there are different rules for
2 different times of the years and -- of the year, and
3 depending what upstream flow is, and you -- you apply the
4 algorithm, and that -- that basically would tell you how
5 much you're allowed to divert at the -- at the -- at the
6 new intakes.

7 WITNESS LEAHIGH: That's correct.

8 MR. BRODSKY: Okay. And so we've got there --
9 The third hollow bullet point down in the first box, it
10 says --

11 (Document scrolled down.)

12 MR. BRODSKY: No, you don't need to scroll
13 down.

14 (Document scrolled up.)

15 MR. BRODSKY: Yeah.

16 (Reading):

17 "July, August, September: Minimum flow of
18 5,000 cfs required in river after diverting at the
19 North Delta Intakes."

20 Am I reading that correctly?

21 WITNESS LEAHIGH: Yes, I see that.

22 MR. BRODSKY: All right. So it's -- It's my
23 understanding, then, that during the months of July,
24 August and September, the rule is that you may not divert
25 more water at the new intakes than will allow at least

1 5,000 cfs to continue flowing down the river after the
2 diversion.

3 Is that correct?

4 WITNESS LEAHIGH: That's what it appears to
5 say, yes.

6 MR. BRODSKY: Okay. All right. Well, do -- Is
7 that your understanding what the Project rule is?

8 WITNESS LEAHIGH: Yes. And . . . another
9 document that would be good to look at, to -- as a better
10 visual, might be from one of the exhibits from the
11 Modeling Panel, which essentially puts this same
12 information but graphical form, if we wanted to pull that
13 up.

14 MR. BRODSKY: Well, I'd like to continue with
15 my line of questioning --

16 WITNESS LEAHIGH: Sure, sure.

17 MR. BRODSKY: -- and put it online.

18 So, it's your understanding the rule is, you've
19 got to leave at least 5,000 cubic feet per second in the
20 river during July, August and September, just to --

21 WITNESS LEAHIGH: Yes.

22 MR. BRODSKY: -- restate.

23 WITNESS LEAHIGH: Yes.

24 MR. BRODSKY: Then I'd like to look at 3-86 of
25 this same document.

1 (Document displayed on screen.)

2 MR. BRODSKY: And down at the bottom of the
3 page, there's a Footnote 19. And 19 says (reading):

4 "The PA operations include a preference for
5 South Delta pumping in July through September months
6 to provide limited flushing flows to manage water
7 quality in the South Delta."

8 Have I read that correctly?

9 WITNESS LEAHIGH: Yes, I believe so.

10 MR. BRODSKY: And so it's my understanding that
11 it's not a requirement that you pump from the South Delta
12 but that the authors of this document have acknowledged
13 there would be some value to that and there's -- there's
14 a preference for it. But it's not required.

15 WITNESS LEAHIGH: Well, indirectly, it would be
16 required because we would need to maintain some sort of
17 pumping in the South Delta in order to meet the Water
18 Quality Control Plan objectives further down in the
19 system, so to bring some of that fresh water -- ensure
20 that some of that fresh water occurring in the cross
21 channel makes its way to meet M&I objectives further
22 south on Old and Middle River.

23 So it would be required indirectly.

24 MR. BRODSKY: So it's not required by the
25 operational rules of the Project. You're saying it would

1 be required because you'd have to meet D-1641.

2 WITNESS LEAHIGH: Correct.

3 MR. BRODSKY: But the operational rules of the
4 Project do allow diversions at the North -- at the North
5 Delta Intakes during July, August, and September under
6 that 5,000 cfs bypass criteria.

7 WITNESS LEAHIGH: North Delta Diversions would
8 be allowed in the summertime as long as we're meeting
9 that criteria.

10 MR. BRODSKY: Okay.

11 WITNESS LEAHIGH: All the criteria, including
12 the Water Quality Control Plan.

13 MR. BRODSKY: I'm sorry?

14 WITNESS LEAHIGH: All the criteria, including
15 the Water Quality Control Plan objectives.

16 MR. BRODSKY: Okay. So, I'd like to take a
17 look at Number 12 on the flash drive.

18 (Document displayed on screen.)

19 MR. BRODSKY: This is very small print.

20 Let me see if I have a copy. Maybe I do.

21 (Handing document to Mr. Leahigh.)

22 MR. BRODSKY: So, this is a printout from
23 USBR's website for the Free -- Freeport Gauging Station,
24 which is -- and it's correct that the Freeport Gauging
25 Station is just upstream of where the proposed new

1 intakes will be?

2 WITNESS LEAHIGH: Yes, it's upstream.

3 MR. BRODSKY: Okay. And this shows that, for
4 August 8th, 2016 -- I thought I was going to be
5 cross-examining last week so I picked a date last week --
6 for August 8th, 2016, the flow of the Sacramento River at
7 Freeport was 19,747 cubic feet per second.

8 WITNESS LEAHIGH: Yes, that's what the report
9 says.

10 MR. BRODSKY: Okay. And then I'd like to go to
11 Number 13 on the flash drive.

12 (Document displayed on screen.)

13 MR. BRODSKY: Can you scroll up?

14 (Document scrolled up.)

15 MR. BRODSKY: There.

16 So that's a handmade graph, and I'm showing the
17 Sacramento River flow . . . as -- The 19,747 cubic feet
18 per second is the top horizontal line, and then the
19 bottom dashed line is CWF Sacramento River flow at 10,747
20 cfs.

21 And what I'm representing there is that you're
22 meeting the 5,000 cfs bypass flow criteria, you're
23 leaving at least 5,000 cubic feet per second in the river,
24 and the capacity of the tunnels is 9,000 cubic feet per
25 second.

1 So, under that bypass flow rule, you could do
2 that. You could reduce the flow of the river by
3 45 percent; is that correct?

4 WITNESS LEAHIGH: I'm not sure that is correct.

5 I think there's -- I think there's other
6 criteria in terms of percent of reduction because that
7 5,000 rule is not the only -- that's not the only
8 constraint, so we have to look at the full criteria.

9 And that actually is one place where the -- the
10 diagram that I was referencing earlier might be helpful
11 because it incorporates all the criteria into one chart.

12 MR. BRODSKY: Are those criteria you're
13 referring to operating criteria of WaterFix, or D-1641,
14 or other constraints?

15 WITNESS LEAHIGH: Of WaterFix and,
16 specifically, the North Delta Diversion criteria.

17 MR. BRODSKY: And you -- Can you point to where
18 that -- that criteria is that would prevent that scenario
19 there?

20 WITNESS LEAHIGH: Well, the document I'm
21 referencing is in DWR-5. I believe it's Page 25.

22 CO-HEARING OFFICER DODUC: Miss Morris?

23 MS. MORRIS: Yes. Before we move off of
24 that --

25 CO-HEARING OFFICER DODUC: Actually, your

1 microphone's not on.

2 MS. MORRIS: Actually, before we move off of
3 the handmade graph, I don't think it was marked for
4 purposes of the record.

5 And I think it's important to mark it so that,
6 when we're looking back at the record, we can see what
7 the questioner's referencing.

8 CO-HEARING OFFICER DODUC: We will go back and
9 mark it for identification.

10 This would be SCDA-2.

11 And then the handmade graph, it would be
12 SCDA-3.

13 (Save the California Delta Alliance
14 Exhibits SCDA-2 & SCDA-3 marked for
15 identification)

16 MR. MIZELL: Could you repeat the page number
17 again?

18 WITNESS LEAHIGH: Yes. I believe it's 25.

19 (Document displayed on screen.)

20 WITNESS LEAHIGH: Yes. So this -- This is a
21 diagram that incorporates all of the criteria into one
22 lookup table, if you will.

23 So across the X-Axis is the Sacramento River
24 flow upstream of the Proposed Delta Intakes, and the
25 Y-Axis would be how much flow would have to remain in the

1 river downstream of the intakes under the various
2 criteria.

3 MR. BRODSKY: Okay. And this is what you're
4 relying on to say that my handmade graph would be
5 prohibited by CWF operating rules?

6 WITNESS LEAHIGH: Well, I guess what I'm
7 suggesting is, we should take a look at what this diagram
8 says since it's more comprehensive in taking into account
9 all the different criteria, because it's fairly complex
10 criteria for the North Delta.

11 MR. BRODSKY: Okay. Can I point out this says,
12 "Sacramento River proposed December through April," and
13 does not apply to the summer months I'm referring to.

14 WITNESS LEAHIGH: (Nodding head.)

15 MR. BRODSKY: And may I also say there are no
16 other restrictions other than the 5,000 cfs. And the
17 reason for that is that these other restrictions were
18 imposed by the -- by the fish agencies, because the
19 spring pulse flows, and the Fall X2, and all those other
20 times that are critical for the fish, but in the summer,
21 there are no fishery requirements, so that's why there's
22 very little restriction on what the North Delta
23 Diversions can do in the summer.

24 Would you agree with that?

25 WITNESS LEAHIGH: It's possible. I wasn't

1 involved in the development of the criteria, so I can't
2 speak for sure as far as what was considered as far as
3 the -- any summer -- summer criteria as it relates to the
4 North Delta Diversion.

5 MR. BRODSKY: Wait. You're in charge of
6 Operations, and I'm representing to you that there's no
7 CWF criteria that would prohibit -- Could we go back to
8 the handmade chart that's SCDA-3, I guess, we're calling
9 it.

10 (Document displayed on screen.)

11 MR. BRODSKY: There's nothing in the CWF -- I'm
12 representing to you that there's nothing in the CWF
13 operating criteria that would prohibit this scenario.

14 Can you point to anything to show I'm wrong
15 about that?

16 WITNESS LEAHIGH: Yeah. Offhand, I cannot. I
17 think the -- a lot of the Modeling Panel were involved in
18 developing that criteria. They may have a -- They have a
19 better understanding as to exactly what the requirements
20 would be for the summer -- summer period.

21 MR. BRODSKY: Okay. Then I'd like to go to --
22 But you're not aware of anything that says --

23 THE WITNESS: I'm not aware --

24 MR. BRODSKY: -- this is incorrect.

25 WITNESS LEAHIGH: I'm not aware of anything at

1 the moment, no.

2 MR. BRODSKY: Okay. Then I'd like to go to
3 Number 14 on the thumb drive.

4 (Document displayed on screen.)

5 MR. BRODSKY: And let me give you a copy of
6 that.

7 CO-HEARING OFFICER DODUC: So we will label
8 this SCDA No. 4. Is my addition correct?

9 Okay. Number 4 for purposes --

10 MR. BRODSKY: I'm sorry the type's so small on
11 that. I just couldn't get it to print out correctly from
12 the website.

13 (Save the California Delta Alliance
14 Exhibit SCDA-4 marked for
15 identification)

16 MR. BRODSKY: Okay. So this is historical data
17 of Sacramento River flow at Freeport Gauging Station.
18 And I've underlined August 9th, 2014, which showed
19 10,138 cubic feet per second as the flow of the
20 Sacramento River at Freeport.

21 Are you able to see that on the copy I've given
22 you?

23 WITNESS LEAHIGH: Yes, I'm able to see that.

24 MR. BRODSKY: Okay. And then I'd like to go to
25 Number 15 on the thumb drive.

1 (Document displayed on screen.)

2 CO-HEARING OFFICER DODUC: Which will be marked
3 as SCDA-5.

4 (Save the California Delta
5 Alliance's Exhibit SCDA-5 marked for
6 identification)

7 MR. BRODSKY: And if we could scroll down.

8 (Scrolling down document.)

9 MR. BRODSKY: There we go.

10 So the handmade chart, again, the top
11 horizontal line is showing the actual flow of the
12 Sacramento River is 10,138 cfs.

13 And then we're showing the CWF Sacramento River
14 flow is 5,000 cfs.

15 And what I'm doing there is, I'm applying the
16 5,000 cfs bypass flow rule so you -- Although the
17 capacity of your intakes is 9,000, you've only taken
18 5,138 because you have to leave 5,000 in the river.

19 Would you agree that that's what I've depicted
20 there on the chart?

21 WITNESS LEAHIGH: That's what you've depicted,
22 and I -- I'm starting to understand now what I was
23 missing and why we wouldn't be diverting that water under
24 this situation or the last situation that you described.

25 And that's -- As I had mentioned, that we would

1 continue to have to meet the Water Quality Control Plan
2 objectives, which includes the salinity outflow
3 requirements in the summer period.

4 So if we diverted that water, we would not be
5 meeting those objectives.

6 MR. BRODSKY: Okay. So let's talk about that.

7 Let's go back to -- Let's go back to the first
8 example, and let's apply D-1641 to both of these charts.

9 Let's go back to the first chart first, which
10 has the higher number. I believe that's 3.

11 MS. RIDDLE: SCDA-3.

12 (Document displayed on screen.)

13 MR. BRODSKY: So on this chart, after I've
14 applied the bypass rules, we're leaving 10,747 cfs in the
15 river.

16 And is it your testimony that with 10,747 cfs
17 flowing down the river, you couldn't meet D-1641?

18 WITNESS LEAHIGH: Without making some other
19 adjustments somewhere else. And we have to take a look
20 exactly what the mix was as far as South Delta Diversion
21 at the time.

22 MR. BRODSKY: You might have to reduce exports
23 to meet D-1641 is what you're saying.

24 WITNESS LEAHIGH: Well, we wouldn't be reducing
25 exports.

1 MR. BRODSKY: I'm sorry. You would have to
2 reduce --

3 WITNESS LEAHIGH: Right.

4 MR. BRODSKY: Withdraw the question.

5 So, I'm sorry, I got you off track. My
6 mistake.

7 So is it your testimony under this scenario,
8 leaving 10,747 cfs in the river, that you could not meet
9 D-1641?

10 And, I'm sorry, your answer was?

11 WITNESS LEAHIGH: Again, we'd have to look at
12 the comprehensive picture as far as what we were
13 diverting from the South Delta Diversion point.

14 It's possible that we -- there could have been
15 some -- The more optimal operation could be some
16 additional diversion from the North Delta Diversion
17 Point, but then we would have to reduce the South Delta
18 Diversion point by probably a similar magnitude.

19 And it's probably -- fairly complex as far as
20 taking a look at which salinity standards we were having
21 to meet at the time, and trying to evaluate which would
22 be the better location for the actual diversion to feed
23 the exports.

24 MR. BRODSKY: Well, let's talk about those
25 standards in detail one at a time.

1 But, first, this is showing you're diverting
2 9,000 cubic feet per second. That's -- That's a lot of
3 water to be diverting. That's toward the high end of
4 what you ever divert; isn't it?

5 MR. BERLINER: Objection: Assumes facts not in
6 evidence. The --

7 MR. BRODSKY: Is that a --

8 MR. BERLINER: -- witness indicated that he
9 couldn't necessarily divert this.

10 CO-HEARING OFFICER DODUC: Mr. Brodsky,
11 let's -- I'm trying to follow your line of questioning
12 here.

13 And you -- Your specific question to
14 Mr. Leahigh was whether or not this 10,747 would achieve
15 the water quality standards.

16 And I believe his answer was he wasn't sure
17 because it depends on a lot of other factors.

18 MR. BRODSKY: Okay.

19 CO-HEARING OFFICER DODUC: So where are you
20 going?

21 MR. BRODSKY: So let's follow that.

22 The water quality standards we saw a few
23 moments ago -- and we can bring it up again if we need to
24 in the Draft BA -- that two of the key drivers of flow
25 requirements are Fall X2 and spring outflow.

1 Do you recall -- Do you recall that?

2 WITNESS LEAHIGH: Those are two of the key
3 aspects that differentiate the various scenarios.

4 MR. BRODSKY: Right. So, in the summer months,
5 there's no requirement for Fall X2; is that correct?

6 WITNESS LEAHIGH: No.

7 MR. BRODSKY: And there -- And the summer
8 months, there's no requirement for spring outflow; is
9 that correct?

10 WITNESS LEAHIGH: No, there's not, but there's
11 certainly driving criteria as it relates to salinity
12 objectives.

13 MR. BRODSKY: Okay. So let's talk about
14 salinity.

15 So D-1641 salinity objective at Rock Slough is
16 a municipal standard. It's a drinking water standard;
17 correct?

18 WITNESS LEAHIGH: It's an M&I standard.

19 MR. BRODSKY: And it's chloride in parts per
20 million; correct?

21 WITNESS LEAHIGH: Yes.

22 MR. BRODSKY: And it is a stricter standard
23 than the other agricultural standards in the Delta which
24 are -- which are expressed in terms of EC; is it not?

25 WITNESS LEAHIGH: Not necessarily. Some of the

1 EC standards for agricultural -- It depends on the year
2 type and the time of year. Some of those can be . . .
3 can require lower salinity thresholds than the Rock
4 Slough standard.

5 MR. BRODSKY: Okay. I'm going to represent to
6 you that the Rock Slough standard in terms of the
7 modeling that was done for CWF, if North Delta Diversions
8 are constrained during the summer, the thing that
9 constrains them first is the Rock Slough standard.

10 CO-HEARING OFFICER DODUC: And your question
11 is?

12 MR. BRODSKY: And my question is, isn't it true
13 that you've entered into a Settlement Agreement with the
14 Contra Costa Water District?

15 WITNESS LEAHIGH: Well, the premise of the
16 question is incorrect.

17 MR. BRODSKY: You disagree with it, okay.

18 WITNESS LEAHIGH: I disagree with it.

19 MR. BRODSKY: Next question: Is it true that
20 you've entered into a Settlement Agreement with the
21 Contra Costa Water District?

22 WITNESS LEAHIGH: That is true, the Department
23 has entered into a Settlement Agreement.

24 MR. BRODSKY: And that provides that if water
25 quality standards at the Rock Slough intake become

1 unacceptable, you'll provide them with alternative
2 sources of water.

3 WITNESS LEAHIGH: No, that's not -- That's not
4 my understanding of the agreement.

5 MR. BRODSKY: What is your understanding?

6 WITNESS LEAHIGH: The agreement does not change
7 our obligations under the D-1641 and the Water Quality
8 Control Plan.

9 The agreement, to my understanding, talks about
10 the conveyance of -- of flow through the WaterFix
11 facilities under certain conditions.

12 MR. BRODSKY: To the Contra Costa Water
13 District.

14 WITNESS LEAHIGH: To the Contra Costa Water
15 District, correct.

16 MR. BRODSKY: And it has nothing to do with
17 their intake at Rock Slough.

18 WITNESS LEAHIGH: Not necessarily, no.

19 MR. BRODSKY: I'm surprised by your answer.
20 I . . . And we'll follow this up with the Modeling Panel.

21 But I'll represent to you that it does allow
22 them an alternative source of water, and the point of
23 that is so that Rock Slough won't restrict North Delta
24 Diversions during the summertime.

25 CO-HEARING OFFICER DODUC: And your question

1 is?

2 MR. BRODSKY: And I assume you disagreed with
3 that.

4 WITNESS LEAHIGH: I -- I -- I do not
5 necessarily think that is the case, what you stated.

6 MR. BRODSKY: Do you know it's not the case?

7 WITNESS LEAHIGH: I think the modeling would
8 suggest, and my testimony is, that we will continue to
9 meet the salinity objectives as we do today, even with
10 WaterFix.

11 MR. BRODSKY: And -- And -- And continuing to
12 meet the salinity objectives does -- does not prohibit
13 you from diverting the 9,000 cubic feet per second as
14 depicted there.

15 WITNESS LEAHIGH: Well, so, the standard that
16 does generally apply during this time period would be the
17 Emmaton/Jersey Point standards.

18 MR. BRODSKY: Uh-huh.

19 WITNESS LEAHIGH: And if we -- We have to do
20 some modeling or what have you, but it's unlikely that a
21 sustainable 9,000 pumping rate the North Delta Diversion
22 during this period of time would allow us to meet Emmaton
23 standards.

24 So, no, we will not -- That would prevent us
25 from diverting the 9,000 cfs as you represent here under

1 the Proposed Project, because part of our Proposed
2 Project is, we will continue to meet the Water Quality
3 Control Plan.

4 MR. BRODSKY: How do you know you couldn't meet
5 the Emmaton standard with 10,747 flowing in the river as
6 you sit there?

7 WITNESS LEAHIGH: I didn't say I could. I said
8 we'd have to do some analysis as to whether that would be
9 possible.

10 MR. BRODSKY: Right.

11 WITNESS LEAHIGH: But just based on experience,
12 if we were diverting that large a flow and allowed the
13 river to get that low, it's -- it's very possible we
14 wouldn't -- On a sustainable basis, it's very possible we
15 would not be able to meet the Emmaton objective.

16 MR. BRODSKY: But you don't know that as you
17 sit here.

18 WITNESS LEAHIGH: I don't know that --

19 MR. BRODSKY: Okay.

20 WITNESS LEAHIGH: -- for sure.

21 (Timer rings.)

22 MR. BRODSKY: Another half hour?

23 CO-HEARING OFFICER DODUC: And what are your
24 remaining lines of question? I think we've -- we've
25 ex -- exhausted this particular line.

1 MR. BRODSKY: I'm going to go to the testimony
2 about the increased flexibility of the Project.

3 And I'm going to go to the conditions, whether
4 there would be certain conditions that would be feasible.

5 And I'm going to go to the impact of climate
6 change.

7 CO-HEARING OFFICER DODUC: Okay. Well, all
8 those three topics have been touched upon by other
9 cross-examiners, so I would, again, ask you to not
10 repeat.

11 But if there's a particular avenue that you're
12 exploring that's different, then --

13 MR. BRODSKY: I believe it is different.

14 CO-HEARING OFFICER DODUC: Okay. So we'll go
15 ahead and put another 30 minutes on there for you, but,
16 again, I encourage efficiency.

17 MR. BRODSKY: Yes. Thank you, Madam.

18 Okay. So, may I ask -- Moving on to a
19 different subject.

20 One of the justifications for the Project is
21 that it'll add enhanced flexibility to the operation of
22 the SWP and the CVP; is that correct?

23 WITNESS LEAHIGH: That's correct.

24 MR. BRODSKY: Would increasing exports in wet
25 periods and complementally increasing ex-periods (sic) in

1 dry periods be a good example of a possible benefit of
2 enhanced flexibility?

3 WITNESS LEAHIGH: Yes, I think generally
4 that's -- that's true.

5 MR. BRODSKY: Okay. And I'd like to go to
6 Number 11 on the thumb drive.

7 (Document displayed on screen.)

8 MR. BRODSKY: And to Page 30.

9 CO-HEARING OFFICER DODUC: So this would be
10 SCDA-6.

11 (Document displayed on screen.)

12 (Save the California Delta
13 Alliance's Exhibit 6 marked for
14 identification)

15 CO-HEARING OFFICER DODUC: I'm sorry. Did you
16 identify this document for the record?

17 MR. BRODSKY: This is a Panel Review conducted
18 by Professor Jeffrey Mount and his colleagues on the
19 Bay-Delta Conservation Plan. It was submitted as a
20 comment on the EIR/S and is in the Administrative Record.

21 And are we on Page 30? If we could scroll
22 down.

23 (Scrolling down document.)

24 MR. BRODSKY: Next paragraph down.

25 (Scrolling down document.)

1 MR. BRODSKY: (Reading):

2 "One of the objectives of BDCP that is in line
3 with those of the Delta Plan is to increase exports
4 during wet periods and decrease them during dry
5 periods when impacts on the ecosystem are greatest.
6 In comparison to the no project alternative, the new
7 facility appears to achieve the former to a modest
8 degree, but it does not significantly reduce
9 pressure on the Delta during drier periods."

10 Would you agree with that?

11 MR. BERLINER: I'm going to object insofar as
12 the relevance of this document since this comment is made
13 in the context of BDCP, and we don't know the foundation
14 for that statement because the BDCP involves a number of
15 actions that are not part of this proposal.

16 CO-HEARING OFFICER DODUC: Mr. Brodsky.

17 MR. BRODSKY: Well, the conveyance concept is
18 the same, but the question can just simply be whether he
19 agrees with that statement as to California WaterFix as
20 it's currently proposed.

21 CO-HEARING OFFICER DODUC: Actually, help me
22 understand.

23 As currently proposed, the WaterFix is -- is H3
24 and H4, or Boundary 1 and Boundary 2, and not being
25 familiar with this document, Mr. Brodsky, to which

1 alternative or scenario does this document refer?

2 MR. BRODSKY: This document refers to all the
3 alternatives that were proposed at that time and that
4 they --

5 CO-HEARING OFFICER DODUC: Okay. So would that
6 be Alternative 1 through Alternative 8?

7 MR. BRODSKY: Yes.

8 WITNESS LEAHIGH: Actually, I think the
9 exceedance diagram that we had up earlier, in earlier
10 testimony today, actually, if I remember correctly,
11 showed under many of the scenarios a tradeoff between
12 lower exports in drier years to higher exports in the
13 wetter years. So I think actually that does show up
14 on -- for several of the scenarios.

15 MR. BRODSKY: Which scenarios are those?

16 WITNESS LEAHIGH: Well, we'd have to look at
17 the -- We'd have to look at that exhibit again, but . . .

18 I believe that was the case for both . . .

19 I'm trying to go -- I'm trying to recall. But
20 I think it was for both H3 and H4. But I think H3 is the
21 one I'm thinking about specifically.

22 MR. BRODSKY: Does -- Does California WaterFix
23 contain any storage -- increased storage component?

24 WITNESS LEAHIGH: No.

25 MR. BRODSKY: If we could turn to Page 22 of

1 this same document.

2 (Document displayed on screen.)

3 MR. BRODSKY: Under Infrastructure . . .

4 Constraints there, it says (reading):

5 "Operations during wet and above average
6 conditions are often constrained by available space
7 to store water in this facility. Expanding
8 potential storage, particularly groundwater storage,
9 would have created considerably more flexibility in
10 exports, particularly during wet years."

11 Would you agree with that?

12 MR. MIZELL: Object as to vague.

13 We don't know what facility this statement's
14 talking about in granting the context of the document.

15 CO-HEARING OFFICER DODUC: I assume the
16 facility's referring to San Luis Reservoir, at least --

17 MR. BRODSKY: It's not referring to any
18 particular storage facility.

19 I'm just asking Mr. Leahigh if SW -- if
20 expanding storage capacity of the SWP and CVP would
21 contribute to the flexibility of operations.

22 Would it create a considerably more flexibility
23 in exports?

24 WITNESS LEAHIGH: You're -- Give me a minute to
25 read this.

1 I'm sorry. So what is the question?

2 MR. BRODSKY: You answered that CWF does not
3 include any expanded storage, and I'm asking you --

4 WITNESS LEAHIGH: That's correct.

5 MR. BRODSKY: -- if expanded storage capacity
6 would enhance the ability -- would enhance the
7 flexibility of -- of -- of the State Water Project and
8 the Central Valley Project to export more water in wet
9 periods and take more pressure off the Delta during dry
10 periods.

11 WITNESS LEAHIGH: With the California WaterFix
12 or just generally?

13 MR. BRODSKY: Both.

14 WITNESS LEAHIGH: There's -- There's probably
15 some potential there for not fully utilizing existing
16 storage under current conditions.

17 MR. BRODSKY: Okay. CWF has -- CWF has a
18 single focus, which is conveyance; is that correct?

19 WITNESS LEAHIGH: Generally, that's true.

20 MR. BRODSKY: Okay. I'd like to go to
21 Number 16 on the flash drive.

22 (Document displayed on screen.)

23 MR. BRODSKY: And if we could go to Page 4.

24 (Document displayed on screen.)

25 CO-HEARING OFFICER DODUC: So this is SCDA-7.

1 (Save the California Delta Alliance
2 Exhibit 7 marked for identification)

3 MR. BRODSKY: Okay. I'll just read from the
4 top there. In 2014 --

5 CO-HEARING OFFICER DODUC: I'm sorry. What is
6 this document? Let's identify it for the record.

7 MR. BRODSKY: This document is called,
8 "Challenges facing the Sacramento-San Joaquin Delta," and
9 the authors are Samuel N. Luoma, et al.

10 And I'll read this first paragraph that
11 explains what it is (reading):

12 "In 2014, the California Natural Resources
13 Agency and the U.S. Department of the Interior asked
14 the authors of this paper, as four former leaders of
15 The Delta Science Program, to summarize the
16 challenges faced by water supply and ecological
17 resource managers in this critically important
18 region of Northern California."

19 So this was commissioned by the California
20 Resources Agency and U.S. Department of Interior.

21 And then I'd like to read to you, over in the
22 right-hand column near the top (reading):

23 "With water scarcity has come the awareness
24 that problems are less amenable to traditional
25 engineering solutions, and that attempts at

1 dramatic, simple solutions may intensify the risk of
2 unexpected, if not catastrophic, consequences.
3 Simultaneous attention to a portfolio that includes
4 actions like addressing overuse and mis-use of
5 water, and improving groundwater management and
6 storage, should accompany any necessary water
7 infrastructure adjustments."

8 So are any of those things addressing overuse,
9 and misuse, and improving groundwater management, and
10 improving storage a part of the California WaterFix?

11 WITNESS LEAHIGH: Well, certainly the storage
12 component. As I indicated, the current storage south of
13 the Delta are being -- capacities are underutilized
14 because of the conveyance constraint.

15 So, to the extent that the California WaterFix
16 is able to free up some of that constraint, it would
17 allow us to more fully utilize the existing storages that
18 are available south of the Delta to improve the overall
19 water management capabilities of the system.

20 MR. BRODSKY: So you don't agree that
21 additional storage is needed to improve -- improve the
22 ability of the Project to meet the coequal goals of
23 taking pressure off the Delta and improving water supply
24 reliability.

25 WITNESS LEAHIGH: I don't think it's necessary,

1 no --

2 MR. BRODSKY: Okay.

3 WITNESS LEAHIGH: -- to be able to improve.

4 MR. BRODSKY: Okay. I'd like to go to
5 Number 17 on the thumb drive.

6 (Document displayed on screen.)

7 MR. BRODSKY: And if we could just scroll down
8 a little bit.

9 (Scrolling down document.)

10 MR. BRODSKY: And this document is produced by
11 the Delta Stewardship Council. It was adopted by the
12 Council, "19 Principles for Water Conveyance in the
13 Delta."

14 CO-HEARING OFFICER DODUC: And this will now be
15 SCDA-8.

16 (Save the California Delta Alliance
17 Exhibit 8 marked for identification)

18 MR. BRODSKY: And I'd like to read from midway
19 down the first paragraph. It says (reading):

20 "New Delta conveyance infrastructure by itself
21 does not create any new supplies of water.
22 Improvements to conveyance and increases in storage
23 capacity must be considered as an independent part
24 of the system -- interdependent parts of a system
25 and be operated in a way that maximizes benefits for

1 each of the coequal goals of providing a more
2 reliable water supply for California and protecting,
3 restoring, and enhancing the Delta ecosystem."

4 So you do not agree that increases in storage
5 capacity must be implemented to achieve the coequal
6 goals? Do you disagree with the Delta Stewardship
7 Council?

8 WITNESS LEAHIGH: That part of the statement,
9 yes, I do disagree with. I don't think there can be
10 additional developed water supply as a result of just the
11 California WaterFix without -- It could be independent of
12 any increase in storage South-of-Delta.

13 MR. BRODSKY: Okay. Feel free to disagree.

14 All right. I'd like to turn to another subject
15 and go to SWRCB-25.

16 (Document displayed on screen.)

17 MR. BRODSKY: Okay. So this is the 2010 Flow
18 Criteria Report.

19 And let me say at the outset that the report
20 proposes flows for the Delta that would be all the water
21 that the fish would want if the wish had all their wishes
22 and does not take account of beneficial use.

23 Is that your understanding of what this report
24 is about?

25 WITNESS LEAHIGH: Roughly, that is my

1 understanding as well.

2 MR. BRODSKY: Beg your pardon?

3 WITNESS LEAHIGH: Roughly, that is my
4 understanding as well.

5 MR. BRODSKY: And it proposes, on Page 5 here
6 (reading):

7 "75 % of unimpaired Delta outflow from January
8 through June."

9 (Document displayed on screen.)

10 CO-HEARING OFFICER DODUC: I think "proposed"
11 is probably not the correct terminology.

12 MR. BRODSKY: It . . . It states a criteria of
13 (reading):

14 "75 % of unimpaired Delta outflow from January
15 through June."

16 That's on Page 5.

17 (Scrolling down document.)

18 MR. BRODSKY: Right there.

19 And is that correct? Am I reading that
20 correctly?

21 WITNESS LEAHIGH: Are you talking about the
22 first bullet there under 3?

23 MR. BRODSKY: Yes.

24 WITNESS LEAHIGH: Yes.

25 MR. BRODSKY: Okay. And then if we could go

1 back to the -- the slide on Page 10 of DWR-1.

2 (Document displayed on screen.)

3 MR. BRODSKY: And it's your opinion that that
4 criteria is not practical to achieve with CWF and also to
5 meet reasonable beneficial uses; is that correct?

6 CO-HEARING OFFICER DODUC: And by "that
7 criteria," you meant the 75 percent --

8 MR. BRODSKY: Yes, the 75 percent.

9 WITNESS LEAHIGH: I'm sorry. Can you repeat
10 the question?

11 MR. BRODSKY: Is it your opinion that meeting
12 that 75 percent of unimpaired flow as Delta outflow is
13 not practical to meet with CWF and also have the ability
14 to meet beneficial uses?

15 WITNESS LEAHIGH: I think that we probably
16 would not be able to meet all the objectives of the
17 Project by adhering to a 75 percent.

18 MR. BRODSKY: And on this slide here, we see
19 Alternative 8, which is just to the right of Boundary 2,
20 which is Alt -- Alternative 8 is a higher outflow
21 scenario than what is being analyzed in these
22 proceedings; is that correct?

23 WITNESS LEAHIGH: Yeah. I think generally that
24 is the case, yeah.

25 MR. BRODSKY: Okay. And Alternative 8 was

1 based on suggestions of the State Water Resources Control
2 Board that aren't quite as high in outflow as the 2010
3 Flow Criteria Report, 75 percent of unimpaired flow, but
4 Alternative 8 heads in that -- heads in that direction
5 more than -- more than WaterFix is proposing.

6 Is that your understanding?

7 WITNESS LEAHIGH: That's my general
8 understanding, yes.

9 MR. BRODSKY: Okay.

10 CO-HEARING OFFICER DODUC: And let's be clear:
11 That was suggestions by Board staff.

12 MR. BRODSKY: Thank you.

13 Would additional storage capacity in the system
14 give the SWP and the CVP more of an ability to operate
15 towards Alternative 8 and towards the 75 percent of
16 unimpaired flow?

17 WITNESS LEAHIGH: I don't -- I don't think so.

18 MR. BRODSKY: Okay. Let's go to --

19 WITNESS LEAHIGH: But I haven't analyzed it, so
20 that's just my off-the-cuff response.

21 MR. BRODSKY: Well, do -- do you know? I mean,
22 "I don't know" is a perfectly fine answer.

23 WITNESS LEAHIGH: I think it's doubtful that --
24 Well, I'll go with I don't know.

25 MR. BRODSKY: Okay. Thank you.

1 Let's go to Number 19 on the thumb drive.

2 (Document displayed on screen.)

3 MR. BRODSKY: Okay. And then if we could
4 scroll down.

5 (Scrolling down document.)

6 CO-HEARING OFFICER DODUC: And 19 is now
7 SCDA-8.

8 MS. RIDDLE: Nine, I think.

9 CO-HEARING OFFICER DODUC: No?

10 MS. HEINRICH: Nine.

11 CO-HEARING OFFICER DODUC: It's nine? Okay.

12 (Save the California Delta
13 Alliance's Exhibit 9 marked for
14 identification)

15 MR. BRODSKY: Let's go to Page 3.

16 (Document displayed on screen.)

17 MR. BRODSKY: Okay. So this -- this is a chart
18 that was prepared by the Delta Science Program for the
19 Delta Stewardship Council and was presented by the lead
20 scientist at the Delta Stewardship Council's
21 January 27-28th, 2011, meeting.

22 And the -- If we could just scroll up just a
23 little bit.

24 (Scrolling up document.)

25 MR. BRODSKY: There.

1 So the top graph is showing total inflow, and
2 maybe if we can just scroll down a little bit so the
3 witness can see the top graph.

4 (Scrolling down document.)

5 MR. BRODSKY: And that graph is representing
6 that inflow comes in large spikes; in other words, we
7 have brief periods of very high flow and then we return
8 to a lower flow.

9 Is that -- my interpretation of that graph
10 correct?

11 WITNESS LEAHIGH: Yes.

12 MR. BRODSKY: And is that generally your
13 understanding of the way the hydrology in our region
14 works?

15 WITNESS LEAHIGH: Yes, that's -- that's
16 generally the case.

17 MR. BRODSKY: Okay. And then if we could
18 scroll up so we can see the bottom half of the graph.

19 (Scrolling up document.)

20 MR. BRODSKY: So that's showing, over that
21 historical period from 1990 to 2000, that 25 percent of
22 total inflow into the Delta was 64 million acre-feet and
23 that the actual exports during that period were
24 47 million acre-feet.

25 Is that your understanding of what the graph

1 depicts?

2 WITNESS LEAHIGH: So it says 25 percent if the
3 inflow is 64,000 -- 64 million acre-feet.

4 Yes, okay.

5 MR. BRODSKY: Okay. And so what that graph is
6 showing is that 25 percent of inflow is actually
7 substantially more than was actually exported.

8 WITNESS LEAHIGH: That's what it shows. That's
9 what it states.

10 MR. BRODSKY: Right.

11 And isn't it true that the reason we can't meet
12 a 75 percent outflow requirement is because our flows
13 come at a very high velocity for short periods of time
14 and we don't have the capacity to capture and convey --
15 capture, convey and store that water?

16 WITNESS LEAHIGH: Yeah. The current -- So the
17 current issue is, typically, we wouldn't have a physical
18 capacity to convey some of these high flows, these flashy
19 events, and that fits right into the example from this
20 year.

21 MR. BRODSKY: And wouldn't we need the storage,
22 also, though -- additional storage to stay -- If we were
23 to stay with 75 percent outflow as that graph depicts,
24 there's enough water in the system to meet export needs
25 and maintain 75 percent outflow. Wouldn't we need more

1 storage to be able to do that --

2 MR. BERLINER: Object --

3 MR. BRODSKY: -- or I think you answered you
4 didn't know.

5 WITNESS LEAHIGH: Well, no, I --

6 MR. BERLINER: -- that assumes a number of
7 facts not in evidence.

8 CO-HEARING OFFICER DODUC: Well, let's let
9 Mr. Leahigh answer to the best of his ability.

10 WITNESS LEAHIGH: Well, I think my -- No. My
11 answer was that there is a significant amount of unused
12 storage capacities South-of-Delta, and so that would not
13 be the immediate limitation -- physical limitation.

14 The current limitation is the conveyance to
15 pick up these excess flows, and that's what the WaterFix
16 Project is trying to get at.

17 MR. BRODSKY: Okay. Let me -- Let me turn to
18 another subject.

19 And maybe I'm not understanding you correctly.
20 I just want to verify if you testified in a number of
21 places that you'd continue to be able to meet D-1641.

22 WITNESS LEAHIGH: That's correct.

23 MR. BRODSKY: And is it your testimony that
24 meeting D-1641, then, would establish that there's no
25 injury to legal users of water?

1 WITNESS LEAHIGH: As it relates to my
2 testimony, that was -- that's how I reached that
3 conclusion, yes.

4 MR. BRODSKY: Okay. I'd like to turn to the --
5 the flash drive, and the two lower documents, there are
6 two letters: 2000 -- 3/19/2004. If we could open that
7 letter first.

8 (Document displayed on screen.)

9 MR. BRODSKY: And this is a letter from State
10 Water Resources Control Board to U.S. Bureau of
11 Reclamation and Department of Water Resources, dated
12 March 19th, 2004.

13 And if we could go to Page 2.

14 (Document displayed on screen.)

15 MR. BRODSKY: The bottom paragraph on that
16 page.

17 (Document displayed on screen.)

18 MR. BRODSKY: Yeah. And it says (reading):

19 "The significant degradation may occur in the
20 absence of violations of water quality objectives in
21 cases where the degradation impairs a senior water
22 right of water of a usable quality."

23 Doesn't that say that meeting D-1641 -- Doesn't
24 that -- Doesn't that -- Don't you understand that to mean
25 that meeting D-1641 does not necessarily equate with

1 absence of injury to a legal user?

2 Or if you don't know, you can answer you don't
3 know.

4 WITNESS LEAHIGH: Well, this was an argument
5 from Contra Costa Water District.

6 MR. BRODSKY: But this is -- The letter is from
7 State Water Resources Control Board staff, Victoria
8 Whitney, Division Chief, and it's her testimony.

9 MR. MIZELL: I'm going to object as
10 speculative.

11 The question is asking the witness to speculate
12 as to what's in a State Water Board staff member's mind
13 when they wrote a sentence about a legal conclusion they
14 wrote.

15 CO-HEARING OFFICER DODUC: And Mr. Leahigh can
16 answer that he does not know.

17 WITNESS LEAHIGH: Yeah. I don't know the
18 specifics on what the conclusions were here.

19 MR. BRODSKY: Okay. Is it true that you don't
20 know that meeting D-1641 necessarily equates to no injury
21 to legal users of water?

22 MR. BERLINER: Objection: Asked and answered.

23 WITNESS LEAHIGH: Well, I testified as to what
24 the basis was for my statement in that regard, but I'm
25 not the legal expert, so I'll just leave it at that.

1 MR. BRODSKY: Okay.

2 MS. RIDDLE: I'm not sure we marked this for
3 identification. It would be SWRC-10 (sic).

4 CO-HEARING OFFICER MARCUS: Yes, it would.

5 MS. RIDDLE: I mean SCDA-10.

6 (Save the California Delta
7 Alliance's Exhibit 10 marked for
8 identification)

9 MR. BRODSKY: I'd like to go back to DWR-1,
10 Page 10.

11 (Document displayed on screen.)

12 MR. BRODSKY: As far as the feasibility of
13 conditions that might be attached to a Permit, we've got
14 Alternative 8 there at the high -- high outflow end.

15 If conditions were imposed that required you to
16 Reach Alternative 8 over time -- not immediately, but
17 let's say over 20 years -- would that be something that
18 would be feasible to implement?

19 MR. BERLINER: Objection: Calls for
20 speculation.

21 CO-HEARING OFFICER DODUC: And Mr. Leahigh may
22 answer that he does not know.

23 WITNESS LEAHIGH: Yeah, I -- I don't know. I
24 don't know whether it would be feasible. That would be a
25 policy call.

1 MR. BRODSKY: What about operationally
2 feasible? What would be the restriction?

3 You operate the Projects, and I've asked you a
4 number of times if additional storage would allow for
5 more flexibility and you've answered no, and so I'm
6 asking you:

7 Alternative 8 is a much higher outflow
8 scenario. If there were additional infrastructure, in
9 other words, if the Board imposed a requirement that
10 you've got to get these higher outflow standards over
11 time and that might force you to build additional
12 infrastructure over time, can you see -- can you conceive
13 of a way that it would be feasible to get there?

14 WITNESS LEAHIGH: I can't answer that question.

15 MR. BRODSKY: Okay. All right. I'd like to
16 ask the climatologist a couple of questions, if I could.

17 CO-HEARING OFFICER DODUC: You're on,
18 Mr. Anderson.

19 WITNESS ANDERSON: Yeah.

20 MR. BRODSKY: So, are you familiar with a
21 discipline of recent origin called Extreme Event
22 Attribution?

23 WITNESS ANDERSON: I'm generally familiar with
24 it.

25 MR. BRODSKY: Okay. And so Extreme Event

1 Attribution is trying to figure out if a particular
2 weather occurrence, like a drought, is linked to climate
3 change or is just something that happened on its own.

4 Is that roughly correct?

5 WITNESS ANDERSON: Roughly.

6 MR. BRODSKY: Okay. And so have you studied
7 whether the recent drought is linked to climate change or
8 not?

9 WITNESS ANDERSON: Not myself directly, no.

10 MR. BRODSKY: Okay. Do you have any opinion as
11 to whether the recent drought is an aberration or that
12 those -- those sorts of droughts are more likely to occur
13 in the future because of climate change than they have
14 been in the past?

15 WITNESS ANDERSON: I think climate change has
16 the opportunity to . . . change what is a plausible
17 evolution of a water-year outcome. So what -- You know,
18 whether it may occur in that arena with warming
19 temperatures, you change the dynamics of the atmosphere,
20 and so it could plausibly have an impact there.

21 MR. BRODSKY: And it might make these kind of
22 droughts more likely? Yes or no?

23 WITNESS ANDERSON: If that's the conclusion you
24 come to. Whether or not they're more frequent or not
25 depends on what aspect of the drought you're trying to

1 drive at.

2 MR. BRODSKY: Well, I'm just trying to find out
3 if these kind of -- I mean, we had a severe drought. I'm
4 just trying to find out if you --

5 WITNESS ANDERSON: We had an atmospheric
6 drought in '77 as well.

7 MR. BRODSKY: So I'm asking your opinion:

8 Is it likely those kind of things are going to
9 recur more frequently in the future? Is it more likely
10 or not?

11 WITNESS ANDERSON: I don't think there's
12 sufficient information to make that statement.

13 MR. BRODSKY: So you don't have information one
14 way or another on it.

15 WITNESS ANDERSON: My opinion is --

16 MR. BERLINER: Objection: Misstates --

17 WITNESS ANDERSON: -- I do not think there's
18 sufficient information to make that statement.

19 MR. BRODSKY: Okay.

20 WITNESS ANDERSON: My statement would be purely
21 speculative. You do not have scientific backing to --

22 MR. BRODSKY: I wasn't suggesting that --

23 CO-HEARING OFFICER DODUC: All right. Next
24 question, Mr. Brodsky.

25 MR. BRODSKY: All right. Are you -- Are you

1 aware with the Precautionary Principle?

2 WITNESS ANDERSON: No, I'm not.

3 MR. BRODSKY: Okay. The Precautionary
4 Principle is essentially that if some action might cause
5 environmental harm, until it's proven that it won't cause
6 the harm, we won't engage in the action.

7 And it was suggested --

8 MR. BERLINER: Objection: There's no consensus
9 on that definition.

10 That might be Mr. Brodsky's definition, which
11 is fine if you want to ask your question on your own
12 definition.

13 But to suggest that this is a universal
14 definition without any foundation is improper.

15 MR. BRODSKY: Okay. Let me --

16 CO-HEARING OFFICER DODUC: Your question,
17 Mr. Brodsky?

18 MR. BRODSKY: Let me ask it:

19 Applying extreme caution, would it be prudent
20 to allow for the fact that droughts may become more
21 frequent or more intense in the future?

22 WITNESS ANDERSON: I think it's prudent to be
23 able to manage different volumes of water over different
24 time periods to the extent that we understand which
25 extremes may occur and how we might manage through those

1 extremes.

2 MR. BRODSKY: But you didn't answer my question
3 about making assumption about droughts, though, at all.

4 WITNESS ANDERSON: Well, drought is a dry
5 extreme, and then you're managing a small volume of
6 water. But within that smaller volume of water, you may
7 have outflows of a large volume of water.

8 So it depends again. You're asking about
9 drought as a general construct, not as a specific facet,
10 be it the lack of snowpack, which changes the timing,
11 versus within that water year having an atmospheric event
12 which provides excess flow over a shorter time period.

13 We've seen both of those in this past drought,
14 and there's no reason to believe that pattern might not
15 continue in the future.

16 That part, we do understand.

17 MR. BRODSKY: Okay. All right. Let . . .

18 (Timer rings.)

19 MR. BRODSKY: Can I take just maybe three more
20 minutes?

21 CO-HEARING OFFICER DODUC: Okay.

22 MR. BRODSKY: So, blue-green algae has been a
23 problem in the -- in the Delta this summer. And I'm
24 going to read you from the Discovery Bay Press an article
25 about blue-green algae.

1 CO-HEARING OFFICER DODUC: So is that going to
2 be SCDA-11?

3 (Save the California Delta
4 Alliance's Exhibit 11 marked for
5 identification)

6 MR. BRODSKY: And it says (reading):

7 "There are several reasons the algae is so bad
8 in the Delta this year, including low rainfall over
9 the last four years, several weeks of temperatures
10 hitting more than 100 degrees, light winds and
11 excess nutrients in the water . . ."

12 So the part about temperatures hitting more
13 than 100 degrees, is that something that's more likely to
14 happen in the future than it's been in the past due to
15 climate change?

16 WITNESS ANDERSON: It's possible, yes.

17 MR. BRODSKY: Is it likely?

18 WITNESS ANDERSON: It would be an expectation.
19 You know, "likely," to me, you would attach a certain
20 probability to.

21 To me, that's hard to say because I haven't
22 looked specifically at the Delta's history of reaching
23 100 degrees in the summer and looking at the Delta in the
24 future.

25 MR. BRODSKY: My understanding of the way

1 climate change is, that we have -- there's global
2 warming, that temperatures are expected to increase in
3 the future.

4 WITNESS ANDERSON: Warming on average.

5 MR. BRODSKY: Okay.

6 WITNESS ANDERSON: So -- Okay. So, obviously,
7 you're averaging over a year and with the climate models
8 are averaging over a 30-year period.

9 MR. BRODSKY: So --

10 WITNESS ANDERSON: So, if you're looking at an
11 individual average, in a year, you have warming both in
12 the different seasons, and you have warming from the
13 standpoint of low temperatures not being as low as they
14 were, as well as some highs being higher than they were.

15 MR. BRODSKY: Would it be reason --

16 WITNESS LEAHIGH: The stronger signal has been
17 in the lows.

18 MR. BRODSKY: Well, for planning purposes,
19 would it be reasonable to assume that we're going to have
20 more hundred-degree days in the summer than we have in
21 the past going forward over the next 10, 20 years?

22 WITNESS ANDERSON: I think it would be prudent
23 to look at projections and see what they say.

24 MR. BRODSKY: You don't have any opinion as to
25 whether -- whether --

1 WITNESS ANDERSON: You're saying whether,
2 without being able to look at projections and determining
3 whether or not that threshold is met more frequently,
4 would I have an opinion that that should be considered?

5 My opinion is that you should use the science
6 to inform that decision.

7 MR. BRODSKY: But you don't have any opinion as
8 to whether that threshold is more likely to be --

9 WITNESS ANDERSON: I have not looked at that
10 specific issue.

11 MR. BRODSKY: So you don't know.

12 WITNESS ANDERSON: Correct.

13 MR. BRODSKY: And you represent yourself to be
14 a climatologist, and you have no opinion about whether
15 we're going to have more hot days because of climate
16 change.

17 WITNESS ANDERSON: No. You gave a specific
18 threshold, sir.

19 MR. BRODSKY: Do you -- Do you have any --

20 CO-HEARING OFFICER DODUC: Okay. All right.
21 Mr. Brodsky, wrap this up.

22 MR. BRODSKY: Okay. That will conclude my
23 questions.

24 Thank you, Madam Chair.

25 CO-HEARING OFFICER DODUC: Thank you.

1 Mr. Jackson, you're up next. And you tempted
2 me earlier with the notion that you'll have a short
3 cross-examination.

4 How long do you think you'll need?

5 MR. JACKSON: Well, first, I'm going to do the
6 majority of it, and -- and my colleague is going to do a
7 specific part.

8 CO-HEARING OFFICER DODUC: Okay. I'm only
9 asking for planning purposes. I need to give the court
10 reporter a break.

11 MR. JACKSON: Yeah. I -- I think it will be --
12 I have three clients. Instead of three hours, I'm asking
13 for one.

14 CO-HEARING OFFICER DODUC: Okay. So if
15 Mr. Jackson is one hour, then, let's just take our
16 15-minute break now because I don't want to break us up
17 later.

18 So, let's resume at . . . 2:40.

19 (Recess taken at 2:24 p.m.)

20 (Proceedings resumed at 2:40 p.m.)

21 CO-HEARING OFFICER DODUC: (Banging gavel.)

22 All right. It is 2:40 and we are back in
23 session.

24 I'd like to have the witnesses back up here.

25 Mr. Jackson, please begin.

1 MR. MIZELL: Thank you.

2 CROSS-EXAMINATION BY

3 MR. JACKSON: I'm going to start with
4 Mr. Milligan, if I could.

5 Mr. Milligan, you had a chance to review the
6 testimony of Mr. Leahigh?

7 WITNESS MILLIGAN: Yes.

8 MR. JACKSON: So some of the questions I'm
9 going to ask you come from his testimony.

10 WITNESS MILLIGAN: Okay.

11 MR. JACKSON: All right. And could we put up
12 the testimony for DWR-61, Mr. Leahigh's testimony.

13 (Document displayed on screen.)

14 MR. JACKSON: And go to Part II or -- excuse
15 me -- Page 10, top of the page.

16 (Document displayed on screen.)

17 MR. JACKSON: I have a different Page 2,
18 evidently.

19 Go to the first page.

20 (Document displayed on screen.)

21 MR. JACKSON: And now Line 1 through Line 6,
22 which I have on Page 2 of the testimony.

23 (Document displayed on screen.)

24 MR. JACKSON: When Mr. Leahigh says his
25 responsibilities include working with United States

1 Bureau of Reclamation to coordinate operations with the
2 Central Valley Project, that's essentially -- that's the
3 two of you and your staffs in the Ops Offices for the
4 various Projects?

5 WITNESS MILLIGAN: Yes. We're both collocated
6 at the Joint Operations Center so --

7 MR. JACKSON: All right. So you're actually
8 all working together in one space.

9 WITNESS MILLIGAN: Correct. We're both on the
10 third floor of the Center.

11 MR. JACKSON: I've heard the word "knobs"
12 mentioned in operations. Are you familiar with that
13 concept?

14 WITNESS MILLIGAN: Well, I've heard folks use
15 the term. I think I know the context in which they use
16 it. I -- And it's a day-to-day matter. We don't think
17 of it in that way, but I think I can relate to what
18 you're talking about.

19 MR. JACKSON: All right. So assume that it's a
20 lay person that's asking these questions.

21 Do -- Do knobs include both storage facilities
22 and operational infrastructure?

23 WITNESS MILLIGAN: I guess I would call storage
24 facilities the operational structure. But I think they
25 may be release of water at a reservoir or a dam,

1 potentially pumping diversions in the Delta, maybe
2 something like the Cross Channel Gate operation. Some
3 may even take that to mean close coordination with other
4 diverters on the river, coordination with other Operators
5 on other basins, perhaps.

6 MR. JACKSON: A suite of options in order to
7 try to operate the systems as -- as best you can.

8 WITNESS MILLIGAN: Yeah. Usually with, in this
9 context, using infrastructure that's currently in place,
10 not let's do a planning study, but -- or some other kind
11 of research study. Who can we call that might be able to
12 effectuate some change that's needed at that moment?

13 MR. JACKSON: Is Trinity Reservoir one of your
14 knobs?

15 WITNESS MILLIGAN: I'll say it's one of our
16 facilities, yes.

17 MR. JACKSON: All right. Is -- Is some of the
18 water that is later re-diverted in the Delta under the
19 existing system, does it originate in Trinity Reservoir
20 first?

21 WITNESS MILLIGAN: I would say yes, most likely
22 some molecule of water that was developed under our
23 storage rights at Trinity could find its way into
24 re-diversion in the Delta.

25 MR. JACKSON: There's been a substantial amount

1 of discussion in regard to BiOps.

2 And by that, usually people have meant the
3 2008-2009 BiOps of the National Marine Fisheries Service
4 and the United States Fish & Wildlife Service as it
5 relates to Sacramento River listed critters; correct?

6 WITNESS MILLIGAN: I think I know what you
7 mean. The Fisheries Biological Opinion in 2009, U.S.
8 Fish & Wildlife Service Biological Opinion in 2008. And
9 they cover a range, particularly Fisheries cover a range
10 of species.

11 MR. JACKSON: And what --

12 WITNESS MILLIGAN: Some of those are in Sac
13 River, some on the American, some of the Stanislaus;
14 obviously, the Delta as well.

15 MR. JACKSON: And without getting into amounts
16 of water for fish, because that's Part II, they are --
17 they do operate -- they are beneficial uses and they do
18 operate as constraints in terms of water management;
19 don't they?

20 WITNESS MILLIGAN: Some could look at them as
21 constraints. They certainly are considerations in the
22 day-to-day operation and may necessitate, say, different
23 strategy to be able to meet multiple goals.

24 MR. JACKSON: Calling your attention first to
25 the Trinity River.

1 Are there constraints on the Trinity River that
2 determine how much water can be diverted out of the
3 Trinity system into the Sacramento system?

4 WITNESS LEAHIGH: There are constraints.
5 Obviously, the size of the diversion tunnel from that
6 Trinity Basin to Sacramento would be a constraint. Then
7 there are also the diversions like temperature management
8 and storage considerations and operations to the Trinity
9 River Restoration Program, as an example.

10 MR. JACKSON: And it's my understanding that
11 recently there has been a -- a request for reconsultation
12 in regard to the Trinity River Coho as well as a request
13 for reconsultation in regard to the Sacramento fish.

14 WITNESS MILLIGAN: Our recent -- Whether
15 they're request for reconsultation, we usually -- we
16 consult on the CVP as a whole, and we've done this in
17 conjunction with the State Water Project as a whole, so
18 two Projects integrated in that sense across the whole
19 part of the Project.

20 So, we have not asked for reconsultation for
21 just a particular river, or Reach of river, or part of
22 the Project of the CVP.

23 MR. JACKSON: And there's a Record of Decision
24 that limits the amount of water you can take from the
25 Trinity system into the Sacramento system, depending on

1 the water year; is that correct?

2 WITNESS MILLIGAN: I -- I'm mildly familiar
3 with the Record of Decision for the Trinity River program
4 does not necessarily do that. It doesn't talk about --
5 It doesn't dictate the amount of water in the spring that
6 would be dedicated to releases from management of the
7 program on the Trinity River. And there's a -- there's a
8 goal of a quantity -- you know, percentage of water that
9 would be re-diverted out of the basin.

10 MR. JACKSON: Over the last 20 years, has the
11 number that -- the amount of water that is diverted out
12 of the basin been going up or down?

13 WITNESS MILLIGAN: I don't have -- Or I'm not
14 aware of a specific analysis of that, but it tends to be
15 in drier years that the percentage is -- is higher, and a
16 lot of that has to do with planning as it relates to,
17 particularly, temperature considerations on both Clear
18 Creek in the Sac -- to the Sacramento River and anything
19 from Whiskeytown, as well as cold water consideration on
20 the mainstream Sacramento.

21 MR. JACKSON: Have you -- Have you determined
22 whether or not the water coming from the Trinity River
23 through Whiskeytown and through the Carter Tunnel is a
24 higher temperature than what's released from Keswick or a
25 lower temperature?

1 WITNESS MILLIGAN: My experience is it depends
2 on the time of the year.

3 MR. JACKSON: I'm thinking of September,
4 October.

5 WITNESS LEAHIGH: Later in the season, it's
6 probably many times as warm than our objective would be.
7 But the time of the dynamics within Whiskeytown are of a
8 consideration as well as warming all the way up to
9 Lewiston Reservoir, just downstream of the Trinity Lake.

10 MR. JACKSON: Right. For legal water users on
11 the Trinity system downstream of Lewiston, would the
12 California WaterFix projected operation H3 take more
13 water or less water from the water users on the Trinity?

14 WITNESS MILLIGAN: To my recollection -- It's
15 been a little while since I've looked at some of the
16 modeling results of this particular question -- is that
17 the flows and carryover storage as it relates to the
18 Trinity would be very similar.

19 MR. JACKSON: What is the carryover storage on
20 the Trinity?

21 WITNESS MILLIGAN: What does that term mean, or
22 a numeric number?

23 MR. JACKSON: No, a numeric number.

24 WITNESS MILLIGAN: There's not a hard-and-fast
25 number so it obviously varies by year. I think the

1 modeling output, we've seen some of these exceedance
2 plots. Through the 80-year simulation from CalSim, it
3 ranges from a very low number to what would be higher.
4 So it would give a range of what the carryover would be
5 because there's no hard-and-fast number.

6 MR. JACKSON: No criteria you need to meet.

7 WITNESS MILLIGAN: That is correct.

8 MR. JACKSON: So, using that as an example, and
9 trying to go quickly, do you have -- do you have a firm
10 carryover storage number in Shasta?

11 WITNESS MILLIGAN: There are -- I would say no,
12 but there are some levels that are identified in the RPA
13 for Shasta. That's about targets and projections going
14 towards that, and if you're going to be below that
15 particular target, then what types of actions should be
16 taken to help conserve storage.

17 MR. JACKSON: Do you have a carry -- a firm
18 carryover story -- storage number in Folsom?

19 WITNESS MILLIGAN: No, we do not.

20 MR. JACKSON: Do you have a firm carryover
21 storage number in New Melones?

22 WITNESS MILLIGAN: No.

23 MR. JACKSON: Do you have a firm carryover
24 storage number in Millerton?

25 WITNESS MILLIGAN: No.

1 MR. JACKSON: If you -- Why -- Why don't you
2 have carryover storage numbers for operational purposes
3 in your reservoirs?

4 MR. BERLINER: Objection: Relevance.

5 CO-HEARING OFFICER DODUC: Actually, I want to
6 know the answer to that.

7 Mr. Milligan.

8 WITNESS MILLIGAN: Well, we do not have a firm
9 number at any of these reservoirs. We do have, and let's
10 say starting -- let's say a starting point of a kind of
11 average year. We've had average runoff. There are some
12 ideas of where we'd like to be, but to have a firm number
13 at a particular point could preclude us to respond to any
14 of a number of unforeseen circumstances, prolonged
15 drought.

16 Again some questions some folks ask was, let's
17 say summertime levee failure in the Delta, that you may
18 need to make a release of substantial volumes of water
19 that could affect a carryover number.

20 So, obviously, it's not our rule of thumb to go
21 down to dead pool. And all these reservoirs -- I guess
22 dead pool would be a managing number because you just
23 couldn't get the water out of the reservoirs.

24 But, intuitively, there's a range of places
25 where we think would be the appropriate carryover,

1 balancing out of storage amongst the reservoirs.

2 A lot of things go into that. Refill potential
3 comes into play. Relative fullness of the various
4 reservoirs at a particular time. Also, how can you pinch
5 the balance as your water year goes forward?

6 And what are the dynamics of the flood -- the
7 flood management operations you basically have in coming
8 winter.

9 MR. JACKSON: So, without such a number, how
10 will my clients in the Trinity Basin be able to plan
11 their future use of water if the major user on the river
12 either increases or decreases the amount of water going
13 toward the ocean on the Trinity?

14 WITNESS MILLIGAN: I -- I do not know. I'm not
15 sure how they do it today. We don't have such a number
16 today.

17 MR. JACKSON: So, did you examine what would
18 happen on the Trinity to the legal users of water
19 affected by the change from your existing operations,
20 which some of them are not that happy about, to an
21 operation that can move extra water in the Delta?

22 WITNESS MILLIGAN: Well, our examination of --
23 This kind of is a parallel activity to what the potential
24 fishery effects could be.

25 And one of the things that we were looking at

1 is, what are the changes in carryover storage? And the
2 changes in the releases of water from the reservoirs,
3 both in the, quote, no action or, let's say, current
4 condition, which is with the WaterFix facility in place
5 with its associated criteria. We saw very little change
6 in the upstream operations associated.

7 MR. JACKSON: And where would -- where would
8 someone like me find that information for the Trinity?

9 WITNESS MILLIGAN: I think that this was
10 probably in a number of places. The -- In the Draft
11 EIS/EIR material, that type of information was available.
12 I'm not sure if it was in the modeling material that's
13 going to be part of this proceeding. I know that we've
14 seen some of these type of graphs. I don't know if we
15 included the Trinity in that.

16 MR. JACKSON: Well, the -- the . . .

17 For instance, you're talking about some draft
18 environmental documents. Do you know whether it was the
19 BDCP document or the WaterFix environmental document?

20 WITNESS MILLIGAN: I think from a -- And I may
21 be wrong. I'm not the one working on the -- the NEPA
22 part of this for -- for Reclamation.

23 But the lineage of the BDCP document to the
24 WaterFix is kind of the same document with some changes
25 in recirculation. And I don't know what, in terms of the

1 types of plots that were included, as to what's in the
2 recirculated document. My hope is that type of material
3 would be there.

4 MR. JACKSON: Let me -- The Trinity is
5 connected to -- to Shasta; correct? Or it's a casual at
6 least.

7 WITNESS MILLIGAN: You can follow a line from
8 Trinity down to Whiskeytown, town to Keswick, yes.

9 MR. JACKSON: And if I were following that
10 line, the -- At Shasta, how would my clients in that area
11 know whether their legal water rights were going to be
12 affected by the new facility in a circumstance in which
13 you're now operating the water you've received from
14 Trinity and the water you're releasing from Shasta, and I
15 guess under the new plan, your plan is to catch the water
16 out of Stillwater Creek and Cal Creek and Cottonwood
17 Creek and export it from the new facility?

18 WITNESS MILLIGAN: I think there's two
19 questions there.

20 MR. JACKSON: Okay. Take it whatever way you
21 want.

22 WITNESS MILLIGAN: The first part, if I was
23 asked a question by a senior water right converter on the
24 Sacramento River up close to the release point at
25 Keswick, for example.

1 MR. JACKSON: The Anderson-Cottonwood
2 Irrigation District.

3 WITNESS MILLIGAN: Okay. I would say, what I
4 looked at in that regard is what is the carryover in
5 storage and the release pattern of the flows at Keswick
6 and storage at Shasta. I would also have an eye towards
7 what's happening at Trinity.

8 So if we got to a cycle of dry years, and we
9 kind of decreased the amount of storage up in those two
10 reservoirs to the point that you got to Year 4 or 5 in
11 the drop sequence, that all of a sudden we're at a point
12 where we don't have water.

13 And what it appears is that we're not -- the
14 existence of the new conveyance with the associated
15 upgrade criteria does not seem to be aggravating it to
16 the point where it's taking those storage levels down.

17 MR. JACKSON: Well, let's perhaps dig into that
18 a little.

19 The -- With the new facility, their -- folks
20 have talked about the potential of 1.2 million acre-feet
21 of water being an additional export.

22 Have you heard that number?

23 WITNESS MILLIGAN: I've seen a number of
24 1.2 million acre-feet from Mr. Leahigh's presentation of
25 a snapshot of if such a facility operated if the H3

1 criteria was in place this year.

2 MR. JACKSON: All right. And H3 is -- Is one
3 of the ranges of what you're asking for.

4 WITNESS MILLIGAN: Yes. It's within the --
5 It's one of the ends of the primary range where we think
6 this will operate.

7 MR. JACKSON: Thank you very much.

8 That leads me to a question that has been
9 occurring to me regularly through this particular set of
10 questions, which is that you don't have a Drought Plan
11 that would determine how Shasta and Trinity would share
12 in Year 1, 2, 3, 4 and 5; do you?

13 WITNESS MILLIGAN: Could you . . . I think I
14 follow your question, but could you tell me what you mean
15 by "share"?

16 MR. JACKSON: Well, the -- They -- The two
17 facilities in terms of delivering water to the Sacramento
18 River from your northernmost facilities can be -- Your
19 operational flexibility can allow you to juggle which
20 place the water comes from; correct?

21 WITNESS MILLIGAN: To -- To a degree, given
22 some of the constraints we've talked about.

23 MR. JACKSON: Right. And why isn't it possible
24 or feasible for you -- for the Bureau to prepare a -- a
25 plan for droughts about how much water would come out of

1 each of the facilities so that other users in the area
2 would have some way of determining whether the new
3 Project would injure them?

4 WITNESS MILLIGAN: Well, I don't know if it's
5 in the form of a Drought Plan, but I think that's the
6 intent of the EIS/EIR is to show, under range of
7 operations, how the Project -- with the proposed action
8 being the WaterFix -- how those particular facilities
9 would operate and the range of operations that are there.

10 So it's not necessarily a Drought Plan. I
11 think the intent of that type of document is to kind of
12 talk about the array of how things could operate.

13 The difficulty of a Drought Plan -- and I think
14 we've seen this in probably both directions -- is that
15 not all the basins respond kind of in kind up and down.
16 It's not always the same degree of impairment, if you
17 will, within one basin versus the other.

18 So, particularly the Trinity, which has a much
19 higher snow runoff component, element, to its particular
20 flows, which the Shasta, which is much more rain-driven,
21 can have -- find -- We can find ourselves many times with
22 probably an unbalance, if you will, when you get to June,
23 for example, as to the state of how full we are with
24 those two reservoirs.

25 One of the things that we'll do in the course

1 of the season is to try to give them a little more
2 balance as to what the refill potential would be going to
3 the season ahead.

4 MR. JACKSON: But the alternative to a Drought
5 Plan for the reservoirs is a series of TUCPs, sort of
6 emergency actions; isn't it?

7 WITNESS MILLIGAN: I don't know that I would --
8 would say that. I think the Projects certainly are in
9 how we've described how we would operate, particularly
10 within a number of -- We've had a number of opportunities
11 to do that, whether it's a Project Description within our
12 consultation packages or something as to the description
13 of the no action in a year like this, with this type of
14 Project, is trying to capture how we think we would
15 operate through these extended periods. And if we would
16 take that -- tease those out, we could kind of identify
17 what some of the concerns would be.

18 But what I think we've seen in the last couple
19 years, within a drought context, which have been a little
20 outside of some of the modelings that's been presented,
21 is, there's been some conflicting considerations that
22 need some intervention. And some of this is kind of
23 dictated by our Biological Opinion.

24 The fisheries as it relates to Shasta, is that
25 if the combination of storage and temperature capability

1 on the river is at a certain place, then if that happens,
2 start reviewing some other options to kind of help
3 maintain the storage.

4 So, what we've seen, I think, has come in some
5 of our discussions, is that, in fact, a year as dire --
6 the sequence of very dry years that we have had here over
7 the last few years, we've actually seen higher carryover
8 of storages at Shasta than the modeling might have
9 suggested in that we would not have taken Shasta down to
10 the very low levels like the dead pool that some have
11 identified because of intervention and consideration of
12 modified objectives of the Delta and keeping higher
13 storage in the reservoir and try to work with as much
14 cold water as we could.

15 MR. JACKSON: This is, I guess, a hypothetical.

16 Hypothetically, I would have looked at the
17 historical record and determined that 60 percent of the
18 years in the historical record were -- were below normal,
19 dry, and critically dry.

20 Would that surprise you?

21 WITNESS MILLIGAN: In the context of, let's
22 say, Sac Valley, it wouldn't necessarily surprise me.
23 That seems a little high, but that wouldn't necessarily
24 surprise me as an actual descriptor of the water year
25 types.

1 MR. JACKSON: And probably looking back from
2 the third or the fourth year of the drought, in a
3 circumstance like that, wouldn't -- wouldn't it likely
4 occur to me or to you that maybe we let go too much of
5 the water in the first year and the second year not
6 knowing it was a drought?

7 MR. BERLINER: Objection: Relevance.

8 CO-HEARING OFFICER DODUC: Mr. Jackson.

9 MR. JACKSON: Yeah. The relevance of this is
10 that -- and I think it was fairly well established by
11 Mr. Brodsky's cross-examination -- that the -- there are
12 circumstances in the summer when you -- when, if you've
13 got both of these facilities, you can move an awful lot
14 of water out of storage.

15 And I'm trying to figure out how we go about
16 not ending up in an endless set of TUCPs if this thing is
17 built.

18 CO-HEARING OFFICER DODUC: All right. I'll
19 allow that.

20 Please answer.

21 WITNESS MILLIGAN: Could you repeat your
22 question so I make sure I'm answering the right question?

23 MR. JACKSON: Well, I can see you're a great
24 engineer. That stops a lawyer every time.

25 I will attempt to paraphrase my original

1 question.

2 The . . . In terms of -- of -- of looking at
3 the operations both before and -- and with the new
4 facility, Mr. Brodsky showed that with the new facility,
5 on certain times during the summer, you could operate
6 from North Delta Diversion and South Delta Diversion and
7 end up with a higher level of export than you can with
8 the existing facilities only.

9 Wasn't that the -- the -- the result of the
10 colloquy between the two of you?

11 WITNESS MILLIGAN: Well, I didn't -- That was
12 between he and Mr. Leahigh.

13 MR. JACKSON: Oh, I'm sorry. That's true.
14 I'm --

15 WITNESS MILLIGAN: And if we're speaking to the
16 two hand-drawn graphics --

17 MR. JACKSON: Thanks, I am.

18 WITNESS MILLIGAN: -- I didn't get a chance or
19 didn't get to comment on it because I wasn't directly
20 asked.

21 I think his representation of what could be
22 diverted is a bit high in terms of what -- The two years
23 he picked out was the high times in the two August
24 periods he picked out.

25 His analysis -- Or his depiction may have

1 been -- by on one set of criteria could have said you
2 could have taken through the North Delta, but that didn't
3 necessarily comport with actual exports that we had been
4 having to deal with in reality of those particular two
5 years.

6 So there was probably a great deal of overall
7 Delta salinity outflow that probably would have dictated
8 how much could be diverted. And I think that would
9 require a lot more analysis.

10 MR. JACKSON: Well -- And could you point to me
11 where the Petitioners in this -- in this case did that
12 analysis?

13 WITNESS MILLIGAN: No, I can't.

14 MR. JACKSON: So --

15 WITNESS MILLIGAN: Like, this year or last
16 year.

17 MR. JACKSON: So I guess I'm -- I'm left pretty
18 much where Mr. Brodsky seemed to be left, which is, how
19 can I go back and tell my clients whether or not they're
20 going to be harmed by this Project with this level
21 of . . . uncertainty, let's say?

22 WITNESS MILLIGAN: Well, I -- Again, I'll speak
23 to the CVP.

24 CVP with the Project that's currently proposed
25 has no additional capacity at the Jones Pumping Plants or

1 increased capacity within the Delta-Mendota Canal or, for
2 that matter, a larger share of San Luis Reservoir.

3 And many times -- In the wetter sequences of
4 our hydrologic history, many times we've been able to use
5 the previously-stored water in the summertime and fill
6 that capacity, if you will, in the CVP and I don't know
7 if that will change.

8 In the drier sequences, what the modeling is
9 suggesting is that other than the example Mr. Leahigh had
10 shown, which was periods of excess conditions in the
11 Delta, the Project would allow us to better manage the
12 entertainment risk for Delta smelt, so pick up some more
13 of that excess flow which would actually help us in
14 San Luis storage, for example.

15 But it does not seem to be in any of the
16 modeling of the same large opportunities on the CVP to
17 take water out of storage during balanced conditions and
18 really leverage that for water in the south.

19 MR. JACKSON: But throughout the testimony of
20 Mr. Leahigh and -- and you, there has been the -- the
21 assumption that there would -- that the operational
22 flexibility would allow different things in what the
23 models would allow.

24 WITNESS MILLIGAN: I think there's probably two
25 facets to that. One is an operational flexibility of

1 north to south to be able to -- Going back to the
2 formulation of this Project with regard to the diversions
3 in the north and the idea of doing dual conveyance, is
4 the term meaning you maintain your ability to divert in
5 the south as well as the north, and a lot of utility in
6 managing entrainment risk, both the Delta smelt and
7 the -- or the salmon.

8 So that's one degree of flexibility.

9 MR. JACKSON: I would get in trouble if I said
10 that because entrainment risk is Part II.

11 WITNESS MILLIGAN: Probably so but --

12 MR. BERLINER: I'd appreciate the questioner
13 not interrupt the witness while giving an answer.

14 MR. JACKSON: I'm sorry.

15 WITNESS MILLIGAN: I hope I don't get in
16 trouble.

17 That is to say, there's a degree of flexibility
18 from the Project that, from my perspective, is very
19 significant.

20 The other element of flexibility that I think
21 is before us is to balance in the Delta the management of
22 the salinity field at particular times in a way that
23 perhaps the Cross Channel Gate does to a degree, which
24 might be a period of time when we're trying to balance
25 Jersey Point versus Emmaton salinity.

1 There may be -- There have been times where
2 closing the Cross Channel Gate for a period to freshen up
3 Emmaton, for example, might be an appropriate knob, in
4 trying to use that terminology.

5 I think that we might find that the additional
6 flexibility to take some water from the north may afford
7 us an opportunity to not bring salts around the -- the
8 front end of Sherman Island in certain circumstances.

9 So, those are the types of levels of
10 flexibility in the Delta that I find the most effective.

11 Some -- One last thing we haven't talked a lot
12 about is: In an example like Mr. Leahigh showed, where
13 we could have picked up anywhere maybe upwards to a
14 million acre-feet of additional excess flows, that
15 creates less of a tension in -- later in the spring,
16 because you've kind of filled your -- potentially filled
17 a lot of buckets South-of-Delta and that would certainly
18 give us more flexibility timing-wise, I think, to manage
19 through the later part of the spring and early summer.

20 MR. JACKSON: In talking about that point in
21 regard to flexibility, to your knowledge as the
22 Operator -- and you may be the wrong person to ask this
23 question -- do you have a water right that covers these
24 three locations?

25 WITNESS MILLIGAN: The dual intakes?

1 MR. JACKSON: The -- The -- The . . . I
2 believe on the list, it was two, three and five intakes.

3 Does the Bureau have a water right that covers
4 taking water at those points?

5 WITNESS MILLIGAN: This -- A detailed answer
6 probably should be our water rights person.

7 But my understanding is, that's -- in part, our
8 request is to add this explicitly as a point of
9 re-diversion to our Permits at Shasta and Trinity, as
10 examples.

11 To some degree I think that, one is they didn't
12 want to be -- out of an abundance of caution to be very
13 explicit. Probably could say that we might have a --
14 might be able to cover this in some way. But I think we
15 want to be rather up-front about this and be explicit,
16 that would be, like, the heaviest points.

17 A lot of our permits will say re-diver --
18 re-diversion anywhere from Keswick down to Jones Pumping
19 Plant.

20 Well, this is kind of geographically between
21 those points, but we did want to make that clear.

22 MR. JACKSON: And Has this -- Has the Bureau's
23 involvement in this Project been authorized by Congress?

24 MR. BERLINER: Objection: Calls for a legal
25 conclusion.

1 MR. JACKSON: It's a fact.

2 CO-HEARING OFFICER DODUC: He may answer it if
3 he knows or if he doesn't.

4 WITNESS MILLIGAN: My hesitation has been that
5 for -- You know, obviously, there's not been
6 Congressional authorization to help construct or, to the
7 degree, be explicitly a -- an implementer of this.

8 We certainly have authority to evaluate new
9 planning as it relates to such a facility. And then at
10 that point, based on the part of the final EIS, we would
11 then determine whether we want to pursue additional
12 authorization from Congress.

13 MR. JACKSON: All right. But --

14 WITNESS MILLIGAN: That's typically the
15 pattern.

16 MR. JACKSON: To this stage, that part of the
17 process has not taken place --

18 WITNESS MILLIGAN: No.

19 MR. JACKSON: -- for the Bureau.

20 WITNESS MILLIGAN: No.

21 MR. JACKSON: Thanks.

22 Now, calling your attention to the San Joaquin
23 side.

24 How much additional flow do you imagine will be
25 required from the San Joaquin when you take the fresh

1 water out from the Sacramento side before it gets to the
2 Delta channels?

3 WITNESS MILLIGAN: My -- I think you used the
4 term "imagine."

5 My thinking on this is that we would not -- and
6 I'll just speak to New Melones as a point --

7 MR. JACKSON: Or Millerton.

8 WITNESS MILLIGAN: Or Millerton.

9 That we would not change our operations to try
10 to respond to a Delta change, should it occur, based on
11 an operation of this Project; that we would either have
12 to deal with that predominantly with how we're actually
13 operating the Delta.

14 We would not make releases at Millerton or at
15 at New Melones to basically compensate so you could do
16 something differently from the CVP perspective in the
17 Delta.

18 MR. JACKSON: So that would leave you, let's
19 see, no more water in on the San Joaquin side. So that
20 would mean there would be less water out?

21 MR. BERLINER: Objection: Vague and ambiguous.

22 MR. JACKSON: Of the Delta. That would be the
23 knob you would -- you would lessen exports --

24 WITNESS MILLIGAN: If there was --

25 MR. JACKSON: -- to freshen up the --

1 WITNESS MILLIGAN: If there was If there was a
2 time period where -- It's hard to -- This is a
3 hypothetical on what actually is the concern: Is that a
4 Delta outflow object? Is it an X2 objective? Is it an
5 active salinity management for an ag or M&I standard?

6 But I think in terms of sequencing the knobs,
7 modification of the export facility would occur before we
8 would then resort to any -- to make a release from New
9 Melones, as an example. We would reserve New Melones.

10 If the question was salinity in Vernalis, then
11 that's a different story. But if it was kind of the more
12 global Delta salinity that may be managed throughout
13 flow -- pure outflow, then it's either a question of, do
14 you have the flexibility in that particular timeframe to
15 deal with this upstream, or probably make modifications
16 to this.

17 MR. JACKSON: And at this point in the process,
18 we don't know the answers to that.

19 WITNESS MILLIGAN: I think the -- the level of
20 detail we have is that there are some circumstances where
21 the action, I think, in some of the modeling, and what
22 we've conceived operationally, there's going to be times
23 when the exports need to be modified or which intakes
24 you're using needs to be modified.

25 There could be some times where, yeah, you may

1 need to make your -- dedicate a little more of your
2 releases upstream, use of your upstream storage, to get
3 you through a particular time, and then we operate around
4 that later in the season.

5 MR. JACKSON: Could you put up Page 3, Lines 21
6 through 23.

7 (Document displayed on screen.)

8 MR. JACKSON: Mr. Leahigh, you indicate at
9 Line 28 (reading):

10 "Management of net Delta outflow is the
11 fundamental way in which salinity is managed in the
12 system but there are uncontrollable and variable
13 factors outside SWP/CVP control that influence net
14 Delta outflow, including tidal and meteorological
15 effects."

16 How is that this fundamental management of Net
17 Delta Outflow . . . the fundamental way in which you
18 manage salinity?

19 WITNESS LEAHIGH: Well, the fundamental way is
20 that, just in very simplistic terms, the higher the Delta
21 outflow, the lower salinity.

22 But there are definitely nuances to that,
23 depending on what part of the -- part of the year that
24 we're talking about, and how high those flows are.

25 Typically, in the summertime, they're more

1 nuanced as far as the splits between the Lower Sacramento
2 and the Lower San Joaquin Rivers.

3 MR. JACKSON: All right. When you say "the
4 Lower Sacramento," what are you describing?

5 WITNESS LEAHIGH: Yes. The Lower Sacramento,
6 I'm really talking about the objective location at
7 Emmaton.

8 MR. JACKSON: All right. And -- And that
9 location is -- is on the Sacramento River, as you define
10 it?

11 WITNESS LEAHIGH: Yes.

12 MR. JACKSON: And Jersey Point is on the
13 San Joaquin River, as you define it.

14 WITNESS LEAHIGH: Yes, as I defined it and as
15 it's --

16 MR. JACKSON: Right.

17 WITNESS LEAHIGH: -- generally just defined.

18 WITNESS MILLIGAN: It's actually there. If I
19 understand the map, is that Emmaton is on the Sacramento
20 or adjacent to it, and the station at Jersey Point is
21 adjacent to the San Joaquin.

22 MR. JACKSON: Okay. Does the -- Mr. Leahigh,
23 does the -- Does DWR have a facility on the San Joaquin?

24 WITNESS LEAHIGH: We have a facility which is
25 our Clifton Court intake, which does influence the flows

1 on that location of the San Joaquin River that I'm
2 referring to.

3 MR. JACKSON: All right. And that's where the
4 reverse flow problem is?

5 WITNESS LEAHIGH: No. We're talking -- Well,
6 we were talking about Jersey Point, so that's more in the
7 Central Delta. So that's what I'm referencing.

8 MR. JACKSON: All right. So if we could drive
9 water out of the San Joaquin to Jersey Point, Clifton
10 Court would not pull it back?

11 WITNESS LEAHIGH: I'm sorry. Can you repeat
12 the question?

13 MR. JACKSON: Yeah. If -- If there was enough
14 water coming to Jersey Point, we would not need to worry
15 about -- If San Joaquin water made it that far, the
16 operation of Clifton Court in either today's scenario or
17 the CWF scenario for Clifton Court South, we would not
18 need to worry about the water coming back as you pumped?

19 WITNESS LEAHIGH: No. For the -- The concern
20 at Jersey Point is generally if the pumping in the South
21 Delta is -- is so heavy as to start bringing salinity
22 from further west into the Central Delta, and so
23 that's -- that's the piece that we're trying to manage by
24 reducing the diversions at the South Delta.

25 MR. JACKSON: And -- And so, in a C --

1 California WaterFix situation where you're pumping water
2 on the Sacramento, and taking out part of the flow of the
3 Sacramento, it will not increase salinity problems on the
4 Lower San Joaquin?

5 WITNESS LEAHIGH: No, because, just to be
6 clear, I think we're still -- Well, we're still talking
7 about balanced condition operation.

8 So, typically, what we're talking about there
9 is just shifting diversions from the South Delta to the
10 North Delta, so increases on the North Delta Diversion
11 would be offset by decreases at the South Delta Diversion
12 location.

13 MR. JACKSON: But -- But the flow to the -- The
14 hydrodynamics would change; wouldn't it? I mean, there's
15 still water coming through the Cross Channel Gates,
16 Georgiana Slough, Steamboat Slough, and there's less
17 fresh water in the Sacramento River to mix; isn't there?

18 WITNESS LEAHIGH: Yes, that's correct. So --
19 And it -- It depends on the level of pumping. But
20 generally if we're shifting -- if we were having high
21 pumping, shifting some of that pumping to the North Delta
22 away from the South Delta would actually improve salinity
23 conditions at Jersey Point in the Lower San Joaquin.

24 MR. JACKSON: What would it do to salinity
25 situations at the property that CSBA owns in the town of

1 Collinsville?

2 Actually, let me withdraw that.

3 A better way to describe it is, CSBA who owns
4 the land where your Collinsville water quality station's
5 located. And so that's the -- that's the point I'm
6 talking about.

7 WITNESS LEAHIGH: Okay. So that far out . . .

8 Typically in the summer time, this shifting
9 would be fairly neutral by the time you get out to the
10 confluence, so you're shifting the salinity dynamics on
11 the Lower Sacramento River near Emmaton and Lower
12 San Joaquin at Jersey Point.

13 But by the time we typically would be operating
14 to essentially the same Delta outflow, and so
15 Collinsville's EC is more closely linked to the actual
16 Net Delta Outflow. And if that's the same, then they
17 should -- they should pretty much have the same salinity
18 at that location.

19 MR. JACKSON: I have a couple of more questions
20 but I want to make sure Mr. Shutes gets to ask his. May
21 I have him do that and then you can argue with me about
22 whether or not I get to finish?

23 CO-HEARING OFFICER DODUC: Are you with him?

24 MR. JACKSON: Or -- No. I will obey.

25 CO-HEARING OFFICER DODUC: Thank you,

1 Mr. Jackson.

2 Mr. Shutes.

3 CROSS-EXAMINATION BY

4 MR. SHUTES: Thanks very much.

5 I'm Chris Shutes, here representing the
6 California Sportfishing Protection Alliance, and my
7 questions are for Mr. Leahigh.

8 I'd like to ask questions about re-diversion of
9 stored water during balanced conditions. Mr. Cooper
10 asked you a lot of questions about that. We heard some
11 questions about that today.

12 I understood you to tell Mr. Cooper that most
13 of the increased opportunities for re-diversion of stored
14 water during WaterFix would be during wetter years.

15 Do you recall saying that?

16 WITNESS LEAHIGH: Yes, I recall that.

17 MR. SHUTES: Okay. I put together a couple of
18 hydrographs for Oroville storage and a hydrograph for
19 Feather River flow into a short PowerPoint. I marked
20 that as CSPA-101, and I'd like that to be pulled up, the
21 slide 2.

22 (California Sportfishing Protection
23 Alliance's Exhibit 101 marked for
24 identification)

25 MR. SHUTES: I have some -- I have some hard

1 copies here.

2 (Distributing documents.)

3 (Document displayed on screen.)

4 MR. SHUTES: Mr. Leahigh, looking at the
5 hydrograph from CDEC that shows flow at Feather River at
6 Gridley for the time period January 2007 to
7 September 2010, I call your attention to the highlighted
8 section of the figure.

9 That shows flow at the Feather River at Gridley
10 from about . . . February through early July 2010.

11 Do you see that?

12 WITNESS LEAHIGH: Yes, I see that.

13 MR. SHUTES: And you see the flow increase that
14 began on or about July 1st, 2010?

15 WITNESS LEAHIGH: Yeah. It's hard to make out
16 exactly what month that is but somewhere between May and
17 September, yes.

18 MR. SHUTES: So I'd like to ask you:

19 Isn't it possible that DWR would consider
20 exporting more water in June in a year with 2010
21 hydrology if the WaterFix were in place?

22 WITNESS LEAHIGH: Well, we'd have to take a
23 look at the specifics for 2010.

24 2010 wasn't particularly wet, so I think it
25 would probably be doubtful that there would have been an

1 increase. Certainly, seasonally, there would not -- most
2 likely not have been an increase.

3 We'd have to look at a number of factors, and I
4 don't have enough information in front of me.

5 MR. SHUTES: Okay. If storage were low at
6 San Luis Reservoir at that time, wouldn't there be
7 considerable demand for export water before July 1st?

8 WITNESS LEAHIGH: San Luis Reservoir wouldn't.
9 The driver would be upstream, Oroville storage, as far as
10 how much supply we had to work with.

11 We would tailor our deliveries south of the
12 Delta to whatever additional supply on top of the other
13 requirements were available for those -- for those
14 deliveries.

15 MR. SHUTES: Okay. Could we please turn to
16 Slide 4.

17 (Document displayed on screen.)

18 MR. BAKER: Has this been marked for
19 identification?

20 MR. SHUTES: If it hasn't been marked for
21 identification, could we please do so and mark it as
22 CSPA-101.

23 CO-HEARING OFFICER DODUC: I think it's marked
24 so on the first page.

25 MR. SHUTES: It is.

1 CO-HEARING OFFICER DODUC: By the way, thank
2 you for doing that.

3 Just a note to other cross-examiners: If you
4 would please label your exhibit before you give it to the
5 staff, it would be very helpful, with the acronym and the
6 number.

7 Mr. Shutes did a fine example with that.

8 MR. SHUTES: Thanks.

9 MR. BAKER: Just a point of order. This says
10 CSPA-101 and we've been using one, two, three, four,
11 five.

12 MR. SHUTES: I actually did the labeling prior
13 to that sequence and I thought that probably Mr. Jennings
14 would want his to be CSPA-1 so that's why I did it this
15 way.

16 CO-HEARING OFFICER DODUC: That's fine, as long
17 as it's a unique number.

18 MR. SHUTES: So, looking at Slide 4, looking at
19 the storage plot for Oroville Reservoir for September 15,
20 2010, to August 10, 2016, I'd like to call your attention
21 to the Calendar Year 2012 and ask you whether 2012 would
22 appear to be what you would call a wetter year in which
23 you might have considered increasing re-diversion of
24 stored water as you discussed in your previous discussion
25 on -- on cross-examination?

1 WITNESS LEAHIGH: It's difficult to say for
2 sure.

3 We -- One thing I'd want to take a look at is
4 what our actual use of the existing conveyance was.
5 Certainly if we weren't using the existing conveyance, it
6 wouldn't be an expectation. We'd be moving additional
7 water.

8 MR. SHUTES: Okay. And now I call your
9 attention to Calendar Year 2013 on the same slide.

10 Oroville storage dropped about 2 million
11 acre-feet during 2013; isn't that correct?

12 WITNESS LEAHIGH: I'm sorry. It dropped
13 from . . .

14 Sorry. Could you repeat that?

15 MR. SHUTES: Isn't it correct that during Water
16 Year 2013, Oroville storage dropped about 2 million
17 acre-feet?

18 WITNESS LEAHIGH: Well, the difference between
19 the high point and the low point is -- looks to be
20 slightly less than 2 million acre-feet, yes.

21 MR. SHUTES: Okay. Is it fair to say that the
22 Oroville storage went from a good storage condition to
23 one that caused great concern in less than one calendar
24 year?

25 WITNESS LEAHIGH: I wouldn't characterize -- I

1 don't think I'd characterize that -- what looks to be
2 1.25, and that's -- and that looks like that's by the end
3 of December. No, I wouldn't necessarily characterize
4 that as -- as a concerning level.

5 MR. SHUTES: Not concerning at all?

6 WITNESS LEAHIGH: It depends on . . .

7 I'm trying to remember if we had all of our
8 capacities available to us as far as withdrawals from the
9 lake, because we did have an accident that temporarily
10 constrained our capabilities, but I don't think that that
11 was necessarily a concern in that particular year.

12 MR. SHUTES: Could we get back to Slide 3,
13 please.

14 (Document displayed on screen.)

15 MR. SHUTES: So, calling your attention to the
16 year -- Calendar Year 2007.

17 Oroville storage dropped, again, about
18 2 million acre-feet during Calendar Year 2007; is that
19 correct?

20 WITNESS LEAHIGH: Yes. It looks like --
21 right -- slightly less than 2 million acre-feet from high
22 point to low point.

23 MR. SHUTES: So -- Okay. I'd have the same
24 question:

25 Would that be a condition where you would

1 consider it one that would cause DWR great concern?

2 WITNESS LEAHIGH: No, I don't think -- Again,
3 it kind of depends. I don't think I have all the
4 information I need.

5 But, generally, hitting 1.2 million acre-feet
6 by the end of the Calendar Year would not -- would not
7 necessarily be a concern.

8 MR. SHUTES: And even in December of -- of that
9 year, you would not have been concerned.

10 WITNESS LEAHIGH: No.

11 MR. SHUTES: Okay. On Lines 1 through 3 of
12 Page 4, in your testimony, you state, and I won't have
13 her pull it up because we've been through it before
14 (reading):

15 "The SWP/CVP must ensure that higher priority
16 requirements of water system or 'In-Basin
17 Requirements' are met before developing water supply
18 for their respective water supply contractors."

19 Do you remember that?

20 WITNESS LEAHIGH: Yes.

21 MR. SHUTES: As referred to in the sentence, is
22 the time trajectory you say you're ensuring that in-basin
23 requirements are met longer than for the current water
24 year?

25 WITNESS LEAHIGH: Yes, generally that is the

1 case, yes.

2 MR. SHUTES: And -- And how does the time
3 period longer than the current water year factor into
4 your planning and your allocation for the present water
5 year?

6 WITNESS LEAHIGH: Well, typically in all years,
7 as you can see on these graphs, even -- even -- these
8 were -- this was in the middle of a three-year drought --
9 we will typically have additional runoff even in the dry
10 years that causes storage gains. And you can see that in
11 this sequence of -- of dry years.

12 And so we have -- we have good estimates on
13 typically what we would expect to see even under dry
14 years, and so we factor that into carryover storages that
15 we generally are targeting combined with the expectation
16 of additional runoff the following year.

17 And does that match up with our ability to meet
18 those higher priority needs, which is our -- our
19 deliveries to our Settlement Contractors and the D-1641
20 requirements? Our share of those requirements.

21 MR. SHUTES: Okay. You told Mr. Kelly on
22 cross-examination last Thursday that your operational
23 decisions, especially as they relate to storage, depend
24 on what you were comfortable with.

25 Do you recall that?

1 WITNESS LEAHIGH: Something along those lines.

2 MR. SHUTES: Okay. So my question is, if
3 you're comfortable with baseline storage operations for
4 Oroville, why would you not operate to those storage
5 conditions if CWF was in place?

6 WITNESS LEAHIGH: I think that that's my
7 testimony, is that we -- the expectation is that we would
8 be operating to the same storage levels with California
9 WaterFix as without it.

10 MR. SHUTES: Okay. Could we please pull in
11 DWR --

12 (Timer rings.)

13 MR. SHUTES: -- 514, Figure 13, Page 16.

14 CO-HEARING OFFICER DODUC: So let me do a time
15 check.

16 Mr. Shutes, how much more do you have?

17 MR. SHUTES: I am about almost halfway through
18 what I have.

19 CO-HEARING OFFICER DODUC: Which means what?

20 MR. SHUTES: Which means another 10 or 15
21 minutes tops.

22 CO-HEARING OFFICER DODUC: All right. And
23 Mr. Jackson?

24 MR. JACKSON: I can finish up in 15.

25 CO-HEARING OFFICER DODUC: And your line of

1 questioning will be?

2 MR. SHUTES: My line of questioning is another
3 group of clients whose legal uses of water may be
4 affected by this Project.

5 CO-HEARING OFFICER DODUC: Let's go ahead and
6 put 30 minutes on there.

7 MR. SHUTES: So I'd like to ask you,
8 Mr. Leahigh, in your opinion as the Operator of the State
9 Water Project:

10 Could DWR make decisions about carryover
11 storage in Oroville Reservoir that would draw Oroville
12 storage down farther, as indicated in the model output
13 for Boundary 1 as summarized in this slide?

14 WITNESS LEAHIGH: Not likely. Regardless of
15 who's operating the Project, they're going to be looking
16 at the higher require -- higher priority needs that we
17 need to fulfill, and so the same -- the same general
18 management of upstream will -- should be consistent.

19 MR. SHUTES: So, Boundary 1, as I read it here,
20 is somewhat higher than baseline; is that correct? The
21 storage in Oroville, for the most part, is higher than
22 baseline?

23 WITNESS LEAHIGH: In the drier -- In -- It
24 looks like the dryest, 30 percent of the years all the
25 scenarios with the exception of Boundary 2 are -- look

1 all to be about the same.

2 And then, yes, I do see that the modeling shows
3 a little bit higher in kind of those medium type years to
4 wetter years.

5 MR. SHUTES: Okay. So, why, if you're
6 comfortable with the baseline storage, would you not
7 operate to the baseline storage in these water years if
8 the constraints are -- you don't have any additional
9 constraints on storage?

10 WITNESS LEAHIGH: Well, the most important
11 feature that I would be focused on for this particular
12 exceedance graph will be the very driest years, and --
13 and that's what I focused on in terms of -- of showing
14 that -- that this -- this analysis demonstrates that, in
15 those drier years where it really matters, the WaterFix
16 Project would not be -- result in additional stored water
17 being moved out of Lake Oroville.

18 MR. SHUTES: Yes, I understand that. But you
19 said that you would be more likely to export additional
20 stored water in the wetter years more likely than in the
21 drier years.

22 Do you recall that?

23 WITNESS LEAHIGH: Yes. If there was going to
24 be a time that we would be moving more stored water with
25 the WaterFix than without, it would likely occur in the

1 wetter years, correct.

2 MR. SHUTES: Okay. And so wouldn't the -- Why
3 would you not take advantage of what you thought was a
4 comfortable level of storage historically and operate to
5 that in those wetter years and bring it down so those
6 exceedance plots would actually coincide? Is there any
7 constraint that would prevent you from doing that . . .
8 in wetter years?

9 WITNESS LEAHIGH: In wetter years? How would
10 you define "wetter years"?

11 MR. SHUTES: Well, I would define it as you
12 defined it. That's what --

13 WITNESS LEAHIGH: Yeah.

14 MR. SHUTES: -- I'm trying to get to as -- from
15 what you said before.

16 WITNESS LEAHIGH: Well, I -- I -- I wouldn't
17 say this mod -- these modeling results. I mean, it
18 actually shows . . . perhaps under the H . . .

19 Well, it looks like H3, it's showing that we're
20 slightly less aggressive on moving stored water in those
21 medium years.

22 But certainly that would . . . that would
23 represent -- I mean, that doesn't represent -- certainly
24 doesn't represent any additional harm. If anything, it's
25 more conservative.

1 MR. SHUTES: I guess the overall question for
2 all of these exceedance plots is: Why wouldn't you just
3 operate to the No-Action Alternative rather than to
4 what's indicated in the modeling? I mean, it's fine for
5 the Model Team to get something, but you as an actual
6 Operator have the discretion, do you not, to operate to
7 baseline conditions if that's protecting our beneficial
8 uses, as you said -- or your in-basin uses, as you've
9 said you operate to in the past?

10 WITNESS LEAHIGH: Yeah. I don't -- I don't
11 know exactly why the modeling would -- would show this
12 difference in those kind of medium years.

13 I can't think of a good reason why it would
14 show that sitting here right now, but perhaps -- perhaps
15 some of that water under H3 could be released and
16 exported as closer to the No-Action Alternative.

17 MR. SHUTES: Okay.

18 WITNESS LEAHIGH: But the model -- modelers
19 might be able to give a reason why it appears to be more
20 conservative in terms of storage in that particular case.

21 MR. SHUTES: I understand. I'm just asking
22 about the actual operation more than the modeling.

23 For -- For any of these modeling alternatives,
24 provided the in-basin needs were met and particularly in
25 the wetter years, is there anything -- any constraint

1 that prevents DWR from pulling storage down, say, in the
2 top 50 percent of years other than the No-Action
3 Alternative?

4 WITNESS LEAHIGH: It would just be my same
5 response throughout, which has been: We'd continue to
6 try to meet other regulations, whether contractual or
7 regulatory, and that would be our constraint.

8 MR. SHUTES: Okay. And there's no carryover
9 storage -- numeric carryover storage in Oroville that's
10 required; is there?

11 WITNESS LEAHIGH: There's no constant numeric
12 number, no.

13 MR. SHUTES: Okay. And DWR has never proposed
14 or supported one?

15 WITNESS LEAHIGH: No. In fact, it -- I think I
16 testified it might be detrimental to fix a number rather
17 than being able to adjust to changing circumstances.

18 MR. SHUTES: Okay. I'd like to ask a couple of
19 questions about the relation between the modeling and the
20 decision you make in your Project operations.

21 As -- As Operator, do you consult with
22 CalSim II modelers about the annual and short-term
23 operation of the State Water Project?

24 WITNESS LEAHIGH: We -- We periodically -- I
25 think, as I've noted earlier, we do meet with the

1 modelers to try to continuously improve on the modeling
2 as it attempts to emulate the actual Project operations.
3 So there are ongoing discussions with the modelers.

4 MR. SHUTES: And you have a pretty good
5 understanding of how CalSim works, I take it?

6 WITNESS LEAHIGH: I have, I'd say, a fair
7 understanding.

8 MR. SHUTES: Okay. So, as I understand it,
9 CalSim II contains storage rule curves for the State and
10 Federal Project reservoirs; is that right?

11 WITNESS LEAHIGH: Yes, as a -- as a way to try
12 to emulate the actual real-world decision-making process.

13 MR. SHUTES: Okay. And is it -- Is it right to
14 say that, in a CalSim model run, a storage rule curve
15 sets target operation for Oroville in any given year?

16 WITNESS LEAHIGH: My understanding of the rule
17 curve is that it -- it doesn't set a specific carryover
18 number for Oroville. It tries to generally balance
19 Oroville upstream and -- and downstream needs.

20 MR. SHUTES: Okay. You said that -- that the
21 rule curve tries to emulate actual operations.

22 Without pulling it up here, in the interest of
23 time, would you agree with Mr. Munévar that CalSim II
24 modeling attempts -- sorry -- that under real-time
25 operations, Operators have greater flexibility than that

1 included in the modeling?

2 WITNESS LEAHIGH: Yes. And I think that
3 particular statement is dealing more with shorter term
4 operations within a month and reacting to conditions --
5 observed conditions in the -- in the system.

6 MR. SHUTES: And would you say that that's true
7 on a longer term basis or not?

8 WITNESS LEAHIGH: No. I think that's -- I
9 think that CalSim does a much better job in terms of the
10 monthly time-step and the -- as a planning tool does a
11 much -- does a good job of representing Project
12 operations over a long period of time.

13 MR. SHUTES: Okay. From my -- Just about the
14 last thing.

15 I'd like to look at DWR-515, Page 5, please.

16 (Document displayed on screen.)

17 MR. SHUTES: These are the summer operating
18 rules that Mr. Brodsky looked at, I think, in a different
19 page.

20 Look at the top, please.

21 (Document displayed on screen.)

22 MR. SHUTES: Sorry, down -- I'm looking for the
23 summer operating rules.

24 (Scrolling down document.)

25 MR. SHUTES: There we go. Right there.

1 Page 6, my mistake.

2 As I read it, that the bypass requirement for
3 the North Delta Diversion would be 5,000 cfs.

4 Is that -- Is that the bypass diverting as you
5 understand it? July through September.

6 WITNESS LEAHIGH: Yes, as stated in this table.

7 MR. SHUTES: Okay. And is it your
8 understanding that, during this time period, DWR has
9 proposed that North Delta Diversions not be subject to
10 import/export restrictions?

11 WITNESS LEAHIGH: No. I -- The proposal -- The
12 way I understand the proposal is how the North Delta --
13 Are you talking about the -- the -- Which restriction are
14 you talking about, just to clarify?

15 MR. SHUTES: I'm sorry. I don't understand
16 the --

17 WITNESS LEAHIGH: Oh, I'm sorry. Can you
18 repeat the question, please?

19 (Laughter.)

20 MR. SHUTES: My understanding was that there
21 were some import/export restrictions -- let's put it that
22 way -- that DWR and the Bureau proposed would not apply
23 to North Delta Diversions, that the import/export
24 restrictions would only apply to the water that passed
25 south of the North Delta Diversions.

1 Is that your understanding?

2 WITNESS LEAHIGH: I think you're referencing --
3 Are you referencing the inflow to export or the --
4 sorry -- the export -- percent exported inflow?

5 MR. SHUTES: Correct, yes.

6 WITNESS LEAHIGH: Okay. Yeah, the -- So, the
7 proposal is to treat the North Delta Diversion as a
8 subtraction of the inflow to the Delta.

9 MR. SHUTES: Correct. Okay.

10 So, once in-basin requirements are being met,
11 wouldn't any exports that DWR made to the North Delta
12 Diversions during balanced conditions in the summer be
13 more efficient for the North Delta facilities than
14 exporting it, running through the Delta and exporting it
15 from the south?

16 WITNESS LEAHIGH: Well, generally, that -- that
17 export-to-inflow ratio is not controlling in the
18 summertime.

19 MR. SHUTES: Would it be more controlling in
20 the summertime during periods of relatively high flow,
21 like the 19,000 cfs that Mr. Brodsky was referencing
22 earlier today?

23 WITNESS LEAHIGH: It's -- Well, it's typically
24 not -- Even with high flows, it wouldn't typically be
25 controlling in August.

1 MR. SHUTES: Okay. So a related question would
2 be:

3 As Operator of the State Water Project, you
4 sometimes transfer water through the DWR export
5 facilities; don't you?

6 WITNESS LEAHIGH: That's correct.

7 MR. SHUTES: Have you discussed within DWR
8 whether, under the WaterFix, carriage water would be
9 required for water transfer from July through September
10 through North Delta facilities?

11 WITNESS LEAHIGH: Yes. I mean -- Well,
12 typically, under -- Well, under the current operations,
13 we have a carriage water component to water transfers.

14 MR. SHUTES: I understand you have it at
15 present. I'm asking about the proposal for carriage
16 water for water that's -- that would be exported under
17 the north -- through the North Delta facilities under the
18 WaterFix.

19 WITNESS LEAHIGH: There hasn't been any
20 specific discussion, that I'm aware of, on carriage water
21 for transfers if it relates the WaterFix, but certainly I
22 think that's something that we would continue to analyze.

23 MR. SHUTES: If import/export requirements
24 didn't apply, wouldn't there be a strong argument, in
25 your opinion, that carriage water shouldn't apply if

1 water wasn't passing through the Delta? Transferred
2 water in the summer?

3 WITNESS LEAHIGH: No, because the carriage
4 water component, it really has more to do with the
5 salinity objectives and ensuring that the higher pumping
6 from the South Delta does not create the need for
7 additional flow in order to meet the same salinity regime
8 in the Delta.

9 And so it's really a protection for the
10 Projects to assess whether additional transfer -- the
11 additional exports due to the transfer water is not
12 harming the Projects.

13 MR. SHUTES: But wouldn't the conditions that
14 would occasion added salinity because of additional
15 exports be largely eliminated by transferring that water
16 to the North Delta?

17 WITNESS LEAHIGH: As -- As a general statement,
18 to the extent that diversions are shifted to the North
19 Delta, it should lower the carriage water costs, yes.

20 MR. SHUTES: Okay. So would you -- And this is
21 the last question.

22 Would you expect the transfer season to be
23 expanded under the California WaterFix?

24 WITNESS LEAHIGH: I -- I -- I have no idea.
25 It's not part of any proposal that I'm aware of.

1 MR. SHUTES: Has any analysis been done, as far
2 as you're aware, in any of the documentation for the
3 WaterFix of what might happen in terms of the transfer
4 season if the tunnels were built and implemented?

5 WITNESS LEAHIGH: I'm sorry. It sounds like
6 the same question, but I -- I don't have --

7 MR. SHUTES: The question went to -- You said
8 you weren't aware of anything, and my question was, are
9 you aware of any documentation or analysis that has been
10 done in any of the environmental review that addresses
11 this question?

12 WITNESS LEAHIGH: No, I'm not aware.

13 MR. SHUTES: Thank you.

14 CO-HEARING OFFICER DODUC: Thank you.

15 Mr. Jackson.

16 CROSS-EXAMINATION (RESUMED) BY

17 MR. JACKSON: Staying right here with the
18 question of transfers.

19 One of my clients, AquAlliance, represents
20 members all over the Sacramento Valley.

21 When you release water from Shasta or Oroville
22 in summer months, are you also replenishing the
23 groundwater sort of in a state of nature; some of it
24 leaves the embedded banks and enters the groundwater
25 table?

1 MR. BERLINER: Objection: Vague.

2 CO-HEARING OFFICER DODUC: Mr. Jackson.

3 MR. JACKSON: Do -- Do you know whether or not
4 there's a connection between the surface water that you
5 release and the groundwater basin over which the
6 Sacramento or Feather River travel?

7 WITNESS MILLIGAN: I believe there is. There
8 is a lot of data as to just how much of a connection and
9 what -- how -- how quickly that water migrates through,
10 as a fundamental basis, but I think there is a
11 connection.

12 MR. JACKSON: Are you -- Are you aware,
13 Mr. Milligan, that -- I'm trying to stay away from the
14 fish.

15 Are you aware that the riparian habitat in the
16 summer in the counties of Shasta, Tehama, Butte, and to a
17 certain extent Sutter and Yuba, are presently watered by
18 the rivers?

19 WITNESS MILLIGAN: Watered by the what?

20 MR. JACKSON: The rivers.

21 WITNESS MILLIGAN: I haven't seen anything
22 explicitly, but that make sense, that recurring
23 vegetations probably see a lot of water from the rivers.

24 MR. JACKSON: So since you haven't seen
25 anything, there's no way to quantify that?

1 WITNESS MILLIGAN: There probably -- There
2 maybe is a way, but I'm not aware of any study of such.

3 MR. JACKSON: To your knowledge, has either the
4 Bureau, or Mr. Leahigh for the DWR, examined the
5 interconnection in the summer months from water released
6 from facilities and the groundwater basin?

7 WITNESS MILLIGAN: I -- I believe that there
8 has been some work on that, but I -- I can't point to
9 exactly. A lot of this has been part of -- We had kind
10 of looked at the, quote, white papers and transfers and
11 some work associated with it, but that hasn't been done
12 over the last few years.

13 MR. JACKSON: And is any of that in the
14 environmental documents presented to the Board?

15 WITNESS MILLIGAN: I do not know if it has or
16 not.

17 MR. JACKSON: Mr. Leahigh, do you know?

18 WITNESS LEAHIGH: Yeah. I'm sure there are
19 studies that have been done with that, through the
20 interaction, but I'm not aware of what's -- what's
21 contained in the environmental documents.

22 MR. JACKSON: To your knowledge, did the
23 modelers take that into account when they looked at flows
24 under the -- under the existing scenario and under the
25 California WaterFix scenario?

1 WITNESS MILLIGAN: This may be a good question
2 for the modelers, but because of what's in Cal -- I
3 should say, is your questions kind of geared toward
4 CalSim as an example?

5 If it is, CalSim does do a lot of grouping
6 based on historical data. And to the degree that that
7 interaction is somewhat part and parcel of the overall
8 water accounting of -- looking at the historic, I think
9 it probably is captured in there. Parsing it out to the
10 exact amounts, I think, is more difficult.

11 MR. JACKSON: Or telling me where it is in the
12 environmental documents?

13 WITNESS MILLIGAN: Well, that's two different
14 questions.

15 Some of the lumping of, let's say, depletions
16 or accretions within the various Reaches of the river
17 that's embedded in the code for CalSim, you probably have
18 to be pretty well versed in the CalSim code to understand
19 that, and probably the implementation.

20 There's probably some additional analysis of
21 groundwater interaction in the environmental documents
22 that probably warrants its own section or chapter.

23 MR. JACKSON: Calling -- Mr. Milligan, calling
24 your attention to water transfers out of the Sacramento
25 Valley.

1 The Bureau has proposed a 600,000 acre-foot
2 transfer program each year for the next 10 years; is that
3 true?

4 WITNESS MILLIGAN: I will say up to that
5 quantity and an analysis of -- of that.

6 MR. JACKSON: Is there any analysis, to your
7 knowledge, of that transfer program which you have
8 proposed in the California WaterFix environmental
9 documents?

10 WITNESS MILLIGAN: I'm not aware if it has or
11 has not.

12 MR. JACKSON: Mr. Leahigh, do you -- does DWR
13 also have a water transfer program out of the Sacramento
14 Valley?

15 WITNESS LEAHIGH: Out of the Sacramento Valley?
16 I don't believe we have any specific long-term
17 program.

18 MR. JACKSON: But you do serial short-term
19 programs; correct?

20 MR. MIZELL: Objection: Assumes facts not in
21 evidence, unless Mr. Jackson wishes to clarify what he
22 means by serial and we have some sort of evidence
23 documenting his assertions.

24 CO-HEARING OFFICER DODUC: Mr. Jackson, serial?

25 MR. JACKSON: Do I have anything documented?

1 I've got piles. I don't -- And you'll see them in the
2 direct testimony. But the . . .

3 Mr. Leahigh, you know that there are transfers
4 ongoing and have been for a number of years from Water
5 Districts in the Sacramento Valley that have transferred
6 water at -- that you have arranged with your water users
7 south of the Delta; correct?

8 WITNESS LEAHIGH: Yes.

9 MR. JACKSON: Can you -- Can you quantify that
10 for me in a given year on average?

11 WITNESS LEAHIGH: The average number of water
12 transfers?

13 MR. JACKSON: No. The average volume of water.

14 WITNESS LEAHIGH: Volume of water --

15 MR. JACKSON: Transferred.

16 WITNESS LEAHIGH: -- transferred.

17 It will vary significantly from year to year,
18 depending on how dry a year it is, and the need,
19 and . . . That's typically how it varies.

20 MR. JACKSON: And these transfers take place in
21 the summer months generally?

22 WITNESS LEAHIGH: Yes.

23 MR. JACKSON: And they . . . And they
24 will . . . They could be captured at the new North Delta
25 pumps; correct?

1 WITNESS LEAHIGH: I would think that would be
2 possible, yes.

3 MR. JACKSON: And it would lessen the flow,
4 then, across the Delta by the amount of the water
5 transfer through the tunnels; wouldn't it?

6 WITNESS LEAHIGH: No. Assuming this is --
7 Transfers are generally new water to the system.

8 MR. JACKSON: Well, let's -- I'll -- I'll come
9 back.

10 WITNESS LEAHIGH: It's supposed to bring new
11 water to the system. Let's put it that way.

12 MR. JACKSON: I can't resist that one.

13 To your knowledge, has DWR or the Bureau done
14 any research to quantify the amount of water you're
15 taking off the groundwater system for transfers?

16 MR. BERLINER: Objection: Relevance.

17 MR. JACKSON: The relevance is that all of the
18 groundwater users in the Sacramento Valley are legal
19 water users of groundwater. They are not presently very
20 often to what extent competing with the surface water
21 flows, but they could be affected by -- by increased
22 groundwater flows out of the system.

23 CO-HEARING OFFICER DODUC: Mr. Leahigh?

24 WITNESS LEAHIGH: Well, these water transfers
25 are from third parties. This is not Projects. We're

1 merely conveying water transfers for other parties.

2 CO-HEARING OFFICER DODUC: So you have not done
3 an analysis.

4 WITNESS LEAHIGH: I haven't personally. I --
5 I -- I'm not aware of what analysis has been done with
6 the Department.

7 MR. JACKSON: Well, to give you --

8 WITNESS LEAHIGH: I have --

9 MR. JACKSON: I'm sorry. I do -- I've got one
10 eye going there (indicating) and another one here
11 (indicating). The -- Which is not too hard.

12 The -- The City of Chico, for instance, is on
13 the east side of the Sacramento Valley, and it pumps
14 groundwater for its citizens. It's in the same aquifer,
15 the Tuscan, of places where groundwater transfers have
16 happened and the water table is dropping.

17 Have you done any indication -- any study that
18 would indicate to those people whether they would be
19 injured by this Project?

20 WITNESS LEAHIGH: We have a whole nother office
21 within the Department that looks at these aspects, so
22 I -- I couldn't tell you with any details on that.

23 MR. JACKSON: Could you tell me who runs that
24 office?

25 WITNESS LEAHIGH: Well, that's -- Transfers are

1 dealt with in the State Water Project Analysis Office.

2 MR. JACKSON: And who's the head of that
3 office?

4 WITNESS LEAHIGH: Well, it's currently vacant,
5 but it was Robert Cooke. There's various acting
6 assignments right now.

7 MR. JACKSON: And Mr. Cooke was listed as a
8 witness; wasn't he? One of those little short things.

9 WITNESS LEAHIGH: I believe he's part of the
10 Water Rights Panel, yes.

11 MR. JACKSON: Okay. Thank you.

12 All right. There are also agriculture users
13 along the east side of the Sacramento. I mean -- Well,
14 it's kind of like it is in the -- in the San Joaquin.
15 Populations all on the east side on Highway 99, and
16 agriculture happens on the east end.

17 They've been on groundwater for a hundred
18 years, relatively shallow groundwater.

19 Do you know whether the WaterFix infrastructure
20 could be used to take more water from the ground and
21 cause injury to them?

22 MR. BERLINER: Objection: Vague; incomplete
23 hypothetical.

24 Awful lot of facts you'd have to impose in
25 order to under -- for him to answer that question.

1 CO-HEARING OFFICER DODUC: Sure enough, but
2 Mr. Leahigh can answer that he does not know.

3 WITNESS LEAHIGH: I don't know for sure, but
4 I -- I wouldn't anticipate the WaterFix would change the
5 amount of transfers particularly in that, typically, as
6 it is -- as it occurs today, the years in which transfers
7 occur, there's typically plenty of capacity even today.

8 MR. JACKSON: Okay. I'm going to try to get my
9 last question in before that thing goes off, so maybe
10 I'll get an answer extra.

11 It seems that your opinion that there -- that
12 water rights holders will not be injured by the new
13 facility is based upon the fact that you're going to meet
14 D-1641; is that right?

15 MR. BERLINER: Objection: Asked and answered.

16 CO-HEARING OFFICER DODUC: Let's get his answer
17 on the record one more time.

18 WITNESS LEAHIGH: Yes, that's right.

19 MR. JACKSON: In --

20 CO-HEARING OFFICER DODUC: I thought that was
21 your last question.

22 MR. JACKSON: Well, but it -- I'm going to
23 follow up with that question, and then that's going to go
24 off in six seconds.

25 CO-HEARING OFFICER DODUC: All right.

1 MR. JACKSON: The . . . So D-1641 is a -- a
2 floor which -- which you supply the water for D-1641 in
3 the normal year; correct? The two --

4 WITNESS LEAHIGH: Yes. And so my testimony was
5 what that record has been over all years.

6 MR. JACKSON: And so --

7 (Timer rings.)

8 MR. JACKSON: -- isn't that floor treated by
9 the Operators and perhaps the monitors -- I'll ask
10 them -- also as a ceiling for what the -- for what the
11 estuary gets in terms of water?

12 WITNESS LEAHIGH: I'm not sure what you mean by
13 the term "ceiling."

14 MR. JACKSON: Well, as long as you've met
15 D-1641, and assuming that you've done that, your next
16 step is to operate for maximum water supply.

17 MR. BAKER: Objection: Asked and answered.

18 MR. JACKSON: Isn't it?

19 WITNESS LEAHIGH: To the extent of all the
20 other requirements, and we have physical capabilities,
21 yes, we will try to maximize our -- trying to meet our
22 contractual amounts south of the Delta.

23 MR. JACKSON: So if this Project is approved
24 for a hundred years and operated the same way that you
25 operate today, where is the water going to come from to

1 fix the Delta?

2 WITNESS LEAHIGH: Well, as I've stated numerous
3 times, the additional supply's expected to come from
4 excess flows that we are currently unable to divert.

5 CO-HEARING OFFICER DODUC: Mr. Jackson, on that
6 note, are you finished?

7 MR. JACKSON: I am. I will . . .

8 Yes, I'm finished.

9 CO-HEARING OFFICER DODUC: Thank you,
10 Mr. Jackson and Mr. Shutes.

11 Group Number 32, Mr. Stroshane is in the
12 audience.

13 MR. STROSHANE: We have no questions.

14 CO-HEARING OFFICER DODUC: All right. Group
15 Number 32 has already asked their questions. I mean, 33.

16 34 . . . is not here.

17 35 . . . is not here.

18 37, Miss Des Jardins.

19 MS. DES JARDINS: Okay. I'm just arranging to
20 distribute -- There's a number of --

21 CO-HEARING OFFICER DODUC: I'm sorry. We can't
22 hear you.

23 MS. DES JARDINS: I'm sorry.

24 I have -- I have a fair number of exhibits.

25 These are printouts of some questions I have for the

1 Operators.

2 Can we go into Leahigh questions, please? And
3 I apologize, I keep forgetting your name, Mr. Leahigh.

4 It's actually questions for Mr. Milligan as
5 well. And since it's late and I noticed everybody was
6 falling asleep, I would like to go to Number 8, salinity
7 in the Delta.

8 CO-HEARING OFFICER DODUC: Okay. Before you
9 do --

10 MS. DES JARDINS: Yeah.

11 CO-HEARING OFFICER DODUC: -- let's get this
12 numbering straight.

13 MS. DES JARDINS: Okay.

14 CO-HEARING OFFICER DODUC: So are you
15 suggesting that these are the numbers that will be
16 assigned to your documents for identification purposes?

17 MS. DES JARDINS: Yes, you may -- you may use
18 these.

19 CO-HEARING OFFICER DODUC: So, for example, I
20 guess we'll go with DDJ.

21 MS. DES JARDINS: Okay.

22 CO-HEARING OFFICER DODUC: DDJ-1 and DDJ-2,
23 et cetera, et cetera.

24 MS. DES JARDINS: Okay. Sure.

25 CO-HEARING OFFICER DODUC: All right.

1 MS. DES JARDINS: I have two sets of questions,
2 so --

3 CO-HEARING OFFICER DODUC: So --

4 MS. DES JARDINS: -- I have those --

5 CO-HEARING OFFICER DODUC: So Leahigh would be
6 1 through -- You've actually got more.

7 MS. DES JARDINS: One through 14.

8 The three at the bottom are complete copies of
9 larger documents.

10 CO-HEARING OFFICER DODUC: All right. So,
11 then, let's make the other one 15 through whatever.

12 MS. DES JARDINS: Okay. And, for the record, I
13 should say I am Dierdre Des Jardins with California Water
14 Research.

15 And because everybody's falling asleep,
16 let's -- I wanted to open up Number 8, which was sort of
17 my punchline.

18 (California Water Research's Exhibit

19 8 marked for identification)

20 (Document displayed on screen.)

21 CROSS-EXAMINATION BY

22 MS. DES JARDINS: But, Mr. Leahigh,

23 Mr. Milligan --

24 Let's scroll down just a little so the scale is
25 there.

1 (Scrolling down document.)

2 MS. DES JARDINS: Okay. There we go.

3 You may recognize this. This is a picture of
4 salinity intrusion on January 28th, 2014. That's the day
5 before you applied to the State Water control Board for a
6 Temporary Urgency Change Petition.

7 Do you recall the extreme salinity intrusion in
8 the Delta at that time?

9 WITNESS LEAHIGH: Yes.

10 MS. DES JARDINS: Did you consider it to be a
11 risk?

12 WITNESS LEAHIGH: A risk? Yeah. Salinity
13 conditions at the time was certainly a big part of our
14 request -- factoring into our request in front of the
15 Board for the Temporary Urgency Change Petition.

16 MS. DES JARDINS: What could have happened if
17 this kind of salinity intrusion had continued or gotten
18 worse?

19 WITNESS LEAHIGH: If it had gotten worse?
20 Well, we were right at the brink of exceeding some of the
21 M&I water quality standards in the Delta, so if it got
22 worse, I suppose it could have pushed us over that
23 threshold.

24 MS. DES JARDINS: And how would that affect the
25 M&I users in fixing the M&I standards?

1 WITNESS LEAHIGH: I can't say exactly. I just
2 know there was a potential that we could have exceeded
3 the M&I objectives.

4 MS. DES JARDINS: Okay. I'd like to go to the
5 slide Number 9.

6 (California Water Research's Exhibit
7 9 marked for identification)

8 (Document displayed on screen.)

9 MS. DES JARDINS: So, this is from the
10 California Data Exchange Center.

11 Do you recognize that? It's a website run by
12 the Department of Water Resources and provides sensor
13 data for locations in the Delta.

14 WITNESS LEAHIGH: Yes, I'm familiar with CDEC.

15 MS. DES JARDINS: This is a plot of the
16 electrical conductivity at Clifton Court Forebay between
17 November 2013 and November 15th, 2014.

18 And, yes, you can see the electrical
19 conductivity climbing there.

20 This is the concern that you expressed;
21 correct?

22 WITNESS LEAHIGH: Yes.

23 MS. DES JARDINS: What led -- Clearly it had
24 been climbing for over a month.

25 What was the condition? Why weren't you -- Why

1 weren't you able to control this in another way?

2 WITNESS LEAHIGH: Well, if I recall, and I do
3 know that Calendar Year 2013 ended up being the driest
4 year in historical record. And so we had extremely low
5 inflows into the estuary and reservoirs, so we were very
6 concerned about our ability to manage the supply that we
7 had to manage.

8 If I recall, we were -- I think actually
9 Reclamation had asked for some . . . modifications to the
10 requirements for the Cross Channel Gate as far as the
11 ability to open that to help address some of this
12 salinity intrusion.

13 MS. DES JARDINS: Oh. But part of the issue
14 here was that you did not have the upstream supply,
15 either through natural flow or storage, to -- to control
16 this kind of salinity intrusion.

17 Was -- Was that a -- a significant contributing
18 factor?

19 WITNESS LEAHIGH: Well, it was -- it was
20 certainly a concern as far as that amount of storage and
21 projecting forward for the remainder of the year, and all
22 of the other standards that we would need to meet, and
23 that was a big part of why we went to the Board and asked
24 for the Petition for the Temporary Urgency Change, which
25 included opening of that Cross Channel and modified

1 standards for outflow requirements in the spring.

2 So, yes, that was all -- that was all part
3 of -- of our request to the Board.

4 MS. DES JARDINS: And so it was at this point
5 that you felt that you were no longer able to meet the
6 D-1641 standards; is that correct?

7 WITNESS LEAHIGH: Yes, it -- That's correct.

8 MS. DES JARDINS: Oh. Mr. Mulligan --
9 Milligan, sorry.

10 So, similarly, I recall that the -- the Bureau
11 had to release some extra water around this time and that
12 you were concerned as well about meeting -- meeting
13 your -- your needs and carryover needs in Shasta; is that
14 correct?

15 WITNESS MILLIGAN: Yeah. We were -- We shared
16 DWR's concern about continued -- potentially continued
17 dry conditions giving how dry '13 was.

18 We had a fairly limited amount of stored water
19 upstream. We had concerns about building a cold water
20 pool at Shasta to get through the subsequent temperature
21 season.

22 So, at this particular time, we were asking for
23 some consideration on a number of fronts, and also
24 started thinking about what if this dry condition
25 continued on, what should our overall objectives be in

1 terms of prioritizing the use of that fairly limited
2 amount of stored water? That's all -- You know, that
3 plus a little bit more coming, yeah, what's the best way
4 to use that?

5 MS. DES JARDINS: Okay. Thank you.

6 WITNESS MILLIGAN: And just with an eye towards
7 the Delta particularly, that if we ran out of stored
8 water or didn't manage this in a particularly
9 constructive way, then we would get towards summertime at
10 some point and really lose control of the salinity and
11 that would probably shut down a lot of M&I users.

12 MS. DES JARDINS: So what happened on this --
13 in the previous slide could have gotten significantly
14 worse if you hadn't considered storage at that point.

15 WITNESS MILLIGAN: That -- That was the
16 consideration, was, have a late and much worse-looking
17 salinity problem.

18 MS. DES JARDINS: Okay. Thank you.

19 So I'd like to go back to Slide 1 now.

20 CO-HEARING OFFICER DODUC: Do you mean
21 Document 1?

22 MS. DES JARDINS: Document 1.

23 MR. BAKER: So DDJ what?

24 CO-HEARING OFFICER DODUC: 1. DDJ-1.

25 ///

1 (California Water Research's
2 Exhibit 1 marked for identification)

3 MS. DES JARDINS: I'm going to pull up -- This
4 is from the 2004 --

5 (Document displayed on screen.)

6 MS. DES JARDINS: -- long-term -- It actually
7 has documentation of your operations forecasting. And I
8 couldn't find any more recent documentation, so I need to
9 ask you:

10 It said at the time -- Let's -- Let's scroll
11 down a little bit so it's a little more of the yellow
12 highlighted.

13 (Scrolling down document.)

14 MS. DES JARDINS: Yeah, that's good.

15 Okay. So this is Chapter 5 of the OCAP. It's
16 the Forecasting section. And it says (reading):

17 "The forecast model is currently Lotus 123 for
18 Windows spreadsheet application designed to assist
19 in water and power operations planning in the
20 Central Valley Project. An Excel spreadsheet
21 forecast is in development."

22 So, Mr. Milligan, do you now use an Excel
23 spreadsheet?

24 WITNESS MILLIGAN: Yes, we do. And I'll say we
25 have a Legacy laptop that runs 123 if we need that.

1 MS. DES JARDINS: I see. So you're using a
2 monthly timestamp usually in a one-year period when
3 you're looking at forecast operations, as it says here?

4 WITNESS MILLIGAN: We do do some year ahead.
5 But particularly what we've seen through the drought, we
6 have been finding it more fruitful to look at, like,
7 three to six months ahead, and a lot of that not knowing
8 where our variabilities may be. So we've been much more
9 focused in the nearer term.

10 MS. DES JARDINS: Okay. And Mr. Leahigh, it
11 says (reading):

12 "The State Water Project also performs
13 spreadsheet-based annual operations forecasts using
14 a monthly timestamp. These forecasts are used to
15 help plan SWP operations and determine allocations."

16 So you have a similar spreadsheet model that
17 you use for your monthly forecasts?

18 WITNESS LEAHIGH: Yes, we have a similar
19 spreadsheet model that's --

20 MS. DES JARDINS: Okay. So -- And the
21 completed model takes in -- You need input data of the
22 current hydrologic conditions; is that -- That's correct?

23 WITNESS LEAHIGH: Yes. Input data -- Part of
24 the input data is the forecasted hydrology.

25 MS. DES JARDINS: Okay. Let's scroll down a

1 bit more on this, please.

2 (Scrolling down document.)

3 MS. DES JARDINS: Oh, we need to scroll down to
4 the next yellow highlight.

5 (Scrolling down document.)

6 MS. DES JARDINS: Oh, forget that. Down --
7 Down further.

8 (Scrolling down document.)

9 MS. DES JARDINS: Down further.

10 (Scrolling down document.)

11 MS. DES JARDINS: There it is. Okay.

12 So this says (reading):

13 "In the beginning of the Water Year, forecasts
14 for 50 percent hydrology and 90 percent hydrology
15 are calculated."

16 Is that what you do, Mr. Milligan, still?

17 WITNESS MILLIGAN: We still do that, yes.

18 MS. DES JARDINS: And in doing allocations, do
19 you use 50 or -- In the initial phases, do you use the 50
20 or 90 percent hydrology?

21 WITNESS MILLIGAN: Consistent with the
22 Biological Opinions. This is a fairly old document --

23 MS. DES JARDINS: Yes.

24 WITNESS MILLIGAN: -- and some of these things
25 have been refined or modified based on the Biological

1 Opinion.

2 MS. DES JARDINS: So --

3 WITNESS MILLIGAN: But we -- You know, further
4 of the Biological Opinions, we do use the 90 percent --

5 MS. DES JARDINS: So --

6 WITNESS MILLIGAN: -- CSA --

7 MS. DES JARDINS: So that's -- The Biological
8 Opinions require that the Central Valley Project use
9 90 percent exceedance forecast?

10 WITNESS MILLIGAN: Yeah.

11 MS. DES JARDINS: Per allocations?

12 WITNESS MILLIGAN: Yes.

13 MS. DES JARDINS: Mr. Leahigh, do you look at
14 50 and 90 percent allocations for the State Water Project
15 as well?

16 WITNESS LEAHIGH: We do operational studies
17 based on both a 50 percent forecast and 90 percent
18 forecast, but the 90 percent is used primarily for the
19 allocation determinations.

20 MS. DES JARDINS: So you primarily use
21 90 percent.

22 Has that been true in the past?

23 WITNESS LEAHIGH: Yes.

24 MS. DES JARDINS: Okay. Let's continue to
25 scroll down.

1 (Scrolling down document.)

2 MR. BERLINER: I'm going to object to this line
3 of questioning.

4 I understand we do backgrounds, but I don't
5 think we're -- This is well known to the Board. We're
6 dealing with a 12-year-old document.

7 CO-HEARING OFFICER DODUC: Thank you,
8 Mr. Berliner.

9 I, too, was wondering where you're going with
10 this, Miss Des Jardins.

11 MS. DES JARDINS: I want to get into exactly
12 what happened with the 2013 forecasts so --

13 CO-HEARING OFFICER DODUC: So can you just go
14 ahead --

15 MS. DES JARDINS: Okay.

16 CO-HEARING OFFICER DODUC: -- and ask.

17 MS. DES JARDINS: Okay.

18 Then let's -- Put that away, and let's get up
19 to -- Close.

20 (Document closed.)

21 MS. DES JARDINS: And let's look at the
22 specific.

23 So let's look at the January 1st, 2013,
24 Sacramento River Water Supply Index.

25 CO-HEARING OFFICER DODUC: So DDJ-3.

1 MS. DES JARDINS: Yeah.

2 (California Water Research's Exhibit

3 3 marked for identification)

4 MS. DES JARDINS: And let's scroll down.

5 (Scrolling down document.)

6 MS. DES JARDINS: So you use the --

7 Mr. Leahigh, you look at Oroville forecast runoff and --

8 or Feather River forecast runoff and the Four River

9 Unimpaired runoff; is that correct?

10 WITNESS LEAHIGH: Yes. The information in the

11 document you're showing right now is forecasted

12 information we use in our operations models, yes.

13 MS. DES JARDINS: Okay. So the 50 percent

14 exceedance was -- in January 2013 was 22,460 acre-feet.

15 90 percent was 16550 for the Four Rivers Index.

16 WITNESS LEAHIGH: That's what it says, yes.

17 MS. DES JARDINS: Okay. Next -- Next document.

18 (Document displayed on screen.)

19 MS. DES JARDINS: Okay. So let's go back --

20 Yeah, Number 4, the State Water Project Allocation.

21 (California Water Research's Exhibit

22 4 marked for identification)

23 (Document displayed on screen.)

24 MS. DES JARDINS: So based on this -- That was

25 the earliest published forecast I could find.

1 But based on this, your initial allocation was
2 30 percent.

3 WITNESS LEAHIGH: Well, I don't recall which
4 month your forecasted information was there, so I don't
5 know if that was the particular set --

6 MS. DES JARDINS: Yeah.

7 THE WITNESS: -- of numbers that was used for
8 the initial allocation.

9 MS. DES JARDINS: Okay.

10 WITNESS LEAHIGH: But that was -- that appears
11 to be what our initial allocation was for --

12 MS. DES JARDINS: Okay.

13 WITNESS LEAHIGH: -- for 2013, yes.

14 MS. DES JARDINS: Okay. Let me close that.

15 MR. BAKER: Before we move on, could you please
16 identify it?

17 MS. DES JARDINS: Yes. So this is -- this is
18 the Department of Water Resources Notice to State Water
19 Project Contractors. And call it Exhibit DDJ-4.

20 CO-HEARING OFFICER DODUC: So before you
21 continue with your next document, Miss Des Jardins, help
22 me understand, please, your line of questioning.

23 MS. DES JARDINS: So I can next go to the
24 runoff forecast change and we'll look at the allocation
25 decrease.

1 CO-HEARING OFFICER DODUC: But help me
2 understand your line of questioning.

3 MS. DES JARDINS: So, the question -- the issue
4 is how -- how they got into a situation where they had
5 a -- had to violate D-1641, and if this was predictable,
6 it was related to the forecasts.

7 This is how the Project is currently managed,
8 as I understand it, how it is proposed to be managed in
9 the future.

10 CO-HEARING OFFICER DODUC: And by violating
11 D-1641, what do you mean?

12 MS. DES JARDINS: The -- I -- I do believe this
13 line of questioning is relevant to -- very -- extremely
14 relevant to issues in the hearing. Everybody said it.
15 This is the actual details of what happened in a
16 particular year.

17 It's not going to take me very long to finish
18 going through the two remaining slides.

19 But, yeah, this is -- Is this not how the
20 actual operations forecasts are working?

21 CO-HEARING OFFICER DODUC: I'm trying to
22 understand.

23 So, which of the D-1641 requirements do you
24 believe was violated during this time?

25 MS. DES JARDINS: In January 20 -- This is

1 leading up to January of 2014.

2 CO-HEARING OFFICER DODUC: Okay. And what was
3 violated?

4 MS. DES JARDINS: In January of 2014, they
5 needed to ask for relaxations of -- of D-1641
6 requirements.

7 CO-HEARING OFFICER DODUC: So that was -- Okay.

8 MS. DES JARDINS: And the question is, could
9 this happen again? And this line of questioning will
10 establish that.

11 CO-HEARING OFFICER DODUC: They have
12 acknowledged that, even with the WaterFix proposal,
13 they'll do their best, obviously, to comply with D-1641.
14 They have not ruled out the possibility of asking for
15 future Temporary Urgency Change Petitions.

16 So if your point is that they may need to ask
17 for Temporary Urgency Change Petitions in order to meet
18 D-1641 requirements in the future under the WaterFix
19 scenario, then I believe they -- Well, actually, they did
20 include it and they know they took it out.

21 So maybe I'm confused, too.

22 Help me here, Mr. Leahigh.

23 I think where she's going -- well, she will
24 correct me if I'm wrong -- is the potential for the
25 Project Petitioners to request TUCPs in the future in

1 order to meet D-1641, as you have done so in the past.

2 WITNESS LEAHIGH: So, I think something that
3 we're missing here is, yes, there are dry years, there
4 are critically dry years, and then there's what happened
5 in 2013; okay? So there are different levels of dryness.

6 And what happened in the probably 13 months
7 from January of 2013 through January of 2014 was
8 completely unprecedented, certainly in terms of the
9 hundred-year record that we have if not going back
10 hundreds of years.

11 So this was an absolute extreme outlier in
12 terms of what we had ever experienced and would have ever
13 expected to experience.

14 And so that's why I -- I feel it's
15 misrepresenting when we're looking at the 2013-14 period
16 and saying, "Well, this is what we're going to do in
17 every dry year." This is a whole nother level of
18 dryness, which basically was the reason for our request
19 that first year, in January 2014.

20 CO-HEARING OFFICER DODUC: All right.
21 Miss Des Jardins, go ahead and proceed with those
22 acknowledgments in mind.

23 MS. DES JARDINS: Yes. I just want to hit -- I
24 understand that it was unusually dry, particularly the
25 spring was unusually dry.

1 Let's go to Number 5, quickly.

2 (Document displayed on screen.)

3 MS. DES JARDINS: So, by -- So, what
4 happened -- And I was trying to trace it.

5 Let's go down to the bottom which has the Four
6 River Index.

7 (Document displayed on screen.)

8 MS. DES JARDINS: So, by April, your 50 percent
9 forecast had gone down to 12,520, and your 90 percent
10 forecast had gone down to 10,850, so, your forecast
11 changed.

12 Did -- Do you remember that, that your forecast
13 inflows changed?

14 WITNESS LEAHIGH: Yes. Our forecasts change
15 every month.

16 MS. DES JARDINS: Yeah. But -- but it went
17 down significantly.

18 Is it normal for it to go down like that?

19 WITNESS LEAHIGH: It's equally likely that the
20 50 percent will increase or decrease. It's more unusual
21 for the 90 percent forecast to decrease from one month --

22 MS. DES JARDINS: Yeah.

23 WITNESS LEAHIGH: -- but it does happen.

24 MS. DES JARDINS: Did this affect your forecast
25 carryover storage?

1 WITNESS LEAHIGH: Well, so, in fact, in this
2 year -- this is 2013 -- in reaction to these declining
3 forecasts, we made what we typically don't do, which is a
4 reduction in our allocation to our South-of-Delta
5 customers as a result of these drier forecasts, I
6 believe, which had gone as high as 40 percent and then we
7 made a reduction back to --

8 MS. DES JARDINS: 35 percent.

9 WITNESS LEAHIGH: -- I believe it was either 30
10 or 35 percent.

11 MS. DES JARDINS: Okay. Let's put this away
12 and go to number 6.

13 MR. BAKER: So before we move on, this is
14 DDJ-5.

15 MS. DES JARDINS: DDJ-5, April 1st, 2013.

16 (California Water Research's Exhibit
17 5 marked for identification)

18 MS. DES JARDINS: Yes. Go to Number 6.

19 This is another Notice to the State Water
20 Project Contractors. And yes, Mr. Leahigh, this is the
21 decrease. Reduction equates to a drop in allocations
22 from 40 percent to 35 percent.

23 That's what you recall?

24 WITNESS LEAHIGH: Yes.

25 MS. DES JARDINS: Okay. And that was in March

1 of 2013.

2 Okay. Thank you. You can put that away.

3 Now, I'd like to go to the Oroville storage in
4 2013, Number 10.

5 (Document displayed on screen.)

6 MS. DES JARDINS: And let's -- Let's go past
7 that. The bottom -- the one on the bottom.

8 (Scrolling down document.)

9 MS. DES JARDINS: So, this is a graph of how
10 the storage in Oroville was drawn down in 2013.

11 So, Mr. Leahigh, was -- was this what you
12 initially forecasted for the end of the year that -- at
13 that -- or was that lower than you anticipated because of
14 the reduced runoff?

15 WITNESS LEAHIGH: Well, for the end of the
16 year, this would have been -- this certainly would have
17 been on the lower side than what we would have
18 forecasted.

19 Because of the -- you know, the driest year on
20 record, we did see much lower inflows in the fall, and so
21 that did affect -- We were likely at minimum releases in
22 the fall from Oroville. And so the very much reduced
23 inflows most likely resulted in storages lower than we
24 had been anticipating.

25 MS. DES JARDINS: Okay. Thank you.

1 I will next want to go to Mr. Anderson, so the
2 Anderson slides.

3 MR. BAKER: And just for the record, this was
4 DDJ-10.

5 MS. DES JARDINS: Yes.

6 (California Water Research's Exhibit
7 10 marked for identification)

8 MS. DES JARDINS: So we're going to -- Let's go
9 to the other one.

10 (Scrolling down document.)

11 MS. DES JARDINS: Yeah.

12 So, Mr. Anderson, you gave a -- Let's click
13 open Anderson 2009, at the bottom, yeah.

14 (Document displayed on screen.)

15 MS. DES JARDINS: No. Close that one.

16 So, yeah, this is just --

17 (Document displayed on screen.)

18 MR. BAKER: Will we be identifying this?

19 MS. DES JARDINS: Yeah. So let's call this
20 Exhibit DDJ-15?

21 (California Water Research's Exhibit
22 15 marked for identification)

23 MS. DES JARDINS: So, this -- Do you recall
24 giving this talk in 2009, Mr. Anderson?

25 WITNESS ANDERSON: I gave a number of talks.

1 I'm not sure specifically who this was given to. Could
2 you refresh my memory?

3 MS. DES JARDINS: Yeah. Scroll down a little,
4 please. It should say.

5 (Scrolling down document.)

6 MS. DES JARDINS: Scroll down a little more.

7 (Scrolling down document.)

8 MS. DES JARDINS: California Extreme
9 Precipitation Symposium.

10 WITNESS ANDERSON: Yes, I do remember that one.

11 MS. DES JARDINS: Okay. So I'm going to get
12 some excerpts from that. Just a sec. I do have -- I do
13 have some . . . slides so . . .

14 If you can distribute these.

15 So next I'd -- You can close this.

16 This is the tidal slide, and I'd like to go to
17 the excerpt number one on Page 19 to 23 on climate
18 change.

19 (Document displayed on screen.)

20 MR. BAKER: And if you would identify for the
21 record.

22 MS. DES JARDINS: Yeah. So let's start this as
23 16. So call it DDJ-16.

24 (California Water Research's Exhibit
25 16 marked for identification)

1 MS. DES JARDINS: We'll just add 15 to the
2 Anderson numbers.

3 So let's go down just a little so we can see
4 the rest of this particular slide.

5 (Scrolling down document.)

6 MS. DES JARDINS: So stop. No, up a little.

7 (Scrolling up document.)

8 MS. DES JARDINS: There you go.

9 Okay. So Mr. Anderson, in 2009, you said that,
10 in the future, we could see (reading):

11 ". . . Less precipitation falling as snow,
12 drier springs," and "increased variability" in
13 runoff.

14 WITNESS ANDERSON: Yes, I did.

15 MS. DES JARDINS: Do you still think that?

16 WITNESS ANDERSON: Yes, I think those are still
17 possible impacts.

18 MS. DES JARDINS: Okay. I agree with you.

19 Let's go down to the next slide, next -- next
20 in this -- in this PowerPoint excerpt.

21 (Document displayed on screen.)

22 MS. DES JARDINS: "Signs of change."

23 And at that time, you'd already seen the dryest
24 precipitation year in Southern California in 2007, and
25 the dryest spring in the Northern Sierra in 2008, at

1 least up until 2009.

2 WITNESS ANDERSON: Up to that point, yes.

3 MS. DES JARDINS: Yeah. Okay. Let's go to the
4 next slide.

5 (Document displayed on screen.)

6 MS. DES JARDINS: So, "Future Drought
7 Characteristics." You said (reading):

8 "Fall runoff decreases due to drier antecedent
9 conditions in watershed.

10 "Decrease in Spring precipitation decreases
11 odds of 'March miracles.'.

12 "Smaller snowpacks and drier springs decrease
13 April through July runoff."

14 WITNESS ANDERSON: That is possible concepts
15 used in the talk.

16 MS. DES JARDINS: Yeah. So -- So these would
17 be impacts of climate change; is that correct?

18 WITNESS ANDERSON: Yes, those would -- I would
19 say at the top.

20 MS. DES JARDINS: Okay. Let's go down a little
21 further to the next slide.

22 (Scrolling down document.)

23 MS. DES JARDINS: Yeah. Keep going.

24 (Scrolling down document.)

25 MS. DES JARDINS: Okay. Stop here.

1 July. The average of the 10 lowest flows is 2.6 million
2 acre-feet in your what-if scenario, and it was the
3 average of 6.8 million acre-feet.

4 The average of the 10 lowest drought flows on
5 the Sacramento River was 7.5 million acre-feet while the
6 average is about 18 million acre-feet.

7 So this is -- this is a pretty good what if
8 scenario. It's extreme but it's not 99 percent
9 exceedance extreme; is it?

10 WITNESS ANDERSON: Don't know specifically.
11 I'd have to do the computations to verify that.

12 MS. DES JARDINS: Well, I have the Water Supply
13 Index numbers. So let's put this away, and let's go to
14 the next one.

15 (Document displayed on screen.)

16 MS. DES JARDINS: Yeah, number -- Yeah, Water
17 Supply Index marked number two. And let's call this
18 Exhibit DDJ-17.

19 (California Water Research's Exhibit
20 17 marked for identification)

21 MS. DES JARDINS: Okay. And let's scroll down.

22 (Scrolling down document.)

23 MS. DES JARDINS: Okay. To the bottom, which I
24 have highlighted in green.

25 (Scrolling down document.)

1 MS. DES JARDINS: And let's pull this up.
2 2014, you were exactly on, Mr. Anderson. There was
3 2.6 million acre-feet of runoff in your what-if scenario
4 in the spring, and there was 7.5 million acre-feet of
5 annual runoff.

6 So let's -- Do -- Do you agree that this is the
7 same as your what-if -- 2009 what-if scenario?

8 WITNESS ANDERSON: Could you magnify it a
9 little?

10 MS. DES JARDINS: Yeah.

11 (Document enlarged on screen.)

12 WITNESS ANDERSON: Yeah, they look like they're
13 the same ballpark.

14 MS. DES JARDINS: Yeah. They're not in the
15 same ballpark. 2.6 and 2.59 are very close; are they
16 not?

17 WITNESS ANDERSON: Yes.

18 MS. DES JARDINS: 7.5 and 7.46 are very close
19 as well.

20 WITNESS ANDERSON: Yes.

21 MS. DES JARDINS: Okay. Well, let's go and
22 look at -- Scroll back up.

23 (Scrolling up document.)

24 MS. DES JARDINS: And let's shrink it back down
25 a little so we can see -- Shrink it back to a hundred

1 percent, please.

2 (Document set at 100%.)

3 MS. DES JARDINS: Yeah. So I've highlighted on
4 these -- the 10 -- as you used to compute them, the 10
5 lowest runoff years that you used to compute that
6 average.

7 There's the 10 lowest years for annual runoff,
8 and the 10 lowest years for spring runoff leading up to
9 2009.

10 And I believe your method was to take the
11 average of those.

12 WITNESS ANDERSON: Yes.

13 MS. DES JARDINS: Okay. If it's an average of
14 the 10 lowest years, it's a dry scenario but it's not
15 necessarily a totally unexpected scenario; isn't that
16 correct?

17 WITNESS ANDERSON: I agree it would be extreme
18 though not necessarily unprecedented.

19 MS. DES JARDINS: Okay. Thank you.

20 Let's put this away.

21 Okay. And then let's go to -- Let's open up
22 the PPIC combined presentation. Next I'm going to go to
23 that.

24 (Document displayed on screen.)

25 That's -- Scroll down. The large document,

1 yes.

2 (Document displayed on screen.)

3 MS. DES JARDINS: Okay. Do you recall giving
4 this presentation to --

5 WITNESS ANDERSON: Yes, I do.

6 MS. DES JARDINS: Yeah. On January 12, 2015.

7 WITNESS ANDERSON: Yes.

8 MS. DES JARDINS: And it was titled, "Climate,
9 Drought and Change"?

10 WITNESS ANDERSON: Yes.

11 MS. DES JARDINS: This is the tidal side and
12 I'm going to go to excerpts from it.

13 MR. BAKER: Before we move on, could you please
14 mark the exhibit?

15 MS. DES JARDINS: Let's call this -- Can I call
16 this DDJ . . .

17 What number are we at?

18 MS. HEINRICH: 18. It would be 18.

19 MS. DES JARDINS: Let's call this DDJ-18. And
20 I apologize about my numbering.

21 (California Water Research's Exhibit
22 18 marked for identification)

23 MS. DES JARDINS: Okay. Thank you. Let's put
24 this away, and I'll go to my excerpts.

25 So the next thing I want to go to is Number 3.

1 (Document displayed on screen.)

2 MS. DES JARDINS: And so -- And, again, it
3 says, in 2015, your climate change expectations are
4 (reading):

5 "Warmer temperatures.

6 "Smaller snowpack/more rain, less snow.

7 "And earlier snowmelt onset."

8 This is from Page 19 of your PPIC presentation.

9 WITNESS ANDERSON: Yes.

10 MS. DES JARDINS: Does this look familiar?

11 WITNESS ANDERSON: Yes, it looks familiar.

12 MS. DES JARDINS: Okay. And would you still
13 characterize this as expectations of what we could see
14 with climate change?

15 WITNESS ANDERSON: Yes.

16 MS. DES JARDINS: Okay. Let's go to the next
17 slide.

18 MR. BAKER: Would you please identify this.

19 MS. DES JARDINS: Yes. It's DDJ-19. I
20 apologize.

21 (California Water Research's Exhibit
22 19 marked for identification)

23 MS. DES JARDINS: Let's go to the next slide.

24 (Document displayed on screen.)

25 MS. DES JARDINS: No, no.

1 CO-HEARING OFFICER DODUC: Same document.

2 MS. DES JARDINS: Yeah. Sorry.

3 Go down, scroll down, number two.

4 (Scrolling down document.)

5 MS. DES JARDINS: Yeah, scroll down.

6 (Scrolling down document.)

7 MS. DES JARDINS: Okay. So in the 21st
8 Century, you thought we'd seen a lot of variability
9 compared to last Century.

10 WITNESS ANDERSON: Yes.

11 MS. DES JARDINS: Okay. Let's go down to the
12 next slide -- or not -- No. Yes, next, Number 3.

13 (Document displayed on screen.)

14 MS. DES JARDINS: And there's also variability
15 in the Sacramento River runoff.

16 And notice the -- You noted there that the 21st
17 Century average for Sacramento River runoff is
18 significantly below that from 1971 to 2000.

19 WITNESS ANDERSON: Correct.

20 MS. DES JARDINS: So it's about 16,000
21 acre-feet in the 21st Century -- or 16 million -- excuse
22 me -- and 18.8 million acre-feet from 1971 to 2000.

23 WITNESS ANDERSON: That's correct.

24 MS. DES JARDINS: Do you think it's possible we
25 could continue to see the lower average runoff in the

1 21st Century?

2 WITNESS ANDERSON: There is some question as to
3 the Kato Scale of Vulnerability that would influence
4 that, that we're still uncertain about.

5 MS. DES JARDINS: Yeah. We'll get to that.

6 Okay. So next page on this slide, please.

7 (Document displayed on screen.)

8 MS. DES JARDINS: Okay. So here you say

9 (reading):

10 "It's getting warmer, which increases the
11 impact of droughts."

12 And I believe the things in yellow boxes --
13 What's -- Scroll down just a little bit on the slide.

14 (Scrolling down document.)

15 MS. DES JARDINS: Yeah. So this -- Where's
16 NOAA Climate Division 2?

17 WITNESS ANDERSON: It's in the Sacramento River
18 Watershed.

19 MS. DES JARDINS: Sacramento River Watershed.

20 So this shows -- It's really significantly
21 warmer than -- than -- on the warm side of the historical
22 record. Yeah?

23 WITNESS ANDERSON: Yes. Mr. Leahigh provided
24 an updated slide on this in his testimony.

25 MS. DES JARDINS: Okay. And let's go down.

1 (Scrolling down document.)

2 CO-HEARING OFFICER DODUC: And this will be
3 your last question, Miss Des Jardins, for tonight.

4 MS. DES JARDINS: Okay. And then this is a --
5 This is really what I wanted to get to. It says, "21st
6 Century droughts on the Sacramento River."

7 And you plot April to July runoff on the lower
8 slide and -- and Water Year runoff in the Sacramento
9 River, and I believe this is the Four River Index that we
10 looked at.

11 And we see a cluster there in the lower part.
12 That's the drier water years. But they're not
13 unprecedentedly dry; are they?

14 WITNESS ANDERSON: That's correct.

15 MS. DES JARDINS: There are other years that
16 were just as dry. In fact, I see a cluster of three that
17 were drier and also had drier April to July runoff.

18 WITNESS ANDERSON: That's correct.

19 MS. DES JARDINS: So -- And, in fact, this
20 whole cluster on the left could kind of be seen as
21 characteristic of what we've seen in droughts so far in
22 the 21st Century.

23 WITNESS ANDERSON: That is the idea. The green
24 squares are a characterization of the drier years in the
25 21st Century.

1 MS. DES JARDINS: Yeah. And then we have some
2 few years in the 21st Century on the right, some of which
3 are very wet. I believe the one all the way on the
4 furthest right is probably 2011, which was a record wet
5 year; is that correct?

6 WITNESS ANDERSON: It wasn't a record wet year
7 but it was at the wetter end of the distribution.

8 MS. DES JARDINS: The wetter end of the
9 distribution.

10 CO-HEARING OFFICER DODUC: On that note, I hate
11 to stop you.

12 MS. DES JARDINS: Okay.

13 CO-HEARING OFFICER DODUC: All right. We will
14 resume in the morning.

15 Ms. Riddle?

16 MS. RIDDLE: I'd like to suggest that
17 Miss Des Jardins take her slides back and number them and
18 we get some clarification for the record tomorrow and go
19 through what we went through. We were bouncing quite a
20 bit and I think the numbering is a little out of whack,
21 so it would be helpful if we could do that.

22 MS. DES JARDINS: My apologies. I will
23 renumber the Anderson slides and --

24 CO-HEARING OFFICER DODUC: Okay. And,
25 Mr. Mizell?

1 MR. MIZELL: Yes. I've been in contact with
2 all of my engineering witnesses, and we were able to
3 confirm that all of them except for John Bednarski can
4 make it here by tomorrow afternoon, and that would
5 include Mr. Pirabarooban, who was absent previously.

6 CO-HEARING OFFICER DODUC: Right.

7 MR. MIZELL: And Mr. Bednarski can't be here on
8 Tuesday.

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

11 With that, we'll resume at 9 o'clock tomorrow.

12 (Proceedings adjourned at 5:01 p.m.)

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1 State of California)
2 County of Sacramento)

3

4 I, Candace L. Yount, Certified Shorthand Reporter
5 for the State of California, County of Sacramento, do
6 hereby certify:

7 That I was present at the time of the above
8 proceedings;

9 That I took down in machine shorthand notes all
10 proceedings had and testimony given;

11 That I thereafter transcribed said shorthand notes
12 with the aid of a computer;

13 That the above and foregoing is a full, true, and
14 correct transcription of said shorthand notes, and a
15 full, true and correct transcript of all proceedings had
16 and testimony taken;

17 That I am not a party to the action or related to a
18 party or counsel;

19 That I have no financial or other interest in the
20 outcome of the action.

21

22 Dated: August 26, 2016

23

24

25

Candace L. Yount, CSR No. 2737

