1	BEFORE THE
2	CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
3	
4	CALIFORNIA WATERFIX WATER) RIGHT CHANGE PETITION)
5	RIGHT CHANGE PETITION) HEARING)
6	
7	JOE SERNA, JR. BUILDING
8	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
9	BYRON SHER AUDITORIUM
10	1001 I STREET
11	SECOND FLOOR
12	SACRAMENTO, CALIFORNIA
13	
14	PART 1 - REBUTTAL
15	
16	Tuesday, May 9, 2017
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1	APPEARANCES
2	CALIFORNIA WATER RESOURCES BOARD
3	Division of Water Rights
4	Board Members Present:
5	Tam Doduc, Co-Hearing Officer Felicia Marcus, Chair & Co-Hearing Officer
6	Dorene D'Adamo, Board Member
7	Staff Present:
8	Diane Riddle, Environmental Program Manager Dana Heinrich, Senior Staff Attorney Kyle Ochenduszko, Senior Water Resources Control Engineer
10	PART I - REBUTTAL
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14	The U.S. Department of the Interior:
15 16	Amy L. Aufdemberge, Esq.
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18	For California Sportfishing Protection Alliance (CSPA), California Water Impact Network (C-WIN), and AquAlliance:
19	
20	Chris Shutes Michael Jackson
21	For North San Joaquin Water Conservation District:
22	Jennifer Spaletta
23	For The San Joaquin Tributaries Authority (SJTA):
24	Tim O'Laughlin
25	

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1	APPEARANCES (Continued)		
2	For The City of Brentwood, Reclamation District No. 800 (Byron Tract), Brannan-Andrus Levee Maintenance District;		
3	Reclamation District 407; Reclamation District 2067; Reclamation District 317; Reclamation District 551;		
4	Reclamation District 563; Reclamation District 150; Reclamation District 2098, The Sacramento Valley Group		
5	Sacramento Municipal Utility District (SMUD):		
6	David Aladjem		
7	For The City of Roseville, Sacramento Suburban Water District, San Juan Water District, The City of Folsom,		
8	Yuba County Water Agency and The City of Roseville:		
9	Ryan Bezerra		
10	For The Environmental Justice Coalition for Water, Islands, Inc., Local Agencies of the North Delta, Bogle		
11	Vineyards/Delta Watershed Landowner Coalition, Diablo Vineyards and Brad Lange/Delta Watershed Landowner		
12	Coalition, Stillwater Orchards/Delta Watershed Landowner Coalition, Brett G. Baker and Daniel Wilson:		
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20	John Herrick, Esq.		
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22	For County of San Joaquin, San Joaquin County Flood Control and Water Conservation District, and Mokelumne River Water and Power Authority:		
23	Thomas H. Keeling		
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1	APPEARANCES (Continued)
2	For California Water Research:
3	Deirdre Des Jardins
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1	Tuesday	Мази 9	2017	9:30 a m

- 2 PROCEEDINGS
- 3 ---000---
- 4 CO-HEARING OFFICER DODUC: Good morning,
- 5 everyone.
- It is 9:30, and welcome back to the Change
- 7 Petition hearing for the California WaterFix Project.
- 8 I'm Tam Doduc. With me to my right is Board
- 9 Chair and Co-Hearing Officer Felicia Marcus. We'll be
- 10 joined shortly, I believe, by Board Member Dee Dee
- 11 D'Adamo. To my left are Dana Heinrich and Kyle
- Ochenduszko. We're also being assisted today by
- 13 Mr. Baker and Mr. Long.
- 14 Before we proceed, a couple of quick
- 15 announcements:
- 16 As always, in the event of an alarm, we will
- 17 evacuate this room so please identify the exit closest to
- 18 you. Please take the stairs, not the elevator, down to
- 19 the first floor, and we will meet up in the park. If
- 20 you're not able to use the elevators (sic), please flag
- down one of the staff and you'll be directed to a
- 22 protected area.
- This hearing is being recorded, Webcasted, so,
- 24 as always, please speak into the microphone and begin by
- 25 identifying yourself and stating your affiliation.

- Our court reporter is back with us. The
- 2 transcript will be made available by us on our website as
- 3 soon as possible after the conclusion of Part 1. If you
- 4 wish to have the transcript sooner, please make your
- 5 arrangements with her.
- 6 And, finally, and most importantly, please take
- 7 a moment right now and turn all noise-making devices to
- 8 silent, vibrate, do not disturb. Please take a moment
- 9 and double-check.
- 10 You have an issue with silencing noise-making
- 11 devices, Mr. Shutes?
- MR. SHUTES: I do not. I have a procedural --
- 13 CO-HEARING OFFICER DODUC: You are anticipating
- 14 the next item, which is housekeeping matters, before we
- turn to Mr. O'Laughlin for what will be, I'm sure, a
- 16 sizzling cross-examination.
- MR. O'LAUGHLIN: Scintillating.
- 18 CO-HEARING OFFICER DODUC: Miss Spaletta, we
- 19 have received your request to conduct cross-examination
- 20 of this panel for Group 24, approximately 30 minutes, and
- 21 you've been added to the queue.
- MS. SPALETTA: Thank you.
- 23 CO-HEARING OFFICER DODUC: I believe,
- 24 Mr. Aladjem -- I'm going in order. I will get to you,
- 25 Mr. Shutes.

- 1 Mr. Aladjem, you have a procedural issue and
- 2 Mr. O'Laughlin has a procedural -- a housekeeping matter.
- 3 MR. O'LAUGHLIN: Thank you.
- 4 MR. ALADJEM: Chair Doduc, David Aladjem for
- 5 City of Brentwood. Just a housekeeping matter.
- 6 I have coordinated my cross-examination of this
- 7 panel with Mr. Emrick. We are adjacent on the schedule
- 8 and initially the City of Antioch was going to go first.
- 9 We agreed it would be more efficient for the
- 10 cross-examination for me to go first.
- 11 So if it is the Chair's pleasure, we would like
- 12 to rearrange that.
- 13 CO-HEARING OFFICER DODUC: Thank you.
- Mr. O'Laughlin.
- MR. O'LAUGHLIN: Thank you.
- 16 CO-HEARING OFFICER DODUC: Oh, I'm sorry.
- 17 Before someone reminds me, that was a yes to
- 18 Mr. Aladjem's request. I'm very careful about
- 19 responding.
- Mr. O'Laughlin.
- MR. O'LAUGHLIN: Thank you.
- 22 Tim O'Laughlin representing the San Joaquin
- 23 Tributaries Authority.
- 24 My rebuttal witness, Mr. Steiner, may be coming
- 25 up in the next week or so. He is unavailable on the 18th

- 1 for personal reasons.
- 2 And I don't think his testimony is going to
- 3 take very long. His direct rebuttal would be probably
- 4 maybe three minutes at most. And when we get done with
- 5 this panel, I don't think there'll be much cross,
- 6 hopefully, of Mr. Steiner but we would see.
- 7 So I will work with the other parties and the
- 8 State Board staff to schedule him at a time that he is
- 9 available. But if he doesn't get that appointment, he
- 10 has a wait another three or four months, so . . .
- 11 CO-HEARING OFFICER DODUC: Thank you,
- 12 Mr. O'Laughlin.
- MR. O'LAUGHLIN: Thank you.
- 14 CO-HEARING OFFICER DODUC: We look forward to
- 15 getting an update from you as you work out the scheduling
- 16 with the other parties.
- MR. O'LAUGHLIN: Thank you.
- 18 CO-HEARING OFFICER DODUC: Now Mr. Shutes.
- 19 MR. SHUTES: Thank you.
- We received the Exhibit 902 yesterday and we do
- 21 have about 20 to 30 minutes of questions on that.
- 22 A couple of months ago, I made an obligation to
- 23 speak at the ACWA conference tomorrow, and I would
- 24 request that I be able to do the cross sometime today.
- 25 CO-HEARING OFFICER DODUC: We will try to

- 1 accommodate that, Mr. Shutes.
- 2 MR. SHUTES: Thank you.
- 3 MR. O'LAUGHLIN: Can I say something? Sorry to
- 4 interrupt.
- 5 You know, if you want, so -- And this is going
- 6 to go -- Because you're going to probably going to ask me
- 7 a question about how long I'm going to take and what I
- 8 have questions about.
- 9 So I had questions about those previous
- 10 exhibits, and then 902, 903 and whatever came in last
- 11 night.
- 12 I'm happy if Mr. Shutes wants to go first and
- ask all his 903 questions, because I have currently now
- about 20 to 25 minutes on 903, which was going to be
- 15 added to my hour.
- 16 But if you want to just take him right now, get
- 17 him done, get him out, I'm perfectly fine with that.
- 18 CO-HEARING OFFICER DODUC: Are you re --
- MR. O'LAUGHLIN: I'm here all day.
- 20 CO-HEARING OFFICER DODUC: -- prepared,
- 21 Mr. Shutes, to go right now?
- MR. SHUTES: Yes, I am. Thank you.
- 23 CO-HEARING OFFICER DODUC: Then let's do that.
- MR. O'LAUGHLIN: Okay. Thank you.
- 25 CO-HEARING OFFICER DODUC: Thank you,

- 1 Mr. O'Laughlin.
- 2 Mr. Bezerra.
- 3 MR. BEZERRA: Yes. Thank you very much.
- 4 Ryan Bezerra for the Cities of Folsom and
- 5 Roseville, San Juan Water District, Sac Suburban Water
- 6 District.
- 7 I want to alert the Chair that we are working
- 8 through some scheduling issues for the American River
- 9 panel.
- 10 We have gotten caught in something of a
- 11 scheduling pinch. The Bureau of Reclamation scheduled a
- 12 meeting with its CVP contractors regarding costs on this
- 13 Project for Thursday night in Monterey, and so those
- include our representatives who are on that panel.
- 15 So we are attempting to do our level best to
- 16 get that panel on on Friday. So we've talked to North
- 17 Delta Water Agency who has indicated some amenability to
- 18 flip-flopping with that panel, if necessary, so that's
- 19 very much appreciated.
- 20 If -- It may be necessary to split the American
- 21 River panel, which would split rather nicely between the
- 22 Managers and then Mr. Gohring and Mr. Weaver, so I'll
- 23 keep you updated on what we're doing in terms of
- scheduling that panel. But we're doing our level best to
- 25 get it on to Friday.

- 1 CO-HEARING OFFICER DODUC: So, for those who
- 2 are planning for cross-examination, because we -- we have
- 3 a standing practice to give them at least three days'
- 4 notice.
- 5 MR. BEZERRA: Yes.
- 6 CO-HEARING OFFICER DODUC: So they should be
- 7 planning to conduct cross-examination of Group 7 as well
- 8 as North Delta, whatever Group Number North Delta is,
- 9 this week.
- MR. BEZERRA: I believe they're 9.
- 11 CO-HEARING OFFICER DODUC: They're 9.
- MR. BEZERRA: So, again, I'll do my best to
- 13 keep updated but we seem to have gotten caught in a
- 14 scheduling pinch and we'll try to make it work as best we
- 15 can.
- 16 CO-HEARING OFFICER DODUC: All right.
- 17 MR. BEZERRA: Along those lines, I wonder if
- there's a compilation of how much cross was left
- 19 remaining on this panel. It seems like this panel
- 20 could --
- 21 CO-HEARING OFFICER DODUC: I would suspect we
- 22 will continue the cross-examination of this panel until
- 23 tomorrow.
- MR. BEZERRA: Thanks very much.
- 25 CO-HEARING OFFICER DODUC: With any luck, we'll

- 1 wrap up this panel tomorrow, but we'll see how it goes.
- 2 All right. With that, then, I think all the
- 3 housekeeping matters have been addressed for now.
- JOHN LEAHIGH, ARMIN MUNÉVAR,
- 5 NANCY PARKER, PARVIZ NADER-TEHRANI,
- 6 called as witnesses for the Petitioners, having been
- 7 previously duly sworn, testified further as follows:
- 8 CO-HEARING OFFICER DODUC: We will turn to
- 9 Mr. Shutes to continue CSPA, et al.'s, cross-examination.
- 10 MR. SHUTES: Thank you.
- 11 Good morning. Chris Shutes for the California
- 12 Sportfishing Protection Alliance.
- 13 CO-HEARING OFFICER DODUC: I'm sorry. For
- 14 Mr. Baker and Mr. Long, Mr. Shutes had estimated 20
- 15 minutes.
- 16 MR. SHUTES: And my questions are primarily for
- 17 Mr. Leahigh with a couple followups for Mr. Munévar.
- 18 CROSS-EXAMINATION (RESUMED) BY
- 19 MR. SHUTES: Mr. Leahigh, yesterday, DWR
- 20 submitted and served DWR-902, the February 2012 DWR
- 21 Monthly Operations Report, in response to my request
- 22 during cross-examination last Friday. Thank you very
- 23 much for providing this document.
- On May 5th, you represented this document as a
- 25 statement of DWR policy on reservoir operations; is that

- 1 correct?
- 2 WITNESS LEAHIGH: I -- I think what I indicated
- 3 was that this document -- the document you're
- 4 referencing, within that document, it demonstrated the --
- 5 the upstream policy of DWR in terms of managing carryover
- 6 storage in Lake Oroville.
- 7 MR. SHUTES: Very good.
- 8 So I'd like to review -- Could we please bring
- 9 up DWR-902 and look at Page 7.
- 10 And while we're doing that, Mr. Leahigh:
- 11 So what you're telling us, this is not really a
- 12 policy but it demonstrates what you think or what you
- 13 believe the policy is. Is that a fair characterization
- of this document?
- 15 WITNESS LEAHIGH: Yes. It has a -- It has a
- 16 very specific equation in it that essentially implements
- 17 that policy.
- MR. SHUTES: Thank you.
- 19 MR. OCHENDUSKO: We're still working to bring
- 20 it up, Mr. Shutes. Apologize.
- 21 MR. SHUTES: That's fine. Maybe we can do this
- 22 to start without having it in front of us.
- On Page 7 of the document, Mr. Leahigh, there
- 24 are a few acronyms that I'd like to review just so that
- 25 we're all sure we're understanding what they mean. One

- 1 of them is SVI.
- 2 Could you tell us what that means, please.
- 3 WITNESS LEAHIGH: Yes. That's Sacramento
- 4 Valley Index.
- 5 MR. SHUTES: And SRI?
- 6 WITNESS LEAHIGH: Sacramento River Index.
- 7 MR. SHUTES: Very good. And Antco, A-N-T-C-O?
- 8 WITNESS LEAHIGH: That's Anticipated Carryover
- 9 in San Luis Reservoir.
- 10 MR. SHUTES: Anticipated . . .
- 11 WITNESS LEAHIGH: Carryover.
- 12 MR. SHUTES: Carryover in San Luis Reservoir.
- 13 WITNESS LEAHIGH: Correct.
- MR. SHUTES: Very good.
- I really do need the document now.
- 16 (Pause in proceedings.)
- 17 CO-HEARING OFFICER DODUC: I don't suppose
- anyone has that document handy on a flash drive.
- 19 MR. BERLINER: I could e-mail it. E-mail it?
- 20 CO-HEARING OFFICER DODUC: Would that be
- 21 helpful?
- MR. OCHENDUSKO: Yes, please.
- CO-HEARING OFFICER DODUC: Yes, please,
- 24 Mr. Berliner.
- MR. BERLINER: Sure.

1	(Pause in proceedings.)
2	UNIDENTIFIED SPEAKER: Do they also have the
3	other exhibits that came in last night, too?
4	MR. BAKER: We will.
5	UNIDENTIFIED SPEAKER: Okay.
6	(Pause in proceedings.)
7	CO-HEARING OFFICER DODUC: Well, a lesson is
8	learned. Next time, when documents are submitted this
9	late in front of before a Board meeting date, please
LO	do bring it on a flash drive.
L1	(Document displayed on screen.)
L2	MR. SHUTES: There we go. Thank you very much
L3	CO-HEARING OFFICER DODUC: Thank you.
L 4	MR. SHUTES: Could we please turn to Page 8.
L5	(Document displayed on screen.)
L6	MR. SHUTES: And go down to where
L7	Page 8, please.
L8	(Document displayed on screen.)
L9	MR. SHUTES: There we go. And can we zoom in
20	where it says "Reservoir Targets."
21	(Document displayed on screen.)
22	MR. SHUTES: Very good.
23	So, Mr. Leahigh, the line directly below the
24	term "Reservoir Targets," is that the equation you were
25	referring to just a moment ago?

- 1 WITNESS LEAHIGH: Yes, it is.
- 2 MR. SHUTES: Very good.
- 3 And you call it an equation. Let's just call
- 4 it that.
- 5 Would you please explain each term in that
- 6 equation.
- 7 WITNESS LEAHIGH: Sure.
- 8 MR. SHUTES: And -- Okay. Go ahead.
- 9 WITNESS LEAHIGH: Sure. So . . . So this --
- 10 this is an expression of the policy which essentially
- 11 sets the -- for allocation purposes sets the Lake
- 12 Oroville end-of-September storage target. So this would
- be, as you could see, on September 30th.
- So, the target would equal a million acre-feet
- 15 plus the difference between that -- So you see the
- 16 3.045 million acre-feet? That was the storage in Lake
- 17 Oroville from the -- at the end of the previous Water
- 18 Year.
- 19 So the difference between the storage coming
- 20 into the Water Year, subtracting out the million
- 21 acre-feet. So that difference is then multiplied by the
- 22 Table A allocation -- one-half of the Table A allocation.
- 23 And so that -- that is -- that is multiplied to that --
- that difference from the previous year's carryover to a
- 25 million. And then that term is then added to the million

- 1 acre-feet.
- 2 And so -- So, the best way to look at this: If
- 3 you look at the various studies that are immediately
- 4 below that equation. These are -- These -- All these
- 5 rows represent individual studies that an analysis was
- 6 performed on, a potential SWP allocation based on
- 7 different hydrologic exceedances and other parameters.
- 8 The next column over, you can see the Possible
- 9 Table A allocation that's possible under each of those
- 10 scenarios. And then you can see what the storage target
- 11 would be for each of those scenarios as well.
- 12 And so what you could see is, the higher the
- 13 allocation in that Possible Table A column, the -- also
- 14 the higher the storage target.
- So, to put it in perhaps simpler words: The
- 16 additional inflows that we have to work with are divided
- 17 up between making -- putting those inflows towards the
- 18 current year's allocation, but then some -- some of that
- 19 flow is reserved in Lake Oroville as carryover storage
- 20 for the following year.
- 21 And that's that balancing that I've been
- 22 discussing in terms of taking the supply, applying some
- of it to the current year, but then reserving some for
- the following year in the event that it's a dry year.
- 25 And this -- this shows that it is dependent

- 1 upon the State Water Project allocation as I've been
- 2 describing. The higher the allocation, the less
- 3 dependent we would be on the upstream storage in Lake
- 4 Oroville.
- 5 MR. SHUTES: Thank you.
- 6 And where it says, "Possible Table A %," that
- 7 refers to the percentage shown in the column under
- 8 Possible Table A; is that correct?
- 9 So I'm looking at the line in the equation.
- 10 WITNESS LEAHIGH: Yes.
- MR. SHUTES: And "Possible Table A %" refers to
- 12 that column there; is that correct?
- 13 WITNESS LEAHIGH: That is correct.
- MR. SHUTES: Very good.
- 15 And the red number is red because it changes
- 16 year by year and it indicates the end of October storage;
- is that correct?
- 18 WITNESS LEAHIGH: Yeah. It -- In red is the
- 19 3.045 million acre-feet --
- MR. SHUTES: Um-hmm.
- 21 WITNESS LEAHIGH: -- and that's -- Yeah.
- 22 That represents the storage from the previous
- 23 September 30th of the -- so that's the end-of-storage
- from the previous Water Year, September 30th.
- MR. SHUTES: It's September 30th, not

- 1 October 30th.
- 2 WITNESS LEAHIGH: Correct.
- 3 MR. SHUTES: Very good. Thank you.
- Where did this equation come from? What --
- 5 What is the derivation of it?
- 6 WITNESS LEAHIGH: So this -- this equation --
- 7 this particular one . . .
- 8 So, we've had various forms of this throughout
- 9 my tenure with State Water Project operations, so for the
- 10 last 20 years.
- 11 We've had essentially something similar to this
- 12 type of equation as an expression of that policy for at
- 13 least the last 20 years, since I've been involved in my
- 14 current role.
- 15 MR. SHUTES: And when was the last time this
- 16 changed?
- 17 WITNESS LEAHIGH: Well, we are -- One of the
- things we will continuously evaluate is the different
- 19 parameters in here, depending upon reacting to various
- 20 changes in conditions.
- 21 So, for example, we had -- This was actually
- 22 changed when we had an incident at our lower-level outlet
- 23 at Lake Oroville. We were unable to release the very
- lowest flow from the lake, and this was actually
- 25 subsequent to this particular year.

- 1 In order -- We actually made an adjustment to
- 2 this. We -- We increased the -- that very first term,
- 3 the 1.0 million acre-feet. We increased it to reflect
- 4 the higher risk we had in terms of meeting temperature
- 5 requirements, so we actually increased that first term
- 6 temporarily until we had a fix in place. So we had, for
- 7 example, 1.5 rather than 1.0.
- 8 So these terms will vary over time, responding
- 9 to various changes in conditions. But the basic policy
- 10 does not change in terms of linking the carryover storage
- 11 to the actual Table A allocation for any particular year.
- MR. SHUTES: So would you then say that the
- 13 policy is the linking of Table A and carryover storage,
- 14 not the exact numbers in the equation?
- 15 WITNESS LEAHIGH: Yes, I'd -- I'd say that's
- 16 correct.
- MR. SHUTES: Very good.
- 18 And you mentioned the last time the equation
- 19 changed, and that would be 2009? Would that be correct?
- When the low-level outlet had some issues?
- 21 WITNESS LEAHIGH: So, the last time it would
- 22 have changed is when -- We essentially have now a fix in
- 23 place, so I'm trying to remember exactly which year. So
- 24 either last year or the year before were -- we actually
- 25 revised that first number. For this year, we're actually

- 1 using 1.3 million acre-feet rather than 1.0.
- 2 So, like I said, we're continuously
- 3 reevaluating the details of the -- this expression of the
- 4 policy, but the fundamental of the policy -- fundamentals
- of the policy are consistent through time.
- 6 MR. SHUTES: Okay. And those changes are not
- 7 in response to hydrology but in response to physical
- 8 issues with your infrastructure.
- 9 Is that a fair characterization?
- 10 WITNESS LEAHIGH: Well, the example I gave
- 11 was -- the change was made in response to change in
- 12 infrastructure.
- So, part of the reason that, though, we didn't
- 14 go back to a million acre-feet the last time we changed
- 15 this but to 1.3, you know, so it -- We make changes as
- 16 we -- as we learn more in terms of our management
- 17 capabilities.
- 18 I think as a result of not only the drought but
- 19 what we're finding is increased use -- land use base
- 20 changes in terms of additional diversions are being
- 21 taken, for example, for rice decomposition in more recent
- 22 years. We've re-evaluated that -- kind of that floor
- 23 term, which is the first -- the first parameter there,
- and so a combination of those things. In addition, we've
- also looked at capabilities for temperature management.

- 1 And so a combination of these various aspects
- 2 caused us to increase that floor to -- It's now, as I
- 3 said, 1.3 million acre-feet. So it's infrastructural
- 4 changes, it's land use changes, it's -- it could be a
- 5 variety of reasons why we would want to make slight
- 6 adjustments to this -- these guidelines.
- 7 MR. SHUTES: So when you increase that number
- 8 from 1.0 to 1.3, would you characterize that as
- 9 increasing or decreasing the risk tolerance that you have
- 10 for your operation of the reservoir, or neither?
- 11 WITNESS LEAHIGH: Well, I guess risk tolerance
- 12 for what purpose? I need a little more specificity on
- 13 that.
- 14 MR. SHUTES: Well, let's say a risk tolerance
- 15 for having enough water in storage to meet the regulatory
- 16 requirements the following year.
- 17 WITNESS LEAHIGH: Right. So that -- that last
- 18 increase, I think we were trying to maintain at least the
- 19 same level of risk and . . . so this was -- this increase
- 20 that we made was in acknowledgment of these other changes
- 21 that have been occurring in the system and to -- In order
- 22 to try to maintain that same -- the same level of risk,
- 23 that was -- that was the primary reason for the increase.
- 24 And, as I said, it was for -- for a number of -- for
- 25 multiple reasons that we increased that.

- 1 MR. SHUTES: Very good.
- 2 You stated just a moment ago that one of the
- 3 reasons you changed the equation was because of concerns
- 4 about meeting temperature requirements in the lower
- 5 Feather River downstream of Oroville Dam; is that
- 6 correct?
- 7 WITNESS LEAHIGH: Yeah. So it's a combination
- 8 of the use of the river valve to -- It's really more
- 9 linked to the use of the river valve in order to meet the
- 10 temperature requirements.
- 11 We want to position ourselves so that we would
- 12 be less reliant to necessarily have to -- We want to be
- in a position where it's less frequently required to use
- 14 the river valve in order to meet the temperature
- 15 requirements.
- 16 MR. SHUTES: And, if you recall, one of the
- 17 requirements or conditions in the water quality
- 18 certification for the relicensing of the Oroville
- 19 facilities is -- is an anticipated improvement in
- 20 infrastructure in order to allow more reliable release of
- 21 cold water into the lower Feather River.
- 22 Do you recall that?
- MR. BERLINER: Objection: Relevance.
- 24 CO-HEARING OFFICER DODUC: Mr. Shutes.
- 25 MR. SHUTES: I'm trying to understand whether

- 1 potential changes in infrastructure that are already
- 2 anticipated may in themselves occasion a change in this
- 3 equation.
- 4 CO-HEARING OFFICER DODUC: And how does that
- 5 relate to the Petition before us?
- 6 MR. SHUTES: It relates to the -- to the
- 7 carryover storage and the policy that Mr. Leahigh has
- 8 presented about how the reservoir will be operated under
- 9 the California WaterFix, and I'm trying to sort of
- 10 establish the baseline condition.
- 11 CO-HEARING OFFICER DODUC: I'll give you a
- 12 little leeway with that, but you might have to be more
- 13 specific in terms of what these planned activities are
- 14 that you're referring to.
- So objection overruled for now.
- 16 MR. SHUTES: Do you need me to restate the
- 17 question, Mr. Leahigh?
- 18 WITNESS LEAHIGH: Well, there's a lot of
- 19 commitments made in that Settlement Agreement.
- I -- Personally, I did not review that prior.
- 21 I wasn't prepared to answer any questions related to this
- 22 Settlement Agreement, so I'd -- I'd prefer not to since I
- 23 haven't reviewed it recently.
- MR. SHUTES: That's fine, thank you.
- I have a couple questions for Mr. Munévar and

- 1 then I'll be done.
- 2 Excuse me. I have one more for Mr. Leahigh,
- 3 and that is:
- 4 Is this document available on -- on the
- 5 Internet?
- 6 WITNESS LEAHIGH: As far as I know, this
- 7 document is not -- is not available on the Internet.
- 8 MR. SHUTES: And none of the similar documents
- 9 for different months and years are available on the
- 10 Internet, so far as you know?
- 11 WITNESS LEAHIGH: So far as I know, they are
- 12 not.
- MR. SHUTES: Thank you.
- 14 CO-HEARING OFFICER DODUC: Mr. Shutes, are your
- 15 questions for Mr. Munévar also related to this table?
- MR. SHUTES: They are.
- 17 CO-HEARING OFFICER DODUC: Okay. Then proceed.
- 18 MR. SHUTES: Mr. Munévar, did you use this or
- 19 similar documents in developing the code in CalSim II
- 20 that simulates reservoir operations for the State Water
- 21 Project?
- 22 WITNESS MUNÉVAR: We did not use this specific
- 23 document but we did use the same formulation that
- 24 Mr. Leahigh indicated and is on the screen at this point.
- 25 MR. SHUTES: So there is code in CalSim II that

1 effectively achieves the same purpose as this document

- 2 tying reservoir storage targets to exports.
- 3
 Is that a fair characterization?
- 4 WITNESS MUNÉVAR: Yes, it is.
- 5 MR. SHUTES: Where in the CalSim code is that
- 6 particular piece of code located? Could you describe
- 7 that in a way that a -- an experienced Modeler, not
- 8 myself, could find it?
- 9 WITNESS MUNÉVAR: Yes, I can.
- 10 So, it's -- It's within the part of the code
- 11 that sets Rule Curves for -- for upstream reservoirs, and
- 12 there's one called -- I believe it's called
- OroRuleCurve.wresl, something like that.
- MR. SHUTES: Please state that more slowly.
- 15 WITNESS MUNÉVAR: O-R-O rulecurve.wresl.
- 16 MR. SHUTES: Rule curve, and I didn't catch the
- 17 dot --
- 18 WITNESS MUNÉVAR: Dot wresl, W-R-E-S-L.
- I believe that's the file name.
- 20 And it implements this -- this Oroville storage
- 21 target almost identical to what's on the screen.
- MR. SHUTES: Very good.
- 23 And that's all the questions I have. Thank
- 24 you.
- 25 CO-HEARING OFFICER DODUC: Thank you,

- 1 Mr. Shutes.
- 2 Mr. O'Laughlin, before you begin, I'd like to
- 3 take a break for the court reporter as close as possible
- 4 to 10:45, 11 o'clock, during that time period, so I'll
- 5 ask you to find a good time to break in your
- 6 cross-examination.
- 7 MR. O'LAUGHLIN: Sure. No problem.
- 8 Tim O'Laughlin, San Joaquin Tributaries
- 9 Authority.
- 10 We have a housekeeping thing that will
- 11 hopefully expedite my cross-examination, maybe make it go
- 12 faster.
- 13 In the original direct testimony, I had asked
- 14 questions of the United States Bureau of Reclamation
- 15 Modeling Team about what was modeled for San Joaquin flow
- 16 at Vernalis, because that was the input.
- 17 At the time, the witness didn't answer. They'd
- 18 get back to me.
- 19 They never got back to me. That's why we filed
- 20 our rebuttal testimony with Mr. Steiner.
- 21 So I'd ask Reclamation to make -- I don't
- 22 believe Miss Parker is the person to respond to the
- 23 questions because Ms. White was -- did the modeling and
- 24 actually the inputs to the modeling.
- 25 So she's here. We can probably ask her a

- 1 couple quick questions and blow through that section
- 2 rather rapidly.
- 3 CO-HEARING OFFICER DODUC: Any objection?
- 4 MS. AUFDEMBERGE: You know, we looked through
- 5 the testimony this morning and we couldn't find anything
- 6 about getting back to him, so I think this is something
- 7 that should have been cleared up when he had the
- 8 opportunity on case-in-chief cross.
- 9 MR. O'LAUGHLIN: Yeah. But the answer was --
- 10 The person -- So if we want to leave -- I'm trying to
- 11 help the Board here. I'm not trying to be
- 12 obstructionist.
- 13 The question is very simple: Did you -- How
- 14 did you model Vernalis flows? Did you use TUCPs? Did
- 15 you use Table 3? What did you use? And Ms. White
- 16 responded she was uncertain, and I said okay. And then
- we talked afterwards and I was going to get a result.
- 18 I don't have a result. You don't have in front
- 19 of you or knowledge right now of how that was modeled.
- 20 And this is going to go to the very questions
- 21 that go to the rest of the panel here about what water's
- 22 flowing into the Delta from the San Joaquin side and how
- 23 it's being distributed in the Delta and used in the
- 24 Delta.
- 25 So I think it's very important that, if she's

- 1 here and can testify and resolve this issue, we can move
- on rather expeditiously on other matters.
- 3 CO-HEARING OFFICER DODUC: And --
- 4 MR. O'LAUGHLIN: And, in fact, I wouldn't even
- 5 offer my rebuttal testimony if she testifies that --
- 6 depending on how she testifies, that they modeled it
- 7 based on historic conditions.
- 8 CO-HEARING OFFICER DODUC: But is that within
- 9 the scope of the rebuttal testimony that Reclamation is
- 10 proposing to present in this phase?
- 11 MR. O'LAUGHLIN: So, we can do this -- Well, I
- 12 can ask it different. I can go through Miss Parker and
- 13 use Mr. Steiner's testimony and go through all the things
- 14 that Mr. Steiner is proposing in his rebuttal testimony
- about what flows -- how D-1641's being met all the time
- 16 at Vernalis.
- 17 And Miss Parker's going to respond, "I don't
- 18 know. I don't know. I didn't do it."
- 19 And then when we get to the end of it, you're
- 20 not going to see how it was modeled. That seems kind of
- 21 fruitless and pointless to me. But if we're going to do
- 22 that, I'm an attorney. I do a lot of senseless things
- 23 all the time.
- 24 CO-HEARING OFFICER DODUC: Mr. O'Laughlin, my
- 25 understanding, based on, I believe, what was said last

- 1 week, is that Reclamation did not intend to present
- 2 Miss White as a rebuttal witness.
- 3 Actually, that her testimony had been withdrawn
- 4 and you'd not be submitting; is that correct?
- 5 MS. AUFDEMBERGE: Correct.
- 6 And I'd just like to correct the record, that
- 7 you will know how Vernalis' model fits in the modeling
- 8 assumptions in the BA.
- 9 MR. O'LAUGHLIN: Well, that's -- that's --
- 10 CO-HEARING OFFICER DODUC: Mr. --
- 11 MR. O'LAUGHLIN: I'm fine. I'll go through
- this with Miss Parker. Then we'll see how little
- 13 Reclamation -- And then I'm going to -- Just so we're
- 14 clear because I don't like sandbagging people, I'm going
- 15 to move to strike Miss Parker's testimony, because she's
- 16 not going to know anything about this. Because basically
- the person who put all the inputs in is Ms. White.
- I'll go through that. That's fine.
- 19 My time just increased, if I may. Two things
- on the increase: One is going to be this Reclamation
- 21 deal which is going to cause an increase in my
- 22 cross-examination; two, in the exhibits yesterday, I have
- lots of questions about Exhibits 903 through 905.
- 24 And the scope of my inquiry today it is,
- 25 where's the water going?

- 1 CO-HEARING OFFICER DODUC: All right.
- 2 Mr. O'Laughlin, I appreciate --
- 3 MR. O'LAUGHLIN: I'm going to try to be at an
- 4 hour.
- 5 CO-HEARING OFFICER DODUC: I appreciate your
- 6 attempt to be efficient.
- 7 I have come to accept that this has not been --
- 8 not likely to be an efficient process, but as long as
- 9 there is value being added to the record and to our
- 10 decision-making process, you may proceed.
- MR. O'LAUGHLIN: Thank you very much.
- 12 CROSS-EXAMINATION BY
- 13 MR. O'LAUGHLIN: Ms. Parker, Tim O'Laughlin,
- 14 San Joaquin Tributaries Authority.
- 15 So I want to cut to the chase at Vernalis.
- 16 What modeling assumptions were used to -- for
- 17 releases for New Melones Reservoir to meet D-1641 flow
- 18 objectives at Vernalis?
- 19 MS. AUFDEMBERGE: Objection: This is beyond
- the scope of Ms. Parker's rebuttal testimony.
- 21 MR. O'LAUGHLIN: Well, it goes to the very
- 22 essence of her testimony because you have to understand
- 23 the inputs coming into the Delta in order to understand
- 24 her testimony.
- 25 MS. AUFDEMBERGE: Her testimony is about how

- 1 Mr. Bourez manipulated the modeling for -- on behalf of
- 2 Sac Valley Group, and she goes step by step through those
- 3 manipulations. It doesn't have to do with --
- 4 MR. O'LAUGHLIN: Yeah. But --
- 5 MS. AUFDEMBERGE: -- with the --
- 6 MR. O'LAUGHLIN: But I'm going to impeach her
- 7 because she --
- 8 CO-HEARING OFFICER DODUC: Enough.
- 9 MR. O'LAUGHLIN: -- contributed to the model,
- 10 too.
- 11 CO-HEARING OFFICER DODUC: All right. Yeah.
- 12 Mr. Bezerra.
- 13 MR. BEZERRA: Yes. I'd just like to support
- Mr. O'Laughlin on this one.
- Miss Parker's testimony discusses the
- 16 Biological Assessment modeling and the results from that
- 17 modeling in great depth. And the assumptions underlying
- 18 that modeling are all within the scope of her rebuttal
- 19 testimony.
- 20 CO-HEARING OFFICER DODUC: Mr. Aladjem, do you
- 21 concur?
- 22 MR. ALADJEM: David Aladjem, City of Brentwood.
- 23 I do concur. And if Miss Parker is unable or
- unwilling to answer those questions, then I would join
- 25 Mr. O'Laughlin's motion to strike.

1 CO-HEARING OFFICER DODUC: All right. I'm also

- 2 intrigued by Mr. O'Laughlin's proposed lines of
- 3 questioning, so the objection is overruled.
- 4 Miss Parker, please answer to the best of your
- 5 ability.
- 6 WITNESS PARKER: So, let me understand.
- 7 You want to know what the releases from New
- 8 Melones are in the model to meet D-1641 criteria; is that
- 9 correct?
- 10 MR. O'LAUGHLIN: Yes.
- 11 WITNESS PARKER: New Melones releases water to
- 12 meet Table 3 flow criteria at Vernalis.
- 13 New Melones releases to meet dissolved oxygen
- 14 criteria at Ripon that is not necessarily a D-1641
- 15 criteria. It follows on from previous regulatory
- 16 requirements.
- New Melones releases to meet RPA flows at
- 18 Goodwin for -- from the 2009 RPA. That's beyond the 1641
- 19 regulatory environment.
- MR. O'LAUGHLIN: So when you did the
- 21 modeling -- So -- And just so we're clear, RPA flows are
- 22 what? The acronym "RPA," what does that stand for?
- 23 WITNESS PARKER: The reasonable and prudent
- 24 alternative flows for the BO.
- 25 MR. O'LAUGHLIN: And that's Appendix 2E to the

- 1 OCAP BO; is that correct?
- 2 WITNESS PARKER: Yes, I believe so.
- 3 MR. O'LAUGHLIN: Now, when you were doing the
- 4 modeling and these releases were being made, did you do
- 5 these releases based on a historical basis or did you do
- 6 them based on a modeling basis that included -- because
- 7 the modeling starts at -- Let me go back.
- 8 MS. AUFDEMBERGE: Objection.
- 9 MR. O'LAUGHLIN: I'll strike it.
- 10 In 1980, was the OCAP BO Appendix 2E flows in
- 11 existence?
- 12 WITNESS PARKER: No.
- 13 MR. O'LAUGHLIN: Okay. So if you modeled flows
- in 1980 and you put in the OCAP BO Table 2E releases,
- 15 that would be a theoretical operation at that time in --
- MS. AUFDEMBERGE: Objection.
- MR. O'LAUGHLIN: -- 1980; correct?
- 18 MS. AUFDEMBERGE: We've already established
- 19 that Miss Parker did not do the modeling in BA. She
- 20 refers to it in her testimony. But she -- He's now
- 21 asking questions as if she did the modeling.
- 22 MR. O'LAUGHLIN: But who's the person who put
- 23 the inputs to the model?
- 24 CO-HEARING OFFICER DODUC: All right. All
- 25 right. All right. All right.

1 Objection is noted and Mr. -- Miss -- noted but

- 2 overruled.
- 3 And, Miss Parker, to the extent that you can
- 4 answer the question, please do. But if you do not have
- 5 that information and not aware of how the modeling was
- 6 done, then please state that.
- 7 WITNESS PARKER: So, in order to answer your
- 8 question, I think I need to explain the difference
- 9 between doing historical modeling and the use of an
- 10 historical hydrology input dataset in order -- and then
- 11 to superimpose projected or existing criteria.
- 12 So, just taking New Melones as an example, we
- 13 use an inflow time series of hydrology for the Stanislaus
- 14 River. The regulations that are imposed on New Melones
- 15 and on the Stanislaus River for the BA studies are either
- 16 the current condition or the proposed condition.
- 17 In this case for the Stanislaus, those don't
- 18 change, so we have the same exact criteria.
- 19 But the 2E flows are imposed as a requirement,
- 20 but based on an historical trace of inflows to New
- 21 Melones, so in our modeling, what happened in 1980 --
- 22 where modeling, what happened -- what would have happened
- in 1980 if the 2E flows had been a regulatory
- 24 requirement.
- Does that make sense?

- 1 MR. O'LAUGHLIN: Yes, absolutely.
- WITNESS PARKER: Does it answer your question?
- 3 MR. O'LAUGHLIN: Yes.
- 4 WITNESS PARKER: Okay.
- 5 MR. O'LAUGHLIN: Okay. So, anyway -- So,
- 6 here's the point:
- 7 So, when you did your analysis, there are two
- 8 conditions in Table 3 of D-1641 for flow at Vernalis.
- 9 There is the February through June criteria and then
- 10 there's the April-May pulse flow criteria; is that
- 11 correct?
- 12 WITNESS PARKER: I -- I believe so.
- 13 MR. O'LAUGHLIN: Okay. Now, when you did your
- 14 modeling, did you look, based on the releases you were
- 15 making for the OCAP BO Appendix 2E for the releases to
- 16 meet D-1641, did you look at Vernalis itself to see if,
- in fact, D-1641 February-through-June flow objectives
- 18 were being met?
- 19 WITNESS PARKER: I have not reviewed that
- 20 specific operation to ensure that those flows were always
- 21 being met.
- MR. O'LAUGHLIN: Okay.
- 23 WITNESS PARKER: But what I could -- And also,
- I did not do the modeling.
- 25 But my understanding is that, for the BA's

- 1 studies, there was nothing significant that was changed
- 2 about how we model the San Joaquin in and of itself and
- 3 that the same criteria that were in place in, say, the
- 4 2015 long-term op study -- And Armin, correct me if I'm
- 5 wrong here.
- 6 But the same criteria that are pretty standard
- 7 in CalSim runs for the time being were used in the BA
- 8 studies. That does include --
- 9 So the process goes: We kind of pour water in
- 10 the San Joaquin. We meet the 2E flows. And then we --
- 11 we look and see if the criteria for the Table 3 flows are
- 12 being met, given everything else that's happening. If
- 13 there is a deficit there, then New Melones makes up the
- 14 difference.
- 15 What I don't know is whether or not that is
- 16 always met. There are -- There could be conditions if
- 17 New Melones happens to be in a stressed situation where
- 18 they have no water to release, then we'd probably miss
- 19 the Table 3 flows. But given an ability to meet those,
- 20 the model would.
- 21 Does that help?
- MR. O'LAUGHLIN: Yes, absolutely.
- 23 Armin, do you have anything to add to that?
- 24 WITNESS MUNÉVAR: (Shaking head.) No, I do
- 25 not.

- 1 MR. O'LAUGHLIN: Okay. Great.
- 2 So -- Now I have the same question -- Sorry if
- 3 I'm being redundant.
- 4 But there's two criteria. And the second
- 5 criteria is the Table 3 D-1641 April-May pulse flow.
- 6 So would your answer be the same as your
- 7 previous answer in regards to the February-June flow you
- 8 just made in regard to April-May?
- 9 MS. AUFDEMBERGE: I want to renew my objection
- 10 that this is premised on the idea that he did not get an
- answer to this question during our case in chief. And I
- 12 think we have to look -- and we find that where we think
- 13 this is adequately answered.
- 14 So I feel like we're on a false pretense here
- 15 that this has not been adequately addressed in our case
- 16 in chief.
- 17 CO-HEARING OFFICER DODUC: Mr. O'Laughlin.
- 18 MR. O'LAUGHLIN: Well, I think what's great
- 19 about this is that -- I know she doesn't like the answer
- 20 that was just given because --
- 21 CO-HEARING OFFICER DODUC: Mr. O'Laughlin.
- MR. O'LAUGHLIN: Well, no. I just want to make
- 23 this straight.
- 24 MS. AUFDEMBERGE: I'm fine with that answer.
- 25 MR. O'LAUGHLIN: Look -- Because -- Because it

- 1 clearly points out that the --
- 2 CO-HEARING OFFICER DODUC: Okay. Enough.
- 3 Enough.
- 4 MR. O'LAUGHLIN: And --
- 5 CO-HEARING OFFICER DODUC: The objection's --
- 6 MR. O'LAUGHLIN: -- the scope --
- 7 CO-HEARING OFFICER DODUC: Mr. O'Laughlin,
- 8 stop.
- 9 Objection overruled.
- 10 MR. O'LAUGHLIN: These are terrible times.
- 11 CO-HEARING OFFICER DODUC: Proceed,
- 12 Mr. O'Laughlin.
- 13 MR. O'LAUGHLIN: Have you gone back and looked
- 14 at how many times D-1641 at Vernalis, either February
- 15 through June or the April-May pulse flow, was not met in
- 16 the modeling?
- 17 WITNESS PARKER: I have not looked at that, no.
- 18 MR. O'LAUGHLIN: Okay. So, Armin, I've got a
- 19 question for you.
- 20 Has DWR looked at the deficit of what was
- 21 modeled and what was available to meet D-1641 at
- 22 Vernalis?
- 23 WITNESS MUNÉVAR: I'm not aware whether it's
- 24 been done or not.
- 25 MR. O'LAUGHLIN: Okay. Do you know, as you sit

- 1 here today, if there is a deficit between D-1641 flows
- 2 that should have been there and were -- and actually show
- 3 up in the modeling?
- 4 WITNESS MUNÉVAR: I'm not aware of it.
- 5 MR. O'LAUGHLIN: Okay. Thank you.
- 6 Ms. Parker, have you had a chance to review
- 7 Mr. Steiner's testimony?
- 8 WITNESS PARKER: I'm sorry, I really haven't
- 9 yet. I'm supposed to do that but I haven't done it yet.
- MR. O'LAUGHLIN: How opportune.
- Okay. Moving on.
- 12 WITNESS PARKER: Hey, we're not there yet.
- 13 CO-HEARING OFFICER DODUC: Striking that
- 14 commentary from Mr. O'Laughlin.
- MR. O'LAUGHLIN: Can you please pull up
- 16 Mr. Tehrani's DWR-50, Slide 47, please.
- 17 (Document displayed on screen.)
- 18 WITNESS NADER-TEHRANI: What is the slide
- 19 number?
- MR. O'LAUGHLIN: It's right there.
- 21 WITNESS NADER-TEHRANI: Oh.
- 22 CO-HEARING OFFICER DODUC: Slide 50, I believe
- 23 you said?
- 24 MR. O'LAUGHLIN: No. It's DWR-50, Slide 47.
- 25 CO-HEARING OFFICER DODUC: Oh, Slide 47.
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- 1 MR. O'LAUGHLIN: Sorry.
- 2 CO-HEARING OFFICER DODUC: It is up.
- 3 MR. O'LAUGHLIN: Yes, it is.
- I have some -- You prepared this, right,
- 5 Mr. Tehrani, or your --
- 6 WITNESS NADER-TEHRANI: My staff, yes, um-hmm.
- 7 MR. O'LAUGHLIN: I have some questions in
- 8 regards to what this is showing.
- 9 Is there -- On the left-hand side, it talks
- 10 about Vernalis flow in cfs.
- 11 Do you see that?
- 12 WITNESS NADER-TEHRANI: That's correct.
- MR. O'LAUGHLIN: Okay. Now, there's no time
- 14 series associated with the flow, so is that one day, 30
- days, 60 days or 90 days?
- 16 WITNESS NADER-TEHRANI: These -- Every point on
- 17 this plot represents a monthly average flow.
- MR. O'LAUGHLIN: A monthly average flow for
- 19 what month?
- 20 WITNESS NADER-TEHRANI: This plot by itself
- 21 does not specify which month it occurred.
- 22 MR. O'LAUGHLIN: Does this tell us -- So I'd
- 23 have to count up all the dots.
- Does this -- How many years of data does this
- 25 represent?

- 1 WITNESS NADER-TEHRANI: This would be 16 years.
- 2 MR. O'LAUGHLIN: And what years would those be,
- 3 please?
- 4 WITNESS NADER-TEHRANI: This would be Water
- 5 Years 1976 through 1991, so technically there should be
- 6 192 dots.
- 7 MR. O'LAUGHLIN: Hmm. There doesn't look like
- 8 192 dots. That was one of my problems with the graph.
- 9 WITNESS NADER-TEHRANI: Well, if you look down
- 10 at the very bottom, there's a concentration of a number
- of dots, so it's hard to count those dots.
- 12 MR. O'LAUGHLIN: So, if I could -- Basically, I
- 13 could look -- Like, if I looked in the upper right-hand
- 14 corner right under Boundary 1, there's two dots up there
- and they appear to be right around 28,000, 29,000.
- Those appear to be individual dots of
- individual months; correct?
- 18 WITNESS NADER-TEHRANI: That's correct.
- 19 MR. O'LAUGHLIN: Okay. So if -- And I agree
- 20 with you. If the time series is 192 dots, I can count
- 21 all the individual dots and then basically the cluster in
- the left would be what's left over; correct?
- 23 WITNESS NADER-TEHRANI: Technically, yes.
- MR. O'LAUGHLIN: Ballpark.
- 25 WITNESS NADER-TEHRANI: That's correct.

- 1 MR. O'LAUGHLIN: Okay. Now -- And this is
- 2 for -- If I understand your testimony correctly, this is
- 3 every month of every year from 1976 through 1991;
- 4 correct?
- 5 WITNESS NADER-TEHRANI: Water Years, yes, sir,
- 6 um-hmm.
- 7 MR. O'LAUGHLIN: And -- Thank you. You're --
- 8 You're better than my sidekick.
- 9 So my next question was, this is based on Water
- 10 Years; correct?
- 11 WITNESS NADER-TEHRANI: That's correct.
- MR. O'LAUGHLIN: Thank you.
- 13 Now, did -- Down at the bottom, it talks about
- 14 "Volumetric Fingerprint."
- 15 Can you explain to me what volumetric
- 16 fingerprint means?
- 17 WITNESS NADER-TEHRANI: This is based on DSM-2
- 18 fingerprinting analysis.
- 19 So the model basically looks at the water
- 20 quality at City of Antioch in terms of -- of not
- 21 necessarily what the EC or chloride concentration is.
- 22 Imagine if you take a bucket of water for that
- 23 single month. We asked the model what fraction of that
- 24 water came from San Joaquin River. So if that -- You
- know, based on a monthly average basis.

- 1 So if 30 percent of that volume or that bucket
- 2 is from San Joaquin, we called that 30 percent
- 3 contribution from San Joaquin.
- 4 MR. O'LAUGHLIN: Okay. And it's 30 percent --
- Is it 30 percent of the makeup of the water? It's not
- 6 based on the volume. So, in other words, when I'm
- 7 looking at this graph -- Let's go to an outlier. Makes
- 8 it easier.
- 9 If I'm at 60 percent, I'd go up the graph and
- 10 there's an outlier here right under 20,000 cfs. That
- just tells me that 60 percent of -- let's call it an
- 12 acre-foot of water at Antioch is going to come from the
- 13 San Joaquin but it's not telling me that Antioch took
- 14 18,000 cfs and 60 percent of it was the San Joaquin;
- 15 correct?
- 16 WITNESS NADER-TEHRANI: No, it does not say
- 17 that.
- 18 MR. O'LAUGHLIN: So -- So I can understand
- 19 this, then, from the standpoint, at that point in time,
- on that dot, at 60 percent, roughly around 18,000 cfs in
- 21 that month from that year at the Antioch intake, roughly
- 22 60 percent of the water was from the San Joaquin River
- 23 that they took at their intake.
- 24 WITNESS NADER-TEHRANI: That's correct, keeping
- 25 in mind that the water that shows up at Antioch -- Let's

- 1 take the month of May of 1980, for an example.
- 2 MR. O'LAUGHLIN: Okay.
- 3 WITNESS NADER-TEHRANI: It may not have been
- 4 through the Delta in the month of May. It might have --
- 5 It might be water that actually entered the Delta in the
- 6 prior month or the month before that.
- 7 That's just how the Delta works.
- 8 MR. O'LAUGHLIN: You know what's scary about
- 9 talking to you is, you sound almost like Dr. Paulsen, and
- 10 I mean that as a compliment.
- 11 CO-HEARING OFFICER DODUC: Mr. O'Laughlin, you
- just read my mind.
- MR. O'LAUGHLIN: I know. It's scary.
- So I have a question about the time series,
- 15 then.
- 16 So I'm looking at this chart and graph, and
- 17 based on your experience, knowledge and expertise of
- doing DSM-2, does the residency time in the Delta for
- 19 water coming from the San Joaquin River increase with
- 20 higher volumes or does it decrease with -- with volume?
- 21 So if you have really low flows in the -- in
- 22 the -- on the San Joaquin River, does the residency time
- 23 of those -- those waters last longer in the South Delta?
- Or if you have really high flows, do they last longer in
- 25 the Delta?

- 1 WITNESS NADER-TEHRANI: I think you really have
- 2 to focus on which part of the Delta you're referring to
- 3 in terms of --
- 4 MR. O'LAUGHLIN: Antioch. I'm going to keep it
- 5 to Antioch.
- 6 WITNESS NADER-TEHRANI: So can you repeat the
- 7 question one more time, please.
- 8 MR. O'LAUGHLIN: Sure. I'm just trying to get
- 9 a general understanding -- Why don't you just do this for
- 10 me and for the Board.
- 11 Can you just generally explain how residency
- 12 times of San Joaquin River flows work as they move
- 13 through the Delta --
- MR. BERLINER: Objection: Beyond the scope.
- 15 MR. O'LAUGHLIN: -- in low-flow positions and
- 16 high-flow.
- 17 CO-HEARING OFFICER DODUC: Hold on. There's an
- 18 objection.
- 19 Mr. Berliner.
- MR. BERLINER: This goes beyond
- 21 Dr. Nader-Tehrani's rebuttal testimony.
- MR. O'LAUGHLIN: Well, it goes -- Exact --
- 23 Well, he just explain that it didn't. The problem is, as
- 24 you look at these dots, the dots have embedded within
- 25 them a residency time of flows that occurred in previous

- 1 months that make up the dots in the graph.
- 2 We have to try to understand that residency
- 3 time so that we can understand what those dots mean on
- 4 the graph.
- 5 CO-HEARING OFFICER DODUC: Objection overruled.
- 6 WITNESS NADER-TEHRANI: So, would you mind,
- 7 please, repeating the question one more time. I have a
- 8 short memory span.
- 9 MR. O'LAUGHLIN: I just want to -- Actually, I
- 10 want you to help us.
- So, you're the foremost expert --
- 12 (Document handed to Mr. O'Laughlin.)
- MR. O'LAUGHLIN: Thank you.
- You're the foremost expert on this in these
- 15 proceedings, and I just want a general understanding so
- we all understand when we're looking at this.
- 17 Can you explain how San Joaquin River residency
- 18 time works in the Delta at a low flow and at a high flow
- 19 so we can kind of understand: Is it one day? Is it 60
- 20 days? How does that work?
- 21 WITNESS NADER-TEHRANI: In relation to Antioch.
- MR. O'LAUGHLIN: Yes.
- 23 WITNESS NADER-TEHRANI: Okay. So I guess, in
- 24 general, at higher flows, it takes water less time to
- 25 arrive at Antioch. At low flows, it just takes longer.

- 1 I cannot put a numerical value because there are other
- 2 parameters that are -- affect that residence time and
- 3 that's the tide.
- 4 You go through spring mean cycle and that
- 5 really affects -- especially in the San Joaquin River, it
- 6 affects the amount of time it takes for the water from
- 7 San Joaquin to arrive at Antioch.
- 8 And as a . . . The testimony for Antioch
- 9 showed, during dry time and critical times, it -- very
- 10 little of San Joaquin actually gets there.
- 11 So, you know, in terms of the speed of -- you
- 12 know, the length of time it takes, just higher flows,
- 13 less time; lower flows, more time. And it actually at
- 14 times may not even get there.
- MR. O'LAUGHLIN: Thank you.
- 16 Now, in regards to your -- When you were doing
- 17 that explanation, does -- And we're going to talk about
- 18 this in more detail when we get to your Head of Old River
- 19 barrier issues.
- 20 Did you include an operation of Old River
- 21 barrier, or are you thinking there's no barrier and this
- 22 is kind of an unadulterated kind of operation in the
- 23 Delta when you made those statements?
- 24 WITNESS NADER-TEHRANI: The statements I made
- 25 is irrespective of the Head of Old River operation.

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1 MR. O'LAUGHLIN: Okay. Thank you.
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- 2 Can you pull up Exhibit -- I think it's Page 46
- 3 where we broke this down by year data, which was
- 4 Dr. Paulsen's fingerprinting.
- 5 (Document displayed on screen.)
- 6 MR. O'LAUGHLIN: There it is.
- 7 So I have a couple questions on this. It
- 8 says -- You did not do this. This is Antioch's exhibit;
- 9 correct?
- 10 WITNESS NADER-TEHRANI: The modeling, she did
- 11 not do. She just post-processed the information. That's
- 12 my understanding.
- 13 MR. O'LAUGHLIN: Okay. And so let's look at
- 14 San Joaquin River Water Year -- Critical Water Year.
- 15 And it basically shows little or no water
- 16 reaching Antioch's intake; is that correct?
- 17 WITNESS NADER-TEHRANI: From San Joaquin River,
- 18 yes.
- 19 MR. O'LAUGHLIN: Okay. Now, based on your
- 20 experience, knowledge and expertise as a Modeler in the
- 21 Delta, do you have any basis to disagree with that
- depiction in the graph?
- 23 WITNESS NADER-TEHRANI: No.
- MR. O'LAUGHLIN: No.
- 25 Would you agree with the depiction with the

- 1 graph?
- 2 WITNESS NADER-TEHRANI: That would be
- 3 consistent with my knowledge of how the Delta works.
- 4 MR. O'LAUGHLIN: So I'm wondering, when you
- 5 look at this -- Here's -- So here's my question:
- 6 If Vernalis has water flowing in in a critical
- 7 year, what happened to all the water that flowed into the
- 8 San Joaquin River in the Delta?
- 9 WITNESS NADER-TEHRANI: Well, typically, in
- 10 critical Water Years, the flow at Vernalis is lower than
- 11 other Water Year types, so some of that water is used
- 12 in-Delta -- for in-Delta use.
- 13 Some of that water goes to Head of Old River,
- 14 which part of that water could technically be exported by
- 15 CVP and SWP in the South Delta facility.
- 16 And then some of that water will, again,
- 17 continue on the main stem of San Joaquin River.
- 18 Then, once they get to Turner Cut and Columbia
- 19 Cut, some of that water will turn left and some of that
- 20 water just keeps going, you know, towards the -- towards
- 21 the bay.
- 22 Typically, though, during summertime,
- 23 especially the in-Delta use are much higher as -- in the
- 24 Delta, so technically a large portion of that water could
- 25 be actually picked up by the Delta -- in-Delta use, the

- 1 farm activity and so forth.
- 2 MR. O'LAUGHLIN: Did you do any modeling of
- 3 the -- particle tracking modeling of what year was being
- 4 diverted during what months at -- at either the CVP
- 5 facility or the SWP facility in the South Delta?
- 6 WITNESS NADER-TEHRANI: The PTM would not
- 7 necessarily be the right tool.
- 8 MR. O'LAUGHLIN: What tool would be?
- 9 WITNESS NADER-TEHRANI: It would be the same,
- 10 fingerprinting.
- MR. O'LAUGHLIN: Same fingerprinting as was
- 12 done here?
- 13 WITNESS NADER-TEHRANI: Yes. The same analysis
- 14 would be the useful tool to assist to what you are
- 15 describing.
- MR. O'LAUGHLIN: Okay. So . . .
- 17 If we could go back to the previous slide very
- 18 quickly, Number 47.
- 19 (Document displayed on screen.)
- MR. O'LAUGHLIN: Thank you.
- 21 Have you -- And one of the things that's -- I'm
- 22 trying to understand.
- 23 So we had the previous graph where we had
- 24 San Joaquin River Water Years, critical years and then a
- 25 dry year, a normal year and then a wet year.

- 1 If you were to look at this graph, how would
- 2 you characterize the blue dots on the axis that are below
- 3 5,000? Would you characterize those as Critical Water
- 4 Years or Dry Water Years, Normal Water Year or a Wet
- 5 Water Year?
- 6 WITNESS NADER-TEHRANI: It could be either.
- 7 MR. O'LAUGHLIN: Okay. Because, in fact, based
- 8 on this graph, you could have 5,000 cfs occur in a Wet
- 9 Water Year in February and then, the next month, it could
- 10 be 20,000 cfs; correct?
- 11 WITNESS NADER-TEHRANI: It could -- It varies,
- 12 basically, um-hmm.
- MR. O'LAUGHLIN: Okay. But would your
- 14 statement be that, if flows are below 5,000 cfs, that
- 15 little or no water from the San Joaquin River makes it to
- 16 Vernalis?
- 17 WITNESS NADER-TEHRANI: Well, there -- I see --
- 18 MR. O'LAUGHLIN: I mean, not to Vernalis. To
- 19 Antioch. Sorry. Excuse me.
- 20 WITNESS NADER-TEHRANI: Thank you for
- 21 correction.
- MR. O'LAUGHLIN: Sure.
- 23 WITNESS NADER-TEHRANI: Just looking at this
- 24 plot, I see at least one month where the flow is below
- 5,000 and it indicates to me that is roughly 16,

- 1 17 percent of that water arrive at Antioch. Keep in mind
- 2 as I said, that water arriving at Antioch, it may have
- 3 arrived at a prior month. So don't know the information
- 4 for what the flow was like in the prior month.
- 5 What this -- What this plot is trying to
- 6 represent is that . . . the higher the flow at Vernalis,
- 7 the higher the contribution of water from San Joaquin
- 8 would be at Antioch.
- 9 And at the very low flows, let's say lower than
- 10 a thousand, 2,000 cfs, very little of that water would
- 11 arrive at Antioch, in general sense.
- 12 Now, there could be exceptions, but that's kind
- of the trends that you see here.
- MR. O'LAUGHLIN: Thank you. That's very
- 15 helpful.
- 16 Okay. Can you just pull up SGT -- SJTA-2005
- and scroll to Page 746, please.
- 18 (Document displayed on screen.)
- 19 MR. O'LAUGHLIN: 746. Sorry about that.
- 20 (Document displayed on screen.)
- 21 MR. O'LAUGHLIN: There we go. Thank you.
- 22 Okay. I will represent to you that
- 23 Miss Paulsen did these graphs, water inflow entering the
- 24 Delta from February 1 to June 30th, the runs for Water
- Year depicted there, '66 and '88 using DSM-2.

1 Do you -- If you saw these graphs and looked at

- 2 the percentages, would you have any questions or comments
- 3 or concerns that the graphs would not accurately
- 4 represent the amount of percentage of San Joaquin River
- 5 water being diverted by the exporters?
- 6 WITNESS NADER-TEHRANI: I would say I don't
- 7 have enough information to make that assessment.
- 8 MR. O'LAUGHLIN: But generally, based on your
- 9 previous statement, if water is moving down Old River, it
- 10 first comes in contact with the CVP facility; is that
- 11 correct?
- 12 As a diversion point?
- 13 WITNESS NADER-TEHRANI: Well, depends on
- 14 from -- from the Head of Old River, then it has an
- opportunity to go to Middle River, Grant Line or Old
- 16 River.
- 17 And beyond that, yes, then it will reach -- You
- 18 know, it has -- there is an opportunity for that water to
- 19 be picked up by CVP. There is an opportunity for that
- 20 water to be going through Clifton Court Forebay.
- 21 MR. O'LAUGHLIN: Isn't one of the problems,
- 22 even though with water going down Old River, even if it
- 23 goes to Grant Line or Middle River, one of the problems
- that you have, reverse flows on Old and Middle River,
- 25 which is basically San Joaquin River water circling back

- 1 around and going back to the pumps; is that correct?
- 2 WITNESS NADER-TEHRANI: The reverse flows do
- 3 not occur year-round.
- 4 MR. O'LAUGHLIN: Okay. But they do occur.
- 5 WITNESS NADER-TEHRANI: They do occur, yes.
- 6 MR. O'LAUGHLIN: And when they do occur, that's
- 7 basically San Joaquin River water heading back toward
- 8 Clifton Court and Jones; correct?
- 9 WITNESS NADER-TEHRANI: With the higher reverse
- 10 flows at Old and Middle River, then it makes higher
- 11 probability for the water going through Head of Old River
- 12 to actually going to the pumps.
- MR. O'LAUGHLIN: Now, leaving these diagrams
- 14 up.
- 15 Do you have -- Leaving aside the CVP and SWP
- 16 pumping percentages, do you have any basis to disagree,
- 17 based on your knowledge of the San Joaquin River flows,
- 18 how much water actually flowed to the Delta during those
- 19 year types, which is represented in 1966 by .2 percent?
- 20 WITNESS NADER-TEHRANI: As I said, I don't have
- 21 enough information to give you an answer on that.
- MR. O'LAUGHLIN: Right. Thank you.
- 23 What time did you say again you want to stop?
- 24 I forgot. Was it 10:45? For the court reporter?
- 25 CO-HEARING OFFICER DODUC: Around then.

- 1 MR. O'LAUGHLIN: Okay. I think I can get
- 2 started, then.
- While we're on -- Can you pull up Mr. Tehrani's
- 4 PowerPoint again -- I forget which slide it was -- with
- 5 regard to Head of Old River Barrier. 40 -- I don't have
- 6 it right here in front of me. It's right at the back.
- 7 Do you have the number on that?
- 8 MR. LONG: Can you tell me which --
- 9 CO-HEARING OFFICER DODUC: Yeah. I forget
- 10 which slide it is.
- 11 WITNESS NADER-TEHRANI: It's in the beginning,
- 12 Slide 3 -- starting from Slide Number 3.
- 13 MR. O'LAUGHLIN: Yeah, that would be fine.
- 14 Thank you.
- 15 (Document displayed on screen.)
- 16 MR. O'LAUGHLIN: So I just have a couple quick
- 17 questions about Head of Old River Barrier.
- 18 What is -- So the Board understands this, can
- 19 you briefly explain what the Head of Old River Barrier
- 20 is.
- 21 WITNESS NADER-TEHRANI: San Joaquin River water
- 22 moving from Vernalis towards north -- downstream. At
- 23 some point, it arrives at a junction of Old River.
- 24 And so the Head of Old River, there -- you
- 25 know, there can be a barrier to -- to block either

- 1 completely or a portion of that water entering the Head
- of Old -- moving that water going through Old River.
- 3 MR. O'LAUGHLIN: Okay. And that -- The Head of
- 4 Old River Barrier, if you understand correctly, is put in
- for fish protection, to keep fish moving in a downstream
- 6 direction past the deep-water ship channel and out the
- 7 main stem of the San Joaquin to the Delta -- I mean,
- 8 through the Delta and out to the bay; correct?
- 9 WITNESS NADER-TEHRANI: That's my
- 10 understanding, yes.
- 11 MR. O'LAUGHLIN: Now, when you were -- When you
- 12 did these modelings for the Head of Old River Barrier,
- what was, A, the design of the Head of Old River Barrier?
- 14 Because you talked about that the design could fully
- 15 block or partially block.
- Are you aware that, like, there's been a
- 17 permanent rock barrier, a barrier with culverts and
- 18 sundry other?
- 19 So maybe you can -- Rather than me ask a bunch
- of questions, just briefly explain how the Head of Old
- 21 River barrier was designed and operated in the modeling.
- 22 WITNESS NADER-TEHRANI: In the real world,
- there have been many years where we have had rock
- 24 barriers at the front of Head of Old River.
- 25 Under California WaterFix, as I understand it,

- 1 there's a proposed permanent, you know, operable gate
- 2 that's -- for the Head of Old River. So all the runs
- 3 that are done based on California WaterFix are based on
- 4 that operable gate. As such, an operable gate has the
- 5 flexibility to be partially open or fully open.
- 6 So that's the way they're -- they have been
- 7 simulated in the model as opposed to the No-Action where
- 8 it was assumed that there would simply be a rock barrier
- 9 with a specific operation period.
- 10 MR. O'LAUGHLIN: Okay. Now, on the Head of Old
- 11 River Barrier, you testified earlier about an aggressive
- 12 operation versus the No-Action Alternative.
- 13 Is there some place we can look to see how the
- 14 Head of Old River Barrier the operational criteria are
- 15 being modeled for the California WaterFix?
- 16 WITNESS NADER-TEHRANI: Armin, do you have --
- 17 Armin --
- 18 MR. O'LAUGHLIN: Oh, Armin can. Okay. Thank
- 19 you.
- 20 WITNESS MUNÉVAR: I can help with the
- 21 reference. So it's --
- MR. O'LAUGHLIN: Okay.
- 23 WITNESS MUNÉVAR: It was DWR-515 that was
- 24 presented in -- in the case in chief, which --
- MR. O'LAUGHLIN: Okay.

- 1 WITNESS MUNÉVAR: -- was the summary of the
- 2 operations.
- 3 MR. O'LAUGHLIN: Thank you very much.
- 4 WITNESS NADER-TEHRANI: Just to make it clear,
- 5 the reference I made, I referenced to being aggressive
- 6 operation was in reference to Boundary 2 for the months
- 7 of March, April and May.
- 8 MR. O'LAUGHLIN: Thank you.
- 9 Now, generally, can you describe what the water
- 10 quality is like on Old River or Middle River or Grant
- 11 Line if the Head of Old River Barrier is fully open as
- 12 opposed to closed. And just generally, or if you want,
- we can do, like, late summer or early spring.
- 14 Because my understanding is, if the Head of Old
- 15 River Barrier's closed and more water is coming from the
- 16 Sacramento River, that generally water quality in the
- 17 Southern Delta gets better whereas if you have the
- 18 heavy --
- 19 WITNESS NADER-TEHRANI: Did you say Sacramento
- 20 River?
- 21 MR. O'LAUGHLIN: Yeah, Sacramento River.
- 22 WITNESS NADER-TEHRANI: I'm sorry. I lost
- 23 track. Would you mind repeating the question.
- 24 MR. O'LAUGHLIN: Sure. I'll go back. That was
- 25 rather long-winded.

- 1 Can you describe for me the water quality
- 2 conditions in the Southern Delta if the Head of Old River
- 3 Barrier is closed and flows of 5,000 cfs are in the main
- 4 stem of the San Joaquin River. Water quality.
- 5 WITNESS NADER-TEHRANI: And by water quality,
- 6 you mean in South Delta downstream of Head of Old River
- 7 Barrier.
- 8 MR. O'LAUGHLIN: Yes.
- 9 WITNESS NADER-TEHRANI: So the water that would
- 10 be remaining there is from whatever time that was, you
- 11 know, before that -- Old River was -- the barrier was
- 12 placed.
- 13 So once the barrier is placed, then there is a
- 14 potential for some of the water that's coming from, you
- 15 know, the north -- you know, from Sacramento River to
- 16 actually get there.
- But, yeah, so I don't know -- I don't know if
- 18 that answered that question.
- MR. O'LAUGHLIN: Okay.
- 20 WITNESS NADER-TEHRANI: You're -- You're asking
- 21 for water quality, then it really depends on the quality
- of water that's coming from the north.
- 23 MR. O'LAUGHLIN: Okay. When you were -- If you
- 24 were to look at particle -- If you were to look at the
- 25 fate of water in the South Delta and you were trying to

- 1 ascertain what percentage of water was being diverted at
- 2 Jones from the San Joaquin River, you would have to
- 3 understand what the Head of Old River Barrier operations
- 4 were doing during that time period; is that correct?
- 5 WITNESS NADER-TEHRANI: The Head of Old River
- 6 Gate operation would affect a fraction of volume of
- 7 San Joaquin, and that would be it.
- 8 MR. O'LAUGHLIN: I'm done with Mr. Tehrani and
- 9 if you want --
- 10 WITNESS NADER-TEHRANI: There is one
- 11 clarification I want to make if that's okay.
- 12 CO-HEARING OFFICER DODUC: Please.
- MR. O'LAUGHLIN: Yeah.
- 14 WITNESS NADER-TEHRANI: So referring back to
- 15 that Antioch . . .
- 16 MR. O'LAUGHLIN: Is this Page 46 or 47?
- 17 CO-HEARING OFFICER DODUC: Page 47.
- 18 WITNESS NADER-TEHRANI: Yes.
- MR. O'LAUGHLIN: Which one? 46 or 47?
- 20 WITNESS NADER-TEHRANI: Hold on a second. Can
- 21 you bring -- Yeah, that's the one.
- 22 So I think you asked me a question about what
- 23 happens during the low flows, and I -- and I made a
- 24 statement that very little of that water will get to
- 25 Antioch.

- And I want to correct myself just to say that
- this -- the fingerprinting by itself does not, you know,
- 3 say what fraction of San Joaquin River actually arrives
- 4 at Antioch. It just -- It just specified of the water
- 5 that's in Antioch, what fraction was from San Joaquin
- 6 River?
- 7 So, by itself, this particular plot does not
- 8 say what fraction of the river flow itself actually
- 9 arrives at Antioch, if that makes sense.
- 10 CO-HEARING OFFICER DODUC: You'll have to
- 11 repeat that again for me.
- 12 WITNESS NADER-TEHRANI: Okay. So -- Yeah,
- 13 that's very quick tricky. So, you know, I just want to
- 14 make sure I set the record straight.
- 15 So just imagine, you know, if you just take a
- 16 bucket of water from Antioch, and if I was able to trace
- 17 what -- what part of the molecules of -- that water at
- 18 City of Antioch, what fraction came from Sacramento
- 19 River, what fraction came from San Joaquin, that's all it
- 20 says.
- 21 There is no indication -- This analysis by
- 22 itself does not say what fraction of San Joaquin River
- 23 water actually made it to Antioch. There is a difference
- in there.
- 25 MR. O'LAUGHLIN: Yeah. That's a very good --

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1 CO-HEARING OFFICER DODUC: Thank you.
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- 2 MR. O'LAUGHLIN: -- explanation.
- 3 CO-HEARING OFFICER DODUC: Good time for a
- 4 break, Mr. O'Laughlin?
- 5 MR. O'LAUGHLIN: Yes. I'm done with
- 6 Mr. Tehrani.
- 7 CO-HEARING OFFICER DODUC: And when we return,
- 8 you have additional questions for which witnesses?
- 9 MR. O'LAUGHLIN: I have Mr. Leahigh and I think
- 10 I have some -- Most of Armin's -- Armin's questions have
- 11 been answered. I probably have half an hour, 45 minutes.
- 12 CO-HEARING OFFICER DODUC: For Mr. Leahigh?
- MR. O'LAUGHLIN: Yes.
- 14 CO-HEARING OFFICER DODUC: Okay. Let's take
- our break and resume at 11 o'clock.
- MR. O'LAUGHLIN: Thank you.
- 17 (Recess taken at 10:45 a.m.)
- 18 (Proceedings resumed at 11:00 a.m.)
- 19 CO-HEARING OFFICER DODUC: All right. It is
- 20 11 o'clock. We are resuming, so please take your seats.
- But, first, Mr. Bezerra.
- 22 MR. BEZERRA: Yes. Thank you very much.
- I have a question about exhibits that have been
- 24 produced and when.
- 25 On April 19th, we received a letter from

- 1 Petitioners that indicated they were posting modeling
- data files that were given the numbers DWR-901, 902, 903
- 3 and 904, and then there was discussion this morning about
- 4 further documents that were produced yesterday that also
- 5 had Exhibit Numbers 902, 903 and succeeding.
- 6 So I'm wondering exactly what's going on and
- 7 which exhibits are what, because -- I mean, if nothing
- 8 else, we have to keep exhibit numbers straight.
- 9 CO-HEARING OFFICER DODUC: The exhibits that
- 10 were released yesterday were in response to Mr. Schutes'
- 11 cross-examination that he conducted on Friday.
- MR. BEZERRA: Yeah, but they're the same
- 13 number.
- 14 CO-HEARING OFFICER DODUC: Oh, the same number.
- 15 MR. BEZERRA: They seem to all have the-- They
- seem to have the same exhibit numbers of files that
- 17 Petitioners said they were posting in the April 19th
- 18 letter.
- 19 CO-HEARING OFFICER DODUC: I can't help with
- 20 that.
- Ms. McGinnis.
- 22 MS. McGINNIS: Robin McGinnis for California
- 23 Department of Water Resources.
- 24 I'd have to look at the updated Exhibit List
- 25 which we served yesterday afternoon. I believe the

- 1 modeling files are 900A and B, and then we served -- 901
- was some of the spreadsheets that Ms. Sergent relied on,
- 3 902 was the report we were talking about this morning,
- 4 and then 903 to 906 were the data tables that
- 5 Mrs. Spaletta had requested.
- 6 MR. BEZERRA: We need to clear this up because,
- 7 among other things, I used cross-examination exhibits
- 8 that were derived from modeling files that Petitioners
- 9 posted as described in the April 19th letter that I
- 10 believe were described as DWR-901, and we're going to
- 11 have a real mess if we have overlapping exhibit numbers.
- MR. BERLINER: I can offer --
- 13 MS. McGINNIS: Maybe we can all look at that
- 14 April 19th letter. I'm not familiar with it.
- 15 CO-HEARING OFFICER DODUC: All right. We will
- 16 flag it for now, Mr. Bezerra.
- MR. BEZERRA: Thank you.
- 18 CO-HEARING OFFICER DODUC: I will ask
- 19 Ms. McGinnis and Petitioners to take a look at the
- 20 exhibits and Exhibit Lists and provide any necessary
- 21 correction, in particular, in reference to the exhibit
- 22 that Mr. Bezerra used in his cross-examination, which he
- 23 referred to as 901.
- MS. McGINNIS: Okay. I will check on the list.
- 25 MR. BEZERRA: Just for clarity of the record,

- 1 the exhibits I'm referencing are Exhibits BKS-103 and
- 2 BKS-104, which are modeling results from the Biological
- 3 Assessment modeling.
- 4 Under cross-examination, Miss Parker confirmed
- 5 those were, in fact, results from the Biological
- 6 Assessment modeling, so that's all clean.
- 7 My understanding was the Biological Assessment
- 8 modeling was DWR-901. I just want to make sure we're
- 9 clean on what the record is as to what came from where.
- 10 MS. McGINNIS: It appears that we need to
- 11 update our Exhibit List, which we'll do as soon as
- 12 possible.
- 13 CO-HEARING OFFICER DODUC: Thank you.
- MR. BEZERRA: And not to overemphasize this,
- 15 but we already have cross-examination this morning
- 16 referring to DWR Exhibit 902, which I guess was produced
- 17 yesterday, so this is -- this is something we ideally
- 18 should clean up right away so the people conducting
- 19 cross-examination based on DWR-902 can refer to the
- 20 correct exhibit.
- 21 CO-HEARING OFFICER DODUC: 902 is 902. Has
- 22 there been another 902 which was discussed before today?
- MR. O'LAUGHLIN: Yes.
- 24 MR. BEZERRA: Yes.
- 25 MS. McGINNIS: It's been 901 through 904 or '5.

- 1 MR. O'LAUGHLIN: It looks like '5.
- 2 CO-HEARING OFFICER DODUC: Help.
- 3 MR. O'LAUGHLIN: Well, I don't want to ask
- 4 questions about -- I have a ton of questions on 905 and I
- don't want to ask questions on 905 which is the stuff
- 6 that was sent in yesterday and have it misrepresented in
- 7 the record that it's 905 from the April 19th submittal.
- 8 So I -- I did agree with Mr. Bezerra that we
- 9 should get it clarified as to what exhibits are currently
- in the record and what they're labeled.
- 11 CO-HEARING OFFICER DODUC: Ms. McGinnis, how
- long of a break do you need in order to address that
- 13 right now?
- MR. BERLINER: If I may offer a suggestion:
- 15 Why don't we identify the documents by title and then
- 16 we'll assign -- then we'll go back and figure out the
- 17 correct number for the -- for the document. But the
- 18 title is always going to be the same, anyway.
- 19 CO-HEARING OFFICER DODUC: Mr. O'Laughlin, do
- 20 you have the title handy?
- 21 MR. O'LAUGHLIN: Yeah. We're going to pull
- them up on the screen and, yeah, I can just refer to the
- 23 titles if that works for the Hearing Officers and the
- 24 Petitioners.
- 25 CO-HEARING OFFICER DODUC: Then we will do that

- 1 until this matter is clarified by Miss McGinnis.
- 2 MR. O'LAUGHLIN: Okay. Thank you.
- 3 CO-HEARING OFFICER DODUC: Thank you.
- 4 MR. O'LAUGHLIN: Kevin, can you pull up DWR-10.
- 5 (Document displayed on screen.)
- 6 MR. O'LAUGHLIN: Yeah, there we go. Thank you.
- 7 Mr. Leahigh, Tim O'Laughlin, San Joaquin
- 8 Tributaries Authority. I have questions about your
- 9 rebuttal testimony.
- 10 I'd like to go into this in a little more
- 11 detail than what we've previously done, so I'm going to
- 12 refer -- This is the Primary Sources of Water for State
- Water Project Exports, Page 6 of your exhibit.
- 14 It says down in the legend, "Flood control
- 15 releases and unstored flow."
- Do you see that in the legend?
- 17 WITNESS LEAHIGH: Yes.
- 18 MR. O'LAUGHLIN: And then in the first Water
- 19 Year, you have a Water Year depicted, which is 2011, and
- 20 it says "(Wet)."
- Do you see that?
- 22 WITNESS LEAHIGH: Yes.
- MR. O'LAUGHLIN: And then above that, it
- 24 appears that the legend is depicted in kind of a -- I'm
- 25 color-blind so I'm going to say purple and it says

- 1 "3.61."
- 2 Do you see that on the exhibit?
- 3 WITNESS LEAHIGH: Yes.
- 4 MR. O'LAUGHLIN: Okay. So the first question I
- 5 have is: The 3.61 is what?
- 6 WITNESS LEAHIGH: That's 3.61 million
- 7 acre-feet.
- 8 MR. O'LAUGHLIN: Okay. And so this is -- In
- 9 that year -- And these are Water Years; correct?
- 10 WITNESS LEAHIGH: That's correct. The tabling
- 11 next to the year is -- depicts the Water Year type.
- 12 MR. O'LAUGHLIN: Okay. But what I first want
- 13 to understand is: 2011 is a Water Year, not a Calendar
- 14 Year; correct?
- 15 WITNESS LEAHIGH: I believe this analysis was
- 16 done . . . I think it was done using calendar years.
- MR. O'LAUGHLIN: Okay. Okay. Interesting.
- 18 So in the Calendar Year. Do you -- Well, let
- 19 me ask a preliminary question.
- When you make allocations to your contractors,
- 21 are they made in a Calendar Year or in a Water Year?
- 22 WITNESS LEAHIGH: Allocations to our
- 23 contractors are based on a Calendar Year.
- MR. O'LAUGHLIN: Okay. So, in this, then,
- 25 looking at 3.61 million, that would be the amount of

- 1 water in 2011 that was exported that was flood control
- 2 releases and unstored flow; correct?
- 3 WITNESS LEAHIGH: Correct.
- 4 MR. O'LAUGHLIN: And that is -- Is that broken
- down by a month or is that just the total volume for the
- 6 year?
- 7 WITNESS LEAHIGH: This is the total volume for
- 8 the year.
- 9 MR. O'LAUGHLIN: Is there backup data depicting
- 10 the amount of water that was diverted in 2011 by month?
- 11 WITNESS LEAHIGH: There's backup data depicting
- 12 the amount by day, and those are the exhibits that
- 13 were -- was part of the exhibit that was submitted
- 14 yesterday.
- 15 MR. O'LAUGHLIN: Correct. Okay. Perfect.
- 16 Okay.
- 17 And when it says "wet," is wet based on a
- 18 San Joaquin River Basin Index, a Sac Valley Index? What
- indexes are you using for that depiction?
- 20 WITNESS LEAHIGH: That's the Sacramento Valley
- 21 Index. Oftentimes they're the same, but in this
- 22 particular case, it was -- it was based on the Sacramento
- 23 Valley.
- 24 MR. O'LAUGHLIN: Now, in this document, I want
- 25 to focus first on flood control releases.

- 1 So are the flood control releases depicted in
- 2 the 3.61 million acre-feet only flood control releases
- 3 from Oroville?
- 4 WITNESS LEAHIGH: I think the way the analysis
- 5 was done, yes, I believe it's flood control releases from
- 6 Lake Oroville.
- 7 MR. O'LAUGHLIN: Okay. So other operations,
- 8 either at Shasta, at Yuba, on the American, New Melones,
- 9 East Bay MUD, their flood control releases if they
- 10 occurred in 2011 would not be depicted in this graph; is
- 11 that correct?
- 12 WITNESS LEAHIGH: I believe that's correct.
- 13 MR. O'LAUGHLIN: All right. So the next phrase
- in the legend is "Unstored Flow."
- 15 What do you -- What do you mean by the term
- 16 "unstored"?
- 17 WITNESS LEAHIGH: So, unstored flow would be
- 18 flows that did not derive from Project storage releases.
- 19 So the exception there is -- The flood control releases,
- if, for example, were encroached into flood control
- 21 storage, we would have to release that storage for flood
- 22 control purposes. And so -- so it's lumped in the same
- 23 category as the unstored flow, which would be unregulated
- 24 flows from elsewhere in the system.
- 25 MR. O'LAUGHLIN: Well, I -- That's confusing to

- 1 me, so -- Sorry.
- 2 So are flood control releases and unstored flow
- 3 one and the same or are they different? Or does unstored
- 4 flow subsume flood control releases?
- 5 WITNESS LEAHIGH: So flood control releases
- 6 could be either stored releases or unstored releases. So
- 7 they could be either.
- 8 The -- Right. So they could be either one of
- 9 those. I think the key here -- And maybe I need to
- 10 clarify that a little bit.
- 11 Essentially -- So most of the flows here are
- 12 exported under excess conditions. So there's a number of
- 13 different sources which would fall in this category, and
- 14 those excess conditions, there's typically more unstored
- 15 flow -- Well, there is more unstored flow than is
- 16 necessary for meeting all of the Delta requirements, the
- in-basin uses, and then some of those are picked up by
- 18 the Project facilities in the Delta.
- 19 MR. O'LAUGHLIN: Well, your terminology's kind
- of strange because -- and I'm trying to get a handle on
- 21 this.
- 22 Earlier you talked about this flood control
- 23 releases only being from Oroville. Now you're talking
- 24 about other sources.
- 25 Are there other sources for flood control

- 1 releases and unstored flow other than Oroville in this
- 2 chart, or is this just Oroville?
- 3 WITNESS LEAHIGH: Yes. You were -- I think,
- 4 before, you were asking me specifically on the component
- 5 there that -- of the two, which is flood control
- 6 releases. That -- In the analysis, that component, I
- 7 believe, was from Lake Oroville itself.
- 8 In the unstored flow component, that could
- 9 include flood control that releases from other
- 10 reservoirs.
- 11 MR. O'LAUGHLIN: Okay. So in regards to
- 12 Oroville, you mentioned something that I find strange.
- How is it, when you're in a flood control
- operation, that you're releasing stored water?
- 15 WITNESS LEAHIGH: So after, let's say, a big
- 16 storm event, inflow into Oroville has exceeded the
- outflow, and so there's storage gains. And if those
- 18 storage gains cause us to encroach into our flood control
- 19 requirement that required vacant space, then we would be
- 20 required to release that stored water that's encroached
- in the flood control space and release it downstream.
- 22 MR. O'LAUGHLIN: So when you use the term
- 23 "storage," are you using the term "storage" based in a
- legal sense or just in a practical sense?
- 25 WITNESS LEAHIGH: I would say in a practical

- 1 sense.
- 2 MR. O'LAUGHLIN: Thank you.
- 3 And, in fact, you wouldn't know by looking at
- 4 this chart whether or not the water had been stored in
- 5 Oroville for 28 days and then released; is that correct?
- 6 WITNESS LEAHIGH: No, I wouldn't know the
- 7 timing on that.
- 8 MR. O'LAUGHLIN: Okay. So let's go to what's
- 9 been marked as 905 but when we get to it we'll identify
- 10 the top of it.
- 11 (Document displayed on screen.)
- 12 MR. O'LAUGHLIN: And this has been identified
- as "Data for DWR Exhibits 850 and 851, 2015" and we'll
- just identify it as such and we will not use "905."
- So let's go through this. This is a
- 16 fascinating -- And thank you for providing this graph. I
- think it's a fascinating graph to look at.
- 18 Let's just go through kind of the headings so
- 19 we understand what we're looking at.
- 20 So can you tell us -- And this may be
- 21 redundant, but just so it's clear in the record, can you
- tell us the heading what "FRSA" means.
- 23 WITNESS LEAHIGH: Yeah. That's Feather River
- 24 Service Area. So essentially the Feather River
- 25 Settlement Contractors' deliveries at Thermalito

- 1 Afterbay.
- 2 MR. O'LAUGHLIN: Okay. Then the next overall
- 3 heading is "Instream Requirements (Primary)."
- 4 Can you explain what that is.
- 5 WITNESS LEAHIGH: Yes. So, as -- as part of
- 6 our FERC license and agreements with Department of Fish
- 7 and Wildlife, we have year-round instream flow
- 8 requirements for the Feather River.
- 9 MR. O'LAUGHLIN: And so you have to release
- 10 those flow requirements under your FERC license to meet
- 11 those requirements; is that correct?
- 12 WITNESS LEAHIGH: That's correct.
- 13 MR. O'LAUGHLIN: Now, in this -- Under that
- 14 heading Instream Flow Requirements (Primary), there are
- 15 two subsections. One is called "Balance Conditions."
- 16 Can you explain to us what balance conditions
- 17 are.
- 18 WITNESS LEAHIGH: Yeah. So balance conditions
- 19 are when the releases from the Project reservoirs plus
- 20 any unregulated flows in the system downstream of the
- 21 Project reservoirs are approximately equal to the needs
- 22 for in-basin uses to meet the D-1641 requirements and the
- 23 Project exports.
- MR. O'LAUGHLIN: Okay. And also -- So then we
- 25 get a further breakdown under balance conditions, and it

- 1 says "Exports (2nd)."
- 2 Can you tell us what that is.
- 3 WITNESS LEAHIGH: Yeah. So some of the
- 4 instream requirements that -- the instream flows that are
- 5 released, the primary purpose of the release is to meet
- 6 those in-river requirements on the Feather River, but
- 7 then there are -- there can be secondary use for that
- 8 water.
- 9 And in this case, that "(2nd)" indicates the
- 10 secondary use of those flows and, in this case, on that
- 11 column, a secondary use would be exported at the SWP
- 12 export facilities.
- MR. O'LAUGHLIN: Okay. So looking at the
- 14 second column, it says that on January 1st of 2015, it
- 15 has a zero.
- 16 So under that scenario, would it be true that
- 17 water that had been released to meet an instream flow
- 18 requirement was not, in effect, exported on that day?
- 19 WITNESS LEAHIGH: That's correct. For the
- 20 purposes of this accounting, it's not assumed to be
- 21 exported.
- 22 MR. O'LAUGHLIN: Okay. Then if we went down to
- 23 January 15th, 2015, it appears there's a number 900 in
- that column Exports (2nd) and that would tell you that
- 25 900 cfs of instream flow water that had been released at

1 Oroville was secondarily diverted at the export pumps;

- 2 correct?
- 3 WITNESS LEAHIGH: Correct.
- 4 MR. O'LAUGHLIN: Now, is -- This data that is
- 5 collected in this chart, is this post-processed data or
- 6 is this done on a daily basis?
- 7 WITNESS LEAHIGH: No. This -- Well, this
- 8 analysis was -- was post-processed. This analysis was
- 9 done specifically for this proceeding, for this -- for
- 10 this exhibit that was -- that we provided.
- 11 MR. O'LAUGHLIN: Okay. So -- So would that be
- 12 also true -- Well, we'll go -- Sorry. I'm jumping ahead.
- 13 Okay. Sorry. Got to slow down.
- 14 Balanced conditions. "In-Basin" is denoted in
- 15 Balanced Conditions and it also has a paren and it says
- 16 "(2nd)."
- Can you tell us what that is.
- 18 WITNESS LEAHIGH: Yes. So numbers in that
- 19 column, as they are in the Export column, they should
- 20 only show up in those two -- in one of those two columns
- if the Delta condition is not in excess.
- 22 So, in other words, balanced, but the -- So,
- 23 again, there's a secondary use for some of those instream
- 24 flow requirements to the Feather River. And at times
- 25 when we're in balanced conditions and all of the in-basin

- 1 uses are not being met by other natural flows in the
- 2 system, the Projects are releasing supplemental flows to
- 3 make up the difference.
- 4 And during any of those periods, you could see
- 5 numbers in that column where a secondary use of the
- 6 in-bay -- of the minimum flows at the Feather River could
- 7 also serve the purpose of filling in that gap for
- 8 in-basin use.
- 9 MR. O'LAUGHLIN: So in-basin use would be,
- 10 like, Feather River contractors; correct? As an example.
- 11 Or is --
- 12 WITNESS LEAHIGH: Well --
- MR. O'LAUGHLIN: -- this someone else?
- 14 WITNESS LEAHIGH: -- they would be -- they
- 15 would be Feather River diverters downstream --
- MR. O'LAUGHLIN: Okay.
- 17 WITNESS LEAHIGH: -- of Thermalito.
- 18 MR. O'LAUGHLIN: Such as a riparian right
- 19 holder?
- 20 WITNESS LEAHIGH: Correct.
- 21 MR. O'LAUGHLIN: Okay. Right. So in this same
- 22 column, there's --
- 23 WITNESS LEAHIGH: Well --
- MR. O'LAUGHLIN: I'm sorry this is tedious but
- 25 I just want to make sure we go through this.

- 1 Go ahead.
- 2 WITNESS LEAHIGH: Yeah. I guess I'd caution a
- 3 little bit about that.
- 4 It's not in terms of identifying specifically
- 5 who would be entitled to that water. That's not really
- 6 part of the analysis. But it is making up a gap between
- 7 natural flows and then the other in-basin uses and D-1641
- 8 requirements.
- 9 MR. O'LAUGHLIN: Now, is the in-basin use
- 10 that's depicted there in (2nd), is that limited to the
- 11 Feather River, the Sacramento River Basin, or the Delta,
- 12 or all three?
- 13 WITNESS LEAHIGH: Yeah. It would -- could be
- 14 making up a difference in any of those locations.
- 15 MR. O'LAUGHLIN: So if there was an in-basin
- 16 condition in the Delta where there was supposedly a prior
- 17 right, those people at a certain point in time may have
- 18 picked up this water that had been released for other
- 19 instream flow requirements and used it in the Basin;
- 20 correct?
- 21 WITNESS LEAHIGH: Well, I -- We didn't look at
- 22 that in-depth in terms of legal uses of water. We didn't
- 23 assess -- We are not assessing that in part of this
- 24 analysis.
- 25 MR. O'LAUGHLIN: It just means that somebody

- 1 downstream may have picked it up and used it in the mass
- 2 balance basis and, therefore, it had to be accounted for;
- 3 correct?
- 4 WITNESS LEAHIGH: That's right. In terms of --
- 5 Just in terms of the straight mass balance, that's --
- 6 that's really all that we're looking at here.
- 7 MR. O'LAUGHLIN: Right. And I'm not saying
- 8 that anybody downstream had the legal entitlement to that
- 9 water. I'm just saying, on a mass balance basis, some --
- 10 in some way, that water left the system and you accounted
- 11 for it in the -- in the code by saying in-basin and in
- 12 use --
- 13 WITNESS LEAHIGH: Yes.
- MR. O'LAUGHLIN: -- right?
- 15 WITNESS LEAHIGH: Essentially, that's correct.
- 16 MR. O'LAUGHLIN: All right. Excess -- Under
- 17 the Instream Requirements (Primary) still, you have
- 18 "Excess Conditions."
- 19 Can you explain what that is.
- 20 WITNESS LEAHIGH: Yes. So that would be the
- 21 other condition when we're -- When the Delta is not
- 22 considered to be in balance, it would be considered in
- excess.
- 24 So this would be when the releases from the
- 25 Project reservoirs plus any other unregulated flows into

- 1 the system exceed the -- all the in-basin uses, the
- 2 D-1641 standards are all being met, and . . . Yeah,
- 3 that's -- that's essentially what it is.
- 4 MR. O'LAUGHLIN: Okay. There's two components
- 5 listed under "Excess Conditions," and I couldn't tell if
- 6 they were under the Excess Conditions or just under the
- 7 Instream Requirements (Primary).
- 8 So are the ag -- it says, A-G, Ag, and then
- 9 Fish.
- 10 Are those specifically under the "Excess
- 11 Conditions" or are they just generally under the heading
- "Instream Requirements"?
- 13 WITNESS LEAHIGH: Well, they're under both. So
- 14 this would be instream flow requirements to the Feather
- 15 River that are occurring in excess conditions.
- 16 And so, then, we're not -- In that case, we're
- 17 not -- You know, we're still required to meet those
- 18 minimum instream flows, but there's no secondary use of
- 19 that water in terms of the Delta, so in terms of the
- 20 exports or in filling the gap in the in-basin use.
- 21 So we've classified those minimum releases
- 22 under Excess Conditions as -- for fish primarily because
- 23 that is the required -- required flow.
- 24 The Ag component on there is just -- It's a --
- 25 It's a buffer that, because our requirement -- this

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minimum flow requirement is -- we're required -- we're
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- 2 required to keep that all the way down to the -- well,
- 3 essentially the mouth of the Feather River, but the
- 4 Sacramento.
- But, in practical terms, we just need to meet
- 6 it between the Thermalito Afterbay outlet to the
- 7 confluence with the Yuba because the Yuba is providing
- 8 additional flows.
- 9 The -- So the Ag component is a buffer on top
- 10 of the required fish flows to account for any diverters
- 11 between Thermalito Afterbay outlet and the confluence
- 12 with the Yuba River so that we could quarantee that
- the -- that the 900 cfs fish flow is -- is being kept all
- 14 the way downstream.
- 15 MR. O'LAUGHLIN: In that regard, is there any
- 16 analysis anywhere that -- It's kind of peculiar to me
- 17 that we're releasing water for ag diversions in January
- 18 about demand and use? I mean, that seems kind of strange
- 19 that you'd have an ag use in the middle of January.
- 20 Or is it mainly a buffer?
- 21 WITNESS LEAHIGH: It --
- MR. O'LAUGHLIN: See, what I'm trying to
- 23 understand is --
- 24 WITNESS LEAHIGH: Yeah.
- 25 MR. O'LAUGHLIN: -- I get it if you were

- 1 releasing it in June, July and August, people downstream
- 2 are diverting. But is this kind of just a buffer for the
- 3 fish flows sure that what I would call carriage losses,
- 4 whether it's trees, vines, whatever, water seeps out, but
- 5 you've got to make sure you get your 900 down there.
- 6 WITNESS LEAHIGH: That would actually be a more
- 7 accurate way to -- to label this --
- 8 MR. O'LAUGHLIN: Okay.
- 9 WITNESS LEAHIGH: -- particular column.
- 10 MR. O'LAUGHLIN: Okay. So moving on, "Release
- 11 to Support."
- 12 Now, it says "Release to Support." So this is
- 13 this a release from Oroville to support either flood or
- 14 exports?
- 15 WITNESS LEAHIGH: Yes. This is -- This would
- 16 be the release of stored water.
- 17 MR. O'LAUGHLIN: Okay. So this is -- This is
- 18 actual --
- 19 WITNESS LEAHIGH: Well, I take that back.
- MR. O'LAUGHLIN: Okay.
- 21 WITNESS LEAHIGH: I'm not sure if it's only
- 22 stored water for the Flood column, but I think that is
- 23 the case for the Export.
- 24 MR. O'LAUGHLIN: Okay. So -- Because you'd
- 25 have to have control of the stored water to re-divert it

- 1 under your Permits at Clifton Court; correct?
- 2 WITNESS LEAHIGH: Well, this is just trying to
- 3 break down the components of the releases and then the
- 4 components of the sources of export for the purposes of
- 5 developing those graphs. So that's what this is all
- 6 about.
- 7 MR. O'LAUGHLIN: But do you understand that, if
- 8 you do not control the water and/or divert it at Oroville
- 9 under your Permits, do you understand if you have a right
- or don't have a right to re-divert that water at Clifton
- 11 Court Forebay?
- 12 MR. BERLINER: Objection: Calls for a legal
- 13 conclusion.
- MR. O'LAUGHLIN: If he knows.
- MR. BERLINER: That doesn't change the
- 16 character of the question.
- 17 CO-HEARING OFFICER DODUC: Mr. O'Laughlin, I
- 18 believe, is asking Mr. Leahigh that question with respect
- 19 to his understanding as an Operator.
- MR. O'LAUGHLIN: Um-hmm.
- 21 CO-HEARING OFFICER DODUC: So overruled.
- 22 Please answer.
- 23 WITNESS LEAHIGH: My understanding is, we need
- 24 to meet our Permits, and that we are.
- 25 MR. O'LAUGHLIN: Okay. So -- And let's look

- down on that column, then, real guickly.
- 2 On January 15th, again, it looks like, there is
- 3 a number 64 in the Export column, and that would be 64
- 4 cfs of water was released from Oroville to support the
- 5 exports that occurred; is that correct?
- 6 WITNESS LEAHIGH: Yes, essentially.
- 7 MR. O'LAUGHLIN: Essentially --
- 8 CO-HEARING OFFICER DODUC: Could you --
- 9 WITNESS LEAHIGH: Well, so this is --
- 10 CO-HEARING OFFICER DODUC: I'm sorry.
- 11 WITNESS LEAHIGH: Again, this is -- So that 64
- 12 is part of that column, which is a tally of releases from
- Oroville specifically for export purposes.
- 14 CO-HEARING OFFICER DODUC: How much additional
- time do you need to wrap this up, Mr. O'Laughlin?
- 16 MR. O'LAUGHLIN: I hope to be done by noon.
- 17 CO-HEARING OFFICER DODUC: Okay.
- 18 MR. O'LAUGHLIN: Because I'm assuming -- And I
- 19 can look at Miss Spaletta. But I'm assuming a lot of the
- 20 questions that I'm asking are preliminary foundational
- 21 questions that somebody else would be asking. I'm sorry.
- 22 CO-HEARING OFFICER DODUC: No.
- MR. O'LAUGHLIN: It's just, you're stuck with
- 24 me. Sorry.
- 25 CO-HEARING OFFICER DODUC: It could be worse,

- 1 Mr. O'Laughlin.
- 2 (Laughter.)
- 3 MR. O'LAUGHLIN: Wow. I feel sorry for that
- 4 person.
- 5 CO-HEARING OFFICER DODUC: Well, we'll go ahead
- 6 and allow you to take till noon to wrap up.
- 7 Let me also take this opportunity to invite
- 8 Mr. Herrick, since I see him suffering standing there
- 9 straining to read the screen:
- 10 If you would like to -- If any of you would
- 11 like to make use of these front desks and the screens
- 12 there, please feel free to do so.
- MR. O'LAUGHLIN: So back -- back to it.
- 14 So the 64 cfs is water released to support the
- diversions, and so if we went over -- I'm going to skip a
- 16 little bit to ask this question.
- That same day, it says SWP Exports are 4,927.
- Do you see -- Do you see that, John? I'm
- 19 sorry, Mr. Leahigh. I'm sorry.
- 20 WITNESS LEAHIGH: Yes, I see that.
- 21 MR. O'LAUGHLIN: Okay. So -- Now, is the 64
- 22 within the 4,927? In other words, is it an instantaneous
- 23 accounting that's occurring or is there a time lag with
- 24 this chart? Because clearly if you release water on
- 25 January 15 at Oroville, you're not diverting it on the

- 1 same day; right?
- 2 WITNESS LEAHIGH: Yeah. So, this is -- this is
- 3 not intended to be an absolute reflection of -- It
- 4 doesn't take into account timing.
- 5 It's -- This is -- For the purpose that this
- 6 data is intended, it -- it is in sufficient -- in my
- 7 judgment in sufficient detail in order to capture the
- 8 components that are shown in those graphs.
- 9 The -- One of the reasons I'm -- So, my staff
- 10 prepared this. This -- This table was not intended to be
- an exhibit; right? We only provided this table at the
- 12 request of one of the attorneys.
- 13 So the organization of this table is -- I'm not
- 14 completely familiar with, so that's why I'm trying to
- 15 work through this with you.
- 16 But the -- the point that is being made with
- 17 this table, it is -- it is not intended to be a precise
- 18 reflection of operations.
- 19 MR. O'LAUGHLIN: Oh, yeah. No. I mean --
- 20 WITNESS LEAHIGH: Just to be clear.
- MR. O'LAUGHLIN: -- come on.
- 22 WITNESS LEAHIGH: Just to be clear.
- 23 MR. O'LAUGHLIN: That's like your measuring 64
- 24 cfs at Oroville and following it all the way down and
- 25 picking it up. I mean --

- 1 WITNESS LEAHIGH: That's right.
- 2 MR. O'LAUGHLIN: Yeah.
- 3 WITNESS LEAHIGH: That's right.
- 4 MR. O'LAUGHLIN: So move back on the record,
- 5 then.
- 6 So, to go to -- There's a requirement that says
- 7 "In-Basin Requirement."
- 8 So what is that requirement for? That's
- 9 different than In-Basin (2nd).
- 10 WITNESS LEAHIGH: Yes. So this would be --
- 11 Right. So this is also for the same purpose as that
- 12 column that was under Instream Requirements as a
- 13 secondary use.
- 14 But in this particular case, this would be the
- 15 primary reason for the release from Lake Oroville is to
- 16 meet those in-basin requirements.
- So we're already releasing enough to meet that
- 18 Feather River flow. This would be additional flow on top
- of that to meet some of those in-basin charges.
- 20 MR. O'LAUGHLIN: And whoever did -- graphed it
- 21 did a good job because the total Oroville release is the
- 22 sum of the 900 cfs depicted in their Exports (2nd) and
- 23 Release to Support Exports 64 totals the total release
- from Oroville of 964 cfs; correct?
- 25 WITNESS LEAHIGH: Correct.

- 1 MR. O'LAUGHLIN: Okay. Then moving over. Now
- 2 we get to the exports. So that's the release side. Now
- 3 we get to the exports side.
- 4 So, on that day, 4,927 was diverted by the SWP;
- 5 correct?
- 6 WITNESS LEAHIGH: Correct.
- 7 MR. O'LAUGHLIN: Okay. Then you -- you denote
- 8 in the next column whether the Delta is in excess, yes or
- 9 no. And if it's in, I'm assuming that's a no and the Y
- 10 is a yes; correct?
- 11 WITNESS LEAHIGH: Correct.
- 12 MR. O'LAUGHLIN: And then you also are -- This
- is pretty helpful. It tells us if any flood releases on
- 14 that, yes or no. And, once again, it's a no for that
- day, so there's no flood releases for that day.
- 16 Then you summed it up. It looks like somebody
- 17 added something for the charts. It says "Exported
- 18 Unstored Flow, " which appears to me to be the SWP export
- 19 number of 4,927 minus the total Oroville release of 964;
- 20 is that correct?
- 21 I'm terrible at math.
- 22 WITNESS LEAHIGH: No. Well, let's see. Not
- 23 necessarily.
- 24 Can you say --
- 25 MR. O'LAUGHLIN: It's 3,000 -- It ends up,

- 1 John, being 3,963 cfs of un -- exported unstored flows.
- 2 WITNESS LEAHIGH: I'm sorry. What -- That's in
- 3 the column -- last column on the right.
- 4 MR. O'LAUGHLIN: Yes.
- 5 WITNESS LEAHIGH: Yes.
- 6 MR. O'LAUGHLIN: Yes. Right.
- 7 So now we have 964 cfs being released from
- 8 Oroville, and if I understand the charts right, 900 is
- 9 for fishery flows. You were able to pick that up at the
- 10 exports. You're able to pick up the 64 cfs at the
- 11 exports.
- 12 And the difference is, all this other water
- 13 being released from either the Sacramento, the American,
- 14 the Yuba, the Mokelumne, the New Melones, that shows up
- in the Delta and you're able to pump; correct?
- 16 WITNESS LEAHIGH: Right. So in this entire
- 17 period, there was sufficient unstored flows to meet all
- 18 the in-basin requirements and that's why you see only
- 19 zeros in those two columns for in-basin requirements, and
- 20 there was additional unstored flow that was available for
- 21 export. Some of that occurred in balanced conditions and
- 22 some of that occurred in excess conditions.
- But, for the entire period, there was
- 24 additional unstored flow available for export and that's
- 25 what's reflected in that column.

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1 MR. O'LAUGHLIN: Now, do you -- As you sit here
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- 2 today, do you still have a memory of 2015, or did you try
- 3 to wipe that out in your mind?
- 4 WITNESS LEAHIGH: I think it's completely gone.
- 5 MR. O'LAUGHLIN: I wouldn't blame you.
- 6 WITNESS LEAHIGH: 2017 wiped that out pretty
- 7 fast.
- 8 MR. O'LAUGHLIN: That's probably true.
- 9 Okay. Can we scroll down a little bit. Let's
- 10 look at July and August of this year 2015.
- 11 (Scrolling down document.)
- 12 MR. O'LAUGHLIN: Now, I know we don't have the
- 13 columns. We're still looking at the same exhibit.
- 14 But in this -- We're having releases that are
- 15 occurring.
- 16 What I find interesting about this -- Oh,
- 17 shoot, I lost my -- Can you scroll back up real quick? I
- 18 lost one heading. I'm sorry.
- 19 (Scrolling up document.)
- 20 MR. O'LAUGHLIN: Okay. You can scroll back
- 21 down to the July.
- 22 (Scrolling up document.)
- MR. O'LAUGHLIN: So the second column in is
- 24 from -- If you look at this -- Let's pick a date. Let's
- just use the one at the bottom of this, 21-July-15.

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1 And if we start -- I'm going to start at the
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- 2 right-hand side, and I want to focus on the 2,960.
- 3 That's the amount of release being -- being made, is that
- 4 correct, from Oroville on that day?
- 5 WITNESS LEAHIGH: I don't remember the
- 6 headings.
- 7 So it's either that column or the one to the
- 8 left. I forget which.
- 9 MR. O'LAUGHLIN: Okay. Actually, it's the one
- 10 to the -- I believe it is the one to the left. It's
- 11 2,210 is being released.
- 12 Can you scroll -- God, I hate these charts.
- 13 Scroll back up. Sorry. I'll get this one.
- 14 (Scrolling up document.)
- 15 MR. O'LAUGHLIN: Total Oroville release is the
- 16 second. It's SWP, and then we go to Delta in Excess.
- John, just to focus -- I just want to focus on
- 18 the Oroville release and the Oroville exports. So the
- 19 second column in where it says "Delta in Excess" would be
- 20 the total Oroville release and then the SWP exports.
- 21 You see that?
- 22 WITNESS LEAHIGH: Yeah.
- 23 MR. O'LAUGHLIN: Let's scroll down again to
- 24 July. Sorry about that. We'll get through this.
- 25 (Scrolling down document.)

- 1 MR. O'LAUGHLIN: Thank you very much.
- 2 So now we're back down here again.
- 3 So the total Oroville release now, which is the
- 4 second column in from where it says "N," says 2,960 cfs
- 5 as being released.
- 6 You see that?
- 7 WITNESS LEAHIGH: 2960 cfs.
- 8 MR. O'LAUGHLIN: Yes.
- 9 WITNESS LEAHIGH: Yeah.
- 10 MR. O'LAUGHLIN: Okay. Then it says that --
- 11 And these are the things I didn't understand.
- 12 It says exports are minus 12. Can you explain
- 13 to me what that is?
- 14 And minus -- I mean, there's a whole column of
- 15 them there in July. What's going on there? How do you
- 16 divert negative numbers?
- 17 WITNESS LEAHIGH: I don't know for sure what
- 18 the -- what the reason is here in this particular case.
- 19 Sometimes, because of the way that SWP
- 20 export -- Well, it depends -- This is . . .
- I don't know offhand why that is. I'd have
- 22 to -- I'd have to check with the person who prepared
- 23 this.
- 24 WITNESS NADER-TEHRANI: It looks like it
- 25 matches the number in the third column from left.

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1 MR. O'LAUGHLIN: Yes, it does, so --
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- 2 WITNESS NADER-TEHRANI: So now the question is,
- 3 what is the -- Can you scroll back up?
- 4 MR. O'LAUGHLIN: Yeah. Can you scroll back up
- 5 real quick, Kevin?
- 6 (Scrolling up document.)
- 7 MR. O'LAUGHLIN: Yes. So that would be Export
- 8 (2nd), which doesn't make any sense how you come up with
- 9 a negative number on exports.
- 10 So going down to the time period in July. This
- 11 chart last night just confused me no end. Sorry.
- 12 Because I thought I understood it until I got to July.
- 13 If you could scroll back down again.
- 14 (Scrolling down document.)
- MR. O'LAUGHLIN: July 21. There we go.
- 16 July 21.
- 17 So if we move it over, there's also these add
- 18 numbers. So it says that at the exports you picked up
- 19 247 cfs of water at the exports that was unregulated, and
- yet you pumped minus 12.
- 21 So let's focus on the 247. Where -- Where's
- 22 that this 247 number coming from in that year and in that
- 23 month?
- 24 WITNESS LEAHIGH: I don't know offhand.
- 25 MR. O'LAUGHLIN: Would that be part of your --

1 Is that part of your unstored water releases? It says

- 2 unstored flows.
- 3 WITNESS LEAHIGH: No. This would -- Well, this
- 4 would be -- For that column, it should be unstored
- flows . . . in the system, but I don't know exactly where
- 6 they're -- It's not -- It doesn't specify where.
- 7 MR. O'LAUGHLIN: Right. So that's one of my
- 8 questions.
- 9 So when you did the graph -- And I'm looking at
- 10 this time period because it's a critical time period in
- 11 the system, 2015. Water's tight, reservoirs are
- dropping, we're in the middle of a drought.
- 13 So can you tell today where that water's coming
- 14 from? And you know what -- Let's ask that question
- 15 first.
- 16 Can you tell where it's coming from?
- 17 WITNESS LEAHIGH: No.
- 18 MR. O'LAUGHLIN: Okay. Is it possible as you
- 19 sit here today that, of the 247, some of that water is
- 20 San Joaquin River flow?
- 21 WITNESS LEAHIGH: In 2015?
- MR. O'LAUGHLIN: Um-hmm.
- 23 WITNESS LEAHIGH: Yeah. I wouldn't know.
- MR. O'LAUGHLIN: Okay.
- 25 WITNESS LEAHIGH: I'd have to do -- use one of

- 1 Dr. Nader-Tehrani's DSM-2 modeling.
- 2 MR. O'LAUGHLIN: Okay. Can we go to April
- 3 or -- Let's go to April of 2015, if we could real quick.
- 4 I'm almost done. Any day in April would be
- 5 great, Kevin.
- 6 (Document displayed on screen.)
- 7 MR. O'LAUGHLIN: Ah, perfect.
- 8 All right. So, once again in this chart, it
- 9 appears that -- Let's pick a date. Let's go to
- 10 April 30th. Seems like a good time period, because it's
- 11 right at the bottom and --
- 12 (Line on chart highlighted.)
- MR. O'LAUGHLIN: Thank you. That's very
- 14 helpful. Thank you.
- 15 So we're not releasing flood flows. The Delta
- is not -- not in excess, and the CVP -- the SWP --
- 17 sorry -- is exporting 996 cfs of water. Okay?
- 18 And it says on the chart that none of that is
- 19 unstored flow.
- 20 Do you see that?
- 21 WITNESS LEAHIGH: Yes.
- 22 MR. O'LAUGHLIN: Okay. So how is it that
- 23 you're -- that -- So 805 is being used in the basin, I
- understand that, under in-basin requirement.
- 25 The total release is 1800. So if I subtract

- 1 that 805, I'm assuming that's being consumed, so that
- 2 gets me down to a thousand.
- 3 And then how is it that -- Given those numbers,
- 4 do you -- is it the addition of the 246 that gets you up
- 5 a thousand that allows you to export the 996, John?
- 6 WITNESS LEAHIGH: Yeah, looks like that's the
- 7 difference.
- 8 MR. O'LAUGHLIN: Okay. So if I'm looking at
- 9 this chart, then, what this kind of tells me during this
- 10 critical time period is that you're -- in this condition,
- 11 you're releasing the instream requirements under Primary
- in a balanced condition and there's 750 cfs being
- 13 released, and that's meeting a fishery flow requirement
- 14 somewhere in the system, and then you release an
- 15 additional 246 of stored water, it appears, to actually
- 16 divert 996.
- 17 And it's really close. That's roughly a
- 18 thousand cfs; correct?
- 19 WITNESS LEAHIGH: Yeah. So -- Right.
- 20 So that -- The 996 is coming from -- It's
- 21 stored water releases in either case. It's just that
- 22 part of that water served the primary purpose of instream
- 23 flow first before it was exported.
- 24 MR. O'LAUGHLIN: So would you know on this date
- 25 whether or not the instream release requirement of 750

- 1 cfs on April 15th was stored water or bypass flows at
- 2 Oroville?
- 3 WITNESS LEAHIGH: Yeah. I'm not sure.
- 4 MR. O'LAUGHLIN: Okay. Thank you.
- 5 Do you --
- 6 WITNESS LEAHIGH: But I'm sure it's -- Yeah. I
- 7 mean, just sitting here, I couldn't tell you. I'd have
- 8 to examine it some more.
- 9 MR. O'LAUGHLIN: Right. Because you'd have to
- 10 actually look at what inflow was coming into Oroville and
- 11 what demands were being made on Oroville to understand
- 12 whether or not that was actually stored water or water
- 13 that was bypass flows at that period of time; correct?
- 14 WITNESS LEAHIGH: Well . . . Yeah. I'm just
- trying to see if it would be fundamental to the
- 16 spreadsheet that you would be able to tell but I just
- 17 personally can't decipher that --
- MR. O'LAUGHLIN: Okay.
- 19 WITNESS LEAHIGH: -- without examining this
- 20 spreadsheet a little closer.
- 21 MR. O'LAUGHLIN: Now, when you pick up under
- this instream flow requirements, and you talk about
- 23 instream flow requirements, is embedded within the
- 24 instream flow requirements -- is X-2 included within that
- 25 heading? To meet X-2?

- 1 WITNESS LEAHIGH: If it's set up -- A release
- for an in-basin use? Well, no, it's not distinguishing
- 3 between which Delta requirement, but the X-2 is
- 4 considered one of the Delta requirements.
- 5 MR. O'LAUGHLIN: Right. So you would have --
- 6 In looking at this chart, it's hard to tell, because you
- 7 could be making a fish release -- Are the fish releases
- 8 only for the Feather River, or embedded within the fish
- 9 release, are there other Sacramento River and Delta
- 10 components of D-1641 or the OCAP RPAs or your FERC
- 11 license that are embedded in those, or is it just Feather
- 12 River fish flow releases?
- 13 WITNESS LEAHIGH: No, it's just Feather --
- 14 Feather River fish flows.
- 15 And, actually, now, your previous question I
- 16 think I have the answer to that.
- MR. O'LAUGHLIN: Oh, good.
- 18 WITNESS LEAHIGH: Yeah. So it would be stored
- 19 releases from Oroville. I think that was your question
- 20 as far as the 750?
- MR. O'LAUGHLIN: Yes.
- 22 WITNESS LEAHIGH: Yeah, it would be. And the
- 23 way I know that is, if there's -- if the right column is
- 24 indicating no unstored flow for export, then -- then it
- 25 means that the exports were from stored -- stored

- 1 releases.
- 2 MR. O'LAUGHLIN: Okay. So, then, if I looked
- 3 at that and used that logic as I went through here and
- 4 looked at July and August, then the component would be
- 5 that releases to -- if they showed zero in that column,
- 6 you could have the releases add up and still have
- 7 exports, even though it's not shown in the Release to
- 8 Support export column; correct? It would still be stored
- 9 water.
- 10 WITNESS LEAHIGH: I'm sorry. Are you talking
- 11 about July now?
- 12 MR. O'LAUGHLIN: Yeah. July or August or any
- 13 month after that.
- 14 WITNESS LEAHIGH: Sorry. Can you repeat the
- 15 question?
- MR. O'LAUGHLIN: Sure.
- 17 What I'm trying to do is get the general
- 18 understanding based on what you just said, that if you
- 19 add up the 246 and the 750, you get to a thousand, and
- 20 clearly it's showing that the in-basin demand for
- 21 releases -- in-basin -- Is it zero? I think it's zero.
- 22 You get -- Sorry. Strike all that.
- 23 Okay. I've got two other questions in regards
- 24 to this.
- 25 Is -- So, when you're doing this accounting

- 1 methodology and you're looking at stored versus
- 2 non-stored, this chart isn't talking about stored water
- 3 under your Permits subject to re-diversion at Clifton
- 4 Court. It's a shorthand way to let you know what water's
- 5 being released; is that correct?
- 6 WITNESS LEAHIGH: It was a -- This -- This
- 7 analysis . . .
- 8 Well, this is the analysis that supports the
- 9 exhibits that were presented in terms of the stacked bar
- 10 charts. And so the purpose was to provide a breakdown
- of -- in the -- in the case of the exports, the source of
- 12 the water that was exported.
- For the purposes of releases from Lake
- Oroville, it was to establish what the primary purpose of
- 15 each component of the release was, and that's what this
- 16 is.
- 17 MR. O'LAUGHLIN: Can -- Can you scroll down
- 18 once more, Kevin? Let's go to August.
- 19 (Scrolling down document.)
- MR. O'LAUGHLIN: Perfect. Okay.
- 21 So in August of that year, I'm looking at this
- 22 chart, and it says Release to Support exports in 2015 is
- 23 zero.
- Do you see that?
- 25 WITNESS LEAHIGH: I'm sorry. August what?

1 MR. O'LAUGHLIN: Well, they're all zeros in

- 2 August so far.
- WITNESS LEAHIGH: Yeah. Okay.
- 4 MR. O'LAUGHLIN: So it says Release to Support
- 5 exports, zero.
- 6 I'm trying to get a handle on how I use this
- 7 chart.
- 8 So the State Water Project contractors filed a
- 9 complaint against the Delta diverters and said that they
- 10 were -- the Delta diverters were picking up stored water
- 11 that had been released from Oroville for export.
- 12 But in looking at this chart, if I looked at
- 13 it, this chart says no water's being released to support
- exports in the month of August of 2015.
- 15 Can I use this chart for that or should I
- 16 reconcile that in a different manner?
- MS. McGINNIS: Objection: This goes beyond the
- 18 scope of what this data was provided for.
- 19 Mr. Leahigh just explained the chart and how
- 20 this data supports it and now we have veered off on how
- 21 Mr. O'Laughlin should use this chart in the future.
- 22 MR. O'LAUGHLIN: Well, here -- This is the
- 23 fundamental point. I've never veered from this from
- 24 Day 1 in these proceedings, which is trying to understand
- 25 how water is colored as it moves through the Delta.

- 1 Because understanding the fundamental premise of whether
- 2 or not this is stored water has a huge impact on whether
- 3 or not people downstream are entitled to divert it or
- 4 not.
- 5 Because -- Let -- I'll just say this because
- 6 I've said it before. If stored water is being released
- 7 subject to re-diversion, I'm perfectly fine with that.
- 8 But if water isn't being released from stored water meet
- 9 an export, then the whole question on the left-hand side
- 10 is, what is the color of that water to meet other water
- 11 requirements in the basin?
- MS. McGINNIS: And we've gone through every
- 13 column in the table and Mr. Leahigh has explained how it
- 14 relates to the chart. So I don't see why we continue
- 15 talking about different dates and different purposes.
- 16 MR. O'LAUGHLIN: Well, the problem is, you may
- 17 not, but I get to make my record. And unless you can
- 18 say -- state an objection under the law, then that
- objection has absolutely no basis. That's --
- 20 CO-HEARING OFFICER DODUC: Enough. Enough.
- 21 Enough.
- Mr. O'Laughlin --
- MR. O'LAUGHLIN: Yes.
- 24 CO-HEARING OFFICER DODUC: -- you've actually
- 25 been quite artful, and you've laid out what the table is

- 1 and what it shows. It's obvious the data is what's
- 2 available here.
- 3 You've made your point. It's in the record.
- 4 We will move on from here.
- 5 Miss McGinnis, your objection is sustained.
- 6 And I believe you said you were wrapping up
- 7 your questions, anyway. So you have established what you
- 8 wanted to establish, Mr. O'Laughlin, for the record, so
- 9 can we wrap this up?
- There is no need in my opinion to link this
- 11 back to what might or might not happen in 2015 with
- 12 respect to any complaint that was filed at that time.
- 13 I'm going to bring this back to the Petition that is
- 14 before us.
- MR. O'LAUGHLIN: No. I -- And I agree with
- 16 that. That's -- Maybe I shouldn't have -- I was trying
- to be helpful to the witness and maybe that's my
- 18 downfall.
- 19 I can ask it a different way, but -- but really
- 20 the question is -- to everybody in this proceeding is,
- 21 can I use this chart to understand what water is showing
- 22 up in the Delta as stored water subject to re-diversion
- versus water into the Delta to meet other requirements?
- 24 That's --
- 25 CO-HEARING OFFICER DODUC: And that's a fair

- 1 question.
- 2 MR. O'LAUGHLIN: Oh, I got one.
- 3 CO-HEARING OFFICER DODUC: Answer that
- 4 question, please.
- 5 WITNESS LEAHIGH: You should be able to get
- 6 that information from this chart, correct.
- 7 MR. O'LAUGHLIN: Okay. And how would I do
- 8 that, John? Sorry. Mr. Leahigh.
- 9 WITNESS LEAHIGH: Well, we just walked through
- 10 every single column.
- MR. O'LAUGHLIN: Yeah.
- 12 WITNESS LEAHIGH: You want to walk through them
- 13 again --
- MR. O'LAUGHLIN: No, no, no.
- 15 So basically the explanation that you gave us
- 16 previously, we can use those explanations for the columns
- 17 and add or subtract as we want to come up with what water
- 18 is subject to either diversion or re-diversion by the SWP
- 19 at its facilities; correct?
- 20 WITNESS LEAHIGH: I think the table speaks for
- 21 itself.
- 22 MR. O'LAUGHLIN: Okay. And so the -- the only
- thing we wouldn't understand by your testimony is where
- these other sources of unstored flows come from; correct?
- 25 Because you can't tell by this chart what the source of

- 1 that water is.
- WITNESS LEAHIGH: Yes, I think that's correct.
- 3 MR. O'LAUGHLIN: Okay. So I've got two quick
- 4 questions.
- 5 CO-HEARING OFFICER DODUC: Hold on,
- 6 Mr. O'Laughlin. There are people still standing up.
- 7 Are you standing up for a reason? Ah, just to
- 8 see.
- 9 MR. O'LAUGHLIN: So this is for Armin or for
- 10 you, Mr. Leahigh.
- 11 So if I'm looking at this column of unstored
- 12 flow, if the San Joaquin River flows depicted in the
- modeling show that D-1641 is being met when, in fact,
- they aren't, would that impact the amount of water that
- was available for export from unstored flows?
- 16 Either one of you.
- 17 WITNESS LEAHIGH: I'm sorry. Can you repeat
- 18 that question, please?
- MR. O'LAUGHLIN: Sure.
- 20 If -- If the modeling done -- If, and I realize
- 21 it's an if.
- 22 If the modeling done for this exercise has
- D-1641 being met when, in fact, it can't be or it wasn't,
- 24 does that impact the amount of exported unstored flows
- 25 that may be available in this chart?

- 1 WITNESS LEAHIGH: I would have to check back to
- 2 see exactly how -- the fact that we had filed a TUCP in
- 3 this particular year and the -- so the operative
- 4 standards were different than what's in D-1641. I'd have
- 5 to look to see exactly how that was handled in here.
- 6 MR. O'LAUGHLIN: Okay. And then if we wanted
- 7 to, we could ask Mr. Tehrani to do a DSM-2 modeling to
- 8 ascertain that amount; correct?
- 9 MR. BERLINER: Objection.
- 10 MR. O'LAUGHLIN: Or the fate of the water in
- 11 San Joaquin if it hadn't been there.
- 12 CO-HEARING OFFICER DODUC: What is your
- objection, Mr. Berliner?
- 14 MR. BERLINER: If Mr. O'Laughlin is seeking to
- ask Dr. Nader-Tehrani to do runs for him to help his
- 16 questions --
- MR. O'LAUGHLIN: No. I'm just saying if we
- 18 wanted to do that, it could be done.
- 19 CO-HEARING OFFICER DODUC: Are you asking if
- 20 the model is capable of doing that and providing that
- 21 information?
- 22 MR. O'LAUGHLIN: Okay. I'll ask it that way.
- 23 WITNESS NADER-TEHRANI: So now you have to
- 24 repeat the question, please.
- MR. O'LAUGHLIN: If -- If the D-1641 flow

- 1 requirements were shown as being met when, in fact, they
- 2 could not have been met or were not met, could you run a
- 3 DSM-2 model to ascertain the fate of how much San Joaquin
- 4 River flow water was being exported in that time period?
- 5 WITNESS NADER-TEHRANI: That would not be a
- 6 very straightforward run. It would require an iterative
- 7 run, you know, making assumptions and changing, you know,
- 8 the flows in order to meet those requirements.
- 9 MR. O'LAUGHLIN: I have one last question.
- 10 WITNESS NADER-TEHRANI: It would not be
- 11 straightforward.
- MR. O'LAUGHLIN: Okay. I have one last
- 13 question. This is for Armin.
- 14 If -- If the modeling at Vernalis was done
- 15 predicated on meeting D-1641 when, in fact, D-1641 has
- 16 not been met, if there is a deficit there -- if there is
- 17 a deficit there, where would that deficit be made up in
- 18 your -- in the California WaterFix proposal for meeting
- in-Delta requirements or exports?
- 20 WITNESS MUNÉVAR: Yes. So that's an if. It's
- 21 a conditional question.
- MR. O'LAUGHLIN: Huge if.
- 23 WITNESS MUNÉVAR: So, just to point out what I
- 24 think I lost in some of this questioning is that the
- 25 No-Action and the WaterFix have identical operations on

- 1 the San Joaquin with the exception of the Head of Old
- 2 River Gate. So -- So to the extent that any conditions
- 3 occurred on the San Joaquin, the WaterFix does not
- 4 exacerbate that or change those conditions.
- 5 MR. O'LAUGHLIN: Yes, I would -- I agree with
- 6 that entirely. I think that's an excellent point.
- 7 But if the modeling's wrong to begin with, it
- 8 may be wrong throughout; correct? If D --
- 9 WITNESS MUNÉVAR: That's your opinion.
- 10 MR. O'LAUGHLIN: No. If D-1641 isn't being met
- 11 under the No-Action or under the WaterFix, it's not
- 12 showing a true representation; correct? It may not be
- 13 showing a true representation.
- 14 WITNESS MUNÉVAR: I can only state that they
- 15 are consistent between the No-Action and the WaterFix.
- MR. O'LAUGHLIN: Okay. So now my -- Going back
- 17 to my question, then.
- 18 So my question is: Under either the No-Action
- 19 Alternative or the California WaterFix, if, in fact,
- 20 there is a deficit at Vernalis that is being masked by
- 21 what I call magic water, where -- where in the system
- 22 would California WaterFix make that up?
- 23 WITNESS MUNÉVAR: If that were the case, there
- 24 is no mechanism in WaterFix or in the No-Action to make
- 25 up any deficit, as far as I understand.

1	MR. O'LAUGHLIN: Thank you very much.	
2	I'm all done.	
3	CO-HEARING OFFICER DODUC: Thank you,	
4	Mr. O'Laughlin.	
5	MR. O'LAUGHLIN: Thank you.	
6	CO-HEARING OFFICER DODUC: We will take our	
7	lunch break.	
8	And, actually, before we take our lunch break,	
9	I see Miss Taber in the audience.	
10	And you have requested very little time, and I	
11	know that you had just one followup question, and	
12	Miss Meserve before you and Mr. Herrick before you have	
13	requested a lot more time.	
14	Would anyone mind if Miss Taber conducted her	
15	15 minutes or so, if that is still the case, of	
16	cross-examination first when we return from lunch?	
17	All right. We're good.	
18	So, Miss Taber, you'll come up for your	
19	cross-examination.	
20	What time is it? It's 12:03. We'll return at	
21	1:05. Extra two minutes for you all.	
22	(Luncheon recess was taken at 12:03 p.m.)	
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- 1 Tuesday, May 9, 2017 2:05 p.m.
- 2 PROCEEDINGS
- 3 ---000---
- 4 CO-HEARING OFFICER DODUC: All right. Good
- 5 afternoon, everyone. It is 1:05. We are back in
- 6 session.
- 7 Before we turn to Miss Taber for her
- 8 cross-examination, I see Mr. Bezerra in the audience.
- 9 I don't believe we'll get to Group 7 until
- 10 Thursday, given the time that I still have remaining for
- 11 this panel, as well as Panel 3 that still needs to be
- 12 presented and cross-examined.
- 13 And if we happen to break early tomorrow, I
- think there will be no objections; right?
- 15 WITNESS NADER-TEHRANI: No, I will object.
- 16 (Laughter.)
- 17 CO-HEARING OFFICER DODUC: Dr. Nader-Tehrani,
- 18 you may stay as late as you would like tomorrow.
- 19 (Laughter.)
- 20 MR. BEZERRA: Thank you. I appreciate the
- 21 clarification.
- The scheduling fix that we have is the
- 23 Reclamation's schedule will be Thursday, and so we're
- trying to move that panel into Friday, so, again, I'll
- 25 update as soon as I can as to all that.

- 1 CO-HEARING OFFICER DODUC: And that panel would
- 2 be the panel of -- You have two panels for Group 7, I
- 3 believe.
- 4 MR. BEZERRA: Oh, yeah, correct. The first
- 5 Group 7 panel is Walter Bourez and Dan Easton. I believe
- 6 that is proceeding apace. I have to say I'm not the one
- 7 scheduling that one.
- 8 The second Group 7 panel is American River
- 9 witnesses, Tom Gohring, Jeff Weaver and additional.
- 10 Those are the ones we potentially have a scheduling
- 11 issue. I'm trying to make it work so they can be here
- 12 Friday.
- 13 CO-HEARING OFFICER DODUC: Okay. I expect,
- 14 then, if we get to -- when we get to Group 7 on Thursday,
- we will begin with Mr. Bourez and Mr. Easton.
- 16 MR. BEZERRA: I believe that's what everyone in
- 17 Group 7 has anticipated.
- 18 CO-HEARING OFFICER DODUC: And I believe
- 19 Petitioners will have cross-examination, I expect.
- MS. McGINNIS: Yes.
- MR. BEZERRA: I believe so.
- 22 CO-HEARING OFFICER DODUC: And others might
- have as well.
- 24 Again, if we -- Well, we'll play it by ear and
- 25 see how it goes.

- 1 And you mentioned you're trying to discuss --
- 2 MR. BEZERRA: Yeah. We're looking at different
- 3 options for that. As I said previously, we potentially
- 4 can split the panel, if necessary. We can flip-flop with
- 5 North Delta. We're trying to make it work for that
- 6 second Group 7 panel to testify Friday.
- 7 CO-HEARING OFFICER DODUC: Correct.
- 8 MR. BEZERRA: Thank you.
- 9 CO-HEARING OFFICER DODUC: Thank you.
- 10 Any other housekeeping items?
- 11 MS. MESERVE: Osha Meserve for Land and other
- 12 parties.
- 13 I think just to clarify with respect to when
- 14 the rebuttal witnesses that I have for Land would be
- 15 going, I'm under the working assumption, unless you say
- otherwise, that it's next week sometime, and that's what
- 17 I'm working with my witnesses on.
- 18 CO-HEARING OFFICER DODUC: Yes. Given the way
- 19 things are going, I don't expect that we'll get to you
- 20 until next week.
- 21 MS. MESERVE: Okay. Yes. And I cannot be here
- 22 on Friday so I will not be here Friday due to Bar
- 23 business.
- 24 CO-HEARING OFFICER DODUC: And, again, I think
- 25 if we need to break early on Friday, I think after four

- 1 days of togetherness, there will be no objections.
- 2 In fact, Mr. Herrick is refraining from dancing
- 3 in joy at the thought.
- 4 MR. HERRICK: (Dancing in back of room.)
- 5 (Laughter.)
- 6 MS. SUARD: Nicky Suard, Snug Harbor.
- 7 I had e-mailed in and I do request 15 to 25
- 8 minutes on this panel.
- 9 CO-HEARING OFFICER DODUC: I have you down for
- 10 that.
- MS. SUARD: Okay. Thank you.
- 12 MS. McGINNIS: Robin McGinnis for California
- 13 Department of Water Resources.
- I want to address the Exhibit List issue.
- 15 CO-HEARING OFFICER DODUC: Please.
- MS. McGINNIS: So what happened is, on
- 17 April 19th, DWR updated -- uploaded some modeling files
- 18 that were requested by Protestants to the FTP site and
- 19 those exhibits -- those modeling files were assigned
- 20 901 -- DWR-901 to DWR-904.
- 21 And then when the hearing started again on
- 22 April 25th, we started at 901 with those graphs that were
- 23 submitted during the cross-examination of Miss Sergent,
- so we have duplicate Numbers 901 to 904.
- 25 And what we'd like to propose -- And also I'd

- 1 like to apologize for the mistake. But what we'd like to
- 2 propose is to leave the exhibit numbers that were
- 3 assigned yesterday, so the report was 902 and then those
- 4 four .pdfs were 903 to 906, leave those numbers, and then
- 5 take those four modeling files that were 901 to 904 and
- 6 start them at 907.
- 7 CO-HEARING OFFICER DODUC: So then the
- 8 references that Mr. Bezerra and Mr. O'Laughlin made
- 9 yesterday -- Friday and today would be the correct
- 10 reference.
- 11 No.
- MS. McGINNIS: Well, yesterday . . .
- Today, the numbers that Mr. O'Laughlin used,
- 14 but the numbers that Mr. Bezerra mentioned that may have
- 15 been referenced in his client's rebuttal testimony may be
- 16 wrong, but he's checking if he included the 901 in there.
- 17 CO-HEARING OFFICER DODUC: Mr. Bezerra.
- 18 MR. BEZERRA: Yes. I think we're on a path to
- 19 getting this resolved.
- 20 My question is, I believe -- I believe I'm the
- 21 only person so far who has presented exhibits based on
- the modeling files. I believe the only exhibits that are
- 23 based on those modeling files are BKS-103 and BKS-104
- that I used. I need to take a look at those. I don't
- 25 think that they refer to a DWR exhibit number. I think

- 1 we just used them and Miss Parker authenticated them as
- 2 model results, I think.
- 3 So I need to do two things: One is, I need to
- 4 look at the exhibits themselves, which I should be able
- 5 to do pretty quickly back at the office. I don't have
- 6 them here now.
- 7 The other is, I will need to look at the
- 8 transcript from last Thursday and Friday to see if there
- 9 are references to DWR-901. Operating from memory, I
- 10 think there are not, but I will need to check that out.
- 11 And whatever the case is, I suspect we can work out some
- 12 kind of statement for the record that addresses this so
- 13 that the record's clear.
- 14 CO-HEARING OFFICER DODUC: Thank you very much.
- 15 I appreciate the two of you getting together and
- 16 addressing that.
- MS. McGINNIS: So if anyone else has issues or
- 18 questions about that, they can ask me, and then if I
- 19 don't hear anything, then DWR will serve a new -- a
- 20 Revised Exhibit List sometime tomorrow and we can clarify
- 21 the record.
- 22 CO-HEARING OFFICER DODUC: All right. Is that
- 23 clear?
- 24 Clear. We're good.
- 25 All right. Miss Taber.

1 MS. TABER: Good afternoon. Kelley Taber on

- 2 behalf of the City of Stockton.
- 3 My limited number of questions are intended to
- 4 follow up on the testimony of Dr. Bryan regarding
- 5 residence time and temperature modeling that he relied on
- 6 in forming his opinion.
- 7 And I thank the Hearing Chair for noting last
- 8 week and remembering a specific question that I had.
- 9 That question was actually adequately addressed by -- in
- 10 subsequent cross-examination by other parties, so I will
- 11 not need to raise that today.
- 12 Mr. Hunt, could you please put up Stockton 35.
- 13 And I'm not sure who on the panel is the right
- 14 person to answer my question so I will direct it to the
- panel and whoever is qualified to answer, please jump up.
- 16 (Document displayed on screen.)
- MS. TABER: Thank you.
- 18 So Exhibit Stockton 35 is a table from the
- 19 Final EIR/EIS, Table 8-60a.
- I'm sorry. Scroll down to that.
- 21 (Scrolling down document.)
- 22 MS. TABER: And it presents residence times for
- 23 subregions of the Delta, for the EBC one, the No-Action
- 24 Alternative, and Alternative 1 to 9, as I understand it.
- 25 ///

CROSS-EXAMINATION	

- 2 MS. TABER: And the question I have for the
- 3 panel:
- 4 Was residence time modeled for the Proposed
- 5 Project in Alternative 4A?
- 6 WITNESS NADER-TEHRANI: What is your question?
- 7 CO-HEARING OFFICER DODUC: Did -- Was residence
- 8 time modeled for the Proposed Project Alternative 4A, not
- 9 specifically here, but has DWR conducted, or Reclamation,
- 10 modeling of residence time for the Proposed Project?
- 11 WITNESS NADER-TEHRANI: I believe the answer is
- 12 yes.
- 13 I think those are the Particle Tracking Model
- ones, and I believe the answer is yes, but I don't know
- 15 for 100 percent.
- 16 MS. TABER: Okay. Who would know whether the
- 17 residence time was modeled for Alternative 4A?
- 18 WITNESS MUNÉVAR: Same answer as Dr. Parviz --
- 19 Dr. Tehrani, but we can verify if that was done.
- This table is showing Alternative 4, H3 but not
- 21 the H3+ alternative.
- MS. TABER: Right. Okay. Yes.
- 23 CO-HEARING OFFICER DODUC: I believe you can
- 24 move on, Miss Taber. I don't want a repeat of what we
- 25 experienced with Mr. O'Laughlin earlier. One never wants

- 1 to repeat the experience with Mr. O'Laughlin this morning
- 2 in terms of his -- his concern that things -- a response
- 3 that was promised to him was not provided.
- 4 So, Dr. Munévar, when you say you can check and
- 5 get back to Miss Taber, what do you mean? When will you
- 6 do this and . . .
- 7 WITNESS MUNÉVAR: I can do it at the next
- 8 break. I just need to verify that it was performed and
- 9 where in the document it is.
- 10 CO-HEARING OFFICER DODUC: All right.
- 11 MS. TABER: Thank you. That was my question.
- 12 Where was it done and where do I find it?
- 13 WITNESS MUNÉVAR: Yeah.
- MS. TABER: I have the same question for the
- 15 Boundary 1 and Boundary 2 scenarios.
- 16 WITNESS NADER-TEHRANI: And I think the answer
- 17 to that is no.
- 18 CO-HEARING OFFICER DODUC: Okay. Mr. Munévar
- 19 can confirm that?
- 20 WITNESS NADER-TEHRANI: I'm not sure.
- 21 WITNESS MUNÉVAR: Yeah. I think the answer is
- 22 no for Boundary 1 and 2. Those were prepared
- 23 specifically for this hearing so I'm almost certain they
- 24 are not -- that particle tracking has not been done for
- those.

- 1 MS. TABER: Thank you. I'll look forward to
- 2 the followup after the break.
- 3 I also have some questions about modeling of
- 4 temperature.
- 5 And my question is: Who performed the
- 6 temperature modeling that was done for the Biological
- 7 Assessment?
- 8 WITNESS MUNÉVAR: Which particular -- There
- 9 were a number of temperature models used for the
- 10 Biological Assessment. There was the Sacramento River,
- 11 Feather River, I think it was Delta, San Joaquin.
- 12 MS. TABER: Okay. The temperature model that
- 13 was presented and relied on by Dr. Bryan which in his
- 14 reports would be the Delta, I presume.
- 15 WITNESS MUNÉVAR: Yes. I'm -- I'm not certain
- 16 who conducted that modeling to support his work.
- MS. TABER: Okay. And does
- 18 Dr. Nader-Tehrani --
- 19 WITNESS NADER-TEHRANI: I believe some of those
- 20 water temperature models that were done for the Delta was
- 21 done by RMA.
- 22 MS. TABER: And is RMA on consultant to you
- 23 or --
- 24 WITNESS NADER-TEHRANI: Not to me but . . .
- 25 MS. TABER: Does anyone on the panel know who

1 would have commissioned that work by RMA? Or where we

- 2 might find it?
- 3 WITNESS MUNÉVAR: I can give you the same
- 4 answer, that I'll get back to you after the break.
- 5 MS. TABER: Okay. Great. Thank you.
- And so as a followup to that, can anyone
- 7 confirm my understanding that temperature modeling was
- 8 only conducted for the No-Action Alternative and the
- 9 preferred alternative scenarios?
- 10 And by this, I mean the temperature modeling
- 11 that was the -- used in the Biological Assessment.
- 12 WITNESS MUNÉVAR: Sorry to give you the same
- 13 response, but I will get you a response after the break.
- MS. TABER: Okay. And the next question I have
- 15 is:
- 16 What model was used to generate the model
- 17 temperatures that are predicted -- are presented in the
- 18 Biological Assessment?
- 19 WITNESS NADER-TEHRANI: I believe the Delta
- temperature model was done by DSM-2.
- 21 Dr. Bryan, I -- from what I recall, presented
- 22 some model runs at Knights Landing which would be
- considered outside the Delta so that would not DSM-2.
- 24 That would be, I would imagine, the USBR temperature
- 25 model.

- 1 MS. TABER: Okay. So that -- Am I correct,
- 2 then, that the CalSim II results serve as an input to the
- 3 Reclamation temperature model?
- 4 WITNESS MUNÉVAR: That's correct, yes.
- 5 MS. TABER: Okay.
- 6 WITNESS MUNÉVAR: For the upstream of the
- 7 Delta, that is correct. CalSim II results provide the
- 8 flow and release inputs that are then input into the
- 9 temperature models.
- 10 MS. TABER: Okay. And you made reference to
- 11 the -- Dr. Nader-Tehrani -- Delta temperature model.
- 12 Can you explain what that is.
- 13 WITNESS NADER-TEHRANI: That would be a module
- inside the DSM-2.
- 15 MS. TABER: Okay. And -- But you don't know
- 16 who conducted that particular modeling of Delta
- 17 temperatures that --
- 18 WITNESS NADER-TEHRANI: From what I recall,
- 19 it's RMA staff.
- 20 MS. TABER: Okay. Okay. So the -- Can we put
- 21 up, please, Mr. Hunt, Exhibit Stockton 38, which is a
- page from the BDCP Draft EIR/EIS, Page 4-17.
- 23 (Document displayed on screen.)
- MS. TABER: If you'd scroll to the highlighted
- words there.

- 1 (Scrolling down document.)
- MS. TABER: And it says it's used to predict
- 3 monthly mean, vertical water temperature profiles and
- 4 release temperatures in Trinity, Whiskeytown, Shasta,
- 5 Folsom, New Melones and Tulloch Reservoirs; is that
- 6 correct?
- 7 WITNESS MUNÉVAR: Yes, that's correct.
- 8 MS. TABER: So is anyone on the panel able to
- 9 explain how or whether the model temperatures were used
- 10 to determine temperatures in the Delta interior? Or is
- 11 that a separate analysis using --
- 12 WITNESS MUNÉVAR: I --
- MS. TABER: Go ahead.
- 14 WITNESS MUNÉVAR: I can tell you generally.
- 15 So, generally, the models that you have
- 16 highlighted here, the Reclamation temperature models, are
- 17 primarily for the riverine temperature conditions
- 18 upstream of the Delta.
- 19 By the time you arrive at the Delta, it tends
- 20 to be more dominated by the meteorological conditions in
- 21 the Delta itself and the upstream temperatures have
- 22 lesser impact in the Delta.
- 23 So that is a different model. That was the one
- 24 that Mr. Tehrani identified.
- MS. TABER: Okay. So the model reservoir

- 1 temperatures would not have been used to determine
- 2 temperatures in the Delta interior; is that correct?
- 3 WITNESS MUNÉVAR: Not for the Delta interior
- 4 but for the riverine conditions. They were primarily
- 5 used for assessing compliance or changes in temperature
- 6 associated with Biological Opinion and fishery-related
- 7 issues on -- in the river systems themselves.
- 8 MS. TABER: Okay. Those are the only questions
- 9 I had.
- 10 That concludes our cross-examination. Thank
- 11 you.
- 12 CO-HEARING OFFICER DODUC: Thank you,
- 13 Miss Taber.
- Back to our order. And I have Miss Meserve up
- 15 next.
- 16 MS. MESERVE: Good afternoon. Osha Meserve for
- 17 local agencies of the North Delta and other parties.
- 18 With respect to the questioning by City of
- 19 Stockton just now, I would note that, depending on the
- 20 information that Mr. Munévar brings back, I may have
- 21 questions about that as well because that was part of our
- 22 case in chief and concern about those inputs. So I quess
- 23 I'd just reserve the opportunity to come back and ask a
- 24 couple of questions if I have them.
- 25 CO-HEARING OFFICER DODUC: Well, as Mr. Mizell

- 1 when he was here pointed out, normally we don't encourage
- 2 cross on cross, but to the extent that it adds value,
- 3 then you may have that time.
- 4 MS. MESERVE: Thank you, yes.
- I just know that various of us had questions
- 6 about the inputs Dr. Bryan was using and this relates to
- 7 that.
- 8 So with respect to the questions I have today
- 9 for this panel, I have questions for Mr. Leahigh on the
- 10 surplus flows and hydrodynamics, storage in Oroville;
- 11 questions for Mr. Munévar on the modeling used from this
- 12 Project in this drought and the development of model
- 13 scenarios; and then I have questions for
- 14 Dr. Nader-Tehrani on the Fall X2 and B1 water level
- assumptions; and then a couple of questions for
- 16 Miss Parker regarding . . . let's see, climate scenarios,
- 17 sensitivity analyses.
- 18 So I estimate about 45 minutes.
- 19 CO-HEARING OFFICER DODUC: Okay.
- 20 MS. MESERVE: I tried to pay attention to what
- 21 happened before but let's see how we do.
- 22 CO-HEARING OFFICER DODUC: Please proceed.
- MS. MESERVE: Okay.
- 24 CROSS-EXAMINATION BY
- 25 MS. MESERVE: Starting with you, Mr. Leahigh,

- 1 if we could.
- 2 If we could bring up the testimony DWR-78 at
- 3 Page 6, and it's Lines 1 through 3. And this portion of
- 4 the testimony refers to the source of winter exports
- 5 being predominantly surplus flows that would be excess
- 6 outflow if not exported.
- 7 (Document displayed on screen.)
- 8 MS. MESERVE: And did you define how they're
- 9 using the term "excess flow" in this portion of your
- 10 testimony, at the very top of that page?
- 11 WITNESS LEAHIGH: Yes. That would be -- That
- 12 would be flow that's in excess of that needed to meet the
- 13 D-1641 standards and in-basin uses.
- MS. MESERVE: Isn't it true that what you refer
- to as excess flow also help freshen the Delta even
- if . . . even if they aren't required to be released?
- MR. BERLINER: Objection: Beyond the scope of
- 18 his testimony.
- 19 CO-HEARING OFFICER DODUC: Miss Meserve.
- 20 MS. MESERVE: He is referring to excess Delta
- 21 outflow as if the water is wasted in his testimony and
- 22 I'm simply trying to understand what he means by that
- 23 because there may be a value beyond what he has assigned
- 24 to it.
- 25 CO-HEARING OFFICER DODUC: And your question

- 1 again was?
- 2 MS. MESERVE: Isn't it true that what you refer
- 3 to as excess outflow would also help freshen the Delta?
- 4 CO-HEARING OFFICER DODUC: Fair enough.
- 5 Overruled.
- 6 WITNESS LEAHIGH: Well, I think it's the
- 7 Board's responsibility to determine through this
- 8 development of the standards on what is considered excess
- 9 flow.
- 10 MS. MESERVE: Is the persistence of fresh water
- in the Delta and in the bay during longer periods larger
- 12 with these excess flows?
- 13 WITNESS LEAHIGH: I'm sorry. Can you repeat
- 14 that question?
- 15 MS. MESERVE: Wouldn't the persistence of fresh
- 16 water in the Delta and the bay be longer with the excess
- 17 flows in general?
- 18 MR. BERLINER: Objection: Beyond the scope of
- 19 his testimony.
- 20 CO-HEARING OFFICER DODUC: I'm trying to follow
- 21 you here, Miss Meserve.
- 22 MS. MESERVE: The witness is testifying that --
- 23 what he just said, that he wanted to meet the minimums
- 24 that the Board would assign. And I'm simply trying to
- 25 point to the -- some of the other values that would come

- 1 from having what he calls excess.
- 2 CO-HEARING OFFICER DODUC: Okay. And your
- 3 point in pointing that out is that . . .
- 4 MS. MESERVE: In general, by allowing more
- 5 fresh water out of the system, that pushes the salinity
- 6 gradient out farther into the bay which later on helps
- 7 protect fresh water in the Delta for longer periods of
- 8 time, so it's --
- 9 CO-HEARING OFFICER DODUC: How is that --
- 10 MS. MESERVE: -- putting money in the bank.
- 11 CO-HEARING OFFICER DODUC: How does that relate
- 12 to perhaps testimony by Dr. Nader-Tehrani on the water
- 13 quality aspect?
- MS. MESERVE: It could relate to
- 15 Dr. Nader-Tehrani if you prefer I go at it that way.
- 16 CO-HEARING OFFICER DODUC: Let's go at it that
- way, Miss Meserve.
- MS. MESERVE: Okay. Thank you.
- 19 Moving to you, Dr. Nader-Tehrani, then.
- 20 If there was more excess outflow, wouldn't that
- 21 persistence of fresh water help keep the salinity
- 22 gradient out farther than if you were simply operating to
- the minimum outflow required?
- 24 WITNESS NADER-TEHRANI: I don't think there's a
- 25 straightforward answer to this question. It all depends

- 1 on the specifics.
- 2 So I don't have a straightforward answer to
- 3 that question.
- 4 MS. MESERVE: But in general, if you allow more
- fresh water out of the system, that pushes the salinity
- 6 gradient farther to the west; doesn't it?
- 7 MR. BERLINER: Objection: Asked and answered.
- 8 He indicated he doesn't have enough facts to support the
- 9 hypothetical.
- 10 CO-HEARING OFFICER DODUC: In general,
- 11 Dr. Nader-Tehrani.
- 12 WITNESS NADER-TEHRANI: Yes. In general, yes.
- 13 CO-HEARING OFFICER DODUC: Thank you.
- Oh, that was an overruled.
- 15 MS. MESERVE: Moving back to Mr. Leahigh.
- 16 In DWR-78, still, on Page 12 at the top of the
- 17 page, you state that the tunnels -- the Delta tunnels
- 18 (reading):
- 19 ". . . Would provide increased opportunities to
- 20 capture excess flows in average to wet years over
- 21 the long-term."
- Now, is there any operational requirement
- 23 proposed by the Department that would limit the North
- 24 Delta Diversions to actually operate to capture excess
- 25 flows in average to wet years over the long-term?

- 1 MR. BERLINER: Objection: We've been through
- 2 this before.
- 3 CO-HEARING OFFICER DODUC: Yes, Miss Meserve.
- 4 We've gone through the whole -- The Department -- The
- 5 Petitioners have not proposed any terms or conditions.
- 6 MS. MESERVE: I'm actually not speaking to
- 7 terms and conditions. We're -- Mr. Leahigh is testifying
- 8 as to operations and there are certain operational
- 9 parameters that have been set forth, so --
- 10 CO-HEARING OFFICER DODUC: You mean the policy
- 11 to which he referenced in his rebuttal testimony?
- MS. MESERVE: Well, at the top of the page
- here, he's saying that it would provide increased
- opportunities to capture excess flows and I'm simply
- asking whether the -- whether there's any limitation that
- 16 the Project only be operated to capture excess flows?
- 17 CO-HEARING OFFICER DODUC: Limitations in terms
- 18 of the operations, not in terms of what they might be
- 19 proposed.
- MS. MESERVE: Yes.
- 21 CO-HEARING OFFICER DODUC: Okay. Overruled.
- Please answer, Mr. Leahigh.
- 23 WITNESS LEAHIGH: Yes. I think as I've
- 24 testified numerous times, that the primary objective of
- 25 the North Delta Diversion would be to capture these

- 1 excess flows.
- 2 And my review of the historical practice,
- 3 the -- even with the existing capacities available to the
- 4 Projects, we're not fully utilizing that existing
- 5 capacity. So I -- I wouldn't think that there would --
- 6 there'd be little to no expectation that -- that there be
- 7 additional stored water used by the North Delta
- 8 Diversion.
- 9 MS. MESERVE: But as Mr. -- Dr. Nader-Tehrani
- 10 just testified, those same excess outflows could push the
- 11 salinity gradient out farther to the west and be more
- 12 protective of water quality in the Delta; wouldn't they?
- 13 MR. BERLINER: Objection: This question was
- 14 directed to this witness before and referred to
- 15 Dr. Nader-Tehrani.
- MS. MESERVE: It's simply --
- 17 CO-HEARING OFFICER DODUC: I'm not sure where
- 18 the value is in this line of questioning, Miss Meserve.
- 19 The Petitioners have argued -- And you may not
- 20 agree, but they have argued that they will operate this
- in compliance with water quality objectives set forth in
- 22 D-1641.
- 23 So . . . whether excess flow is available to
- improve upon that compliance, is that where you're going?
- MS. MESERVE: I'm not sure.

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1 I'll ask another question of Dr. Nader-Tehrani
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- 2 that may get to the point better.
- 3 CO-HEARING OFFICER DODUC: Please.
- 4 MS. MESERVE: Thank you.
- 5 Dr. Nader-Tehrani, would it be true that the
- 6 farther out the salinity gradient is pushed by excess
- 7 flows, the longer time period we're able to protect water
- 8 quality in the Delta in general is?
- 9 WITNESS NADER-TEHRANI: So, as I said, there
- 10 are, you know, other --
- 11 WITNESS LEAHIGH: Microphone.
- 12 WITNESS NADER-TEHRANI: Sorry.
- 13 As I said, there are other factors that are --
- should be looked at to answer that question.
- 15 But in general, you know, not always, but
- 16 that -- Yeah. In general, yes.
- MS. MESERVE: Okay. Going back to DWR slide --
- 18 Exhibit 10, Slide 18, back to Mr. Leahigh, if we could.
- 19 (Document displayed on screen.)
- 20 MS. MESERVE: This slide states that (reading):
- "The core hydrodynamics" of "the Delta would
- 22 not change."
- On the bottom there.
- Now, if we could go to the next slide, 19.
- 25 (Document displayed on screen.)
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- 1 MS. MESERVE: Does this figure, Mr. Leahigh,
- 2 attempt to rebut the claim that the tunnels would alter
- 3 the hydrodynamics of the Delta?
- 4 WITNESS LEAHIGH: Yes. I think it was implied
- 5 in some of the cases in chief that there would be some
- 6 radical change in the hydrodynamics of the Delta
- 7 associated with the Proposed Project. And I don't
- 8 believe that to be the case.
- 9 MS. MESERVE: To what year types does this
- 10 figure apply?
- 11 WITNESS LEAHIGH: This figure applies to any --
- 12 any year where essentially the Delta is in balanced
- 13 conditions and that the Projects are actively managing
- 14 flows in the system. So that could be in any year.
- 15 MS. MESERVE: So, just to be clear, this figure
- 16 doesn't relate to either high-flow or low-flow conditions
- in particular?
- 18 WITNESS LEAHIGH: Well, generally, it's on
- 19 lower flow, average to low-flow conditions.
- 20 MS. MESERVE: Okay. Just to be clear, because
- 21 you -- I believe you just said that it was -- first, that
- 22 it was any year and then now you just said that it more
- relates to average in lower-flow years.
- I'm trying to understand: To what years does
- 25 this figure relate?

- 1 MR. BERLINER: Objection: Misstates the
- 2 witness' testimony.
- 3 The witness indicated it pertained to high-flow
- 4 and low-flow times, not high-flow years. We're mixing up
- 5 years versus times within a year.
- 6 CO-HEARING OFFICER DODUC: Is that correct,
- 7 Mr. Leahigh?
- 8 WITNESS LEAHIGH: Yes, that's correct.
- 9 You can have periods of average-to-low flows in
- 10 wet years, and you can have periods of very wet flows in
- 11 dry years. So that's the distinction.
- 12 CO-HEARING OFFICER DODUC: Thank you.
- 13 MS. MESERVE: And is this figure intended to be
- 14 to scale in terms of the size of the river and different
- 15 arrows?
- 16 WITNESS LEAHIGH: No. It's -- It's not -- It's
- 17 not intended to be -- It's to give a general sense of the
- 18 magnitude of changes that would be expected in the flows.
- 19 MS. MESERVE: Now, this figure shows a smaller
- 20 reverse flow purple arrow near Jersey Point in the
- 21 Without or -- sorry -- in the With CWF box, correct, than
- in the Without?
- 23 WITNESS LEAHIGH: Correct.
- 24 WITNESS NADER-TEHRANI: I have some information
- 25 that I think would also be helpful in regards to my

- 1 response. So --
- 2 CO-HEARING OFFICER DODUC: In regards to your
- 3 response?
- 4 WITNESS NADER-TEHRANI: To -- Regarding how the
- 5 salinity's pushed with the volume of fresh water removed.
- 6 CO-HEARING OFFICER DODUC: Okay.
- 7 WITNESS NADER-TEHRANI: So if you look at
- 8 Exhibit DWR-901, and that would be Page --
- 9 CO-HEARING OFFICER DODUC: Now, which 901 is
- 10 this?
- 11 WITNESS NADER-TEHRANI: I just want to look at
- 12 Emmaton.
- MS. McGINNIS: Parviz -- I'm sorry.
- Dr. Nader-Tehrani, will you use the name of the
- 15 exhibit.
- 16 WITNESS NADER-TEHRANI: Yes. This is the
- 17 "Monthly Average EC values from California Water Fix DSM2
- 18 model."
- 19 CO-HEARING OFFICER DODUC: Formally known as
- 20 DWR-901.
- 21 WITNESS NADER-TEHRANI: Yes. I forget what the
- 22 new number is.
- MS. McGINNIS: We don't have new numbers yet.
- 24 WITNESS NADER-TEHRANI: All right. So if you
- 25 look at Emmaton, for example, take a look at the month of

- 1 January.
- 2 So the black line represents No-Action. The
- 3 two shades of blue represent H3 and H4. So, although, in
- 4 January, we have the potential to take large volumes of
- fresh water in the river, that doesn't necessarily
- 6 increase salinity at this point.
- 7 That's the point I was trying to make, that,
- 8 you know, it all depends.
- 9 MS. MESERVE: I don't think that relates to my
- 10 question at all, just for the record.
- 11 WITNESS NADER-TEHRANI: Well, the point I was
- 12 trying to make is, it is possible to remove fresh water
- 13 from the system and yet make the Delta fresher. That was
- 14 the point I was trying to make.
- 15 CO-HEARING OFFICER DODUC: All right. Let's
- 16 move on, please.
- MS. MESERVE: Okay. May we please go back to
- 18 the --
- 19 CO-HEARING OFFICER DODUC: Hold on.
- Mr. Bezerra.
- 21 MR. BEZERRA: Just a suggestion on exhibit
- 22 numbering.
- While we were sitting here, I was able to go
- look back at BKS-103 and 104. They do not refer to 901.
- 25 I don't remember referring to 901 in cross-examination.

- 1 I'll confirm that from the transcript.
- 2 But just to make everybody's life easier, I
- 3 suggest we go ahead and start using exhibit numbers as
- 4 DWR has produced today. If there is some clarification
- and needs to go back, I'll figure it out with DWR and
- 6 we'll put something together. Just so we don't have a
- 7 painful exercise of having to refer to the title of every
- 8 document.
- 9 MS. McGINNIS: Thanks so much.
- 10 So this will be -- Sorry, not this.
- 11 What Dr. Nader-Tehrani was just talking about
- 12 will continue to be 901.
- 13 And then . . . we'll set -- we'll -- the
- exhibit numbers we assigned yesterday will stay the same,
- so this morning's references are all fine.
- 16 And we'll send out a Revised Exhibit List
- 17 either later today or early tomorrow.
- 18 Thank you.
- MS. MESERVE: Okay. Thank you.
- 20 CO-HEARING OFFICER DODUC: Miss Meserve.
- MS. MESERVE: So back to the figure.
- 22 And I was mentioning -- discussing with
- 23 Mr. Leahigh, the reverse flow arrow near Jersey Point and
- the fact that it's smaller in the "with CWF" box.
- 25 So, is it your opinion that the proportion of

- 1 cross-Delta flow would be less with the CWF? Is that
- what you're trying to show here?
- 3 WITNESS LEAHIGH: Well, so the reason that the
- 4 reverse flow arrow is smaller in the With California
- 5 WaterFix is not because of the less cross-Delta flow.
- 6 It's because of the lower South Delta exports.
- 7 MS. MESERVE: Now, the -- But the figure does
- 8 not include the new incidences of reverse flow near the
- 9 proposed North Delta Diversions like at Georgiana Slough;
- 10 does it?
- 11 WITNESS LEAHIGH: The --
- 12 WITNESS NADER-TEHRANI: I can -- Sorry.
- 13 WITNESS LEAHIGH: Well, there -- Yeah. I
- 14 can -- I'll just talk about what reverse flows meant in
- 15 this diagram and perhaps Dr. Nader-Tehrani can talk to
- 16 the other point.
- 17 The reverse flow in this particular -- in my
- 18 exhibit here is the reverse net flow, so this would be
- 19 daily average flows, and it doesn't pertain to the North
- 20 Delta Diversion.
- 21 And I'll defer to Dr. Tehrani for that.
- 22 WITNESS NADER-TEHRANI: Yeah. I think your
- 23 response captured what I was going to say.
- MS. MESERVE: If this slide is about Delta
- 25 hydrodynamics, though, wouldn't it be more informative if

1 there was also some kind of purple or other arrow showing

- 2 reverse flows in the Northern Delta that would newly
- 3 arrive with the CWF?
- 4 WITNESS LEAHIGH: Well, I think that's really a
- 5 different category. I think the references to reverse
- flows there are in terms of more of an hourly basis,
- 7 within the ebb and floodtides.
- 8 This is more of a big picture in terms of
- 9 longer time scale and the bigger picture in terms of the
- 10 net average flow on a daily basis and geographically over
- 11 the entire Delta.
- 12 So it's a -- it's a kind of apples and oranges
- 13 type of issue.
- 14 MS. MESERVE: So are you disagreeing that there
- 15 would be new reverse flows in the North Delta as a -- as
- an effect of this Proposed Project?
- 17 WITNESS LEAHIGH: I would have to defer to
- 18 Dr. Tehrani who has been the one to analyze that.
- 19 WITNESS NADER-TEHRANI: I presented testimony
- in this hearing in our rebuttal discussing whether or not
- 21 California WaterFix will increase the frequency of
- 22 significant reverse flow events in the vicinity of the
- 23 Freeport facility.
- 24 And I think I clearly demonstrated that
- 25 California WaterFix does not increase the frequency of

- 1 those reverse flow events.
- 2 MS. MESERVE: And you, Dr. Nader-Tehrani, base
- 3 that on comparative modeling, not predictive modeling,
- 4 though; right?
- 5 WITNESS NADER-TEHRANI: Well, there were a
- 6 number of pieces, and I can go over that, and there's
- 7 value in it.
- MS. MESERVE: No, we don't go need to go over
- 9 the East Bay MUD testimony. I have a different opinion
- 10 as to the outcome of the cross-examination on that.
- 11 But -- However, I believe that it is part of
- 12 the case in chief and certainly part of the BAA as part
- 13 of evidence here, that there are new river flows in the
- 14 Northern Delta.
- 15 And so my question is: Although Mr. Leahigh
- 16 explained that he considered them to be different in
- 17 magnitude, for this to be a useful comparative figure, it
- 18 should show the new reverse flows.
- 19 And for that reason, I would move to strike
- 20 this figure. I don't think it's informative to the trier
- 21 of fact. It shows -- It also -- In addition to not
- 22 showing the new reverse flows on the Sacramento River, it
- 23 also shows the same size river before and after the
- tunnel diversions, so I think it's misleading in
- 25 representing this Project.

1 CO-HEARING OFFICER DODUC: So, just so we're

- 2 clear:
- 3 You're moving to strike the Delta hydrodynamics
- 4 figure on Page 19 of Mr. Leahigh's PowerPoint for the
- 5 rebuttal phase?
- 6 MS. MESERVE: DWR-10, yes.
- 7 CO-HEARING OFFICER DODUC: Okay. Response,
- 8 Mr. Berliner or Miss McGinnis?
- 9 MR. BERLINER: Yes.
- 10 This witness was not testifying regarding
- 11 reverse flow issues associated with the WaterFix. That
- 12 was done by another witness.
- 13 This witness' testimony was limited to
- 14 hydrodynamics within the Delta and how the WaterFix would
- 15 be depicted in relationship to the various values that
- 16 are shown on this graphic.
- 17 The fact that the witness would -- or the
- 18 cross-examiner would like to have a different graphic is
- 19 really not relevant to this witness' testimony.
- 20 Essentially what she's asking is that this witness
- 21 testify to something that he didn't testify to.
- 22 So this graphic has a limited purpose. It's
- 23 not meant to identify every flow factor associated with
- 24 or unassociated with the Petition. So it's only offered
- 25 for limited purposes in support of Mr. Leahigh's

- 1 testimony and not in support of Dr. Nader-Tehrani's
- testimony, which is really on a different subject.
- 3 CO-HEARING OFFICER DODUC: Miss Meserve, final
- 4 comments on this?
- 5 MS. MESERVE: Certainly.
- 6 The problem I have with it is, the figure's not
- 7 clearly marked with what the intent is. It simply says
- 8 "Delta hydrodynamics."
- 9 And then the testimony that I could find that
- 10 it was relied to seems to talk about high-flow
- 11 conditions. And on cross, Mr. Leahigh's saying, well,
- maybe it's high-flow and low-flow times.
- 13 So I just don't think this figure corresponds
- 14 to the testimony and I think it's very misleading and
- 15 incomplete.
- 16 CO-HEARING OFFICER DODUC: Thank you. We will
- 17 take that under advisement.
- MS. MESERVE: Okay. So moving on to --
- 19 WITNESS LEAHIGH: I would just like to add,
- 20 though, that my testimony's being completely misstated in
- 21 these objections. For the record --
- 22 CO-HEARING OFFICER DODUC: Mr. Leahigh, your
- 23 counsel Mr. Berliner has expressed that already. It is
- 24 so noted and we will issue our ruling when you move these
- 25 exhibits into evidence at the completion of your rebuttal

- 1 phase.
- MS. MESERVE: Okay. Let's see. So,
- 3 Mr. Munévar -- So we'll be looking at the DWR-86 for
- 4 this.
- Now, you've worked on matters pertaining to the
- 6 proposed North Delta Diversions going back to about 2007;
- 7 is that correct?
- 8 WITNESS MUNÉVAR: That's correct.
- 9 (Document displayed on screen.)
- MS. MESERVE: And do you have any -- in your
- 11 training and knowledge -- specialized information as to
- what would constitute an injury to water uses in the
- 13 Delta?
- MS. McGINNIS: Objection: Calls for a legal
- 15 conclusion.
- 16 MS. MESERVE: Mr. Munévar has testified in his
- 17 written testimony about the issue of injury, and so I'm
- 18 simply asking about what his specialized knowledge is.
- 19 CO-HEARING OFFICER DODUC: You know, we've been
- 20 down this road before --
- 21 MS. MESERVE: And I have very few questions
- 22 about it.
- 23 CO-HEARING OFFICER DODUC: All right. Let's go
- 24 through this quickly, keeping in mind that the issue of
- 25 injury is a key issue which I expect we will be hearing

- 1 from many of you in your closing briefs, and how these
- 2 witnesses view that issue is certainly not the be all/end
- 3 all in terms of our decision-making.
- 4 WITNESS MUNÉVAR: What's --
- 5 CO-HEARING OFFICER DODUC: So, Mr. Munévar,
- 6 please go ahead and answer.
- 7 WITNESS MUNÉVAR: Yes. I believe, as I
- 8 testified both in direct and on cross, that what I'm
- 9 calling no injury is when I observe that a No-Action
- 10 condition has -- of the Proposed Project has essentially
- 11 the same sets of deliveries to those users as compared to
- 12 the No-Action.
- 13 So in my testimony, it's a comparative between
- 14 the No-Action and the Proposed Project, and if there is
- no change, that's what I've called no injury.
- 16 MS. MESERVE: Just to clarify: When you say
- 17 "no change," you're saying when the -- if you compare NAA
- 18 to one of the Project scenarios.
- 19 WITNESS MUNÉVAR: That's correct.
- MS. MESERVE: It's on a comparative.
- 21 And who provided you with your working
- definition of "injury" for this testimony?
- 23 WITNESS MUNÉVAR: It was -- It was . . .
- It was my determination to compare a No-Action
- 25 with the Proposed Project, or specific water users.

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1 MS. MESERVE: Now, on Page 31 of your
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- 2 testimony, on Line 11 --
- 3 (Document displayed on screen.)
- 4 MS. MESERVE: -- you discuss that CalSim
- 5 modeling does not and should not be used to predict
- 6 actual Project outcomes; is that correct?
- 7 WITNESS MUNÉVAR: Which line are you referring
- 8 to?
- 9 MS. MESERVE: Line 11 (reading):
- ". . . CalSim model results . . . "
- 11 WITNESS MUNÉVAR: Yes. Well, the testimony
- 12 stands for itself. I was talking about under stressed
- 13 water supply conditions, given the generalized nature of
- 14 the rules that are in CalSim, they should not be used to
- 15 reflect what literally could occur in that particular
- 16 type condition.
- MS. MESERVE: And so the modeling produces
- 18 outputs that don't reflect actual projected operations in
- 19 a given time period; right?
- 20 WITNESS MUNÉVAR: Well, there are no actual
- 21 projected conditions. That is the purpose of modeling,
- 22 is to envision what the future may look like under a set
- 23 of structured rules. But those conditions have not yet
- 24 occurred so there is no actual condition for that future
- event.

- 1 MS. MESERVE: Okay. So if, as you claim, it's
- 2 improper to use the CalSim modeling to predict
- 3 operations, on what basis can you claim that the Project
- 4 will not cause injury to legal users of water?
- 5 MS. McGINNIS: Objection: Asked and answered.
- 6 CO-HEARING OFFICER DODUC: Yes. We have -- We
- 7 have gone down this path already, Miss Meserve. In fact,
- 8 he answered it already.
- 9 Sustained.
- 10 MS. MESERVE: Now, regarding the rebuttal
- 11 testimony you provided about drought-like conditions.
- 12 You challenged the testimony put forth by
- 13 Islands, Inc., and Land, which was marked as Exhibit
- 14 II-24, that the Project would induce drought-like
- 15 conditions.
- 16 And you say on Page 39 of your testimony in
- 17 DWR-86 -- if we could go to that page -- that it fails to
- 18 represent the actual effect of the Project on the
- 19 Sacramento River.
- 20 (Document displayed on screen.)
- MS. MESERVE: You just told me that the
- 22 modeling does not reflect actual effects, so how do you
- 23 square what you just told me with your criticism of the
- 24 Protestants not showing actual effects?
- 25 WITNESS MUNÉVAR: Yeah. My criticism was quite

- different here in that the Protestants' use of the bypass
- 2 rules were not in sync or alignment with how they would
- 3 actually be implemented as given by the -- by the North
- 4 Delta bypass rules.
- 5 There is a set of criteria in which, as the
- 6 system becomes wetter and wetter, the rules for diversion
- 7 enable higher diversions as a percentage of flow over --
- 8 over time.
- 9 And what was claimed by the Protestants was
- 10 that that wettest -- wettest set of rules would apply
- 11 even in conditions in which the flow has not achieved
- 12 that long-term condition.
- 13 So that's what I meant by it did not apply the
- 14 rules correctly as indicated in the Proposed Project.
- 15 MS. MESERVE: So you are concerned on Page 39
- 16 that the pulse flow operations criteria would allow for
- 17 flows above 13,000 cfs most of the time.
- 18 But wouldn't the operational range proposed by
- 19 Petitioners also at times allow flows down to 5,000 or
- 7,000 cfs, depending on the month?
- 21 WITNESS MUNÉVAR: Depending on the month and
- the wetness condition.
- 23 So, in this particular reference, what I was
- 24 referring to was a -- 1993 and I believe the Protestants
- 25 were arguing that the flows would always be between 5700

- and 13,000 cfs and, in fact, 80 percent of the days had
- 2 flows greater than the 13,000 cfs when applying the rules
- 3 correctly, as -- as indicated in the Proposed Project
- 4 definition.
- 5 MS. MESERVE: The purpose of the Project,
- 6 however, Mr. Munévar, is to divert more water from -- I'm
- 7 sorry. Strike that.
- 8 The purpose of the Project is to divert water
- 9 from new diversion points on the Sacramento River where
- 10 there currently are no diversions; right?
- 11 WITNESS MUNÉVAR: I don't think that's the
- 12 purpose of the Project. That is the part of the
- 13 infrastructure that allows that but it's also balancing
- 14 that with the South Delta operations, or diversions from
- 15 the South Delta.
- MS. MESERVE: Was the basis of your
- 17 disagreement really with the word -- use of the word
- 18 "constrained" in the II-24 exhibit in that the Project
- 19 could bypass more flows than the minimums shown in
- 20 DWR-515, not that they necessarily would?
- 21 WITNESS LEAHIGH: I think my -- the basis for
- 22 my disagreement was that the rules were applied
- 23 inappropriately as described by the WaterFix in the
- 24 Protestants' argument.
- 25 In particular, it was related to Level 1,

- 1 Level 2, Level 3 bypass criteria that -- that apparently
- 2 were not envisioned. The Protestants' argument, it went
- 3 straight to the Level 3 argument -- Level 3 bypass rules
- 4 to make a particular point.
- 5 MS. MESERVE: Now, on Page 39, you discuss
- 6 this -- what you find to be most of the time 3,000 cfs.
- 7 You included monthly to date -- monthly -- Does this
- 8 include the monthly to daily flow patterning in the model
- 9 so that it's just making assumptions about what the input
- 10 would be, not without any relation to real-world
- 11 conditions?
- 12 WITNESS MUNÉVAR: I'm not sure where you're
- 13 referring to in the testimony. I don't see 3,000 cfs on
- 14 Page 39.
- MS. MESERVE: I'm sorry. 13,000 cfs.
- 16 WITNESS MUNÉVAR: Could you read --
- MS. MESERVE: You --
- 18 WITNESS MUNÉVAR: -- the question again?
- MS. MESERVE: -- say (reading):
- 20 "Also, the assumption that bypass flows would
- 21 be constrained from 5700 to 13,000 is incorrect."
- 22 But isn't -- in the modeling, you're using
- 23 daily flow patterning which is simply an assumption
- that's built into the model in order to try to come up
- 25 with what you did of the most of the time over 13,000

- 1 cfs?
- 2 WITNESS MUNÉVAR: I'm not certain I understand
- 3 the question. I'll try to answer it if you like.
- 4 Within the modeling there is a patterning which
- 5 takes the monthly operable releases out of CalSim, and
- 6 within CalSim applies a daily pattern in order to get
- 7 variability, because we know variability -- daily
- 8 variability of flows is important in terms of assessing
- 9 the impact to the North Delta intake.
- 10 The argument here was related to the misuse of
- 11 the level -- of the bypass rules by the Protestants in
- 12 making the argument that they would be constrained
- between 5700 and 13,000 cfs in terms of bypass flows.
- In fact, when we apply the correct analysis to
- 15 it, we find that 80 percent of the days have flows
- 16 greater than 13,000 cfs for that -- that year, 19 --
- 17 1993.
- 18 MS. MESERVE: But as compared to a No-Action
- 19 Alternative, there would be more days with less cfs in
- the river south of the new intakes; right?
- 21 WITNESS MUNÉVAR: Due to the operation of the
- 22 North Delta Intakes, yes, there will be days of lower
- 23 flow below the intakes.
- We feel the bypass flows that were developed
- 25 over the course of at least five years, to -- to refine

- 1 and make them as protective as they could be in terms
- of -- of fish and -- fish and water quality concerns.
- 3 MS. MESERVE: Now, on Page 42 of your
- 4 testimony, on Lines 4 through 8, you refer to the three
- 5 criteria which you say were not considered in the
- 6 analysis done in Exhibit II-24 to lead to the conclusion
- 7 that operation of the tunnels would lead to more
- 8 drought-like conditions. You refer to pulse flows,
- 9 real-time monitoring, and several other Delta
- 10 regulations.
- Just to be clear, besides the -- Are any of
- 12 these other constraints part of the Proposed Project
- 13 besides the pulse flows?
- 14 WITNESS MUNÉVAR: The constraints that are
- indicated here -- And I'll walk through them:
- 16 Pulse flow protections part of North Delta
- Bypass criteria, Level 1, Level 2, Level 3 bypass
- 18 criteria, are part of the Proposed Project.
- 19 Real-time monitoring, I believe, is part of the
- 20 Proposed Project but we don't model that because we --
- 21 it's a real-time event.
- 22 And other Delta regulations, like water quality
- 23 and 1641 standards, are included in the -- in the
- 24 assessment and in the modeling.
- 25 So I'd say all of those that are listed here,

- 1 with the exception of the real-time monitoring, are
- 2 included in the -- in the modeling for the California
- 3 WaterFix.
- 4 MS. MESERVE: How would real-time monitoring
- 5 prevent the incidence -- the increased incidence of
- 6 drought-like conditions on the Sacramento River and in
- 7 the Delta?
- 8 WITNESS MUNÉVAR: I believe what's referred to
- 9 here, real-time monitoring would be monitoring of
- 10 conditions related to fishery presence or turbidity that
- 11 might change the way the North Delta Diversions would be
- 12 operated for a short period of time.
- 13 MS. MESERVE: But is it -- Would it be fair to
- 14 say that these changes weren't certain enough to even try
- to include in the modeling effort?
- 16 WITNESS MUNÉVAR: Yeah. The modeling does not
- 17 include a predictive model for presence of some, except
- 18 at the intakes, nor is it particularly advanced to
- 19 project turbidity conditions at the intakes.
- 20 Even in the absence of that real-time
- 21 monitoring, though, the argument holds that the bypass
- 22 criteria does not create drought-like conditions, which
- 23 is what the point of this rebuttal testimony was about.
- MS. MESERVE: When you say it does not create
- 25 drought-like conditions, you're speaking in the absolute,

- 1 however, as if it were all the time, all year? Is that
- 2 what you're saying? That's what you're thinking that the
- 3 testimony said.
- 4 WITNESS MUNÉVAR: Well, the Protestants'
- 5 arguments were drought-like conditions and were focused
- 6 on the spring -- primarily on the spring period because
- 7 they were referencing our Level -- Level 2 or Level 3
- 8 criteria, which was through -- through May and June, I
- 9 believe.
- 10
 I don't like the term "drought conditions"
- 11 because drought conditions -- "Drought" is a definition
- 12 that is far broader than changes in flow in a particular
- 13 river.
- MS. MESERVE: And going back to the pulse flow
- 15 requirements that you mentioned, those pulse flow
- 16 requirements are currently still under negotiation under
- 17 the Biological Opinion; aren't they?
- 18 WITNESS MUNÉVAR: I'm not aware whether they
- 19 are or not. I'm not involved in that.
- 20 MS. MESERVE: Now, with respect to the modeling
- 21 approach, you helped develop the different scenarios that
- 22 were presented here in your testimony and in the case in
- 23 chief; is that correct?
- 24 WITNESS MUNÉVAR: Yes, correct.
- 25 MS. MESERVE: And can you explain to me at

- 1 all -- and hopefully this is not ground we've been on --
- 2 the decision-making process with respect to the selection
- 3 of assumptions for the modeled scenarios?
- 4 WITNESS MUNÉVAR: That could be a long story.
- 5 I can only address what -- what I presented in
- 6 my initial testimony, which was that -- that what was
- 7 intended through the boundary analysis, Boundary 1 and 2,
- 8 to reflect outside conditions associated with the
- 9 WaterFix and H3 and H4, which were to meant -- were
- 10 designed to reflect the initial operation criteria within
- 11 the adaptive range.
- 12 Other than that, there are numerous assumptions
- associated with each of those that was meant to inform
- 14 the Board in terms of the range of operations for the
- 15 WaterFix.
- 16 MS. MESERVE: And as you were developing these
- 17 scenarios, did you make the decisions about what those
- 18 assumptions were or did those decisions, were they made
- 19 by others?
- 20 WITNESS MUNÉVAR: I believe they came about
- 21 from the initial range of some of the operations that
- 22 were being considered at the time. I believe there
- 23 was -- there was H3 and H4 that were characterized as
- 24 part of the EIR/EIS. The Boundary 1 and Boundary 2 were
- 25 developed in consultation with DWR.

- 1 MS. MESERVE: And when you were working on
- 2 these scenarios, did you receive input from the Water
- 3 Contractors as to those scenarios in addition to the lead
- 4 agencies?
- 5 MR. BERLINER: At this point, I'm going to
- 6 object for multiple reasons: This is way outside this
- 7 witness' testimony.
- 8 We've been giving the cross-examiner a lot of
- 9 leeway here to try to find something relevant but we are
- 10 really rehashing stuff that we went through in Part IA
- and this has no bearing on this witness' current
- 12 testimony.
- 13 CO-HEARING OFFICER DODUC: We are rehashing
- 14 quite a bit, Miss Meserve, and you are running out of
- 15 time, way over your estimate.
- 16 I would suggest -- The objection is sustained,
- 17 and I encourage you to move on to -- Actually, you have
- 18 questions for Dr. Nader-Tehrani and Miss Parker still
- 19 remaining.
- 20 MS. MESERVE: Yes. I would just point out that
- 21 Mr. Munévar has testified that he looked at comparing the
- 22 NAA to the -- to the -- to the Proposed Project
- 23 alternatives, so it's very critical what the inputs to
- those made and who made those decisions.
- 25 And he's also leveled complaints against other

- 1 Protestants that they have somehow cooked the books in
- order to get to particular outcomes, and so that's the
- 3 reasoning for my questions.
- 4 CO-HEARING OFFICER DODUC: And you are moving
- 5 on now.
- 6 MS. MESERVE: And I am moving on to
- 7 Dr. Nader-Tehrani.
- 8 Now, in the --
- 9 CO-HEARING OFFICER DODUC: I'm sorry. And
- 10 since you're about to run out of time, how much time do
- 11 you anticipate needing?
- 12 MS. MESERVE: I think I should be able to do it
- in 20 minutes.
- 14 CO-HEARING OFFICER DODUC: And let me ask the
- 15 court reporter.
- 16 Are you okay with going another 20 minutes
- 17 before the break?
- THE REPORTER: (Nodding head.)
- 19 CO-HEARING OFFICER DODUC: Okay. Let's do
- 20 that.
- MS. MESERVE: Thank you.
- So I wanted to look at DWR-79 errata, Figure 2.
- 23 And this is the graphic that shows the B1 and
- the NAA scenarios. Hopefully, I have the exhibit right.
- 25 (Document displayed on screen.)

- 1 MS. MESERVE: So --
- 2 WITNESS NADER-TEHRANI: Is this the figure
- 3 you're referring to?
- 4 MS. MESERVE: The chlorides, yes.
- 5 So there are lower chlorides in the wet years,
- 6 like '84 and '86, and then higher chlorides in the dry
- 7 years, like '85 and '87 in this -- in the B1 analysis;
- 8 right?
- 9 WITNESS NADER-TEHRANI: So the higher chloride.
- 10 Are you referring to the No-Action or Boundary 1?
- 11 MS. MESERVE: Under the B1.
- 12 WITNESS NADER-TEHRANI: Under the Boundary 1.
- 13 So could you repeat the question, please.
- MS. MESERVE: So this graph is showing that
- there are lower chlorides in the wet years, like '84 and
- 16 '86, and then --
- 17 WITNESS NADER-TEHRANI: Can you specify the
- 18 months you're referring to?
- MS. MESERVE: So I believe --
- 20 WITNESS NADER-TEHRANI: Because it changes --
- 21 MS. MESERVE: -- you're looking at the spring
- 22 periods?
- WITNESS NADER-TEHRANI: Spring of '84?
- MS. MESERVE: Right.
- 25 WITNESS NADER-TEHRANI: Okay. So March to

- 1 May '84.
- 2 MS. MESERVE: Right. And then in the '86, it
- 3 would be -- you've got the lower chlorides in the March
- 4 through May.
- 5 WITNESS NADER-TEHRANI: In the March through
- 6 May, they all look similar.
- 7 MS. MESERVE: But under B1, aren't you getting
- 8 poorer water quality in the dry years under the B1
- 9 scenario?
- 10 WITNESS NADER-TEHRANI: Again, can you specify
- 11 the months where you are making those observations?
- MS. MESERVE: So, in '87, for instance.
- 13 WITNESS NADER-TEHRANI: What month?
- MS. MESERVE: Under the -- That would be --
- 15 There's a spike from May to March basically.
- 16 WITNESS NADER-TEHRANI: May to March of what?
- MS. MESERVE: Right. You've got the -- of
- 18 '86 into '87. You have a very large spike of chlorides.
- 19 WITNESS NADER-TEHRANI: And so if you're
- 20 talking about -- When I made testimony last week, was
- 21 that the May -- Well, the large increases of chloride in
- 22 the year '86 starts from around September of '86, and
- 23 that is directly related for the most part to Fall X2.
- 24 And '86 is a wet year and that's why you see those
- 25 differences.

- The No-Action was modeled with Fall X2.
- 2 Boundary 1 was modeled without Fall X2.
- 3 MS. MESERVE: Right. But B1 is part of the
- 4 proposal for -- for this Project; isn't that correct?
- 5 WITNESS NADER-TEHRANI: And as I explained,
- 6 Boundary 1 represents a kind of future under California
- 7 WaterFix where the model is not -- the California
- 8 WaterFix is not regulated by or not operating to Fall X2,
- 9 whereas No-Action is.
- 10 So if you're seeing -- if you're observing
- 11 those differences, one has to take that into account.
- MS. MESERVE: And the -- According to the
- 13 testimony of the Petitioners, isn't it correct that DWR
- 14 participates in a working group specifically to see about
- 15 removing the Fall X2 requirement?
- 16 WITNESS NADER-TEHRANI: I don't know about
- 17 that.
- 18 MS. MESERVE: You state on Page 10 -- I quess
- if we could go to the testimony, if we could, DWR-79,
- 20 Page 10.
- 21 (Document displayed on screen.)
- 22 WITNESS NADER-TEHRANI: Not the errata.
- 23 MS. MESERVE: I'm sorry, yes. In the written
- 24 testimony.
- You state that (reading):

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1 "As long as" the "Fish and Wildlife Service
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- 2 upholds the need for the Fall X2 . . . " the
- 3 "WaterFix is expected to operate to it during wet
- 4 and above normal years."
- 5 But isn't DWR actively working to convince Fish
- 6 and Wildlife to relieve it of the obligation to comply
- 7 with Fall X2?
- 8 WITNESS NADER-TEHRANI: Yeah, I'm not aware of
- 9 those meetings or negotiations or what not.
- 10 MS. MESERVE: Are you aware of Ms. Pierre's
- 11 testimony in DWR-51 at Page 13 to that effect?
- 12 WITNESS NADER-TEHRANI: I don't know offhand,
- 13 no.
- MS. MESERVE: Okay. If Fall X2 was no longer a
- 15 requirement, then future Operators of the tunnels could
- 16 legally operate it according to a scenario that matched
- 17 B1; correct?
- 18 WITNESS NADER-TEHRANI: Well, in that case,
- 19 No-Action would also look different.
- 20 MS. MESERVE: Can you please explain that.
- 21 If --
- 22 WITNESS NADER-TEHRANI: Yes.
- MS. MESERVE: -- in the future --
- 24 WITNESS NADER-TEHRANI: Yeah. Sure.
- 25 The No-Action that was modeled for this

- 1 particular Petition, we made the assumption that Fall X2
- 2 is a part of it. Boundary 1, we made the specific
- 3 assumption that Fall X2 is not a part of it.
- 4 So if in the future, if Fall X2 is no longer
- 5 part of the regulatory requirement, then the No-Action
- 6 you've been seeing will not represent that kind of
- 7 future.
- MS. MESERVE: And so in that case, the
- 9 No-Action Alternative that we've been discussing here
- 10 today and previous days would be completely irrelevant;
- 11 wouldn't it?
- 12 WITNESS NADER-TEHRANI: I think I explained
- 13 that already.
- MS. MESERVE: Okay. Let's go to Page 11 of the
- 15 testimony.
- 16 (Document displayed on screen.)
- MS. MESERVE: And on Lines 15 to 23, you
- 18 discuss that the lack of Fall X2 would be the main reason
- 19 that Dr. Burke's testimony for Central Delta Water Agency
- 20 showed larger reductions than other model scenarios.
- 21 Just to confirm, B1 is part of the operational
- 22 range sought; isn't it?
- 23 WITNESS NADER-TEHRANI: You're going the
- 24 same -- I mean, the point here is -- What I was trying to
- 25 show is Dr. Burke, first of all, used 15-minute values

- 1 and that, I think, was -- I made the point that I think
- 2 it was inappropriate.
- 3 But also he showed water -- water level
- 4 reductions, which was much larger than what I was
- 5 showing. And I was showing instances that all those --
- 6 that -- and I stick to the three highest ones that I've
- 7 seen.
- 8 Those larger reductions that are reported by
- 9 Dr. Burke is related to, once again, Fall X2 being
- 10 included in No-Action and not included in Boundary 1.
- 11 MS. MESERVE: Now, on Page 12 and Lines 13
- 12 through 16, you state that Fall X2 has not been required
- 13 since 2008 except in 2011, and that legal users of water
- have not enjoyed its benefits as a result.
- Does your area of expertise include assessment
- 16 of the rights of water users in the Delta to certain
- 17 water quality or levels?
- 18 WITNESS NADER-TEHRANI: I think I was making a
- 19 number of points. One was that Fall X2 is a fish
- 20 requirement, and I was very clear on that.
- 21 And I was also making the point that, to -- to
- 22 my knowledge, Fall X2 was never fully implemented but it
- 23 came close in 2011. It -- It was part of the Fish and
- 24 Wildlife -- U.S. Fish and Wildlife Services' Biological
- 25 Opinion in 2009 but they didn't have it prior to that and

- 1 there's only been one year, 2011, that came close.
- 2 So if you're trying to figure out the -- the
- 3 changes in how -- If you want to look at the past history
- 4 as a guide and compare, you know, what -- how would the
- 5 experience of the legal users of water be, then No-Action
- 6 would not be representative of that because No-Action
- 7 does have Fall X2 criteria, and that's the -- that's what
- 8 I was trying to make.
- 9 So in the past, legal users of water have not
- 10 experienced the full extent of Fall X2 criteria. And,
- 11 again, it was very clear, Fall X2 is a fish -- fish
- 12 criteria.
- MS. MESERVE: But your area of expertise does
- 14 not include what the actual rights of water users in the
- 15 Delta are with respect to water quality or water levels.
- 16 WITNESS NADER-TEHRANI: No, I don't think I
- 17 made that claim.
- MS. MESERVE: Okay. Now, on Page 19, Lines 20
- 19 through 22, you state that (reading):
- 20 ". . . There will be little or no diversions
- 21 from the . . . proposed northern -- North Delta"
- Diversions ". . . (with the exceptions (sic)
- of . . . health and safety requirements.)"
- 24 Can you please explain what you mean by health
- 25 and safety requirements.

- 1 WITNESS NADER-TEHRANI: Armin, do you want
- 2 to . . .
- 3 Armin would probably be able to explain about
- 4 the health and safety operations.
- 5 MS. MESERVE: Well, I actually am curious as to
- 6 what you meant by it. This is in your testimony.
- 7 WITNESS NADER-TEHRANI: Yeah. My understanding
- 8 is that there are some minimum flows that are going to go
- 9 through each diversion point for the health and safety
- 10 reason. And those are small compared to the capacity.
- 11 But as far as the details of it, if you want
- 12 further details, I would ask you to -- suggest you ask
- 13 that question to Mr. Armin Munévar.
- MS. MESERVE: And, Dr. Nader-Tehrani, do you
- 15 know what the input to the model was for health and
- 16 safety diversions that you're referring to here in terms
- 17 of cfs?
- 18 WITNESS NADER-TEHRANI: I believe they are 300
- 19 cfs each.
- 20 Armin?
- 21 WITNESS MUNÉVAR: Yeah. The minimum -- minimum
- 22 pumping levels were 300 cfs per intake, so it was 900 cfs
- 23 across the three.
- 24 And so health and safety does not necessarily
- 25 imply just to the North Delta Intakes. So health and

- 1 safety could be a combined pumping between North and
- 2 South Delta diversions.
- 3 But I believe what's being referred to here is
- 4 the 300 cfs at each of the three intakes in the North
- 5 Delta.
- 6 MS. MESERVE: So, when this -- On Line 20, it
- 7 says, "little or no diversions." Is there really a time
- 8 when there would be no diversions according to the
- 9 scenarios you modeled? Or is it always at least 900 cfs?
- 10 WITNESS NADER-TEHRANI: I believe the way it
- 11 was modeled, it was at least 900 cfs.
- 12 MS. MESERVE: So is it incorrect to say "no
- diversions on Line 20?
- 14 WITNESS NADER-TEHRANI: And if you want to
- 15 refer to the way the modeling was done, then the "no
- 16 diversion" would not apply because we always assumed
- 17 those minimum health and safety requirements.
- 18 WITNESS MUNÉVAR: And it could be that there --
- 19 that there actually is zero diversion. If there was not
- a need for the water south of the Delta, then that
- 21 diversion would not -- would not occur.
- 22 MS. MESERVE: Going back to Dr. Nader-Tehrani.
- 23 On Page 32 to 35, you discuss some of the
- 24 specific limitations of the CalSim and DSM-2 modeling.
- 25 And there's several regarding CalSim and a few regarding

- 1 DSM-2.
- 2 And I -- Could you tell us: How -- Don't these
- 3 limitations also limit our ability to use the modeling to
- 4 address the key question of injury to legal water users,
- 5 the ones you've discussed here on these pages?
- 6 WITNESS NADER-TEHRANI: I don't believe that.
- 7 I think I was making clear -- making it clear that if you
- 8 are expecting, based on the model results, these models
- 9 are not the appropriate tools to predict daily or, you
- 10 know, even, you know, specific month what the, you know,
- 11 outcome, for example, for water quality be.
- 12 And the pro -- And I was explaining what
- they're good at, what their strengths are, looking at the
- long-term averages, for example, based on Water Year
- 15 types, or even looking at the probability of, you know,
- 16 exceedance based on a certain parameter.
- 17 And I think in that sense, that's the, you
- 18 know, way we would recommend the use of the model --
- 19 proper use of the model in terms of what we expect the
- 20 changes are going to be for specific locations in the
- 21 Delta, whether you're talking water quality or water
- level.
- MS. MESERVE: And you understand,
- 24 Dr. Nader-Tehrani, that the specific 15-minute or
- 25 one-hour increment might be very important to a

1 particular diverter in the Delta with respect to water

- 2 quality and water level?
- 3 WITNESS NADER-TEHRANI: I was just making the
- 4 point that, based on all the limitations of the model,
- 5 you cannot cite large changes that would occur in 15
- 6 minutes a day or even a single month and expect that to
- 7 be the real outcome of how we would see it, that the
- 8 models are not designed that way.
- 9 MS. MESERVE: On Page 36 at the top of your
- 10 testimony --
- 11 (Document displayed on screen.)
- 12 MS. MESERVE: -- you have the heading that says
- 13 the D-1641 exceedances . . . are not real -- are
- 14 generally not real.
- 15 And I want to know, what do you mean -- do you
- mean they wouldn't really occur? This is a very
- 17 confusing heading in the context of what we're talking
- about modeling, which we all know is not real; correct?
- 19 MS. McGINNIS: Objection: There were a couple
- 20 questions asked there.
- 21 Can you state them separately, please?
- 22 CO-HEARING OFFICER DODUC: Miss Meserve.
- 23 MS. MESERVE: By stating that the exceedances
- shown by the model "are generally not real," do you mean
- 25 they wouldn't really occur?

- 1 WITNESS NADER-TEHRANI: No. I'm just saying
- 2 that you cannot cite -- It would be inappropriate to cite
- 3 the exceedances that are reported under DSM-2 and claim
- 4 it as these are what we expect the -- the exceedances
- 5 would be under the -- in the future under California
- 6 WaterFix.
- 7 And we went through lengthy explanation, and
- 8 the fact that these exceedances are also shown under
- 9 No-Action, and the fact that I think our Operators show
- 10 the actual, you know, exceedances they have experienced,
- and the large difference between the two.
- 12 And I go into great length as to several
- 13 reasons why I believe those model exceedance -- those are
- 14 clearly just model exceedances.
- 15 MS. MESERVE: Would it be better to not use the
- 16 term "real" in this heading, in your opinion, looking at
- 17 it now?
- 18 WITNESS NADER-TEHRANI: The only reason I used
- 19 "real" is, I noticed a lot of Protestants are using the
- 20 modeling information as if those are the expected outcome
- 21 of California WaterFix, and I was just clearly making the
- 22 point that that's not the case.
- 23 MS. MESERVE: Now moving on to Ms. Parker, I
- just have a couple of questions. And that's DOI-33.
- 25 On Page 2 of your testimony, you discuss the

- 1 climate scenarios and which you say that the QO run was
- 2 done for the fish agencies and is not part of the case in
- 3 chief; right?
- 4 WITNESS PARKER: I don't know that I said that
- 5 in my written statement, but that is the case.
- 6 MS. MESERVE: And you discuss that this was not
- 7 a full run but it was subject only to a sensitivity
- 8 analysis; right?
- 9 WITNESS PARKER: I don't think that's quite
- 10 right.
- 11 It was a full run. We ran the CalSim model.
- 12 We did not subject that particular scenario or those
- 13 scenarios run with the historical hydrology to the same
- level of scrutiny and refinement to which we worked on
- 15 the models that were presented as part of the Petition.
- 16 MS. MESERVE: And, now, isn't it true that when
- 17 the BDCP formerly-Proposed Project shifted to the
- 18 Section 7 CWF, there were -- was quite a bit of modeling
- 19 that was carried over into what's now considered the case
- in chief; right?
- MS. AUFDEMBERGE: Objection: This exceeds
- 22 her -- Miss Parker's rebuttal testimony.
- 23 CO-HEARING OFFICER DODUC: Miss Meserve, why
- are we going here?
- 25 MS. MESERVE: I am wanting to discuss with the

- 1 witness her testimony that it undermines the use of
- 2 sensitivity analyses when relied upon by others but at
- 3 the same time show -- I believe that their case in chief
- 4 relies heavily on models that were only subjected to
- 5 sensitivity analysis after a very large change in the
- 6 Project was proposed.
- 7 And I believe she's discussed the climate
- 8 projections as the best example between those.
- 9 CO-HEARING OFFICER DODUC: Miss Parker, I don't
- 10 believe that's what you did but clarify.
- 11 WITNESS PARKER: Yeah. There's -- I think
- 12 there's a misunderstanding.
- 13 So, the reason we brought up the Q0 runs was to
- 14 specifically respond to the implication that Petitioner
- 15 modeling showed low storage conditions and that MBK
- modeling showed much better storage conditions.
- 17 And as an inference, the idea was that WaterFix
- 18 would cause -- Well, MBK modeling showed that storage
- 19 conditions would be impacted by the WaterFix.
- 20 So there were two stories there:
- One, Petitioner modeling did have lower storage
- 22 conditions than MBK modeling.
- Number two, the implication of the MBK modeling
- 24 was that the WaterFix caused further -- or caused a
- 25 degradation in the storage condition.

1	So, for us, using or looking at the QO results
2	relative to the Q5 results, which were the Petitioners'
3	modeling presented for this process, that helped to
4	demonstrate that the low storage conditions to which MBK
5	objected were largely the result of using climate
6	change-impaired inflows.
7	So that was argument number one.
8	The second was that, under our Q5 scenarios,
9	the difference in storage conditions between the
10	No-Action and the proposed action did not change, whereas
11	in MBK's studies, their studies did show a change in
12	their proposed action.
13	And then the rest of my testimony was about why
14	that happened, because that was where the
15	predetermination of allocations and the assumption of the
16	use of joint point for conveying CVP water south of the
17	Delta, that was what helped pull that storage condition
18	down.
19	So there's several different stories, but none
20	of that had anything to do with the fact that Q0 is a
21	sensitivity run. That was used in a separate process.
22	Does that help clarify?
23	MS. MESERVE: Thank you.
24	(Timer rings.)

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MS. MESERVE: I have, like, five more

25

- 1 questions.
- 2 CO-HEARING OFFICER DODUC: Quickly, please.
- 3 MS. MESERVE: On Page 27 of your testimony, you
- 4 discuss that Mr. Weaver cherry-picked a rare condition in
- 5 1932 and 1933; correct?
- 6 WITNESS PARKER: Yes.
- 7 MS. MESERVE: And when you say those years were
- 8 outliers, which I believe you did, those were drought
- 9 years; right? The --
- 10 WITNESS PARKER: Yes.
- MS. MESERVE: -- outliers?
- 12 WITNESS PARKER: Well, an outlier is not
- 13 necessarily a drought -- An outlier condition is not
- 14 necessarily always in a drought year, but I would say
- 15 that drought years are stressed conditions in our CalSim
- 16 runs that do not necessarily or accurately predict how
- 17 the Projects would actually operate under those stressed
- 18 conditions.
- 19 MS. MESERVE: And you expect those stressed
- 20 conditions, or drought years, would also occur in the
- 21 future; right?
- 22 WITNESS PARKER: I'm pretty sure that drought
- 23 conditions will occur in the future.
- MS. MESERVE: So it's reasonable, in general,
- 25 to include analyses of drought years or outliers for

- 1 purposes of understanding the effects of the Proposed
- 2 Project; right?
- 3 MR. BERLINER: Objection: Misstates the
- 4 witness' testimony.
- 5 She specifically said the drought years were
- 6 not necessarily outliers and that outliers were not
- 7 necessarily drought years.
- 8 CO-HEARING OFFICER DODUC: Rephrase,
- 9 Miss Meserve.
- 10 MS. MESERVE: I believe I said "drought years."
- 11 Is that -- The objection is that she's talking about
- 12 outliers and I said drought years? Is that the problem?
- 13 I'm having a hard time following what the problem is.
- I guess -- My question is: Isn't it reasonable
- 15 to include an analysis of, let's say -- use a new word --
- 16 rare years for purposes of understanding the effects of
- 17 the Proposed Project?
- 18 WITNESS PARKER: Oh, and I think that we do.
- 19 We have the drought years, we have the drought record and
- 20 several other drought periods within the time period of
- 21 record that's assessed by CalSim modeling.
- 22 MS. MESERVE: And we have to rely on a historic
- 23 record in order to try to create those outputs; right?
- 24 WITNESS PARKER: I'm not sure what that means.
- 25 MS. MESERVE: Well, we're not doing predictive

- 1 modeling; right? We're doing based on the period of
- 2 record, so --
- 3 WITNESS PARKER: We used a historical -- either
- 4 historical hydrology or historical hydrology that has
- 5 been adjusted to reflect potential future climate change,
- 6 and we used that hydrology time series as input to try to
- 7 model a particular regulatory environment or particular
- 8 set of facilities to operate. And that's what we've done
- 9 with the No-Action and the proposed action and comparing
- 10 those two scenarios.
- 11 In drought years, both scenarios, the No-Action
- and the proposed action, have to get through those
- 13 drought years.
- 14 What I think we've said is that CalSim does not
- 15 particularly depict specific operational decisions once
- it gets to a point where we have stressed water supply
- 17 conditions.
- 18 The droughts -- I mean, the idea is that
- 19 droughts are going to happen whether we have a WaterFix
- 20 or not. And the No-Action and the proposed action depict
- 21 really similar operations with and without the WaterFix
- 22 because the WaterFix is not contributing significantly to
- 23 water supply in critically dry Water Years and I think
- everybody's modeling shows that.
- 25 But the -- We -- We recognize -- What I'm

- 1 trying to point out is that the specific difference in
- 2 operations in one month in the middle of the drought
- 3 record does not necessarily correspond to a specific
- 4 deliberate impact of the WaterFix operation.
- 5 And that's what I'm talking about here, is that
- 6 Mr. Weaver has depicted the difference in that -- in that
- 7 release in July of '32 as indicative of the fact that the
- 8 WaterFix is going to cause Folsom to be drawn down in
- 9 critical years following dry years, or whatever the
- 10 sequence was.
- 11 And my rebuttal is specifically geared towards
- 12 explaining that's a pretty rare condition; that if you
- look at the drawdowns in critical years -- I think it's
- 14 the other -- so -- That particular statement is actually
- 15 about a sequence of flows in 1933.
- 16 The other condition you asked about was in
- 17 1932, and that was a drawdown.
- 18 So in both cases, what I think I've been trying
- 19 to explain is that the -- the drawdown that he objected
- 20 to was, A, not the result of a specific WaterFix
- 21 operation and in -- taken in the totality of the results
- of both CalSim models was pretty rare. I mean, it was,
- 23 like, the second highest drawdown in the period of
- 24 record.
- 25 So that -- The point there is, it is not a

- consistent, deliberate indication, or it's not
- 2 consistently deliberately indicative of a specific impact
- 3 of a WaterFix operation.
- 4 The second issue was with the flow flip-flop.
- 5 And, again, if you look through the entire period of
- 6 record, you've got 982 combinations of three-month flows.
- 7 And if you look at how many of high/low high incidences
- 8 or low/high low instances there are, there's really not
- 9 that many.
- 10 And given a consistent logic to which the model
- is just trying to react, and it's doing that in these
- 12 cases within the middle of the drought period of record
- 13 when the system is operating with not a whole lot of
- 14 leeway, that that is not appropriate to pull out and say
- 15 that is an indication that the WaterFix is going to cause
- 16 conditions in Folsom that are not good.
- 17 So that's what I was trying to clarify. Does
- 18 that help? That was a long answer.
- 19 MS. MESERVE: Based on what you just said,
- 20 then, is it fair to say that your view of injury to water
- 21 users is to take sort of a long view versus a specific
- 22 point in time viewpoint of it?
- 23 WITNESS PARKER: I don't know what a long view
- 24 is.
- 25 When you look at the -- the results of

- 1 Petitioners' proposed action study relative to their
- 2 No-Action study -- And I think this is something
- 3 Mr. Munévar talked to yesterday or the day before -- or
- 4 last week. Sorry.
- 5 So there are specific years where you could see
- 6 a lower storage condition in that particular year but,
- 7 then, in a different year, you actually might see a
- 8 higher storage condition.
- 9 On the balance, on the long -- on the -- on the
- 10 distribution of all of those results, if we are not
- 11 seeing more instances of lower storage, to us, that
- 12 indicates that the WaterFix is not deliberately drawing
- down storage and resulting in carryover storages that
- 14 persist for -- for years at a time, and that's what the
- 15 results are.
- 16 So when you go back to my storage condition
- 17 argument, the results of the WaterFix relative to the
- 18 results of the No-Action do not show lower storage
- 19 conditions, and the -- the instances of -- Should I just
- stop now or keep going?
- 21 CO-HEARING OFFICER DODUC: Let's -- Let's stop.
- 22 Mr. Bezerra, are you here to stop the madness?
- 23 MR. BEZERRA: I'd like to move to strike the
- 24 last answer to the question. I don't believe it was
- 25 responsive and it's rehashing the written testimony at

- 1 length.
- 2 If we're going to rehash all the written
- 3 testimony that's already been subject to
- 4 cross-examination, then those of us who conducted that
- 5 cross-examination should be able to come back and
- 6 recross.
- 7 I don't think that's where we want to go with
- 8 this hearing, so it would be useful if we could keep the
- 9 answers within the scope of the question.
- 10 Thank you.
- 11 CO-HEARING OFFICER DODUC: It would also be
- 12 helpful if the questions are not repeated again and
- 13 again.
- 14 Miss Meserve, you will wrap up your
- 15 cross-examination now, please. Do you have a final
- 16 question?
- 17 And Mr. Bezerra has an objection that will be
- 18 noted and will be responded to later.
- 19 MS. MESERVE: May I join in Mr. Bezerra's
- 20 objection?
- 21 WITNESS PARKER: I was trying to answer the
- 22 question about the long view.
- 23 CO-HEARING OFFICER DODUC: Your fault for
- 24 asking the question, Miss Meserve.
- 25 MS. MESERVE: It was a yes-no question, in my

- 1 opinion.
- 2 CO-HEARING OFFICER DODUC: Actually, there are
- 3 no yes-no questions, from what I've learned conducting
- 4 the hearing.
- 5 Miss Meserve.
- 6 MS. MESERVE: The final question, just to
- 7 follow up on:
- It would be, however, in Petitioners' interest,
- 9 as you've just described it, to show that there is no or
- 10 very little difference between the No-Action Alternative
- and the model Project being proposed; right?
- 12 MR. BERLINER: Objection as to the phrase "in
- 13 the Petitioners' interest." It's vague and ambiguous.
- 14 CO-HEARING OFFICER DODUC: Sustained.
- MS. MESERVE: Thank you. I'm done.
- 16 CO-HEARING OFFICER DODUC: Thank you,
- 17 Miss Meserve.
- 18 We will now take a much-needed break, and we
- 19 will resume at 2:55.
- 20 (Recess taken at 2:38 p.m.)
- 21 (Proceedings resumed at 2:55 p.m.)
- 22 CO-HEARING OFFICER DODUC: All right. It is
- 23 2:55. We are resuming.
- 24 And Mr. Herrick is up next for
- 25 cross-examination.

1 MR. HERRICK: Thank you. John Herrick for

- 2 South Delta parties.
- I have a few questions for Mr. Leahigh,
- 4 Mr. Munévar -- Munévar --
- 5 WITNESS MUNÉVAR: Good.
- 6 MR. HERRICK: -- and Dr. Nader-Tehrani.
- 7 Everybody has covered many of the topics so I
- 8 don't believe I'll be anywhere near an hour, maybe half
- 9 hour, 45 minutes, something like that.
- 10 The topics include the . . . the rebuttal
- 11 testimony of Mr. Leahigh about contradicting
- 12 Mr. Nomellini's assertions, Rule Curve for San Luis
- 13 Obispo -- San Luis Reservoir, sorry.
- Mr. Munévar, I have a few questions on his
- 15 calculation of significant impact of injury. I'll go
- 16 into that. And then his dealings with the ability to
- 17 project joint JPOD and his ability to have the models
- 18 deal with extreme drought conditions.
- 19 And, then, lastly, for Dr. Nader-Tehrani, I
- 20 have a few questions on his explanation of how X-2 or the
- 21 barriers affect results that he's critiquing. And, then,
- 22 lastly, the effectiveness of the model given that he is
- 23 saying the model can't be used in certain circumstances
- for -- and this is my words, not his -- short-term
- evaluations, so . . .

- 1 CO-HEARING OFFICER DODUC: All right. Thank
- 2 you. Proceed.
- 3 MR. HERRICK: Thank you.
- 4 WITNESS MUNÉVAR: Madam Hearing Officer, there
- 5 were a few questions --
- 6 CO-HEARING OFFICER DODUC: Oh, that's right.
- 7 You have the followups.
- 8 WITNESS MUNÉVAR: I'm trying to -- trying to
- 9 close them out for you, if we can.
- 10 CO-HEARING OFFICER DODUC: Thank you.
- 11 And this is in response to Miss Taber's
- 12 questioning.
- 13 WITNESS MUNÉVAR: Yes.
- So, I was able to confirm at the break that the
- 15 temperature modeling that was used for the riverine
- 16 conditions is the Reclamation's HEC-5Q modeling.
- 17 And for the Delta temperature modeling, it's
- 18 the DSM-2 temperature modeling that was conducted by RMA.
- 19 Those are both documented in the BA, in
- 20 Appendix 5.B.
- 21 Second, there were questions on the residence
- 22 time that Mr. Bryan had relied upon. Those are also
- documented in Appendix 5.B, No-Action, the H3+.
- 24 They are also in the EIR/EIS Appendix 5A. They
- 25 were -- Temperature modeling was not conducted for the

- 1 Boundary 1 or Boundary 2 analysis for this hearing.
- 2 CO-HEARING OFFICER DODUC: Thank you.
- 3 And before we return to Mr. Herrick, there were
- 4 two, I guess, objections based on Miss Meserve's
- 5 cross-examination.
- One was made by Miss Meserve with respect to
- 7 the hydrodynamic slide in Mr. Leahigh's -- I think it was
- 8 Mr. Leahigh's presentation.
- 9 WITNESS LEAHIGH: (Nodding head.)
- 10 CO-HEARING OFFICER DODUC: That one, we'll take
- 11 under consideration.
- 12 The other objection was from Mr. Bezerra,
- joined in by Ms. Meserve, in response to Miss Parker's
- 14 response to a question from Miss Meserve. That objection
- is overruled.
- 16 Ms. Parker, however, I will ask you, as much as
- 17 I enjoy your detailed explanation, to be more concise in
- 18 your answers.
- 19 WITNESS PARKER: (Nodding head.)
- 20 CO-HEARING OFFICER DODUC: With that,
- 21 Mr. Herrick.
- 22 MR. HERRICK: If we could please pull up
- DWR-78, which is the testimony of Mr. Leahigh, and on
- 24 Page Number 4, please, Line -- beginning with Line
- 25 Number 10.

1	(Document displayed on screen.)
2	CROSS-EXAMINATION BY
3	MR. HERRICK: Mr. Leahigh, you see your
4	testimony there. I'm going to ask you about the sentence
5	that starts at Line 10.
6	Do you see that?
7	WITNESS LEAHIGH: Yes.
8	MR. HERRICK: And it says (reading):
9	"The conservative nature of the allocation
10	process more often than not results in San Luis
11	Reservoir storages that are higher than necessary to
12	meet that year's allocated supply."
13	Do you see that?
14	WITNESS LEAHIGH: Yes.
15	MR. HERRICK: Now, why do you use the term
16	"conservative nature" if the operations of the Projects
17	result in more water in San Luis than for that year's
18	allocations?
19	WITNESS LEAHIGH: So the the reference to
20	"conservative nature" is when we're making allocation
21	decisions in the spring, that we've got the range and
22	variability in terms of expected inflows into the
23	reservoirs and to the system downstream and to the Delta.
24	By "conservative," I'm talking about utilizing
25	the low end of that range, so at the drier end of that
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- 1 range in terms of making those -- those -- using those
- 2 assumptions in the study which supports the allocation to
- 3 the State Water Project.
- 4 So in more times than not, when we -- when it
- 5 comes down to the actual operations that summer, because
- 6 we were conservative in those assumptions from the
- 7 spring, in most cases there will be additional inflows
- 8 that the Projects will be able to capture. And so that
- 9 ends up in San Luis storage above and beyond what those
- 10 conservative estimates were for an allocation earlier.
- 11 So, in other words, we don't want to
- 12 overpromise the delivery capability in any one particular
- 13 year.
- MR. HERRICK: But with regard to upstream
- 15 storage, it's not conservative; it's the opposite of
- 16 that. In other words, you'll operate it to -- to the
- 17 benefit of moving water from the north to the south, not
- 18 the opposite; correct?
- 19 WITNESS LEAHIGH: No, I would disagree with
- 20 that.
- So, we would continue to operate to the
- 22 carryover storages that we've been talking about and
- which was displayed in the new exhibit that was
- introduced yesterday and which Mr. Schutes questioned me
- 25 on this morning, so --

- 1 MR. HERRICK: I'll get that in a minute if
- 2 that's a good place to stop. I don't want to cut you
- 3 off.
- 4 WITNESS LEAHIGH: Right.
- As it relates to the upstream . . .
- 6 So this is assumptions in the spring on what
- 7 we're actually going to see later on in the summer. So
- 8 it -- it is conservative in terms of the lower end of the
- 9 uncertainty range, as far as the inflows into Oroville as
- 10 well.
- 11 So I guess I'm missing your point on -- on --
- 12 It is on the conservative range as it relates to inflows
- into Oroville as well as flows downstream of the
- 14 reservoirs into the Delta.
- 15 MR. HERRICK: I guess it's a perspective. It's
- 16 conservative with regard to export supplies but it's not
- 17 conservative with regard to maximizing carryover.
- Would you agree with that?
- 19 WITNESS LEAHIGH: No, I would not agree with
- 20 that.
- 21 Remember, these are -- these are estimates in
- 22 terms of what we will expect to see. Now, what -- later
- in the year.
- 24 So it is true that, the lower the allocation,
- 25 then the more we would rely on the stored water in Lake

- 1 Oroville. But, ultimately, that's in response to actual
- 2 conditions that are -- that we see later in the year.
- 3 MR. HERRICK: Further down on the same page,
- 4 beginning with Line 18, you begin to discuss your
- 5 disagreement with Mr. Nomellini's assertions with regards
- 6 to exports and carryover.
- 7 Do you see that?
- 8 WITNESS LEAHIGH: Yes.
- 9 MR. HERRICK: And in response to that, you
- 10 provided us with your PowerPoint, which is DWR-10.
- 11 And if we could pull up Slide Number 6 on that,
- 12 please.
- 13 (Document displayed on screen.)
- MR. HERRICK: And you may not recall, but do
- 15 you recall that Mr. Nomellini was discussing an instance
- 16 in 2009 when he was making his point about whether or not
- 17 carryover or exports should or should not occur? Do you
- 18 recall that at all?
- 19 WITNESS LEAHIGH: Yes, I somewhat -- somewhat
- 20 remember that.
- 21 MR. HERRICK: Okay. So in response to
- 22 Mr. Nomellini's example of 2009, you give us data for the
- 23 years 2011, 2012 and 2015; is that correct?
- 24 WITNESS LEAHIGH: Yes. I don't recall which
- 25 year Mr. Nomellini was -- was referencing during his

- 1 testimony. I was just -- My rebuttal was to his general
- 2 point that he was making.
- 3 MR. HERRICK: And you picked these three years
- 4 instead of giving us years in the modeled years for what
- 5 reason?
- 6 WITNESS LEAHIGH: Just that these -- In the
- 7 modeled years? I'm sorry. What are you referring to?
- 8 MR. HERRICK: These hearings have to do with
- 9 CalSim modeling 82 years and DSM modeling 16 years.
- 10 And so I'm just asking: You picked three years
- 11 to give examples of that are outside of either of those
- 12 modeled periods. I'm just asking why, if there's a
- 13 reason.
- 14 WITNESS LEAHIGH: Well, in the Operations
- Office, we deal with more historical data, and so
- 16 that's -- that's why I chose historical data, which we
- 17 have -- was readily accessible to us. And these three
- 18 years are -- are just representative of these three
- 19 different year types.
- 20 MR. HERRICK: And for the year 2012, you show
- 21 that 860,000 acre-feet of storage was exported in a
- 22 below-normal year out of Oroville; is that correct? Or
- 23 released for export.
- 24 WITNESS LEAHIGH: That's correct.
- 25 MR. HERRICK: And so is that in conflict with

- 1 Mr. Nomellini's point that if additional storage is
- 2 maintained rather than being exported, it would be
- 3 available for the following year? Or is that in
- 4 agreement with Mr. Nomellini?
- 5 WITNESS LEAHIGH: No, it's not in agreement.
- 6 So, the point -- And maybe I didn't make the
- 7 point very well. But the -- the point I'm trying to make
- 8 is, the timing is very important in terms of -- of when
- 9 we are -- So, the winter period, as I've said in my
- 10 testimony, is -- typically, there is unstored flows
- 11 available for export.
- 12 If -- If we were -- If we were not to pick
- 13 those up, that's not going to help the storage conditions
- 14 in Lake Oroville whatsoever, because that -- that source
- 15 of that water is from some place other than Lake Oroville
- 16 storage, by definition.
- 17 And so for the Projects to -- to not export
- 18 those flows in the winter, even if it is a dry year --
- 19 turns out to be a dry year, it wouldn't -- it wouldn't
- 20 serve any -- it wouldn't go to conserving any upstream
- 21 storage.
- 22 So the Projects capturing that water and
- 23 putting it to beneficial use will have zero effect on the
- 24 stored water later in the year.
- MR. HERRICK: But for 2012, your point applies

- 1 to the bottom two bars, not the top one, which is
- 2 Released for Export.
- 3 WITNESS LEAHIGH: That's correct. And that --
- 4 The block of .86 million acre-feet, the red block there,
- 5 that would be stored releases that are typically made
- 6 during the summer.
- 7 So, you know, I think -- My understanding from
- 8 Mr. Nomellini's testimony was, he was talking about early
- 9 in the year when it's not clear what type of year it's
- 10 going to be.
- 11 Well, it -- It's not really relevant what type
- of year it's going to be. Either the flows are excess or
- 13 they're not to the system at that time in which the
- 14 exports are taking place.
- 15 MR. HERRICK: But in your testimony on Line 24,
- 16 you said (reading):
- 17 "Project exports are generally supported during
- the winter and early spring months by runoff . . . "
- 19 So that's not always the case, what you said.
- 20 You do export stored water in those months Mr. Nomellini
- 21 was talking about; correct?
- 22 WITNESS LEAHIGH: No, typically we do not.
- 23 Typically in the winter, there will always be some
- 24 unstored flow available for export. Even if we're --
- 25 Even if we're not in excess conditions, even if we're in

- 1 balanced conditions, there would -- there would typically
- 2 be unstored flow available for export in the wintertime.
- 3 MR. HERRICK: Mr. Leahigh, that didn't answer
- 4 the question. I asked -- used the term generally,
- 5 sometimes you do, and you said, no, typically not.
- 6 The question is, are there times in that -- in
- 7 those winter/spring months when you're exporting stored
- 8 flow that, as Mr. Nomellini says, if you didn't, would be
- 9 either left in storage for later use or later delivery.
- 10 WITNESS LEAHIGH: The only stored water I can
- 11 think of that might be released in the wintertime and is
- 12 exported perhaps as a flood -- storage that was
- encroached due to flood control space. I can't think of
- 14 any other instance where stored water would be released
- 15 for export in the wintertime.
- 16 MR. HERRICK: Even during the drought times we
- just experienced, you weren't storing water in the
- 18 wintertime? Excuse me. Going up at the end of that
- 19 sentence.
- 20 WITNESS LEAHIGH: We would have to revisit the
- 21 historical record for that particular year that we're
- 22 looking at.
- 23 But the only other -- the only other example I
- 24 can think of would be a release of stored water to
- 25 support maybe a minimum level of health and safety

- 1 pumping.
- 2 But other than that, I can't think of any other
- 3 example of when that would occur, what you described.
- 4 MR. HERRICK: Do you know how much carryover
- 5 was available -- was in the -- in Oroville at the end of
- 6 2012 Water Year?
- 7 WITNESS LEAHIGH: At the end of Water Year
- 8 2012?
- 9 MR. HERRICK: Yes.
- 10 WITNESS LEAHIGH: Offhand, I don't know.
- 11 MR. HERRICK: But that entire block of Released
- 12 for Export, regardless of the time of year it was
- 13 released, could have gone to that carryover storage and
- been available in the subsequent drought years; correct?
- 15 WITNESS LEAHIGH: Well, this was the year
- 16 that -- the report that was offered as an exhibit, and I
- 17 actually looked at this particular year.
- 18 And what it showed was, essentially, the more
- 19 unstored flow and the wetter the conditions, the more of
- 20 that stored water we would leave as carryover for the
- 21 following year with the higher allocations.
- 22 With the -- With the lower allocations, we
- 23 would move some additional stored water but we wouldn't
- 24 be utilizing all of our capacity in moving all of it, so
- 25 some of it would be left for carryover supplies the

- 1 following year.
- MR. HERRICK: Mr. Leahigh, that's not what I
- 3 asked you.
- 4 What I asked you was, of that 860,000 acre-feet
- 5 that was released from storage for export in 2012, if
- 6 that had not been released for export, it would have been
- 7 carryover -- correct? -- regardless of the policies or
- 8 the current operations of the Project?
- 9 MR. BERLINER: Objection: That calls for
- 10 speculation. I don't know what kind of Water Year would
- 11 have followed that.
- 12 CO-HEARING OFFICER DODUC: But if it's not
- 13 released, then it's carryover.
- 14 WITNESS LEAHIGH: It would be carryover.
- 15 I'm assuming that there wouldn't have been any
- other reason to release it. Of course, when you develop
- a Project, you expect to get some water supply from it.
- MR. HERRICK: Is that a "yes"?
- 19 WITNESS LEAHIGH: I'm not sure. It's likely
- 20 that it would remain as carryover. I can't say
- 21 definitively that that's --
- 22 MR. HERRICK: Okay. I'm not trying to make
- 23 this complicated; I'm not trying to trick you. I'm just
- 24 saying, if it's not released from storage and remains in
- storage, it'll be there for the following year.

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1 Yes, we can come up with conditions that
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- 2 somebody would use it then, but the general point is,
- 3 less release of storage for exports means more carryover;
- 4 correct?
- 5 WITNESS LEAHIGH: Generally, yes.
- 6 MR. HERRICK: Now, on your Slide Number 6,
- 7 which is still up there, is it correct to say that the
- 8 designation of -- of the -- designation of the releases
- 9 is performed after the fact, not at the time that they're
- 10 being released?
- 11 And if I may clarify that.
- 12 At any time in, say, 2012 when you're making
- releases, somebody doesn't go to a notebook or a
- 14 spreadsheet on a computer and say, "This is what
- everything was for," but at the end of the year or
- 16 sometime during the year, then DWR and/or the Bureau look
- 17 back and say, "We will designate this for that use"; is
- 18 that correct?
- 19 WITNESS LEAHIGH: No, I don't think that's
- 20 correct.
- I think it's pretty clear. In real-time,
- 22 relatively, whether or not we're releasing water for
- 23 export -- specifically for export, it would be -- it
- 24 would be clear in real-time.
- 25 MR. HERRICK: But you -- Can you not say,

- 1 instead of making releases for Feather River
- 2 requirements, you could just label all of the releases as
- 3 exports and take care of Feather River fishery
- 4 requirements, and so you wouldn't have to label it
- 5 fishery water; isn't that correct?
- 6 WITNESS LEAHIGH: Well, we'd be required to
- 7 make the releases for the minimum Feather River flows
- 8 regardless of if we were releasing for export.
- 9 MR. HERRICK: Yes. But the point is, you get
- 10 to choose how it's designated and that -- that then
- determines the accounting at the end of the year.
- 12 WITNESS LEAHIGH: Not really. We don't get to
- 13 choose whether we release that water for minimum instream
- 14 flow requirements or not.
- MR. HERRICK: Well, let me give you a bad
- 16 example, and I apologize, because I'm going to the
- 17 Federal Project.
- 18 They have obligations for dissolved oxygen on
- 19 the Stanislaus and they have obligations for water
- 20 quality at Vernalis.
- 21 If they release a block of water to meet
- 22 Vernalis, they meet the dissolved oxygen. If they meet
- 23 water for the dissolved oxygen, they may meet the
- 24 Vernalis standard.
- 25 So, it's up to the Project to determine how

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1 they allocate those releases if they perform more than --
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- if they result in more than one benefit; correct?
- 3 WITNESS LEAHIGH: Well, for the example you
- 4 gave for the State Water Project and Lake Oroville
- operations, the two different purposes that you're
- 6 talking about, one is discretionary and one is not.
- 7 So that one, in my mind, is very clear that the
- 8 non-discretionary purposes is -- is how it would be
- 9 categorized as a primary purpose of the release.
- 10 MR. HERRICK: If we go to Slide Number --
- 11 Excuse my color-blind eyeball.
- 12 Page -- Slide Number 8 instead of 6.
- 13 (Document displayed on screen.)
- 14 MR. HERRICK: And those are different bar
- charts than the ones on Slide Number 6; correct?
- 16 WITNESS LEAHIGH: Correct.
- MR. HERRICK: And, again, you don't have to
- 18 agree with me, but by comparing 6 and 8, it seems to
- 19 suggest that the designation of what the water's for
- 20 doesn't necessarily result in the actual use or export of
- 21 that water.
- Would that be a correct statement?
- 23 WITNESS LEAHIGH: I'm sorry. Can you repeat
- that question, please?
- 25 MR. HERRICK: Yeah. Slide 6 says the Primary

- 1 Sources of Water for Export, and it has certain bar
- 2 charts -- bars, and then Slide 8 says Primary Reasons for
- 3 Lake Oroville Releases, and the two don't really match,
- 4 especially with regard to -- The two don't really match.
- 5 Is that an indication there are post hac
- 6 decisions what the water was ultimately released for and
- 7 ultimately used for or not?
- 8 WITNESS LEAHIGH: No, I don't think so. Like I
- 9 said, it's pretty clear when we're making releases
- 10 whether we're making discretionary releases for export or
- 11 not. So that's known in real-time.
- MR. HERRICK: All right. Turning to Page 7 on
- 13 your testimony, which is DWR-78.
- 14 (Document displayed on screen.)
- MR. HERRICK: And beginning -- I'm sorry.
- 16 Beginning on Line Number 6.
- You say that (reading):
- 18 "The Project balances the needs of the current
- 19 year with the risks for meeting the many
- 20 requirements and beneficial purposes of storage in
- subsequent years. In this balancing process, the
- 22 SWP policy is to incrementally increase conserved
- 23 storage for subsequent years as the available water
- for water supply deliveries in the current year
- 25 increases."

- 1 Do you see that?
- 2 WITNESS LEAHIGH: Yes.
- 3 MR. HERRICK: So this gets to the -- I think
- 4 the heart of the Rule Curve issue that we've been
- 5 discussing -- various people have been discussing.
- 6 You're telling us by this that carryover
- 7 storage for the following year is a function of exports
- 8 and increases to exports; is that correct?
- 9 WITNESS LEAHIGH: Well, there is one component
- 10 of the carryover storage that is essentially that balance
- of State Water Project supplies and those supplies only
- in terms of balancing the needs of the current year
- 13 versus carryover to subsequent years for protection in
- 14 drier years.
- 15 MR. HERRICK: So the Rule Curve or whatever the
- 16 controlling policy is, it doesn't set a number for
- 17 storage based upon that year type. It is a number that's
- developed based upon an available supply which can be
- 19 divided between exports and carryover; is that correct?
- 20 WITNESS LEAHIGH: Yeah. So the -- It's -- I'm
- 21 sorry. Can you repeat that question?
- 22 MR. HERRICK: The carryover storage in at least
- Oroville is not a function of that year type
- 24 specifically; in other words, it doesn't come up with a
- 25 specific number needed. Rather, it -- the carryover is a

- 1 function of the available supply and its division between
- 2 exports and carryover storage, ignoring other needs of
- 3 the reservoir.
- 4 WITNESS LEAHIGH: Yes. I think that's
- 5 generally true, yes.
- 6 MR. HERRICK: So, again, I'm not criticizing
- 7 the decision, but when you look in hindsight, when you
- 8 have 2012, a below-normal year, and then you have some
- 9 horrific drought years after that, would it be better to
- 10 have a number for the carryover rather than a calculation
- 11 that divides up the supply?
- 12 WITNESS LEAHIGH: No, actually, I don't believe
- it would be.
- MR. HERRICK: So if the exports are 860,000
- 15 acre-feet in 2012 from storage, are we to assume that
- 16 carryover is something at or above that number for 2012?
- 17 WITNESS LEAHIGH: Well, yeah. Certainly the
- 18 carryover was higher than that number.
- 19 MR. HERRICK: Okay. So if somebody had decided
- 20 to increase carryover but not exports, there would have
- 21 been more water for the following drought years available
- in the storage; right?
- 23 WITNESS LEAHIGH: That's entirely possible. If
- the following year was a wet year and you carried that
- 25 storage over, you might have ended up spilling it. So,

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1 you know, you won't know from year to year --
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- 2 MR. HERRICK: Correct.
- 3 WITNESS LEAHIGH: -- what to expect.
- 4 MR. HERRICK: Turning to Slide Number 10 --
- 5 (Document displayed on screen.)
- 6 MR. HERRICK: -- DWR -- sorry -- 10.
- 7 Now, I have to start this with a rhetorical
- 8 question, which is: What the heck is this?
- 9 Mr. Leahigh, am I correct in that the years
- 10 given only present three months of the year; is that
- 11 correct?
- 12 WITNESS LEAHIGH: It -- Right. It's showing
- 13 the three months of the year where the vast majority of
- 14 any export -- any stored water for export would occur,
- and that's the July-through-September period.
- 16 MR. HERRICK: And it is July through September;
- 17 correct?
- 18 WITNESS LEAHIGH: Correct.
- 19 MR. HERRICK: But then you draw a line from
- 20 each September to the next year's July; is that correct?
- 21 Because you have a continuous -- you have continuous
- lines.
- 23 WITNESS LEAHIGH: Well, okay. So each point --
- 24 There's really only one point for each year, which is the
- 25 total volume of export for that three-month period.

- 1 So the months aren't split out, aren't broken
- 2 out. It's just a kind of lumping of three-month volume
- 3 together for each year.
- 4 MR. HERRICK: Yeah. But there's not only one
- 5 point in each year; there's a line.
- 6 I'm not trying to beat this to death but when
- 7 you look at this, it suggests that exports, or unmet
- 8 demand, or -- excuse my code words, you know.
- 9 It suggests that the -- there are continuous
- 10 change in those parameters, whereas it's only three-month
- 11 increments; right?
- 12 WITNESS LEAHIGH: Well, we could have just as
- easily put points on for each column, because there's
- only -- there's only one point for each column, which is
- 15 the lumped three-month volume.
- 16 So, yeah, we didn't need to use a line
- 17 necessarily if that's -- you know, if that's causing the
- 18 confusion. That's -- It could just be a single point for
- 19 each year.
- 20 MR. HERRICK: But what this is telling us is
- 21 that at certain times there's unused capacity at the
- 22 State and/or Federal pumps which might be used for joint
- 23 point; correct?
- 24 WITNESS LEAHIGH: Well, not only joint point,
- 25 but it could be used just for moving additional

- 1 Project -- State Water Project supplies as well.
- 2 MR. HERRICK: All right. Thank you.
- 3 Turning to Page 6, the bottom of 6 to the top
- 4 of seven, please.
- 5 (Document displayed on screen.)
- 6 MR. HERRICK: That's not the right cite. I'm
- 7 sorry.
- 8 Going back to your -- the quote I just read on
- 9 Page 7 -- I apologize for that -- starting at Line 6. I
- 10 read those two sentences. Sorry.
- 11 Is the -- Is the State Water Project balancing
- 12 any of its other obligations with carryover and exports?
- 13 WITNESS LEAHIGH: I think it's primarily the
- 14 State Water Project supplies.
- 15 MR. HERRICK: And so, in fact, the State Water
- 16 Project is, then, balancing, not creating a priority
- between exports and carryover; is that correct?
- Is that a fair statement?
- 19 WITNESS LEAHIGH: I'm sorry. Say that again.
- 20 MR. HERRICK: Is it correct to say that the
- 21 operations of the State Water Project with regard to
- 22 Oroville don't give carryover storage a priority over
- 23 exports? They balance the two to some degree.
- 24 WITNESS LEAHIGH: They balance the two to some
- 25 degree, yes.

- 1 MR. HERRICK: Turning to Slide Number 15 on
- 2 DWR-10. Sorry for jumping back and forth.
- 3 (Document displayed on screen.)
- 4 MR. HERRICK: And, Mr. Leahigh, this is your --
- 5 This is one of the slides from your PowerPoint discussed
- 6 in your testimony.
- 7 And in this, you were trying to depict the
- 8 timing of exports generally under pre- and post-BiOps; is
- 9 that correct, generally?
- 10 WITNESS LEAHIGH: Yes, that's correct.
- 11 MR. HERRICK: And under the pre-BiOps, there
- 12 was significantly more exports in January, February,
- 13 March, April and May, maybe June, too; is that correct?
- 14 WITNESS LEAHIGH: Correct.
- 15 MR. HERRICK: Subsequent to the BiOps, the
- 16 State Water Project had to shift to exports in July,
- 17 August -- July and August; is that correct?
- 18 WITNESS LEAHIGH: Correct.
- 19 MR. HERRICK: Now, under the WaterFix, you say
- 20 that you'll -- the Project will try to re-establish those
- 21 January, February, March and April exports by taking more
- 22 surplus flow; correct?
- 23 WITNESS LEAHIGH: Well, I think with the
- 24 Project, we don't expect to completely recover the
- 25 availability of that excess flow. But I think the hope

- 1 is to at least restore some of that former capability.
- 2 MR. HERRICK: And then I believe the testimony
- 3 was, that actually results in increased upstream storage
- 4 because upstream storage is not needed for any of those
- 5 earlier releases.
- 6 Would that be a fair statement?
- 7 WITNESS LEAHIGH: Well, if anything, I would
- 8 expect -- If not the same upstream, I wouldn't expect a
- 9 decrease in upstream storages with the WaterFix because
- 10 of the application of the policy and the Rule Curve, as
- 11 you call it.
- MR. HERRICK: Yes. DWR -- Excuse me.
- 13 DWR doesn't intend to give up those July and
- 14 August exports; do they?
- 15 WITNESS LEAHIGH: There would be -- By adhering
- 16 to the same policy, there would be a natural progression
- towards more of the pre-BiOp pattern.
- MR. HERRICK: That's not my question.
- 19 You're still going to try to do exports in July
- 20 and August because you have storage to support that;
- 21 correct?
- 22 WITNESS LEAHIGH: No, not if the same Rule
- 23 Curve is applied as today. We would, if anything,
- 24 leave -- The higher export of excess flows in the spring
- 25 would generally result in higher allocations, which would

- 1 then support higher carryover storages as a result. So I
- 2 would expect less movement of stored water during July
- 3 and August with the WaterFix.
- 4 MR. HERRICK: But you just told us that higher
- 5 carryover under the Rule Curve for Oroville results in
- 6 additional exports. That's how you balance those two
- 7 things.
- 8 WITNESS LEAHIGH: No. They -- Well, the
- 9 additional exports are coming from the export of -- of
- 10 excess flows in the spring. That's -- That's the source
- of the additional export for deliveries.
- 12 And so that's why that's -- those additional
- 13 export of excess flows would be a substitute for the
- 14 stored water that we're moving from Oroville in the
- 15 summer currently.
- 16 MR. HERRICK: But some of that excess flow is
- 17 flowing into Oroville from upstream; right?
- 18 WITNESS LEAHIGH: Well, there is --
- 19 MR. HERRICK: As the water enters the
- 20 reservoir, you're making decisions about allocations for
- 21 exports and for carryover.
- 22 WITNESS LEAHIGH: Right. And -- Well, some of
- that additional flow would be kept as additional
- 24 carryover as a result of higher allocations that could be
- 25 possible with the WaterFix.

- 1 MR. HERRICK: Let me switch to Mr. Munévar, if
- 2 I may.
- 3 Mr. Munévar -- And I'm going to destroy your
- 4 name. I apologize now. I'm confused about how to
- 5 correctly pronounce it but I'm trying.
- 6 Your testimony is DWR-86 -- If we could pull
- 7 that up, please. And first I'd like to go to Page 30 and
- 8 31 -- Pages 30 and 31.
- 9 WITNESS MUNÉVAR: I think we want the errata.
- 10 MR. HERRICK: That may be, but I'm looking at
- 11 just the testimony in DWR-86.
- 12 (Document displayed on screen.)
- MR. HERRICK: Yes, thank you.
- And you say at the bottom of Page 30, the
- beginning of Page 31, that (reading):
- 16 "These generalized rules" -- referring to
- 17 CalSim model rules -- "have been developed based on
- 18 historical operational trends and on limited CVP/SWP
- 19 operator input and only provide a coarse
- 20 representation of the project operations over the
- 21 hydrologic conditions considered."
- Do you see where you say that?
- 23 WITNESS MUNÉVAR: Yes.
- MR. HERRICK: Now, this gets to the important
- 25 part of one of the issues for us but there have been a

- 1 lot of questions so I don't want to beat this to death.
- 2 You do understand that this proceeding is to
- 3 result in someone else deciding whether or not there's
- 4 injury to other users of water; correct? That's one of
- 5 the things to be found.
- 6 WITNESS MUNÉVAR: That's my understanding, yes.
- 7 MR. HERRICK: And the tools being used by the
- 8 Petitioners include CalSim II and DSM-2 in order to
- 9 evaluate the impacts from the proposal; correct?
- 10 WITNESS LEAHIGH: Correct. Evaluate the
- 11 changes associated with the WaterFix.
- MR. HERRICK: Now, when you say that the
- 13 CalSim II model outputs only provide a coarse
- 14 representation of the Project operations, do you
- 15 understand the difficulty people are having determining
- 16 whether or not there are short-term impacts that
- 17 constitute injury resulting from the Proposed Project?
- 18 You understand that?
- 19 MR. BERLINER: Objection: Calls for
- 20 speculation.
- 21 The witness can't know what others are
- thinking.
- 23 MR. HERRICK: Well, I'll -- Let me put it to
- 24 you. I'm thinking that.
- 25 CO-HEARING OFFICER DODUC: Oh, dear.

- 1 (Laughter.)
- 2 MR. HERRICK: Do you understand the point I'm
- 3 making, that -- where the process is trying to determine,
- 4 or quantify, or label the impacts from the Project.
- 5 Do you understand that?
- 6 WITNESS MUNÉVAR: Yeah. I think I just -- just
- 7 stated that.
- 8 MR. HERRICK: And do you believe that the
- 9 impacts on the Project can only be described in long-term
- or long-term average coarse representations?
- 11 WITNESS MUNÉVAR: I don't -- I don't think
- 12 that's how I testified.
- MR. HERRICK: Okay. I'm asking you.
- So do you believe that the CalSim II -- I'll
- 15 get to the DSM-2 later.
- 16 Do you believe the CalSim II can be used for
- 17 short-term evaluation of impacts? And by "short term," I
- mean less than a . . . a multiyear average.
- 19 WITNESS MUNÉVAR: I think, as the model is
- 20 applied here for the WaterFix hearing, it's best used in
- 21 a comparative long-term capability. There -- You could
- 22 apply the model in a very different fashion to look at an
- 23 annual type of operation but that's not what's been
- 24 presented here.
- 25 MR. HERRICK: And that's what I'm getting at.

- 1 I'll make a hypothetical here. The
- 2 hypothetical is:
- In any particular year, an effect on upstream
- 4 flow or a carry -- or a storage number might constitute
- 5 an adverse impact assignment later on. Somebody may
- 6 decide whether or not that's injury, but might result in
- 7 an adverse impact.
- 8 Is your presentation as part of these
- 9 proceedings allowing the decision-maker to see whether or
- 10 not there are those short term less-than-a-year --
- 11 within-a-year impacts?
- MS. McGINNIS: Objection: Calls for legal
- 13 conclusion.
- Mr. Herrick's asking Mr. Munévar to do the
- 15 Hearing Officer's job.
- 16 CO-HEARING OFFICER DODUC: I believe
- 17 Mr. Herrick is asking Mr. Munévar as a Modeler whether or
- 18 not his work might be used in that manner.
- 19 MR. HERRICK: Yes. And I would add to that
- 20 that I'm asking him about the ability to measure or
- 21 predict short-term effects with the caveat that those
- 22 would then be used by the decision-maker later. He
- 23 doesn't have to make those decisions of what it
- 24 constitutes.
- 25 But -- But I'm trying to find out if you think

- 1 the modeling that's been done for CalSim II will allow
- 2 the determination of less-than-a-year impacts on things
- 3 like store -- carryover storage deliveries, stream flow,
- 4 things like that.
- 5 CO-HEARING OFFICER DODUC: If one were to
- 6 determine that such analysis is needed to determine
- 7 impacts.
- 8 MR. HERRICK: Yes. Just a hypothetical.
- 9 CO-HEARING OFFICER DODUC: And he's not asking
- 10 Mr. Munévar to make that determination, just whether or
- 11 not the modeling and the modeling results could be used
- 12 that way.
- 13 WITNESS MUNÉVAR: I'll answer the best I can.
- 14 The -- The modeling as presented demonstrates a
- 15 possible way the WaterFix would operate under long-range
- 16 hydrologic conditions. That includes months, years,
- decades, droughts, wet periods.
- 18 To use the model to isolate one particular
- 19 event would not be an appropriate application for this
- 20 modeling. But to look at it from the whole in terms of
- 21 its distribution of changes, or no changes as we've
- arqued here, is an appropriate use of the model.
- 23 If you wanted to run this in an operational
- 24 sense, it would be a different approach than -- and
- 25 probably Mr. Leahigh would be more involved in that type

- 1 of operation.
- 2 MR. HERRICK: So I take from your answer that
- 3 we could -- by "we" I mean either the Bureau, DWR or
- 4 anybody else -- we could do different modeling to predict
- 5 as best we could certain impacts in specific years or
- 6 year types but that the model -- But we didn't do that.
- 7 The modeling presented is that long-term average method,
- 8 I'll say; is that correct?
- 9 WITNESS MUNÉVAR: No, that's not correct.
- 10 So --
- 11 MR. HERRICK: Please correct me.
- 12 WITNESS MUNÉVAR: The modeling presented -- and
- 13 I think we've tried to be very clear -- we've shown them
- 14 both in exceedance levels, we've shown every year, we've
- 15 shown year type averaging. So these are not long-term
- 16 averages. They're partitioned by individual year types,
- water showing the full range of years as to the
- 18 exceedance analyses.
- 19 MR. HERRICK: Okay. But your year types are a
- 20 combination of 82 of those year -- Excuse me.
- 21 Your year types are all of the, say, critical
- 22 years in that 82-year period. They're not individual
- 23 years.
- 24 WITNESS MUNÉVAR: Correct. Those could be
- 25 averages of seven to 10 years.

- 1 MR. HERRICK: Okay. So you -- you corrected
- 2 me -- you said I was wrong -- that you were using yearly
- 3 results.
- 4 You're not using that. You're using averages
- of each year type; is that correct?
- 6 WITNESS MUNÉVAR: Your question was related to
- 7 long-term averages and that was what I was responding to.
- 8 MR. HERRICK: Okay.
- 9 WITNESS MUNÉVAR: So we do not necessarily use
- 10 long-term averages, although we view them. We then try
- 11 to look at Exceedance Plots. And then we look at -- For
- 12 some presentation, it makes more sense to present them by
- 13 year types, which is a subset of that long-term average
- 14 partition in five different classes of years.
- 15 MR. HERRICK: But when you take every critical
- 16 year in the 82-year record and average it, you don't
- think that's a long-term average?
- 18 WITNESS MUNÉVAR: No, I do not.
- 19 MR. HERRICK: Okay.
- 20 I realize I'm not being as short and concise as
- 21 I promised. I apologize.
- 22 On Page 14 of your testimony, please.
- 23 (Document displayed on screen.)
- MR. HERRICK: And on the main paragraph at
- 25 Line 9, you're talking about the San Luis Rule Curve.

```
1
                Do you see that?
 2
                WITNESS MUNÉVAR: Yes, I do.
 3
                MR. HERRICK: The San Luis Rule Curve is the
      Rule Curve to determine what preferences on how much
 4
      water gets delivered to San Luis?
 5
 6
                WITNESS MUNÉVAR: So it's -- it's really a
      model -- a model implementation that tries to emulate
 7
      Operator behavior on when to move stored water from
 8
9
      upstream storage to South-of-the-Delta storage.
10
                MR. HERRICK: And on Line 21, you say
11
      (reading):
12
                "The San Luis rule curve could, and should
           change, when the ability to capture surplus water or
13
14
           export of stored water has changed due to regulatory
15
           and infrastructure modifications . . . "
16
                There's more to that but starting with that.
17
                WITNESS MUNÉVAR: Did you say Line 21?
18
                MR. HERRICK: Line 21.
```

21 (Scrolling down document.)

19

20

please?

22 WITNESS MUNÉVAR: Yes, I see it.

23 MR. HERRICK: So, wouldn't it be correct to

24 say, then, that if the California WaterFix adds the

25 ability to capture more water, that the San Luis Rule

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WITNESS MUNÉVAR: Can you scroll down there,

- 1 Curve should change in order to maximize more exports?
- 2 Isn't that what you're saying there?
- 3 WITNESS MUNÉVAR: I do agree that it should
- 4 change but not for the reasons that you mentioned there.
- 5 It should change because of the change in behavior of the
- 6 timing of exports.
- 7 I think Mr. Leahigh's plot of the -- I believe
- 8 it was 2005 and 2011, were good examples in that if you
- 9 had more exports in the winter and spring, therefore, you
- 10 may not need to move water out of storage in the summer.
- 11 And that's what the San Luis -- Adjustments to the
- 12 San Luis Rule Curve can emulate that operational behavior
- 13 under a different set of infrastructure.
- So with the WaterFix, we are able to divert
- 15 more of excess flows -- in quotes -- during winter and
- 16 spring and, therefore, have a reduced need to move stored
- 17 water in summer out of Oroville or upstream storage on
- 18 the CVP side.
- 19 MR. HERRICK: Unless you wanted to maximize
- 20 San Luis storage for the next year; correct?
- 21 WITNESS MUNÉVAR: Well, that's not -- that's
- 22 not how the Projects are typically operated and that's
- 23 not how the Rule Curve is implemented.
- MR. HERRICK: On Page 16, Line . . . Excuse
- 25 me.

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I think I'm on the wrong page here. Oh,
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- because I'm on the wrong page.
- 3 On Page 16, we'll start at Line 13 -- Excuse
- 4 me.
- 5 On Line 17, your -- you make the point that it
- 6 is not possible for Reclamation to include JPOD when
- 7 doing its March-through-May allocation estimates; is that
- 8 correct?
- 9 WITNESS MUNÉVAR: That's correct, in reference
- 10 to Miss Parker's testimony.
- 11 MR. HERRICK: If we could pull up DWR-902,
- 12 please.
- 13 (Document displayed on screen.)
- MR. HERRICK: And scroll down. I think it's
- 15 the last page.
- 16 (Scrolling down document.)
- 17 CO-HEARING OFFICER DODUC: And let me make sure
- 18 I'm clear. Is 902 still 902?
- MS. McGINNIS: Yes, it is.
- 20 CO-HEARING OFFICER DODUC: Thank you.
- MR. HERRICK: That, I don't know.
- 22 Mr. Munévar, you see that this last page of 902
- is entitled "Hydrologic Exceedence" (sic).
- Do you see that?
- 25 WITNESS MUNÉVAR: I do.

- 1 MR. HERRICK: And at the bottom right-hand
- corner, it's labeled "2/29/2012"; correct?
- 3 WITNESS MUNÉVAR: Correct.
- 4 MR. HERRICK: And this is, in fact, an
- 5 estimation as of February how much capacity might be
- 6 available for JPOD; isn't it?
- 7 WITNESS MUNÉVAR: Yeah. I'm not familiar
- 8 with -- with this -- this document. This would probably
- 9 be a better question for Mr. Leahigh.
- 10 MR. HERRICK: Mr. Leahigh -- Mr. Leahigh, you
- 11 see this page in front of you?
- 12 WITNESS LEAHIGH: Yes, I do.
- MR. HERRICK: So, in fact, DWR, then, is
- 14 allocate -- is estimating available capacity in the
- 15 summer months as of -- as of the end of February?
- 16 WITNESS LEAHIGH: Yes. And what this
- 17 indicates -- Well, you can see the hydrologic exceedances
- 18 on the top there.
- 19 And so you see a 50 percent arrow, and it's a
- 20 range because of the variations in the application of the
- 21 Biological Opinions.
- 22 But if you -- If you go down to the bottom, you
- also see that there's . . .
- 24 In some of the scenarios, there would be zero
- 25 available capacity for -- that's not being utilized by

- 1 the State Water Project and, in other cases, there would
- 2 be some. So even at this point in time, it's -- it would
- 3 be 50-50 whether or not there'd even be any unused
- 4 capacity available.
- 5 What -- What this also does not show is, even
- 6 in the cases where there would be unused capacity
- 7 available, it -- it would be -- there would be a big
- 8 question mark as far as how much of that unused capacity
- 9 would be taken up by third-party transfers.
- 10 So there would be a great deal of uncertainty
- in terms of how much might be available for the CVP in
- 12 order to -- for JPOD operations.
- MR. HERRICK: Mr. Leahigh, that's informative
- 14 but the question was:
- 15 As of the end of February, the State Water
- 16 Project is estimating available -- potentially available
- JPOD opportunities. Whether the predictions are
- 18 amazingly accurate or not is not the question.
- 19 Would you agree that, as of the end of
- 20 February, that's what the State Water Project did in this
- 21 year, this particular year.
- 22 WITNESS LEAHIGH: Well, yes, I agree there's an
- 23 estimate, but the estimate's all across the board. It's
- 24 anything from zero to a significant amount.
- 25 MR. HERRICK: Then I'll go back to Mr. Munévar.

1 That's why I asked the question, because, in

- 2 your testimony, it's -- it's not possible for Reclamation
- 3 to include JPOD export wheeling capacity when it's in the
- 4 process of its March through May allocation estimates.
- 5 So it is possible. Are you saying it may not
- 6 be accurate?
- 7 WITNESS MUNÉVAR: Well, I think, because the --
- 8 the estimations at this point in time are across the
- 9 board and that they're not necessarily articulating the
- 10 CVP available capacity, the CVP does not rely upon Joint
- 11 Point of Diversion estimates in their allocation setting.
- MR. HERRICK: Well, regardless, once you've
- 13 made your estimations of deliveries earlier in the year,
- 14 when joint point opportunities arise in the summer, is
- there some reason the Bureau wouldn't take advantage of
- 16 those opportunities because they didn't estimate them
- 17 earlier in the year?
- 18 WITNESS MUNÉVAR: They may move water through
- 19 Joint Point of Diversion but only to support an
- 20 allocation that was already made without the estimation
- 21 of Joint Point of Diversion, or to make up for -- for a
- 22 lack of exports during a different period of the year.
- I think Mr. Leahigh's plot showed that -- the
- 24 limited amount of Joint Point of Diversion used by the
- 25 CVP over the course of those 10-plus recent years.

1 MR. HERRICK: I'm not sure that answered my

- 2 question at all. No offense.
- 3 Is there a reason why the Bureau would not take
- 4 advantage of joint point diversion opportunities in the
- 5 summer or fall months even though they had not estimated
- 6 those earlier in the year?
- 7 MS. AUFDEMBERGE: Objection: He's asking what
- 8 the Bureau would do. He's a Modeler, not the Operator.
- 9 CO-HEARING OFFICER DODUC: So is there reason
- 10 why you would not model that, Mr. Munévar?
- 11 WITNESS MUNÉVAR: And I thought I answered it.
- 12 Even in the modeling, if Joint Point of
- 13 Diversion -- if there was a need to use Joint Point of
- 14 Diversion and the capacity was available in the summer,
- 15 we do simulate some use of Joint Point of Diversion.
- 16 The difference is in -- in relying upon an
- 17 estimate of available Joint Point of Diversion and
- 18 setting an allocation back in March, April and May, which
- 19 is a different level of certainty than operating on a
- 20 very opportunistic basis as it arises during the course
- of the summer.
- 22 MR. HERRICK: Mr. Munévar, we heard earlier
- 23 there were scenarios under the California WaterFix that
- 24 result in less exports to the CVP contractors than the
- 25 No-Action Alternative.

- 1 It hasn't been determined apparently between
- 2 DWR and USBR how they might address that, but would not
- 3 joint point opportunities that arose after the initial
- 4 allocations for contractors be one method of addressing
- 5 that decrease in supplies?
- 6 MS. AUFDEMBERGE: Objection: Calls for
- 7 speculation.
- 8 MR. HERRICK: Well, there might be some
- 9 speculation but I think it's appropriate.
- 10 CO-HEARING OFFICER DODUC: I would suggest you
- 11 reframe your question, keeping in mind that Mr. Munévar
- is the Modeler, not the Operator.
- 13 MR. HERRICK: Mr. Munévar, have you modeled
- joint point opportunities in summer and fall in order to
- 15 make up for other modeled results that show decreases in
- 16 supplies to the CVP contractors as a result of California
- 17 WaterFix?
- 18 WITNESS MUNÉVAR: No, I have not.
- MR. HERRICK: Lastly, with regard to
- 20 Mr. Munévar.
- 21 You go on at length -- I don't mean that as a
- 22 criticism -- of describing why you can't model the
- 23 extreme drought conditions and those unforeseen
- 24 circumstances.
- 25 Do you recall that? And I'm not -- that's a

- 1 very rough description.
- 2 WITNESS MUNÉVAR: Yeah. In general, yes.
- 3 MR. HERRICK: Now, what many of us don't
- 4 understand is why can't we have model results that tell
- 5 us how we start a historic drought year and then look for
- 6 available supply and then have the Projects tell us what
- 7 to do with it and then determine the effects.
- 8 Why can't that be done?
- 9 WITNESS MUNÉVAR: I think for a number of
- 10 reasons.
- I think first is that all of our modeling
- 12 represents a No-Action with -- with a trending sea-level
- 13 rise or an increase in sea level, a change in climate,
- 14 which creates conditions that are likely to be more
- 15 exacerbated than what we've observed.
- 16 And, secondly, there are competing interests
- that appear to be at the same levels of priority that
- 18 cannot all be maintained during those stress conditions.
- 19 We don't feel it's appropriate for the modeling
- 20 to make those -- those decisions or adaptations or
- 21 adjustments in response to climate change. We were
- 22 intending to implement a No-Action in the WaterFix and
- 23 compare them under identical conditions and express how
- 24 the WaterFix would change those conditions.
- 25 MR. HERRICK: Well, your modeling will tell us

- 1 what the conditions are as of the year before any
- 2 historic drought; correct? Doesn't mean they're accurate
- 3 but the model will give outputs for, you know, 1975
- 4 before the '76-77 drought. The model will tell us what
- 5 it thinks will be the conditions the year before the
- 6 drought; correct?
- 7 WITNESS MUNÉVAR: Correct, assuming we know the
- 8 droughts are coming.
- 9 MR. HERRICK: No, no. I'm just saying we're
- 10 looking back now. We're doing modeling.
- 11 And so the model tells us what the conditions
- 12 are the year before of a drought -- the year before a
- 13 drought.
- 14 WITNESS MUNÉVAR: Partial correct.
- 15 So, yes, I -- I understand where you're going.
- 16 But I want to stress we're using a historic sequence, not
- 17 to go back in time. We're looking forward in time.
- 18 We're saying, what if we had that kind of
- 19 variability in the future? How would we operate a
- 20 No-Action in the future and how would we operate the
- 21 WaterFix in the future?
- 22 So we're really looking at future conditions,
- 23 not -- Even though we labeled them as, you know, 1976,
- 24 '77, we're looking at sequences of historic variability
- 25 but operating them in the future.

- 1 MR. HERRICK: Okay. But that's a distinction
- 2 without . . .
- 3 You're using the historic record, running the
- 4 models under whatever scenario, and then looking at them.
- 5 Whether or not it's -- somebody's saying it's 1975 or
- 6 it's a 1975-type year in the model, that's what we're
- 7 doing. We're trying to run the model, see what happens
- 8 under the -- each scenario for those hydrologic
- 9 conditions.
- 10 WITNESS MUNÉVAR: I would disagree with that.
- 11 The sequences are the same. We look at future land use,
- we look at future sea-level rise, we look at future
- 13 climate change. So those future conditions are different
- than the direct, observed historic conditions.
- 15 MR. HERRICK: But those all go into the model,
- 16 so we're doing -- we're doing the modeling scenarios of
- 17 all those changes and we're looking at the historic
- 18 record as -- as possible hydrologic conditions and then
- we're getting outputs; correct?
- 20 WITNESS MUNÉVAR: Possible hydrologic
- 21 variability is the way I describe it.
- MR. HERRICK: So if we know that there's a
- 23 '76-77 drought after 1975 and we run all the scenarios
- 24 with your -- as you said, with all the climate change and
- 25 all those things, it will tell us in 1975 how much

- 1 carryover's in each reservoir; correct?
- 2 WITNESS MUNÉVAR: The model will project a -- a
- 3 storage condition in the No-Action WaterFix in the year
- 4 preceding an anticipated drought.
- 5 MR. HERRICK: It's projecting what would be
- 6 there.
- 7 So why can't the Bureau or DWR, then, just make
- 8 an assumption and say: Okay. Next year, this is how
- 9 much snow falls and when?
- 10 Why can't they then tell us how the Projects
- 11 operate under the No-Action and the other scenario? Why
- 12 can't they tell us how that would work?
- 13 As you said, there may be not enough water for
- 14 anybody but why can't you tell us how much is available
- and how much you would allocate to your priorities?
- MS. AUFDEMBERGE: Ob . . .
- 17 CO-HEARING OFFICER DODUC: That sounds more
- 18 like a question for an Operator than a Modeler,
- 19 Mr. Herrick.
- 20 MS. AUFDEMBERGE: The way he phrased that,
- 21 it -- he keeps saying, "why can't you tell us what
- 22 Reclamation would do?"
- 23 MR. HERRICK: Well, I'm not sure how to answer
- that because we're talking about modeling when we're
- 25 examining the effects of the Project.

And so, yes, any ultimate decision may be made

- 2 by someone else, but why can't the Modelers assign uses
- of the limited supply in those drought times so we can
- 4 all look at what the effects are?
- 5 And I believe Mr. Munévar's telling us you
- 6 can't do that and I'm trying to explore why you can't do
- 7 that.
- 8 Now, yes, somebody may decide to do something
- 9 else, but why can't we have -- why can't we look at this?
- 10 CO-HEARING OFFICER DODUC: Mr. Munévar, are you
- 11 able to answer?
- 12 WITNESS MUNÉVAR: Well, I'll do the best I can.
- So, just to clarify: During the years
- 14 preceding droughts and, in many cases, the first year or
- 15 two in droughts are not the ones that are driving what
- we're calling stress supply conditions.
- 17 It's only when we reach the point where we now
- do not have sufficient supply to allocate to all
- 19 high-priority needs, in-Delta requirements, other senior
- 20 water right users, et cetera, that -- that there's not
- 21 enough supply to go around.
- 22 And in order for the modeling to say, how do we
- 23 make it through that dire condition under climate change
- 24 and sea-level rise and hydrologic variability, would
- 25 require us as the Modelers to describe a new priority

1 system that is really the purview of the Board and not --

- 2 not the modeling folks.
- I think this is a philosophical difference
- 4 that -- that many people have. And we very explicitly
- 5 did not go into that territory of trying to define what
- 6 are the new priorities and how do we manage through that
- 7 very com -- complex system which is regulatory-driven,
- 8 could be upstream adaptations. Each drought is very
- 9 unique.
- 10 These are not things that you generalize in a
- 11 rule, in a modeling, and -- and lay out a result and then
- 12 the result is questioned because you've imposed all these
- 13 policy or regulatory decisions from the modeling folks
- into the -- into the analysis.
- 15 So we've been very clear and philosophically
- 16 attempting not to do that on purpose.
- MR. HERRICK: Well, you said in your testimony
- 18 and just now that that's the Board's decision, but what
- 19 do you base that upon? That's the permit holder and
- 20 parties subject to a Biological Opinion. It's their
- 21 obligation. It's not somebody else's job to tell them
- 22 what to do; is it?
- 23 MS. AUFDEMBERGE: Objection: That calls for a
- 24 legal conclusion.
- 25 CO-HEARING OFFICER DODUC: Sustained.

- 1 MR. HERRICK: Mr. Munévar, doesn't the
- 2 CalSim II contain a scripting language that would allow
- 3 you to do just what we're talking about? Can't you --
- 4 Can't you make those iterative changes and go through the
- 5 scenarios to see how the various limited supplies might
- 6 be allocated in the situations we've been discussing?
- 7 WITNESS MUNÉVAR: This is not a limitation of
- 8 the model capabilities to do it. It's a limitation that
- 9 we feel that Modelers should not be making those
- 10 regulatory priority or adaptation decisions.
- 11 CO-HEARING OFFICER DODUC: So your answer to
- 12 Mr. Herrick is that, yes, you could, that the model could
- do that.
- 14 WITNESS MUNÉVAR: Yes, one could, but I would
- 15 be very wary of -- of going down that path.
- 16 CO-HEARING OFFICER DODUC: Thank you.
- 17 MR. HERRICK: Okay. I see I'm well over.
- 18 Let me -- Let me move to Dr. Nader-Tehrani, and
- 19 I'll be as quick as I can. I apologize.
- 20 CO-HEARING OFFICER DODUC: And how much time do
- 21 you anticipate needing?
- MR. HERRICK: I'll do it in 15 minutes.
- 23 CO-HEARING OFFICER DODUC: Let me ask the court
- 24 reporter:
- Do you need, like, a five-minute break?

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1
                THE REPORTER: (Shaking head.)
 2
                CO-HEARING OFFICER DODUC: No? You're good?
 3
                THE REPORTER: Um-hmm.
 4
                CO-HEARING OFFICER DODUC: Okay.
                MR. HERRICK: Dr. Nader-Tehrani, if we could
 5
 6
      start with your testimony, which is DWR-79, on Page 10,
 7
      please.
 8
                  (Document displayed on screen.)
 9
                MR. HERRICK: Excuse me. Page 11. Sorry.
10
                  (Document displayed on screen.)
                MR. HERRICK: And begin on Line 5.
11
                                                    That's in
12
      front of you. Do you see that? You say that (reading):
                "Dr. Burke reports reduction in water levels,"
13
14
           blah blah blah. "In his analysis he did not specify
15
           the time periods during which those large (sic)
           differences were detected."
16
17
                Do you see that.
18
                WITNESS NADER-TEHRANI: Yes, I do see that,
19
      um-hmm.
20
                MR. HERRICK: And if we turn to your -- your
21
      PowerPoint, which is DWR-50, and we go to Page -- excuse
      me -- Slide 12.
22
23
                  (Document displayed on screen.)
24
                MR. HERRICK: You've included in your
25
      testimony/presentation Dr. Burke's slide from SDWA-77;
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- 1 correct?
- WITNESS NADER-TEHRANI: Yes, that's correct.
- 3 MR. HERRICK: Now, this is a plot of the
- 4 changes in elevation between Boundary 1 and the No-Action
- 5 Alternative from October '75 through October '91;
- 6 correct?
- 7 WITNESS NADER-TEHRANI: That's correct.
- 8 MR. HERRICK: Okay. So he is giving us the
- 9 timeframes for these changes; right? You said he didn't
- 10 but he did, in fact.
- 11 WITNESS NADER-TEHRANI: Well, what I was
- 12 actually referring to was those larger impacts, where,
- 13 for example, you see one instance where you -- you know,
- 14 you're seeing more than 4 feet of reduction in water
- 15 level.
- 16 And I believe in his report, I don't think he
- 17 specified that. And I think he was asked that in the
- 18 testimony, and I don't think he responded that.
- 19 MR. HERRICK: Well, let's go through that.
- 20 You can see that each square of this -- this
- 21 diagram or chart is a year; correct?
- 22 WITNESS NADER-TEHRANI: That's correct.
- 23 MR. HERRICK: And the width of that, I'll say
- 24 October '84 --
- 25 WITNESS NADER-TEHRANI: Yes.

- 1 MR. HERRICK: -- spike, the width of that is
- what? Is that 1/10th of a square or 1/11th or 1/9th or
- 3 something? It's somewhere around that; correct? It's
- 4 not just a single line.
- 5 WITNESS NADER-TEHRANI: Well, the problem with
- 6 this depiction, as I see it, is that I believe, if I'm
- 7 not mistaken, he took 15-minute output and -- and
- 8 subtracted the water level for -- did a No-Action minus
- 9 Boundary 1.
- 10 So what you see here, if I -- if I understood
- 11 his methodology, you can figure out there are 96
- 12 time-steps in a day, multiplied by 365, multiplied by 16
- 13 years. So that's as many points as you see here.
- 14 And so, therefore, just because it's a 4-foot
- of reduction, it doesn't mean that it lasted for how
- 16 long, what period it was, and that's what I was trying to
- 17 get at.
- 18 And I was trying to provide further
- 19 clarification as to what months did he observe those
- 20 larger differences and what was the reason for those
- 21 reductions. Was it the North Delta Diversions or was it
- 22 something else?
- 23 MR. HERRICK: Okay. Well, let's -- let's --
- let's narrow it down a little bit.
- 25 So you don't believe this chart shows somewhere

- 1 around a week, two weeks, three weeks of decreases with a
- 2 maximum of just over 4 feet. That's not a couple of
- 3 weeks of decreased water levels somewhere above 2 --
- 4 somewhere below 2 feet?
- 5 WITNESS NADER-TEHRANI: I think that this plot
- 6 by itself would -- would -- you know, by itself would --
- 7 would not.
- 8 But when you look at the -- And I further look
- 9 at it as a three-month window, and then I think it makes
- 10 it clear as to the extent of those when those reductions
- 11 would occur.
- 12 MR. HERRICK: So you say in your testimony that
- 13 you tried to duplicate his work.
- 14 Isn't this straight out of DSM-2? Did you, in
- 15 fact, duplicate his work.
- 16 WITNESS NADER-TEHRANI: I just took the DSM-2
- 17 outputs straight as -- the same way that Dr. Burke took.
- 18 You know, we just simply did a post process.
- 19 MR. HERRICK: But you didn't -- You gave us the
- 20 maximum. You didn't tell us what was on the shoulder of
- 21 those maximums; did you?
- 22 WITNESS NADER-TEHRANI: What -- What slide are
- 23 you referring to?
- MR. HERRICK: Well, in your testimony, you have
- 25 Table 1 on Page 13.

- 1 Do you see that?
- 2 (From electronic device:)
- 3 "Sorry. I missed that."
- 4 CO-HEARING OFFICER MARCUS: That's me.
- 5 (Laughter.)
- 6 CO-HEARING OFFICER MARCUS: Although I did miss
- 7 that.
- 8 MR. HERRICK: Move to strike.
- 9 (Laughter.)
- 10 WITNESS NADER-TEHRANI: You're referring to
- 11 Table 1?
- MR. HERRICK: Your -- Your table 1 on Page 13
- 13 at the bottom.
- 14 You see that?
- 15 WITNESS NADER-TEHRANI: Yes.
- 16 MR. HERRICK: Now, so you gave us the 15-minute
- 17 interval that showed the maximum decrease that occurred
- 18 on -- maximum decreases that occurred on Mr. Burke's
- 19 slide; correct?
- 20 WITNESS NADER-TEHRANI: Well, can you -- I'm
- 21 sorry. I lost that. Can you repeat the question?
- MR. HERRICK: Your Table 1 gives us those three
- 23 15-minute intervals from DSM-2 of those lowest numbers
- 24 which will give the greatest decreases in water level
- 25 from Dr. Burke's --

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1 WITNESS NADER-TEHRANI: Okay. I want to be
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- 2 clear:
- I don't think I necessarily said that the
- 4 reductions you see only last for 15 minutes.
- 5 MR. HERRICK: I think you specifically say that
- 6 in here.
- 7 WITNESS NADER-TEHRANI: Do I? I don't know if
- 8 I did, if that's what I said.
- 9 Can you show me what you're referring to?
- 10 MR. HERRICK: You say (reading):
- 11 ". . . The three largest reductions in water
- 12 levels are found for a single 15-minute time-step
- during" three different months."
- 14 WITNESS NADER-TEHRANI: Yes. But I don't think
- I said that, at other times, you don't see that.
- 16 MR. HERRICK: Okay. Well, that was my original
- 17 question --
- 18 WITNESS NADER-TEHRANI: Right.
- 19 MR. HERRICK: -- that we got away from.
- 20 You didn't then tell us in your rebuttal to
- 21 Mr. Burke --
- 22 WITNESS NADER-TEHRANI: Yes.
- 23 MR. HERRICK: -- how -- or what the shoulders
- of each of those maximum decreases were; correct?
- 25 WITNESS NADER-TEHRANI: And I think I would

- 1 like to go to my DWR-50 and --
- 2 MR. HERRICK: Is there -- I don't mean to
- 3 interrupt you, and you can explain as much as you want.
- 4 WITNESS NADER-TEHRANI: Slide 15, I think,
- 5 would represent in this case the large reduction would
- 6 actually apply for probably the entire month of
- 7 September. It wouldn't necessarily be 4 feet all month
- 8 long, but that reduction in water level actually applied
- 9 for the -- pretty much the entire month of September.
- 10 And I was citing the reason for that would be
- 11 the large differences in flow versus the No-Action where
- 12 No-Action is modeled to meet the Fall X2 requirement
- 13 but -- I'm sorry -- the Boundary 1 was model -- Sorry.
- 14 Take that back.
- No-Action was modeled to meet Fall X2
- 16 requirements; Boundary 1 did not.
- 17 MR. HERRICK: Okay. Thank you,
- 18 Dr. Nader-Tehrani, but that's -- you didn't answer my
- 19 question. We'll get to the reasons why you think it's
- 20 okay to ignore that. That's fine.
- 21 But my question to you was: Why did you not
- 22 give us the shoulders of the greatest decreases in water
- 23 levels when you told us only the 15-minute interval of
- those three greatest decreases?
- 25 WITNESS NADER-TEHRANI: I do not have any

- 1 particular reason.
- 2 I -- And I think the plot that I was referring
- 3 to, which is Slide 15 in my DWR-50, clearly illustrates
- 4 the extent to which I'm showing those reductions.
- 5 So I'm not sure why -- what -- what you
- 6 mean.
- 7 This is what you will see. I'm comparing the
- 8 minimum daily stage for No-Action versus Boundary 1, and
- 9 you see those large differences persist pretty much the
- 10 entire month of September.
- MR. HERRICK: Okay. Let me start over.
- 12 Let's go back to Slide 12, please.
- 13 (Document displayed on screen.)
- 14 MR. HERRICK: Okay. Let's ignore those three
- 15 spikes that you refer to; okay?
- 16 WITNESS NADER-TEHRANI: Yes, um-hmm.
- 17 MR. HERRICK: And let's go to the period from,
- 18 let's say -- This is very general, just looking at the
- 19 chart -- October '78 through, you know, October '83.
- 20 Do you see that timeframe?
- 21 WITNESS NADER-TEHRANI: Yes, um-hmm.
- 22 MR. HERRICK: Okay. Regardless of the spikes,
- 23 does not this show us that the California WaterFix,
- 24 regardless of the month, is decreasing water levels
- 25 somewhere around and up to a foot; is that correct?

Of course, that's not in every instance but --

1

21

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2
                WITNESS NADER-TEHRANI: I think --
 3
                MR. HERRICK: -- there are --
                WITNESS NADER-TEHRANI: -- the next plot gives
      a better depiction as to the extent of those reductions,
 5
 6
      so if you can show the next slide.
 7
                  (Document displayed on screen.)
                MR. HERRICK: Okay. You're going to have to --
 8
 9
                WITNESS NADER-TEHRANI: This would be a greater
10
      example than --
11
                MR. HERRICK: Pardon me, Dr. Nader-Tehrani. I
12
      appreciate your efforts, but I do ask you to answer the
13
      question I asked you.
14
                So we go back to 15 -- excuse me -- 12.
15
                  (Document displayed on screen.)
16
                MR. HERRICK: Do you agree or not agree, for
17
      the time period I specified, it shows that the WaterFix
18
      generally decreases water levels, whether it's a foot --
19
      foot average or it's a significant decrease over that
20
      timeframe rather than normally an increase or even.
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22 And I think, in my direct testimony last year,
23 I did specify what those reductions are expected to be on

their higher flows and lower flows.

So, yes, there are times where it would be one

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WITNESS NADER-TEHRANI: I think that it varies.

- 1 foot and possibly even higher, and I think I went over
- 2 those reasons.
- 3 MR. HERRICK: Okay. But -- But I'm not asking
- 4 if you went over them before.
- 5 So let me start again, and I'll approach it
- 6 from another -- another angle.
- 7 From October '78 through October '82, do any of
- 8 those decreases in water level adversely impact someone
- 9 who diverts water in that area?
- 10 WITNESS NADER-TEHRANI: I don't think I can
- 11 comment on whether it would adversely impact someone.
- 12 MR. HERRICK: Okay. You have told us a number
- 13 of times, both in direct and in the rebuttal, about the
- 14 reasons it's not important or it doesn't affect --
- significantly affect or it's not a big number.
- 16 But that's what we're doing here. Somebody's
- 17 looking at this data, and yours, and making a
- 18 determination of impacts.
- 19 So unless there's some other DWR witness, I'm
- 20 asking you about your claims as to whether or not this is
- 21 an adverse impact.
- 22 WITNESS NADER-TEHRANI: I -- Again, my -- I'm
- 23 not going over whether the information I'm presenting
- 24 would necessarily lead to a direct impact to a legal user
- of water.

- 1 MR. HERRICK: Okay.
- 2 WITNESS NADER-TEHRANI: I was just trying to
- 3 explain the extent of what I -- those expected reductions
- 4 are, both in terms of the 16 years and the two-year
- 5 low-flow period.
- 6 MR. HERRICK: Okay. And so that would be your
- 7 same answer with regard to the spikes. However long the
- 8 duration is, you don't have an opinion as to whether or
- 9 not those spikes translate into an adverse impact to a
- 10 diverter in the area.
- 11 WITNESS NADER-TEHRANI: No, I'm not claiming
- 12 that. I was merely explaining why those -- those spikes
- 13 are there.
- MR. HERRICK: Now, you then also explain in
- 15 your rebuttal testimony that -- excuse me -- many of
- 16 these adverse impacts to water levels are a result of the
- 17 X-2 in Boundary 1; is that correct?
- 18 WITNESS NADER-TEHRANI: The Fall X2.
- MR. HERRICK: Is that a "yes"?
- 20 WITNESS NADER-TEHRANI: Yeah. Because there --
- 21 And I'm --
- 22 MR. HERRICK: Dr. Nader, I'll get to that --
- 23 WITNESS NADER-TEHRANI: Sure.
- MR. HERRICK: -- but I have to lead to it
- 25 rather than have the answer to the third question --

- 1 WITNESS NADER-TEHRANI: Okay.
- 2 MR. HERRICK: -- to the first question.
- 3 Your testimony generally explains why you
- 4 believe that the -- the significant impacts to stage or
- 5 water level occur during times when Fall X2 would be
- 6 implemented -- correct? -- or not implemented.
- 7 WITNESS NADER-TEHRANI: Yeah. I want to make
- 8 sure my testimony is clear:
- 9 I'm just saying, with regards to the picture
- 10 you see here, those larger differences are attributed to
- 11 Fall X2.
- 12 CO-HEARING OFFICER DODUC: Yes. We've heard
- 13 that numerous times.
- 14 WITNESS NADER-TEHRANI: Yes.
- MR. HERRICK: Yes.
- 16 WITNESS NADER-TEHRANI: So I don't have an
- 17 explanation beyond that.
- 18 CO-HEARING OFFICER DODUC: All right.
- 19 MR. HERRICK: I'm not looking for explanations.
- I want answers, if I may.
- 21 WITNESS NADER-TEHRANI: Or answers.
- MR. HERRICK: So let's go to Slide 15.
- 23 (Document displayed on screen.)
- MR. HERRICK: And I believe this is one of the
- 25 pieces of evidence, testimony, that you're giving in

- 1 support of that; right? That Boundary 2, having the
- 2 Fall X2, is creating these impacts rather than the Tunnel
- 3 Project itself; right?
- 4 CO-HEARING OFFICER DODUC: Boundary 1.
- 5 WITNESS NADER-TEHRANI: Boundary 1.
- 6 MR. HERRICK: Excuse me, Boundary 1.
- 7 WITNESS NADER-TEHRANI: That's correct.
- 8 MR. HERRICK: Now, without being argumentative,
- 9 DWR and the Bureau gave us the boundaries; correct? So
- 10 whether or not the Boundary 1 criteria are causing this,
- 11 isn't that indeed one of the conditions under which the
- 12 Project may be operated, according to the Petition?
- 13 WITNESS NADER-TEHRANI: And I'm going to repeat
- 14 the same explanation: That Boundary 1 represents a
- 15 condition upon which the Fall X2 is no longer a
- 16 regulating criteria.
- 17 And we are -- The problem is, you're comparing
- 18 it against a scenario where Fall X2 is a regulation --
- 19 regulated criteria. And so if indeed in the future
- 20 Fall X2 stays as a regulatory criteria, you will not see
- 21 the green. You will see something different.
- MR. HERRICK: Okay. Dr. Nader-Tehrani, we've
- 23 heard that a number of times now, but I'm looking for
- answers to my questions; okay?
- 25 If I may, you guys gave us Boundary 1 and the

- 1 No-Action.
- 2 WITNESS NADER-TEHRANI: Yes.
- 3 MR. HERRICK: Do you think it's unfair of us to
- 4 examine the impacts between Boundary 1 and the No-Action,
- or should we do that because that's what you gave us?
- 6 WITNESS NADER-TEHRANI: I'm -- I'm --
- 7 CO-HEARING OFFICER DODUC: Okay. I'm going to
- 8 interrupt here. That's an unfair question.
- 9 I believe Mr. -- Dr. Nader-Tehrani is trying to
- 10 not exert any opinion as to whether you should or should
- 11 not analyze Boundary 1 or do a comparison.
- 12 His testimony is simply that the difference
- between Boundary 1 and No-Action is X-2, or at least the
- 14 absence of X-2 in Boundary 1.
- 15 MR. HERRICK: I --
- 16 CO-HEARING OFFICER DODUC: I don't believe he's
- 17 asserting any opinion regarding -- with respect to
- whether or not you should analyze Boundary 1.
- 19 MR. HERRICK: I understand. I'm moving on. I
- 20 didn't mean to beat this to death.
- 21 CO-HEARING OFFICER DODUC: But you did.
- MR. HERRICK: But I did.
- It is important to note that we're trying to
- 24 analyze what they gave us, and in response to us pointing
- out a problem, they have their Modelers say, "Well,

- that's because of something else."
- 2 CO-HEARING OFFICER DODUC: And that's within
- 3 their right to do so and it's within your right to note
- 4 that.
- 5 MR. HERRICK: Again, I'll be very -- I'll try
- 6 to be fast.
- 7 Dr. Nader-Tehrani, you made a similar point
- 8 with regard to water quality as measured at Tracy Old
- 9 River resulting from the Head of Old River Barrier being
- 10 installed; correct?
- 11 WITNESS NADER-TEHRANI: Under Boundary 2.
- MR. HERRICK: Boundary 2.
- 13 But, again, that's a -- that's a boundary that
- 14 was provided by the Petitioners; correct? We didn't
- 15 choose that.
- 16 WITNESS NADER-TEHRANI: Yeah. And I think I
- 17 explained that the assumptions that --
- 18 CO-HEARING OFFICER DODUC: The answer is yes.
- MR. HERRICK: Yes.
- 20 And, just generally speaking, the Head of Old
- 21 River Barrier, depending on how it's operated --
- 22 correct? -- then has an effect on flows and water quality
- and circulation in some South-of-Delta channels; correct?
- 24 WITNESS NADER-TEHRANI: Yes, that's correct.
- 25 MR. HERRICK: Okay. So let me move on to my

- last point here, and I've lost my --
- 2 CO-HEARING OFFICER DODUC: Yes. I've forgotten
- 3 what your last point is.
- 4 MR. HERRICK: My last point is the
- 5 unreliability of DSM-2, or the inappropriate use of
- 6 DSM-2.
- 7 Now, I think this is important,
- 8 Dr. Nader-Tehrani, to go -- to go through a little
- 9 background real quickly. And then I'm going to ask you
- 10 if you agree that three possibilities exist with regard
- 11 to what is the best available science. That's where I'm
- 12 leading this.
- 13 But the quick background is: CalSim II gives us
- 14 a monthly number at an input starting at Freeport, or
- 15 whatever it is, in the Sacramento River; correct?
- 16 WITNESS NADER-TEHRANI: That's one of the
- 17 inputs, yes.
- 18 MR. HERRICK: And because it's a monthly
- 19 number, that monthly number has to be somehow broken
- into, what, daily inputs for DSM-2?
- 21 WITNESS NADER-TEHRANI: Yes. We call it daily
- 22 mapping, yes.
- 23 MR. HERRICK: What the process does is, DSM-2
- 24 Modelers look at the historic flow pattern for that month
- 25 and then break the monthly number into that historic

- 1 average flow into the -- into the Delta; correct?
- 2 WITNESS NADER-TEHRANI: I believe that's done
- 3 for Sacramento River flow and San Joaquin.
- 4 MR. HERRICK: Okay. And then the model itself,
- 5 DSM-2, has nodes or -- or incremental boxes full of
- 6 calculations.
- 7 Is that generally --
- 8 WITNESS NADER-TEHRANI: Sure.
- 9 MR. HERRICK: And then that tries to estimate
- 10 how the input either travels through the system or is
- 11 diluted through the system or how it permeates itself
- 12 through the Delta in general, even though it may not go
- 13 through -- to all the Delta, but it tries to calculate
- 14 that; right?
- 15 WITNESS NADER-TEHRANI: That's correct.
- MR. HERRICK: Okay. So the model,
- inappropriately or not -- right? -- is trying to convert
- 18 the CalSim -- The DSM-2 model is trying to convert the
- 19 CalSim II inputs into changes in flows or quality or, you
- 20 know, stages throughout the Delta based on those inputs.
- 21 It's trying to calculate that.
- 22 WITNESS NADER-TEHRANI: That's correct.
- MR. HERRICK: And it does that both for
- No-Action, for H3, for Boundary 1, Boundary 2. All the
- 25 different scenarios, it's trying to do that.

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1 WITNESS NADER-TEHRANI: That's correct.
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- 2 MR. HERRICK: But it's your testimony that
- 3 using those smaller increments -- and by that, I mean the
- 4 15-minute or daily average or weekly average or monthly
- 5 average -- that's not appropriate because of why?
- 6 WITNESS NADER-TEHRANI: One of the reasons is,
- 7 one thing that DSM-2 -- Pieces of information that DSM-2
- 8 does not have, or we don't give it, is the day-to-day
- 9 operation decision -- Operator decisions that go into
- 10 real-life operations.
- 11 The real-time Operators see that, you know,
- 12 salinity intrusion's coming and react accordingly by
- 13 adjusting flows. That -- Those decisions are not
- 14 reflected in the model.
- 15 Second piece of information is, the daily
- 16 mapping was only done for, I believe, Sacramento River
- 17 and San Joaquin River flows. And I think part of the
- 18 reason was to make sure that the bypass flows are
- 19 correctly calculated on a daily basis and not on a
- 20 monthly basis.
- 21 The same sort of daily mapping didn't go into
- 22 the export levels. I know it didn't do -- go under the
- 23 South Delta export. I'm not sure if it went through the
- 24 North Delta export.
- 25 So those were not -- They -- They -- No

- 1 variations were included in those -- in those exports.
- 2 So, in the months where there are large
- 3 variations of flow from one day to another day, you may
- 4 have a situation where the flows and exports don't
- 5 necessarily match up together, and that means in terms of
- 6 that's not what the real Operators would do.
- 7 An example that -- For example, and I sometimes
- 8 cite, is November of '81 where you have a, you know,
- 9 low-flow situation in the beginning of the month and a
- 10 high-flow situation at the end of the month. On average,
- 11 you had a large flow and -- which called for a large
- 12 amount of exports for that month. But we didn't apply
- 13 those, you know, on a daily basis for the same exports.
- 14 Furthermore, because of the high Sacramento
- 15 River flow, cross channels close, because -- you know, to
- 16 protect for flood.
- 17 So there are those subtleties that -- that
- 18 makes the use of the daily results just not appropriate
- 19 simply because the model is not given further
- instructions on how to react for, you know, for example,
- 21 you know, these larger salinity intrusion effects that
- 22 would occur.
- 23 So I just gave you some of the examples of why
- it would not be appropriate to do that.
- 25 MR. HERRICK: Okay. I'm trying to get to

- 1 the -- I'm trying to lead up to the ultimate question,
- 2 but thank you.
- 3 It is correct, though, that when we run -- or
- 4 when you run these models with the different scenarios
- for WaterFix, both the No-Action and the various
- 6 scenarios all have the same conditions of not having what
- 7 you say should be included to be more representative of
- 8 the exact impacts; is that correct? They're all the
- 9 same.
- 10 WITNESS NADER-TEHRANI: They're all subject to
- 11 the same.
- 12 But the specific events -- The specific effect
- 13 that happens on a single day could be different, because
- 14 the flows are different, the export levels are different,
- 15 and, therefore, the, you know, specific spike that might
- 16 happen in water quality in one scenario, it may not
- 17 happen in the next scenario even though the same approach
- 18 was used in doing those daily mapping.
- 19 MR. HERRICK: Okay. I'll take that as a yes.
- Now, I'm going to give you three possibilities.
- 21 You can disagree with them, but I'm going to posit those.
- 22 The overall issue is, we're in a hearing to
- 23 examine adverse impacts that may or may not occur from
- 24 the Petition and some third party, as in the State Board
- 25 will then make a decision whether they occur or whether

or not they are -- constitute legal injury. That's the

- 2 overall framework under which we're operating.
- 3 So I'm -- I'm positing to you, and you can
- 4 disagree, so disagree with me or not:
- 5 There are three possibilities with regards to
- 6 the best evidence; okay?
- 7 The first possibility is, DSM-2 is the
- 8 best-available evidence -- best-available science to
- 9 determine impacts but only on long-term average level.
- 10 That's the first possibility.
- 11 Second possibility is, DSM-2 is the best
- 12 possible science, best-available science, to determine
- impacts in the Delta both long-term and short-term.
- 14 And the third possibility is, DSM-2 isn't the
- 15 best-available science to determine what happens in the
- 16 Delta.
- 17 If those aren't too far afield, which one of
- those describes DSM-2 in your mind?
- 19 WITNESS NADER-TEHRANI: The -- The first choice
- 20 is closer to what I feel, being the closest, because what
- 21 I explained is, in addition to those long-term average
- 22 results, you should also rely on those Exceedance Plots
- that would reflect, in fact, the results of every 15
- 24 minutes, but it -- but it would also give you the
- 25 extremes of any particular specific thing that you're,

1 you know, concerned about, whether that would be water

- 2 quality, water level.
- 3 CO-HEARING OFFICER DODUC: So your answer is
- 4 the first one.
- 5 WITNESS NADER-TEHRANI: With the caveat that I
- 6 mentioned.
- 7 MR. HERRICK: So if we have to determine, in
- 8 order for the Board to make a decision, short-term
- 9 effects, are you saying DSM-2 isn't the best-available
- 10 science?
- 11 WITNESS NADER-TEHRANI: DSM-2 when used --
- 12 The -- The limitations are when DSM-2 used in conjunction
- 13 with CalSim.
- MR. HERRICK: Okay.
- 15 WITNESS NADER-TEHRANI: Because there are other
- 16 ways of using DSM-2.
- 17 MR. HERRICK: But we do -- we established
- 18 earlier in case in chief cross that DSM-2 is sometimes
- 19 used to predict water levels and quality in support of
- joint point of operations; correct? Whether it's correct
- or not, it's used for that purpose.
- 22 WITNESS NADER-TEHRANI: That's to simulate
- 23 historical conditions.
- MR. HERRICK: Okay.
- 25 WITNESS NADER-TEHRANI: Which is very different

- than the way we're using in a planning model in
- 2 conjunction with CalSim.
- 3 MR. HERRICK: So does that mean that we could
- 4 use DSM-2 in a different manner to try to examine
- 5 short-term -- shorter-term impacts?
- 6 WITNESS NADER-TEHRANI: Not with respect to
- 7 California WaterFix. It's only when we have the
- 8 historical information to feed into DSM-2, which we don't
- 9 for California WaterFix. We just don't know what that
- 10 is.
- 11 MR. HERRICK: That's all I have.
- 12 I apologize profusely because I was nowhere
- 13 near my estimated time of efficiency after other people
- 14 had covered similar areas. I do apologize.
- 15 CO-HEARING OFFICER DODUC: Thank you,
- 16 Mr. Herrick. Actually, it was interesting, though
- 17 somewhat convoluted.
- 18 Before we get to Miss Spaletta, unless you have
- 19 an objection you wanted to voice, Mr. Aladjem. I was
- 20 going to ask Mr. Keeling if he would mind when we resume
- tomorrow, assuming we get through Miss Spaletta's
- 22 cross-examination today, if he wouldn't mind letting you
- 23 go before he conducts his cross-examination because of
- 24 your need to leave early tomorrow.
- 25 MR. ALADJEM: And I -- David Aladjem, City of

- 1 Brentwood.
- I would very much appreciate that courtesy,
- 3 Madam Chair.
- 4 CO-HEARING OFFICER DODUC: Mr. Keeling, would
- 5 you mind?
- 6 MR. KEELING: I would not mind.
- 7 CO-HEARING OFFICER DODUC: Okay.
- 8 MR. ALADJEM: But Madam Chair, I did have an
- 9 objection.
- 10 CO-HEARING OFFICER DODUC: Okay.
- 11 MR. ALADJEM: If I heard Dr. Nader-Tehrani
- 12 correctly just now in answer to Mr. Herrick's last
- 13 question, he said that it was not possible for the -- for
- 14 DSM-2 to tell the Board -- or to provide results on
- anything other than the long-term averages, Exceedance
- 16 Plots that are contained in his testimony.
- 17 In terms of impacts on water quality and water
- 18 levels. Excuse me.
- 19 CO-HEARING OFFICER DODUC: Okay.
- 20 MR. HERRICK: If -- If that is a correct
- 21 statement of Dr. Nader-Tehrani's testimony, I would move
- 22 to strike all of that testimony on the grounds that it's
- 23 now irrelevant because the periods of time for which the
- 24 Water Board has criteria and objectives in D-1641 do not
- 25 constitute long-term periods of the type that

- 1 Dr. Nader-Tehrani has said is the only thing that can be
- 2 analyzed under DSM-2 and, therefore, none of the
- 3 testimony is relevant.
- 4 CO-HEARING OFFICER DODUC: Mr. Berliner,
- 5 Miss McGinnis, would you like to respond?
- 6 MR. BERLINER: Well, I'd like to respond that
- 7 Mr. Aladjem is misstating the testimony that
- 8 Dr. Nader-Tehrani gave.
- 9 So if -- Dr. Nader-Tehrani made it clear that
- 10 DSM-2 has multiple uses and can be used in planning
- 11 studies in various ways. It could be also used over the
- 12 short-term in different ways.
- So Mr. Aladjem, I think, oversimplified
- 14 Mr. Nader -- Dr. Nader-Tehrani's statement.
- 15 MR. ALADJEM: If I may --
- 16 CO-HEARING OFFICER DODUC: Mr. Aladjem.
- 17 MR. ALADJEM: -- Chair Doduc.
- In the colloquy with Mr. Herrick,
- 19 Dr. Nader-Tehrani went back and forth about the question
- 20 about whether the -- as Mr. Berliner said -- planning
- 21 studies. Dr. Nader-Tehrani said, "Yes, we could do that.
- We could do historical analyses."
- 23 But when pressed about the type of future
- 24 analysis that is at issue in this case, Dr. Nader-Tehrani
- 25 said that it could only be used for long-term purposes.

- 1 And I would submit to the Board that the water
- 2 quality objectives contained in 1641 are not long-term.
- 3 They are at most one year.
- 4 CO-HEARING OFFICER DODUC: Mr. Herrick, you
- 5 wish to add something?
- 6 MR. HERRICK: I would just join in that and
- 7 also add the testimony of Mr. Munévar.
- 8 CO-HEARING OFFICER DODUC: Thank you.
- 9 Quickly, people.
- 10 MS. DES JARDINS: I just wanted -- Whoops.
- 11 Dierdre Des Jardins.
- 12 I just wanted to join in.
- 13 CO-HEARING OFFICER DODUC: Thank you.
- MS. DES JARDINS: Thank you.
- 15 CO-HEARING OFFICER DODUC: Mr. Keeling.
- 16 MR. KEELING: Tom Keeling on behalf of the
- 17 San Joaquin County Protestants.
- We join in Mr. Aladjem's motion.
- 19 CO-HEARING OFFICER DODUC: All right. We will
- 20 note that and take it under consideration.
- 21 Miss Spaletta, you're our wrap-up
- 22 cross-examiner today.
- MS. SPALETTA: Good afternoon. Jennifer
- 24 Spaletta on behalf of North San Joaquin Water
- 25 Conservation District.

- 1 All of my questions will be for Mr. Leahigh and
- 2 all of my questions involve the exhibits that were
- 3 provided yesterday afternoon, which I think we're okay to
- 4 refer to as DWR Exhibits 903, 904, 905 and 906. And I
- 5 will be referencing those exhibits as well as the charts
- 6 in DWR-10 which the exhibits relate to.
- 7 CROSS-EXAMINATION BY
- 8 MS. SPALETTA: So, Mr. Leahigh, we'll get
- 9 started by my asking you some basic questions.
- 10 Tim O'Laughlin went over Exhibit 905 with you
- in detail, which is the data for DWR Exhibits 850 and 851
- 12 for the year 2015. And during that discussion, you
- 13 explained the columns on that exhibit and what they
- 14 meant.
- My first question to you is whether the
- 16 explanation you gave for the columns on Exhibit 905 would
- be the same for Exhibits 903 and 904?
- 18 WITNESS LEAHIGH: Yes, they should be.
- 19 MS. SPALETTA: Okay. And who prepared
- 20 Exhibits 903, 904, 905?
- 21 WITNESS LEAHIGH: So that was my staff
- 22 prepared. This was the data that my staff used to
- 23 prepare the graphs.
- MS. SPALETTA: Who on your staff?
- 25 WITNESS LEAHIGH: Aaron Miller.

1 MS. SPALETTA: And when did -- Is Aaron a man

- 2 or a woman?
- 3 WITNESS LEAHIGH: Aaron is a man.
- 4 MS. SPALETTA: When did Mr. Miller prepare the
- datasets that are in Exhibits 903, 904, 905?
- 6 WITNESS LEAHIGH: Well, just to be clear:
- 7 So the -- the data was what Aaron used to
- 8 prepare the graphs that were the exhibits in my
- 9 PowerPoint.
- 10 MS. SPALETTA: So Aaron Miller on your staff
- 11 prepared the graphs that were in DWR Exhibit 10, your
- 12 PowerPoint, on Pages 6, 8, 10 and 12?
- 13 WITNESS LEAHIGH: Correct.
- MS. SPALETTA: Okay. And did Mr. Miller also
- prepare the charts of data that are Exhibits 903, 904,
- 16 905 and 906?
- 17 WITNESS LEAHIGH: I -- I actually prepared the
- 18 charts that were -- I'm sorry. The -- Are you talking
- 19 about the tables?
- MS. SPALETTA: We can call them tables. That's
- 21 okay.
- 22 WITNESS LEAHIGH: The tables of data, that was
- 23 from the sources that -- or from -- of what Aaron used.
- 24 Because Aaron has been -- he's temporarily on assignment
- 25 elsewhere, I did prepare those tables.

1 MS. SPALETTA: Okay. And when did you prepare

- 2 the tables that are 903, 904, 905 and 906?
- 3 WITNESS LEAHIGH: This weekend.
- 4 MS. SPALETTA: Okay. And was that before or
- 5 after Aaron had prepared the charts that appeared in
- 6 DWR-10?
- 7 WITNESS LEAHIGH: It was after.
- 8 MS. SPALETTA: Okay. So where is the data that
- 9 Aaron used to prepare the charts that are in DWR-10 on
- 10 Pages 6, 8, 10 and 12?
- 11 THE WITNESS: Well --
- MS. McGINNIS: Objection: Relevance.
- 13 It doesn't really matter where the data is.
- 14 Miss Spaletta asked for the data; we've provided the
- 15 data. It's in the tables we provided.
- 16 I don't understand where she's going with this.
- 17 CO-HEARING OFFICER DODUC: Miss Spaletta.
- 18 MS. SPALETTA: Well, it's unusual for a set of
- 19 data to be compiled after an exhibit that purportedly
- 20 represents the data.
- 21 So I'd like to know where the data is that was
- 22 used by Mr. Miller to prepare the exhibits and the charts
- 23 that we saw in DWR-10. It may be that there's some
- 24 master set of data that was used for both but I'm just
- 25 trying to understand that.

- 1 CO-HEARING OFFICER DODUC: I'll give you that
- 2 limited leeway.
- 3 WITNESS LEAHIGH: Well, the data is in a
- 4 spreadsheet, and this is the data from that spreadsheet.
- 5 MS. SPALETTA: Okay. So there is a -- like, a
- 6 master spreadsheet that you used to pull data out of to
- 7 create DWR-903, 904, 905 and 906?
- 8 WITNESS LEAHIGH: Correct.
- 9 MS. McGINNIS: Objection: Again, relevance.
- 10 I don't think it matters where the data is.
- 11 She asked for the data; we gave the data. So --
- 12 CO-HEARING OFFICER DODUC: And it was the same
- data that was used to generate the graphs --
- 14 WITNESS LEAHIGH: Yes.
- 15 CO-HEARING OFFICER DODUC: -- initially.
- 16 WITNESS LEAHIGH: Yes.
- 17 CO-HEARING OFFICER DODUC: Okay.
- 18 MS. SPALETTA: And the master spreadsheet that
- 19 you just referred to, does it contain additional
- 20 information other than the information that has been
- 21 pulled out and used to create the tables?
- 22 CO-HEARING OFFICER DODUC: Now you may object.
- 23 MS. McGINNIS: Yeah. Objection: It's not --
- 24 He never said it was a master spreadsheet.
- 25 MS. SPALETTA: So this raises a very

- 1 interesting question, which is, is there something that
- 2 DWR needs to hide from the rest of us?
- 3 I just have this strange feeling we're talking
- 4 about a public agency who has data that they've gathered
- 5 about the operation of a public project permitted by this
- 6 agency, and we're seeing graphs of this data compiled
- 7 from supposedly a master spreadsheet which has not been
- 8 made available to the rest of the parties.
- 9 So I think it's a valid question where this
- 10 master spreadsheet is, what format it's in, and what
- 11 other data may be included.
- 12 CO-HEARING OFFICER DODUC: Now, Miss Spaletta,
- 13 the data was provided to support Mr. Leahigh's testimony
- that was submitted as part of his rebuttal. And so to
- 15 the extent that this spreadsheet contains other data that
- 16 is not part of his rebuttal, it would be outside the
- 17 scope for your cross-examination.
- 18 MS. SPALETTA: I strongly disagree, because we
- 19 have no idea what that other data is. It may be highly
- 20 relevant to the data that he chose to put in the
- 21 spreadsheet. There may be other data on the spreadsheet
- 22 that would make the data that he chose to put in the
- 23 spreadsheet be viewed in a different light, but because
- the rest of the parties don't have access to it, we don't
- 25 have a fair opportunity to make that determination.

- 1 CO-HEARING OFFICER DODUC: Your response?
- 2 MS. McGINNIS: This is entirely outside the
- 3 scope of Mr. Leahigh's rebuttal.
- 4 We included these charts in his test -- He
- 5 included these charts in the testimony. They are --
- 6 They're generated by Excel; they pull from different
- 7 worksheets.
- 8 The data that was requested was provided, and
- 9 if Protestants have a theory that there is some other
- 10 information that they should be entitled to, then they
- 11 can ask for that.
- MS. SPALETTA: Well, then, I'll make a formal
- 13 request, and it's going to be multiple part:
- Number one, I would request that the
- information that's been provided in DWR-903, 904, 905 and
- 16 906 be provided in its native format, which I believe is
- 17 probably Excel, so that the parties to this proceeding
- 18 can actually view the data in something other than what
- is less than 10-point font and do the addition and
- 20 subtraction and see the formulas in the spreadsheet.
- 21 That's the first request.
- 22 And the second request is that if there is a
- 23 master spreadsheet that this data was pulled from, that
- 24 also be produced to the parties in its native format.
- 25 CO-HEARING OFFICER DODUC: And --

- 1 MS. McGINNIS: My response is: What is the
- 2 authority for this information request? Is it a
- 3 discovery request, a PRA request?
- 4 MS. SPALETTA: It could be both. I don't think
- 5 that it really matters.
- 6 I think the Hearing Officers have the authority
- 7 to ask DWR to make the production if for no other reason
- 8 it's in the public interest and it makes the hearing
- 9 transparent.
- 10 MS. McGINNIS: And my response is, it actually
- 11 confuses issues.
- 12 We have provided the data that backs up those
- 13 charts. They're in Mr. Leahigh's testimony. That is the
- 14 scope of his testimony and this request is outside the
- 15 scope.
- 16 CO-HEARING OFFICER DODUC: We'll take that
- 17 under consideration.
- 18 MS. SPALETTA: All right. So, then, I will do
- 19 my best to ask questions about the information that is in
- 20 these exhibits.
- 21 I will note that I probably would not have had
- 22 to ask a lot of these questions if I'd actually received
- 23 the date in Excel and I could have seen the formulas but
- 24 we will plow through.
- Okay. Let's start with DWR-903.

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1 Mr. Leahigh, can you please identify for me
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- which columns on the table in DWR-903 contain measured
- 3 data as opposed to computed data.
- 4 (Document displayed on screen.)
- 5 WITNESS LEAHIGH: (Examining document.)
- 6 Well, the -- certainly total Oroville releases,
- 7 State Water Project exports. The -- So the breakdown of
- 8 the instream requirements, those are manually input but
- 9 they're input based on our requirements.
- 10 The Feather River service area deliveries is
- 11 measured data. I think the others -- I think the other
- 12 columns are probably a result of a calculation, but it's
- 13 hard to tell just sitting here right now exactly.
- MS. SPALETTA: Okay. So you're not able to
- 15 explain to me what the calculation is, then, to get each
- of the other columns as we sit here today?
- 17 WITNESS LEAHIGH: Well, if you want -- if you
- 18 want to go through it, we can make an attempt.
- 19 MS. SPALETTA: Well, I don't want to do
- 20 something that's futile. Are you confident in your
- 21 ability to explain how each of the columns other than the
- 22 three columns you identified as measured, how each of the
- other columns is computed?
- 24 WITNESS LEAHIGH: I'd have to think through it
- a bit but, yeah, we could probably do it.

1 MS. SPALETTA: Okay. Well, let's start with --

- 2 Maybe I can make this easy for you.
- For the total Oroville release which is a
- 4 measured number, is there some combination of the other
- 5 columns that should add up to that measured number?
- 6 MR. BERLINER: I'm going to object to this line
- 7 of questioning.
- 8 We've been through this chart already quite
- 9 extensively through Mr. O'Laughlin.
- 10 If there's a point that Miss Spaletta wants to
- 11 get to, why don't we find out what the point is and see
- 12 if all of this tedious analysis of this spreadsheet has
- any relevance here at all.
- 14 CO-HEARING OFFICER DODUC: Actually, I don't
- 15 believe Mr. O'Laughlin asked that specific question.
- But, Miss Spaletta, help us with --
- 17 MS. SPALETTA: Sure.
- 18 CO-HEARING OFFICER DODUC: -- the point.
- 19 MS. SPALETTA: Mr. O'Laughlin only examined
- 20 Mr. Leahigh about DWR 905 and I'm actually working from a
- 21 different exhibit.
- I really would prefer not to have to do this in
- the hearing, but, again, because we don't have discovery
- 24 before the hearing, nor the opportunity to examine the
- 25 witnesses, we are left with this forum.

1 So, there is a point. Frankly, I just want to

- 2 understand the numbers.
- I don't think it's appropriate for DWR to
- 4 present in graphical or chart form conclusions about
- 5 their operational data without having adequate
- 6 foundation.
- 7 If the rest of the stakeholders in this
- 8 proceeding do not understand the foundation for the
- 9 chart, it should not be admissible. And so this is an
- 10 attempt to reach that understanding.
- 11 CO-HEARING OFFICER DODUC: All right.
- 12 Overruled, Mr. Berliner. We will plow through this.
- 13 WITNESS LEAHIGH: You know, I'm sorry, but I
- 14 could conceptually describe why the breakdown is what it
- is in those stacked bar charts. I don't think we need to
- 16 go through a tedious exercise bit by bit.
- I mean, I can -- I can explain why all of the
- 18 results that apparently are . . . somebody has a problem
- 19 with the results. But we can step through conceptually
- why they make sense.
- 21 CO-HEARING OFFICER DODUC: Hold on a second.
- Mr. Ochenduszko.
- 23 MR. OCHENDUSKO: I'm just going to repeat the
- 24 offer by Co-Hearing Officer Doduc:
- 25 If anybody wants to approach the screen to see

- 1 what we're talking about.
- 2 CO-HEARING OFFICER DODUC: So that's what you
- 3 were --
- 4 MS. DES JARDINS: Yes.
- 5 CO-HEARING OFFICER DODUC: Yes. There are
- 6 monitors up here.
- 7 MS. DES JARDINS: Okay.
- 8 CO-HEARING OFFICER DODUC: I'm sorry. Where
- 9 were we?
- 10 MS. SPALETTA: Mr. Leahigh was objecting to my
- 11 line of questioning.
- 12 CO-HEARING OFFICER DODUC: Oh. Which I believe
- 13 his attorney has already done and which I have overruled.
- MS. SPALETTA: So my question was, you told me
- 15 that the total Oroville release number is measured. And
- 16 I was asking you if there was some other combination of
- 17 the other columns that should add up to that measured
- 18 number.
- 19 WITNESS LEAHIGH: Yes.
- 20 MS. SPALETTA: Okay. And which columns should
- 21 add up to the measured number for the total Oroville
- 22 release?
- 23 WITNESS LEAHIGH: So any of the numbers in the
- 24 Instream Requirements columns. Actually, any -- any of
- 25 the columns -- all of the columns with the exception of

- 1 the Feather River service area, the FRSA column, which is
- 2 the first column, because those deliveries come straight
- 3 out of Thermalito and they're not -- Thermalito Afterbay
- 4 and they're not released to the river.
- 5 MS. SPALETTA: Okay. So that is helpful.
- The total Oroville release number, then, is
- 7 exclusive of the withdrawals from the Thermalito
- 8 Afterbay.
- 9 WITNESS LEAHIGH: Correct.
- 10 MS. SPALETTA: Okay.
- 11 So, then, Mr. O'Laughlin didn't ask this
- 12 specific question and it was something that I wanted to
- 13 ask.
- 14 For this time period in January of 2011, the
- 15 Delta was in excess conditions. And if I'm reading this
- 16 chart correctly, the -- all of the exports are treated as
- 17 coming from unstored flow, even though there is a release
- 18 of 1750 cfs from Oroville for instream purposes; is that
- 19 correct?
- 20 WITNESS LEAHIGH: That's correct, because
- 21 that's a passthrough of unstored flow. It's not -- It
- doesn't represent a release of stored water.
- 23 MS. SPALETTA: Oh. So this measured Total
- 24 Oroville Release column that says 1750, how do we know if
- 25 the number in that column is a passthrough of unstored

- flow versus a release from storage?
- 2 WITNESS LEAHIGH: Whether or not there's a
- 3 number in the far right-hand column or not.
- 4 MS. SPALETTA: Can you explain that in more
- 5 detail.
- 6 WITNESS LEAHIGH: A non-zero number in the far
- 7 right-hand column. So if there's a zero in that column
- 8 on the far right, then that would indicate that the --
- 9 that releases are from stored water in Oroville. But in
- 10 this particular case, there's -- not only is there
- 11 unstored water being passed through Oroville, there's
- 12 unstored water in the system that's being exported as
- well.
- MS. SPALETTA: There's stored water?
- 15 WITNESS LEAHIGH: I'm sorry. Unstored water
- 16 that's being exported in this period.
- MS. SPALETTA: All right. So I think that
- 18 helps me, because when -- when you finished with
- 19 Mr. O'Laughlin, I had reached the conclusion that this
- 20 Total Oroville Release column was only releases from
- 21 storage.
- 22 But I think if you -- if I'm correct in my
- 23 understanding right now, it could be either a passthrough
- of unstored water or a release from storage, depending on
- 25 the condition.

- 1 WITNESS LEAHIGH: Correct.
- 2 MS. SPALETTA: Okay. Looking at March 15th in
- 3 this table, there is a Total Oroville Release of 4,017
- 4 thousand acre-feet and a flood release of 2,742 thousand
- 5 acre-feet.
- 6 And then what does the difference between those
- 7 two numbers represent?
- 8 WITNESS LEAHIGH: So this is in cfs.
- 9 MS. SPALETTA: I'm sorry, cfs.
- 10 WITNESS LEAHIGH: Yeah. And the -- So the
- 11 difference is that minimum -- minimum instream flow
- 12 release, which is the 1275.
- 13 MS. SPALETTA: So why are you classifying some
- of it as flood release here when earlier in the year it
- 15 was classified simply as unstored flow?
- 16 WITNESS LEAHIGH: I'm sorry. Can we go back
- 17 up? I don't have the --
- MS. SPALETTA: Up to January.
- 19 (Scrolling up document.)
- 20 WITNESS LEAHIGH: Oh, why -- Okay. The
- 21 question is why is this -- some of it's being classified
- 22 as a flood release?
- MS. SPALETTA: Um-hmm. Why?
- 24 WITNESS LEAHIGH: Because either -- Most
- 25 likely, we were going into flood control storage at this

- 1 point.
- 2 MS. SPALETTA: Okay. Okay. This is probably a
- 3 simple question.
- 4 If you scroll down to June 5th, that row is
- 5 highlighted.
- 6 (Scrolling down document.)
- 7 MS. SPALETTA: Is there some significance to
- 8 the highlighting?
- 9 WITNESS LEAHIGH: Not that I'm aware.
- 10 MS. SPALETTA: Okay. And then if we scroll
- down to December 1st.
- 12 (Scrolling down document.)
- MS. SPALETTA: On December 1st, you have
- 14 exports of 6,360 and an Oroville release of 2,845 with
- exports from unstored flow at 3,515.
- 16 So here, are you treating a portion of the
- 17 export as a re-diversion of releases from Oroville?
- 18 WITNESS LEAHIGH: (Examining document.)
- 19 So we have unstored flow that's being exported
- 20 and part of that -- Let's see, 1145, that column is -- I
- 21 forget. That's release for export? No, that was -- I
- don't have the headings in front of me.
- 23 MS. SPALETTA: It's flood release. I'm sorry,
- 24 no, Release for Export. You're correct. Release for
- 25 Export.

- 1 (Pause in proceedings.)
- 2 MS. SPALETTA: I think, based on your earlier
- 3 testimony, what's happening here is different than what
- 4 was happening in January is, you are treating the release
- 5 from Oroville as a release from storage and then counting
- 6 that as a re-diversion of the release from storage at the
- 7 pumps and reducing the export of unstored flow by a like
- 8 amount.
- 9 Am I correct?
- 10 WITNESS LEAHIGH: It looks like that could be
- 11 the case here.
- MS. SPALETTA: Could be or is?
- 13 WITNESS LEAHIGH: You know, it's really hard to
- tell sitting here and looking at two .pdfs, but . . .
- MS. SPALETTA: I'm glad that you agree.
- 16 What would you need to have to verify that?
- 17 WITNESS LEAHIGH: I'd have to -- Well, I need
- 18 to talk to the person that put this together, for one.
- 19 MS. SPALETTA: I thought you said you put this
- 20 together.
- 21 WITNESS LEAHIGH: Well, I just put the data
- 22 together to put it in a form that was somewhat readable.
- 23 That's all I did.
- But the -- the graph was produced, as I said,
- 25 by my staff.

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1 MS. SPALETTA: So you're not able to answer.
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- 2 WITNESS LEAHIGH: I'm not able to answer what?
- 3 MS. SPALETTA: Whether the difference between
- 4 the SWP exports on December 1st -- Well, I'll ask it
- 5 better. Strike that.
- 6 Whether the 2,845 cfs of Oroville release is
- 7 being treated as a re-diversion of released stored water
- 8 at the export pumps on December 1st.
- 9 WITNESS LEAHIGH: (Examining document.)
- 10 Yeah, I'm not sure.
- MS. SPALETTA: Okay. Let's move on to DWR
- 12 Exhibit 906.
- Oh, actually before we do.
- 14 All of the explanations you just gave me for
- 15 DWR-903, would they be equally applicable to the way that
- the columns work on DWR-904 and 905?
- 17 WITNESS LEAHIGH: Yes. The arrangement of the
- 18 columns are the same in all the exhibits.
- 19 MS. SPALETTA: Okay. Then moving on to
- 20 DWR-906.
- 21 (Document displayed on screen.)
- MS. SPALETTA: This is the data for DWR
- 23 Exhibit 852.
- And, again, you created this document; right?
- 25 WITNESS LEAHIGH: Yes.

1 MS. SPALETTA: And it includes columns entitled

- 2 "Unmet Demand" for the CVP and the SWP.
- 3 Do you see those?
- 4 WITNESS LEAHIGH: Yes.
- 5 MS. SPALETTA: And what do those numbers
- 6 represent?
- 7 WITNESS LEAHIGH: Those numbers represent the
- 8 difference between -- Well, for SWP, it's the difference
- 9 between the total Table A amount and the percentage of
- 10 the Table A that was allocated.
- 11 MS. SPALETTA: So am I correct to understand,
- 12 then, that you are equating demand with total Table A
- amount in each contractor's contract?
- 14 WITNESS LEAHIGH: That's re -- That's -- That's
- 15 correct, because as I testified before, essentially the
- 16 demands we're getting from our contractors now are the
- 17 full Table A.
- 18 MS. SPALETTA: Okay. And so that is without
- 19 regard to whether a contractor is intending to take
- 20 delivery of the water to sell it to someone else, use it
- 21 for direct beneficial use, or put it to storage; correct?
- 22 WITNESS LEAHIGH: It's -- It's with regard
- 23 to -- I can't say. It's in terms of their request, like
- I said. They're requesting the full Table A, and I don't
- 25 have the specifics on what that water would be used

- 1 for --
- MS. SPALETTA: That's all I have.
- 3 WITNESS LEAHIGH: -- when or how it would be
- 4 used.
- 5 MS. SPALETTA: Those are all my questions.
- 6 Thank you.
- 7 CO-HEARING OFFICER DODUC: Thank you,
- 8 Miss Spaletta.
- 9 Well, we've been busy today. We've received
- 10 several objections, several requests, and we'll need to
- 11 think that over.
- 12 In the meantime, when we resume tomorrow, we
- 13 will have Mr. Aladjem first up followed by Mr. Keeling
- 14 and then followed by the others.
- 15 Mr. Berliner, I am estimating at this point,
- 16 though. Who knows? At this point, I'm estimating around
- 17 two and a half hours left of cross-examination for this
- 18 panel.
- 19 I was going to ask, with respect to this panel,
- 20 I believe you have some redirect but I also believe you
- 21 have perhaps a time constraint with respect to your
- 22 Panel 3 witnesses.
- So do you have a proposal to make,
- 24 Mr. Berliner?
- 25 MR. BERLINER: I have one that would be a

- 1 simple proposal and one more complex.
- 2 So the simple proposal would be, we could take
- 3 Panel 3 starting first thing in the morning and interrupt
- 4 the cross-examination, let them finish, and then come
- 5 back to cross-examination and just finish up the week
- 6 with whatever we have planned. That would probably be
- 7 the simplest.
- 8 We have two witnesses on Panel 3. Their direct
- 9 testimony will take about 20 minutes. I think we have
- 10 about five parties who indicated they wanted to
- 11 cross-examine that panel, and it was, if I recall
- 12 correctly, under four hours of cross-examination. I
- don't know if that's still what the status is, but if
- 14 that's correct, we would finish with that group easily
- 15 tomorrow and then could resume with this panel.
- 16 We do have redirect, and I suspect that the
- 17 redirect will then open up recross, so this panel is
- 18 obviously taking far longer than what we thought it
- 19 would.
- 20 And now I'm starting for wonder if we're going
- 21 to get to the other parties still, given how much time
- 22 we're spending with this panel.
- 23 So that would be the easiest way to approach
- 24 it.
- 25 CO-HEARING OFFICER DODUC: Let's hear any

- 1 concerns or objection to that, quote, easy proposal,
- 2 unquote.
- 3 MR. ALADJEM: Madam Chair, David Aladjem, City
- 4 of Brentwood.
- If I understood Mr. Berliner's proposal, we
- 6 would go to Panel 3 tomorrow morning first thing and then
- 7 return to this panel on Thursday morning? That's
- 8 perfectly fine with me.
- 9 CO-HEARING OFFICER DODUC: Mr. Bezerra.
- 10 MR. BEZERRA: Yeah. I'm just trying to process
- 11 what this means in relation to scheduling other panels.
- 12 It --
- 13 CO-HEARING OFFICER DODUC: It means that we
- 14 will likely not get to Group 7 until Friday.
- 15 MR. BEZERRA: That's kind of what it sounds
- 16 like.
- MR. BERLINER: At the earliest.
- 18 CO-HEARING OFFICER DODUC: At the earliest.
- 19 MR. BEZERRA: It sounds to me like if we start
- 20 with the next panel tomorrow and we have four hours of
- 21 cross, then we end up roughly mid-afternoon tomorrow.
- 22 And then I don't know if we'd bring this whole panel back
- in the mid-afternoon.
- I don't know if Petitioners feel like
- 25 disclosing this. It would be useful to know what

- 1 subjects they would like to conduct redirect on. That
- 2 would help us assess on how much cross might be required.
- 3 Once we get done with those two panels, I guess
- 4 we're on to Group 7 and we'll have to figure out that
- 5 scheduling.
- 6 And then as I disclosed earlier, the American
- 7 River panel has a conflict with a Reclamation meeting
- 8 that was scheduled. So I'm having a difficult time
- 9 processing what --
- 10 CO-HEARING OFFICER DODUC: Mr. Bezerra, your
- 11 scheduling conflict was for Thursday with respect to your
- 12 second panel. What I'm thinking is, we may not get to
- 13 your first panel until Friday, in which case that
- 14 conflict does not --
- 15 MR. BEZERRA: Yeah, that sounds about right. I
- 16 know we hesitate to do these things and set dates
- 17 certain, but if we can say Group 7 will start testifying
- 18 Friday morning, then we could clean this all up, but I
- 19 know that's tough to do in this hearing.
- 20 CO-HEARING OFFICER DODUC: I would like to be
- 21 able to say that but I don't know yet to what extent
- 22 redirect --
- MR. BEZERRA: Right.
- 24 CO-HEARING OFFICER DODUC: -- and recross of
- 25 this panel will entail.

- 1 MR. BEZERRA: Right.
- 2 MR. BERLINER: So we have about at this point
- 3 roughly a dozen questions on redirect spread more or less
- 4 equally across the panel.
- 5 But I suspect, things being what they are, as
- 6 soon as we open up that can of worms, we're going to get
- 7 all the parties coming back and seeking to conduct cross
- 8 on that redirect, which they're perfectly entitled to do.
- 9 Obviously, the cross will be far narrower so it
- 10 should be far quicker than the cross that we're doing
- 11 this time, but I can't predict how long cross will be.
- 12 My estimate for this round is totally off.
- But in terms of total time, I don't think it
- 14 changes -- I understand Mr. Bezerra's concern but it's
- 15 the same amount of time. It's just the order that's
- 16 changing.
- 17 CO-HEARING OFFICER DODUC: So, at this point,
- 18 are we then comfortable -- I think I am comfortable --
- 19 with giving Mr. Bezerra the assurance that we will not
- get to Group 7 until Friday at the earliest?
- 21 MS. HEINRICH: If I may suggest, because of the
- 22 uncertainty about how long it's going to take to complete
- 23 DWR's and DOI's rebuttal, it might be prudent to at least
- have the panel that doesn't have the scheduling conflict
- 25 prepared to go on Thursday.

- 1 MR. BEZERRA: That's where I sort of ended up
- 2 in my head.
- I think that first Group 7 panel is rather
- 4 flexible on timing. I don't know that for sure. And I
- 5 don't think the cross will be overly extensive.
- 6 So we'll talk to that first Group 7 panel which
- 7 is Mr. Bourez and Mr. Easton about their availability on
- 8 rather short notice.
- 9 CO-HEARING OFFICER DODUC: Well, they were
- 10 going to be available on Thursday, anyway.
- MR. BEZERRA: Yeah, that's correct.
- 12 CO-HEARING OFFICER DODUC: Correct.
- 13 MR. BEZERRA: It's just getting them here on
- half an hour's notice might be a little tough, but we'll
- 15 talk to them about it.
- 16 CO-HEARING OFFICER DODUC: Okay.
- 17 MR. ALADJEM: Thank you.
- 18 CO-HEARING OFFICER DODUC: Sorry. Are we all
- 19 clear? Someone will explain it to me later, I'm sure.
- 20 Mr. Aladjem.
- 21 MR. ALADJEM: Madam Chair, just for clarity, I
- 22 believe Mr. Bezerra's point is what I was about to raise,
- which is Group 7 has two witnesses.
- 24 CO-HEARING OFFICER DODUC: It actually has more
- 25 than two.

- 1 MR. ALADJEM: There are several.
- 2 CO-HEARING OFFICER DODUC: Yes.
- 3 MR. ALADJEM: But I think that if the Chair
- 4 could assure us that they would not come on before the
- 5 afternoon of Thursday, which I think is likely, we will
- 6 be ready to have them here Thursday afternoon and just in
- 7 case they're necessary.
- 8 CO-HEARING OFFICER DODUC: Today is Tuesday.
- 9 We will spend most of Wednesday going through Panel 3,
- 10 potentially coming back to this panel for some cross, and
- 11 then this panel will undergo redirect and recross, so,
- 12 yes, the earliest that we will get to Group 7 will be
- 13 Thursday afternoon.
- MR. BEZERRA: Thank you.
- 15 MR. ALADJEM: And Chair Doduc, I hate to be
- 16 persistent about this, but I understood the Chair to say
- 17 that my cross-examination of this panel would be first
- 18 thing on Thursday morning?
- 19 CO-HEARING OFFICER DODUC: Today is Tuesday.
- 20 (Laughter.)
- 21 CO-HEARING OFFICER DODUC: Okay. Wednesday --
- 22 You're not available tomorrow in the afternoon.
- 23 MR. ALADJEM: That is correct, Madam Chair.
- 24 CO-HEARING OFFICER DODUC: Okay. So, if
- 25 necessary, yes, you will conduct cross-examination

- 1 Thursday morning.
- MR. ALADJEM: Thank you, Madam Chair.
- 3 CO-HEARING OFFICER DODUC: Be sure to be here
- 4 on Thursday.
- 5 MR. ALADJEM: I will be here with bells on.
- 6 MS. MESERVE: Madam Chair, if I might just
- 7 comment on the proposal set forth. I mean, I think part
- 8 of what we're going through is, we've had this panel for
- 9 a long time. We've had a bunch of questioners. People
- 10 have to listen very carefully to try to winnow down the
- 11 questions.
- 12 And I just think that breaking up the ordering
- of the panels is going to make that harder. And I would
- 14 suggest that the flow of this hearing would probably go
- 15 better to continue with this panel until it's done. And.
- 16 I'm not quite sure why we have to switch things
- 17 up right now. It doesn't seem like a necessity. So I
- think my preference would be to do things in order,
- 19 and -- and I think that would be more efficient so that
- 20 people don't get distracted by what's going on with
- 21 Panel 3 in, you know, trying to figure out how to deal
- 22 with the recross and redirect and all those items for
- 23 Panel 2.
- 24 CO-HEARING OFFICER DODUC: I believe it was --
- 25 Mr. Berliner, help me out here -- the unavailability of

- one of your witnesses in Panel 3.
- MR. BERLINER: Yes, that's -- that's correct.
- 3 Dr. Thornberg had a long-standing commitment
- 4 for Thursday and that predated the hearing schedule in
- 5 this proceeding, and he's under contract to appear
- 6 elsewhere on Thursday.
- 7 He may have Thursday afternoon free. We're
- 8 trying to get confirmation on that. But Thursday
- 9 morning, he's tied up, which then gets us to the other
- 10 alternative which is far more complicated, which would
- 11 be --
- 12 CO-HEARING OFFICER DODUC: More complicated.
- MR. BERLINER: Yeah. Which I would -- am
- 14 reluctant to suggest.
- 15 CO-HEARING OFFICER DODUC: And what would be
- this more complicated proposal?
- 17 MR. BERLINER: Well --
- 18 CO-HEARING OFFICER DODUC: By the way, I
- 19 believe it's after 5:00 so we've actually lost the
- Webcast.
- MS. MESERVE: That's good.
- 22 (Laughter.)
- 23 CO-HEARING OFFICER DODUC: And I'm about to
- lose my Co-Hearing Officer.
- 25 Mr. Berliner, is this more complicated

- 1 proposal --
- 2 MR. BERLINER: Well, it would break up Panel 3,
- 3 then, on cross for when we run out of time on Wednesday,
- 4 because we're going to run out of time on one or the
- 5 other panel whatever way we go.
- 6 CO-HEARING OFFICER DODUC: So you would bring
- 7 that witness back on Friday.
- 8 MR. BERLINER: If the witness was available
- 9 Thursday afternoon, we would bring him back Thursday
- 10 afternoon; if not, on Friday.
- 11 CO-HEARING OFFICER DODUC: And, in the
- meantime, then, we would go to Group 7.
- 13 MR. BERLINER: Which -- That's why it's the
- 14 messiest alternative.
- 15 MS. MESERVE: I think having heard a further
- 16 explanation, I believe Mr. Berliner's first proposal is
- 17 probably better.
- I would ask, however, when it comes to
- 19 scheduling our witnesses for our rebuttal, that we
- 20 receive a similar accommodation for being able to -- You
- 21 know, we will try very hard to have our witnesses
- 22 available when they're available, but I do -- this is a
- 23 little deviation from what prior practice has been. I'd
- 24 like to see that evenly applied.
- MR. BERLINER: We have no objection.

- 1 CO-HEARING OFFICER DODUC: Mr. Berliner is
- 2 moving his witnesses amongst his witnesses.
- Right. Never mind. Okay.
- We're back to the -- We're back to the simple
- 5 proposal that Mr. Berliner had made.
- 6 Now, have we confused you, Mr. Bezerra?
- 7 MR. BEZERRA: I'm confused a fair amount of
- 8 time, anyway, but -- Yeah.
- 9 I think -- I think for Group 7 purposes, we'll
- 10 talk to the other Group 7 counsel and witnesses. We'll
- 11 have the first Group 7 panel here Thursday afternoon as
- 12 much as we possibly can. Then the second Group 7 panel,
- 13 I will tell them to be here Friday morning.
- 14 CO-HEARING OFFICER DODUC: All right.
- MR. BEZERRA: Thank you.
- 16 CO-HEARING OFFICER DODUC: And Mr. Aladjem will
- 17 conduct his cross of this panel Thursday morning.
- 18 On that note, let's all go take a break. We
- 19 will return in the morning.
- 20 And I think -- Oh, to make things even more
- 21 complicated, just so you know: On Thursday,
- 22 Mr. Ochenduszko -- We actually are in one hearing room in
- the morning and one hearing room in the afternoon.
- MR. BERLINER: What?
- 25 CO-HEARING OFFICER DODUC: I know. But

2	MR. BEZERRA: Can I Can I Not to add one
3	more complication but, as I understand it, the
4	Petitioners will be offering all of their rebuttal
5	testimony into the record at the completion of their
6	panels, which potentially puts that in the middle of all
7	of this.
8	If we could deal with evidentiary objections
9	possibly next week rather than throwing it into the
10	middle of this rather complicated paneling exercise. You
11	may have some arguments on evidentiary objections that
12	may take some time.
13	CO-HEARING OFFICER DODUC: We will take that
14	under advisement.
15	MR. BEZERRA: Thank you.
16	CO-HEARING OFFICER DODUC: Okay. Let's go away
17	for the day. Thank you.
18	(Proceedings adjourned at 5:07 p.m.)
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tomorrow, we will be in Sierra.

State of California)
County of Sacramento)
I, Candace L. Yount, Certified Shorthand Reporter
for the State of California, County of Sacramento, do
hereby certify:
That I was present at the time of the above
proceedings;
That I took down in machine shorthand notes all
proceedings had and testimony given;
That I thereafter transcribed said shorthand notes
with the aid of a computer;
That the above and foregoing is a full, true, and
correct transcription of said shorthand notes, and a
full, true and correct transcript of all proceedings had
and testimony taken;
That I am not a party to the action or related to a
party or counsel;
That I have no financial or other interest in the
outcome of the action.
Dated: May 13, 2017
Candace L. Yount, CSR No. 2737