1	BEFORE THE									
2	CALIFORNIA STATE WATER RESOURCES CONTROL BOARD									
3										
4	,									
5	RIGHT CHANGE PETITION) HEARING)									
6										
7	JOE SERNA, JR. BUILDING									
8	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY									
9	COASTAL HEARING ROOM									
10	1001 I STREET									
11	SECOND FLOOR									
12	SACRAMENTO, CALIFORNIA									
13										
14	Friday, October 21, 2016									
15	9:00 A.M.									
16										
17	PART I-B									
18										
19	VOLUME 21									
20	PAGES 1 - 137									
21										
22										
23	Reported by: Megan Alvarez, RPR, CSR No. 12470 Certified Shorthand Reporter									
24	511 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
25										

ii

- 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

9

- 10 PART I
- 11 For Petitioners:
- 12 California Department of Water Resources:
- 13 James (Tripp) Mizell, Esq.
 Thomas M. Berliner, Esq.

14

- 15 The U.S. Department of the Interior:
- 16 Amy L. Aufdemberge, Esq.

17

INTERESTED PARTIES:

18

State Water Contractors:

19

Stefanie Morris, Esq.

20

- 21 California Water Research:
- 22 Deirdre Des Jardins, Esq.

23

The Sacramento Valley Group:

24

David Aladjem, Esq.

iii

1 INTERESTED PARTIES (Continued): 2 The City of Roseville; Sacramento Suburban Water District; San Juan Water District; the City of Folsom; 3 Yuba County Water Agency: 4 Alan Lilly, Esq. Ryan Bezerra, Esq. 5 Jennifer Buckman, Esq. San Joaquin Tributaries Authority, The (SJTA), Merced 7 Irrigation District, Modesto Irrigation District, Oakdale Irrigation District, South San Joaquin 8 Irrigation District, Turlock Irrigation District, and City and County of San Francisco: Tim Wasiewski, Esq. 10 11 Westlands Water District: 12 Philip A. Williams, Esq. 13 Biggs-West Gridley Water District (BWGWD), Glenn-Colusa 14 Irrigation District (GCID): 15 Andrew M. Hitchings, Esq. 16 Nevada Irrigation District (NID), Butte Water District (BWD), Richvale Irrigation District (RID), Anderson -Cottonwood Irrigation District, Plumas Mutual Water 18 Company (PMWC), Reclamation District 1004, South Feather Water and Power Agency, western Canal Water District (WCWD), paradise Irrigation District: 20 Dustin C. Cooper, Esq. 21 Tehama-Colusa Canal Authority & water service 22 contractors in its service area: 23 Meredith Nikkel, Esq. 24 ///

iv

```
1 INTERESTED PARTIES (Continued):
 2 North Delta Water Agency & Member Districts:
 3 Kevin O'Brien, Esq.
   California Sportfishing Protection Alliance (CSPA),
 5 California Water Impact Network (C-WIN), and
   AquAlliance:
 6
   Michael Jackson, Esq.
 7
 8 For Brett G. Baker, Local Agencies of the North Delta,
   Bogle Vineyards/Delta Watershed Landowner Coalition,
 9 Diablo Vineyards and Brad Lange/Delta Watershed
   Landowner Coalition, Stillwater Orchards/Delta Watershed
10 Landowner Coalition, Islands, Inc., SAVE OUR SANDHILL
   CRANES and Friends of Stone Lakes National Wildlife
11 Refuge, City of Antioch:
12 Osha Meserve, Esq.
13
   Central Delta Water Agency, South Delta Water Agency
14 (Delta Agencies), Lafayette Ranch, Heritage Lands Inc.,
   Mark Bachetti Farms and Rudy Mussi Investments L.P.:
15
   John Herrick, Esq.
16 Dean Ruiz, Esq.
17
   The Placer County Water Agency:
18
   Dan Kelly, Esq.
19
   Sacramento Regional County Sanitation District; City of
   Stockton:
21
   Kelley Taber, Esq.
22
23 San Luis & Delta-Mendota Water Authority:
24 Daniel O'Hanlon, Esq.
```

V

1	INDEX
2	
3	RESPONDENTS' WITNESSES PAGE
4	GROUP 7 - PANEL 1
5	WALTER BOUREZ
6	DAN EASTON
7	
8	Cross-Examination by Mr. Berliner (Resumed)3
9	Cross-Examination by Ms. Aufdemberge24
10	Cross-Examination by Ms. Morris36
11	Cross-Examination by Mr. Herrick42
12	Cross-Examination by Mr. Jackson49
13	Cross-Examination by Ms. Des Jardins66
14	Redirect Examination by Mr. Lilly88
15	Recross-Examination by Ms. Des Jardins100
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

vi

1	PANEL 2						
2	MARC VAN CAMP						
3							
4	Direct Examination by Ms. Nikkel106						
5	Direct Examination by Mr. Cooper10						
6	Cross-Examination by Mr. Mizell11						
7	Cross-Examination by Ms. Des Jardins117						
8							
9	000						
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

vii

1	EXHIBITS						
2	RESPONDENTS'	EXHIBITS		W/DRAWN	IDEN	EVID	
3	DDJ-92				82		
4	DDJ-109				82		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

1 OCTOBER 21, 2016 - FRIDAY 9:00 A.M.

- 2 PROCEEDINGS
- 3 VOLUME 21
- 4 --000--
- 5 CO-HEARING OFFICER DODUC: Welcome back to
- 6 casual Friday of the WaterFix hearing.
- 7 I'm Tam Doduc. With me today are
- 8 Chair Felicia Marcus, and I believe DeDe D'Adamo will be
- 9 joining us shortly. On my left are Dana Heinrich and
- 10 Diane Riddle.
- 11 And we also have Mr. Portman and Mr. Baker
- 12 assisting us today.
- 13 Since it is Friday, let's do a little pop
- 14 quiz. I will pick on someone who's wearing a tie today.
- 15 Mr. Hitchings. Please come up and give us the
- 16 three general announcements. I want to be sure you've
- 17 been paying attention.
- 18 MR. HITCHINGS: If you hear an alarm, look for
- 19 the closest exit and proceed immediately. Bathrooms are
- 20 down the hall to the right and to the left.
- 21 And we want this hearing to be transparent,
- 22 efficient, and with integrity.
- 23 And turn off your cell phone. Take a moment
- 24 right now to do that. Thank you.
- 25 CO-HEARING OFFICER DODUC: Thank you. I think

- 1 I will give that a B, a B+. Yes, because he forgot this
- 2 meeting is being Webcasted and recorded, so please speak
- 3 into the microphone and provide your name and
- 4 affiliation.
- 5 You also forgot, I believe, to take the stairs
- 6 and not the elevators down to the ground floor and meet
- 7 in our relocation site in the park across the street.
- 8 You also forgot that if you cannot use the
- 9 stairs, please flag one of the staff and you'll be
- 10 redirected into a protective area.
- 11 And forgot to acknowledge that the court
- 12 reporter is here today. And the transcript will be made
- 13 available after I-B. If you would like a transcript
- 14 earlier, please make arrangements with the court
- 15 reporter.
- I'll have to downgrade you to a C+. But
- 17 you're good for your first shot at it, Mr. Hitchings.
- 18 MR. HITCHINGS: Thank you. Thank you.
- 19 CO-HEARING OFFICER DODUC: With that, we are
- 20 ready to resume here today.
- 21 I don't see a lot of people here so we'll just
- 22 resume with you, Mr. Berliner.
- Ms. Aufdemberge up next for the U.S.
- 24 Department of the Interior. And then Ms. Morris for the
- 25 State Water Contractors.

1 MR. BERLINER: Thank you. Good morning.

- 2 --000--
- 3 CROSS-EXAMINATION (RESUMED)
- 4 MR. BERLINER: I've passed out and added to an
- 5 exhibit yesterday, which is DWR Exhibit No. 545 errata.
- 6 Yesterday there was a wrong scale attached to
- 7 the chart. We have corrected the scale on this chart.
- 8 We had asked a whole series of questions
- 9 comparing the MBK modeling charts against the California
- 10 WaterFix modeling charts. I was not intending to ask
- 11 questions about this other than to submit it for the
- 12 record, that this is, again, yet another similar chart
- 13 to the ones we had gone through.
- 14 CO-HEARING OFFICER DODUC: Any objection,
- 15 Mr. Lilly?
- MR. LILLY: Well, I don't know what
- 17 "submitting for the record" means. As far as submitting
- 18 into evidence, there's been no authentication or any
- 19 foundation for this exhibit.
- 20 So I don't mind having it marked as an exhibit
- 21 for part of the record. But, so far, there have been no
- 22 questions about it. Obviously, it's not ready to be
- 23 submitted into evidence.
- 24 CO-HEARING OFFICER DODUC: We'll so mark it.
- 25 And, Mr. Berliner, just because of that, ask

- 1 one question.
- MR. BERLINER: Mr. Bourez, good morning.
- 3 You recall yesterday we looked at a series of
- 4 comparisons. This one concerns the deliveries to the
- 5 Feather River -- to the State Water Project Feather
- 6 River water rights contractors.
- 7 MBK did modeling work to show what impacts
- 8 would be on the Alternatives 4A and 4A-DO. Do you see
- 9 those in the left-hand of the chart?
- 10 WITNESS BOUREZ: Yes.
- 11 MR. BERLINER: Is your microphone on?
- 12 WITNESS BOUREZ: Yes.
- 13 MR. BERLINER: Bottom of the chart, do you see
- 14 the source from where the information was taken?
- 15 WITNESS BOUREZ: Yes, I do.
- MR. BERLINER: Are you familiar with the
- 17 right-hand chart, which was an exhibit previously in
- 18 this proceeding?
- 19 WITNESS BOUREZ: Yes.
- 20 MR. BERLINER: In your view, do the charts
- 21 roughly show similar impacts with the exception that
- 22 there's some slight differences in the critical year of
- 23 the California WaterFix?
- 24 WITNESS BOUREZ: Yes.
- MR. BERLINER: I have no further questions on

1 this chart. And per our prior practice, we will be, on

- 2 rebuttal, authenticating the basis for the left-hand
- 3 chart.
- 4 Next question for Mr. Easton.
- 5 Mr. Easton, reflecting on the time that you
- 6 were with the Department of Water Resources, to the best
- 7 of your knowledge, was it common practice to have the
- 8 operations staff sign off on DWR modeling assumptions
- 9 prior to doing any major planning studies?
- 10 WITNESS EASTON: As I recall, you asked this
- 11 question yesterday, and my answer is the same. If -- if
- 12 it was, I don't -- I don't recall. I don't recall
- 13 having my studies signed off by --
- 14 MR. BERLINER: That's fine. Thank you.
- 15 Again for Mr. Easton: Do you agree that
- 16 CalSim is useful when used in a comparative planned
- 17 model for studies?
- 18 WITNESS EASTON: Yes, I do.
- 19 MR. BERLINER: Do you agree the CalSim is the
- 20 state-of-the-art model for project operations?
- 21 MR. LILLY: Object. The question is vague as
- 22 to which version of CalSim he means, particularly
- 23 whether he means petitioners' version versus the MBK
- 24 version. Mr. Easton may have different responses
- 25 depending on which version he's being asked about.

1 MR. BERLINER: I'm referring generally to

- 2 CalSim II.
- 3 WITNESS EASTON: Is your question: Is it the
- 4 best available tool for doing planning studies of CVP
- 5 and SWP operations?
- 6 MR. BERLINER: Yes.
- 7 WITNESS EASTON: It is, in my opinion, the
- 8 best available tool, but that does not mean it's always
- 9 right.
- 10 MR. BERLINER: Understood. I think we have a
- 11 quote about all models being wrong and some are useful.
- 12 Do you agree CalSim does a good job estimating
- 13 long-term operational response?
- 14 WITNESS EASTON: It can with the proper
- 15 oversight of an expert modeler. Not anybody can run
- 16 this model and expect to get a reasonable result. You
- 17 need to review the results. You need to make sure that
- 18 it's operating properly.
- 19 MR. BERLINER: Has it been your experience
- 20 that CalSim provides useful information when used in DWR
- 21 and reclamation long-term planning studies?
- 22 WITNESS EASTON: It -- can you give me an
- 23 example of what those studies you're talking about are?
- MR. BERLINER: Just planning studies in
- 25 general. General question, not specific to any.

1 WITNESS EASTON: Please repeat the question.

- 2 MR. BERLINER: Sure. Has it been your
- 3 experience that CalSim provides useful information when
- 4 used in DWR and reclamation long-term planning studies?
- 5 WITNESS EASTON: It provides useful
- 6 information when you review it appropriately and make a
- 7 determination whether it is operating properly.
- 8 MR. BERLINER: And is that the kind of
- 9 exercise that modelers at DWR and reclamation have to go
- 10 through in order to make sure that the CalSim model will
- 11 produce useful results?
- 12 WITNESS EASTON: It is the job of DWR and
- 13 reclamation modelers to review their modeling results
- 14 and ensure that they are appropriate.
- 15 MR. BERLINER: In your experience, is that
- 16 something that they do?
- 17 WITNESS EASTON: In my experience, it's
- 18 something that they do to the best of their ability.
- 19 MR. BERLINER: Generally, do you agree it's
- 20 better to use systematic generalized rules rather than
- 21 customized rules for planning studies?
- 22 MR. LILLY: And I'm going to object. That
- 23 question is so general that it's not appropriate and
- 24 particularly if it's for applicability to this
- 25 proceeding.

- 1 CO-HEARING OFFICER DODUC: Mr. Berliner?
- MR. BERLINER: It's a general question. I'm
- 3 not asking in the context of WaterFix.
- 4 I'm asking, as I indicated at the beginning of
- 5 the question, generally, do you agree?
- 6 CO-HEARING OFFICER DODUC: Hold on.
- 7 Mr. Berliner, please repeat your question for
- 8 me.
- 9 MR. BERLINER: Generally, do you agree it's
- 10 better to use systematic generalized rules rather than
- 11 customized rules for planning studies?
- 12 MR. LILLY: And I'm still going to object.
- 13 That question's so vague that it's not possible to get
- 14 any useful information from an answer to it.
- 15 CO-HEARING OFFICER DODUC: I'm sure Mr. Easton
- 16 or Mr. Bourez can answer to that effect after your
- 17 coaching now. Go ahead, please.
- 18 WITNESS BOUREZ: I'd like to take a crack at
- 19 this. Generalized rules do not fit every alternative
- 20 with CalSim. When you impose or evaluate a project with
- 21 CalSim, the generalized rules often don't apply to that
- 22 change. And, therefore, every change I've ever made to
- 23 CalSim modeling, any alternative, has required custom
- 24 tools and evaluation of those rules.
- 25 So you can't just plug something in the model

1 and run it with a generalized rule and expect to have a

- 2 reasonable result or expect that that would occur in
- 3 actual operations. It takes a lot of adjustment and
- 4 evaluation of those model results to determine if it's
- 5 reflective of what may actually happen.
- 6 MR. BERLINER: Change of subject. Go to
- 7 climate change.
- 8 I think we established that the model that MBK
- 9 created did not include climate change, correct?
- 10 WITNESS BOUREZ: That's correct.
- 11 MR. BERLINER: So I have some specific
- 12 questions as to whether certain variables were addressed
- 13 in the model. And hopefully these are "yes," "no." But
- 14 if "yes," "no," is not sufficient, you can, of course,
- 15 expand it.
- 16 CO-HEARING OFFICER DODUC: Mr. Berliner,
- 17 please get the microphone closer to you.
- 18 MR. BERLINER: Does the MBK modeling estimate
- 19 how sea level rise will affect Delta salinity?
- 20 WITNESS BOUREZ: Does mine include climate
- 21 change or sea level rise? So, no, it doesn't.
- 22 MR. BERLINER: Does the model estimate how the
- 23 State Water Project and Central Valley Project would be
- 24 operated to satisfy D-1641 outflow and salinity
- 25 standards in the future with sea level rise?

1 WITNESS BOUREZ: Sea level rise is not

- 2 included, so no.
- 3 MR. BERLINER: Does the MBK modeling estimate
- 4 changes in runoff patterns in the future with climate
- 5 change?
- 6 WITNESS BOUREZ: No, it doesn't.
- 7 MR. BERLINER: Do you have an understanding
- 8 that DWR and reclamation are required by law to consider
- 9 climate change in their analysis of California WaterFix?
- 10 WITNESS BOUREZ: Yes. However, the way in
- 11 which you do it is the subject of debate. I don't think
- 12 that a climate change scenario should replace the use of
- 13 the historically based hydrologic sequence in CalSim,
- 14 and we've documented this in several of our reports.
- We certainly do believe that climate change
- 16 needs to be looked at. It's real. Its happening.
- 17 There's a lot of evidence for it. And it should be
- 18 evaluated in all alternatives and for every project.
- 19 However, not using a historically based
- 20 hydrology, we believe, is an inappropriate approach.
- 21 Climate change should be evaluated on a sensitivity
- 22 analysis, and we've written a large number of comments
- 23 regarding that. And I can explain why we believe that
- 24 in quite a bit of detail if you'd like.
- MR. BERLINER: No. Thank you very much.

1 CO-HEARING OFFICER DODUC: Mr. Berliner, how

- 2 much more time do you anticipate needing?
- 3 MR. BERLINER: Very little. 10 minutes.
- 4 CO-HEARING OFFICER DODUC: Okay.
- 5 MR. BERLINER: In your Exhibit 1 of 3, you
- 6 indicated that, in your view, the incorporation of
- 7 climate change by the agencies will ignore reasonably
- 8 foreseeable adaptation measures. Do you recall that?
- 9 WITNESS BOUREZ: I do, but if you'd like to
- 10 call up the exact effects if you want to get specific,
- 11 we can go through that.
- MR. BERLINER: Well, let me ask you some
- 13 questions and we can see whether we need it.
- Just for Mr. Baker's convenience, in case we
- 15 do, it will be Sacramento Valley Water Users Exhibit 103
- 16 at page 7.
- 17 For Mr. Bourez or Mr. Easton, I'm not sure
- 18 which, you included a number of adaptations that you
- 19 thought would occur. Do you recall that one of them was
- 20 updating the operational rules regarding water releases
- 21 from reservoirs for flood protection?
- 22 WITNESS BOUREZ: Yes, I do.
- 23 MR. BERLINER: And do you also recall second
- 24 was that during severe droughts, emergency drought
- 25 declarations call for mandatory conservation and changes

1 in some regulatory criteria similarly to what's been

- 2 experienced in previous droughts?
- 3 WITNESS BOUREZ: Yes, I do.
- 4 MR. BERLINER: And third, if droughts become
- 5 more frequent, the projects would likely revisit the
- 6 rules by which they allocate water during shortages and
- 7 operate more conservatively in wetter years?
- 8 WITNESS BOUREZ: Yes, I do.
- 9 MR. LILLY: Excuse me. Since he's reading
- 10 from Exhibit SVWU-103, page 7, it might be helpful for
- 11 everyone if we put it up on the screen. I request that.
- 12 CO-HEARING OFFICER DODUC: I think Mr. Baker
- 13 is doing that.
- MR. BERLINER: That's fine.
- 15 Regarding the first recommendation on flood
- 16 control, at this particular time, isn't it uncertain as
- 17 to what changes the Army Corps of Engineers would allow
- 18 considering issues of dam safety?
- 19 WITNESS BOUREZ: It certainly is. However,
- 20 this comment is -- it includes the changes in hydrology
- 21 and what effects it might have on flood control rules.
- But one of things, when you look at the way
- 23 climate change was imposed in CalSim, they took the
- 24 changes in hydrology and applied that to reservoir
- 25 inflows. For example, the American River Basin, the

- 1 climate change hydrology was opposed on the Folsom
- 2 inflow rather than in the entire basin.
- 3 And the flood control rules in Folsom are
- 4 highly dependent upon how much water is in upstream
- 5 reservoirs in Union Valley, French Meadows, and
- 6 Hell Hole. And the combined storage in those three
- 7 reservoirs is 600,000 acre feet roughly, while Folsom is
- 8 1 million acre feet.
- 9 So there's significant flood storage capacity
- 10 in those reservoirs. And by imposing climate change on
- 11 Folsom inflow without adjusting the flood control for
- 12 that upstream storage, we have a mismatch in hydrology
- 13 within that basin that is very significant.
- 14 MR. BERLINER: Move to strike that answer as
- 15 nonresponsive starting after the word "yes."
- 16 I did not ask about how -- whether modeling
- 17 was appropriately done. I asked: Isn't it uncertain
- 18 what changes the Army Corps of Engineers would allow
- 19 considering issues of dam safety?
- 20 CO-HEARING OFFICER DODUC: Mr. Lilly, did you
- 21 want to add something?
- 22 MR. LILLY: You know, I think it's appropriate
- 23 for Mr. Bourez to provide the context of his answers.
- 24 This is complicated material and sometimes a simple
- 25 "yes" or "no" answer doesn't really explain the whole

1 situation. I think he's trying very hard to explain the

- 2 whole picture here.
- 3 CO-HEARING OFFICER DODUC: Thank you,
- 4 Mr. Lilly. I'll note your objection and ask Mr. Bourez
- 5 to provide you with a direct answer. However, the
- 6 explanation he provided, I found helpful.
- 7 MR. BERLINER: At this point in time, wouldn't
- 8 any assumed change in the flood control rules be
- 9 speculative?
- 10 WITNESS BOUREZ: Yes, they would.
- MR. BERLINER: Did the MBK modeling adopt a
- 12 change to the operational rules regarding water releases
- 13 for flood control?
- 14 WITNESS BOUREZ: We did not.
- MR. BERLINER: As to the second point, while I
- 16 appreciate your testimony was prepared prior to
- 17 September, in light of the hearing officer's admonition
- 18 about assuming TUCPs and any other regulatory measures
- 19 that the Water Board or others might issue, are you
- 20 still contending that DWR and reclamation should know
- 21 what operational changes the Water Board will allow in
- 22 the future?
- 23 WITNESS BOUREZ: I can't speculate on what
- 24 TUCPs will be in the future.
- 25 MR. BERLINER: Isn't it true that a variety of

- 1 approaches have been used during drought conditions by
- 2 the agencies in order to respond to drought? And would
- 3 an example be that during 1977, various barriers were
- 4 constructed in the Delta, whereas in 2015, only one
- 5 barrier was constructed?
- 6 WITNESS BOUREZ: Yes.
- 7 MR. BERLINER: Weren't there also other
- 8 regulatory approaches adopted in the 1977 drought that
- 9 were not adopted in the most recent drought?
- 10 WITNESS BOUREZ: I have not compared what
- 11 happened in 1977 compared to 2015. We had a completely
- 12 different regulatory requirement on a lot of the system
- 13 in 1977. So even your baseline operations and criteria
- 14 are different. So, by definition, they have to be
- 15 different.
- 16 MR. BERLINER: Regarding the third point that
- 17 you raised stating that DWR and reclamation could
- 18 operate more conservatively during future wet years,
- 19 didn't the MBK adopt a higher risk tolerance than the
- 20 modeling by the California WaterFix?
- 21 MR. LILLY: Object. That misstates the
- 22 testimony. The Point No. 3 on this does not say they
- 23 would operate more conservatively; it says they would
- 24 likely revisit the rules. So he's misstating
- 25 Mr. Bourez' testimony.

1 CO-HEARING OFFICER DODUC: Mr. Berliner, can

- 2 you rephrase?
- 3 MR. BERLINER: I asked if this was an accurate
- 4 rephrasing, but I think maybe we ought to, in fact, pull
- 5 it up and look at it exactly.
- 6 MR. LILLY: It does say both "revisit" and I
- 7 see here, "and operate more conservatively." So I think
- 8 if he just tracks that language, the question will be
- 9 more accurate.
- 10 CO-HEARING OFFICER DODUC: Do we have that
- 11 language? Would you point that out?
- 12 MR. BERLINER: Yeah, just so we can point it
- 13 out exactly.
- 14 CO-HEARING OFFICER DODUC: Where is that
- 15 language?
- 16 WITNESS BOUREZ: On page 7. In the bottom
- 17 paragraph about two-thirds of the way through the
- 18 paragraph. Number 3 bracketed in that paragraph.
- 19 "If droughts become more frequent, the CVP and
- 20 SWP would likely revisit the rules by which they
- 21 allocate water during shortages and operate more
- 22 conservatively in wetter years."
- 23 CO-HEARING OFFICER DODUC: And your question
- 24 again, Mr. Berliner?
- MR. BERLINER: Yes.

1 And so my question was: Didn't MBK modeling

- 2 adopt a higher risk tolerance than the modeling
- 3 performed for the California WaterFix?
- 4 WITNESS BOUREZ: That really compares apples
- 5 and oranges, because the California WaterFix modeling
- 6 had climate change. Ours did not. And the increased
- 7 risk was associated with the California WaterFix and the
- 8 ability to move more stored water during high storage
- 9 conditions.
- 10 And, you know, it depends on how you define
- 11 risk and risk to whom. It may be risk to upstream
- 12 storage and a lower risk for south of Delta water
- 13 contractors.
- 14 So I think you have to be more specific on
- 15 what you mean as risk and whether you're distinguishing
- 16 the possible changes in operating criteria due to
- 17 climate change versus change in operating criteria or
- 18 effects of the California WaterFix.
- 19 MR. BERLINER: Just to be clear on the climate
- 20 change, you did not include climate change in either the
- 21 no-action alternative or the Alternative 4A H3-plus,
- 22 correct?
- 23 WITNESS BOUREZ: Correct.
- MR. BERLINER: And why did you remove them out
- 25 of both the no-action alternative and the H3-plus?

1 WITNESS BOUREZ: Well, keep in mind that to

- 2 determine the effects of a proposed action, you want to
- 3 have consistency in hydrology between the two modeling
- 4 runs that you're comparing. And if we introduced
- 5 climate change, we would not have been able to determine
- 6 what the effects of the north of Delta diversion would
- 7 be, or the tunnels, if we introduced a difference in
- 8 hydrology between those two modeling runs. So they had
- 9 to be consistent.
- 10 MR. BERLINER: Thank you.
- 11 Refresh my recollection. We were talking
- 12 about DSM2 yesterday. I asked questions about your
- 13 familiarity. Do you have enough familiarity to respond
- 14 to questions regarding CalSim and compliance with water
- 15 quality control standards by applying DSM2 or is that
- 16 beyond your experience?
- 17 WITNESS BOUREZ: I have worked closely with
- 18 DSM2 modeling, and we've iterated between CalSim and
- 19 DSM2. And I have evaluated results of DSM2 and effects
- 20 that it might have on CalSim simulation.
- I am not a DSM2 expert. I've never run the
- 22 model, but I worked very closely with those who do.
- 23 MR. BERLINER: Let me ask you a question. And
- 24 if this is beyond, then we'll just move on.
- 25 If a water quality control salinity standard

- 1 is based on a 14-day average, would you necessarily
- 2 expect that CalSim and DSM2 would report the same level
- 3 of compliance?
- 4 WITNESS BOUREZ: Being that DSM2 has a
- 5 15-minute time step and CalSim has a monthly time step,
- 6 I would expect that there's times that, on a daily
- 7 basis, water quality could exceed a standard where
- 8 CalSim, on average monthly basis, may not. So they
- 9 could be different.
- 10 MR. BERLINER: In terms of looking at water
- 11 quality control plan compliance, is it more appropriate
- 12 to look at CalSim results for determining the compliance
- 13 or DSM2 results?
- 14 WITNESS BOUREZ: It depends on which standard
- 15 you're referring to.
- 16 CalSim does have representation of water
- 17 quality to an artificial neural network, an ANN, which
- 18 is trained on DSM2 and is used to represent the flow
- 19 necessary to meet water quality standards in the Delta.
- 20 And there's a lot of checks between CalSim and DSM2.
- 21 DWR's done some quite excellent work on comparing those.
- Not sure if I answered your question or not.
- 23 MR. BERLINER: So let's put it in the context
- 24 of salinity. For example, in a wet year, would you
- 25 suspect that CalSim would show compliance with water

- 1 quality salinity standards based on a 14-day average
- 2 such as Emmaton, but DSM2 could show exceedances in the
- 3 same standard?
- 4 MR. LILLY: I'm going to object. That's an
- 5 incomplete hypothetical, and clearly a lot of other
- 6 factors are necessary to answer that question.
- 7 CO-HEARING OFFICER DODUC: Mr. Bourez, are you
- 8 able to answer the question?
- 9 WITNESS BOUREZ: It's ambiguous.
- 10 If CalSim is showing water quality at Emmaton
- 11 within compliance, the ANN is not as accurate as DSM2.
- 12 However, DSM2 also shows exceedances of standards that,
- 13 when you look at the calibration of the model, it may
- 14 show an exceedance for a reality that's not. It's a
- 15 very complex model, but it is possible that CalSim may
- 16 see compliance for an average month where DSM2 may not.
- 17 CO-HEARING OFFICER DODUC: Do you have much
- 18 further to go, Mr. Berliner?
- MR. BERLINER: No, not much.
- 20 CO-HEARING OFFICER DODUC: "Not much" meaning?
- 21 MR. BERLINER: I have five questions.
- 22 CO-HEARING OFFICER DODUC: All right. Let's
- 23 put another 10 minutes on there, assuming two minutes
- 24 per question.
- MR. BERLINER: Try to beat that by a lot.

- 1 Regarding October Cross Channel Gate
- 2 operations, does the MBK modeling of the no-action
- 3 alternative and the California WaterFix modeling of the
- 4 no-action alternative contain the same modeling
- 5 assumptions regarding the October Cross Channel Gate
- 6 operations?
- 7 WITNESS BOUREZ: The MBK modeling operation of
- 8 the Cross Channel Gate in October does differ from the
- 9 petitioners' modeling of the Cross Channel Gate.
- 10 MR. BERLINER: In what way?
- 11 WITNESS BOUREZ: To answer that, yes, I'd like
- 12 to refer to SVWU Exhibit 102 on page 17.
- 13 There's a description of our logic in the
- 14 section of why we changed the Cross Channel Gate logic.
- 15 CO-HEARING OFFICER DODUC: 102, page?
- 16 WITNESS BOUREZ: 17.
- 17 CO-HEARING OFFICER DODUC: 17. All right.
- 18 Please continue.
- 19 WITNESS BOUREZ: It's on the -- yeah. That
- 20 paragraph right below where it says: "Cross Channel
- 21 Gate operation assumptions overestimated in October" --
- 22 "overestimates October outflow."
- 23 This is one of the issues we saw with the
- 24 California WaterFix modeling. And, you know, there's
- 25 some details associated with this operation.

1 In October, the assumptions of the California

- 2 WaterFix placed increased export restrictions to Old and
- 3 Middle River flow requirements in the South Delta, yet
- 4 they have increased flow requirement at Rio Vista.
- 5 And so what happens is that you have a flow
- 6 requirement in Rio Vista that causes more water to come
- 7 down the Sacramento River. Under current operations,
- 8 that water could be exported to the South Delta.
- 9 When you put the Old and Middle River flow
- 10 requirement on the South Delta, you end up with more
- 11 Delta surplus that can't be exported.
- 12 You see this in both the petitioners' modeling
- 13 and MBK modeling. If you notice, a change in October
- 14 outflow, delta outflow, it increases in October.
- 15 So what we did, based on historical
- 16 operations, and we cite in this paragraph that, in
- 17 October and November of 2013, the Bureau of Reclamation
- 18 closed the Delta Cross Channel Gate to meet compliance
- 19 along the Sacramento River.
- 20 And we're assuming that -- that they would
- 21 close that Cross Channel Gate to meet the Rio Vista flow
- 22 requirement rather than have that water flow out the
- 23 Deltas as surplus flow that can't be captured.
- 24 So the change we made was to protect storage
- 25 and not have surplus Delta outflow. And that's why we

- 1 put in the operation of a Cross Channel Gate. We
- 2 believe it's a more reasonable representation of how the
- 3 project would operate.
- 4 MR. BERLINER: Do both the MBK and the DWR
- 5 models show an increase in outflow in October?
- 6 WITNESS BOUREZ: Yes, they do.
- 7 MR. BERLINER: Bear with me. That may have
- 8 been my last question.
- 9 I have one other question. Yesterday you
- 10 mentioned that the modeling approach that you're using
- 11 or proposing here has been used in prior applications
- 12 by, I believe, the Bureau of Reclamation; is that
- 13 correct?
- 14 WITNESS BOUREZ: I hate to ask, but I'd like
- 15 to be more specific.
- 16 When you say the modeling changes that we made
- 17 have been applied, there's some of the modeling changes
- 18 that we made that we have used in performing work for
- 19 the Bureau of Reclamation. Not all of them.
- 20 MR. BERLINER: And could you identify which
- 21 projects those are that you worked for the Bureau of
- 22 Reclamation?
- 23 WITNESS BOUREZ: The project in particular
- 24 that our changes for the San Luis operation has the most
- 25 influence is the San Luis Low Point Improvement Project.

1 And in that project, it's really important to

- 2 have the best depiction of San Luis operation that we
- 3 can. And so we used those improvements for that
- 4 analysis.
- 5 MR. BERLINER: Great. Thank you very much.
- 6 Appreciate it. I have no further questions.
- 7 CO-HEARING OFFICER DODUC: Thank you.
- 8 Does that conclude cross-examination of this
- 9 panel by the Department of Water Resources?
- 10 MR. BERLINER: Yes.
- 11 CO-HEARING OFFICER DODUC: Thank you.
- 12 Ms. Aufdemberge for the U.S. Department of the
- 13 Interior.
- 14 --000--
- 15 CROSS-EXAMINATION
- 16 MS. AUFDEMBERGE: Good morning, Mr. Bourez and
- 17 Mr. Easton. My name is Amy Aufdemberge. I'm with the
- 18 United States Department of Regional -- I'm with the
- 19 United States Department of the Interior Regional
- 20 Solicitors Office here in Sacramento.
- 21 And with me today is Kristin White. She's a
- 22 modeler with the Bureau of Reclamation.
- 23 So I believe you testified that the State
- 24 Water Project and the Central Valley Project are
- 25 integrated projects; is that correct?

1 WITNESS BOUREZ: They operate in an integrated

- 2 fashion, yes.
- 3 MS. AUFDEMBERGE: And they serve multiple
- 4 beneficial uses; is that correct?
- 5 WITNESS BOUREZ: That's correct.
- 6 MS. AUFDEMBERGE: Do they serve these multiple
- 7 uses on an interannual basis; is that correct?
- 8 WITNESS BOUREZ: Yes.
- 9 MS. AUFDEMBERGE: Interannual or over a
- 10 multiple span of years, correct?
- 11 WITNESS BOUREZ: (Witness nods head.)
- MS. AUFDEMBERGE: For example, are Delta
- 13 outflow obligations under the Water Board Control Plan,
- 14 D-1641, are those beneficial uses of project operations?
- 15 MR. LILLY: I object. That calls for a legal
- 16 conclusion. I don't think that's really an engineering
- 17 question.
- 18 CO-HEARING OFFICER DODUC: Mr. Bourez, do you
- 19 have an understanding of beneficial uses?
- 20 WITNESS BOUREZ: I have an understanding, but
- 21 I don't think it's as complete as the legal opinion.
- 22 I can -- I can answer the question in terms of
- 23 are we complying with the State Water Board standards.
- 24 And I believe that the Bureau of Reclamation operates to
- 25 meet those standards.

- 1 CO-HEARING OFFICER DODUC: Thank you.
- 2 MS. AUFDEMBERGE: Are Delta outflow
- 3 obligations a use of project operation yield?
- 4 Let me ask that a different way.
- 5 Are Delta outflow obligations a use of the
- 6 project?
- 7 WITNESS BOUREZ: The projects operate to meet
- 8 the standards, and they have a range of operations that
- 9 they can do -- employ to meet those requirements.
- 10 MS. AUFDEMBERGE: Is water quality a use of
- 11 the projects?
- 12 WITNESS BOUREZ: It is.
- MS. AUFDEMBERGE: Are consumptive use demands
- 14 on flows uses of the project?
- 15 WITNESS BOUREZ: Yes, they are.
- 16 MS. AUFDEMBERGE: And you've testified in your
- 17 opinion, apparently, is that your models of operations
- 18 are more realistic than petitioners' models of
- 19 operations, correct?
- 20 WITNESS BOUREZ: I believe they are.
- 21 MS. AUFDEMBERGE: And that's because you
- 22 believe your operating philosophy is more reflective of
- 23 realistic operation philosophies with the project; isn't
- 24 that correct?
- MR. LILLY: I going to object. That misstates

- 1 the testimony. It's not operating philosophy. It's
- 2 modeling assumption, is what he testified to yesterday.
- 3 CO-HEARING OFFICER DODUC: Would you stipulate
- 4 to that change in your question?
- 5 MS. AUFDEMBERGE: Yes.
- 6 WITNESS BOUREZ: I believe our modeling
- 7 assumptions result in a model mimicking his actual
- 8 operations better than petitioners' model.
- 9 CO-HEARING OFFICER DODUC: And we've covered
- 10 this, Ms. Aufdemberge.
- 11 MS. AUFDEMBERGE: Yes, I understand.
- Does the Bureau of Reclamation currently
- 13 consider risk of drier hydrology in subsequent years
- 14 when deciding whether to store water in summer or fall
- 15 exclusively for exports?
- 16 WITNESS BOUREZ: I don't believe it's
- 17 exclusively for exports, but they do consider carryover
- 18 storage.
- 19 MS. AUFDEMBERGE: Is one reason CVP might
- 20 decide to retain water in storage, particularly in
- 21 summer and fall, be to reduce the risk of the not
- 22 meeting -- of multiple obligations in subsequent years?
- 23 WITNESS BOUREZ: Yes.
- MS. AUFDEMBERGE: Does the operational
- 25 philosophy or the modeling assumptions reflected in your

- 1 model selectively prioritize a current year's exports
- 2 over subsequent years beneficial use needs of storage
- 3 or -- or ability to meet obligations in subsequent
- 4 years?
- 5 WITNESS BOUREZ: No, it does not.
- 6 MS. AUFDEMBERGE: Can you explain how it does
- 7 not?
- 8 WITNESS BOUREZ: This might be a long
- 9 explanation.
- 10 When you look at the balancing of reservoirs
- 11 in use of water, you don't bring your reservoirs down so
- 12 low that you risk a subsequent year of drought. You
- 13 have to have enough carryover in those reservoirs to
- 14 protect against dry years.
- 15 However, you can't leave them so full that
- 16 you're -- that you just spill that water out and don't
- 17 beneficially use it in the current year. There's a
- 18 balance between use of water in a current year and where
- 19 your storage ends up relative to a subsequent year.
- I also want to point out that, in our
- 21 modeling, we're carrying over far more water in both the
- 22 no-action and the WaterFix alternative than the
- 23 petitioners' model. They bring their storage down to
- 24 dead pool, and they have much lower storages.
- 25 So ours -- both of our model runs are much

- 1 more conservative in protecting against a dry year than
- 2 the petitioners' modeling in both alternatives.
- 3 MS. AUFDEMBERGE: So it's in the wetter years
- 4 that you're saying that there is surplus storage in --
- 5 that should be exported; is that correct?
- 6 WITNESS BOUREZ: Let me restate your question
- 7 to make sure that I got it right.
- 8 In our modeling, if we had high storage in
- 9 Shasta/Folsom/Oroville, and in the no-action
- 10 alternative, the capacity is such that you couldn't move
- 11 that water. And then the tunnels provide additional
- 12 capacity to convey that stored water.
- 13 If we had excess stored water upstream
- 14 reservoirs in those wetter years, we conveyed that water
- 15 to south of Delta and delivered it.
- 16 We have a lot of constraints on how much water
- 17 we release. For example, in our MBK alternative where
- 18 we model the spring outflow criteria as an outflow
- 19 criteria rather than an export constraint, we actually
- 20 consider storage in Shasta and we don't release that
- 21 water in the spring unless Shasta is high enough.
- 22 So the storage levels have to be above the top
- 23 temperature shutters in order for us to release that
- 24 water. So we're looking at protecting the upstream
- 25 storage to a pretty high degree.

1 And the only time we move additional water in

- 2 our alternative relative to the no-action is if we have
- 3 water above RPA level and we're meeting all requirements
- 4 upstream, and we do consider carryover for subsequent
- 5 drought years.
- 6 MS. AUFDEMBERGE: Could the Bureau of
- 7 Reclamation now operate federal facilities in a matter
- 8 that maximizes exports at the expense of carryover for
- 9 future years?
- 10 WITNESS BOUREZ: I don't believe that the
- 11 Bureau of Reclamation operates to maximize exports and
- 12 sacrifices storage in order to do that.
- 13 It's my understanding operations, they look at
- 14 water supply in upstream reservoirs and determine, based
- 15 on the condition of that reservoir, how much water it is
- 16 reasonable to release for exports.
- 17 I think the Bureau of Reclamation operators do
- 18 a very good job at protecting upstream storage and not
- 19 overreleasing for south of Delta. We tried to mimic
- 20 that in our modeling.
- 21 Again, when we look at the petitioners'
- 22 modeling, they're more aggressive about making those
- 23 releases and bringing storage down. And you can tell --
- 24 and if you bring up some storage plots, if you would
- 25 like to compare the modeling where their drier year

1 storage levels are far below any alternative that we've

- 2 run.
- 3 MS. AUFDEMBERGE: So one difference, though,
- 4 is that you're exporting more -- I believe you used the
- 5 term "excess storage"?
- 6 WITNESS BOUREZ: Yes. This is a term I think
- 7 John Leahigh characterizes very well in his testimony.
- If storage in the reservoir's above what's
- 9 needed in meet upstream requirements and those upstream
- 10 requirements will be contract -- in excess of what's
- 11 required to meet contract obligations upstream, instream
- 12 flow requirements, storage levels, and biological
- 13 opinions. If there's water in excess of those
- 14 requirements, then we're releasing that water and
- 15 exporting it.
- MS. AUFDEMBERGE: And why do you do that?
- 17 WITNESS BOUREZ: I mean, it's a water supply
- 18 project, and we're trying to increase water supply but
- 19 not increase -- but not endanger the ability to meet
- 20 those requirements upstream. There's a balance between
- 21 delivering that water and leaving it in storage.
- 22 If you leave it in storage, it's going to
- 23 spill out. And those spills, the way we model it,
- 24 aren't considered a beneficial use.
- 25 MS. AUFDEMBERGE: If you're only exporting

1 water that would otherwise be spilled, how do you show a

- 2 deficit in the following year created by those exports?
- 3 WITNESS BOUREZ: This is a really kind of
- 4 Water Operations 101 kind of comment.
- 5 If you release water in a wetter year and you
- 6 end up in that wetter year at a little bit lower
- 7 storage, if you fill the next year, you've created
- 8 yield. You've delivered that water and you've
- 9 recovered.
- 10 If you go into a drought, you could be a
- 11 little bit lower going into that drought. And at that
- 12 time -- and we've gone through our two-year example
- 13 yesterday when we explained that moving water in those
- 14 wetter years, and, you know, you still have very high
- 15 storage a lot of times, but you're moving more water,
- 16 that you go to into a dry year with that lower storage,
- 17 you could have an impact.
- 18 MS. AUFDEMBERGE: So you are overestimating
- 19 excess storage because it's rippling through the deficit
- 20 to get to your end-of-September carryover storage; is
- 21 that correct?
- 22 WITNESS BOUREZ: I'm not sure I understand the
- 23 question. But we're not overestimating excess storage.
- 24 Even without the California WaterFix, in the no action
- 25 alternative, there's a balance between storage and

- 1 conveyance.
- 2 And when you look at the dry critical years in
- 3 a CalSim simulation, there's often times that we're not
- 4 at full capacity in those export pumps. There's a
- 5 balance between how much you're going to leave in
- 6 storage and how much you're going to export.
- 7 If you're in wetter years, you can't maintain
- 8 a balance as easily because you're export-constrained.
- 9 When you add the tunnels, you have another degree of
- 10 freedom to balance that storage with water deliveries.
- 11 And so when you remove that constraint, this
- 12 is more prevalent on the CVP side than the SWP side,
- 13 because Oroville -- on the state side, Oroville has a
- 14 lot more capacity to move water through bigger pumps to
- 15 balance north of Delta, south of Delta. But on the CVP
- 16 side, you're more constrained on, you know -- with
- 17 export capacity, yet you have much more storage
- 18 upstream.
- 19 So when you remove that export constraint,
- 20 having the tunnels, the balance between north of Delta
- 21 reservoirs and south of Delta deliveries can change
- 22 to -- to increase water supply.
- Now, any time that you increase water supply,
- 24 there is a risk. There's a risk in the no-action
- 25 alternative as well as the California WaterFix

1 alternative. And what we tried to do with our modeling

- 2 is to balance that delivery of water the way we think it
- 3 would occur in actual operations.
- 4 So if there was high water, high storage
- 5 upstream in those wetter years, we conveyed that. And
- 6 in the middle of the rogue years, we actually deliver
- 7 less water south of Delta.
- 8 So it's a matter of the balancing the system.
- 9 And the California WaterFix allows increased flexibility
- 10 for the projects to balance the system. That's one of
- 11 the things that it does offer the system. You have more
- 12 of a choice to balance.
- 13 And the petitioners' modeling, they
- 14 artificially constrain south of Delta allocations. And
- 15 we spent a lot of time talking about the export estimate
- 16 and the use of joint point of diversion where they don't
- 17 allow that balance to occur and don't use the
- 18 flexibility that the project offers.
- 19 MS. AUFDEMBERGE: So is it your belief that
- 20 reclamation would change its operational philosophy
- 21 because the facilities might physically allow for it?
- 22 WITNESS BOUREZ: I don't think that the
- 23 reclamation would change its operational philosophy. I
- 24 think that they would still operate to protect the
- 25 upstream storage as they do now. It just offers

1 flexibility to convey more stored water when it's

- 2 available.
- 3 MS. AUFDEMBERGE: Thank you very much. That
- 4 ends my cross-examination.
- 5 CO-HEARING OFFICER DODUC: Thank you,
- 6 Ms. Aufdemberge.
- 7 Ms. Morris?
- 8 Yesterday, I believe Mr. Mizell conveyed a
- 9 message that you expect to take an hour and a half.
- 10 Okay.
- 11 Let me ask the witnesses: Would you like to
- 12 take a short break now?
- MS. MORRIS: Actually, that's not correct. I
- 14 went through and I have -- my estimation is five minutes
- 15 if they're short answers. They're very specific
- 16 questions. I think we've covered the details very well
- 17 yesterday.
- 18 CO-HEARING OFFICER DODUC: So I think you just
- 19 became one of my favorite people. Between the not
- 20 wearing a business suit today and that, you're on top of
- 21 my list. And you'll never have to do the general
- 22 announcement. I promise you that.
- In that case, why don't we proceed.

24

-	1	000
_	<u>L</u>	000

- 2 CROSS-EXAMINATION
- 3 MS. MORRIS: Good morning. I think most of my
- 4 questions are for --
- 5 CO-HEARING OFFICER DODUC: Why don't you
- 6 identify yourself for the record.
- 7 MS. MORRIS: Stephanie Morris for the State
- 8 Water Contractors. And I'll try to speak very slow.
- 9 To be very clear so we don't have any
- 10 confusion, my questions are not about why you changed
- 11 the model. They are specifically about what changes you
- 12 made to the allocation logic.
- 13 I heard all of your testimony on that in
- 14 detail yesterday, so I understand your rationale for why
- 15 you changed it. And I really just have a couple quick
- 16 questions.
- 17 Yesterday, I think it was Mr. Easton was
- 18 talking about a trial-and-error process used for the
- 19 export estimate for your allocation logic, correct?
- 20 WITNESS BOUREZ: That's correct.
- 21 MS. MORRIS: Once you get the allocations from
- 22 that approach, did you manual -- did you manually change
- 23 allocations for some years in the 82-year period for
- 24 your no-action alternative?
- 25 WITNESS EASTON: I'm going to have you repeat

- 1 that.
- 2 MS. MORRIS: Sure. Happy to. One more time.
- 3 I think it might be 10 minutes now.
- 4 Once you get the allocation from the export
- 5 estimate, which you identified as the trial-and-error
- 6 process yesterday, for allocations for some years in the
- 7 82-year period, did you make manual changes?
- 8 WITNESS EASTON: So, first of all, the export
- 9 estimate wasn't a trial-and-error process. That's
- 10 actually an iterative process.
- 11 MS. MORRIS: Stop there. I'll go back, then.
- 12 If I need to be clear, I will be.
- I think your testimony, Mr. Bourez' testimony,
- 14 page 39, this is Exhibit SVWU-107, and I'm going to look
- 15 at page 39 -- actually, it's probably easier if you just
- 16 look at page 42.
- 17 When you talk about adjustments to the
- 18 allocation logic, as I understand it --
- 19 CO-HEARING OFFICER DODUC: Hold on, Hold on,
- 20 Ms. Morris. Let Mr. Baker pull that. Page 42.
- 21 Where specifically on page 42, Ms. Morris?
- MS. MORRIS: Page 42 towards the bottom under
- 23 Roman numeral V, "Adjustments to Allocation Logic."
- 24 CO-HEARING OFFICER DODUC: We're there.
- 25 MS. MORRIS: You did three things. You ran

- 1 the model. You used the WSI-DI. Correct?
- 2 WITNESS EASTON: We ran the model, and we
- 3 assumed WSI-DI for that.
- 4 MS. MORRIS: Okay.
- 5 WITNESS EASTON: There was also an initial
- 6 export estimate for that, which initially, that could be
- 7 far off. And we have an iterative process for the
- 8 export estimate.
- 9 MS. MORRIS: My question was: Did you run the
- 10 WSI-DI? Okay. Then you did your iterative process.
- 11 Is that what you recall -- you actually
- 12 referred it to as trial and error yesterday. Is that
- 13 what you meant by iterative process?
- 14 WITNESS EASTON: No, no. We're talking about
- 15 two different things. So the export estimate --
- 16 MS. MORRIS: No, no. I don't want to do this.
- 17 CO-HEARING OFFICER DODUC: Hold on. Hold on.
- 18 Ms. Morris, what is your question?
- 19 MS. MORRIS: I don't have a question pending.
- 20 Let me step back and ask the question.
- 21 When you did apply your allocation logic, did
- 22 you manually change allocations for some years in the
- 23 82-year period that you ran for your no-action
- 24 alternative? It's a yes-or-no question.
- 25 WITNESS EASTON: Yes.

- 1 MS. MORRIS: Thank you. Did you also make
- 2 manual changes for allocations for the modeling run in
- 3 MBK 4A?
- 4 WITNESS EASTON: Yes.
- 5 MS. MORRIS: Did you also do that -- I should
- 6 be clear. Did you also make manual changes in the
- 7 allocation for the model run MBK DO?
- 8 WITNESS EASTON: Yes.
- 9 MS. MORRIS: For those changes that you made
- 10 in the allocation that you made changes specifically to
- 11 the CVP allocations and the both -- I'm sorry -- and the
- 12 no-action alternative, the 4A run, and the DO run,
- 13 correct?
- 14 WITNESS EASTON: Forgive me. My brain works
- 15 slowly.
- 16 MS. MORRIS: Let me go again. That was a bad
- 17 question. Fair.
- 18 You made changes to the CVP allocation
- 19 manually in all three runs?
- 20 WITNESS EASTON: Yes.
- 21 MS. MORRIS: Okay. For the SWP, you made
- 22 changes to the allocation only in the MBK DO run,
- 23 correct?
- 24 WITNESS EASTON: I would like to explain why
- 25 that is, but yes.

1 MS. MORRIS: We've done that yesterday. I

- 2 don't care today.
- 3 MR. LILLY: You know what? Isn't it fair to
- 4 let him explain?
- 5 CO-HEARING OFFICER DODUC: Hold on. Let her
- 6 finish her line of questioning first.
- 7 MS. MORRIS: And then the manual changes that
- 8 you made -- I'm assuming it was you and not
- 9 Mr. Bourez -- and actually, who did make the manual
- 10 changes? Which one of you?
- 11 WITNESS EASTON: I made the manual changes,
- 12 but Mr. Bourez -- we all reviewed the studies together
- 13 to make a determination as to the reasonableness.
- 14 MS. MORRIS: Let me ask Mr. Bourez, then: The
- 15 manual changes that were made by you and Mr. Easton,
- 16 those changes were based on your own professional
- 17 judgment, correct?
- 18 WITNESS BOUREZ: That's correct.
- 19 MS. MORRIS: Okay. I have no further
- 20 questions.
- 21 CO-HEARING OFFICER DODUC: Thank you,
- 22 Ms. Morris.
- 23 Group No. 4.
- MR. O'HANLON: Daniel O'Hanlon for the
- 25 San Luis and Delta-Mendota. I'll have no questions this

- 1 morning. Thank you.
- 2 CO-HEARING OFFICER DODUC: Thank you.
- Number 5, Mr. Williams.
- 4 MR. WILLIAMS: Philip Williams for Westlands
- 5 Water District. No questions.
- 6 CO-HEARING OFFICER DODUC: Number 6, Coalition
- 7 for Sustainable Delta is not here.
- 8 Number 8 is not here.
- 9 Number 9, North Delta. Mr. O'Brien.
- 10 MR. O'BIEN: North Delta has no questions.
- 11 Thank you.
- 12 CO-HEARING OFFICER DODUC: Confirm again,
- 13 Mr. Aladjem. Number 10.
- MR. ALADJEM: No questions.
- 15 CO-HEARING OFFICER DODUC: Number 11 has yet
- 16 to show to this hearing and is still a no-show.
- Number 12, Colusa, is not here.
- Number 13.
- 19 MS. TABER: Good morning. Kelley Taber,
- 20 Sacramento Regional County Sanitation District. No
- 21 questions.
- 22 CO-HEARING OFFICER DODUC: Number 14, County
- 23 of Yolo is not here.
- 24 Number 15, I believe said they did not have
- 25 any questions.

- 1 Okay. Number 16, South Valley Water
- 2 Association, et al., is not here.
- 3 17 is not here.
- 4 18.
- 5 MR. WASIEWSKI: Tim Wasiewski, San Joaquin
- 6 Tributaries Authority. We'll have no questions.
- 7 CO-HEARING OFFICER DODUC: 19, I don't see
- 8 Ms. Meserve or Mr. --
- 9 20, still not here.
- 10 21. I see Mr. Herrick and Mr. Ruiz.
- 11 MR. HERRICK: I don't know why everybody's so
- 12 scared today. I don't mind messing up in front of the
- 13 public.
- 14 --000--
- 15 CROSS-EXAMINATION
- 16 MR. HERRICK: John Herrick for South Delta
- 17 Water Agency. I'll just have a couple of questions for
- 18 the panel.
- 19 I think I'll follow up with Mr. Easton. I
- 20 think you wanted to explain something in response to
- 21 previous questions you asserted.
- 22 Would you like to explain that?
- 23 WITNESS EASTON: I think we're -- I think
- 24 we've said enough about that.
- 25 CO-HEARING OFFICER DODUC: Mr. Easton is on my

- 1 good list. Mr. Herrick is not.
- 2 MR. HERRICK: In your testimony, one of the
- 3 things that you mentioned is that the biological
- 4 assessment model includes artificial limits on the joint
- 5 point of diversion. Do you recall that?
- 6 WITNESS BOUREZ: Yes, I recall that.
- 7 MR. HERRICK: And do you know whether or not
- 8 the modeling for the joint point includes any sort of
- 9 restrictions on those operations based upon any water
- 10 quality measurements in the South Delta?
- 11 WITNESS BOUREZ: The model is designed to meet
- 12 the standards, and I'm very much aware that some of the
- 13 standards in the South Delta are difficult to meet. And
- 14 the model doesn't consider those standards when it looks
- 15 at joint point.
- 16 MR. HERRICK: So the model doesn't assume some
- 17 new operation in order to meet a standard to allow joint
- 18 point, correct?
- 19 WITNESS BOUREZ: That's correct.
- 20 And I want to be clear that when we talk about
- 21 joint point -- if -- I just want to make sure we're on
- 22 the same page. I gave an example yesterday of what the
- 23 artificial limit is. And I'd like to repeat that
- 24 example just to make sure that we're not talking past
- 25 each other.

- 1 MR. HERRICK: Please do.
- 2 WITNESS BOUREZ: For a hypothetical, if
- 3 Banks -- if the state is using Banks Pumping Plant and
- 4 diverts 6680 CFS out of the South Delta and nothing out
- 5 of the North Delta diversion, so it's not using the
- 6 tunnels, and under the hypothetical, the CVP is
- 7 exporting 4600 CFS at Jones Pumping Plant, and under
- 8 this hypothetical, if the CVP has a lot of storage in
- 9 Shasta and Folsom, and it's likely to spill, under this
- 10 condition, the CVP could not use the North Delta
- 11 diversion and convey that water through Banks the way
- 12 that the petitioners' model is set up.
- 13 We believe that's an unrealistic operation and
- 14 that the CVP should have the access to that North Delta
- 15 diversion. And we're assuming in our modeling that the
- 16 state would allow that use of joint point of diversion
- 17 to convey that water.
- 18 That's the, I think, the primary difference
- 19 between their assumptions and our assumptions. There's
- 20 nothing in the project description that would prevent
- 21 the use of joint point under that condition.
- 22 MR. HERRICK: So even though the state pumping
- 23 may not be able to do joint point under normal
- 24 operations in the model, with the California WaterFix,
- 25 joint point could occur with the North Delta diversion?

- 1 Is that what you're saying?
- 2 WITNESS BOUREZ: Yes.
- 3 MR. HERRICK: I asked you a few questions
- 4 about whether the model addresses water quality as part
- 5 of the conditions to achieving joint point.
- 6 Does it address water levels as a limiting
- 7 criteria for using joint point?
- 8 WITNESS BOUREZ: CalSim does not.
- 9 MR. HERRICK: Your testimony talks about how
- 10 the model runs done by the WaterFix petitioners result
- 11 in some reservoirs going down to dead pool, but that
- 12 you've provided modeling that shows not doing that. In
- 13 other words, a more practical operation. Would that be
- 14 a correct statement?
- 15 WITNESS BOUREZ: I believe our modeling is
- 16 more practical.
- 17 MR. HERRICK: So does that mean, with your
- 18 modeling, there's a better likelihood of meeting water
- 19 quality standards with that additional storage in
- 20 subsequent years than the WaterFix does?
- 21 WITNESS BOUREZ: Yes, it does.
- 22 But I just -- I want to make sure that
- 23 everybody's aware that they have climate change in
- 24 theirs without the adaptation measures, and that's one
- 25 of the reasons their reservoirs are going to dead pool.

- But we don't have climate change and we have
- 2 refined our operations and the balance of the reservoirs
- 3 to prevent dead pool from occurring. And, therefore, it
- 4 would be easier for the modeling to meet water quality
- 5 compliance.
- 6 MR. HERRICK: The model runs that you've done?
- 7 WITNESS BOUREZ: I think both models, their
- 8 modeling and our modeling, meets compliance of water
- 9 quality standards in the Delta in the same way.
- 10 MR. HERRICK: Earlier this morning you
- 11 answered a question regarding DSM2. And you said that
- 12 sometimes it may show exceedance where, in fact, there
- 13 isn't one. Do you recall that?
- 14 WITNESS BOUREZ: Yes.
- 15 MR. HERRICK: Is the opposite also true? Does
- 16 DSM2 sometimes show compliance when, in fact, the
- 17 standard may be exceeded?
- 18 WITNESS BOUREZ: I really -- I'm not sure.
- 19 MR. HERRICK: But would you -- well, never
- 20 mind.
- 21 You said you weren't overly familiar with DSM2
- 22 except you've worked with people that have modeled on
- 23 it, right?
- 24 WITNESS BOUREZ: Right.
- 25 MR. HERRICK: You also answered questions

- 1 about Old and Middle River flows. Is it your
- 2 understanding that the WaterFix proposes times when
- 3 there will -- there will be times when a head of Old
- 4 River barrier will be installed and operated, but they
- 5 also seek to have positive Old and Middle River flows;
- 6 is that correct?
- 7 WITNESS EASTON: It is my understanding -- and
- 8 bear with me, because there's so many details in all the
- 9 different examples. But in some of their -- I know that
- 10 they do have further closure at the head of Old River
- 11 barrier gates in the Boundary 2 analysis. I can't
- 12 recall the others. I'm sorry. Slipped my mind.
- 13 WITNESS BOUREZ: Yeah, I understand your
- 14 question, that if there is an additional barrier, it's
- 15 basically impossible to comply with Old and Middle River
- 16 flow requirements because there's no flow going into Old
- 17 and Middle River.
- 18 And I don't recall what those assumptions are
- 19 in all of the modeling. I'd have to go back and look
- 20 into it.
- 21 MR. HERRICK: That's all right. I want to
- 22 make sure it's clear for the record.
- 23 Would you agree that if there's barrier at the
- 24 head of Old River that blocks off flow into Old River,
- 25 then that affects whether or not -- affects Old and

- 1 Middle River flow levels?
- 2 WITNESS BOUREZ: Absolutely.
- 3 MR. HERRICK: And if you block off the water,
- 4 you can't have downstream flow, net downstream flow?
- 5 WITNESS BOUREZ: That's correct.
- 6 MR. HERRICK: Thank you.
- 7 That's all I have. Thank you very much.
- 8 CO-HEARING OFFICER DODUC: Thank you,
- 9 Mr. Herrick.
- 10 22, City of Stockton.
- 11 MS. TABER: Kelley Taber for City of Stockton.
- 12 We have no questions. Thank you.
- 13 CO-HEARING OFFICER DODUC: Thank you,
- 14 Ms. Taber.
- 15 23, not here.
- 16 24, not here.
- 17 25, not here.
- 18 26, not here.
- 19 27, not here.
- 20 28, not here.
- 21 29, not here.
- 30, Mr. Brodsky is not here.
- 23 31, Mr. Jackson.
- I forgot to ask Mr. Herrick, but, Mr. Jackson,
- 25 how much time do you anticipate needing and what topic

- 1 areas will you be covering?
- 2 MR. JACKSON: I would expect it would be
- 3 between 20 and 30 minutes, but that depends on the
- 4 colloquy between the two of us.
- 5 Actually, I want to put up Exhibit SV -- the
- 6 Sacramento Valley Water Users 110, and I will be asking
- 7 questions in regards to Slide 4, Slide 13, Slide 21,
- 8 Slide 28, and Slide 40.
- 9 CO-HEARING OFFICER DODUC: 40?
- 10 MR. JACKSON: Yes.
- 11 CO-HEARING OFFICER DODUC: Let me check with
- 12 the court reporter and the witness.
- 13 Shall we go ahead and take our break after
- 14 Mr. Jackson is done in about a half hour or so?
- 15 All right. Proceed.
- 16 --000--
- 17 CROSS-EXAMINATION
- 18 MR. JACKSON: Mr. Baker, could you put up
- 19 Exhibit 110?
- 20 May I move so that I can follow the slides a
- 21 little better here?
- 22 Mr. Bourez, in terms of this slide --
- 23 CO-HEARING OFFICER DODUC: Is your mic on,
- 24 Mr. Jackson?
- MR. JACKSON: No.

1 In terms of this slide, is it fair to say that

- 2 these are the differences between the California
- 3 WaterFix alternatives minus what is presently done in
- 4 terms of no-impact or in terms of no-project?
- 5 WITNESS BOUREZ: This is the -- each one of
- 6 these bars represents the average annual -- the
- 7 difference between the average annual outflow of each of
- 8 those alternatives compared to the average annual
- 9 outflow of the no-action alternative.
- 10 MR. JACKSON: So it's fair to say that each
- 11 alternative, H4A or H3-plus, is going to result, at
- 12 least from your review of the modeling, is going to
- 13 result in less Delta outflow than is present on an
- 14 annual basis?
- 15 WITNESS BOUREZ: Alternative 4A would have
- 16 less Delta outflow than the no-action alternative.
- 17 MR. JACKSON: For the purposes of these
- 18 questions, I want you to assume that my clients own a
- 19 piece of land in the town of Collinsville which is below
- 20 the point of diversion for the California WaterFix.
- 21 Are you familiar with the Collinsville
- 22 location?
- 23 WITNESS BOUREZ: Yes, I am.
- 24 MR. JACKSON: And would you describe that in
- 25 general?

1 WITNESS BOUREZ: Essentially, it's the Western

- 2 Delta. It's where the confluence of the San Joaquin and
- 3 the Sacramento Rivers come together. And I could point
- 4 it out on a map if you would like.
- 5 MR. JACKSON: No, I think that will do.
- 6 But it is clearly below the diversion point
- 7 for the California WaterFix?
- 8 WITNESS BOUREZ: That's correct.
- 9 MR. JACKSON: This measurement of the change
- 10 in Delta outflow takes place at what location?
- 11 WITNESS BOUREZ: The net Delta outflow is
- 12 actually calculated. So this would be Delta outflow.
- 13 You could call it Collinsville, if you would. It's
- 14 calculated Delta outflow.
- MR. JACKSON: So right there?
- 16 WITNESS BOUREZ: Yes.
- 17 MR. JACKSON: Okay. Now, I understand that
- 18 there is in these boundaries, the boundary that is
- 19 Boundary 1, I believe, is indicated, by your review, is
- 20 1.2 million acre foot less outflow than what is
- 21 presently happening in the no-project?
- 22 WITNESS BOUREZ: It is.
- 23 And you say "what's presently happening." I
- 24 just want to be clear. These are differences between
- 25 two model runs, one with project and one without. And

1 this is the difference between those two model runs,

- 2 yes.
- 3 MR. JACKSON: And so if there is less outflow
- 4 in the model run, can you determine from the model run
- 5 what effect that will have on our piece of property?
- 6 WITNESS BOUREZ: When you say "what effect,"
- 7 you have to define what that effect is.
- 8 MR. JACKSON: Will the water quality be
- 9 different?
- 10 WITNESS BOUREZ: It may be different. It just
- 11 depends on so many factors. A lot of times that water's
- 12 coming out, as we pointed out, you might have 60,000 CFS
- 13 outflow in a month. And with the WaterFix, that might
- 14 be 58,000. And those conditions, those high flows, I
- 15 wouldn't expect that there would be a change in salinity
- 16 at those times.
- 17 And if we're conveying stored water, the
- 18 projects have to meet water quality requirements under
- 19 1641. So when they're conveying stored water, they're
- 20 ensuring that they have that water quality.
- 21 Now, if those standards are not controlling,
- 22 it is possible that the salts come in farther. But the
- 23 standards are designed to protect those beneficial uses
- 24 of water in the Delta. But it is possible that they're,
- 25 with that outflow, depending on the timing, there could

- 1 be a change in water quality.
- 2 MR. JACKSON: So the water quality could be
- 3 changed at various times of the year that are critical
- 4 or might be critical to the operation of agriculture on
- 5 the property?
- 6 WITNESS BOUREZ: Yeah. That's -- I have not
- 7 analyzed that in detail. We have looked at North Delta
- 8 compliance points, and we do see some -- some issues
- 9 there. But I have not looked at Collinsville output.
- 10 So I really can't speculate on what the water quality
- 11 changes would be there.
- 12 MR. JACKSON: All right. Since you haven't
- 13 looked at it, this question will be in general: Is the
- 14 iteration that you're using of CalSim II capable of
- 15 predicting what will happen on that property at
- 16 Collinsville with the operation of the California
- 17 WaterFix?
- 18 WITNESS BOUREZ: That's a tough question to
- 19 answer. CalSim is a -- you know, it's -- it's more of
- 20 an operations-type model on a monthly time step, and so
- 21 some of the operations you're talking about are a lot
- 22 more detailed. And that's why, you know, folks use DSM2
- 23 to get more detail on what those changes would be at
- 24 various locations within the Delta.
- 25 CalSim could be used to tell you what the

- 1 changes in outflow would be on a monthly basis. It can
- 2 feed into DSM2 where they can do more detailed analysis
- 3 on water quality and probably answer some of your
- 4 questions.
- 5 But CalSim, itself, cannot really determine
- 6 the changes in water quality at Collinsville. We can
- 7 tell you what the average change of inflow is, and that
- 8 can be used to determine that.
- 9 MR. JACKSON: But it depends to -- for finer
- 10 work on the -- on another model?
- 11 WITNESS BOUREZ: Yes. That would be DSM2.
- MR. JACKSON: Could we put up Slide 21?
- 13 There's been some discussion, which is
- 14 reflected on your Slide 21, about something called a
- 15 "big gulp."
- 16 What are you describing in terms of a big
- 17 gulp?
- 18 WITNESS BOUREZ: First, I want to be clear
- 19 that you don't pick this up at 7-Eleven.
- The big gulp, with the way we describe it, at
- 21 times when we have very high Delta surplus, in this
- 22 example, in the no-action alternative in January, we
- 23 have roughly a -- Delta outflow of about 65,000 CFS on
- 24 average. And at times during the month, it could
- 25 exceed -- 100- or 150,000 would not be unusual for those

- 1 higher flows.
- 2 During those higher flows, the big gulp really
- 3 is taking as much of that surplus as we can out of the
- 4 system while still leaving significant surplus. You see
- 5 the Delta outflow went from about 65,000 CFS in January
- 6 down to roughly 59,000 CFS.
- 7 And, really, when you're out -- I don't know
- 8 how -- how -- if we can really measure that in Delta
- 9 outflow because I don't think gauges are even accurate
- 10 enough within 10 percent. Maybe pick up a difference in
- 11 that Delta outflow.
- 12 Well, that's a very significant increase in
- 13 water supply for the state. And I think, you know, from
- 14 my personal view, that's a reasonable use of the tunnels
- 15 to capture that big gulp because we're not affecting
- 16 water quality even at Collinsville.
- 17 So, again, that big gulp is a capture of as
- 18 much flow as we can when we have high surpluses in the
- 19 system.
- 20 MR. JACKSON: All right. So when you talk
- 21 about Delta outflow, are you talking about water to the
- 22 sea or are you talking about inflow to
- 23 San Francisco Bay?
- 24 WITNESS BOUREZ: Inflow to San Francisco Bay.
- 25 MR. JACKSON: And how does -- how does your

- 1 modeling treat the need for freshwater in
- 2 San Francisco Bay?
- 3 WITNESS BOUREZ: CalSim does not model the
- 4 San Francisco Bay. So it doesn't consider it.
- 5 MR. JACKSON: So there's no way to tell
- 6 whether the big gulp would harm beneficial uses in
- 7 San Francisco Bay using the CalSim model?
- 8 WITNESS BOUREZ: I don't believe there is.
- 9 I've never looked it. I'm not a bay expert.
- 10 MR. JACKSON: You talked about a modeling
- 11 forum that you're a member of. And it's -- I believe
- 12 either you or Mr. Easton talked about it as sort of a
- 13 tight-knit group; is that correct?
- 14 WITNESS BOUREZ: That's correct.
- MR. JACKSON: Does -- are there any bay
- 16 specialists looking at these problems within that group?
- 17 WITNESS BOUREZ: I know there's bay
- 18 specialists within that group. I don't know if
- 19 they've -- the degree to which they have analyzed this.
- 20 MR. JACKSON: Could we go to Slide 13?
- 21 Calling your attention to the modeling. It
- 22 looks like in the winter months -- November, December,
- 23 January, February -- there are changes in Delta outflow
- 24 in -- of -- from the California WaterFix compared to
- 25 no-action that result in as much as 2,000 CFS difference

1 in less outflow by the operation of the California

- 2 WaterFix.
- 3 WITNESS BOUREZ: To be clear, this is a --
- 4 these numbers are calculated by taking the average
- 5 monthly outflow from the alternatives compared to the
- 6 monthly average outflow of the no-action alternative.
- 7 And on average during that period, there seems to be --
- 8 or is calculated less Delta outflow. I don't see where
- 9 it's 2,000 CFS less.
- 10 And when you're talking about some of these
- 11 effects, that could be times when the Delta outflow
- 12 could have been an average of 50,000 CFS, and it dropped
- 13 to 40,000 CFS in a month. And that could just be a
- 14 average of all the wet years, where the drier and
- 15 critical years may not be affected.
- 16 There's a whole lot of information in these
- 17 plots. You got to be careful what conclusions you draw.
- 18 And I would say that, on average, the outflow is
- 19 generally less during the wintertime.
- MR. JACKSON: Thank you.
- 21 Could you put up Slide 33?
- 22 You talked in other testimony that I will not
- 23 go over, about No. 1, 2, and 3.
- I'm interested in Key Finding No. 4:
- 25 "CalSim II does not address effects to water rights."

- 1 What do you mean by that?
- 2 WITNESS BOUREZ: I'm going to have to refer to
- 3 another one of our exhibits in our two-year example.
- 4 Let me pull up the -- it's Slide No. 25. If you could
- 5 pull that one up in this exhibit. This is a slide where
- 6 we used to discuss this very issue.
- 7 CalSim's not designed to curtail water rights.
- 8 And, in particular, I'm going to start with Term 91.
- 9 CalSim does not have a calculation internal
- 10 that calculates supplemental water as an imposed --
- 11 (Reporter request for clarification.)
- 12 WITNESS BOUREZ: CalSim does not have a
- 13 calculation of supplemental water under Term 91. It has
- 14 to be calculated based on the CalSim output. So
- 15 CalSim I doesn't address effects on those water right
- 16 holders, nor does it impose curtailments on other more
- 17 senior water right holders.
- 18 And CalSim also isn't designed to impose
- 19 deficiencies other than what are based on the contract
- 20 criteria for the Sacramento River settlement
- 21 contractors, Feather River service area contractors, the
- 22 CVP, San Joaquin River Exchange Contractors, or refuge.
- 23 Those are -- the model is designed to meet
- 24 those requirements and won't cut them beyond the input
- 25 criteria.

1 MR. JACKSON: So does -- CalSim does have --

- 2 you've used the term -- or I heard the term "hardwired"?
- 3 WITNESS BOUREZ: Yes.
- 4 MR. JACKSON: Does it have an allocation
- 5 hierarchy?
- 6 WITNESS BOUREZ: Yes, it does.
- 7 MR. JACKSON: Would you tell me what that is?
- 8 WITNESS BOUREZ: This can get to be a very
- 9 long conversation, but there's different ones.
- 10 There's an allocation hierarchy for the State
- 11 Water Project. And what the model does will allocate
- 12 for the State Contractors Table A allocations based on
- 13 water supply availability.
- 14 And for the Feather River service area
- 15 contractors, their allocations are based on unimpaired
- 16 inflow to Oroville which is input to the model.
- 17 So the difference between those two is the
- 18 Table A allocations are dynamic in the model calculated
- 19 by the model and can be influenced by model inputs,
- 20 where the allocations to the Feather River service area
- 21 contractors are input to the model. The model doesn't
- 22 change them.
- 23 And the same is true for the CVP contractors
- 24 or the Sacramento River Settlement Contractors, CVP,
- 25 San Joaquin River Exchange Contractors, and the refuges.

- 1 Those allocations are input to CalSim based on Shasta
- 2 inflow, and the model does not change those dynamically.
- 3 MR. JACKSON: Does the model have any
- 4 hierarchy in terms of rights system?
- 5 WITNESS BOUREZ: It does not. It meets those
- 6 deliveries all the time.
- 7 And one of the things that we see with CalSim,
- 8 if there were to be a curtailment during drought, that
- 9 those water rights are not reduced.
- 10 So this is one of the issues we have with
- 11 climate change hydrology and drought conditions, is that
- 12 those water rights are curtailed and the projects have
- 13 to meet the requirements rather than those curtailments.
- 14 And I want to further say that this is a
- 15 significant fundamental change to any model. To
- 16 determine the effects of imposing Term 91 curtailments
- 17 on the system is a daunting task.
- 18 MR. JACKSON: Now, for those of us who are
- 19 not -- who have water rights that are not related to the
- 20 projects, does CalSim do -- how do they calculate our
- 21 water -- well, let's assume for the purpose of this
- 22 discussion that the property that I'm talking about at
- 23 Collinsville is on both sides of the levy and is a
- 24 riparian right.
- Does CalSim II model riparians?

- 1 WITNESS BOUREZ: What CalSim does is it
- 2 actually starts with land use, and so whatever crop
- 3 would be assumed in CalSim. And they've used a lot of
- 4 aerial surveys to come up with crops. And then they run
- 5 a model to determine what the irrigation requirements
- 6 are and the consumptive use requirements are. And that
- 7 is input to CalSim as a diversion requirement. And then
- 8 the model will meet those.
- 9 And if it's riparian, the model assumes that
- 10 it is always going to be met.
- 11 MR. JACKSON: How does model check to see
- 12 whether or not it's being met?
- 13 WITNESS BOUREZ: That's a good question.
- 14 The model is going to meet all of those
- 15 consumptive use needs that come out of the model. And
- 16 what would happen is the reservoirs will release water
- 17 to meet Delta outflow.
- 18 And since your diversions in the Delta would
- 19 be taken out of the system, the projects would have to
- 20 release more water in order to meet that Delta outflow
- 21 obligation. So if -- so by definition, their design of
- 22 the model has to meet all of those riparian diversions.
- 23 MR. JACKSON: Can the model predict whether it
- 24 does?
- 25 WITNESS BOUREZ: It does in the model, always.

1 If it's meeting outflow obligations, it's meeting all

- 2 the diversions.
- 3 MR. JACKSON: What does -- first of all, has
- 4 CalSim ever been validated?
- 5 WITNESS BOUREZ: Can you define what you mean
- 6 by "validated"?
- 7 MR. JACKSON: Sure. Is there a process by
- 8 which the CalSim modeling is refined based upon actual
- 9 conditions?
- 10 CO-HEARING OFFICER DODUC: Before Mr. Bourez
- 11 answers that, we went through this some of this when
- 12 petitioners were up here.
- Where are we going with this?
- 14 MR. JACKSON: Well, where I'm going with this
- 15 is I'm trying to determine how my client can determine
- 16 the effect of the WaterFix on the conditions that we
- 17 have had prior to the WaterFix.
- 18 CO-HEARING OFFICER DODUC: I understand that.
- 19 MR. JACKSON: And so I'm trying to determine
- 20 whether or not CalSim can help me with that process.
- 21 CO-HEARING OFFICER DODUC: Mr. Bourez, do you
- 22 know if CalSim can help with that process?
- 23 WITNESS BOUREZ: I think CalSim is helping
- 24 with that process. And what we're finding from both of
- 25 the petitioners' modeling and our modeling is that all

- 1 the modeling is complying with the standards in the
- 2 Delta and all the modeling is meeting all the
- 3 consumptive needs in the Delta.
- 4 And I believe that the model has had
- 5 significant enough review with all the peers that we've
- 6 worked with on it to ensure that that's the case. And
- 7 when we check our model results we are, in fact, meeting
- 8 those consumptive demands.
- 9 I think the real issue for you is, you know,
- 10 when you're meeting -- when water quality is not
- 11 controlling the operation of the project, do the salts
- 12 come in a little bit more and is that an effect on you.
- 13 And that's not my area of expertise to know
- 14 what that change in salinity, what that effect would
- 15 have on you.
- 16 MR. JACKSON: When you say it's not in your
- 17 area of expertise, you mean it's -- do you mean it's not
- 18 yours or it's not CalSim's area of expertise?
- 19 WITNESS BOUREZ: I think you have to run DSM2,
- 20 which I know DWR has done, and that can help answer this
- 21 question.
- 22 MR. JACKSON: Actually, I think I can end
- 23 there. Thanks.
- 24 CO-HEARING OFFICER DODUC: Thank you,
- 25 Mr. Jackson.

1 Before we take our break, let me do a rundown

- 2 to do a time check.
- 3 32, not here.
- 4 33, not here.
- 5 34, not here.
- 6 35, no show.
- 7 Ms. Des Jardins, 37, I believe you said
- 8 yesterday you do have cross-examination. How much time
- 9 do you anticipate needing?
- 10 MS. DES JARDINS: About an hour.
- 11 CO-HEARING OFFICER DODUC: Okay.
- 12 38, not here.
- 13 39, not here.
- 14 40? 41? 42? 43?
- 15 So let's plan on resuming after our break with
- 16 Ms. Des Jardins. We -- after her cross-examination,
- 17 we'll take our lunch break.
- Do you anticipate any redirect, Mr. Lilly?
- 19 MR. LILLY: Right now, my list is probably
- 20 about five minutes.
- 21 CO-HEARING OFFICER DODUC: Of redirect?
- MR. LILLY: Of redirect, yes.
- 23 CO-HEARING OFFICER DODUC: Okay.
- 24 So we will -- in all likelihood, I'm looking
- 25 to Group 7, get to your Panel 2 later this afternoon. I

- 1 believe your witness, Mr. Van Camp, is available.
- With that, we'll take a break, and we'll
- 3 resume at 10:55.
- 4 (Off the record at 10:37 a.m. and back
- on the record at 10:55 a.m.)
- 6 CO-HEARING OFFICER DODUC: If everyone could
- 7 please take your seats. It is 10:55. And we are now
- 8 resuming with cross-examination by Ms. Des Jardins.
- 9 Your topics areas that you will be exploring,
- 10 Ms. Des Jardins?
- 11 MS. DES JARDINS: I wanted to go into --
- 12 CO-HEARING OFFICER DODUC: I'm going to ask
- 13 you to get very close to the microphone.
- 14 MS. DES JARDINS: I wanted to go into -- I
- 15 have follow-up questions on joint point of diversion,
- 16 one on Delta Cross Channel.
- 17 And Mr. Mizell asked questions about whether
- 18 what Mr. Bourez did comported with agency practices. I
- 19 also have questions about whether what he did comported
- 20 with standard engineering practices.
- 21 CO-HEARING OFFICER DODUC: All right. We
- 22 don't go over grounds that have already been covered.
- You may proceed.

24

- 1 --000--
- 2 CROSS-EXAMINATION
- 3 MS. DES JARDINS: Mr. -- can we bring up put
- 4 Exhibit DJ93 on here? This is from comments --
- 5 prehearing comments by Richard Denton.
- 6 Mr. Denton looked into the total South Delta
- 7 exports for the revised DEIR/DEIS modeling which showed
- 8 that it went to 15,000 CFS at times.
- 9 Mr. Bourez, did you ever look at the -- the
- 10 JPOD exports and revised DEIR/DEIS model?
- 11 WITNESS BOUREZ: What you're showing is from
- 12 the revised circulated document?
- 13 MS. DES JARDINS: Mr. Denton prepared this and
- 14 submitted this in comments to the State Board prehearing
- 15 comments. And he was concerned that he plotted the
- 16 South Delta exports versus Delta outflow, and he noted
- 17 that at least in --
- 18 CO-HEARING OFFICER DODUC: Hold on,
- 19 Ms. Des Jardins. You're not testifying here.
- 20 MS. DES JARDINS: What this shows, Mr. Bourez,
- 21 if you look at this, what does it --
- 22 CO-HEARING OFFICER DODUC: Hold -- hold on.
- 23 Hold on a second.
- 24 What is the source of this information?
- 25 MS. DES JARDINS: It's from Mr. Denton. I was

1 going to ask if Mr. Bourez had looked at the revised

- 2 DEIR/DEIS modeling.
- 3 CO-HEARING OFFICER DODUC: Hold on. Slow
- 4 down.
- 5 Was this submitted as an exhibit by you, or is
- 6 this something that you're introducing right now?
- 7 MS. DES JARDINS: I'm introducing this right
- 8 now.
- 9 CO-HEARING OFFICER DODUC: Okay. What is it
- 10 showing? Not your conclusion, but where does the data
- 11 come from?
- MS. DES JARDINS: It's from the revised
- 13 DEIR/DEIS 4A H3.
- 14 CO-HEARING OFFICER DODUC: Okay.
- MS. DES JARDINS: So this is for the CEQA/NEPA
- 16 documents that were submitted with the WaterFix petition
- 17 and associated model.
- 18 CO-HEARING OFFICER DODUC: Assuming that this
- 19 indeed is the data and it's accurately portrayed, what
- 20 is your question to Mr. Bourez?
- MS. DES JARDINS: My question to Mr. Bourez
- 22 is, one: Would you agree that this appears to show that
- 23 there are exports above 11 -- above 11,280 CFS, which is
- 24 the current limit, and did you ever look at the revised
- 25 DEIR/DEIS at the exports?

- 1 CO-HEARING OFFICER DODUC: Let's break it up
- 2 first. Did you look at the revised DEIR/DEIS?
- 3 MS. DES JARDINS: South Delta exports?
- 4 CO-HEARING OFFICER DODUC: Looking at South
- 5 Delta exports and Delta outflow?
- 6 WITNESS BOUREZ: Yes, we've looked at it.
- 7 MS. DES JARDINS: Did you notice these kind of
- 8 exceedances of the current Army Corps of Engineers
- 9 limits with that modeling?
- 10 WITNESS BOUREZ: Yes. We noticed that in the
- 11 draft environmental documents, we saw that the
- 12 South Delta diversions were higher than permitted
- 13 capacity.
- I also want to add to that in the modeling
- 15 that the petitioners performed for the biological
- 16 assessment, this has been revised and you no longer see
- 17 that in updated modeling. But we did comment on this in
- 18 our SVWU-102, in a report. We noticed this as well.
- 19 MS. DES JARDINS: Did the agency give any
- 20 explanation for the conflict between the CEQA/NEPA
- 21 analysis and the biological assessment assumptions?
- 22 WITNESS BOUREZ: I have not discussed it with
- 23 them, and I have not heard any explanation.
- 24 MS. DES JARDINS: Has the agency indicated
- 25 that they might seek any changes in the future to the

1 Army Corps of Engineer limits? Has there been -- or did

- 2 you -- I mean, when you looked at the biological
- 3 assessment modeling, did you have any information beyond
- 4 what the current Army Corps of Engineers limits are as
- 5 far as any future plans?
- 6 WITNESS BOUREZ: So there's -- you had two
- 7 questions. The first one, I believe, was have the
- 8 agencies asked for revision of the Army Corps of
- 9 Engineers permit? Not to my knowledge.
- 10 And then you also asked a question -- and
- 11 please correct me if I misstate this: Have I heard any
- 12 reason why the modeling in the biological assessment
- 13 differs from the draft EIR/EIS?
- 14 MS. DES JARDINS: I already asked that. I
- 15 just wanted to say in your engineering analysis, the
- 16 only information -- was the only information that you
- 17 had available for the biological assessment the current
- 18 Army Corps of Engineers limit of 6680 CFS?
- 19 WITNESS BOUREZ: In the biological assessment
- 20 modeling, we did review that, and I believe that the
- 21 Army Corps of Engineers permit for South Delta
- 22 diversions were adhered to in the petitioners' modeling.
- 23 In other words, they did not export more than 6680 CFS
- 24 at Banks in the updated modeling.
- 25 MS. DES JARDINS: Is it your understanding

1 that the Army Corps permit governs the diversions from

- 2 the Delta into Clifton Court Forebay?
- 3 WITNESS BOUREZ: Well, it's my understanding
- 4 that the Army Corps of Engineers permit does govern the
- 5 diversions from the South Delta into Clifton Court
- 6 Forebay.
- 7 MS. DES JARDINS: Are you aware that they're
- 8 talking about building an isolated section of
- 9 Clifton Court for the North Delta diversions to go into?
- 10 WITNESS BOUREZ: I did watch some of the
- 11 testimony on that, and I'm not real familiar with the
- 12 design. But I understand that they are looking at
- 13 separating the South Delta diversion from the tunnels.
- 14 MS. DES JARDINS: If it was completely
- 15 separated, would the limits -- if it was completely
- 16 separated, would the limits on diversions into
- 17 Clifton Court apply?
- 18 WITNESS BOUREZ: I believe -- and I can't say
- 19 what the Corps -- Army Corps of Engineers would do
- 20 regarding permits for South Delta diversions. I'm
- 21 assuming that the diversions from the South Delta into
- 22 Clifton Court, that the Army Corps of Engineer permits
- 23 would still apply. But they would not apply to the
- 24 diversions from the North Delta diversions that enter
- 25 into Clifton Court. That would be my understanding.

1 MS. DES JARDINS: Thank you. That concludes

- 2 my line of questioning on the joint point of diversion.
- I'd like to go to Exhibit SWRCB -- SVWU-102.
- 4 And I'd like to go to page 17. Scroll down to the part
- 5 of the North Delta Cross Channel.
- 6 So the question here, this was fairly clear on
- 7 the reasons for your changing the Delta Cross Channel
- 8 Gate operations in October. You state: "As long as the
- 9 Delta salinity standards are met, operators have
- 10 indicated they would indeed close the Delta Cross
- 11 Channel gates in this manner."
- 12 In the BDCP model, the Delta Cross Channel is
- 13 not closed in that manner and that result is that the
- 14 BDCP model overestimates outflow under such
- 15 circumstances.
- 16 Which -- was your observation that this
- 17 continued in the WaterFix modeling that you examined?
- 18 WITNESS BOUREZ: In the WaterFix modeling that
- 19 we examined that the petitioners performed, they did not
- 20 close the Cross Channel Gate in order to meet Rio Vista
- 21 flow requirements.
- They increased Delta outflow. You know, they
- 23 changed operations in order to meet that standard. It
- 24 could have been increased releases from upstream
- 25 reservoirs or decreases in North Delta diversion in

- 1 order to meet that flow requirement on the
- 2 Sacramento River.
- In our modeling, we had partial closures of
- 4 the Delta Cross Channel Gate in order to meet the flow
- 5 requirements on the Sacramento River at Rio Vista.
- 6 MS. DES JARDINS: Which you believe is closest
- 7 to recent historical operations?
- 8 WITNESS BOUREZ: The Bureau of Reclamation has
- 9 closed the Cross Channel Gate in the past. And we cite
- 10 the example of October and November of 2013 where they
- 11 did close the Cross Channel Gate in order to meet
- 12 compliance standards on the Sacramento River.
- 13 MS. DES JARDINS: Okay. The question I asked
- 14 here was if -- does the WaterFix modeling have the same
- 15 issue with overestimated outflow as you saw in the BDCP
- 16 modeling with possibly overestimating outflow and
- 17 overestimating benefits to Delta smelt?
- 18 WITNESS BOUREZ: To answer this question, I'd
- 19 like to pull up Exhibit SVWU-110, slide 37.
- 20 I'd like to turn your attention to --
- 21 CO-HEARING OFFICER DODUC: Hold on. Since
- 22 you're answering her questions, it's best that she's --
- MS. DES JARDINS: Apologies.
- 24 CO-HEARING OFFICER DODUC: -- ready. Okay.
- 25 WITNESS BOUREZ: I'd like to turn your

1 attention to the average monthly difference -- well, let

- 2 me remind everybody again what this slide shows.
- 3 These are changes in Delta outflow for the
- 4 preferred alternative, or Alternative 4A in the
- 5 biological assessment. And the top two plots are the
- 6 petitioners' models. They're alternative minus the
- 7 no-action. And the bottom two charts are MBK modeling,
- 8 the Alternative 4A minus the no-action alternative.
- 9 And I'd like to turn your attention to October
- 10 in the monthly difference plots. You can see that the
- 11 increase in the Delta outflow in petitioners' modeling
- 12 in October is often over 1,000 CFS increased Delta
- 13 outflow for that month in almost all year types.
- In the MBK modeling, it's typically less than
- 15 a thousand CFS. That difference is primarily driven by
- 16 the Cross Channel Gate operation.
- 17 We still have Delta surplus in both modeling
- 18 scenarios. But we have less Delta surplus in the MBK
- 19 modeling. That's because we operate the Cross Channel
- 20 Gate to meet that Rio Vista flow requirement and we're
- 21 only doing that when we're in compliance with water
- 22 quality at Jersey Point and Rock Slough.
- 23 So that's really the difference that we're
- 24 talking about.
- 25 MS. DES JARDINS: So your assessment is that

- 1 it's more realistic for the projects to be operated
- 2 mainly to meet the water quality requirements than these
- 3 other assumptions that, if you look at the recent
- 4 historical operations, that the assumptions that you
- 5 made were more realistic?
- 6 WITNESS BOUREZ: I believe our assumptions are
- 7 more realistic in that the projects would operate the
- 8 Cross Channel Gate.
- 9 MS. DES JARDINS: Okay. Thank you.
- 10 Next exhibit I'd like to go to is DDJ-51.
- 11 It's on the exhibit list. It's from previous
- 12 examination. Yeah, Exhibit DDJ-51.
- 13 And, Mr. Bourez, you did this iterative
- 14 process of adjusting the reservoir operations to be what
- 15 you -- to, in your opinion, be more realistic and
- 16 comport more with current operating procedures; is that
- 17 correct?
- 18 WITNESS BOUREZ: We've adjusted the model to
- 19 get the most realistic simulations as we could.
- 20 MS. DES JARDINS: Yeah. And I just wanted to
- 21 go -- let's scroll down to the objective function. This
- 22 is related to the objective function.
- 23 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
- 24 what is this document?
- 25 MS. DES JARDINS: This is an excerpt from the

- 1 petitioners' 2004 response to the CalSim peer review.
- 2 The CalSim peer review also noted some issues
- 3 with the -- Mr. Bourez, would it surprise you that the
- 4 issues with the modeling of reservoir operations are
- 5 long-standing in CalSim?
- 6 WITNESS BOUREZ: I'm sorry. They're more?
- 7 MS. DES JARDINS: Would -- is it -- how long
- 8 have there been issues with CalSim's modeling of
- 9 reservoir operations? Do you have any idea?
- 10 WITNESS BOUREZ: How long have there been
- 11 problems with it? I'm not sure what you mean by
- 12 "problems."
- 13 But even -- and I see DWR Sim is up here as
- 14 well. It's just a predecessor. Some of the logic that
- 15 we used to use in DWR Sim is still present in CalSim II.
- 16 It's a model. There's always weaknesses in any model
- 17 run, but I believe that the operation of the model is
- 18 adequate and, you know, to mimic actual CVP/SWP
- 19 operations for planning studies.
- 20 MS. DES JARDINS: It says: "Most successful
- 21 applications of optimization that attempt to simulate
- 22 the behavior of a system have calibrated their objective
- 23 function so that the model results correspond to what
- 24 actually happens or would happen under a particular
- 25 hydrologic and demand scenario."

1 This is what the peer review orders noted in

- 2 2003.
- 3 And DWR stated: "The lack of calibration is
- 4 one reason why the simulation of historical operations,
- 5 which they introduced as Exhibit DWR-505, was unable to
- 6 mimic historical project carryover storage during
- 7 drought conditions."
- 8 Are these issues similar to what you saw in
- 9 the WaterFix models that -- with, you know,
- 10 corresponding to what would -- at what actually happened
- 11 during a repeat of certain water years during the
- 12 particular hydrologic and demand scenario?
- 13 WITNESS BOUREZ: I think we're mixing apples
- 14 and oranges a little bit.
- MS. DES JARDINS: Okay.
- 16 WITNESS BOUREZ: Let's address this peer
- 17 review comment and then talk about the adequacy for
- 18 modeling the WaterFix.
- 19 It's impossible to calibrate an operations
- 20 model to historical operations in terms of a formal
- 21 calibration. Calibration is very different than is the
- 22 model adequate or a valid tool.
- When you look at historical operations, we've
- 24 had some very significant changes in operational
- 25 criteria and standards. And, you know, even, for

- 1 example, in 2014/2015, we had temporary urgency change
- 2 petitions where we didn't meet all the standards in the
- 3 system.
- 4 And when you look at that change in historical
- 5 operations, it's very difficult to calibrate a model
- 6 based on historical operations.
- 7 I don't think that's a valid metric for
- 8 determining if CalSim is an adequate tool for evaluating
- 9 the WaterFix. That's my personal opinion. And I think
- 10 there's a lot of folks in our profession who are of the
- 11 same opinion.
- 12 Now, is the modeling adequate for evaluating
- 13 the California WaterFix? And -- well, I'll have to
- 14 defend ourselves. I believe that the modeling we did
- 15 certainly is adequate for evaluating the California
- 16 WaterFix.
- 17 MS. DES JARDINS: I wasn't asking about your
- 18 model. I was asking about the modeling presented by the
- 19 petitioners and the discrepancies you saw with the
- 20 reservoir operations which caused you to make changes.
- 21 WITNESS BOUREZ: Yeah. We spent quite a bit
- 22 of time comparing and contrasting those models. I'm
- 23 happy to repeat a lot of that.
- 24 CO-HEARING OFFICER DODUC: Please do not.
- 25 MS. DES JARDINS: No. I'm just -- is -- what

- 1 I was -- it's just a question about the petitioners'
- 2 modeling. They noticed there were discrepancies in the
- 3 historical operations with mimicking carryover storage,
- 4 and you saw some discrepancies when carryover storage, I
- 5 believe, as in exports; isn't that correct?
- 6 WITNESS BOUREZ: Again, it's really difficult
- 7 to take the CalSim simulation, compare it to historical
- 8 operations. We can use historical operations and what's
- 9 happened, the decisions that the operators made in
- 10 operating the project and why they made those decisions
- 11 and incorporate that into the model logic. And that's
- 12 typically what is done with these simulation models.
- 13 And I think that there's -- there is some
- 14 helpful information in the petitioners' models. You
- 15 know, they're showing how much surplus we can grab out
- 16 of the system. We're showing that. We operated the
- 17 reservoirs differently than they did and balanced the
- 18 system differently.
- 19 And I said several times I believe our
- 20 modeling is a better depiction or a closer depiction of
- 21 how the project would actually operate. That doesn't
- 22 mean that what the petitioners did is completely
- 23 useless. These are all ways of operating the system.
- 24 So I'm struggling to, you know, really how to
- 25 answer your question.

1 MS. DES JARDINS: Thank you. Let me go to

- 2 Exhibit DDJ-54 to ask a clarifying follow-up question.
- 3 Scroll down, please. Keep scrolling.
- 4 So if it says --
- 5 MR. LILLY: Excuse me. I just request that
- 6 Ms. Des Jardins identify what that document is.
- 7 MS. DES JARDINS: I apologize. This is an
- 8 excerpt. This is Exhibit DDJ-54. It's an excerpt from
- 9 the 2004 CalSim peer review response in which they
- 10 specifically responded to the issue about calibration
- 11 and validation of the operations modeling, specifically
- 12 issues of reservoirs and how well the model represented
- 13 operating rules.
- 14 And so this states that a more reasonable --
- 15 what they proposed was a more reasonable approach to
- 16 defining behavioral parameters through discussions of
- 17 system operators to define current operational policy or
- 18 rules. And that it would appear more reasonable to
- 19 define operating rules in conversations with operators
- 20 and subsequently use a recent wet, normal, and dry year
- 21 in a validation exercise.
- 22 Mr. Bourez, I just wanted to say if you had
- 23 like a post-2009 BiOp data set, if you had a recent, you
- 24 know, like 2010 to 2015, if there was an input data set
- 25 for CalSim and you had a recent wet, normal, dry,

- 1 critically dry year, would it make it easier to assess
- 2 how the model actually -- your model or the petitioners'
- 3 model -- represented current operations?
- 4 WITNESS BOUREZ: So when you look at recent
- 5 historical operations, which we do and we track
- 6 operations pretty closely, and the decisions that are
- 7 made to operate the project and we try to incorporate
- 8 that logic into CalSim.
- 9 And since 2009, there has been significant
- 10 effort from the Department of Water Resources, Bureau of
- 11 Reclamation, and several consultants to improve that
- 12 representation of those biological opinions in CalSim.
- 13 We operate the model. We do pay attention to
- 14 what has happened and how the projects operate so that
- 15 we get an operation that does mimic those recent
- 16 operations. So I would agree with the statement that
- 17 the way the project operators operate is how we want the
- 18 models to operate.
- 19 MS. DES JARDINS: So the -- you described a
- 20 series of qualitative changes you made that were based
- 21 on sort of assessments of how well you believed the
- 22 WaterFix modeling presented by the petitioner
- 23 represented this recent historical operations; is that
- 24 correct?
- 25 And you -- the changes you've made, would it

- 1 be correct to say that you were trying to meet what your
- 2 understanding was of these recent historical operations?
- 3 WITNESS BOUREZ: Yes. If I understand your
- 4 question, we're trying to take that -- the way the
- 5 project operators operate and incorporate that into our
- 6 model runs. And that's the goal of the models, is to
- 7 mimic those operational rules and the decisions they
- 8 make.
- 9 CO-HEARING OFFICER DODUC: And you believe the
- 10 changes you've made are more representative of -- more
- 11 realistic in terms of the operations aspect?
- 12 WITNESS BOUREZ: Yes, I do.
- MS. DES JARDINS: Okay. The next thing, I
- 14 want to go back to one of my exhibit files, the files
- 15 that I submitted.
- 16 If you could bring that folder up, DDJ-93.
- 17 I'd like to go to "Musings on a Model." I believe it's
- 18 page 12.
- 19 CO-HEARING OFFICER DODUC: What is this
- 20 document?
- 21 MS. DES JARDINS: Okay. So this document is
- 22 entitled "Musings on a Model CalSim II in California
- 23 Water Community."
- 24 CO-HEARING OFFICER DODUC: Are you familiar
- 25 with this document?

- 1 WITNESS BOUREZ: Yes, I am.
- MS. DES JARDINS: So I want to go to --
- 3 MS. McCUE: You've identified this as
- 4 DDJX-109.
- 5 MS. DES JARDINS: Yes, DDJX-109. It's going
- 6 to be DDJ-109. Thank you.
- 7 (Respondent Exhibit DDJ-109
- 8 marked for identification.)
- 9 MS. DES JARDINS: Scroll back. Scroll back.
- 10 DIANE RIDDLE: Is it highlighted?
- MS. DES JARDINS: No, it's not.
- 12 I'm going to have to skip this question.
- I did have a question. Let's go to DDJX-92.
- 14 And I had some exhibits.
- 15 (Respondent Exhibit DDJ-92
- marked for identification.)
- 17 MS. DES JARDINS: Mr. Bourez, I wanted to ask
- 18 you: There was a change to the State Water Project
- 19 delivery that was done in -- for some early modeling --
- 20 CO-HEARING OFFICER DODUC: You need to
- 21 identify what that is.
- MS. DES JARDINS: Let's go back. Edit --
- 23 go --
- 24 CO-HEARING OFFICER DODUC: It's only one page.
- MS. DES JARDINS: Can we go back to the

1 spreadsheet? There's a spreadsheet on there. Let's go

- 2 back to the spreadsheet.
- 3 So this is from the modeling support Web site.
- 4 And it's a comparison of the 2009 and 2010 delivery
- 5 logic and the 2010 logic. Let's go to SWP WSI-DI. The
- 6 2010 logic was what was used for the State Water for
- 7 some of the early BDCP scenarios. And I have a PDF of
- 8 this as well.
- 9 Mr. Bourez, I have a paper copy if you'd like
- 10 to look at one.
- MS. McCUE: This is DDJ-91.
- 12 MS. DES JARDINS: Yeah. I just wanted to ask
- 13 you about the water supply index demand index curve and
- 14 what this kind of change would do to exports at
- 15 Oroville.
- 16 So it shows the old curve is dashed in blue
- 17 and the new curve is in pink.
- 18 WITNESS BOUREZ: So still it is difficult to
- 19 comment on this, because each CalSim scenario that is
- 20 developed, you retrain these curves to be commensurate
- 21 with the standards and requirements of facilities that
- 22 you have in that CalSim run.
- 23 So CalSim actually has an iterative process to
- 24 develop these curves based on that. And this is what we
- 25 talked about as kind of a standard procedure for CalSim,

- 1 is to redevelop these curves.
- 2 So I'm not quite sure, even though that these
- 3 are from, you know, a CalSim run or BDCP, it could be
- 4 from a wide variety of CalSim runs. So it's very
- 5 difficult to comment on what the changes would mean
- 6 here.
- 7 And, you know, further, you know, describing
- 8 what the water supply index is versus the delivery index
- 9 and how's that used in the model is -- you know, it's a
- 10 complex operation. And, you know, the model uses this
- 11 in conjunction with a delivery versus carryover index.
- 12 So once you get that delivery index, there's a delivery
- 13 versus carryover curve that is also used to set
- 14 allocations.
- 15 And then on top of that, there's the export
- 16 estimate which will further change south of Delta
- 17 deliveries.
- 18 So this is one component of several factors
- 19 that determine deliveries. And I can't tell you what
- 20 influence this would have on a CalSim run or which
- 21 CalSim run this is from.
- 22 So it's a really vague question, and you have
- 23 to put really the whole picture together.
- 24 MS. DES JARDINS: Let me ask you then about
- 25 the hierarchy of what happens in -- so the -- so the

- 1 water supply index. I've looked at the code, and
- 2 it's -- they start in March, they estimate -- have an
- 3 estimate of water supply.
- 4 Isn't it the water supply in the future is,
- 5 they assume, will be equal to the runoff at that point,
- 6 or if they have an estimate of the water supply? They
- 7 have an estimate of the water supply, and then, from
- 8 that, they estimate how much water is going to be put
- 9 into demand.
- 10 WITNESS BOUREZ: Okay. So let's -- and Dan
- 11 knows the details of this logic in a lot more detail
- 12 than I do, but let's try a simple explanation first.
- 13 CO-HEARING OFFICER DODUC: Okay. Before you
- 14 do, help me understand where you're going with this,
- 15 Ms. Des Jardins. And what is -- what specifically is
- 16 the point you're trying to make? That will be helpful
- 17 to us in this matter.
- 18 MS. DES JARDINS: Well, there were some
- 19 conclusions that, you know, are in -- and I can go to
- 20 that section of the DEIR/DEIS -- that it was not
- 21 possible for the projects to meet the 2010 flow criteria
- 22 because of the effects on Oroville because it drained
- 23 Oroville.
- 24 CO-HEARING OFFICER DODUC: Okay. So without
- 25 getting into all this detail, what is it about that

- 1 assertion that you would like to ask Mr. Bourez?
- MS. DES JARDINS: I was trying to ask him,
- 3 first, about some of the detail about how the model
- 4 represents water supply and demands. And so I would
- 5 understand a little bit about how changing these curves,
- 6 which, as Mr. Bourez says, happens between different
- 7 CalSim runs, what that does to the assumptions about
- 8 reservoir operations -- and if he can't comment on this
- 9 specific.
- 10 CO-HEARING OFFICER DODUC: That's fine. I
- 11 would like us to step back from perhaps rolling in the
- 12 weeds and going back to your point, which is a good
- 13 point, this assertion that was made by petitioners.
- 14 Mr. Bourez, do you have an opinion on the
- 15 assertion regarding --
- 16 Well, I'll let you state that assertion again,
- 17 that point that you wanted to get to in terms of the
- 18 modeling that petitioners' presented.
- 19 MS. DES JARDINS: Well, more generally,
- 20 Mr. Bourez, I guess what I'm saying is you state that
- 21 with -- that there is -- that these water supply
- 22 index-demand index that it's trained and that it differs
- 23 from application to application. It's changed for
- 24 different -- there isn't a single standard WSI-DI that
- 25 used.

- 1 So, in some sense, the water supply -- the
- 2 reservoir operations assumptions are changing for both
- 3 the State Water Project and Central Valley Project
- 4 reservoirs.
- 5 CO-HEARING OFFICER DODUC: You've lost me
- 6 again. Go back. I asked -- I asked what was the main
- 7 point that you were trying to get to, not the details
- 8 but the main point that you are trying -- the
- 9 overarching point that you are trying to get to.
- 10 And you mention that there was an assertion
- 11 made by petitioners when they did the modeling that they
- 12 could not meet.
- 13 MS. DES JARDINS: They could not meet the 2010
- 14 flow criteria or some variant of it.
- 15 CO-HEARING OFFICER DODUC: Because?
- 16 MS. DES JARDINS: Because unacceptable impacts
- 17 on Oroville Reservoir.
- 18 CO-HEARING OFFICER DODUC: Do you have an
- 19 opinion on that, Mr. Bourez?
- 20 WITNESS BOUREZ: I don't have an opinion.
- MS. DES JARDINS: Okay. Thank you.
- 22 WITNESS BOUREZ: I don't have an opinion on
- 23 that.
- 24 CO-HEARING OFFICER DODUC: Thank you.
- MS. DES JARDINS: Okay. Let me go back to my

- 1 set of folders.
- 2 Yeah. That concludes my questions. Thank
- 3 you, Mr. Bourez.
- 4 CO-HEARING OFFICER DODUC: Thank you,
- 5 Ms. Des Jardins.
- 6 And unless someone else shows up, I believe
- 7 that concludes the cross-examination.
- 8 Mr. Lilly, your redirect? And I see that
- 9 you've taken off your tie.
- 10 MR. LILLY: I figured I better try to comport
- 11 to norms here.
- --000--
- 13 REDIRECT EXAMINATION
- 14 MR. LILLY: I would like Mr. Baker to put on
- 15 the SWRCB 104. Yes, it will be Chapter 3 and page 3-83.
- 16 Scroll down right to there.
- 17 So, Mr. Easton, during some of the questioning
- 18 yesterday, some questions came up about the -- and just
- 19 for the record, this is -- this exhibit has been
- 20 identified before. But this is the final biological
- 21 assessment for California WaterFix project.
- 22 And, Mr. Easton, some questions came up
- 23 yesterday about the difference between the biological
- 24 assessments, proposed action, and spring Delta outflow
- 25 criteria versus the modeling assumption of that being

1 done as an EI ratio. Do you generally remember that

- 2 line of questioning?
- WITNESS EASTON: Yes, I do.
- 4 MR. LILLY: And I think you said at that point
- 5 that you were shown a table which was page 3-88 and you
- 6 said that there was, in fact, some text earlier in the
- 7 document that described how the outflow criteria might
- 8 be implemented. And is this, in fact, the text you were
- 9 referring to?
- 10 WITNESS EASTON: So you're referring to the
- 11 top paragraph?
- 12 MR. LILLY: Yes, good question. The paragraph
- 13 that begins: "The proposed operational criteria are
- 14 described in the following sections and in Table 3.3-1."
- 15 WITNESS EASTON: Yes, it is.
- 16 MR. LILLY: Then could you just elaborate,
- 17 maybe referring to the appropriate parts of this
- 18 paragraph, why reading that and you concluded that the
- 19 spring outflow criteria might be implemented by methods
- 20 other than simply an EI ratio limitation?
- 21 WITNESS EASTON: So I'll start with -- you
- 22 want me to read directly from the paragraph?
- 23 MR. LILLY: That's okay. If you go slowly.
- 24 WITNESS EASTON: "To avoid a reduction in
- 25 overall abundance from longfin smelt, the PA includes

- 1 spring outflow criteria which are intended to be
- 2 provided by appropriate beneficiaries through the
- 3 acquisition of water from willing sellers.
- 4 "If sufficient water cannot be acquired for
- 5 this purpose, the spring outflow criteria will be
- 6 accomplished through operations of the CVP/SWP to the
- 7 extent an obligation is imposed on either SWP or CVP
- 8 under federal or applicable state law."
- 9 MR. LILLY: Based on that, what was your
- 10 conclusion regarding how these potential new Delta
- 11 outflow criteria might be implemented?
- 12 CO-HEARING OFFICER DODUC: Hold on before you
- 13 answer.
- Mr. Berliner?
- 15 MR. BERLINER: While we did discuss the IE
- 16 ratio, we did not discuss the EI ratio. I'm not sure
- 17 where we're going here. My objection may be premature,
- 18 but since Mr. Lilly introduced this as an EI ratio, we
- 19 did not discuss that.
- 20 MR. LILLY: And I'm sorry if I misspoke. It
- 21 is referring to the same thing. I meant the IE ratio
- 22 and I stand corrected.
- 23 CO-HEARING OFFICER DODUC: All right. Thank
- 24 you.
- 25 WITNESS EASTON: Well, this paragraph clearly

1 defines it as a spring outflow criteria with no mention

- 2 of the SJR IE.
- 3 In a sentence where it says "will be
- 4 accomplished through operations of the CVP/SWP to the
- 5 extent an obligation is imposed on either SWP or CVP,"
- 6 to me, I read that and I see that the CVP/SWP have the
- 7 flexibility to meet this flow requirement, not just with
- 8 export -- not necessarily through the San Joaquin River
- 9 IE export constraint.
- 10 MR. LILLY: Just so we're all clear, what are
- 11 the other ways that the CVP and SWP could implement
- 12 these outflow criteria?
- 13 WITNESS EASTON: They could make additional
- 14 releases from upstream reservoirs. And they -- they
- 15 mention the purchase of water, but we did not model
- 16 that.
- 17 MR. LILLY: Then have you had discussions with
- 18 anybody at DWR or the Bureau of Reclamation regarding
- 19 this question of implementation of these Delta outflow
- 20 criteria?
- 21 WITNESS EASTON: We -- well, we were at a
- 22 reclamation meeting to discuss the BA modeling where the
- 23 implementation was discussed, yes.
- 24 MR. LILLY: And what -- what was the -- what
- 25 did the Bureau of Reclamation representative say about

- 1 implementation of these Delta outflow criteria?
- 2 WITNESS EASTON: A representative with
- 3 reclamation -- the consultant for reclamation, had
- 4 mentioned that the San Joaquin River and IE was, at that
- 5 time, when we were discussing the modeling, was a
- 6 mechanism for meeting the outflow, but it was also
- 7 considered an option that the reservoirs could be
- 8 operated to meet the outflow criteria.
- 9 MR. LILLY: Now I'm going to turn to you,
- 10 Mr. Bourez. And there were some questions this morning
- 11 about climate change from Mr. Berliner that I think need
- 12 some follow-up explanation.
- 13 I would like to ask you, in your opinion, what
- 14 is wrong with the petitioners using climate change in
- 15 their modeling?
- 16 WITNESS BOUREZ: The main problem I see with
- 17 the climate change modeling, it does not have adaptation
- 18 measures and the operation of the projects don't seem
- 19 realistic. That's -- and we've written several reports
- 20 that address that.
- 21 I also mentioned the issue with Folsom
- 22 operations, and we developed comments for the long-term
- 23 operations EIS/EIR regarding climate change specific to
- 24 Folsom and the American River operations.
- 25 And what we saw is when they impose climate

1 change, they impose it at the project reservoir so the

- 2 change in American River Basin hydrology would be
- 3 imposed at Folsom rather than all of the individual
- 4 reservoirs within the American River watershed.
- 5 And what that does, it doesn't capture the
- 6 reoperation of those upstream reservoirs. And this
- 7 affects both wetter years and very dry conditions. If
- 8 the dry years get drier, then we -- the upstream
- 9 reservoirs may also operate differently.
- 10 So -- so ignoring those upstream -- upstream
- 11 reservoirs would definitely skew the results.
- So, you know, it's -- it's -- and these --
- 13 these reservoirs operate together in a lot of
- 14 circumstance. For example, if allocations to some of
- 15 the CVP contractors from Folsom and the American River
- 16 are decreased by the Bureau of Reclamation, there's
- 17 agreements for additional releases from upstream
- 18 reservoirs to meet those demands.
- 19 And there's also flood control in Folsom
- 20 dependent upon the upstream reservoirs storage
- 21 conditions.
- 22 And by only changing the inflow to Folsom and
- 23 not the operation of the upstream reservoirs, you have
- 24 inconsistent hydrology between the upstream reservoirs
- 25 and Folsom. And that skews the results. And that, at

- 1 times, could be significant for reservoirs like Folsom.
- 2 Other reservoirs such as Shasta, they don't
- 3 have that upstream storage. So you have different
- 4 issues there.
- 5 So there's these problems with climate change
- 6 and, you know, particularly the adaptation measures make
- 7 it difficult to be the only hydrologic data set to use
- 8 for analysis.
- 9 MR. LILLY: I think just on a general term, I
- 10 think that was a useful explanation.
- 11 But what exactly -- you talked about
- 12 adaptations. And for those of us who don't do this
- 13 stuff as much as you do, maybe if you could just explain
- 14 more generally. I think you may have talked about some
- 15 adaptations; but what, in general, are the types of
- 16 adaptations that the project operations might have to
- 17 make in response to climate change?
- 18 WITNESS BOUREZ: Well, I think there's two
- 19 types.
- 20 CO-HEARING OFFICER DODUC: Hold on,
- 21 Mr. Bourez.
- Mr. Berliner?
- 23 MR. BERLINER: Object. This is beyond the
- 24 scope of the cross-examination. We discussed three
- 25 specific series of areas where Mr. Bourez cited

1 recommendations, and now we're going into all the world

- 2 of possibility. We never asked about that.
- 3 CO-HEARING OFFICER DODUC: Mr. Lilly?
- 4 MR. LILLY: I think that this is within the
- 5 scope because they basically were critiquing how MBK
- 6 treated climate change. And I think this is appropriate
- 7 to explain the situations to give more explanation for
- 8 why MBK did what they did.
- 9 CO-HEARING OFFICER DODUC: I agree it's an
- 10 outgrowth of that. I will allow Mr. Bourez to answer.
- 11 WITNESS BOUREZ: I'm sorry. Could you repeat
- 12 the question?
- MR. LILLY: Yes. You referred to adaptations
- 14 and project operations in response to climate change.
- 15 You don't need to detail all of them.
- 16 What types of adaptations are you talking
- 17 about that potentially could occur in response to
- 18 climate change?
- 19 WITNESS BOUREZ: I think there's really two
- 20 types. One is more of a discretionary operation where
- 21 the balance between storage and use of that storage
- 22 within a year may change. If we're subject to change in
- 23 seasonal runoff and are exposed to longer term droughts,
- 24 there could be differences in that balance between
- 25 project storage and delivery in certain years.

- 1 Also, the requirements that we have -- State
- 2 Board requirements, flow requirements, biological
- 3 opinions -- have all been developed based on what we've
- 4 seen in the system and historical hydrology.
- 5 If we have some significant changes over time,
- 6 it's possible that those regulations may change to
- 7 protect -- I mean, if you can't meet those requirements
- 8 in the future or if different requirements are needed
- 9 for protection of fishery, then it's -- those could be
- 10 changed in the future. And that would be adaptation to
- 11 climate change or different hydrologic conditions.
- 12 MR. LILLY: So, in your opinion, how would
- 13 climate change properly be included in an analysis of
- 14 the effects of the Cal WaterFix project?
- 15 WITNESS BOUREZ: So if I were to do it -- and
- 16 I also want to state that I think the climate change
- 17 projections that were used in the California WaterFix
- 18 are a little bit outdated and the newer projections that
- 19 we've seen are significantly different than those
- 20 climate change predictions.
- 21 So with -- given that we're really not sure
- 22 where the climate is going and what's going to happen, I
- 23 don't believe that you should solely rely on climate
- 24 change for the only analysis. We don't know what's
- 25 going to happen, but we do know what has happened. And

- 1 that historical hydrologic trace should be used to
- 2 evaluate the project.
- 3 And I think that the climate change scenarios
- 4 are very important to understand how robust our
- 5 decisions are and what might happen in the future. So I
- 6 think you should really use both. Again, you should use
- 7 historically based hydrologic trace for a lot of reasons
- 8 that we've cited. But we should run the climate change
- 9 scenarios as a sensitivity analysis so we that make sure
- 10 that the decisions we're making are robust.
- 11 MR. LILLY: And did the petitioners submit any
- 12 exhibits or testimony that includes any such sensitivity
- 13 analysis?
- 14 WITNESS BOUREZ: I haven't seen where they --
- 15 no, I don't believe they've run any sensitivity analysis
- 16 with different climates. They've only run with the
- 17 early long-term in these submittals, and they have not
- 18 run the historical hydrologic trace.
- 20 runs do not include the adaptations that you described
- 21 and believe are appropriate?
- 22 WITNESS BOUREZ: That's correct.
- 23 MR. LILLY: Why did you not include climate
- 24 change in modeling you have submitted for this
- 25 proceeding?

- 1 WITNESS BOUREZ: Well, there's a couple
- 2 reasons. One, we didn't come up with the adaptation
- 3 measures that we believe are necessary to really operate
- 4 with climate change. And we believe we got a -- a
- 5 better depiction or idea of what could happen with -- by
- 6 using historically based hydrologic data sets.
- 7 MR. LILLY: Do you have an opinion as to
- 8 whether including some kind of recognition or analysis
- 9 of climate change would change the conclusions that you
- 10 have described regarding the effects of the Cal WaterFix
- 11 project?
- 12 WITNESS BOUREZ: I think some of our basic
- 13 conclusions would remain the same. And those are the
- 14 export estimate issues that we described with -- would
- 15 remain, whether we had climate change or not, and the
- 16 effect of those would be similar. The effect of joint
- 17 point of diversion limitations would be similar. And
- 18 the balancing of San Luis, use of the San Luis rule
- 19 curve would be similar.
- 20 However, some of the changes in reservoir
- 21 storages, if those storage levels were lower or higher,
- 22 it could change some of the water supply reliability
- 23 maybe for the Folsom diverters, but it could also change
- 24 reliability for cold water pool. So -- and those would
- 25 be different under different climate change scenarios.

Τ	MR. LILLY: All right. Thank you. I don't
2	have any further questions. Thank you.
3	CO-HEARING OFFICER DODUC: Thank you,
4	Mr. Lilly.
5	Mr. Berliner, do you anticipate having
6	recross?
7	MR. BERLINER: I wish to confer with my
8	colleagues.
9	CO-HEARING OFFICER DODUC: Why don't we do
10	this: Why don't we take our lunch break and we will
11	continue at 1:00 o'clock. And at that time, we will
12	conduct recross of this panel.
13	(Whereupon the luncheon recess was taken
14	at 11:54 a.m.)
15	000
16	
17	
18	
19	
20	
21	
22	
23	
24	

1	OCTOBER	\sim 1	2016	AFTERNOON	CHCCTONT	1:00	T) 1/4
1	OUTOBER	<i>/</i> /	711 h	A H. L. H. K MICHOLDIN	SESSION	1 . ()()	P 101

- 2 --000--
- 3 CO-HEARING OFFICER DODUC: All right,
- 4 everyone. Please find a seat. It is 1:00 o'clock, and
- 5 we are resuming.
- 6 Mr. Berliner or Mr. Mizell, does the
- 7 department wish to conduct recross?
- 8 MR. BERLINER: We have no recross for this
- 9 witness.
- 10 CO-HEARING OFFICER DODUC: Ms. Aufdemberge?
- 11 MS. AUFDEMBERGE: This is Amy Aufdemberge for
- 12 interior. We have no cross. Thank you.
- 13 CO-HEARING OFFICER DODUC: Let me do it the
- 14 easy way. Who is here that conducted cross and would
- 15 like to conduct recross?
- Ms. Des Jardins, please come up on.
- 17 MS. DES JARDINS: This will be on the topics
- 18 of Mr. Lilly's redirect. I'm Deirdre Des Jardins.
- Can we go ahead and open this up?
- 20 --000--
- 21 RECROSS-EXAMINATION
- MS. DES JARDINS: Mr. Bourez, you participate
- 23 regularly in California Water and Environmental Modeling
- 24 Forum; is that correct?
- 25 WITNESS BOUREZ: I participated but not so

- 1 regularly.
- 2 MS. DES JARDINS: Okay. Well, I'd like to go
- 3 to -- this was a presentation by Francis Chung, who is
- 4 the principal engineer with the Department of Water
- 5 Resources, I believe, and it also pertains to climate
- 6 change.
- 7 Can we go to page 12 of this document?
- 8 And so this problem -- you saw this as well
- 9 with dead storage. This goes back to the early -- early
- 10 days of --
- 11 CO-HEARING OFFICER DODUC: Hold on.
- 12 Mr. Berliner?
- 13 MR. BERLINER: I have an objection. This is
- 14 beyond the scope of redirect.
- 15 CO-HEARING OFFICER DODUC: I was wondering,
- 16 too.
- Ms. Des Jardins, where are you going with
- 18 this?
- 19 MS. DES JARDINS: I would like to say I think
- 20 it is relevant that Francis Chung also recommended that
- 21 the department develop a reoperation strategy for the
- 22 reservoirs prior to release of the BDCP modeling.
- 23 CO-HEARING OFFICER DODUC: I don't believe
- 24 that was in the scope of Mr. Bourez' redirect.
- 25 MS. DES JARDINS: Okay. I would say --

1 CO-HEARING OFFICER DODUC: You would ask?

- 2 MS. DES JARDINS: So it is a serious future
- 3 problem with climate change, how the projects are going
- 4 to operate with increased outflow needs due to sea level
- 5 rise and increased demands and area of origin; is that
- 6 not correct?
- 7 WITNESS BOUREZ: I believe --
- 8 CO-HEARING OFFICER DODUC: Hold on.
- 9 Mr. Berliner?
- 10 MR. BERLINER: Object again. That's beyond
- 11 the scope of the direct.
- 12 MS. DES JARDINS: Okay. So it is an issue of
- 13 how the projects are going to operate in the future, and
- 14 that was an issue with the modeling that you saw that
- 15 it's -- do you think it's an open question about how the
- 16 projects are going to operate or would we -- are you
- 17 assuming that there's going to be some appropriate
- 18 adaptation?
- 19 CO-HEARING OFFICER DODUC: Mr. Bourez'
- 20 redirect clarified some of the reasons why they don't
- 21 believe the climate change analysis that was conducted
- 22 by petitioners was adequate.
- 23 Mr. Bourez also pointed out some of the
- 24 weaknesses, things the just -- why he thought it was not
- 25 adequate, because he didn't address things such as

- 1 adaptation measures and it wasn't realistic.
- 2 His testimony was quite general in nature. So
- 3 I'm trying to understand where you're going with this.
- 4 MS. DES JARDINS: I was just trying to get
- 5 Walter's opinion. It's a pity I can't compare to
- 6 another engineer's opinion, but modelers are faced with
- 7 a question when looking at future conditions, you know:
- 8 Is -- is this an appropriate -- is this a real effect or
- 9 is this something that the system would adopt to?
- 10 CO-HEARING OFFICER DODUC: Are you talking
- 11 about climate change in particular?
- MS. DES JARDINS: The dead pool conditions in
- 13 particular. So I was trying to clarify more with
- 14 Walter.
- 15 As a modeler, not as a system operator, but as
- 16 a modeler, when you see the dead pool conditions, is
- 17 your assessment that that's a realistic assumption about
- 18 future -- future operations when you saw the dead pool
- 19 conditions in --
- 20 CO-HEARING OFFICER DODUC: Mr. Berliner?
- MR. BERLINER: I'm going to object again.
- 22 This came up during the case in chief discussions, but
- 23 this did not come up in redirect.
- 24 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
- 25 you need to focus on what Mr. Bourez testified on

- 1 redirect by Mr. Lilly. This is not to open the entire
- 2 cross-examination process over again.
- 3 MS. DES JARDINS: I was just trying to focus
- 4 on climate change. And I believe Mr. Lilly asked
- 5 Mr. Bourez about why -- he didn't include climate
- 6 change, and there was a question about...
- 7 Mr. Bourez, Mr. Lilly asked you some of the
- 8 reasons why you didn't include climate change. Was one
- 9 of them this question about future operations under
- 10 climate change?
- 11 CO-HEARING OFFICER DODUC: Is that future
- 12 operations were not certain and adaptations had not been
- 13 developed to reflect that as part of the modeling?
- 14 WITNESS BOUREZ: That's correct.
- 15 MS. DES JARDINS: Thank you. That concludes
- 16 my cross-examination.
- 17 CO-HEARING OFFICER DODUC: Thank you,
- 18 Ms. Des Jardins.
- 19 Mr. Lilly, I'm going to ask that you wait
- 20 until entire Group 7 completes its entire case in chief.
- 21 MR. LILLY: I will follow the hearing
- 22 officer's direction. And I do want to appreciate
- 23 everybody's attention and insightful questions both
- 24 yesterday and today. Thank you very much.
- 25 CO-HEARING OFFICER DODUC: Thank you,

- 1 Mr. Lilly.
- 2 We will now move to Panel No. 2 from Group 7.
- 3 Thank you, Mr. Bourez and Mr. Easton.
- 4 Mr. Van Camp, before you get too comfortable,
- 5 please remain standing, and raise your right hand.
- 6 MARC VAN CAMP,
- 7 called as a witness by the Respondents, having
- 8 been first duly sworn, was examined and
- 9 testified as follows:
- 10 CO-HEARING OFFICER DODUC: Thank you.
- 11 MS. NIKKEL: Good afternoon. My name is
- 12 Meredith Nikkel. I'm an attorney with Downey Brand,
- 13 here on behalf of the group of protestants conveniently
- 14 called the Sacramento Valley Group. This group is made
- 15 up of numerous protestants all of which are part of but
- 16 not the entirety of the similarly named Sacramento
- 17 Valley Water Users.
- 18 The purpose of this panel of just
- 19 Marc Van Camp is limited to introducing the water rights
- 20 and use of those rights for the protestants of the
- 21 Sacramento Valley Group as well as RD 1004.
- 22 And Dustin Cooper is here on behalf of the
- 23 RD 1004.

24

25

1	1	000
Т	L	000

- 2 DIRECT EXAMINATION
- 3 MS. NIKKEL: State your name, spell your last
- 4 for the record.
- 5 WITNESS VAN CAMP: Marc Van Camp, spelled
- 6 V-A-N, C-A-M-P.
- 7 MS. NIKKEL: Mr. Van Camp, have you taken an
- 8 oath to tell the truth during your testimony for this
- 9 hearing?
- 10 WITNESS VAN CAMP: Yes, I have.
- 11 MS. NIKKEL: Mr. Van Camp, can you please
- 12 examine Exhibit SVG-01-001.
- 13 WITNESS VAN CAMP: (Witness examining
- 14 document.)
- MS. NIKKEL: Is this an accurate statement of
- 16 your written testimony for this hearing?
- 17 WITNESS VAN CAMP: Yes, it is.
- 18 MS. NIKKEL: Now if you could please turn to
- 19 and examine SVG-00 -- sorry -- -01-002.
- 20 Is this an accurate statement of your
- 21 education and professional experience?
- 22 WITNESS VAN CAMP: Yes, it is.
- MS. NIKKEL: Now I'm going to ask you to
- 24 quickly peruse the exhibit list.
- Do the exhibits identified as SVG-02-001

- 1 through SVG-25-037 contain true and correct copies of
- 2 the water rights claimed and held by protestants of the
- 3 Sacramento Valley Group as reflected in those exhibits
- 4 or in documents on file with the State Water Board and
- 5 the use of those rights?
- 6 WITNESS VAN CAMP: Yes, they do.
- 7 --000--
- 8 DIRECT EXAMINATION
- 9 MR. COOPER: Good afternoon.
- 10 Dustin Cooper on behalf of Reclamation
- 11 District No. 1004. Mr. Van Camp is also offering
- 12 testimony on behalf of RD 1004.
- 13 Before going through a similar exercise, I
- 14 would like to incorporate the opening statement by
- 15 Mr. Lilly of the Sacramento Valley Water Users for
- 16 RD 1004.
- 17 Mr. Van Camp, if I could direct your attention
- 18 to the exhibit that's been marked as MLF-100. And let
- 19 me know when you've had a chance to pull that up.
- 20 WITNESS VAN CAMP: I have.
- 21 MR. COOPER: Is this a true and correct copy
- 22 of your testimony on behalf of the Reclamation District
- 23 No. 1004?
- 24 WITNESS VAN CAMP: Yes, it is.
- MR. COOPER: Would you please turn to

- 1 Exhibit MLF-101.
- 2 WITNESS VAN CAMP: Okay.
- 3 MR. COOPER: Is Exhibit MLF-101 a true and
- 4 correct copy of your resume and professional
- 5 qualifications?
- 6 WITNESS VAN CAMP: Yes, it is.
- 7 MR. COOPER: If I could direct your attention
- 8 to the documents that have been identified as Exhibits
- 9 MLF-102 through 165. Only through 165 for this
- 10 question.
- 11 WITNESS VAN CAMP: Okay.
- 12 MR. COOPER: Are Exhibits MLF-102 through 165,
- 13 MLF-165, true and correct copies of Reclamation District
- 14 1004's statements of diversion and use and supplemental
- 15 statements under water rights held by the district for
- 16 the years 2010 through 2014?
- 17 WITNESS VAN CAMP: Yes.
- 18 MR. COOPER: If I could now direct your
- 19 attention to the exhibits identified as MLF-166 through
- 20 188.
- 21 WITNESS VAN CAMP: Okay.
- 22 MR. COOPER: Are those true and correct copies
- 23 of the water right licenses and permits, as well as
- 24 reports under those licenses and permits, as well as
- 25 the -- a true and correct copy of the settlement

1 agreement that the Reclamation District No. 1004 holds

- 2 with the United States?
- 3 WITNESS VAN CAMP: Yes. Along with the
- 4 monthly diversions reported by reclamation.
- 5 MR. COOPER: Thank you.
- 6 MS. NIKKEL: Mr. Van Camp, will you please
- 7 take a moment and summarize your written testimony in
- 8 Exhibits MLF-100 and SVG-01-001.
- 9 WITNESS VAN CAMP: Certainly.
- 10 As Ms. Nikkel presented, the purpose is simply
- 11 to document and identify the water rights on file by
- 12 these protestants for this proceeding for the Sacramento
- 13 Valley Group in addition to RD 1004. To also identify
- 14 the water use under those water rights for the years
- 15 2010 through 2014.
- 16 In the case of the use of water pursuant to
- 17 the contracts that many of these water right holders
- 18 have with reclamation or with DWR, I have water use
- 19 through 2015.
- 20 I also identified -- because of our
- 21 familiarity and involvement with the water transfers, I
- 22 have identified the quantities of water transfers by
- 23 each of these water right holders and protestants from
- 24 2010 through 2015.
- 25 In developing this testimony for these

1 protestants of the Sac Valley Group and RD 1004 -- well,

- 2 for the Sac Valley Group, I elected to group them by
- 3 similar categories.
- 4 Those categories -- the first category is what
- 5 I refer to or what's commonly referred to as Sacramento
- 6 River settlement contractors.
- 7 So in addition to the water rights held with
- 8 your agency, they have what is referred to as a
- 9 settlement contract with the Bureau of Reclamation.
- 10 That also pertains to RD 1004.
- 11 The second group is consistent of one, meaning
- 12 Sutter Extension Water District. And in addition to the
- 13 numerous water rights it holds, it also has an agreement
- 14 with the Department of Water Resources which generally
- 15 is similar to the Sac River settlement contracts.
- 16 The third group of entities or protestants
- 17 within my testimony are those that do not hold contracts
- 18 or may have a contract with reclamation but not in the
- 19 form of a settlement contract but hold numerous water
- 20 rights. And many of them include storage facilities and
- 21 have the water rights for those storage facilities.
- 22 So I have detailed that for each of these
- 23 protestants. I don't think for the purpose of this
- 24 proceeding and for efficiency I need to go through each
- 25 one of them. They are very similar in nature.

- 1 CO-HEARING OFFICER DODUC: Thank you.
- 2 WITNESS VAN CAMP: I refer to your files --
- 3 refer to your files rather than providing paper copies
- 4 when possible.
- 5 MS. NIKKEL: And that can concludes our direct
- 6 examination.
- 7 CO-HEARING OFFICER DODUC: Thank you.
- 8 You are also finished as well, Mr. Cooper?
- 9 MR. COOPER: Yes.
- 10 CO-HEARING OFFICER DODUC: All right.
- 11 Group No. 1, Department of Water Resources.
- 12 Actually, while Mr. Mizell is getting set up,
- 13 let me do a quick check.
- 14 How many parties intend to cross-examine
- 15 Mr. Van Camp, just by a show of hands.
- Just Ms. Des Jardins, then. All right.
- 17 I'm sorry. Did I miss you, Mr. Jackson?
- MR. JACKSON: No, you didn't.
- 19 CO-HEARING OFFICER DODUC: Okay.
- 20 Mr. Mizell, estimated time and --
- 21 MS. NIKKEL: I would expect to be 30 minutes
- 22 or less.
- 23 CO-HEARING OFFICER DODUC: All right.
- 24 Please begin.

25

1	1	000
Т	L	000

- 2 CROSS-EXAMINATION
- 3 MR. MIZELL: Mr. Van Camp, thank you for
- 4 coming in today to answer questions.
- 5 I'll be asking rather similar questions both
- 6 about the Sac Valley Group exhibits and the MLF exhibits
- 7 so bear with me. I'll separate them out so that we
- 8 don't get confused in the record.
- 9 Did you draft what has been marked as
- 10 Exhibit SVG-01-001?
- 11 WITNESS VAN CAMP: Yes, I did.
- 12 MR. MIZELL: And did you draft what has been
- 13 marked as Exhibit MLF-100?
- 14 WITNESS VAN CAMP: Yes, I did.
- MR. MIZELL: Okay. And did anyone assist you
- 16 in drafting the testimony SVG-01-001?
- 17 WITNESS VAN CAMP: I had communication with
- 18 folks in my office, but I was the one that drafted it.
- 19 MR. MIZELL: Similar question: Did anyone
- 20 assist you in drafting the testimony of MLF-100?
- 21 WITNESS VAN CAMP: Same answer.
- 22 MR. MIZELL: Okay. Did you rely upon
- 23 Mr. Donald Kingman to draft the testimony SVG-01-001?
- 24 WITNESS VAN CAMP: No, I did not.
- 25 MR. MIZELL: Okay. Similarly, did you rely on

- 1 Donald Kingman to draft MLF-100?
- 2 WITNESS VAN CAMP: No, I did not.
- 3 MR. MIZELL: Can you please confirm the
- 4 primary purpose of your testimony is to identify and
- 5 provide a description of the water rights held by each
- 6 of the parties listed in those two exhibits?
- 7 WITNESS VAN CAMP: Yes. The primary purposes
- 8 is just to document the water rights, the water use, in
- 9 addition to the contracts held.
- 10 MR. MIZELL: So I understand correctly that
- 11 you're familiar with all of the contracts identified in
- 12 those two exhibits?
- 13 WITNESS VAN CAMP: I am familiar with the form
- 14 of contract and work with them on a regular basis, yes.
- MR. MIZELL: Do you agree that the contract
- 16 between the joint boards and the Department of Water
- 17 Resources is a settlement agreement?
- 18 WITNESS VAN CAMP: I believe the agreement
- 19 refers to the water rights. I believe it's a form of a
- 20 settlement agreement, yes.
- 21 MR. MIZELL: So is it true that the settlement
- 22 agreement marked as SVG-20-72 does not change or modify
- 23 the parties' water rights except for a change in point
- 24 of diversion agreed to on July 6, 1964?
- 25 WITNESS VAN CAMP: Mr. Mizell, I believe

- 1 you're referring -- actually refers to a portion of my
- 2 testimony on page 12.
- 3 MR. MIZELL: There's an exhibit marked as
- 4 SVG-20-72 that I believe is previously marked DWR-329.
- 5 And if, Mr. Baker, you could bring up either
- 6 one, I guess, DWR-329, pages 19 and 20.
- 7 You could see the text that I'm actually
- 8 referring to. So pages 19 and 20, looking for paragraph
- 9 number 11. I'll give you a moment to read that.
- 10 WITNESS VAN CAMP: Further down as well,
- 11 Mr. Mizell?
- 12 MR. MIZELL: No. I think up to the end of the
- 13 first sentence would be fine.
- 14 WITNESS VAN CAMP: I have read it.
- MR. MIZELL: So is it true that this sentence
- 16 states that this settlement agreement does not change or
- 17 modify the parties' water rights except for a change in
- 18 point of diversion agreed to on July 6th, 1964?
- 19 WITNESS VAN CAMP: That is what it says.
- 20 MR. MIZELL: Okay. In fact, your testimony --
- 21 going back to SVU-01-001 [sic], page 12, your testimony
- 22 states that the 1969 agreement that we've just been
- 23 reviewing provides that water diverted under the
- 24 agreement shall be deemed diverted under the joint
- 25 district's water rights; is that correct?

- 1 WITNESS VAN CAMP: Yes.
- 2 MR. MIZELL: More generally now, do any of the
- 3 contracts with the State of California for the contract
- 4 holders listed in your testimony, either the SVG-01-001
- 5 or the MLF-100, do any of those contracts with the
- 6 department provide for rights to storage in any state
- 7 facility?
- 8 MS. NIKKEL: Objection. Calls for a legal
- 9 conclusion.
- 10 CO-HEARING OFFICER DODUC: Mr. Mizell is
- 11 asking for the content of that contract.
- Do you have that information? Do you have
- 13 that knowledge, Mr. Van Camp? Not an interpretation,
- 14 but whether the contract contains that language?
- 15 WITNESS VAN CAMP: Not specifically. I'm
- 16 aware the contracts call for quantities of water.
- 17 Mr. Mizell, I'd ask you to be a little more
- 18 clear. The only state contract is the one held by
- 19 Sutter Extension Water District.
- 20 MR. MIZELL: Did any of the contracts with the
- 21 United States afford those contractors to storage in a
- 22 federal facility?
- MR. LILLY: Same objection.
- 24 CO-HEARING OFFICER DODUC: Answer if you can,
- 25 Mr. Van Camp. If it's beyond your expertise, you may

- 1 say so.
- 2 WITNESS VAN CAMP: I will provide my position
- 3 from an technical engineer standpoint in dealing with
- 4 those contracts. There are water rights settlement
- 5 contracts. So that to the extent the water rights are
- 6 deficient, the contracting entity has agreed to
- 7 supplement those water rights, likely with stored water,
- 8 to provide the contract quantities defined in those
- 9 contracts.
- 10 MR. MIZELL: Okay. When you use the word
- 11 "likely from stored water," that's in anticipation, a
- 12 speculation, as to what might happen in the future or
- 13 not necessarily spelled out explicitly in the text that
- 14 you're aware of?
- 15 WITNESS VAN CAMP: From my experience in the
- 16 development of the Sacramento River settlement contract,
- 17 studies were performed to arrive at an estimated
- 18 quantity of water that would be needed available to
- 19 supplement those water rights.
- 20 MR. MIZELL: I think I've covered all my
- 21 points actually. So thank you very much.
- 22 CO-HEARING OFFICER DODUC: Thank you,
- 23 Mr. Mizell.
- Ms. Des Jardins.
- Ms. Des Jardins, your time estimate?

1 MS. DES JARDINS: This should be 15 minutes,

- 2 tops.
- 3 CO-HEARING OFFICER DODUC: And your focus
- 4 area?
- 5 MS. DES JARDINS: I wanted to ask about the --
- 6 when the settlement contracts were signed and what were
- 7 the conditions under which they were signed.
- 8 And then I want to ask about the amounts and
- 9 rates of diversion under the contracts that are done
- 10 under the bureau's permit.
- 11 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
- 12 you need to get closer to the microphone.
- 13 MS. DES JARDINS: I apologize. I seem to have
- 14 a problem with hoarseness.
- 15 --000--
- 16 CROSS-EXAMINATION
- 17 MS. DES JARDINS: Mr. Van Camp, a number of
- 18 the settlement contracts were signed around 1964; is
- 19 that correct?
- 20 WITNESS VAN CAMP: That is correct.
- 21 MS. DES JARDINS: Originally?
- 22 And that was done as a result of Decision 990?
- 23 Are you aware of that history?
- 24 WITNESS VAN CAMP: I am.
- MS. DES JARDINS: Quickly go ahead and open to

- 1 Decision 990. I want to go to page 86.
- 2 MR. BAKER: Before you do that, you have
- 3 labeled it DDJ-97.
- 4 Sorry. If I can mark it as DDJ-97.
- 5 MR. BAKER: No. You marked an earlier cross
- 6 exhibit as DDJ-97.
- 7 MS. DES JARDINS: Oh, no.
- 8 MR. BAKER: This is a different document.
- 9 MS. DES JARDINS: Let's make it DDJ-98, then.
- 10 I won't wreck that. Thank you.
- 11 So I believe page 86 -- let's look at Term 23.
- 12 That's correct, page 86. Roll up stop.
- 13 Term 23, I believe this is the term under
- 14 which your contracts were signed. "The export of stored
- 15 water under permits issued pursuant to
- 16 Applications 5626, 9363, and 9364 outside the watershed
- 17 of Sacramento River Basin or beyond the
- 18 Sacramento-San Joaquin Delta shall be subject to the
- 19 reasonable beneficial use of said stored water within
- 20 said watershed and Delta, both present and prospective,
- 21 provided, however, that agreements for the use of said
- 22 stored water are entered into with the United States
- 23 prior to March 1st, 1964, by parties currently diverting
- 24 water from Sacramento River."
- 25 And it continues for prior to 1971 for the

- 1 Sacramento San Joaquin Delta.
- 2 But, Mr. Van Camp, is it your understanding
- 3 that the contracts were signed under this permit term of
- 4 Decision 990?
- 5 WITNESS VAN CAMP: It may be difficult for me
- 6 to decide or to state how they were signed under -- but
- 7 clearly this was direction provided by this board to the
- 8 Bureau of Reclamation for a permit to operate the
- 9 Central Valley Project.
- 10 MS. DES JARDINS: And is it your understanding
- 11 that those contracts were signed in part in
- 12 consideration of that -- of beneficial use of stored
- 13 water within the Sacramento Valley?
- 14 MS. NIKKEL: Object. Vague and ambiguous as
- 15 to what "consideration" means.
- 16 MS. DES JARDINS: Maybe I'm not a water rights
- 17 attorney. So there were area of origin statutes. Are
- 18 you aware of how those intersect with the settlement
- 19 contracts?
- 20 MS. NIKKEL: Object, again, as to vague and
- 21 ambiguous as to the words "intersect with."
- MS. DES JARDINS: All right. If here's
- 23 something...
- 24 I'd like to go to page 84. And scroll back
- 25 up. I'm looking for permit Term 14.

1 The other thing I wanted to ask: There was a

- 2 reporting requirement. In this decision, it says: "No
- 3 directed diversion or rediversion of stored water for
- 4 beneficial use under permits issued pursuant to
- 5 Applications 5626, 9363, yadda yadda -- "other than
- 6 through the conduits or canals hereinafter named in this
- 7 paragraph, shall be made until a description of the
- 8 location of each point of diversion and a statement of
- 9 the quantity of water to be diverted is filed with the
- 10 State Water Rights Board."
- 11 And it lists project canals.
- 12 Is it your understanding that the bureau filed
- 13 statements of -- of points of rediversion of stored
- 14 water under your contracts with this board, or is there
- 15 a record of that, the location and the quantity of water
- 16 to be diverted?
- 17 MS. NIKKEL: I'm going to object as to
- 18 mischaracterizing the testimony. The entities here do
- 19 not have contracts with this board.
- 20 MS. DES JARDINS: No. This is --
- 21 When you divert stored water, are you
- 22 diverting under your permit or the board's permit?
- 23 MS. NIKKEL: Object. Vague and ambiguous as
- 24 to "you." I'm not sure who we're talking about.
- 25 MS. DES JARDINS: Reclamation District 1008

- 1 diverts stored water under the contract -- or is that
- 2 under Reclamation District 108's water right or the
- 3 bureau's?
- 4 MS. NIKKEL: Sorry. I heard two. Are we
- 5 talking about RD 1004 or 108?
- 6 MS. DES JARDINS: I believe it's RD 1008, but
- 7 maybe I am not correctly recollecting.
- 8 MS. NIKKEL: This is testimony. There's an
- 9 RD 108 and RD 1004.
- 10 MS. DES JARDINS: All right. Let's try 1004.
- 11 WITNESS VAN CAMP: Let me try to give you a
- 12 general understanding of how the reporting goes.
- 13 CO-HEARING OFFICER DODUC: Before you do that,
- 14 help me understand, Ms. Des Jardins, again, what is the
- 15 broader context of where you're going with this line of
- 16 questioning? What is it that you're trying to get at?
- 17 MS. DES JARDINS: California Code of
- 18 Recollections, Title 23, 794, requires information under
- 19 terms -- under Subdivision 6 requires the information on
- 20 diversion and this term also was rediversion of stored
- 21 water.
- 22 And I'm just trying to find out about -- if
- 23 there's -- about if there's statements of the amount of
- 24 water being rediverted under the bureau's permits.
- 25 There's many different settlement contractor locations

1 and the peak rates of diversion. And I believe it is

- 2 relevant to this proceeding as cumulatively as a lot of
- 3 diversions of stored water.
- 4 CO-HEARING OFFICER DODUC: Ms. Nikkel?
- 5 MS. NIKKEL: I think I heard a Code of
- 6 Regulation section in there, 794. And I don't have my
- 7 code in front of me, but I believe that's the section
- 8 that refers to the information that must be in the
- 9 petition.
- 10 And we're not here offering any sort of
- 11 petition for change, rather, we have submitted protests
- 12 in this proceeding.
- 13 So I don't see how this witness could answer a
- 14 question about a petition we did not file.
- 15 MS. DES JARDINS: I'm not asking him to answer
- 16 questions about a petition. I can just ask you instead.
- 17 But let me go first -- I would like to
- 18 ascertain -- but let me give you some specifics.
- 19 Let's go to Provident Irrigation District.
- 20 So Provident Irrigation District signed a
- 21 settlement contract with the Bureau of Reclamation and
- 22 I'd like to ask you, specifically: Did -- to your
- 23 knowledge, was the location and the amount of diverted,
- 24 did you ever -- do you have any knowledge that the
- 25 statement and the location under this permit form was

- 1 filed with the board?
- 2 And I understand that's a responsibility of
- 3 reclamation. I'm just asking if you have any knowledge
- 4 about it. And I understand that you report separately
- 5 under your own water rights.
- 6 WITNESS VAN CAMP: You are correct.
- 7 The individual districts file their water use
- 8 statements with this board on their diversions under
- 9 their water rights, and they refer to their Sac River
- 10 settlement contract.
- 11 Reclamation files their own reports of water
- 12 use, and I have not analyzed the bureau's reports of
- 13 water use.
- MS. DES JARDINS: Okay. Thank you.
- The other thing I'd like to ask, for example,
- 16 with Provident, you have a contract and it specifies a
- 17 base amount and a, quote/unquote, project amount. But
- 18 I -- my understanding is that, depending upon the actual
- 19 flows, you may be -- the bureau could be required to
- 20 provide up to the entire contract amount, not just --
- 21 not just what is called the project amount.
- Is that your understanding as well,
- 23 Mr. Van Camp?
- 24 WITNESS VAN CAMP: I will provide you my
- 25 understanding from the experience I've had with the

- 1 Sac River contracts, renewals of those contracts.
- 2 Studies were undertaken back in the '50s,
- 3 often referred to as 1956 studies.
- 4 The deficiencies of water rights changes on a
- 5 regular basis, every year. Hopefully, most years
- 6 they're fulfilled with natural flow.
- 7 For the purpose of ease of these contracts,
- 8 the contractors and the Bureau of Reclamation negotiated
- 9 average deficiencies. And that is what's represented in
- 10 the contracts in quantity of base supply and a quantity
- 11 of project water or otherwise would be the deficiency of
- 12 the water rights.
- 13 It would be difficult for the bureau to, I
- 14 believe, administer those contracts on a regular annual
- 15 basis. So the purpose of those contracts was to do it
- 16 on an average basis and have a payment based on that
- 17 assumed average deficiency.
- 18 You're right. In any one year, the deficiency
- 19 of the water right may be less or more.
- 20 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
- 21 help me understand the relevance of your question to the
- 22 WaterFix petition that is before us.
- 23 I'm struggling to determine the value of this
- 24 cross-examination and this line of questioning.
- MS. DES JARDINS: The question regards what

- 1 the peak diversions under the bureau's permits will be,
- 2 and it is relevant to the overall questions before this
- 3 board. Unless --
- 4 CO-HEARING OFFICER DODUC: Go ahead,
- 5 Ms. Nikkel, jump in.
- 6 MS. NIKKEL: I'm not sure how the questions
- 7 relate to that topic.
- 8 MS. DES JARDINS: I'm trying to determine what
- 9 both the peak market -- so he's clarified that there's
- 10 an average deficiency that's in the contracts.
- 11 And my next question is going to be that in
- 12 terms of a -- like Natomas Mutual Water Company, I
- 13 believe, has a post-1914 right. So that in the
- 14 circumstance of curtailment of that right, then Natomas
- 15 would have the right to have the entire deficiency made
- 16 up of stored water and ask if that was your
- 17 understanding of the contracts.
- 18 MS. NIKKEL: I guess I still don't see how
- 19 that question relates to the issue of the peak diversion
- 20 under the project.
- 21 CO-HEARING OFFICER DODUC: And neither do I.
- MS. DES JARDINS: Then let me ask --
- 23 CO-HEARING OFFICER DODUC: Ms. Des Jardins,
- 24 before you throw the whole due process at me again, yes,
- 25 you do have the right to conduct cross-examination, but

1 your cross-examination must be relevant to the petition

- 2 before us, and it must add value to the record, and it
- 3 must help us better understand the issues before us.
- 4 I have struggled with your cross-examinations,
- 5 and I need you to provide that clear linkage before I
- 6 will allow you to continue.
- 7 MS. DES JARDINS: Am I allowed to propose a
- 8 different line of questioning? Because that's what I
- 9 was going to do. I wanted to ask about the rates of
- 10 diversion under the contracts.
- 11 CO-HEARING OFFICER DODUC: The rates of
- 12 diversion under the contracts?
- MS. DES JARDINS: Yes.
- 14 CO-HEARING OFFICER DODUC: That would be
- 15 diversion by the projects?
- 16 MS. DES JARDINS: My understanding is that the
- 17 stored water is rediverted under -- under the bureau by
- 18 the settlement contractors under the bureau's right.
- 19 And it was for that reason that your example in the 2014
- 20 curtailment, there was a number which was the most
- 21 extreme example -- there were a number of settlement
- 22 contractors who were curtailed but their contract
- 23 specifies that the bureau will make it up.
- 24 And I raised the question then because I
- 25 looked at Sacramento Valley very closely. And I said

- 1 how can you do this if they're curtailed?
- 2 But I believe they're allowed to redivert
- 3 under the stored water right. And so I believe that --
- 4 that's what I'm not getting clarification on. But I
- 5 believe these are all rediversions of stored water under
- 6 the bureau's water right. I believe the bureau asserted
- 7 very strongly that nobody has a right to redivert stored
- 8 water except under the water rights.
- 9 CO-HEARING OFFICER DODUC: Ms. Nikkel?
- 10 MS. DES JARDINS: That is where -- unless
- 11 they're willing to stipulate that the settlement
- 12 contractors are diverting abandoned water, but I don't
- 13 think that's the case.
- 14 CO-HEARING OFFICER DODUC: Ms. Nikkel and then
- 15 Mr. Berliner.
- 16 MS. NIKKEL: I still don't see the relevance
- 17 to this proceeding. I understand the questions are
- 18 about the bureau's water rights and the use of those
- 19 rights, but that has nothing to do with the change in --
- 20 the proposed change in point of diversion.
- 21 CO-HEARING OFFICER DODUC: Mr. Berliner?
- MR. BERLINER: Same objection.
- 23 CO-HEARING OFFICER DODUC: Ms. Des Jardins, do
- 24 you have a different line of questioning that is
- 25 relevant to the issue in --

- 1 MS. DES JARDINS: I'm trying to read, but I
- 2 don't find -- Title 23, California Code of Regulations
- 3 very clearly states that information on rates of
- 4 diversion would be supplied.
- 5 I didn't see it in the petitioners'
- 6 application.
- 7 CO-HEARING OFFICER DODUC: Yes, by the
- 8 petitioner. These are not petitioners before us.
- 9 MS. DES JARDINS: I was just trying to get
- 10 some information in the absence of that information
- 11 being supplied, but I'm willing to stop.
- 12 CO-HEARING OFFICER DODUC: Thank you.
- MS. DES JARDINS: Thank you.
- 14 CO-HEARING OFFICER DODUC: Any further
- 15 relevant, meaningful, substantive, helpful
- 16 cross-examination?
- Not seeing any other volunteers.
- 18 Ms Nikkel, Mr. Cooper, does that conclude?
- 19 MS. NIKKEL: That concludes. We have no
- 20 redirect.
- MR. COOPER: Yes.
- 22 CO-HEARING OFFICER DODUC: And I will again
- 23 ask you to wait until the conclusion of all the panels
- 24 for Group 7 before introducing your exhibits.
- MS. NIKKEL: Thank you.

- 1 CO-HEARING OFFICER DODUC: We are moving
- 2 quicker than anticipated. I don't see Panel 3 in the
- 3 audience. I think we may be adjourning today.
- 4 Mr. Hitchings, I'm so pleased to see that I
- 5 have corrupted you enough that you have taken off your
- 6 tie.
- 7 MR. HITCHINGS: Your point is well taken.
- 8 CO-HEARING OFFICER DODUC: And I see only one
- 9 other tie in this room, which I will now have to work
- 10 on.
- 11 Oh, two.
- 12 MR. HITCHINGS: You may be getting to this,
- 13 Hearing Officer Doduc, but the next two panels, they're
- 14 coming from Northern California, two- to three-hour
- 15 drive for each witness.
- 16 It would be very helpful particularly for
- 17 Panel 4 if we could get some estimate as to how long we
- 18 think Panel 3 will take, and that will help with the
- 19 Tuesday/Wednesday hearing scheduling.
- 20 CO-HEARING OFFICER DODUC: I see that, and I
- 21 see that your Panels 5, 6, and 7, you have some specific
- 22 dates being requested?
- 23 MR. HITCHINGS: Yes. And Mr. Bezerra can
- 24 speak to the availability for witnesses on those panels.
- 25 CO-HEARING OFFICER DODUC: Let's talk about

- 1 Panel No. 3.
- Who's in charge of Panel No. 3?
- 3 MR. COOPER: That would be myself and
- 4 Mr. Hitchings.
- 5 CO-HEARING OFFICER DODUC: We will start with
- 6 Panel No. 3 on Tuesday, Byron Sher Auditorium. How much
- 7 time do you anticipate for direct?
- 8 MR. COOPER: No more than 30 minutes.
- 9 CO-HEARING OFFICER DODUC: Show of hands?
- 10 Those at this time thinking they might conduct
- 11 cross-examination?
- 12 Okay. So I'm guessing at least one day.
- Panel No. 4, you don't think it will take a
- 14 whole day?
- MR. HITCHINGS: That would also be a panel
- 16 that Mr. Cooper and I will be conducting direct on. I
- 17 think that would probably be maybe 40 minutes of direct.
- 18 CO-HEARING OFFICER DODUC: Will they be
- 19 available on Tuesday, as well?
- 20 MR. COOPER: Yes. With the exception of
- 21 Mark Orme. Mr. Orme is not available until Friday.
- 22 CO-HEARING OFFICER DODUC: Okay.
- 23 MR. COOPER: What I would propose is we go
- 24 ahead with the panel, and then we can trail Mr. Orme to
- 25 a later date when it's convenient.

1 CO-HEARING OFFICER DODUC: Mr. Berliner, I see

- 2 you there.
- 3 MR. BERLINER: We don't think that our
- 4 cross-examination will take a considerable amount of
- 5 time. So it seemed to us that it would be reasonable to
- 6 expect these two panels could get done on Tuesday.
- 7 Depending on direct, but cross-examination will be
- 8 pretty standard routine so -- and fairly repetitious, I
- 9 believe.
- 10 CO-HEARING OFFICER DODUC: Thank you,
- 11 Mr. Berliner.
- Now, my understanding is that your Panels 5,
- 13 6, and 7 will not be available until November 3rd; is
- 14 that correct?
- 15 MR. BEZERRA: Ryan Bezerra for Roseville.
- No, actually, we were just trying to
- 17 coordinate those into those dates. Those were the dates
- 18 that at the time we sent the letter we thought would
- 19 work. We think we can probably arrange for at least one
- 20 of those panels to be here on Wednesday. We have some
- 21 childcare issues. We have people leaving town. We have
- 22 a variety of issues coordinating all those witnesses. I
- 23 believe we're pretty sure we can get at least one panel
- 24 here on Wednesday.
- 25 CO-HEARING OFFICER DODUC: And the others on

- 1 Thursday and Friday?
- 2 MR. BEZERRA: Depending on cross-examination,
- 3 we may be able to do more than one on Wednesday. I
- 4 don't know what the cross is planned for each of those
- 5 three panels.
- 6 CO-HEARING OFFICER DODUC: Mr. Berliner, might
- 7 you give us some clue?
- 8 MR. BERLINER: So these panels are
- 9 substantially different between the three of them, and
- 10 so it would be very helpful to know which ones you're
- 11 anticipating for which days.
- 12 CO-HEARING OFFICER DODUC: Panel 6 is -- well,
- 13 let me refer back to the attorneys representing those
- 14 panels.
- MS. BUCKMAN: Ms. Buckman for the panel.
- 16 So the Folsom diverters panel needs to go on
- 17 Wednesday, if possible, starting no earlier than 10:00
- 18 in order to accommodate the childcare dropoff.
- 19 And so we would be looking for them on
- 20 Wednesday: The Folsom diverters, Roseville, San Juan,
- 21 Folsom.
- 22 And Placer County Water Agency, Mr. Maisch is
- 23 in Spain. But we spoke with -- this morning with the
- 24 attorneys for Placer County Water Agency, and Mr. Fecko
- 25 can step in for Mr. Maisch on the panel. And Mr. Maisch

- 1 will make himself available for any further discussion
- 2 people want to have with him when he returns to the
- 3 country.
- 4 MR. BERLINER: We don't have a time estimate
- 5 at this point for the Placer County Water Agency
- 6 witness, but we would imagine it will be --
- 7 CO-HEARING OFFICER DODUC: This is why I said
- 8 no to a scheduling meeting. It's just too difficult to
- 9 project, especially with the number of parties, and, you
- 10 know, how much cross-examination will take and all that.
- 11 So let's just aim to complete Group 7 next
- 12 week assuming that your -- your witnesses are available.
- MS. BUCKMAN: If we don't have extensive
- 14 cross, we think we could do two panels, either 5 and 7
- 15 or 5 and 6 on Wednesday and the other one on Thursday.
- 16 MR. BERLINER: Could I take a minute to confer
- 17 with the attorneys and get right back to you for a
- 18 second?
- 19 CO-HEARING OFFICER DODUC: Okay. And as
- 20 you're doing that, let me ask: Is there a
- 21 representative here from the Group No. 7 and 15?
- 22 Is there a representative from Group 7 and 15?
- 23 Mr. Hitchings is trying to fight his way to
- 24 the podium.
- MR. HITCHINGS: Yes, thank you.

- 1 My -- one of my other colleagues at the firm,
- 2 Aaron Ferguson, is the lead for that. I can confer with
- 3 him. I believe they are prepared to immediately follow
- 4 as soon as the Group 7, other panels are done. So we
- 5 can report on that on Tuesday the morning.
- 6 CO-HEARING OFFICER DODUC: Excellent.
- 7 MR. HITCHINGS: One other thing I might add
- 8 for the Feather River Panel, that it sounds that the
- 9 Sac River Settlement Contractor Panel on Tuesday would
- 10 take the morning. And would it be fair and appropriate
- 11 to say they should be ready to go as of 12:30 -- be here
- 12 by 12:30, just in case they do start that early?
- 13 CO-HEARING OFFICER DODUC: That sounds --
- 14 MR. HITCHINGS: But no need before then to be?
- 15 CO-HEARING OFFICER DODUC: That is correct.
- 16 MR. HITCHINGS: Okay. Thank you.
- 17 CO-HEARING OFFICER DODUC: Let me be extra
- 18 ambitious. Is there a representative here representing
- 19 Group 8?
- 20 MS. NIKKEL: Meredith Nikkel on behalf of
- 21 Tehama-Colusa Canal Authority. Group No. 8 will be
- 22 ready next week.
- 23 CO-HEARING OFFICER DODUC: Thank you,
- 24 Ms. Nikkel.
- 25 Group 9? North Delta Water Agency, anyone

- 1 here representing them?
- 2 MR. O'BRIEN: Kevin O'Brien representing
- 3 North Delta Water Agency. We'll be ready next week in
- 4 whatever order you'd like.
- 5 CO-HEARING OFFICER DODUC: Excellent.
- 6 Number 10?
- 7 MR. ALADJEM: Good afternoon, Chair Doduc.
- 8 David Aladjem for Group No. 10. We'll be ready on
- 9 November 3rd, and I believe that group number --
- 10 actually Group No. 10, let's leave it at that.
- 11 CO-HEARING OFFICER DODUC: All right. I think
- 12 that's far enough ahead.
- 13 Was there a report from the huddle?
- 14 MR. BEZERRA: We decided to throw a Hail Mary.
- 15 CO-HEARING OFFICER DODUC: As long as you
- 16 don't run into the band.
- 17 MR. BEZERRA: Depending on your reference.
- I think what we'd like to do is propose that
- 19 those of us presenting Panel Five, 6, and 7 caucus with
- 20 those who plan to be cross-examining. We'll figure that
- 21 out and report back as soon as we can.
- Panel 5 will be ready to go at 10:00 o'clock
- 23 on Wednesday. I think that's the best available
- 24 information, and then we can proceed from there.
- 25 As Mr. Hitchings indicated, one of the

1	Sacramento County Water agency witnesses has some
2	scheduling constraints that may require him to go at a
3	little bit different time. But I believe Wednesday,
4	10:00 o'clock, we should be ready with Panel 5.
5	CO-HEARING OFFICER DODUC: All right. Since
6	we're adjourning early, you have plenty of time to
7	coordinate.
8	MR. BEZERRA: Yes. Thank you.
9	CO-HEARING OFFICER DODUC: Anything else,
10	before we adjourn for the week?
11	All right. Thank you, everyone. And we'll
12	see you Tuesday in Byron Sher Auditorium.
13	(Whereupon, the hearing was adjourned
14	at 1:58 p.m.)
15	000
16	
17	
18	
19	
20	
21	
22	
23	

California Reporting, LLC - (510) 224-4476 www.CaliforniaReporting.com

1	CERTIFICATE OF REPORTER
2	I, Megan Alvarez, a Certified Shorthand
3	Reporter, hereby certify that the foregoing proceedings
4	were taken in shorthand by me at the time and place
5	therein stated, and that the said proceedings were
6	thereafter reduced to typewriting, by computer, under my
7	direction and supervision;
8	I further certify that I am not of counsel or
9	attorney for either or any of the parties to the said
10	proceedings, nor in any way interested in the event of
11	this cause, and that I am not related to any of the
12	parties thereto.
13	DATED:, 2016
14	
15	
16	MEGAN F. ALVAREZ, RPR
17	Certified Shorthand Reporter License No. 12470
18	Electise No. 12470
19	
20	
21	
22	
23	
24	
25	