1	BEFORE THE
2	CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
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4	
5	RIGHT CHANGE PETITION ) HEARING )
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7	JOE SERNA, JR. BUILDING
8	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
9	BYRON SHER AUDITORIUM
10	1001 I STREET
11	SECOND FLOOR
12	SACRAMENTO CALIFORNIA
13	PART 1A
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1 **APPEARANCES:** 2 CALIFORNIA WATER RESOURCES BOARD 3 Division of Water Rights 4 Board Members Present 5 Tam Doduc, Co-Hearing Officer: Felicia Marcus, Chair and Co-Hearing Officer: Dorene D'Adamo, Board Member 6 7 Staff Present 8 Diane Riddle, Environmental Program Manager Dana Heinrich, Senior Staff Attorney 9 Kyle Ochenduzsko, Senior Water Resources Control Engr. 10 11 12 For California Department of Water Resources 13 Mark Cowin, Director James (Tripp) Mizell, Senior Attorney 14 Cathy Crothers, Assistant Chief Counsel Ken Bogdan, Senior Attorney 15 Duane Morris, LLP 16 By: Thomas Martin Berliner, Attorney at Law 17 18 U.S. Department of the Interior, Bureau Reclamation, and Fish and Wildlife Service 19 Amy Aufdemberge, Assistant Regional Solicitor 20 21 State Water Contractors 22 Stefanie Morris Adam Kear 23 Becky Sheehan 24 25 (Continued)

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1 Friday, August 12, 2016 9:00 a.m. 2 PROCEEDINGS 3 ---000----4 CO-HEARING OFFICER DODUC: Good morning, everyone. Would you take your seat. It's 9:00 5 6 o'clock. 7 Welcome back to California WaterFix Water 8 Rights hearing. 9 I am Tam Doduc, Board Member and Hearing Officer for this matter. Board Chair Felicia Marcus 10 and Co-Hearing Officer will be joining us shortly. To 11 12 my far right is Board Member DeeDee D'Adamo. To my 13 left are Dana Heinrich, Diane Riddle, and Kyle Ochenduszko. We also have Mr. Baker and Mr. Long 14 15 assisting us today. 16 The usual announcements: Please take a moment 17 and identify the exits closest to you. In the event of 18 an emergency, an alarm will sound and we will evacuate 19 this room. We will take the stairs down to the first 20 floor, exit, and cross the street to the park. If you are not able to use the stairs, you will be directed 21 22 into a protective vestibule. As you know by now, this 23 hearing is being recorded and webcast, so please 24 provide all comments into the microphone and begin by 25 stating your name and affiliation.

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1 Our court reporter is here with us again today, and the transcript will be made available on our 2 3 website upon completion of Part 1A. If you need to 4 have it sooner, please make arrangements with the Court 5 reporting services. 6 Please take a moment and put all noise-making 7 devices on vibration, silent, off, or "do not disturb" features -- as I will do, since I was guilty of making 8 9 a noise yesterday. 10 With that, are there any procedural matters, 11 questions that we need to address before we resume cross-examination? 12 13 Okay. Not seeing any, Ms. Meserve, we will continue with your cross-examination. 14 15 MICHAEL ANDERSON, RON MILLIGAN, 16 JOHN LEAHIGH and MARK HOLDERMAN, called as witnesses on behalf of the 17 18 Petitioner, having been previously duly 19 sworn, were examined and testified further as hereinafter set forth: 20 CROSS-EXAMINATION BY MS. MESERVE (resumed) 21 22 MS. MESERVE: Good morning. It's Osha Meserve 23 doing cross-examination. 24 MS. MESERVE: I was informed by staff that we 25 were able to locate the slide that I was looking for

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1 vesterday regarding the flows across the -- in the --2 the changes and flows in the South Delta, so if we 3 could go to that. I had called it Slide 9 from DWR-1, 4 but I think that's wrong. 5 Okav. 6 MR. LONG: This is Page 8 of DWR-1E corrected. 7 MS. MESERVE: 1E, okay. Thank you. I'm going to find my page in my notes. I'm sorry. I wasn't 8 9 expecting that we could ask about that. 10 Well, I think -- oh, I see. The numbers were taken away. Yeah, I don't think it's worth asking 11 12 about at this point. The question I had was there 13 was -- it used to say that there would be a reduction in reverse flows in the South Delta, and there was a 14 specific range given. And I had a question about how 15 16 that was derived. 17 But with the change in the slide, I'm not sure 18 I can ask this question. I'll get to the issue of 19 reverse flows in the North Delta later. Let's see. So instead -- thank you for finding that. I 20 21 really appreciate it. 22 So I want to follow up briefly on the issue of 23 low-level pumping, which we spoke about yesterday, of being apparently 900 cfs, or three times Freeport, just 24 25 to see if Mr. Milligan or Mr. Leahigh had anything to

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1 add to their testimony with respect to how, if ever the 2 low-level pumping would be ceased. So I just wanted to 3 give an opportunity to clarify the answers from 4 yesterday, if that would be all right, in case there was anything additional. Is there? 5 6 WITNESS LEAHIGH: Well -- so this is John 7 Leahigh. I think that Mr. Milligan made a good 8 9 clarification that low-level pumping was up to 300 cfs 10 per intake. I think that, if you look at the example

that I had put together, there were many periods of 11 time where there was zero pumping occurring at the --12 13 or zero diversion occurring at the proposed intakes. MS. MESERVE: Okay. And would that be 14 15 reflected -- would that be something that we could 16 discuss with the modeling panel in terms of how often that occurred under the models' offered scenarios? 17 18 WITNESS LEAHIGH: Perhaps it would have that 19 information.

20 MS. MESERVE: Am I correct in saying that 21 today you still don't have that information right now 22 as we sit here?

23 WITNESS LEAHIGH: I don't have the information 24 over the long-term what the -- as far as zero pumping 25 or zero intake at the new diversion, no, I don't have

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1 that on a long-term, only for the exhibit that was a 2 part of my testimony.

3 MS. MESERVE: Okay. You know, I'm looking at 4 the time, and I just have a question for the Chair. I 5 sort of think I was -- was I 30 minutes in when we left 6 off? I thought it was more like 15. But maybe I'm 7 wrong.

8 CO-HEARING OFFICER DODUC: Just continue as long 9 as your line of question is relevant, effective, and 10 efficient, we'll be accommodating.

11 MS. MESERVE: Thank you.

Okay. So back on the slide that's been put up now, which is from DWR-1E -- is that correct? Can anyone on the panel explain why the words

were removed from the more natural flow patterns, that part was removed from this slide?

MR. MIZELL: If it's informative to the Board,
I can explain what was in our letter that accompanied
the errata slides when we submitted them.

20 CO-HEARING OFFICER DODUC: Please do.

21 MS. MESERVE: Thank you.

22 MR. MIZELL: The errata that -- we removed the 23 captions from this particular graphic because they were 24 representative of past materials, and they were not 25 representative of what was being presented in the

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1 testimony itself.

2 CO-HEARING OFFICER DODUC: But why would that 3 particular part change?

4 MR. MIZELL: I don't have the reasoning behind 5 these materials, but when we were presenting 6 Ms. Pierre's testimony, we were not presenting the 7 numbers that appeared in the caption.

8 MS. MESERVE: Just for the record, the caption 9 on the left next to the fish used to say "Reinstate a 10 more natural direction of flows in the South Delta by 11 46 to 160 percent."

12 CO-HEARING OFFICER DODUC: So Ms. Meserve, are 13 you questioning whether the conclusion or at least the 14 statements of improvement have been altered regardless 15 of what number goes there?

16 MS. MESERVE: That's really my line of -- yes. That's what I'm curious about and trying to understand 17 18 is that one of the -- and I did find -- because I 19 looked elsewhere in the testimony, so I found that in 20 Ms. Pierre's testimony, DWR-51, Page 8, it says, 21 "Reducing South Delta pumping would provide more 22 natural east-west flow patterns." So that's similar to 23 what's provided -- used to be provided under the little 24 fish figure below -- I mean, to the left rather. 25 So I was just trying to follow up if there has

been a change in the project proponent's representation
 of what was going to occur if this petition's granted.

3 MR. MIZELL: We did not want to mislead the 4 public by putting out numbers in the Power Point 5 presentation that were not representative of the 6 written testimony because it was our understanding the 7 Power Points were to be a summary of the written 8 testimony.

9 CO-HEARING OFFICER DODUC: Okay. Regardless 10 of the number, what about the aspect of improving 11 natural flow I think is where Ms. Meserve was trying to 12 lead.

13 MS. MESERVE: Yes. Can anyone on the panel speak to the improving natural flows and whether that's 14 15 still part of the project proponent's representations? 16 WITNESS LEAHIGH: Yes. So I wasn't familiar 17 with the specific numbers that may have appeared on 18 here or not. But the basic concept is still valid, 19 which is, with the new North Delta diversion, much of 20 the diversions that currently take place in the south 21 diversion location would be shifted to that North Delta 22 diversion. And the result of that would be a decrease 23 in the amount of net negative flow along Old and Middle 24 River generally.

25

MS. MESERVE: Okay. Would these reductions in

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1 reserves flow in the South Delta occur in every water
2 year under operations?

3 WITNESS LEAHIGH: I think that's probably the
4 case. The modelers would be the better source to -5 they're the ones that have evaluated all year types.
6 But I would imagine there will be some reduction in
7 reverse flows in every year.

8 MS. MESERVE: And can you speak to whether 9 there are predicted increased reduced flows -- I mean, 10 sorry -- flow reversals at the North Delta diversion 11 locations under the proposal?

I can ask a more specific question. With respect to looking first at the Sacramento River, would there be an increase in reverse flows in the Sacramento River in the vicinity of the North Delta diversions? WITNESS LEAHIGH: That part of it I don't have as good an understanding. That would be a better guestion for the modelers.

MS. MESERVE: Do you know what the increase in reverse flows over current conditions would be at Miner Slough?

22 WITNESS LEAHIGH: I do not. Perhaps the23 modelers would have that information.

24 MS. MESERVE: And Georgiana Slough?

25 WITNESS LEAHIGH: Same response.

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1 MS. MESERVE: Is it fair to say that the flow reversals in the North Delta would increase when the 2 3 North Delta diversions were being used? 4 WITNESS LEAHIGH: No, I don't have the 5 information. 6 MS. MESERVE: Do you know what will be done 7 operationally to minimize flow reversals in the 8 Sacramento and the other sloughs I mentioned? 9 WITNESS LEAHIGH: No, I don't have that 10 information. Again, I'd refer you to the modeling 11 panel. 12 MS. MESERVE: Are there any conditions or 13 limits that DWR or the Bureau has proposed to limit flow reversals in the North Delta as a result of the 14 15 diversions? 16 WITNESS LEAHIGH: I'm not aware of the 17 specifics on that point. 18 MS. MESERVE: Okay. I'm going to move on to a 19 discussion about how under operations we would -- this project proposes to prevent injury to legal users of 20 21 water. 22 I recall that, during the engineering panel, 23 we heard how the mitigation measures AG1, GW1, Groundwater 1 and Groundwater 5 and Water Quality 11 24 25 would prevent injury to agricultural and domestic water

1 users. Would those same measures reduce injury to

2 water users during operation?

3 WITNESS LEAHIGH: I'm not familiar with the 4 measures you're referring to.

MS. MESERVE: Okay. I do have -- just to 5 6 assist the witness in this, in my folder that I just 7 provided, I have SWRCB Chapter ES, which is Executive Summary of the Draft R-DEIR. If you could pull that 8 9 out? I'm sorry. It's under one that's called 10 "Operations," not this -- not this folder. 11 There we go. The Chapter Zero, "Executive 12 Summary." And then if we scroll to -- sorry I wasn't 13 able to excerpt this -- 82. So we have AG1 at the bottom, "Development and Ag Land Stewardship," and keep 14 15 scrolling down to the next page. 16 And then also for construction and operation,

17 we have an Ag Stewardship Plan, which is a several-page 18 menu options of things that DWR might do and the Bureau 19 might do. And Groundwater 1, maintaining water 20 supplies and then minimizing seepage and then 21 attempting to reduce water quality. 22 So my question is, are you aware for

23 operations of how these types of things would reduce 24 impacts to legal users of water? Is that part of the 25 plan?

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WITNESS LEAHIGH: I was not involved in the
 development of these provisions. So I have no
 knowledge.

MS. MESERVE: Yesterday we spoke about how you
or someone like you might operate the project if built,
correct?

7 WITNESS LEAHIGH: Our office would be making 8 kind of the macro water management decisions for the 9 new infrastructure, that's correct.

10 MS. MESERVE: Who would be responsible for 11 preventing injury and impacts to water users during 12 operation of the project?

13 WITNESS LEAHIGH: Well, it depends on what 14 aspect you're talking about. We have a number of 15 different offices within the Department that have 16 various responsibilities.

MS. MESERVE: Is any of that reflected here in the mitigation measures that we were referred to last week for how these injuries would get weighted in construction?

21 WITNESS LEAHIGH: Again, I don't know offhand. 22 I -- I am not familiar with these measures. I wasn't 23 involved in any of the development of the EIR/EIS. 24 MS. MESERVE: Do you agree with the testimony 25 that you heard about construction that also, during

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operations, all injuries to legal users of water could
 be avoided through these types of measures?

3 WITNESS LEAHIGH: I have no opinion on that,4 not being familiar with this.

5 MS. MESERVE: Okay. How would you explain or 6 if you have any comment it or someone else on the 7 panel, you will see in the -- it's the significant and 8 unavoidable here, under the "Operation of a proposed 9 water conveyance facility." And there's other impacts 10 like that as well, but I'll just stick with that. 11 Can you explain how the effects, from a CEQA and NEPA perspective, would be significant and 12 13 unavoidable or adverse, in the last column, and then at the same time not be expected to injure any legal users 14

15 water?

16 WITNESS LEAHIGH: Again, I have no opinion on 17 this. I was not involved on any of the development of 18 the EIR/EIS.

MS. MESERVE: We're being asked to look at these measures as ways that the injury would be prevented, however, correct? The witness is non-responsive. I'll move on. WITNESS LEAHIGH: Could you repeat the question? MS. MESERVE: Would you agree we're being told

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1 that these are the types of measures that would avoid

2 injury to legal users of water during operations, 3 correct?

WITNESS LEAHIGH: I don't know. 4 5 MS. MESERVE: We also heard during the 6 engineering panel that, under the environmental 7 commitments, there would be a contact at DWR or the design -- whoever was undertaking the construction 8 9 during construction in order to have someone for water 10 users and property owners to contact if there was a 11 problem. 12 Do you know if there would be a similar 13 contact or program for during operation of the project? The witness is non-responsive. 14 15 CO-HEARING OFFICER DODUC: Give him a few 16 seconds there. MS. MESERVE: Sure. I can clarify if there's 17 18 a problem with the question. 19 WITNESS LEAHIGH: I imagine there would be somebody with the Department that could respond to 20 21 concerns that were project related, yes. 22 CO-HEARING OFFICER DODUC: And who would that 23 be? WITNESS LEAHIGH: I don't know offhand. 24 25 Depends on what the issue is and where, what type of

issue. I don't have -- very vague question. 1

2	MS. MESERVE: Okay. I can give you an
3	example. For instance, what if a nearby water user,
4	like one of the users I represent that has an intake
5	just across from the third southerly intake, and they
6	are experiencing difficulty getting their pumps to work
7	because of the change in water levels. Who would they
8	contact?
9	WITNESS LEAHIGH: Well, these sorts of issues
10	that are if they're project-related issues, we do
11	have within our Bay-Delta office several branches that
12	will deal with these sorts of work with local
13	districts. So, for example, the South Delta, we have
14	Mr. Holderman here
15	CO-HEARING OFFICER DODUC: Mr. Leahigh, let me
16	interrupt here.
17	I think it's unrealistic at this point,
18	Ms. Meserve, to ask Mr. Leahigh or anybody to actually
19	name somebody who would be available to address these
20	questions or concerns. But you make an important
21	point, that these things need to be addressed, and
22	there has to be some accountability by the project
23	proponents to address these concerns.
24	So, Mr. Leahigh, without trying to name names
25	that you cannot just pick out of the hat right now, I

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would suggest you provide responses to Ms. Meserve, to
 the extent you know, in terms of the Department's
 commitment to address her concerns.

4 WITNESS LEAHIGH: Yes. I think, as I was 5 saying, the Department would be committed to deal with 6 any project-related issues regarding inability or 7 effect on other users to divert as they had without --8 prior -- without the project in place.

9 MS. MESERVE: But as of today -- and I'm not 10 looking for a name, just to clarify. I was more 11 thinking of a program or some just proposed approach. 12 As of today, Mr. Leahigh, you do not have that 13 information, correct?

14 WITNESS LEAHIGH: I don't have the specific 15 information, no.

16 MS. MESERVE: Are you familiar, Mr. Leahigh, 17 with the prior BDCP Chapter 7 government structure? Is 18 that something you were involved in at all?

19 WITNESS LEAHIGH: No, I was not involved in 20 that.

21 MS. MESERVE: Is anyone on the panel familiar 22 with that prior version of the project, Chapter 7 23 government structure?

24 It's okay.

25 WITNESS MILLIGAN: I will say that I've seen

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1 it, but that is guite a few versions ago, and I 2 couldn't begin to tell you which may have been --3 which, the exact governing structure under a Bay-Delta 4 conservation plan. This is not the proposed project 5 we're speaking to today. 6 MS. MESERVE: Thank you. I only bring it up 7 to ask that -- or to point out that that had -although many of us weren't fully satisfied with it, it 8 9 did have a stakeholder committee that had some kind of 10 input, potentially, into the operation of the project 11 and also construction in order to address these kind of 12 concerns. 13 Is anyone on the panel aware if there's anything like that planned for the current proposal? 14 WITNESS MILLIGAN: I'm not aware. 15 16 MS. MESERVE: Are you aware -- is anyone on 17 the panel aware of whether there would be funding in 18 place or assigned for this type of endeavor, to address 19 complaints and issues as they arise to prevent injury 20 to water users? WITNESS LEAHIGH: I'm not aware. Not to say 21 22 there isn't but I'm not personally aware. 23 MS. MESERVE: Is -- I guess it would be 24 Mr. Leahigh. Are you familiar with the Tort Claims 25 Act, which is the method by which individuals can try

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1 to seek damages from the State government?

MS. MORRIS: Objection, calls -- Stefanie
Morris.
CO-HEARING OFFICER DODUC: Yes, Ms. Morris?
MS. MORRIS: Calls for a legal conclusion.
MS. MESERVE: I asked if he was aware of it.
CO-HEARING OFFICER DODUC: He can answer that
question.

9 WITNESS LEAHIGH: Not particularly, no.
10 MS. MESERVE: Do you know whether affected and
11 injured individuals would have to rely on the Tort
12 Claims Act rather than some other procedures we've been
13 discussing previously?

14 MR. BERLINER: Objection.

15 CO-HEARING OFFICER DODUC: You need to

16 rephrase that, Ms. Meserve.

MS. MESERVE: Since he's not aware of the TortClaims Act, then it's probably best to move on.

CO-HEARING OFFICER DODUC: I agree. Thank
 you.

MS. MESERVE: Okay. I have a question about real-time operations which has been discussed on this panel. Does that include any tract for affected property owners and water rights holders, to have input into the operations of the North Delta diversions to

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1 prevent injury?

2 WITNESS LEAHIGH: The real-time operations as 3 I was discussing it, which would be -- no there would not be that involvement. I wouldn't see that there 4 5 would be that involvement. 6 MS. MESERVE: Do you anticipate any 7 involvement of the thousands of affected diverters in the Delta in the operation of the project? 8 9 MR. BERLINER: Objection, assumes facts not in 10 evidence. 11 CO-HEARING OFFICER DODUC: Ms. Meserve, would 12 you like to rephrase that? 13 MS. MESERVE: Is it your position, Mr. Leahigh, as far as you know, that there would be no 14 15 input of the affected diverters in operation of the 16 project? WITNESS LEAHIGH: I can't say for sure one way 17 18 or the other. 19 MS. MESERVE: Okay. Now I'm going to give you 20 something to do. Mr. Holderman, I know you've been wanting something. Let's see. 21 22 So, according to your testimony, DWR-62, 23 you're an expert on the drought barriers, right? 24 WITNESS HOLDERMAN: Our office was involved in 25 installing last years' drought barrier at West False

1 River, yes.

2	MS. MESERVE: Was your office also involved in
3	the planning of the northern two barriers that weren't
4	actually put in place in 2014 and 2015 but were
5	considered?
6	WITNESS HOLDERMAN: Yes.
7	MS. MESERVE: Could you please put up I
8	have in my folder it's called "DWR Barriers
9	PowerPoint." And the second page.
10	This is the Power Point presentation from 2015
11	on the drought barriers. Are any barriers in the North
12	Delta proposed as part of the WaterFix?
13	WITNESS HOLDERMAN: No.
14	MS. MESERVE: This is part of the reason
15	that you were asked to be on this panel that the
16	barriers were found to cause similar salinity and water
17	level impacts as the WaterFix would because they
18	removed fresh water flow out of the channels?
19	WITNESS HOLDERMAN: I can answer that.
20	CO-HEARING OFFICER DODUC: Okay.
21	WITNESS HOLDERMAN: My purpose for being here
22	is to answer questions on the South Delta barriers and
23	the Head of Old River barrier in South Delta, nothing
24	in the North Delta.
25	MS. MESERVE: Just looking at this picture,

1 this is from -- this is showing the change in elevation 2 from the northern Delta. And I'll get to the point, I 3 promise.

4 The little star, it's tiny, but that's showing the elevational changes during project operations. 5 Does anybody on the panel actually know if there's any 6 7 visual representation of expected water level changes? I know we have testimony about point 5 to 1.25 --8 9 1.2 feet. But is there anything similar to this kind 10 of representation in the DWR's exhibits, that you know 11 of? WITNESS LEAHIGH: As it relates to the --12 13 MS. MESERVE: WaterFix? WITNESS LEAHIGH: -- the proposed North Delta 14 15 diversions? 16 MS. MESERVE: Yes. WITNESS LEAHIGH: Then that would be a 17 18 question for the modelers. I'm not aware that anything 19 of this type exists. MS. MESERVE: Okay. If DWR finds that 20 21 information later, I would be appreciative to be 22 pointed to it. 23 CO-HEARING OFFICER DODUC: Ms. Meserve, before 24 you move on, do you want to mark this for 25 identification? I didn't hear your reference of it.

1 MS. MESERVE: Sure. I'm not sure what I'm 2 going to do with it. We can mark it as Land 1. I 3 don't know if I have another one already. 4 (Watershed Landowners Exhibit LAND-1 marked for identification) 5 6 MS. MESERVE: Now, Mr. Holderman, for the 7 impact from the barriers, there were impacts to numerous diversions that required DWR to take action to 8 9 prevent injury in both the one you actually installed 10 and in the north that was planned, correct? 11 WITNESS HOLDERMAN: There were plans being, made to address the water levels for the barriers in 12 13 the North Delta, yes, if we installed them. MS. MESERVE: Do you know under what 14 15 conditions the DWR would propose those same barriers 16 again in the North Delta? WITNESS HOLDERMAN: They would have to be more 17 18 critically dry conditions than we experienced last year 19 when we put in just the West False River barrier. That was extreme condition; however, it didn't warrant 20 21 installing barriers in the north. So it would have to 22 be something worse than that, in my view. 23 MS. MESERVE: Do you, Mr. Holderman or 24 Mr. Leahigh, know how the combination of any barriers 25 that could be installed and the new points of

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1 diversion, how they would interact if they were both in 2 place?

3 WITNESS HOLDERMAN: I don't believe that DWR's 4 modeled that. The chances of putting in North Delta 5 drought barriers would be -- would be a rare event. So 6 it isn't something that we've molded with the new 7 intakes, which won't be online for another 13 years or 8 so at best.

9 MS. MESERVE: And this -- this pertains back 10 to DWR's program for addressing injury. Mr. Holderman, 11 do you recall discussions with DWR during the barriers 12 that occurred -- that were proposed in the north about 13 replacement water supplies and modifications to diversion intakes that were required or would have been 14 15 required to protect water users? 16 WITNESS HOLDERMAN: Yes. 17 MS. MESERVE: And was your team able to survey 18 all the effective diversions on the Sutter and 19 Steamboat sloughs?

20 WITNESS HOLDERMAN: Yes, we did.

21 MS. MESERVE: Were you ever able to survey

22 from the land?

23 WITNESS HOLDERMAN: I wasn't -- we had 24 surveyors go out and do those surveys. Most of them 25 are from the water side. I don't know if they needed

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1 to access the land to do that. There might have been 2 some cases where they did.

3 If they needed to, they would need to get
4 permission from the land owners and possibly from the
5 reclamation districts.

6 MS. MESERVE: Yes. Well, to my knowledge, 7 that never occurred because that was not able to be --8 I'll just correct the record. That was not able to be 9 accomplished.

Let's see. How long were you working on the barriers project leading up to the 2015 work in -- I'm sorry. DWR was considering barriers in both 2014 and then again in 2015, correct?

14 WITNESS HOLDERMAN: Correct.

MS. MESERVE: And by 2015, did you -- you mentioned you had a survey, but was that a detailed enough survey that you could actually provide replacement water supplies if the barrier went in in 2015?

20 WITNESS HOLDERMAN: The plans were similar to 21 what plans were in place during the late '70s, when the 22 North Delta salinity barrier did go in. And what was 23 anticipated is that the diverters that would be 24 immediately downstream of the barriers, one or two 25 barriers that would be installed, would be the most

affected on the low low tides, as you see in this
 display.

3 Those that are downstream of the barriers that 4 have diversions that are such that that foot, foot and a half decrease in the low low water levels would have 5 an effect on their diversions, we would address either 6 7 -- then there's a number of ways to address that, either with extending their diversion, providing 8 9 supplemental pumping with temporary pumps. There are a 10 lot of different things that can be done.

We've done such things in the South Delta for farmers that were downstream of the rock barriers there that were experiencing lower water levels in a low low tide when the barriers were in place. And we addressed those farmers, and they've been satisfied, since we haven't heard anything back in about 15 years. So I think we took care of them.

18 And the same sort of thing would be done for 19 those diverters that are immediately downstream of any 20 North Delta salinity barrier that might be installed.

21 MS. MESERVE: Do you recall that it was in I 22 think March of 2015 and no -- did DWR have in place or 23 order replacement pumps or any of the things that would 24 be needed if the barriers were going in the next month 25 or the month after? Were you ready?

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1 WITNESS HOLDERMAN: There was -- the 2 conditions at that time in March were such that we were 3 looking at just the West False River barrier. It 4 didn't appear that we would be needing to install North 5 Delta barriers. So, no, it wasn't any urgency to go 6 out and rent temporary pumps or do any of that sort of 7 thing.

8 But I might add that, in '78, there were 9 temporary pumps that were acquired by the Department 10 and staged at local -- in local areas in North Delta in 11 case any of the diverters had trouble, and they could 12 go retrieve those pumps and utilize them until 13 something more permanent could be done or until the 14 problem, you know, went away.

15 MS. MESERVE: Would you say that your 16 readiness in 2015 was similar to what DWR did in 1978? WITNESS HOLDERMAN: I -- I wasn't around in 17 18 '78, so I don't know how ready they were. But I know 19 that's what was accomplished by virtue of reading 20 reports on those activities that were done back then. 21 We, again, did not go beyond the planning 22 stage in looking at providing temporary pumps. And 23 that's something we've done in the South Delta, so it's not a real big deal for us to go out and acquire 24 25 temporary pumps.

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1 MS. MESERVE: I'm going to move on to DWR-218, 2 which is in the main testimony. I want to touch on the 3 cut-off walls that were discussed during the 4 engineering panel. Were those cut-off walls also --5 are those permanent? This is probably for Mr. Leahigh. 6 WITNESS LEAHIGH: I do not know. That would 7 have been a question for the engineering panel. MS. MESERVE: Okay. Well, I will represent to 8 9 you that, once constructed, I believe they were 10 permanent. 11 Do you know how deep the cut-off walls that 12 are discussed in this memo, DWR-218, how deep down they 13 would go for the -- around the forebay, the intermediate forebay in the North Delta, for instance? 14 MR. BERLINER: Objection, asked and answered. 15 16 This was all discussed in the engineering panel. 17 CO-HEARING OFFICER DODUC: What is it that you 18 specifically want to address to Mr. Leahigh, 19 Ms. Meserve, regarding operations? MS. MESERVE: I understand that the cut-off --20 21 I'm trying to confirm whether the cut-off walls would 22 be in place also during the operation of the project 23 not just construction. 24 CO-HEARING OFFICER DODUC: Do you know that, 25 Mr. Leahigh?

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WITNESS LEAHIGH: No, I don't know the answer
 to that.

3 MS. MESERVE: So just a quick follow-up then. 4 So -- so you have -- would it be fair to say that you have not considered the interference cut-off walls 5 would cause to bidirectional groundwater flows in the 6 7 permanent state? 8 WITNESS LEAHIGH: I personally have not. 9 MS. MESERVE: Is it possible that cut-off 10 walls would interfere with domestic and agricultural water supplies during the operation of the project? 11 12 CO-HEARING OFFICER DODUC: I can hear the 13 objections now. Mr. Leahigh, I'm assuming you don't have the 14 15 answer to that question. 16 WITNESS LEAHIGH: I do not have the expertise 17 to answer that question. 18 CO-HEARING OFFICER DODUC: Since you have not 19 considered it. Okay. MS. MESERVE: Okay. I will move on to DWR-402 20 21 exhibit. This has to do with the compliance with the 22 standards and the record of compliance of the project 23 which Mr. Leahigh has testified to. 24 Looking at Page 2 of that exhibit, and 25 Footnote 1 which states -- I'll just -- "This analysis

only considers standards for which both projects...are responsible. It does not include those for which only one is operationally responsible, example, Vernalis." Do you know, Mr. Leahigh, what other standards besides Vernalis were excluded for this exceedance analysis?

7 WITNESS LEAHIGH: Yes. As far as I know, from 8 D1641, from Tables 1, 2, and 3, the only standard --9 standards that the projects are not jointly responsible 10 would be both the water quality and the flow standards 11 at Vernalis on the San Joaquin River.

MS. MESERVE: On Footnote 6 [sic], it states that the TUCPs in 2015 allowed EC compliance point to be moved from Emmaton to Three Mile. Would this have allowed salinity intrusion to move further upstream than normally allowed in D1641?

17

WITNESS LEAHIGH: Yes.

MS. MESERVE: Then on Page 1, the metrics, the 18 19 chart shows that the Ag Water Quality EC Standard was exceeded for 35 days in 2013 and 15 days in 2015 at 20 21 Emmaton. Footnote 8 explains -- which I guess is back 22 on the second page; I'm sorry -- that on the 15 days in 23 2015, the CUP was approved allowing the EC compliance to move from Emmaton to Three Mile. Were these 24 25 exceedances in these two years on consecutive days, do

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1 you know?

2	WITNESS LEAHIGH: Yes, I believe the
3	exceedances during these extreme drought years were
4	my recollection is they were on consecutive days, yes.
5	MS. MESERVE: Do you know if these occurred
6	during the irrigation season in the summer, generally?
7	WITNESS LEAHIGH: Yeah, the Emmaton standard
8	generally is in place during the irrigation season, so
9	yes, the exceedances would have occurred during the
10	irrigation season.
11	MS. MESERVE: Do you know what was the
12	percentage of exceedance for just the existing EC
13	objective at Emmaton over the 21-year period?
14	WITNESS LEAHIGH: Yes, I believe that was part
15	of my testimony. I'd have to look at the exhibit
16	that's that I had a separate exhibit that looks
17	specifically at Emmaton. If you bear with me a second,
18	I can see if I can find that.
19	MS. MESERVE: Yes, I'm trying to focus in on
20	the Emmaton compliance regardless of whether there was
21	a TUCP because that's what protects the water quality
22	for ag users.
23	WITNESS LEAHIGH: Right. So there is a
24	separate exhibit that focused on the Western Delta Ag
25	Standards for which Emmaton is one. And I think that
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1 was DWR -- let's see -- probably 402, perhaps.

2 MS. MESERVE: I think that's what we're 3 looking at.

WITNESS LEAHIGH: I'm sorry. It's DWR-403.
MS. MESERVE: And I can look at that. I'll
keep moving. I'm sorry.

Do you know -- do you know how many days in
2015 were above the point 7 EC level established in
2005 for Emmaton to protect South Delta ag water users?
WITNESS LEAHIGH: I'm sorry. I didn't quite
catch all of your question. For 2015?

12 MS. MESERVE: Yes. Do you know how many days 13 in 2015 were above the Emmaton standard established in 14 2005?

WITNESS LEAHIGH: So it would be on this chart or this table. Well, I'm looking at the other exhibit, and it looks like it was 15 days of exceedance in 2015. MS. MESERVE: Okay. Do you know how high -how high they went? I guess we could look at 403 if we want -- but how high the EC level at Emmaton got in the 2015 irrigation season?

22 WITNESS LEAHIGH: I don't know offhand sitting23 here.

24 MS. MESERVE: Okay.

25 CO-HEARING OFFICER DODUC: Ms. Meserve, how

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1 much additional time do you need, and what are your

2 lines of questioning?

3 MS. MESERVE: Yes. I have a couple of 4 questions about the initial operating criteria for Mr. Leahigh, and then I have a couple of questions for 5 6 Mr. Milligan. And I think I could finish in an 7 additional 20 minutes. CO-HEARING OFFICER DODUC: And your questions 8 9 for Mr. Milligan are on? 10 MS. MESERVE: Joint point of diversion and some operations financing. 11 12 CO-HEARING OFFICER DODUC: All right. We'll 13 give you the 20 minutes. 14 MS. MESERVE: Thank you. 15 Can you define the initial operating criteria 16 referred to on Page 19 of your testimony? WITNESS LEAHIGH: Okay. If you can give me a 17 18 second so I can find that. 19 MS. MESERVE: Yes. WITNESS LEAHIGH: Do you know which line on 20 21 Page 19 offhand? 22 MS. MESERVE: Sorry, I have it marked in 23 another thing, I believe. 24 CO-HEARING OFFICER DODUC: So I'm confused. I 25 had assumed that when talking about initial operation

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1 criteria as proposed, it's between this H3 and H4.

2 WITNESS LEAHIGH: Yes, that's correct. I was 3 trying to see exactly what the context was when I made 4 reference to it in my testimony.

5 CO-HEARING OFFICER DODUC: Because if it's not 6 H3 and H4, then you need to correct me.

7 WITNESS LEAHIGH: No, that is correct. The
8 initial operating criteria is assumed to be somewhere
9 between H3 and H4.

MS. MESERVE: Okay. Thank you. Sorry. I didn't have that marked.

Let's see. So you talk about H4A H3 criteria providing conceptual estimates of potential impacts on water users. Did the conceptual estimate include the diversion of an additional 6,000 cfs from the Sacramento River at Fremont Weir?

WITNESS LEAHIGH: No. Well, there's nothing related to the Fremont Weir that's part of the proposed project.

20 MS. MESERVE: Is the Fremont Weir project one 21 of the existing biological opinion requirements, 22 however?

23 WITNESS LEAHIGH: I don't know the exact 24 details as they relate to Fremont Weir in the 25 biological opinion.

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MS. MESERVE: And I'm speaking of the
 2008-2009 biological opinion, too.

3 WITNESS LEAHIGH: Yeah. Offhand, I don't 4 recall the details on that. 5 MS. MESERVE: So as far as you know, would it be fair to say that the conceptual estimate does not 6 7 include those additional diversions that are likely to occur in the future under the biological opinion? 8 9 MR. BERLINER: I'll object. The witness has 10 already indicated he doesn't know. 11 CO-HEARING OFFICER DODUC: There was an 12 objection. Did you get that? 13 The court reporter -- I'm sorry. Mr. Berliner was not speaking into the microphone. I was just 14 15 making sure the court reporter got it. MS. MESERVE: Okay. So, he does not. 16 So to confirm, you do not know whether the 17 18 conceptual estimate includes the Fremont Weir 19 diversions of 6,000 cfs? WITNESS LEAHIGH: I'm not aware of any 6,000 20 cfs Fremont diversion that you're referring to. 21 22 MS. MESERVE: Are you aware, however, of the 23 Yolo bypass RPA under the biological opinion? WITNESS LEAHIGH: Again, I don't recall any 24 25 details related to that aspect of the BiOp.

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MS. MESERVE: Okay. I should skip over the
 next several questions.

3 Does anyone on the panel know where analysis 4 regarding the effect on operations of the 5 implementation of this RPA would be in the case in 6 chief? 7 WITNESS MILLIGAN: No. But maybe the RPAs are embedded in the no-action alternative. 8 9 MS. MESERVE: Okay. Is it your understanding, 10 Mr. Milligan, that these RPAs would be required also 11 under the WaterFix, if that was to be approved? WITNESS MILLIGAN: It's uncertain. 12 13 MS. MESERVE: Let's see, when -- I think this is a question for Mr. Leahigh, but perhaps Milligan. 14 15 Do you know whether the new boundary analysis, 16 model runs and results will accompany the new BO when 17 it is released next winter, if it is? 18 WITNESS MILLIGAN: I'm not aware. 19 MS. MESERVE: Do the operations of the State 20 Water Project, Mr. Leahigh, pursuant to the 4AH3 or H4 21 depend on the purchase of water from upstream sellers 22 to meet to outflow assumptions in these scenarios? 23 WITNESS LEAHIGH: No, I don't believe it 24 depends on that, no. 25 MS. MESERVE: So the simulation didn't assume

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1 any purchase of water from sellers upstream?

2 WITNESS LEAHIGH: That would be a question for 3 the modelers to confirm, but I don't believe that was 4 the case.

5 MS. MESERVE: Okay. Can the project comply 6 with the existing D1641 and biological opinion 7 standards under the initial operating criteria you 8 discussed if -- actually, strike that, since you didn't 9 know the other one. Sorry.

10 And okay. I'll move on to a different area.
11 Mr. Milligan, I heard on cross-examination on
12 Thursday that the Joint Point of Diversion will apply
13 to the North Delta diversions; is that correct, the
14 D1641 Joint Point of Diversion.

WITNESS MILLIGAN: I'm not sure in our discussions that that was exactly what was mentioned. I think what they said is Joint Point of Diversion may continue with the project in place.

MS. MESERVE: All right. Can you describe how under the Joint Point of Diversion accounting is handled whether there would be -- do you know whether there would be any changes to that accounting with the WaterFix in operation?
MB. BERLINER: I don't believe there would be.

24 MR. BERLINER: I don't believe there would be, 25 other than to -- basically, it's still a tracking of if

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there is CVP water conveyed through and diverted by the
 State Water Project for use later by the Central Valley
 Project.

4 Obviously, the accounting and reporting may 5 differ. This is probably years and years from now, so 6 the criteria and response planning that would go around 7 any use of Joint Point would probably evolve by that 8 time.

9 MS. MESERVE: Do you think that the North 10 Delta diversions would make possible a greater use of 11 the Joint Point of Diversion at the South Delta 12 facilities?

13 WITNESS MILLIGAN: It's hard to say. I don't 14 know.

MS. MESERVE: The documents we have describe the new North Delta intakes as State Water Project facilities with use shared by CVP. Can you describe how you'll calculate the daily basis whether the diversions are for SWP or CVP?

20 WITNESS MILLIGAN: I think that still needs to 21 be worked out.

MS. MESERVE: So there is no written agreement
in place regarding how this would occur?
WITNESS MILLIGAN: Not that I'm aware of.

25 CO-HEARING OFFICER DODUC: Ms. Meserve since

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1 you weren't here yesterday morning, you should be aware 2 that Mr. Milligan answered many of these questions in 3 terms of the joint operations of the facilities and 4 that they have not worked out the specifics and there 5 is nothing he could add at this point. 6 MS. MESERVE: Thank you. 7 Do you know, Mr. Milligan, how much the operation of the North Delta diversion, intermediate 8 9 forebay, and reconstructed South Delta facilities will 10 cost to operate once the project -- if the project is 11 built? WITNESS MILLIGAN: I think there have been 12 13 some estimates, but I'm -- I don't have that information in front of me, and I haven't committed it 14 15 to memory. 16 MS. MESERVE: We heard from Mr. Bednarski that there's no finance plan for completion of the design or 17 18 construction. Does the Bureau have any finance plans 19 for construction? WITNESS MILLIGAN: Not that I'm aware of. 20 21 MS. MESERVE: Or for operation? 22 WITNESS MILLIGAN: Again, not that I'm aware 23 of. MS. MESERVE: Or maintenance? 24 25 WITNESS MILLIGAN: Same answer. California Reporting, LLC - (510) 224-4476

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1 MS. MESERVE: For mitigation? 2 WITNESS MILLIGAN: Same. 3 MS. MESERVE: So under mitigation, that would 4 include -- is it correct that there's no finance plan for relocating agricultural water supply intakes that 5 6 maybe affected by change in point of diversion? 7 WITNESS MILLIGAN: No, not aware. 8 MS. MESERVE: Would that also be true for 9 relocating reclamation district and drainage district 10 water supply ditches and drains? 11 WITNESS MILLIGAN: No, not aware. 12 MS. MESERVE: What is your estimate, 13 Mr. Milligan of when the project could potentially begin to be constructed? 14 15 WITNESS MILLIGAN: I have no estimate on that. 16 MS. MESERVE: Given the news of the legislature's authorization of an audit of the finance 17 18 plan, do you think that will delay that out further 19 than it might otherwise? 20 MS. MORRIS: Objection, relevance. CO-HEARING OFFICER DODUC: Thank you, 21 22 Ms. Morris. 23 Actually, I'm wondering, too, Ms. Meserve. I've allowed you to delve into the financial issue, and 24 25 I appreciate that there's some relevance between the

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1 mitigation measures and the financing related to 2 provide those mitigation measures. But I'm not sure to 3 what detail we need to get into it.

4 What is your current thinking, and how far are 5 you planning on exploring this line of questioning? 6 MS. MESERVE: My concern is what you've 7 mentioned, is that there have been many discussions about how all these things which are listed on a menu 8 9 of options -- in a menu-of-options style in unfinalized 10 mitigation measures will remove all possibility of injury to legal users of water. 11 12 And I'm trying to explore, whether it's for 13 construction or for operation, whether it's possible that this project could do all those things which have 14 15 been promised here before your Board. And I won't go 16 very far with it, also. 17 CO-HEARING OFFICER DODUC: All right. I 18 will --19 MS. MESERVE: I'm almost done. CO-HEARING OFFICER DODUC: I will allow a 20 21 little leeway, but I will say a cautionary note to you 22 and other potential cross-examiners that in deep 23 drilling into the financial aspect is not something 24 that is before us, and I would encourage you to not go 25 too much further.

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MS. MESERVE: Understood.

2 I guess to Mr. Milligan, are there any 3 committed sources of funding for this project yet? WITNESS MILLIGAN: Not that I'm aware. 4 MS. MESERVE: Do you believe that there could 5 6 be additional Fish and Wildlife Coordination Act 7 funding to plan for this project? 8 WITNESS MILLIGAN: I'm not aware of that. 9 MS. MESERVE: Are you aware of any additional 10 CVP IA funding to go for project planning or 11 implementation? WITNESS MILLIGAN: No, I'm not aware of that. 12 13 MS. MESERVE: Has the Bureau ever received the benefit analysis for the Fish and Wildlife Coordination 14 15 Act funds that were already provided to DWR? 16 WITNESS MILLIGAN: I'm not aware if we have. 17 MS. MESERVE: And that concludes my questions. 18 Thank you. 19 CO-HEARING OFFICER DODUC: Thank you, 20 Ms. Meserve. Next up will be Group No. 21. I believe 21 22 Mr. Herrick is here. We'll take a break sometime 23 within the next hour or so for the court reporter. 24 So, Mr. Herrick, I will ask to you perhaps 25 point out a good time break between your lines of

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1 questioning because I don't want to interrupt at a bad 2 time for you. But keep in mind that within the next 3 half an hour we will need to take a 15-minute break. MR. HERRICK: Half an hour. 4 CO-HEARING OFFICER DODUC: Thanks. Of course, 5 I am assuming that your cross-examination will take 6 7 longer than a half an hour. And you could always make 8 me happy by saying it won't. 9 MR. HERRICK: That hurts me to think that you 10 don't want to hear me talk for that long. 11 CROSS-EXAMINATION BY MR. HERRICK 12 MR. HERRICK: Madam Chair, Board Members, John 13 Herrick and Dean Ruiz on behalf of the Central Delta parties, even though I'm specifically South Delta 14 15 normally. 16 I know most of the panel members. I don't 17 believe I have any questions for Mr. Anderson, but 18 they're currently smirking or sneering at me right now, 19 so we'll get right to it. Could we pull up the -- Mr. Leahigh, help me 20 21 on this, the chart from -- I think it was from your 22 PowerPoint, showing the opportunities to get additional 23 water in 2016 if the new North Delta intakes weren't 24 constructed? 25 WITNESS LEAHIGH: Yes, that should be DWR-411.

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1 Is that the one you were looking for?

2	MR. HERRICK: Yes, thank you. Now, this chart
3	shows times when you may have been able to take
4	additional exports during 2016 if those North Delta
5	intakes were installed; is that correct?
6	WITNESS LEAHIGH: Yes. And under that
7	specific scenario, H3.
8	MR. HERRICK: Yes, thank you. And 2016
9	follows the as you described it, I believe, the
10	three worst drought years in a row; is that correct?
11	WITNESS LEAHIGH: That's correct.
12	MR. HERRICK: 2013, '14, and '15 in
13	combination, you say, are the lowest natural flow years
14	on record; is that correct?
15	WITNESS LEAHIGH: Right. I believe it was and
16	'12 through '15, in terms of water year, was the lowest
17	run off on record. And '13, '14, '15 the lowest
18	April-through-July runoff on record.
19	MR. HERRICK: And during those years, we had a
20	number of TUCPs that have been mentioned which relaxed
21	some standards; is that correct?
22	WITNESS LEAHIGH: That's correct.
23	MR. HERRICK: So in the year following that
24	historic drought year when many standards were relaxed,
25	do you have an understanding of whether or not this

California Reporting, LLC - (510) 224-4476 www.CaliforniaReporting.com 1 extra flow that might be available for export would, in 2 the absence of the exports, provide some benefit in the 3 Delta?

WITNESS LEAHIGH: No, I'm not aware that it would. There was -- I would say that -- and it's part of my testimony, the first higher flows that we saw in December, there certainly was a benefit. And that was essentially to freshen up the Delta prior to additional diversions taking place later in January.

MR. HERRICK: So at least the first, I'll say, pulse of water coming through provided benefits in the Delta; is that correct?

13 WITNESS LEAHIGH: As it relates to meeting the 14 objectives, yes.

MR. HERRICK: So are you limiting your answer to benefits -- when I say "benefits," you're limited to compliance of standards or something else?

18 WITNESS LEAHIGH: Yes, I'm talking about in 19 terms of helping meet Water Quality Control Plan 20 objectives.

21 MR. HERRICK: Are there any benefits that 22 result from flows in excess of water quality control 23 standards? 24 MR. BERLINER: Objection, vague and ambiguous,

25 that's an awfully broad question.

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1 CO-HEARING OFFICER DODUC: Yes, it is broad, but I believe Mr. Leahigh is informed enough to answer 2 3 that question. 4 WITNESS LEAHIGH: Actually, I would agree that 5 it's too vaque. 6 CO-HEARING OFFICER DODUC: We're not going to 7 run down a list of every single objective, are you 8 Mr. Herrick? MR. HERRICK: No, no. I think I can dial it a 9 10 little bit so I can clear up the question. 11 CO-HEARING OFFICER DODUC: Nice coaching, 12 Mr. Berliner. 13 MR. HERRICK: Yeah, that was very -- very 14 nice. Mr. Leahigh -- because I'll be calling you 15 16 "Leahigh" by mistake. I bet everybody does. 17 WITNESS LEAHIGH: Happens all the time. 18 MR. HERRICK: Flow above that necessary to 19 meet a standard, that would help flush out additional constituents in the Delta that would not be flushed out 20 if those flows weren't there, correct? 21 22 WITNESS LEAHIGH: I don't know what 23 constituents you're referring to. 24 MR. HERRICK: Let's try salt. 25 WITNESS LEAHIGH: It -- at what locations, I

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1 guess?

2 MR. HERRICK: Would it provide fresher water 3 for a diverter to apply to his lands if he's downstream 4 of the flow?

5 WITNESS LEAHIGH: I think the DWR-412 was 6 probably getting at that question. It showed the 7 difference in water quality between the two scenarios 8 which were represented on this chart.

9 And although there was -- it did show an 10 incremental difference in water quality benefits that 11 were significantly fresher than what the water quality 12 objectives were. If we want to bring that up, that 13 would be DWR-412, I believe.

MR. HERRICK: If a diverter is applying fresher water because of these additional flows, do you have any understanding of whether or not that might help him flush salts out of his soils?

18 WITNESS LEAHIGH: The exhibit that I referred 19 to -- looked like it was starting to be brought up, but 20 perhaps not.

The -- if you look at the difference, a very minute difference in water quality. So I can't imagine it would have that much difference to the diverters in terms of the activity that you're referring to. MR. HERRICK: I appreciate that. Your

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1 imagination on what might happen is not the standard 2 here.

3 Has any analysis been done on the, let's say, 4 the different leaching effects of having the higher flows or not having those higher flows? 5 6 WITNESS LEAHIGH: I'm not an expert in this 7 area, but my opinion would be that this level of degradation effect would be fairly insignificant. 8 9 MR. HERRICK: And that's based upon what? 10 WITNESS LEAHIGH: Based on the percent degradation that's shown here on this graph. 11 12 MR. HERRICK: Have you done any analysis to 13 see whether or not those additional flows might move, say, something like ethyl mercury out of the system 14 15 more than it would without those flows? 16 WITNESS LEAHIGH: I haven't done any analysis 17 on that. 18 MR. HERRICK: Have you done an analysis 19 whether or not those additional flows might benefit 20 fisheries? WITNESS LEAHIGH: No, I have not. 21 22 MR. HERRICK: And I guess the line of my question deals with, if we've had three years where 23 24 many fishery standards have been relaxed, would you 25 expect that use of higher flows the following year

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would provide a benefit to fish, higher flows than the standard would require?

3 WITNESS LEAHIGH: I don't think it's my place 4 to -- I don't have -- that's not my area of expertise. 5 I would not have an opinion on that. 6 MR. HERRICK: I believe you are familiar with 7 the operations of the State and the -- and the impacts of those operations. Is it not true that fishery 8 9 returns, as in salmon, are higher -- what is it --10 three years after a high-flow year; is that correct, as 11 a general rule? 12 MR. BERLINER: Objection, the witness has 13 already indicated this is outside of his area 14 expertise. 15 MR. HERRICK: He did say that, Madam Chair, 16 but I think he knows the answer to this because I think it's common knowledge, especially to the operators of 17 18 the projects, that the fisheries in season love those 19 high flow years because of the returns later on. But 20 if he doesn't know that, he can say so. I'm just 21 trying to find out. 22 WITNESS LEAHIGH: I know that we have a number 23 of regulations for fish and wildlife purposes contained

25 spring X2 requirement. We have requirements under our

in the Water Quality Control Plan which include the

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1 biological opinions. And we meet all those 2 requirements with the exceptions that I've discussed in 3 my testimony for items that are outside of our 4 reasonable control. 5 But I would assume all of the regulations 6 reflect the biological opinion needs of the system, as 7 far as I'm concerned in my capacity as a water 8 operator. 9 MR. HERRICK: So to your knowledge, there's no 10 additional benefit to fisheries for flows above the 11 standards? Is that your position? 12 MR. BERLINER: Objection, misstates his 13 testimony. CO-HEARING OFFICER DODUC: I believe 14 15 Mr. Leahigh has proven himself a quite capable witness 16 in answering questions, and he would, I believe, 17 correct any misinterpretations by Mr. Herrick. Mr. Herrick, did you mean to imply what you 18 did? 19 20 MR. HERRICK: Yes. 21 CO-HEARING OFFICER DODUC: Mr. Leahigh, you 22 may address that if you are able to and correct any 23 misassumption. 24 WITNESS LEAHIGH: He's going to have to repeat 25 the question. I'm sorry. Sounds like I have to listen California Reporting, LLC - (510) 224-4476

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very carefully to this question, so I'd like you to
 repeat it.

3 MR. HERRICK: Is it your understanding that 4 there are no benefits to fish for -- when flows occur 5 which are above standards? 6 WITNESS LEAHIGH: Again, I'm not an expert in 7 that area, so I have no opinion. 8 MR. HERRICK: Mr. Leahigh, has DWR or the 9 Bureau, to your knowledge, done any analysis of the 10 things I've just gone over, which is a quantification 11 of the benefits beyond meeting the standards that 12 result from these flows that we've talked about? 13 WITNESS LEAHIGH: There may be some preliminary analysis, but I am not aware of what that 14 15 is. 16 MR. HERRICK: So then I would conclude that, 17 if there's no analysis -- there may be a preliminary 18 you said. If there's no analysis, then there's no 19 comparison with the beneficial uses to see whether or not there's an injury; is that correct? 20 21 WITNESS LEAHIGH: And are we talking about 22 biological --

23 MR. HERRICK: I meant all of the things I've 24 talk about, whether it's flushing or leaching or fish. 25 If you want to narrow that down, please do.

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1 WITNESS LEAHIGH: I'm sorry. Can you repeat 2 the question?

MR. HERRICK: Since there's no analysis of the 3 4 benefits resulting from flows higher than the standards, then is it true to say that there is no 5 6 comparison against how that would affect legal users? 7 I don't know if I said that well. 8 CO-HEARING OFFICER DODUC: Okay. Now I didn't 9 follow that. Let's try it again, Mr. Herrick. 10 MR. HERRICK: Mr. Leahigh, I think you just 11 said that, although there may be a preliminary analysis --12 13 CO-HEARING OFFICER DODUC: No analysis. MR. HERRICK: -- there's no analysis of any 14 15 benefits of flows above the standards. 16 So my next question was trying to connect that to the standard here, which is injury to legal users. 17 18 Is it correct then to say, if there's no analysis of 19 the effects, then there isn't anything to compare or judge as whether or not the change will affect legal 20 21 users? 22 WITNESS LEAHIGH: I'm sorry. I am not 23 following this question. 24 MR. HERRICK: That's all right. 25 WITNESS LEAHIGH: Yeah.

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MR. HERRICK: Do these additional flows -- do these additional flows delay the onset of balanced conditions later in the year?

Could we go back to that previous chart again?
WITNESS LEAHIGH: Yeah, I don't believe they
do. So we -- that was one of the things we were
looking at at the very end of this example in late
April is that we took a fairly conservative approach in
terms of what additional diversion would occur.

You can see at the very end of April, that the dotted red line really reduces significantly there towards the end of April. And we took a quite conservative approach in terms of we knew the system was beginning to dry out and that we would be into balanced conditions by the time we got into May.

16 I think there are actually -- we did, if I'm not mistaken, check out the -- well, we did do analysis 17 18 with DSM2, as we showed in the previous graphic. And 19 we were conservative in terms of the amount of extra 20 diversion occurring in the late part of April in order 21 not to change the timing on which balanced conditions 22 would occur in May. So we did -- we did try to correct 23 for that factor.

24 MR. HERRICK: Now I'm confused. I didn't 25 understand that. Let's take the March high flows.

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1 They go above 140,000 cfs on the Sacramento; is that

2 correct? Or is that outflow?

3 WITNESS LEAHIGH: Yes, the actual Delta4 outflow did peak over 140,000.

5 MR. HERRICK: So is it your testimony that, if 6 all of that water reaches into the Delta and eventually 7 exits the system, that doesn't delay the onset of 8 balanced conditions beyond that if you use the North 9 Delta diversions to take some of that outflow?

10 WITNESS LEAHIGH: The degree of outflow that 11 we saw caused conditions to freshen to such a degree 12 that there's really very little difference between the 13 two salinity traces between the two scenarios. So in 14 that respect, the system would generally have degraded 15 at about the same rate once we got into the drier 16 period there in the late spring.

So I don't think it would have beensubstantial whatsoever as far as changing and timing.

MR. HERRICK: Well, you couched your answer in "substantial." I'm just trying to understand, as a general purpose, the higher outflow provides a farther west location of fresh water, or however you like to define that. Doesn't that then delay the onset of balanced conditions? You haven't given us a time frame or difference. But how do you come up with this "it's

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1

not substantially different"?

2 WITNESS LEAHIGH: Well, I hate to do this, but 3 if we went back to DWR-412, that might help get at the 4 differences at the far end of this scenario. You can see there is a slight difference in 5 6 the salinity trace there in late April. 7 So -- and I don't -- we don't have that information in front of us here. But as we would go 8 9 into the month of May and as the flows will reduce in 10 the system, salinity would start increasing. I don't 11 believe there would be a substantial change in when the 12 system would have gone into balance. If anything, 13 maybe a day, I would think, just based on my 14 experience. 15 So these are -- these two marks, the 16 differences in salinity between the two scenarios is extremely close. So I wouldn't -- that's the basis for 17 18 which I am making the statement that there wouldn't be 19 a substantial difference. MR. HERRICK: All right. Mr. Milligan, I 20 21 believe the earlier questions were to Mr. Leahigh about 22 who makes the operational decisions and how that 23 feedback gets into the modeling. 24 I just want to explore that real briefly to 25 make sure I understand. Who actually makes the

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MR. HERRICK: Yes.

4

2 WITNESS MILLIGAN: For the Central Valley 3 Project?

5 WITNESS MILLIGAN: Predominantly that is done 6 within the Central Valley operations office of which 7 I'm the manager of.

8 MR. HERRICK: So that would be you or people 9 under you?

10 WITNESS MILLIGAN: Yes, under my supervision.
11 MR. HERRICK: Any parties or interests calling
12 you up asking you to make changes or -- I don't know
13 how that works. Is it just you, or are there other
14 inputs?

15 WITNESS MILLIGAN: There's certainly inputs in 16 coordination with the Statewide Project. We are 17 co-located at the joint operations center.

Depending on what operational decisions may be 18 19 in play, we may be coordinating with other system 20 operators or dam operators in the basin. We may be 21 reaching out to land owners or various water districts, 22 including in the Delta, about concerns of -- whether it's salinity or water levels. And we try to take all 23 24 that into account when we plan out a particular day's 25 operational changes and then forecasting forward.

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1 There's certainly also a lot of coordination 2 with the various state and federal fishery agencies. 3 MR. HERRICK: And you or Mr. Leahigh testified 4 earlier that there are day-to-day decisions that are not reflected in the models, just because the models 5 have assumptions about longer terms than maybe one day; 6 7 is that generally correct? 8 WITNESS MILLIGAN: Let's say in terms of Cal 9 Sim, as an example. 10 MR. HERRICK: Oh, yeah. Sorry. WITNESS MILLIGAN: That would be -- it's a 11 12 monthly time step model. So it's doing monthly 13 averages as it goes from month to month. And that has a lot of utility, but it's too coarse a revolution to 14 15 capture weekly or daily operational adjustments. 16 MR. HERRICK: What's the -- I'll designate it "feedback mechanism" so that the modelers are confident 17 18 that they're reflecting actual operations as best as 19 possible? Is there some sort of ongoing communications or certification, or how does that work? 20 WITNESS MILLIGAN: If I can ask a 21 22 clarification, is that, in regard to the modeling, the 23 support or some more on the day-to-day operations of 24 the project? 25 MR. HERRICK: Well, maybe both. So let's go

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1 for just the modeling supporting the petition.

2 I'm just trying to find out your comfort level
3 with the models reflecting as best as possible the
4 actual operations.

WITNESS MILLIGAN: As it would relate to 5 models that would into a planning study or to support 6 7 something like the petition here, in essence, we'd have some discussions with the modelers. And through the 8 9 course of -- I'm picking Cal Sim 2 as an example. Over 10 the course of time that that's been developed, operation staff have provided some input into kind of 11 12 the general mechanics or framework that the projects 13 operate.

In case of a specific planning study, the 14 15 results would -- you know, the operators would review 16 the results and with the back of their minds say, what 17 kind of questions are we trying to answer with these 18 model results to see if the -- although the model has 19 its shortcoming in terms of time step, as we've 20 discussed, depending on the specific type of question 21 that may be in play, does it seem like the results 22 represent the incremental change of the action being 23 discussed?

There are going to be some other times where the question at hand may be better suited to do some

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DSM2 analysis of, and a lot of the Delta hydrodynamics and salinity and questions about reverse flows may be more suited to that type of a model.

4 MR. HERRICK: Mr. Leahigh, would your answer 5 to that same question be similar, or do you have any 6 differences with Mr. Milligan?

7 WITNESS LEAHIGH: No, I think I would
8 essentially agree with Mr. Milligan's answer. We also
9 give input to -- feedback to the modelers on, you know,
10 continuously trying to improve their representation of
11 actual operations.

MR. HERRICK: I'd like to hand out what is listed on my stick as -- it's the excerpts from the January biological assessment, draft biological assessment. And of course, there have been discussions and objections because there's a newer one apparently. But my questions are dealing with this one. I think copies have been handed out.

And if you could please pull up No. 3 on my list.

21 (South Delta Water Authority Exhibit SDWA-3
 22 marked for identification)

23 MR. HERRICK: Thank you. And you and if you 24 go to the second page of what I have there, beginning 25 with 3.7.2.

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1 And I'll just read a couple -- you guys could follow along with me. I'm starting with A. And it 2 3 discusses if, on October 1st, if the prior water year 4 was dry or critical, then Reclamation-DWR would convene 5 a multi-agency drought -- drought task force, so to 6 speak. And then by B it says if by December 1st 7 something happens. Then C says, if the February 1st hydrologic forecast indicates the potential for a dry 8 9 or critical water year, then Reclamation and DWR would 10 do other things. 11 And one of those other things, possible other 12 things is on the final page there. And it talks about 13 -- you see the "H" on the final page? It says "Reclamation DWR will prepare TUCPs as needed for 14 15 submittal to the SWR/CVP." Do you see where it says 16 that, both Mr. Milligan and Mr. Leahigh? 17 WITNESS MILLIGAN: Yes, I see. 18 WITNESS LEAHIGH: Yes, I see it. 19 MR. HERRICK: Now, are you aware of number of times that a dry or critical year followed by four 20 21 months of dry or critical year have occurred over the 22 historic record? 23 WITNESS MILLIGAN: No. 24 MR. HERRICK: Okay. Mr. Ruiz will be handing 25 out my No. 2, if you could put it up on the screen

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1 please.

2 I'll just start with Mr. Milligan because 3 you're such a nice guy. 4 MR. BAKER: Excuse me. Could you identify 5 this for the record? MR. HERRICK: A printout from CDEC which shows 6 7 the water year classifications for the Sacramento Valley and the San Joaquin Valley starting -- the date 8 9 starts at 1901. And then the next page it goes through 10 2015. And this is just off of CDEC. So I guess that's 11 a representation that it's not made up by me. 12 MR. BERLINER: Are we going to mark these for 13 identification? MR. HERRICK: Yes, this will be South Delta 14 15 No. 2, please. 16 (South Delta Water Authority Exhibit SDWA-2 marked for identification) 17 18 CO-HEARING OFFICER DODUC: Thank you, Mr. Herrick. 19 20 MR. HERRICK: And the previous one was 3 and the one before that -- I think we're on track. I'll 21 22 clarify that later. 23 Mr. Milligan, if you could just go down where I've highlighted. And what I've done is I've 24 25 highlighted any dry or critical year that followed a

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1 dry or critical year.

2	Now, let me caveat that. Of course, the
3	particular circumstances of any year may not mean that
4	the first four months of any year that's dry or
5	critical were actually dry or critical. But we
6	understand that. But just for purposes of this, I've
7	marked that.
8	So if you could count my marks for the
9	Sacramento Valley which go from 1906 through 2015,
10	please. I think I come up with 19, if you'd count
11	those.
12	WITNESS MILLIGAN: For the Sacramento Valley?
13	MR. HERRICK: Yes, I'm doing the Sacramento
14	WITNESS MILLIGAN: Sacramento Valley, I also
15	count 19 marks.
16	MR. HERRICK: 19 marks. Thank you. So from
17	1906, which is from the data from the Sacramento
18	1906 to 2015 is 109 years. Would you agree with that?
19	I'm not trying to trick you on math.
20	WITNESS MILLIGAN: Yes.
21	MR. HERRICK: So 19 years out of 109 years is
22	17 percent of the time; is that correct?
23	WITNESS MILLIGAN: That's probably a little
24	more challenge, but that sounds right.
25	MR. HERRICK: That's what my calculator said.

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Whether I'm an idiot or not is for other people to
 judge.

3 Now, in our historical analyses, don't we use 4 water year 1922 or something instead of back to 1906? Isn't the analysis from 1922 through something? 5 6 WITNESS MILLIGAN: The Cal Sim simulations, 7 because of all the types of inputs that go in, start around 1920, '21. 8 9 MR. HERRICK: Okay. So if we go from 1921, 10 then we've only got 94 years. And 19 out of 94 is 20 11 percent; is that true? 12 WITNESS MILLIGAN: That's true. 13 MR. HERRICK: So do you think that any analysis that the Bureau or DWR's done that includes 14 15 19 years where the standards might have to be changed 16 is a valid analysis of the impacts to third parties? MR. BERLINER: Objection, assumes facts not in 17 18 evidence. CO-HEARING OFFICER DODUC: Mr. Herrick? I'm 19 20 sorry. Which facts are you --MR. HERRICK: Which facts are in evidence. 21 22 CO-HEARING OFFICER DODUC: Yes. 23 MR. BERLINER: Referring to, in the middle of 24 the question, the -- my real-time feed isn't working, 25 so I can't quote it exactly. But the characterization

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1 that essentially the TUCPs would have been necessary 2 historically.

MR. HERRICK: Well, the initial assumption for 3 4 this was that, if the water years that I've marked fall into the category of the times when TUCPs might be 5 6 used, then the answers follow from that. 7 Of course, those conditions might not be true. But I'm asking for his opinion on those in that 8 9 circumstance. 10 So, of course, this may not occur, Mr. Milligan, but if the water years that we've 11 12 highlighted occurred again and, you know, TUCPs were 13 requested, would you believe that an analysis that has 20 percent of the years not reflecting what's going to 14 happen, you think that's a valid analysis? 15 16 WITNESS MILLIGAN: I'm not sure that that 17 tracks with what's necessarily been proposed. I would say that an analysis -- well, let's say that this list 18 19 of facts that talked about the potential that there'd 20 be TUCPs 20 percent of the time and in the analysis doesn't include TUCPs to that extent may have a 21 22 disconnect. 23 I think I read this text which was a draft as 24 being as needed. And I'm not sure what that exactly 25 means. Again, this was draft text, and I think we had

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some testimony that said this section no longer exists
 in the current biological assessment.

3 So -- but I think the question was do I -- I 4 also don't know that I would foresee temporary change 5 petitions 20 percent of the time in the future. 6 MR. HERRICK: That's very nice and, if I may 7 say, not responsive. 8 WITNESS MILLIGAN: Could you repeat the 9 question? I'm trying to get --10 MR. HERRICK: In the analysis we do over an 80-year period, 82-year period, whatever it is, if it 11 12 doesn't have 20 percent of the operations correct 13 because the operations might be changed to TUCPs, I'm asking you if that analysis would be a valid method of 14 15 determining injury to third parties? 16 WITNESS MILLIGAN: It depends on the types of 17 analysis, what the issues involved in the analysis 18 would tend towards. If the question "and" was 19 certainly geared towards the critical or dry year periods, then I think some additional analysis would 20 21 probably be warranted. 22 CO-HEARING OFFICER DODUC: Mr. Herrick, I'll 23 ask you to conclude this line of questioning. We do 24 need to take a break. 25 MR. HERRICK: We can take the break now.

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CO-HEARING OFFICER DODUC: Let's take a 1 15-minute break, and we'll resume at 10:45. 2 3 (Recess taken) CO-HEARING OFFICER DODUC: Mr. Herrick, please 4 5 continue your cross-examination. 6 MR. HERRICK: Thank you. 7 Just a final question for the last line of 8 questioning, Mr. Milligan. In any particular year 9 where a TUCP might be approved, that would result in 10 different, say, carryover storage than in a year when 11 the TUCP wasn't used; in general, is that a correct 12 statement? 13 WITNESS MILLIGAN: It would depend on the objectives that were modified. 14 15 So it's possible but not necessarily always 16 the case. MR. HERRICK: Now, along those lines in 17 18 this -- the drought and the TUCPs, is there a reason we 19 can't model or plan for multi-year droughts? 20 WITNESS MILLIGAN: Mr. Herrick, was that to 21 me? 22 MR. HERRICK: Yes. 23 WITNESS MILLIGAN: Thank you. Sorry. I think that we can. I think the question 24 25 becomes how to represent that. And obviously, through

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1 every drought sequence we go through, we do learn from 2 that and think about how we would operate with, you 3 know, the current infrastructure, the current demands 4 in the system, current limitations, current objectives 5 in play, how to manage through extended drought 6 periods.

7 MR. HERRICK: Now that we've gone through, I'll say two significant droughts in however many years 8 9 that is -- 88, we have data on, you know, storage 10 inflow in bad years, is there a reason why we don't have a plan for what we would do in those two or three 11 12 years of drought rather than planning on, well, we'll 13 examine it at the time and make changes pursuant to TUCPs? Is there some planning rule that I don't know 14 15 about that would prevent us from figuring that out? 16 WITNESS MILLIGAN: No rules that I'd be aware of. 17 18 MR. HERRICK: Now, next, if we could pull up 19 No. 4, please, and we'll mark that SDWA-4. 20 (South Delta Water Authority Exhibit SDWA-4 21 marked for identification) 22 MR. HERRICK: Now, I think everybody has a copy, and just so you know, this is the document where 23 24 I got the information. So the document itself is 25 almost meaningless, but if you'll turn to the next

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1 page, it has a "Cal Sim Table of Priorities." That's 2 what I want to talk about if I may. And I'll just stay 3 with Mr. Milligan, if no one minds. 4 Now, is this still the correct prioritization used in Cal Sim II, if you know? 5 6 WITNESS MILLIGAN: Could you give me a moment 7 to review the table? 8 MR. HERRICK: Certainly. I'm sorry. 9 Table 4.12, and it's titled "Cal Sim II Water Use Prioritization." And then afterwards we'll read that 10 paragraph after the table. I'm not trying to confuse 11 12 or blind-side you. 13 WITNESS MILLIGAN: My general understanding is from Cal Sim, being that -- maybe this is also 14 15 something could be referred to the modeling group, but 16 this is generally the priorities. Although, the second 17 and third priority I had a little question. But just 18 -- they may be very close. 19 MR. HERRICK: Yeah, and the next paragraph --I won't read the whole thing. I think you just read 20 21 through it. But it talks about how there's a balance 22 struck between the second and third priority during the 23 year, and then you operate according to whatever 24 decisions were made under that, correct? 25 WITNESS MILLIGAN: At least that's the Cal Sim

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1 construct of logic.

2	MR. HERRICK: And is that generally the way
3	you operate, the same set of priorities?
4	WITNESS MILLIGAN: In general. I can't speak
5	to the Article 21 deliveries. It's a State project.
6	But this flow is similar to, let's say, the logic
7	stream that the operators may use.
8	MR. HERRICK: So the questions I'm going to
9	ask deal with, you know, this tension between choices.
10	So the question, I guess, is each year you're making
11	decisions that determine how much is released for
12	export and how much is maintained for storage for
13	future years; is that correct?
14	WITNESS MILLIGAN: That's one set of thinking,
15	but there's obviously others.
16	MR. HERRICK: Certainly. And is there any
17	is there any rule book or requirements on the
18	reservoirs that you're in charge of that says, you
19	know, "Thou shalt maintain X amount for future years"?
20	WITNESS MILLIGAN: No, there's not.
21	MR. HERRICK: So and again, I'm not trying
22	to be argumentative, but in any particular year, if you
23	decide not to release water for export from storage,
24	that would necessarily mean then that that water
25	remains for the next year or is carried over for the
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California Reporting, LLC - (510) 224-4476 www.CaliforniaReporting.com 1 next year; is that correct, absent it being released 2 for other issues, other mandates?

3 WITNESS MILLIGAN: Yeah, I would say obviously 4 with consideration to things like balance conditions, 5 you know, probably where we are in the cycling of hydrologic cycles from drought to -- from winter to 6 7 drier conditions, if the -- again, looking at the overall picture and anticipating where we'd be in the 8 9 year ahead may influence some of the operational 10 decisions.

MR. HERRICK: And I didn't mean to disregard other mandatory releases or other obligations that may use that water instead. I'm just drawing the distinction between the decisions made how much to release of stored water for export and that necessarily helps calculate how much is carried over for the next year, correct?

18 WITNESS MILLIGAN: Well, yes, and the carry 19 over for the subsequent year may be more of an after 20 effect of those decisions. For the CVP, also, there's 21 a lot of consideration with regard to temperature 22 management and maintaining --

23 MR. HERRICK: Absolutely.

24 WITNESS MILLIGAN: -- flow stability on the 25 river. So it's not -- those come into play as well.

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1 MR. HERRICK: Since we just went through this 2 horrible drought period is there any discussion among 3 the Bureau and/or DWR that you know of to err on the 4 other side and export less and keep more in storage, or 5 carryover storage?

6 WITNESS MILLIGAN: Nothing formal or specific. 7 MR. HERRICK: Do you think that would be 8 prudent to consider that, given the -- again, I don't 9 mean to be pejorative -- given the inability to meet 10 many water quality standards over the drought period 11 absent the TUCPs?

12 WITNESS MILLIGAN: I think that, although it 13 may not be formalized, it is something that comes into 14 the thinking of seasonal planning that goes on between 15 the two projects and within each one specifically.

16 MR. HERRICK: And whether or not we can plan 17 for a five-year drought or something, we might be able 18 to cushion the second year of the drought if we decide to export less. Would that be a correct statement? 19 20 WITNESS MILLIGAN: I guess that depends on the specifics of the scenario, but -- and that would be 21 22 hard to say. Depends on where you start in that 23 sequence.

24 MR. HERRICK: Now, this is going to sound 25 nasty, so there might be an objection, but I don't mean

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1 it that way.

2 CO-HEARING OFFICER DODUC: You know, 3 Mr. Herrick, I'm really enjoying this gentler John 4 Herrick. 5 MR. HERRICK: I can be nasty. 6 MR. BERLINER: I'm ready to object. 7 CO-HEARING OFFICER DODUC: All right. And that concludes that moment of levity. 8 9 MR. HERRICK: Sorry. 10 CO-HEARING OFFICER DODUC: Mr. Herrick, please 11 continue. 12 MR. HERRICK: So would you agree that it's --13 the incentive for the project is to err on the side of exports, not on the side of carry over storage? 14 15 WITNESS MILLIGAN: I quess I don't quite see 16 it that way. I think it's to err on the side of 17 meeting all our obligation on this. I'll speak for the CVP. We have a significant number that are north of 18 19 the Delta, these obligations. So being able to be good 20 stewards and meet our pretty significant contractual 21 obligations for the Delta, we're always and have always 22 looked at the proper balance of a particular season's 23 Delta diversions and exports versus what's the right 24 place to land upstream in weaving this all together. 25 MR. HERRICK: But your answer was kind of

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dealing with sort of in-basin requirements, in other
 words, people in the Sacramento Valley and obligations
 for water quality standards.

I'm referring to exports. So let's just put
it this way. Have you exported stored water? Has the
Bureau exported stored water during the last three
years of drought?

8 WITNESS MILLIGAN: Yes.

9 MR. HERRICK: And any water that was exported 10 may have been retained be behind a reservoir for other 11 purposes for future years, correct?

12 WITNESS MILLIGAN: As with many things, it's 13 kind of multiple use. We certainly strive to make 14 multiple uses with the same acre foot of water,

15 obviously.

16 MR. HERRICK: But you're not putting -- is it 17 correct -- let me start over.

18 Are you putting exports behind all other
19 considerations? Or are you trying to balance various
20 considerations to maximize exports?

MS. MORRIS: I'm going to object -- Stefanie Morris, State Water Contractors -- to this line of questioning. I didn't think that we were here to put the current project operations on trial. I thought we were here to talk about Cal WaterFix and the impacts to

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1 other legal users of water and those operations.

So I'm slightly confused about the relevance
 of this line of questioning.

4 CO-HEARING OFFICER DODUC: Mr. Herrick, I 5 believe you can make the case for relevance, but I will 6 allow you to do so.

7 MR. HERRICK: The current operations are 8 important for two reasons. The first is they're the 9 basis for the analysis. And the analysis is what we 10 are relying on to determine whether or not there's 11 injury to legal users. So I believe exploring it is 12 perfectly appropriate.

But more important than that, I think as we move forward in this proceeding, the exact operations become relevant in that the conditions on those operations may be part of any future approval by this Board.

18 And I think the drought is a perfect example 19 of that, is somebody may be allowed to do something if 20 they change their operations for storage later because 21 that might help meet future water quality standards. 22 And of course the position that's been espoused by 23 numerous witnesses is they promised to meet D1641 and future imposed water quality obligations. So I think 24 25 it's perfectly relevant.

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CO-HEARING OFFICER DODUC: Thank you,

2 Mr. Herrick. You may continue.

MR. HERRICK: Mr. Milligan, I'll ask this of 3 4 Mr. Leahigh after you, just to check. But I described it as a -- as you erring on the side of maximizing 5 exports. In the past three years we've not met 6 7 numerous standards, we've had TUCPs to address that, 8 correct? 9 WITNESS MILLIGAN: We've had TUCPs and 10 temporary orders to address drought circumstances, yes. 11 MR. HERRICK: And the State Board has never sanctioned you or fined you or penalized you or yelled 12 13 at you for not meeting the standards but instead asking for TUCPs, correct? 14 15 WITNESS MILLIGAN: I'm not sure about the 16 yelling part. But the -- the orders have -- our 17 requests have been responded with you know the orders 18 that included some change. 19 MR. HERRICK: So would it be fair to say that, 20 if there's no threat by the Bureau for not meeting the 21 standards, then it's easier for you to err on the side 22 of exports when deciding between exports and carryover? 23 WITNESS MILLIGAN: I don't think I would agree

24 with that characterization. I think -- and this is the 25 difficulty with the Table 412 that you provided. It is

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1 a little bit centric to the State Water Project.

2	One of the things that was a key component of
3	our temporary urgent change petitions has been to try
4	to prioritize storage up in our CVP reservoirs,
5	particularly Shasta, as an example, which has been used
6	to try to keep and avoid the very low reservoir
7	storages that would come into play if we were, let's
8	say, making outflows consistent with D1641.
9	So the result here is what might be, in
10	characterizing this table as third priority, which is a
11	carryover storage or say storage through the season
12	actually has been elevated to closer to the first
13	priority because of its fishery benefit. That has
14	ancillary benefits for carryover, which hedges against
15	future drought, which has one of the beneficiaries
16	of that is, let's say, upstream water users in Sac
17	Valley as well as potential carryover storage to
18	operate cold water pool going into the next season.
19	I would the other part of the table that
20	complicates the CVP as opposed to maybe helps the
21	construct for the State Water Project is a component of
22	exports trying to meet the Exchange Contract
23	obligations, which is somewhat muddled here in terms of
24	the prior water right commitment.
25	For the last two years, exports for the

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1 purposes of water service contracts, at least the 2 agricultural, have been zero with significant water 3 having to come from the Friant system to be able to 4 meet the obligations of the Exchange Contract as well. 5 MR. HERRICK: My question dealt with the 6 tension between exports and carryover. There are lots 7 of other things going on. I understand that. But there is a tension between how much you might release 8 9 of stored water for export purposes and carry over 10 storage for future use, correct? 11 WITNESS MILLIGAN: There would be. And I 12 think also -- and what's in the carryover part has a 13 lot of drivers to it. But that is part of the decision making process is what's the right balance with that. 14 15 And over the last two years, for example, 16 exports to drive ag water service contracts have been 17 pretty minimal. And even NI CVP supply itself has been 18 -- particularly last year as an example, have met 19 health and safety needs of some pretty key districts. 20 MR. HERRICK: If I could turn now to 21 Mr. Leahigh, I would like to briefly go over your 22 statements about the success rate of the projects in 23 meeting water quality standards. And you gave us a 24 couple of numbers. I think they were 98 percent or 25 above in compliance, is that correct, for the term that

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1 was discussed, the term of years?

2 WITNESS LEAHIGH: Yes. 3 MR. HERRICK: And that term of years was, 4 what, since D1485? Or can you tell me what that was? 5 WITNESS LEAHIGH: Well, it would have applied 6 to whatever the years that were applicable for any 7 particular standard that's in existence today. So many of those go all the way back to D1485. So that's 1978. 8 9 Others went back to the Water Quality Control 10 Plan -- the '95 Water Quality Control Plan. 11 MR. HERRICK: Mr. Leahigh, the way you 12 described it, aren't you taking credit for years in 13 which you didn't do anything to meet water quality 14 standards? 15 WITNESS LEAHIGH: I don't know if "taking 16 credit." The table merely describes the exceedance rate for objectives. It doesn't differentiate between 17 18 which periods the projects had to actively, you know, 19 take actions in order to achieve the objectives. 20 MR. HERRICK: But you gave us a percentage, 21 and the percentage was the violations were the 22 numerator and the total days was the denominator, correct? That's how you calculate the percentage? 23 WITNESS LEAHIGH: The exceedances. 24 25 MR. HERRICK: They're not violations?

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1 WITNESS LEAHIGH: Over the total number of 2 days in which a standard would be operative. 3 MR. HERRICK: So when you have 365 days out of 4 the year, like 2006, when we had more water than anybody could do with, that sort of artificially 5 inflates the denominator, doesn't it, because there was 6 7 no actions taken by the Bureau or the DWR to meet those 8 standards? 9 WITNESS LEAHIGH: I wouldn't use the word 10 "artificial." The table is what the table is, which is a record of exceedances of objectives. 11 12 MR. HERRICK: Is there a reason why you didn't 13 produce a table that showed success rate or compliance rate during times when actions needed to be taken? 14 15 WITNESS LEAHIGH: That would probably be very 16 difficult if not impossible to produce such a table. I don't -- I don't know that we would have all the 17 18 information necessary to prepare such a table. 19 MR. HERRICK: Well, we've got 2006 and '97 and 20 excess conditions in most years and rainfall below the 21 dams and all those things that contribute to your 22 success rate were things that you had no control over; 23 isn't that correct? 24 WITNESS LEAHIGH: There would certainly be 25 periods of time where that was the case, yes.

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1 MR. HERRICK: Wouldn't it be more helpful to 2 the Board -- given that you're, I guess, promising to 3 continue to meet D1641, wouldn't you think it would be 4 more helpful to present the evidence that shows how 5 your actions, when needed, resulted in compliance? 6 WITNESS LEAHIGH: Well, we presented all the 7 information that we thought would be helpful in that we're showing the entire period on which standards have 8 9 been in play. 10 But we also have breakdowns per year so you can look at individual years and see what compliance 11 12 rates would be in shorter periods of time. So all that 13 information is -- is part of the exhibit. MR. HERRICK: Is anybody going to testify with 14 15 regard to that, that other information? 16 WITNESS LEAHIGH: Well, it's part of my 17 written testimony. 18 MR. HERRICK: Your -- I thought you said it 19 was difficult to gather, that's why you didn't do it? 20 WITNESS LEAHIGH: Oh, I'm sorry. I was 21 referring to the individual breakdown, individual years 22 of compliance with individual standards. 23 So I'm sorry. What was your --MR. HERRICK: Let me start over. 24 25 In any particular year when there's exceedance

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and you list that exceedance as a lack of compliance,
 that doesn't tell us the degree of the exceedance, does
 it?

WITNESS LEAHIGH: No. The exceedances are 4 listed in terms of number of days where the objective 5 6 is not met. It doesn't get into the degree. 7 MR. HERRICK: So if I may use an unreasonable example, you know, when you say something's exceeded, 8 9 you know 2 percent of the time, if during that 2 10 percent of the time the exceedance was 500 times the 11 standard, that would be very important information, 12 wouldn't it? WITNESS LEAHIGH: It would be additional 13 information. I would find it hard to believe that 14 15 there would be that magnitude of exceedance, but that 16 would be additional information. 17 MR. HERRICK: It's sort of like saying, "I only killed the guy once in the last ten years. On 18 average, he's in good shape," right? 19 Nobody's going to object to that? I'll 20 21 object. I'll withdraw the question 22 CO-HEARING OFFICER DODUC: I was just trying 23 to enjoy the new and improved John Herrick for as long 24 as possible. 25 MR. HERRICK: I'm starting to feel very

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1 uncomfortable here.

2	All right. Let's move on.
3	If we can pull up SDWA No. 5, mark it as that.
4	(South Delta Water Authority Exhibit SDWA-5
5	marked for identification)
6	MR. HERRICK: And I'll represent to you it's a
7	few pages out of the California Water Code, including
8	Water Code Sections 12200 et. seq.
9	And once everybody gets their written copy or
10	handwritten or hard copy, you'll see that the
11	individual statutes or some of them are separately done
12	on the preceding pages of each, just for clarity
13	because the code book is kind of I don't have a lot
14	of staff.
15	Anyway, Mr. Milligan, you and Mr. Leahigh
16	testified that you intend on and do operate the
17	projects in conformity with certain legal obligations.
18	Do you recall that, in general?
19	WITNESS MILLIGAN: Yes.
20	WITNESS LEAHIGH: Yes.
21	MR. HERRICK: And those obligations include,
22	as you said, I believe D1641 and BiOps and some other
23	things you had mentioned; is that correct?
24	WITNESS LEAHIGH: That's correct.
25	MR. HERRICK: Is one of the obligations under
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which you operate the provisions of Water Code Sections
 12200 et. seq?

3 WITNESS MILLIGAN: I would say to the degree 4 these are outlined in our permit terms and conditions. MR. HERRICK: You have not done -- personally 5 you have not done a separate analysis to determine 6 7 whether you believe -- not whether it's legally required but whether you believe terms and conditions 8 9 of these statutes are mandatory on you? 10 WITNESS MILLIGAN: I have not. MR. HERRICK: So if I may, Section 12201, I'll 11 read from that. I apologize for it not being 12 13 highlighted. I don't know what happened. I did that 14 originally. 15 "The legislature finds that the maintenance of 16 an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban, and 17 18 recreational development in the Delta as set forth 19 above and to provide a common source of fresh water for 20 the export to areas of water deficiency is necessary to 21 the peace, health, safety and welfare of the People of 22 the State of California." Do you see where that says 23 that under 12201? I just read the first -- this. 24 And following on with 12202, it says, "Among

25 the functions to be provided by the State Water

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1 Resources Development System in coordination with the activities of the United States in providing salinity 2 3 control for the Delta through operation of the Federal 4 Central Valley Project shall be the provision of salinity control and an adequate water supply for the 5 users of water in the Sacramento-San Joaquin Delta." 6 7 Do you see where it says that? WITNESS MILLIGAN: Yes, I do. May have 8 9 skipped over some of the section here -- some of the 10 text. MR. HERRICK: There's more text. I'm just 11 12 reading the first half of 12202. 13 WITNESS MILLIGAN: I see -- I see that 14 pull-out. 15 MR. HERRICK: Now, earlier we had testimony 16 about Delta operations including reservoir releases 17 exports and Delta island consumptive use in order to 18 I'll say operate the Delta and maintain outflow as 19 necessary. Do you recall that, your testimony? 20 WITNESS MILLIGAN: Yes, yes. 21 MR. HERRICK: And one of those provisions is 22 that Delta island consumptive use; is that correct? 23 WITNESS MILLIGAN: I'm not sure if it was 24 Mr. Leahigh's testimony or mine, but yes I do recall. 25 MR. HERRICK: And that is correct, in

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operations in the Delta, when necessary, releases are made from State and Federal reservoirs in order to provide for that amount of water lost in the Delta; is that correct?

5 WITNESS MILLIGAN: To the degree that that 6 particular criteria might be controlling operations and 7 they link back to that, that's kind of how we look at 8 it and make the adjustments as appropriate.

9 MR. HERRICK: Yeah, I meant to say, as 10 necessary, that that's what's done.

11 WITNESS MILLIGAN: Yes, correct.

MR. HERRICK: And so if this statute says -and I'm just asking for your understanding because there are obviously the legal arguments perhaps either way. So, in fact, the projects are actually making releases to provide salinity control and provide the supply; is that correct? In other words, the projects cover the water loss to the Delta?

19 WITNESS MILLIGAN: That we're making releases 20 to control salinity and make adequate water available 21 for beneficial uses in the Delta.

22 MR. HERRICK: Yes. So in fact, you're -- it 23 looks like you may be in compliance with that, correct? 24 WITNESS MILLIGAN: It would be. There's no 25 numerics associated with this text. And I don't want

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1 to get into assignments of responsibility, but we are a
2 part of this solution.

3 MR. HERRICK: Of course, us attorneys can 4 argue over those specifics. But generally speaking, 5 the operation of the Delta includes some provision 6 for -- as necessary, what's lost in the Delta due to 7 use. And that use is both ag or evaporation, stuff 8 like that, correct?

9 WITNESS MILLIGAN: Yes. There are some
10 metrics that try to account for the total use of water
11 within the Delta.

12 MR. HERRICK: Now, if I can direct your 13 attention to Section 12205. And it's actually a separate page, if you want to just go to the last page 14 15 of the exhibit, if that's easier to read. Thank you. 16 Let me read 12205 to you. It says, "It is the 17 policy of the State that the operation and management of releases from storage into the Sacramento-San 18 19 Joaquin Delta of water for use outside the area in 20 which such water originates shall be integrated to the 21 maximum extent possible in order to permit the 22 fulfillment of the objectives of this part." Do you 23 see that? 24 WITNESS MILLIGAN: Yes, I do.

25 MR. HERRICK: And without asking for legal

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1 opinion, would you agree that the objectives of this 2 part include, as we said earlier, the maintenance and 3 expansion of ag and industry and urban use, salinity 4 control, and a supply for in-Delta, correct? Or would 5 you agree with that? 6 WITNESS MILLIGAN: Yes, I would, on a layman's 7 level, agree that that's consistent. MR. HERRICK: And I'm not holding you to a 8 9 legal opinion. I'm just trying to explore the 10 obligations that you believe under which you're operating when you manage the system, when you operate 11 12 the system. 13 Now, do you have any opinion as to whether or not a new intake would limit --14 15 MR. O'HANLON: Daniel O'Hanlon, appearing on 16 behalf of San Luis and Delta-Mendota Water Authority. 17 I'm going to object to this line of questions. 18 Although Mr. Herrick is framing it in terms of 19 not asking for a legal opinion, in fact, he is asking for a legal opinion, specifically with reference to the 20 statutes he's included as part of his question. 21 22 CO-HEARING OFFICER DODUC: Mr. Herrick? 23 MR. HERRICK: Well, I'm trying to explore the 24 obligations under which the operators think they are 25 bound. And anytime you deal with a statute, whether

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1 it's CVP IA or D1641, then somebody is reading that and 2 deciding what to do. Now, of course, there maybe legal 3 implications of that, and they may be getting different 4 legal opinions. But I'm trying to explore what they 5 understand as their obligations under certain things. 6 I think it is appropriate.

7 CO-HEARING OFFICER DODUC: Thank you for that8 clarification, Mr. Herrick.

9 Your objection is noted and will be considered10 as part of weighing the evidence before us.

11 MR. HERRICK: Now, Mr. Milligan, doesn't a new 12 intake on the Sacramento River near Hood, the new North 13 Delta intakes, isn't that the opposite of what 14 Section 12205 seems to be directing the projects to do? 15 In other words, not letting the water flow through the 16 Delta to provide for all these other goals?

MS. AUFDEMBERGE: I'm going to object to this
question. There has not been any foundation for
whether this applies to the CVP.

20 CO-HEARING OFFICER DODUC: I'm sorry. I 21 didn't understand your objection.

22 MS. AUFDEMBERGE: It's basically a 23 continuation of the legal conclusion that he's asking 24 how this statute applies to the CVP.

25 MR. HERRICK: Well, we read in 12202 that,

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1 "among the functions of the State in coordination with the Federal project." So Mr. Milligan is free to say, 2 3 "I don't think I'm bound by that." That's fine. And 4 then I'm going to ask Mr. Leahigh the same question. 5 CO-HEARING OFFICER DODUC: All right. 6 So I understand the objection, but I'm not 7 trying to trick him into committing on behalf of the --8 MS. AUFDEMBERGE: How and whether State law 9 applies to the CVP is --10 CO-HEARING OFFICER DODUC: And Mr. Milligan is free to answer that in a way that defers back to Mr. 11 12 Leahigh. 13 Ms. Morris? MS. MORRIS: Objection, the question also 14 15 calls for -- assumes facts not in evidence. 16 CO-HEARING OFFICER DODUC: Which facts are you 17 asserting he's assuming? 18 MS. MORRIS: Well, I should -- he said he 19 assumed that all -- he said that the question was 20 whether the new diversion point would basically take 21 all the water. He assumes that it's going to take all 22 the water and that it's not operated jointly with the 23 South Delta diversion, so that that water then would 24 not be flowing through the Delta. 25 So perhaps a clarification of what he's

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1 talking about or what operational scenario would solve
2 my objection.

3 CO-HEARING OFFICER DODUC: All right. Thank4 you. Mr. Herrick will clarify the question.

Just to ease things going forward, given the 5 fact that the Department of Interior and the Department 6 7 of Water Resources have decided to combine their direct, and I appreciate that for efficiency purposes, 8 9 it means that both your witness will be up there. And 10 I believe, given their professional expertise as well 11 as their senior position in the organization, they are very capable of answering questions that they feel 12 13 comfortable with answering and deferring to the other partner when that question is more appropriate for 14 15 them.

16 So in that light, Mr. Herrick, go ahead and 17 ask your questions. Mr. Milligan will answer to the 18 extent that he can. And if he needs to defer to 19 Mr. Leahigh, I trust that he would do so as well. 20 MR. HERRICK: I'll rephrase that. Thank you, 21 Madam Chair.

22 Mr. Milligan, does a new North Delta intake 23 make it easier for you to maximize the release of 24 storage water for exports to go through the Delta or 25 make it less easy for you to do that?

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WITNESS MILLIGAN: I believe I've testified 1 that the existence of a North Delta diversion would 2 3 provide some flexibility that's currently not there for 4 project operations to allow us to meet a number of beneficial uses, one of which is export but also to 5 better manage the various components of in-basin and 6 7 in-Delta parameters as well. 8 MR. HERRICK: I was going to explore that

9 later, but let's get into that now.

Both you and Mr. Leahigh have described new flexibility if the project goes forward; is that correct?

13 WITNESS MILLIGAN: Yes.

MR. HERRICK: But the flexibility is only for 14 15 exports, isn't it? It's not easier to meet Chipps 16 Island when you have a North Delta intake, is it? 17 WITNESS MILLIGAN: Again, that's probably got 18 two parts to it. I think the first part is it does 19 provide something beyond exports. So let's say 20 management oh reverse flows in the central Delta 21 channels, so, say, Old and Middle River, which helps 22 manage entrainment risk at the South Delta diversion. 23 So I think that there are benefits within the -- which we can better deal with the internal Delta 24 25 hydrodynamics in a way that we can't at the moment.

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1 When we get to outflow for Chipps Island, for example, then it probably is a lot more neutral in that 2 3 regard. 4 MR. HERRICK: Okay. One of the -- I'll go on 5 from there. 6 Mr. Leahigh, I'd ask you the same question 7 about Section 12205. You've had a chance to read that while we were up here asking questions. Is that in 8 9 front of you? 10 WITNESS LEAHIGH: Yes, I've read it. This is 11 the first time I've read it. 12 MR. HERRICK: So you were not aware of this 13 before? WITNESS LEAHIGH: Not specifically, no. 14 MR. HERRICK: Mr. Leahigh, is the Department 15 16 of Water Resources agreeable to conditions that would 17 limit the operation under the project you propose to 18 the provisions that we've covered here in 12200 et. 19 seq? WITNESS LEAHIGH: Well, I'm not familiar 20 21 enough with this code to really offer an opinion on 22 that. 23 MR. HERRICK: Mr. Milligan, is the Bureau 24 willing to agree to conditions on the project that 25 would relate to the provisions of these sections we've

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1 covered?

2	WITNESS MILLIGAN: This is outside my area of
3	expertise. My operating assumption, if I can use that
4	term, is that our permit terms and conditions would
5	satisfy these as they would relate to the operation of
6	the CVP my assumption going forward is, with the new
7	project, that any modifications of those terms and
8	conditions would be in compliance with the Water Code.
9	MR. HERRICK: Well, is it your position that
10	the permit terms and conditions on the State
11	Board-issued permits include all of your other
12	statutory obligations?
13	MR. BERLINER: Objection, calls for a legal
14	conclusion.
15	MR. HERRICK: Well, it was just a follow-on
16	from his statement that he assumed that the State Board
17	permit terms would incorporate as required in the legal
18	obligation.
19	CO-HEARING OFFICER DODUC: Answer to the best
20	of your ability, Mr. Milligan.
21	WITNESS MILLIGAN: Yeah, I think maybe for
22	clarity of my previous answer, I said "would be
23	consistent," that would address the obligations of the
24	Water Code. Our permit terms don't cover, let's say,
25	all of our legal obligations. And those are handled,
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1 let's say, outside of that.

2	MR. HERRICK: Are there any you may not be
3	able to answer this. Are there any Bureau or DWR
4	witnesses who will be appearing who can make
5	commitments on terms and conditions that are suggested
6	by parties?
7	WITNESS MILLIGAN: I'm not aware, no.
8	MR. HERRICK: So we won't be able to find out
9	through this evidentiary hearing what is acceptable to
10	the projects as conditions to approval of the petition;
11	is that correct?
12	MR. BERLINER: This line of questioning is
13	inappropriate. These are operations witnesses.
14	Mr. Herrick's directing himself to far more to policy
15	questions, which will be answered in due time through
16	this proceeding.
17	CO-HEARING OFFICER DODUC: Well, actually, let
18	me rephrase his question.
19	Whether or not there are terms that the
20	petitioners would find acceptable is actually not
21	important to me. But what is important to me is and
22	the Board has asked several times for petitioners to
23	propose permit terms and conditions.
24	So if I might rephrase Mr. Herrick's question
25	or reframe your question in terms of not asking for
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California Reporting, LLC - (510) 224-4476 www.CaliforniaReporting.com terms that might be acceptable to the Department but asking instead for you, if you can, to point to what sections in your testimony where petitioners have outlined some proposed terms and conditions for the this project.

6 And I think that's just a matter of -- well, 7 an attempt, anyway, to clarify what is being proposed as part of the project for Mr. Herrick and other 8 9 parties to consider the aspect of harm to users. 10 Are there relevant portions, sections in your testimony and exhibits that you could direct 11 Mr. Herrick and other parties to for a clear 12 13 understanding of any proposed terms and conditions? WITNESS LEAHIGH: I think we'd have to defer 14 15 to the project description testimony from the DWR 16 consultant. That's as far as we have at this point. CO-HEARING OFFICER DODUC: And that would be 17 18 the extent of what is currently being proposed? 19 WITNESS LEAHIGH: Again, I'd have to defer to 20 that testimony. CO-HEARING OFFICER DODUC: Mr. Brodsky, are 21 22 you just stretching your legs or -- because I do stand 23 up, so I recognize sometimes there's a need for that. 24 MR. BRODSKY: If I dare, Madam Chair, the 25 witness doesn't want to answer what will be acceptable,

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but I think this witness is qualified to answer what would be feasible to implement and why something wouldn't be feasible or problematic to implement. CO-HEARING OFFICER DODUC: And if these witnesses are -- well, let me ask a different question. If, through the course of -- and I'm making a guess here, Mr. Herrick.

8 Through the course of Part 1B, or even Part 2 9 for that matter, if some of the parties were to propose 10 various terms and conditions -- in fact, many of the 11 cross examiners have already raised some suggestions 12 around that avenue -- will there be witnesses provided 13 by petitioners to respond to those proposals?

Because I'm a bit concerned that questions are being deferred back and forth, left and right, and it is going to be very important for the record as well as for the Board's consideration that we be as responsive as possible to the questions that are being asked.

MR. MIZELL: I believe, at this point in time, our project description contains additional criteria on the projects over and above D1641. That's what we're presenting.

Now, we recognize that the scope of this hearing is somewhat open ended in that we have human uses to consider and we have other concerns that

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1 traditionally don't fall within the water rights 2 paradigm. And we have taken it to heart that we are to 3 listen to the questions -- excuse me -- presented to us 4 through the course of Part 1A and the testimony that the other parties will provide during Part 1B. And we 5 can provide rebuttal evidence to address things that 6 7 aren't clearly laid out specifically in the notice at 8 that time.

9 We have held off on presenting specific terms
10 because they would necessarily be incomplete until we
11 hear that evidence.

12 CO-HEARING OFFICER DODUC: All right. Thank13 you Mr. Mizell.

Mr. Herrick, I think that's the best you're going to get.

16 MR. HERRICK: If we could pull up No. 25 on my 17 list. Sorry for going out of order. We'll just mark 18 it South Delta 25.

19 (South Delta Water Authority Exhibit SDWA-2520 marked for identification)

21 CO-HEARING OFFICER DODUC: And as staff is 22 doing that, Mr. Herrick, your first hour is up. I did 23 say first; that implies you'll get a second hour. But 24 how much additional time will you need, and what are 25 your lines of questioning?

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1 MR. HERRICK: First of all, the additional time is always difficult, but given how this is going, 2 3 I have at least another hour. I apologize. CO-HEARING OFFICER DODUC: And what are the 4 5 topics that you'll be exploring? 6 MR. HERRICK: The topics are I have five or 7 six other statutory obligations for operations which go to what we've already explained. I have three things 8 9 from D1641 which are obligations which haven't been 10 talked about. And then I have instances of operations 11 that are contrary to the previous assertions, if I may. 12 And that's sort of a good summary, but I have 13 substantially more left. I apologize. CO-HEARING OFFICER DODUC: All right. Let's 14 15 go ahead and give you 30 minutes to start with. That 16 will take us to the noon hour, and we'll revisit it 17 then. 18 MR. BAKER: Mr. Herrick, can you give us the 19 file number, please. MR. HERRICK: 25. 20 MR. BAKER: You gave us 1 through 20. 21 22 MR. HERRICK: I added that yesterday. There's 23 a -- the Coordinated Operations Agreement, a law, PL 99-546. 24 25 I guess that's what happens when you do it by California Reporting, LLC - (510) 224-4476

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apologize to everybody. I don't see it there. 2 3 I object to the implications of my efficiency 4 here. Anyway, I believe the Board members have a hard copy, and I believe the witnesses have one too. 5 6 Mr. Milligan, do you recognize this SDWA-25, which is PL 99-546? Have you seen this before? 7 WITNESS MILLIGAN: Not quite in this format 8 9 for printing, but I am familiar with this particular 10 piece of public law. 11 MR. HERRICK: Do you see the first portion 12 I've highlighted, which is Section 101, 13 Subdivision (b)1? Do you see that? WITNESS MILLIGAN: Yes, I do. 14 15 MR. HERRICK: And let me briefly or quickly 16 read that. It says, "Unless the Secretary of the 17 Interior determines that the operation of the Central 18 Valley Project in conformity with the State Water 19 quality standards..." and then I skip a bit, "...is not consistent with the Congressional directives applicable 20 21 to the project, he's authorized and directed to operate 22 the project in conjunction with the State of California 23 Water Project in conformity with such standards." I didn't read that very well, but do you see that part? 24

yourself. We'll have to use the hard copies. I

1

25 WITNESS MILLIGAN: Yes, I do.

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MR. HERRICK: So that is -- that's the federal 1 2 law approving the COA agreement and directing the 3 Bureau to do something, right? 4 WITNESS MILLIGAN: Yes, amongst other things within the subsequent sections as well. The entire Act 5 6 is longer than one page. 7 MR. HERRICK: Absolutely. WITNESS MILLIGAN: Okay. 8 9 MR. HERRICK: I'm sorry. I'm not trying to --10 WITNESS MILLIGAN: This is an excerpt from 11 there. 12 MR. HERRICK: This is only the first page, 13 yes. So according to this, it appears there is a 14 15 process by which the Secretary of Interior could decide 16 that compliance with State-mandated water quality 17 objectives is not within the project purposes and then 18 object to it somehow; is that correct? CO-HEARING OFFICER DODUC: Hold on a second. 19 Mr. Berliner, go ahead. 20 21 MR. BERLINER: I suspect we have a similar 22 objection. Delving into these statutes calls for legal 23 conclusions. The question that Mr. Herrick asked was a 24 direct legal question. I object on that basis. 25 MR. O'HANLON: And I join in that objection.

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1 He's essentially reading statutes and asking two engineers whether they agree with the reading of the 2 3 statute. In addition to calling for a legal 4 conclusion, I question what relevance that has. 5 CO-HEARING OFFICER DODUC: Well, as an 6 engineer, I tend to have opinions on legal matters 7 myself. So I don't know to what extent I'm going to rule out the questioning based on that. 8 9 But recognizing that these witnesses are not 10 attorneys, we'll note the objections, and we'll 11 consider that in weighing the evidence before us. Mr. Herrick? 12 13 MR. HERRICK: And I will try to not make it sound --14 15 CO-HEARING OFFICER DODUC: I understand where 16 you're going, but let's be careful how you frame your 17 questions. 18 MR. HERRICK: Thank you. 19 Mr. Milligan, do you understand this federal 20 law to be directing the Bureau to operate the project 21 in conformity to standards directed by the State of 22 California? 23 WITNESS MILLIGAN: Give me just a minute to 24 reread the paragraph given your question. 25 In the -- I would read this that the

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1 operations of the CVP in conjunction with the State 2 Water Project to conform to the standards is what we've 3 been directed, the Secretary directed to do. And if 4 the Secretary determined that such an operation would be inconsistent with the Constitutional direction on 5 how the CVP should be operated, then there's a 6 7 direction as to the process that should be undertaken. 8 MR. HERRICK: And are you in fact operating 9 the Central Valley Project in conformance with the 10 standards, the current standards that the Board has 11 mandated? 12 WITNESS MILLIGAN: We're operating in 13 conformance with our permit terms and conditions. MR. HERRICK: Does that include the South 14 15 Delta salinity standards? 16 WITNESS MILLIGAN: We believe we're within our 17 permit terms and conditions. 18 MR. HERRICK: Okay. And I'll get to that 19 later --20 WITNESS MILLIGAN: Okay. 21 MR. HERRICK: -- more specifically. 22 But you would agree that the South Delta 23 salinity standards at the three interior South Delta 24 locations are currently being violated? 25 WITNESS MILLIGAN: We'll say that they're

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1 currently being exceeded.

2	MR. HERRICK: They're currently being
3	exceeded. Okay. Thank you.
4	Next is No. 6. That would be South Delta
5	No. 6, and it's on the stick. And South Delta No. 6 is
6	Title 34, Public Law 102-575. And that is the Central
7	Valley Project Improvement Act.
8	(South Delta Water Authority Exhibit SDWA-6
9	marked for identification)
10	MR. HERRICK: Now, Mr. Milligan as this moves
11	forward, again, I'll be asking the question that
12	previously you and Mr. Leahigh were not able to answer,
13	but I need to make the record clear.
14	Is the Bureau willing to stipulate to any
15	terms and conditions that would relate to that COA
16	agreement mandate?
17	WITNESS MILLIGAN: I think that would
18	that's certainly a policy question, but I cannot commit
19	to.
20	MR. HERRICK: Mr. Leahigh, same question to
21	you for the State?
22	WITNESS LEAHIGH: Same answer. That's a
23	policy question.
24	MR. HERRICK: Thank you. Now, the second page
25	of the SDWA No. 6, which is actually Page 12 of CVP IA,
	0-1; famia Descrition II.0 (510) 004 4476

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1 you see that there? Subpart (b), the caption is "Fish and Wildlife Restoration Activities," is that correct? 2 3 WITNESS MILLIGAN: Yes. What's not clear is 4 this -- is this Section 3406B? MR. HERRICK: Yes, if you look at the very 5 6 bottom of the page --7 WITNESS MILLIGAN: Okay. MR. HERRICK: I appreciate that, since I've 8 9 only provided excerpts. I'm not trying to mislead you 10 there. 11 But the part I've highlighted says, "The Secretary, immediately upon enactment of this title, 12 13 shall operate the Central Valley Project to meet all obligations under State and Federal law, including but 14 15 not limited to," and then one of them is, "All 16 decisions of the California State Water Resources 17 Control Board establishing conditions on applicable 18 licenses and permits for the project." Do you see 19 where it says that? 20 WITNESS MILLIGAN: Yes, I do. MR. HERRICK: Now, again, the previous 21 22 question dealt with the COA statute. I'm dealing with 23 CVP IA now. In your opinion, is the Bureau operating 24 to meet all conditions in their applicable licenses and 25 permits?

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1 WITNESS MILLIGAN: Yes, we're trying. Yes. 2 MR. HERRICK: And does that include the South 3 Delta standards? 4 MR. HERRICK: They are part of our permit terms and conditions. But again, I think we're --5 6 we're consistent with those permits. 7 MR. HERRICK: And that's fine to caveat that. I'm going to drill down on that later. 8 9 WITNESS MILLIGAN: Yes. 10 MR. HERRICK: Mr. Leahigh, do you have the same answer as Mr. Milligan in regards to complying 11 12 with permit conditions? I'm sorry. Let me strike that 13 because this is CVP IA. 14 Mr. Milligan, the next paragraph under 15 (b) is 1. And I've highlighted a portion of that. And 16 rather than reading it, do you understand this is the provision of the CVP IA that deals with the fish 17 18 doubling mandate? 19 WITNESS MILLIGAN: Yes. It's a common 20 reference, yes. 21 MR. HERRICK: And correct me if I use the 22 wrong shorthand or something, but basically this 23 mandated a fish doubling program which resulted in 24 the -- an adverse fish restoration program; is that 25 correct?

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WITNESS MILLIGAN: Yeah, the fish restoration 1 2 program kind of emanates from this particular section. 3 MR. HERRICK: And of course, CVP IA is much, 4 much, more thorough, right? WITNESS MILLIGAN: Yeah, quite a bit more. 5 6 MR. HERRICK: So the next I have -- the 7 aforementioned fish restoration program which is being passed out, that's South Delta No. 7 please. 8 9 (South Delta Water Authority Exhibit SDWA-7 10 marked for identification) MR. HERRICK: And I apologize. Can we pull up 11 12 Exhibit 6 one last time? 13 Mr. Milligan, as the final restoration plan is being passed out, that fish doubling program was 14 15 supposed to ensure that by the year 2000 the natural 16 fish population as defined would be accomplished; is that correct? 17 18 WITNESS MILLIGAN: Well, it kind of states 19 that all reasonable efforts would be made to ensure 20 that by the year 2002. 21 MR. HERRICK: Yes. I'm not trying to 22 overstate that, but that was -- whether there was a 23 hard or soft deadline, that was the time frame, 24 correct? 25 WITNESS MILLIGAN: Yes.

1 MR. HERRICK: And to your knowledge, have we 2 doubled those fish populations that were described in 3 the bill?

4 WITNESS MILLIGAN: Not to my knowledge. MR. HERRICK: Now, the next one that I just 5 passed out is that final anadromous fish restoration 6 7 program. I'm going fast again. I'm sorry. 8 Now, Mr. Milligan, I'm not trying to test your 9 knowledge of this. I'm just going to flip through the 10 pages of the exhibit. And just to get your impression, 11 I want to make sure I'm on the right track, but the 12 fish restoration program has certain actions for 13 various waterways, is that a correct statement, in order to move forwards doubling of fish, correct? 14 15 MR. BERLINER: Objection as to relevance in 16 general as well as to this part of the proceeding since 17 we have a part devoted to fish and wildlife. 18 CO-HEARING OFFICER DODUC: Mr. Herrick? 19 MR. HERRICK: I understand. That's a good 20 objection. The purpose of this is to test whether or 21 not a federal mandate to do things has been complied 22 with, and if not, then the no-action alternative should 23 include operational changes to meet this, and thus we 24 don't have any appropriate analysis of the impacts to 25 third parties.

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MR. WILLIAMS: Phillip Williams, appearing for
 Westland.

3 To the extent that we're asking an operations 4 member -- panel member to interpret a Federal mandate, I would suggest that we are straying pretty quickly 5 into a legal conclusion. And while you're correct, 6 7 Madam, about Mr. Leahigh and Mr. Milligan may have been opinions certainly that may be of value, I would stress 8 9 that your task is to weigh the probative value of the 10 opinions you are being provided. 11 CO-HEARING OFFICER DODUC: Thank you for that 12 reminder. 13 Actually, before all the objections are voiced, Mr. Herrick, I was going to ask you to clarify 14 15 for me because Mr. Milligan has already, in an answer 16 to your previous question, indicated that the goals have not been met. So what is, then, the purpose in 17 18 going through the specific actions to achieve the goal 19 that he has already acknowledged has not been met? 20 MR. HERRICK: It was not my intent to go 21 through all of the actions but just do go through some 22 of them to indicate that compliance with those goals 23 would necessitate operational changes which then later 24 people will legally argue that should be part of the 25 no-action alternative.

CO-HEARING OFFICER DODUC: All right. I'll allow 1 2 you that question. 3 MR. HERRICK: I'm not going to harp on the 4 many specifics. CO-HEARING OFFICER DODUC: Thank you, 5 6 Mr. Herrick. 7 MR. HERRICK: Mr. Milligan, there -- I'm going 8 to do this quickly. 9 CO-HEARING OFFICER DODUC: I'm sorry. Before 10 you continue, all the other objection will be noted 11 and, obviously, again, will go into weighing of the 12 evidence. 13 MR. HERRICK: Thank you. Mr. Milligan, the FRP has various actions 14 15 recommended for various rivers or streams, correct? 16 WITNESS MILLIGAN: Yes, I refer to those as CVP control streams. 17 18 MR. HERRICK: Sorry. Now, those actions 19 include things such as supplementing existing flows through releases or purchases of water for additional 20 flows; is that correct? 21 22 WITNESS MILLIGAN: That's two categories, yes. MR. HERRICK: And, again, if they're separate, 23 24 go ahead and tell me. 25 Is the Bureau operating to provide the

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1 supplemental flows listed for the streams on

2 CVP-controlled waterways?

3 WITNESS MILLIGAN: On -- there are probably 4 some places where we are short of those, but there are 5 other places where we probably have flows in excess of 6 those.

7 MR. HERRICK: And I'm not trying to delve into 8 convenience, possibility, or feasibility. I'm just 9 indicating that the goals -- sorry -- the actions in 10 the FRP are not fully implemented. Would that be a 11 correct statement?

WITNESS MILLIGAN: Some of them may not be 12 13 consistent. This is a document from -- that predates the current biological opinion. And there may be some 14 15 inconsistencies from what's identified in these tables 16 to what's currently in our biological opinions. And as 17 I said, some places we're providing flows in excess of 18 what's identified in some of these streams, and in some 19 places we fall short.

20 MR. HERRICK: In those places where you fall 21 short, would there be operational changes associated 22 with meeting those additional flow suggestions, 23 requirements, whatever you want to call them? 24 WITNESS MILLIGAN: Given most of the flows 25 probably in terms of particularly the timing, there are

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1 probably periods where, in essence, we are in balanced 2 conditions, if you will, or not certainly in flood 3 control operations. So that would require re-operation of the reservoir and, you know, withdrawals for a 4 5 while, most likely. 6 MR. HERRICK: And such re-operations are not 7 part of the analysis done for this petition, correct? WITNESS MILLIGAN: Any changes -- and I'll 8 9 just refer -- have to go back to, let's say, the Cal 10 Sim set of assumptions. Some of these particular 11 elements are embedded in the Cal Sim set of 12 assumptions. And if we were to operate in -- to 13 additional releases beyond what's already within Cal Sim, then that would mean additional release of stored 14 15 water, most likely. 16 MR. HERRICK: When you say "some of these are embedded in the Cal Sim," that means some aren't; is 17 18 that correct? 19 WITNESS MILLIGAN: I think some are not, but I 20 would have to review each one of these, depending on 21 which ones were of your interest, to see if there's a 22 placeholder within Cal Sim. 23 MR. HERRICK: I don't mean to be rude and not 24 look at you when I'm grabbing other stuff, but thank 25 you.

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1 Next I'd like to pass out Public Law 108-361. And that is South Delta 8. 2 3 (South Delta Water Authority Exhibit SDWA-8 marked for identification) 4 MR. HERRICK: I'd like to say, for 5 6 convenience, there's the web address. But that's 7 impossible for anybody to copy down, so I guess that 8 makes it useless. 9 Mr. Milligan, do you have a copy of that, 10 South Delta 8, Public Law 108-361? 11 WITNESS MILLIGAN: Yes, I do. MR. HERRICK: And this was previous -- I'll 12 13 represent to you this was previously designated HR-2828, which is the bill number when it was moving 14 15 through Congress. Are you familiar with that? 16 WITNESS MILLIGAN: Yes. 17 MR. HERRICK: And the third page of the exhibit has some highlighting. Do you see that? 18 19 WITNESS MILLIGAN: Yes, I do. MR. HERRICK: And I can't represent to you the 20 section it's under, but you can see there's a capital C 21 22 regarding the intertie. And then after C, there's a D 23 where the highlighting is; is that correct? WITNESS MILLIGAN: Under D, "Programmed to 24 25 meet standards"?

MR. HERRICK: Correct. I'm just trying to
 make sure that somebody later looking at this is
 looking at the same thing we look at.

4 Now, you said you're familiar with the 5 statute?

6 WITNESS MILLIGAN: Well, the -- to make sure 7 I'm -- this is the Calfed Bay-Delta Authorization Act is my familiarity with it. Yes, I've seen this before. 8 9 MR. HERRICK: And that was enacted in 2004? 10 WITNESS MILLIGAN: I believe that's correct. MR. HERRICK: Now let me read you a portion of 11 12 the highlighted. It says under small i, "In general, 13 prior to increasing export limits to the Delta for the purpose of conveying water to the south of Delta 14 15 Central Valley Project contractors or increasing 16 deliveries through an intertie, the Secretary shall, 17 not later than one year after the date of enactment of 18 this Act, in consultation with the Governor develop and 19 initiate" -- "develop and initiate implementation of a program to meet all existing water guality standards 20 21 and objectives for which the Central Valley Project has 22 responsibility."

23 Do you see that?

24 WITNESS MILLIGAN: I do.

25 MR. HERRICK: Now, one year from October 2005

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1 would be sometime in -- excuse me -- one year from

2 October 2004 would be sometime in 2005; is that

3 correct?

WITNESS MILLIGAN: Yes. 4 MR. HERRICK: Now, has the Bureau implemented 5 a plan to meet all of its existing water quality 6 7 standards and objectives? 8 WITNESS MILLIGAN: There have been a number of 9 efforts to compile a plan per se in terms of 10 implementing a program as it's described here. And I'm 11 sorry, I'm not as up to speed with those various documents. This is something that's been in the works 12 13 for, I'm afraid, longer than the one-year Congressional 14 mandate. 15 I am aware that there have been some reports 16 to the Congress on the plan to meet standards. But I 17 haven't followed that directly. 18 MR. HERRICK: And without being too nasty 19 here, Mr. Milligan, the statute says not just develop but initiate implementation; is that correct? 20 WITNESS MILLIGAN: That's correct. 21 22 MR. HERRICK: Now, the plan also talks 23 about -- you see there "(iii) Recirculation Program"? 24 WITNESS MILLIGAN: Yes, I do. 25 MR. HERRICK: And it says, "The Secretary

1 shall incorporate into the program," and by that I 2 think they're referring to the program to meet 3 standards, "a recirculation program to provide flow, 4 reduce salinity concentrations in the San Joaquin River and reduce the reliance on New Melones Reservoir for 5 meeting water quality and fishery flow objectives." Do 6 7 you see that? 8 WITNESS MILLIGAN: Yes, I do. MR. HERRICK: Now, has the Bureau initiated a 9 10 recirculation program in order to meet standards? 11 WITNESS MILLIGAN: No, we have not. 12 MR. HERRICK: Now, there are always legal 13 arguments, and there could be laws that change things. But I'm just asking for your view of this. 14 15 Do you view this as a mandate on you as the 16 operator of the Central Valley Project to have done a 17 couple of things that haven't been done? 18 WITNESS MILLIGAN: As the operator, no. I 19 would say this is a -- this is direction to the 20 Secretary. And I believe that we have communicated to 21 the Congress as it relates to a number of these types 22 of things in the Act. 23 MR. HERRICK: And the next page of the 24 document, South Delta 8, you see where there's a 25 section small v, and it's called "Acquisition of

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1 Water"?

2 WITNESS MILLIGAN: Yes, I do. 3 MR. HERRICK: You can re-read that here, but 4 I'll just summarize real fast to save time. 5 The Secretary is also directed to incorporate into the program to meet standards the purchases of 6 7 water from willing sellers in order to meet standards; is that correct, as a general statement? 8 9 WITNESS MILLIGAN: I think it's to meet the 10 dilution discharges of salt and other constituents, so 11 those types of standards. 12 MR. HERRICK: That's an appropriate nuance. 13 Then all of this deals -- within the final paragraph and before, it talks about one of the 14 15 purposes is to reduce the reliance on New Melones for 16 meeting the various San Joaquin River related 17 obligations; is that correct? 18 WITNESS MILLIGAN: This was the intent of this 19 -- a lot of this particular section of the Act. MR. HERRICK: Has the Bureau reduced its 20 21 reliance on New Melones for meeting such things as the 22 Vernalis salinity standard? WITNESS MILLIGAN: That's a somewhat general 23 24 question. I will say that the implementation of the 25 Salt and Boron TMDL certainly has -- there appears to

have had the effect of reducing the reliance on the
 dilution flows from New Melones.

3 We seem to be making lower releases for 4 dilution flows than we may have had in the past. That's just an observation. It seems to have 5 6 correlated with the Salt and Boron TMDL. 7 Has there been a particular set of objectives or other planning actions to do that? No, there has 8 9 not. 10 MR. HERRICK: That was an excellent answer, by 11 the way. WITNESS MILLIGAN: Thank you. 12 13 MR. HERRICK: Mr. Milligan, has the Bureau reduced it is reliance on New Melones for meeting 14 15 fishery flows measured at Vernalis? 16 MS. AUFDEMBERGE: I'm going to object. This whole line of questioning, I'm losing the connection of 17 18 relevance to the impacts of Cal WaterFix. 19 CO-HEARING OFFICER DODUC: Seriously? Okay. 20 Mr. Herrick. MR. HERRICK: Madam Chair, I will do this once 21 22 again. That I'm trying to establish that there are 23 other mandates rather than D1641, which arguably 24 require the Bureau to do -- Bureau and the State to do 25 other things. And if those other things were done,

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1 that would change the no-action alternative, which 2 would change the analysis of injury. 3 So I think that's my same explanation as before. 4 CO-HEARING OFFICER DODUC: Thank you. 5 6 Overruled. 7 Please continue, Mr. Herrick. MR. HERRICK: Thank you. Okay. 8 9 Now, Mr. Milligan, just to upset you even 10 further, I have the "Plan to Meet Standards." And so that's South Delta No. 9. And as that 11 12 being passed out --13 CO-HEARING OFFICER DODUC: As that's being passed out, Mr. Herrick, do you think we might be able 14 15 to wrap up your cross-exam by 12:30? 16 MR. HERRICK: No. CO-HEARING OFFICER DODUC: How much further do 17 18 vou have? 19 MR. HERRICK: I have to assume I have at least 20 45 minutes. But if I may, I'm not trying to -- other people have different things, but I don't think it --21 22 CO-HEARING OFFICER DODUC: I understand. My suggestion will be, if this is a new line of 23 24 questioning -- is it? Is now a good time for our lunch 25 break?

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MR. HERRICK: How about if we do it after this 1 2 exhibit? 3 CO-HEARING OFFICER DODUC: Okay. 4 MR. HERRICK: This won't take more than a couple of minutes. 5 6 CO-HEARING OFFICER DODUC: All right. We'll 7 do that then. MR. HERRICK: Thank you very much. 8 9 (South Delta Water Authority Exhibit SDWA-9 10 marked for identification) 11 MR. HERRICK: Mr. Milligan, you have South 12 Delta No. 9 in front of you, which is the Reclamation's 13 "Program to Meet Standards"? WITNESS MILLIGAN: I have what appears to be 14 15 an excerpt of that, maybe. I don't even know if it's 16 the entire executive summary or not. 17 MR. HERRICK: Let me rephrase that because you 18 are absolutely correct. In front of you is South 19 Delta's exhibit which is excerpts from the plan, 20 certainly not the whole plan. 21 WITNESS MILLIGAN: Okay. Yes, I do have that. 22 MR. HERRICK: You see on the cover page, 23 second, third, there's a map, and then the page after that's labeled ES-3; there's some highlighting on 24 25 there?

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1 WITNESS MILLIGAN: Yes. 2 MR. HERRICK: Just generally, that's a portion 3 of the plan recognizing that the D1641 standards 4 include the three interior South Delta standards for 5 salinity, correct? 6 WITNESS MILLIGAN: Yes, that's what it says. 7 MR. HERRICK: And the only purpose for asking that is the plan doesn't ignore the South Delta 8 9 standards; it recognizes that those are some of the 10 obligations that they're supposed to meet under the 11 plan of -- what do they call them? WITNESS MILLIGAN: Or at least the sentence 12 13 acknowledges that these three stations are part of D1641. 14 15 MR. HERRICK: Now, on the next page, which is 16 ES-4, you see where I've highlighted "Program Objectives"? 17 18 WITNESS MILLIGAN: Yes. 19 MR. HERRICK: And there are two of them there 20 that I've highlighted. The first one says, "Reduce reliance on releases from New Melones Reservoir for 21 22 meeting water quality and fishery flow requirements 23 near Vernalis so as to increase water deliveries to CVP 24 Contractors." Do you see that? 25 WITNESS MILLIGAN: I do see that.

1 MR. HERRICK: Is it your understanding that the plan to meet standards in PL 108-361 required 2 3 meeting standards near Vernalis or all water quality 4 obligations? I didn't say that very well. 5 MR. BERLINER: Same objection as before, 6 calling for a legal conclusion. 7 MR. HERRICK: Let me phrase that, because --CO-HEARING OFFICER DODUC: Mr. Herrick, go 8 9 ahead. 10 MR. HERRICK: Mr. Milligan, I apologize. You see where it says, "Flow requirements near Vernalis" in 11 12 that section I just read? 13 WITNESS MILLIGAN: I do see that. MR. HERRICK: Do you know why it says "near 14 15 Vernalis" rather than referencing the same language 16 that was in the statute, which is "meeting all water 17 quality objectives"? 18 WITNESS MILLIGAN: I do not know why the 19 objectives as stated -- program objectives as stated here are focused specifically to the Vernalis 20 21 objectives or objectives near Vernalis anyway. 22 MR. HERRICK: So that first highlighted part talks about reducing reliance on New Melones for 23 24 meeting certain things, correct? 25 WITNESS MILLIGAN: Yes, specifically water

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1 quality and fishery flow requirements.

2	MR. HERRICK: Right. And then the next bullet
3	says, "Improve water quality conditions in the San
4	Joaquin River above Vernalis," correct?
5	WITNESS MILLIGAN: Yes.
6	MR. HERRICK: Now, do you have any opinion on
7	whether or why the program objectives do not include
8	meeting the water quality standards?
9	WITNESS MILLIGAN: I do not.
10	MR. HERRICK: Okay. That's a good time to
11	break. Thank you, Madam Chair.
12	CO-HEARING OFFICER DODUC: Thank you,
13	Mr. Herrick.
14	We will continue at 1:00 p.m.
15	(Whereupon, the luncheon recess was taken
16	at 11:59 a.m.)
17	
18	
19	
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1	AFTERNOON SESSION
2	000
3	(Whereupon, all parties having been
4	duly noted for the record, the
5	proceedings resumed at 1:00 p.m.)
6	CO-HEARING OFFICER DODUC: All right.
7	Everyone, take your seats. It's 1:00 o'clock. We will
8	begin.
9	But before Mr. Herrick gets started, I want to
10	do just a quick check-in with the parties that are
11	coming up regarding cross-examination so we can sort of
12	have some sort of a planning timeline for the rest of
13	today.
14	Mr. Herrick will anticipate about another half
15	an hour.
16	MR. HERRICK: Or more.
17	CO-HEARING OFFICER DODUC: Well, we'll see,
18	Mr. Herrick.
19	Group No. 22, do you expect to conduct
20	cross-examination, City of Stockton?
21	(No response)
22	CO-HEARING OFFICER DODUC: 23, Stockton East
23	Water District?
24	(No response)
25	CO-HEARING OFFICER DODUC: 24 Ms. Spaletta?
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MS. SPALETTA: Yes.

2 CO-HEARING OFFICER DODUC: Actually, if you 3 wouldn't mind coming up just so that we can hear you. 4 Recognizing that this is only an approximation, how much time do you think you might 5 6 need? 7 MS. SPALETTA: This is Jennifer Spaletta for North San Joaquin. We have actually coordinated with 8 9 both Stockton East and with the County. 10 CO-HEARING OFFICER DODUC: Okay. MS. SPALETTA: So I anticipate that, between 11 12 Mr. Keeling and I, we will take no more than two hours. 13 Correct? MR. KEELING: That's correct. 14 15 CO-HEARING OFFICER DODUC: So that might 16 actually get us to today. But in case we are even more efficient than that, how about Group No. 26? 17 18 MR. MILJANICH: I believe you skipped 19 through 25. CO-HEARING OFFICER DODUC: I'm sorry; did I? 20 MR. MILJANICH: County of Solano. 21 22 CO-HEARING OFFICER DODUC: 25, yes. MR. MILJANICH: Peter Miljanich for County of 23 24 Solano. 25 My cross-examination can take anywhere from

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1 probably 20 to 40 minutes.

2	CO-HEARING OFFICER DODUC: Okay.
3	MR. MILJANICH: But for purely selfish
4	reasons, I'm happy to wait until Thursday.
5	CO-HEARING OFFICER DODUC: All right. So we
6	may or may not get to you today. You should know,
7	though, on Thursday I would like to I'll probably
8	continue any remaining cross-examination from today.
9	But I would first like to start with Mr. O'Laughlin,
10	Group 18, if he still would like to conduct
11	cross-examination because we deferred him from
12	yesterday.
13	All right. Any other questions?
14	MR. EMRICK: It doesn't look like you're going
15	to me today, but I'm Matthew Emrick, City of Antioch.
16	And I've coordinated with Ms. Nikki Suard to take my
17	cross-examination if you get to us.
18	CO-HEARING OFFICER DODUC: Okay. So in
19	essence, we're combining, or are you switching?
20	MR. EMRICK: We'll be switching, 27 and, I
21	think, 42, but only for today's purposes.
22	MR. OCHENDUSZKO: 41.
23	CO-HEARING OFFICER DODUC: 41? All right.
24	And that will hold if we get to you on Thursday as
25	well?

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1 MR. EMRICK: Yes, I would go -- well, if you 2 don't get to us, to 27, today, we'll be 27 on Thursday. 3 CO-HEARING OFFICER DODUC: We will not get to 4 you today is my estimation. So then the switch will 5 not happen on Thursday. 6 MR. EMRICK: Okay. Great. 7 CO-HEARING OFFICER DODUC: I mean, that is 8 your request, right? 9 MR. EMRICK: That would happen today only if 10 you got to us. 11 CO-HEARING OFFICER DODUC: Got it. 12 MR. EMRICK: All right. Thank you. 13 CO-HEARING OFFICER DODUC: Mr. Brodsky, are you stretching your legs? Or do you have a question --14 15 which is perfectly fine to stretch your legs. 16 MR. BRODSKY: So I'm going to have one hour? I'm No. 31, I believe. 17 18 You're saying we're not going to get to me 19 today? CO-HEARING OFFICER DODUC: I am doubtful that 20 we'll get to 31 today, given the estimates that have 21 22 just been given by Mr. Herrick and Ms. Spaletta and 23 also Group No. 25. 24 MR. BRODSKY: And then Mr. O'Laughlin is going 25 to go first on Thursday?

CO-HEARING OFFICER DODUC: Correct. 1 2 MR. BRODSKY: Do we have a time estimate for 3 him? 4 MR. HERRICK: He has previously estimated at least two hours, but that's not a commitment from him. 5 6 CO-HEARING OFFICER DODUC: Nor a commitment 7 from me. 8 MR. BRODSKY: Okay. So he'll go out of order? 9 He'll go first, and then we'll resume the order? Is 10 what will happen on Thursday? 11 CO-HEARING OFFICER DODUC: Correct. MR. BRODSKY: Thank you. 12 13 CO-HEARING OFFICER DODUC: All right. Thank 14 vou. 15 With that, Mr. Herrick, please. 16 MR. HERRICK: Thank you. As I call you "Madam 17 Chair" -- I notice that I keep referring to you as 18 "Madam Chair," but we have a Madam Chair and a Hearing 19 Officer. And so I don't know how to address you 20 ladies, but I will do my best. CO-HEARING OFFICER DODUC: Thank you. I don't 21 22 believe that's a critical issue at the moment before 23 us. MR. HERRICK: Thank you. Just once in a 24 25 while, I realize that I'm not thinking.

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CROSS-EXAMINATION BY MR. HERRICK (resumed) 1 2 MR. HERRICK: Okay. Mr. Milligan, just as a 3 follow-up to the final discussions from last time, are 4 you -- is the Bureau prepared to agree to any 5 conditions that would require recirculation or acquisitions of water on the San Joaquin River or to 6 7 help meet standards as part of your petition here? 8 WITNESS MILLIGAN: I think that would be a 9 policy question, but I'm no not aware of any kind of 10 proposal at this time. MR. HERRICK: Next is South Delta No. 10. 11 (South Delta Water Authority Exhibit SDWA-10 12 13 marked for identification) MR. HERRICK: And Dean previously laid piles 14 15 of the documents out for people to grab. So that's it 16 [indicating], and it just has some excerpts from D1641. Before I label this an actual South Delta 17 18 exhibit, I believe it's a State Board exhibit. So 19 however that should be designated, whether it's South 20 Delta or something else, the whole document is already, 21 I think, on the Web or something. 22 So I'll clear that up with your staff when 23 they're yelling at me later. 24 Mr. Milligan, do you have a copy of D1641 25 excerpts that I've provided in front of you?

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1 WITNESS MILLIGAN: Yes, I do. 2 MR. HERRICK: And, Mr. Leahigh, you have 3 access to that same copy or your own copy? 4 WITNESS LEAHIGH: Yes, I do as well. MR. HERRICK: And these questions are for both 5 6 of you, so I'll just start with Mr. Milligan. 7 Mr. Milligan, on Page 150 of D1641 -- so it's the third page in -- I've begun to highlight a few 8 9 things. And to save time, I will go quickly, but 10 please feel free to say "stop going guickly," or "give 11 me a minute." But D1641 included conditions on the projects 12 13 for joint point of diversion operations, correct? WITNESS MILLIGAN: Yes. 14 15 MR. HERRICK: And on Page 150 is a list of -it contains some of those provisions. You see that, or 16 17 you agree with that? 18 WITNESS MILLIGAN: Yes, I believe these are 19 the conditions related to joint point as we've been 20 calling them. MR. HERRICK: Yes. And the No. 3 under "a.," 21 22 I've highlighted that. And it talks about there has to 23 be a response plan for water levels in order for joint 24 point to move forward; is that correct? 25 WITNESS MILLIGAN: That would be consistent

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1 with a.3 here, which you've highlighted.

2	MR. HERRICK: Yes. And do you know if we do
3	have I'm not trying to trick you, I'll be presenting
4	it to you. It's your understanding we have a response
5	plan for water levels with the projects?
6	WITNESS MILLIGAN: Yes. That's my
7	understanding.
8	MR. HERRICK: Thank you. And then No. 4 is
9	another condition of joint point is that all other
10	provisions of the above permits are met; do you see
11	that?
12	WITNESS MILLIGAN: Yes, I do.
13	MR. HERRICK: Then No. 5 is developing a
14	response plan for water quality, would you agree with
15	that?
16	WITNESS MILLIGAN: Then it continues on to the
17	next page?
18	MR. HERRICK: Yes.
19	WITNESS MILLIGAN: Yes.
20	MR. HERRICK: And, again, I'm not trying to
21	blindside you, but there is a response plan for
22	quality, which I'll present here in a minute; we can go
23	over it. But I just want to go through, lay the
24	groundwork for what some of the other D1641 conditions
25	are on the projects. So these are you aware of
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1 these conditions?

2	WITNESS MILLIGAN: Yes.
3	MR. HERRICK: And then, I don't know if I have
4	this backwards, Mr. Leahigh, the same thing. If you go
5	to the end of my hand-out there starting on Page 152
6	maybe I have those backwards.
7	But anyway, there's one section that deals
8	with the Bureau and one section that deals with the
9	State. And they both have similar conditions on JPOD
10	that I just mentioned; is that correct?
11	WITNESS LEAHIGH: This is the section on
12	Stage 2 JPOD? Is that on Page 152?
13	MR. HERRICK: Yeah, Page 150 I believe
14	that if you go to the previous page, that deals with
15	the Federal permits. And then we were reading from
16	"All stages." On Page 150, talks about "All stages."
17	And then if you flip forward to what's labeled
18	Page 155, I think that's the beginning of the DWR
19	permits, and it talks about the same three provisions.
20	I apologize for rushing. I'm just trying to get
21	through it. I'm just trying to lay the groundwork.
22	WITNESS LEAHIGH: Yes, I see it. That appears
23	to be the terms and conditions associated with DWR's.
24	MR. HERRICK: To your knowledge, is DWR
25	operating pursuant to the water level response plan?
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WITNESS LEAHIGH: Yes.

2 MR. HERRICK: And to your knowledge, is DWR 3 operating pursuant to the water quality response plan? 4 WITNESS LEAHIGH: To my knowledge, yes. MR. HERRICK: And the same questions for you, 5 6 Mr. Milligan. Do you believe that the Bureau is 7 operating according to those two plans? 8 WITNESS MILLIGAN: When we've been operating 9 joint point, yes, we have. 10 MR. HERRICK: And for clarity, those are conditions on joint point, not general conditions for 11 12 the permit? 13 WITNESS MILLIGAN: That's my understanding, 14 ves. 15 MR. HERRICK: Okay. So the next exhibit is 16 South Delta 11, which is -- it's there for people to 17 grab and pass out, sorry. 18 (South Delta Water Authority Exhibit SDWA-11 19 marked for identification) MR. HERRICK: And if everybody has this in 20 21 front of them, South Delta Exhibit 11 is the response 22 plan for water levels under D1641. And on the third 23 page of that hand-out, Mr. Milligan, do you see where 24 I've highlighted some text? 25 CO-HEARING OFFICER DODUC: Let's go ahead and

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1 give Mr. Herrick another 30 minutes.

2 MR. HERRICK: Thank you. I apologize. WITNESS MILLIGAN: It's kind of highlighted, 3 4 what looks to be previously highlighted text? 5 MR. HERRICK: Yeah. Is it not clear on your 6 copy? I apologize. Can you see on the overhead? 7 WITNESS MILLIGAN: Yes. Yes, I see that here. MR. HERRICK: I'll read it real fast here. It 8 9 says, "Water levels are considered adequate if they are 10 forecasted to be 0.0 feet mean sea level or greater at 11 Old River near Tracy Road Bridge and Doughty Cut above 12 Grant Line Canal Barrier and 0.3 feet mean sea level or 13 greater at Middle River near Howard Road Bridge." Do 14 you see that. 15 WITNESS MILLIGAN: Yes, I do. 16 MR. HERRICK: Is that your understanding those 17 are the criteria for adequate water levels in South 18 Delta when JPOD is occurring. 19 WITNESS MILLIGAN: That's my understanding. MR. HERRICK: Then next page that is another 20 section that's highlighted. And I'll read that 21 22 quickly. It's call "Updated modeling." 23 "During the existence of this plan, DWR, 24 Reclamation, and SDWA shall work together to improve 25 the reliability of the modeling used to predict the

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1 effects of export pumping on South Delta water levels. The parties shall also work together to refine the 2 3 definition of water levels in the South Delta below 4 which local diversions become impaired. If additional 5 or replacement definitions of said water levels are 6 identified through this plan, they shall be 7 incorporated into this plan." 8 You understand that's part of the water level 9 response plan? 10 WITNESS MILLIGAN: Yeah, as it relates to the updates of new modeling or new criteria. 11 12 MR. HERRICK: If I may ask, Mr. Holderman, you 13 have some level of familiarity with this plan, do you 14 not? 15 MR. HOLDERMAN: Yes, I do. 16 MR. HERRICK: I believe you were involved in 17 working through the details and agreements on it? 18 MR. HOLDERMAN: Right. MR. HERRICK: To avoid time -- not "avoid 19 time." To avoid excessive time, I apologize if I sound 20 21 like a testimony, but see if you can agree with what 22 I'm going to say. We've had various issues involved with the water level plan; is that correct? 23 24 MR. HOLDERMAN: I'm sorry. Say it again. 25 MR. HERRICK: We had instances when people

1 have complained about low water levels during joint

2 point?

3 MR. HOLDERMAN: Yes. 4 MR. HERRICK: And have we had discussions -we've had discussions, haven't we, about whether or not 5 the 0.3 or 0.0 should be altered or not, correct? 6 7 MR. HOLDERMAN: Yes. 8 MR. HERRICK: And we have not resolved that; 9 is that correct? 10 MR. HOLDERMAN: Since this plan, there's also been a change in data, so we've got to be careful with 11 that because the 0.0 and 0.3 were under a different 12 13 datum. I think it was NAVD or NGVD. And now the levels of concern are 2.5 under NAVD datum. 14 15 And in fact, we've raised the level at two of 16 the three stations where we monitor the levels and -to determine whether -- where we'll have concerns 17 18 from -- to match the Middle River water level, which 19 used to be 0.3 while the others were 0.0. Now they're 20 all 2.5 in the new datum. So they've all been raised 21 to match the Middle River level of concern. 22 MR. HERRICK: Okay. To your knowledge, have 23 there been times when there have been complaints about 24 the ability to divert water due to low water levels 25 when JPOD was occurring?

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1 MR. HOLDERMAN: I can't think of the specific 2 times, but I do recall there's been complaints. And 3 our staff has generally investigated that, those 4 complaints in cooperation with South Delta Water 5 Agency. 6 MR. HERRICK: And those complaints have been 7 raised during times when the water levels are above the agreed-to minimum level of concern pursuant to this 8 9 response plan, correct? 10 MR. HOLDERMAN: Sometimes, yes. 11 MR. HERRICK: And I'm not trying to confuse 12 the change in datum. It's just that, whatever the 13 level is, that there's been complaints during that 14 time? 15 MR. HOLDERMAN: There has been. 16 MR. HERRICK: All right. Mr. Milligan, would 17 the Bureau be agreeable to conditions to the permit in 18 order to alter or change the minimum agreeable water 19 levels in the South Delta as a condition of certain 20 operations? MR. BERLINER: Objection. We already had 21 22 discussion this morning about the permit terms. I 23 think the same logic applies here. CO-HEARING OFFICER DODUC: Yes, Mr. Herrick, I 24 25 recall Mr. Milligan answering several times such things

are policy calls and he does not have an answer to the
 question.

3 So in light of that, where are you trying to 4 go with these additional questions to which I assume he 5 will have the same answer? 6 MR. HERRICK: I don't mean to be repetitive, 7 but I just thought the record should be clear that DWR or the Bureau isn't at this time, whether it's willing 8 or able to agree. But I wanted to, you know, on each 9 10 one of these issues that I've raised, to ask the question about, "Is your entity willing to enter into 11 12 stipulations about those conditions?" 13 I understand the objection. I just don't want to waste time. But I think it's necessary for the 14 15 record to tie it all together. 16 CO-HEARING OFFICER DODUC: All right. Thank you. 17 I'll note the objections, but I'll request 18 that the witness answer. 19 MR. BERLINER: And if I could just have a 20 standing objection? 21 CO-HEARING OFFICER DODUC: Thank you, yes, 22 Mr. Berliner. WITNESS MILLIGAN: So, John, could you repeat 23 24 your question? 25 MR. HERRICK: Is the Bureau willing to agree

1 to conditions to this petition that would include a

2 resolution of water levels of concern?

3 WITNESS MILLIGAN: That's going to be a policy
4 call. And I think it would be viewed in -- in light of
5 the whole package of conditions.

6 WITNESS MILLIGAN: Mr. Milligan, do you 7 believe that we should resolve any issue about water 8 levels of concern prior to analyzing the impacts of the 9 project on legal users?

10 WITNESS MILLIGAN: I think we should assess if 11 there's a change and -- in the water levels. And I 12 think as an independent parallel process, we should be 13 working in conjunction with the South Delta interests 14 about any future operations and response to low levels. 15 But they may be separate tasks, and I think we

16 can kind of do those in parallel.

MR. HERRICK: Mr. Leahigh, you know, to save time, would you have the same answers as Mr. Milligan just had with regard to the State project?

20 WITNESS LEAHIGH: Yes, I think I generally 21 agree with Mr. Milligan's response and that, as far as 22 adding any permit conditions, that would be a policy 23 call as far as DWR is concerned as well.

24 MR. HERRICK: Thank you.

25 The next exhibit I have is South Delta 13. I

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1 skipped No. 12.

2	(South Delta Water Authority Exhibit SDWA-13
3	marked for identification)
4	MR. HERRICK: 13 is the Water Quality Response
5	Plan. As we get that up, let me just preface my
6	questions by saying I'm not trying to trick you.
7	There's a series of actions leading to some final
8	document. This is the initial plan. Next, I'll be
9	showing you the Board's approval of the plan, et
10	cetera. So this was the initial plan submitted by the
11	Bureau and DWR. I'm representing that. You can
12	disagree with that.
13	Mr. Milligan, do you recognize this as the
14	Water Quality Response Plan or excerpts from the Water
15	Quality Response Plan produced by the Bureau and DWR
16	under D1641?
17	MR. MILLIGAN: It does appear to be.
18	MR. HERRICK: And the second page of my
19	document has some highlighted parts. And the part I'm
20	going to read is just the highlight, so I'm not trying
21	to avoid the unhighlighted language. You can look at
22	that. But the first part of highlighted says,
23	"However, if water quality standards at Vernalis or any
24	of the three Southern Delta interior stations are not
25	being met," then I've skipped some, comma, "then the

1 incremental export program effects to the South Delta 2 water quality would be deemed unacceptable, and the 3 incremental export program cannot occur without other 4 mitigation measure for South Delta salinity effects." 5 Do you see that? 6 WITNESS MILLIGAN: Yes, I do. 7 MR. HERRICK: And that was a term or condition that the Bureau was willing to abide by when they 8 9 developed this plan? 10 WITNESS MILLIGAN: It's part of the plan that 11 we submitted, yes. 12 MR. HERRICK: Then the next highlighted 13 section is down near the bottom of that page under the heading of, "Transfers By Third Parties." I'm going to 14 15 read that real fast. 16 "In addition to operating JPOD for the CVP and 17 the SWP consistent with this plan, Reclamation and the 18 Department will also follow this Water Quality Response 19 Plan when operating the Delta pumping facilities to 20 facilitate potential water transfers of their own and 21 water transfers of third parties." Do you see that 22 language? 23 WITNESS MILLIGAN: Yes, I do. 24 MR. HERRICK: Mr. Milligan, is your 25 understanding of that language that JPOD applies to not

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2 all transfers through the export pumps? 3 WITNESS MILLIGAN: That the plan -- this plan 4 on water quality would apply to joint point of diversion and transfer to third party. 5 6 MR. HERRICK: Mr. Milligan, is it your 7 understanding that the Bureau is operating in compliance with the Water Quality Response Plan? 8 9 WITNESS MILLIGAN: Well, yes, Mr. Leahigh, is it your opinion or is it your understanding that the 10 State is operating according to the Water Quality 11 Response Plan that we just reviewed? 12 13 WITNESS LEAHIGH: Yes, that is my 14 understanding. MR. HERRICK: The next exhibit is 15 16 South Delta 14. (South Delta Water Authority Exhibit SDWA-14 17 18 marked for identification) 19 MR. HERRICK: Which is a letter from the State 20 Board to Mr. Milligan and, I believe, your predecessor, 21 Mr. Leahigh, Carl Torgerson; is that correct? Do you 22 have that in front of you? 23 WITNESS LEAHIGH: Yes, this is a predecessor to chief of the operations office to through which I've 24 25 worked.

just the technical joint point of diversion but also to

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1 MR. HERRICK: And the second page of the 2 document, I've highlighted some text. And, again, I 3 apologize. I'll read the first part to you under No. 1. It says, "The DWR and USBR shall meet the 4 5 requirements included in the WQRP dated April 25th, 6 2005 and shall meet the further conditions in this 7 approval. JPOD diversions are authorized pursuant to this WQRP if DWR and USBR are in compliance with the 8 9 time schedule established in the draft cease and desist 10 orders," and it lists the numbers of them, "or any subsequent final order of the State Water Board." 11 12 Mr. Milligan, do you see that language? 13 WITNESS MILLIGAN: I do see the language. MR. HERRICK: And under that, there are two 14 15 time frames. And, again, I'm just trying to save time, 16 so I apologize for rushing. But according this 17 approval, would you agree that the State Board approved 18 the Water Quality Response Plan if, prior to January 19 1st, 2009 you were in compliance with the draft cease and desist orders and after January 9th, if you're in 20 compliance with all permit conditions, correct? 21 22 WITNESS MILLIGAN: Give me a moment to read 23 through that. MR. HERRICK: And just to bother you, there's 24 25 further action on this to the cease and desist orders.

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1 I'm just moving through this as we go.

2 WITNESS MILLIGAN: So could you repeat your 3 guestion?

4 MR. HERRICK: Yes. Is it correct to say that this approval in the July 1st, 2005 letter for the 5 Water Quality -- Water Quality Response Plan says 6 7 generally, if the Bureau and DWR are in compliance with the terms of this cease and desist order, the draft 8 9 cease and desist order, they can pump water up through 10 January 1st, as long as the 1.0 EC level of salinity is 11 met at the relevant stations, and that after January 12 1st 2009, then they have to be in compliance with the 13 point 7 during the appropriate times. Is that how you read that? 14

15 WITNESS MILLIGAN: It is, but my quick read is 16 this would apply to the joint point diversions. And 17 it's unclear about the point you were making on 18 transfers.

MR. HERRICK: Okay. Without tricking you, do you have any knowledge that the limitations on joint point were removed from transfers at any time? WITNESS MILLIGAN: I just see them as distinctly different. And I think, you know, this text seems to speak to joint point, but it's silent on the transfer question.

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MR. HERRICK: That's fine. Next exhibit is 1 2 South Delta 15. 3 (South Delta Water Authority Exhibit SDWA-15 marked for identification) 4 MR. HERRICK: And that's the cease and desist 5 6 order, WR 2006-0006. 7 WITNESS MILLIGAN: We only seem to have one, John. We need to share. 8 9 MR. HERRICK: Look at all these questions I 10 forgot to ask. 11 You have that in front of you, Mr. Milligan? 12 WITNESS MILLIGAN: I do. 13 MR. HERRICK: Again, this is excerpts from that plan. I have the whole plan, if anybody needs it. 14 15 And the second page has some highlighting on it. Do 16 you see that? WITNESS MILLIGAN: I see it. 17 MR. HERRICK: And, again, without -- I'm 18 19 trying to speed things up here. On Page 28, which is 20 that second page I've highlighted for us. But anyway, 21 basically, this cease and desist order -- there's a 22 further change later in time. But this one says, the 23 Department and the Bureau are supposed to implement measures to obviate threatened noncompliance with 24 25 certain water quality requirements, correct? That's

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1 the bottom of Page 28.

2 WITNESS MILLIGAN: Yes, whatever Condition 5 3 was back on Page 159 of --

MR. HERRICK: To refresh your recollection,
maybe, this cease and desist order dealt with meeting
the Southern Delta objectives, correct?

7 WITNESS MILLIGAN: Correct. So these are the8 same pages we were looking at earlier.

9 MR. HERRICK: And then on the next page, under 10 B1, there's some more language I've highlighted. Again, I'm sorry to rush you. You can look at that. 11 12 My question's going to be the cease and desist order 13 then somewhat altered the previous approval of the Joint Point Water Quality Control Plan, correct? 14 15 MR. BERLINER: I'm going to object. We have 16 lengthy documents here that have been highlighted in 17 part. And the witnesses are being asked to give -- to 18 essentially agree with Mr. Herrick and his 19 interpretation without being afforded the opportunity either in time or to view the document in its full 20 21 context. 22 I have no objection that the documents speak

23 for themselves, and I don't think they need to be read 24 into the record.

25 CO-HEARING OFFICER DODUC: Thank you,

Mr. Berliner. And I know that Mr. Herrick is rushing 1 2 to try to accommodate my request. But let's go ahead 3 and allow Mr. Milligan the time he needs to read this 4 and answer as appropriately. MR. HERRICK: Yes, I apologize for trying to 5 6 rush the witnesses. 7 WITNESS MILLIGAN: I've read the sections in 8 whole here. 9 MR. HERRICK: So when you read them in whole, 10 including the first page we reviewed, Page 28, the new 11 deadline is 2009 for accomplishing certain things, correct? 12 13 WITNESS MILLIGAN: That is. 14 MR. HERRICK: We're almost through with this. 15 Sorry. 16 Next is South Delta 16, which is the amended cease and desist order, or WR 2010-0002. 17 18 (South Delta Water Authority Exhibit SDWA-16 19 marked for identification) 20 MR. HERRICK: Now, Mr. Milligan, as you review this document or look at it really quickly again trying 21 22 to save time, and this may not be a good idea, but 23 there was the original cease and desist order, and then 24 this one is an amendment to that, shall we say, or 25 change to it to extend the time frame by which certain

1 things needed to be done, correct?

2 WITNESS MILLIGAN: That is my recollection of 3 what the amended order was meant to achieve. 4 MR. HERRICK: So the new order, then -- let me 5 start over. Sorry. 6 If you'd turn to what's Page 20 of the order 7 in the exhibit there, beginning of the order itself, there's a highlighted sentence, partial sentence. 8 9 Again, you can disagree or qualify your 10 answers. So the order restates that the Bureau and DWR are supposed to obviate the threat of noncompliance. 11 12 And then the next page is by a certain time frame, is 13 that correct, or until something happens? WITNESS MILLIGAN: It's not jumping out to me 14 15 what the new time frame is. 16 MR. HERRICK: And that's my next question. 17 On Page 21, on the next page, I've highlighted 18 some stuff. And I will read this. I apologize. 19 The order says, "Within 180 days from the 20 completion of the State Water Board's pending 21 proceeding to consider changes to the Interior Southern 22 Delta salinity objectives and the associated program of 23 implementation," and then I've -- I'll skip some there. It says, "DWR and USBR shall submit a revised detailed 24 25 plan and schedule to the Executive Director for

1 compliance with the conditions set forth in Paragraph 1
2 above." Do you see that?

3 WITNESS MILLIGAN: I do see that.
4 MR. HERRICK: And Paragraph 1 above referred
5 to the obviating -- measures to obviate the threat of
6 noncompliance at the Southern Delta stations, correct?
7 WITNESS MILLIGAN: That seems to be the
8 reference.

9 MR. HERRICK: Now, at the bottom of this page 10 and continuing on to the next page, I'll read that. It 11 says, "For purposes of this paragraph, the pending 12 proceeding to consider changes to the Interior Southern 13 Delta salinity objectives and the associated program of implementation in any subsequent water right proceeding 14 15 shall be deemed to have been completed if the State 16 Board has not issued a final order in the water right proceeding by January 1, 2013, unless the water right 17 18 proceeding has been initiated, is proceeding as 19 expeditiously as reasonably possible, and will be completed no later than October 1, 2014." Do you see 20 21 that language?

22 WITNESS MILLIGAN: I do.

23 MR. HERRICK: Now, Mr. Milligan, is your 24 understanding of that language that the Bureau and DWR 25 were supposed to have a plan to meet the standards

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1 delivered to the State Board by January 1, 2013?

2 WITNESS MILLIGAN: No, that's not how I
3 probably would have read this text.

It assumed 180 days from completion of a
process which I would have assumed was underway,
that -- unless it was not completed by October 1st,
2014. But maybe because of the short time here to
review this, maybe I'm missing my timing here.

9 MR. HERRICK: I'm not trying to stump you. I 10 just want to make sure the record's clear and see if 11 your understanding will eventually comport with mine. 12 So going back to the Page 21, it talks about 13 within 180 days of the completion of something, a new 14 plan has to be submitted, correct?

15 WITNESS MILLIGAN: That's -- that's what 16 the --

17 MR. HERRICK: First part.

18 WITNESS MILLIGAN: -- first lines of the 19 section here.

20 MR. HERRICK: And then the last part says, for 21 the purposes of this, that proceeding shall be 22 considered completed if the State Board hasn't actually 23 completed it; is that a fair summary? And that new 24 date is 2013.

25 WITNESS MILLIGAN: Then there's an "unless"

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1 component.

2	MR. HERRICK: And do you believe that the
3	"unless" component has occurred? In other words, has
4	the water right proceeding been initiated and going
5	forward and will be completed by October 1st of 2014?
6	MR. BERLINER: I'm going to renew my
7	objection. This is something that Mr. Herrick knows
8	like the back of his hand. He has not established this
9	witness is on the same level that he's at regarding
10	this document. So there's a lack of foundation for
11	this testimony.
12	You can tell by the back and forth that has
13	occurred here. This is very complicated, and the
14	witness is being asked to agree to certain premises in
15	the document that he's clearly not familiar with. So I
16	think this questioning is improper.
17	CO-HEARING OFFICER DODUC: Your objection is
18	noted.
19	Mr. Herrick
20	MR. HERRICK: I'll just
21	CO-HEARING OFFICER DODUC: I'm not going to
22	overrule I'm not going to grant the objection, but I
23	will request you to be more careful in your phrasing of
24	your questions and, if necessary, we'll take the time
25	for Mr. Milligan to fully comprehend or at least
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1 comprehend enough to answer your questions.

2 MR. HERRICK: Yes, thank you. 3 Mr. Milligan, I'm not trying to make you say 4 something that you're not comfortable with. So if the 5 answer is "I'm not sure at this point," that's fine. 6 But what these questions are leading to is 7 whether or not, to your understanding, you're in compliance with the CDO. I think that's an important 8 9 issue. So if you're not sure, you don't think you can 10 answer, that's fine. But that's what I'm trying to 11 explore. So let me ask that ultimate question. 12 Is it your understanding that you're in 13 compliance with the terms and conditions in 14 WR 2010-0002? 15 WITNESS MILLIGAN: I think as a matter of 16 totality, I believe we are. As relates to these 17 specifics, I probably need to spend some more time with 18 some of our water rights experts to build the chain 19 here as to what maybe some of these terms mean and in terms of timing of submitting some additional 20 21 information to the Board. 22 MR. HERRICK: And do you have an understanding 23 of whether or not the Bureau has submitted a new plan to obviate violations of the South Delta standards by 24

25 January 1st, 2013?

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WITNESS MILLIGAN: I don't. I'm not sure if
 we have or not.

3 MR. HERRICK: Mr. Leahigh, the same question. 4 Do you believe that the Department of Water Resources operating the State Water Project is doing so in 5 6 compliance with WR 2010-0002? 7 WITNESS LEAHIGH: Yes. I believe Mr. Holderman could help answer this for the 8 9 Department. 10 MR. HOLDERMAN: Yes. Every quarter, we submit a report for the terms of the CDO to the Water Board, 11 State Board, indicating our progress and the status of 12 13 the various terms and conditions of a CDO. And we've been doing that for many years. 14 15 What Mr. Herrick's not showing is there are --16 there is text in the CDO, not in this particular paragraph that is showing, that makes clear that the --17 18 at least from our interpretation in the Bay-Delta 19 office that the Board intended for that 180 days to 20 start upon completion of a Water Quality Control Plan 21 process, which we all know has been taking a long time. 22 So there is some contrary language in the CDO 23 that can be interpreted different ways. And I know 24 you're looking at this paragraph. We've looked at it 25 as well and tried to interpret what that really means,

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1 Where, you know -- deeming something complete that 2 obviously is not completed, and then other paragraphs 3 in the CDO that say very, very clearly that the Board 4 intended for this to happen after the Water Quality 5 Control Plan process and the water rights process has 6 played out.

7 MR. HERRICK: Well, Mr. Holderman, if you're 8 going to answer the question, let me ask you this 9 follow-on. And that is, if the language of the order 10 starting on Page 21 and continues through 22, tells the 11 Bureau and DWR when completion of the process is deemed 12 to be done, isn't that a direction as to the final 13 date?

You seem to suggest that there's other
language that supercedes that somehow. Where would
that other language be?

MR. HOLDERMAN: For instance, it's near the beginning of the CDO. I haven't look at it recently --I mean, I looked at it recently in terms of this proceeding, but I recall that language being in there because this has come up before. And we found language that was somewhat contrary to this language. And even if you interpret this the way you

24 appear to be interpreting it, there would -- the new 25 plan wouldn't be any different than the plan we

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1 submitted in 2006 because nothing's changed. The whole 2 intent was to prepare a new plan based on new Water 3 Quality Control Plan, potentially Water Quality Control 4 Plan objectives and our water rights proceeding. So it wouldn't make sense to submit a plan that was no 5 different than the plan we submitted in 2006 under the 6 7 original CDO. MR. HERRICK: Mr. Holderman, when it says "the 8 9 process will be deemed completed by January 13th if it

10 hasn't been done," then on what basis would you say 11 they don't want you to submit a new plan?

MR. HOLDERMAN: What I'm saying is it's deemed completed and there is no new Water Quality Control Plan yet, it basically defaults to the existing one. And we've already submitted a plan in 2006 based on that. There's no new plan to prepare.

MR. HERRICK: Isn't that the purpose of the CDO is to get a new plan by a certain deadline? MR. HOLDERMAN: Yes, based on new potentially revised Water Quality Control Plan objectives. And there is language in the CDO that you're not displaying

22 that reflects that thinking.

23 CO-HEARING OFFICER DODUC: Would it be helpful
24 if we pause for a moment for you to find that passage?
25 MR. HOLDERMAN: These are just excerpts. I

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1 don't have a copy.

2 MR. HERRICK: I have the whole order. I would 3 say that's fine, if you want to do that. CO-HEARING OFFICER DODUC: It's your line of 4 5 questioning Mr. Herrick. 6 MR. HERRICK: Mr. Holderman is referring to, I 7 believe, language in the text of the CDO. But I'm 8 referring to language in the order part. 9 So I'm not sure of the point of saying 10 something might be contrary in the language of the CDO 11 rather than in the order of the CDO. The CDO has 12 history and stuff like that. 13 If the Board would like to do that, I will give Mr. Holderman the entire text. He can do that. 14 15 CO-HEARING OFFICER DODUC: Where are you going 16 with this line of questioning? MR. HERRICK: Well, I'm trying to show that 17 the operations of the projects are not in compliance 18 19 with the terms of D1641, especially the CDO. And until 20 they figure out how they can be in compliance, we can't 21 do an analysis of the no-action alternative unless we 22 can analyze impacts to third parties. 23 The Board, if I may, this is argument -- if 24 it's argument, please stop me. 25 But if there's an existing mandatory California Reporting, LLC - (510) 224-4476

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1 requirement on the projects that they're not doing,

2 then they're not describing what they're doing now, and 3 they can't compare that to what they want to do in the 4 future.

5 CO-HEARING OFFICER DODUC: I understand that. In the interest of time to get through this gridlock, 6 7 what I'm confused about is Mr. Holderman gave what I thought was a reasonable answer in terms of the Water 8 9 Quality Control Plan has not been updated, therefore, 10 the plan that was previously submitted by the 11 Department would still hold under current conditions. And now I'm trying to understand, based on that answer, 12 13 where are you going next?

MR. HERRICK: Well, my questions are in response to a position that's contrary to the plain language of the CDO. The CDO language we read deals with when a new plan is due if we don't determine new standards.

So if DWR's position is, "Although we were directed to do it by a certain final date we didn't. And we're not going to do anything but do the same plan again," I think that's relevant. So that's the status of DWR, that's fine.

24 MR. HOLDERMAN: May I add one other thing?
25 CO-HEARING OFFICER DODUC: Please,

1 Mr. Holderman.

2 MR. HOLDERMAN: The date January 2013 was 3 equate a while ago, and we've been submitting these 4 quarterly reports quarterly. And the Water Board, your 5 staff, has not indicated that we were out of compliance 6 or we haven't provided a plan that we were supposed to 7 provide three years ago.

8 And I guess you might insinuate that that 9 might be a concurrence in our interpretation of the 10 CDO.

MR. HERRICK: That's a valid point except, I don't get to cross-examine staff.

13 CO-HEARING OFFICER DODUC: Which is probably 14 why he made that point. Mr. Herrick, I somehow doubt 15 that you're going to get these witnesses to agree to 16 your point of view with respect to compliance with --17 well, with the current requirements.

18 And I don't know how much further you want to 19 spend on this particular issue where I don't see 20 there's hope of them agreeing to the points that you're 21 trying to make. In other words, this may not be the 22 most fruitful line of questioning for you to pursue, 23 although it is within your discretion. But I feel that 24 you have adequately made your arguments for the record. 25 MR. HERRICK: I appreciate that. I won't go

1 any further. I think the documents speak for 2 themselves, and we'll use this in argument later. 3 CO-HEARING OFFICER DODUC: Thank you, 4 Mr. Herrick. 5 MR. HERRICK: Thank you. 6 So let me see what's next given that. If 7 you'll give me one moment, please. 8 Let me ask Mr. Milligan a question because he 9 was the one I talked about JPOD with on this final line 10 of questioning. 11 Is it your understanding that transfers of 12 water can occur -- excuse me. Let me start over. 13 That's not going to get me there. You've testified that you weren't sure that 14 15 transfers were still limited by the terms of JPOD 16 restrictions; is that correct? WITNESS MILLIGAN: I think what I was 17 18 referring to is that transfers, the sections we were 19 discussing, seem to have been in specific to joint point of diversion and was silent on transfers. So we 20 21 probably need to spend more time as it relates to the 22 question of transfers. 23 MR. HERRICK: Okay. I'll go back to Mr. Holderman on the CDO excerpts that I provided. 24 25 Is it your understanding that you've -- "you"

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1 as in DWR -- have complied with the other terms and conditions set forth in the CDO order? And by that I 2 3 mean those subsequent to the ones we've covered. 4 WITNESS HOLDERMAN: Yes. MR. HERRICK: And has DWR or the Bureau given 5 notices each time they predicted an exceedance of the 6 7 South Delta standard? 8 MR. HOLDERMAN: I'd have to defer that to the 9 operators. 10 WITNESS LEAHIGH: Yes, that portion of the CDO would have come from our operations office. And, yes, 11 12 I feel that we've complied with that aspect of the CDO. 13 MR. HERRICK: Without arguing too much, isn't it correct that, once in a while, there's a notice of a 14 15 potential exceedance but that there have been notices 16 once the exceedance occurs? WITNESS LEAHIGH: Yeah, I think the CDO 17 18 requires both of those elements. It requires a 19 notification of a potential exceedance and also 20 requires notification once an exceedance has occurred. 21 And to my knowledge, we've met all of those conditions. 22 MR. HERRICK: Next is -- for the record, for 23 follow-up arguments, but, Mr. Milligan, we are 24 currently -- "we," the Department and the Bureau -- are 25 currently pumping transfer water this summer, correct?

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WITNESS MILLIGAN: Reclamation is not. 1 2 MR. HERRICK: I'm sorry. Mr. Leahigh, the 3 Department is pumping transfer water this summer? I 4 think it's at 400 cfs today or something; is that 5 correct? 6 WITNESS LEAHIGH: Yes, this summer generally 7 there is some water from the long-term Yuba Court that 8 we're picking up, yes. 9 MR. HERRICK: And that pumping has occurred 10 during times when the -- one or more of the South Delta 11 salinity standards is being exceeded; is that correct? 12 WITNESS LEAHIGH: I don't know -- I don't know 13 if that is correct. MR. HERRICK: Mr. Holderman? Are you familiar 14 15 with the exceedances this summer for South Delta 16 salinity standards? MR. HOLDERMAN: I've seen documents. I'm cc'd 17 18 on documents that operations sends out regarding that. 19 MR. HERRICK: Would it refresh your 20 recollection if I said that the transfer of up to 21 500 cfs started on July 1? Does that sound right? 22 MR. HOLDERMAN: I don't know. 23 WITNESS LEAHIGH: Yes, I would agree with --24 with the fact that the transfers started as early as 25 July 1st.

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MR. HERRICK: Mr. Holderman, do you know if
 South Delta salinity standards have been violated as of
 and post July 1st, 2016.

4 MR. HOLDERMAN: I can't give you any dates,
5 but that time of year, it could happen. I don't know
6 dates.

7 WITNESS LEAHIGH: I do have knowledge of that.
8 The -- some of the standards have been exceeded. I
9 don't have the timing exactly of when each standard has
10 been exceeded this summer, but they have occurred.

As far as terms of violation, I don't know if I'd agree with that assessment.

MR. HERRICK: I think I said "exceedance."
Well, we'll just rely on the CDEC record. I
won't waste everybody's time.

16 CO-HEARING OFFICER DODUC: How much more do 17 you have, Mr. Herrick?

18 MR. HERRICK: I have one major topic left. So 19 that's probably 15 minutes. And then if I could have a 20 couple minutes to go through stuff and -- you know, a 21 couple catch-up questions that I missed so. So half an 22 hour at the most.

CO-HEARING OFFICER DODUC: Twenty minutes.
 MR. HERRICK: Twenty minutes at the most.
 Thank you.

The next exhibit is No. South Delta 21. 1 It's another excerpt from D1641. And it's a different 2 3 excerpt, sorry. And, again, it's 21 on mine, but D1641 4 is --5 MR. BAKER: Mr. Herrick, we don't have 21. We 6 can pull up D1641. 7 MR. HERRICK: I didn't understand that. It won't come up? 8 9 MR. BAKER: Exhibit 21 is not on your flash 10 drive that you provided. But we can pull up D1641. MR. HERRICK: Yes. I don't think we need to. 11 It's just a very quick, basic question. 12 13 (South Delta Water Authority Exhibit SWDA-21 identified for the record) 14 15 MR. HERRICK: Mr. Milligan, Mr. Leahigh, these 16 questions are based upon your early representations 17 that day-to-day operations are able to meet water 18 quality standards better than maybe indicated by 19 modeling of the impacts. Do you recall those statements of your general statements? That's kind of 20 21 a horrible question. 22 WITNESS LEAHIGH: I'm sorry. Was that 23 question for myself? 24 MR. HERRICK: Yeah, let's start with you, 25 Mr. Leahigh. My recollection is in your testimony,

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both verbal and written, you talked about how actual 1 2 day-to-day operations allowed you to better meet water 3 quality standards than may be reflected in modeling of 4 compliance. Do you recall that? 5 WITNESS LEAHIGH: Yes, than reflected in the 6 modeling submitted as part of this petition. 7 MR. HERRICK: Yes. Okay. So the excerpt from D1641 is simply a -- a Table 3, which is the water 8 9 quality objectives for fish and wildlife beneficial 10 uses. I assume you see that in front of you now. 11 And I've highlighted the Delta outflow 12 requirement. And the part I highlighted, the water 13 year type, it says "All." The time period says "February through June," and the value is Footnote 10. 14 15 Do you see that, Mr. Milligan, Mr. Leahigh? 16 WITNESS MILLIGAN: Yes. 17 MR. HERRICK: And I will not strain anybody's 18 ability to describe or understand X2, but Footnote 10 19 deals with that X2 issue, right? It tells the different conditions under which different obligations 20 kick in; is that right, as a general statement? 21 22 WITNESS MILLIGAN: Yes. 23 MR. HERRICK: So next is South Delta 22. Is that not on the stick too? What the heck? 24 25 MR. LONG: It is not.

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1 MR. BAKER: We only have 1 through 20. (South Delta Water Authority Exhibit SDWA-22 2 3 marked for identification) 4 MR. HERRICK: Next one is this, which is 2009-0013 Exec, and it is an order by the State Water 5 Resources Control Board dealing with a TUCP request 6 7 back in 2009. And I believe -- I hope everybody has their copy. Sorry for the lack of -- I won't blame 8 9 anybody else. It's my ultimate responsibility. 10 Anyway, you have that in front of you Mr. Milligan, Mr. Leahigh? 11 WITNESS MILLIGAN: Yes. 12 13 MR. HERRICK: Do you recall participating in the hearing on this, on the TUPC that was filed on 14 15 February 10th, 2009 dealing with X2, the outflow 16 standard we just referenced in D1641? WITNESS MILLIGAN: I don't -- I vaguely 17 18 remember the hearing itself. It was a little while 19 ago. 20 MR. HERRICK: I'm not trying to tax your 21 memory on the exact details particular to the hearing. 22 But you do recall that a TUPC was filed in 23 2009, and then a hearing was scheduled, everybody 24 showed up, and then that year it rained? Remember 25 that? So the X2 was satisfied eventually, but this is

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the final order from that hearing. Do you recall that?
 And if you don't, that's okay.

3 WITNESS MILLIGAN: I do recall the events of 4 that particular January and the February, when we were 5 having the discussion while it was pouring outside and 6 the X2 requirement was being met.

7 MR. HERRICK: The good Lord has a sense of irony. Anyway, on Page 2 and 3 of the order, document 8 9 in front of you, I've highlighted certain portions. On 10 Page 2, I just highlighted the part that says, "The Petitioner requests," and then No. 1 is a waiver of the 11 12 starting gate requirement. Do you see that? I'm not 13 going to test you on that. I'm just laying the foundation for the next questions. 14

15 WITNESS MILLIGAN: Yes.

MR. HERRICK: And then on the next page, MR. HERRICK: And then on the next page, Page 3, No. 2, has the second relief requested which is a change to the minimum -- the daily 14-day running average or something like that, correct? One of the averages? Sorry.

21 WITNESS MILLIGAN: Yes, I see that.

22 MR. HERRICK: And then lower down on that same 23 Page 3, there's an excerpt from the actual petition. 24 And it's put in the order here. And you see where it 25 says, "Without a modification of the above X2 [Delta

outflow] standards, the projects could be forced to reduce exports even further than the severe restrictions currently projected and increase releases from upstream reservoirs in February to increase the NDOI from 7100 cfs to 11,400 cfs." Do you see where it says that?

7

WITNESS MILLIGAN: Yes.

8 MR. HERRICK: Does that jog your memory that 9 that was the relief for the justification being sought 10 was that, because of the conditions, they might -- the 11 Bureau and DWR would like to get a relaxation of that 12 X2 standard; is that correct?

13 WITNESS MILLIGAN: Not saying the actual petition, but the order part, I would have to assume 14 15 that this excerpt was lifted properly by the Board. 16 MR. HERRICK: That's correct. And I'm also 17 assuming that the excerpt is, now, correct. 18 Okay. Now, if I may have one moment, please, 19 Madam Hearing Officer? 20 If I may approach the witnesses. Then this will be South Delta 23. 21 22 (South Delta Water Authority Exhibit SDWA-23 23 marked for identification) 24 MR. HERRICK: Mr. Milligan, Mr. Leahigh, you 25 have in front of you a printout that's captioned the

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1 "Delta Hydrology Conditions." Whether or not it's true 2 or not, you have the exhibit in front of you? 3 WITNESS MILLIGAN: Yes. 4 MR. HERRICK: Mr. Leahigh, do you recognize this as apparently a printout from the DWR Delta Ops 5 website that shows monthly data and is available to the 6 7 public? 8 WITNESS LEAHIGH: Yes, this is a report that's 9 produced from my office. 10 MR. HERRICK: Yes. And, again, I'm not being facetious, but assuming this is accurate -- I'm using 11 this, you don't have to say it's necessarily accurate. 12 13 But I'd like to note that -- I'd like to direct you to the parts I've highlighted. On February 1st in the far 14 15 left column, if you go over to the right it shows 16 diversions from Clifton Court Forebay and Tracy Pumping 17 Plant. Do you see that? 18 WITNESS LEAHIGH: Yes. 19 MR. HERRICK: And those are the numbers that 20 are being reported that are occurring on the date that's listed, correct? 21 22 WITNESS LEAHIGH: Yes. 23 MR. HERRICK: So those would be the total 24 exports for any particular day of those two pumping 25 plants/Clifton Court Forebay, correct?

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1 WITNESS LEAHIGH: Yes, those would be

2 historical data for that.

3	MR. HERRICK: I'm just
4	WITNESS LEAHIGH: Correct.
5	MR. HERRICK: So everybody understands what
6	this shows, the chart shows various flows, various
7	rivers. And then it shows exports pumping not just
8	the exports from the projects, but it also has Contra
9	Costa Pumping Plant and so I just want to be
10	complete.
11	You would agree with that?
12	WITNESS LEAHIGH: Yes.
13	MR. HERRICK: Now if we move down to the 10th,
14	February 10th, which is the date of the petition
15	referenced in the prior order, 2009-0013, the days of
16	petition exports are what's that, 998 and 1002? Do
17	you see that?
18	WITNESS LEAHIGH: Yes, I see that.
19	MR. HERRICK: Without being sounding stupid
20	that totals 2,000 cfs, correct?
21	WITNESS LEAHIGH: Yes, that's correct.
22	MR. HERRICK: And then the day after the
23	petition was filed, exports go to 1990 cfs and 1,719;
24	is that correct?
25	WITNESS LEAHIGH: I'm sorry. You referenced

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1 the date that the petition was filed?

2	MR. HERRICK: Yes. One of the portions of the
3	prior exhibit I looked at is the date it was filed.
4	That's on the first page. It's the actual first words
5	in the introduction.
6	WITNESS LEAHIGH: Okay. Yes, I see it.
7	MR. HERRICK: So then on the 12th, exports go
8	to 1990 and 2018, correct?
9	WITNESS LEAHIGH: That's correct.
10	MR. HERRICK: And so exports from between the
11	February 10th and February 12th went from 2,000 to
12	4,000 cfs, correct, total?
13	WITNESS LEAHIGH: That's what this shows,
14	correct.
15	MR. HERRICK: So on the next page, it has
16	additional data from the DWR printout. And besides
17	showing some pumping, it has the categories at the top,
18	it has "Delta Gross Channel Depletions." And one of
19	the categories there to the right-ish it says, "Net
20	delta Outflow Index," correct?
21	WITNESS LEAHIGH: That's correct.
22	MR. HERRICK: So if we go down to the 10th,
23	February 10th, the outflow is the net Delta outflow
24	index is 10,854 cfs, correct?
25	WITNESS LEAHIGH: Correct.

MR. HERRICK: The next day it drops to 9,516 correct?

3 WITNESS LEAHIGH: Correct. 4 MR. HERRICK: Now, this may be a complicated 5 question. If it's too complicated, please say so, and 6 I'll try to rephrase it. 7 Does this data not show that, when DWR and the Bureau petitioned for relief from the net Delta outflow 8 9 index, they then immediately increased exports, and the 10 net Delta outflow index decreased; is that what 11 happened? 12 WITNESS LEAHIGH: Well, and I think your 13 set-up to this whole line of questioning is pretty relevant as far as the precipitation that was 14 15 occurring -- started to occur in that month of 16 February, which actually shows up on this report as 17 well, on the -- if you look at the first page, 18 Column 6, which is rainfall in inches in the Delta, we 19 started to see some precipitation occurring. 20 I think that the timing is -- as you said, was 21 rather awkward. I think that the point of when we 22 started to develop the actual petition was early on in 23 the month. It was much earlier than the point at which

25 existed when we were developing the petition were much

we actually submitted it. So the conditions that

24

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1 different than when the petition actually got

2 submitted.

And I think that, as you indicated, by the time the hearing had been scheduled and everybody was sitting down to begin, conditions had changed significantly at that point, and it was all became a moot point. So I think that timing was very awkward in this entire process.

9 MR. HERRICK: Mr. Leahigh, is it your 10 recollection that the rain events started on the day of 11 the petition or the day after the petition?

12 WITNESS LEAHIGH: Well, the report shows that 13 there was rain that started, looks like, on the 4th or 14 5th of February so prior to -- prior to the petition 15 but during the development of the petition.

16 MR. HERRICK: So how do I put this.

Mr. Leahigh, is the fact that exports doubled while net Delta outflow index went down relevant to the Board's decision in this petition, given that, at the time that occurred, you were petitioning for relief from the Delta net outflow index?

22 WITNESS LEAHIGH: Well, what this tells me, 23 just based on what we're looking at here, is that the 24 petition -- it was becoming obvious that the petition 25 was becoming a moot point in the fact that the outflow

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1 was started stating to increase significantly and there 2 were opportunities to start increasing the pumping. 3 MR. HERRICK: Okay. Let me switch gears here 4 really quickly. Mr. Holderman, is it your understanding that 5 one of the provisions of the petition includes the 6 7 installation of the permanent Head of Old River 8 barrier? 9 MR. HOLDERMAN: Yes. 10 MR. HERRICK: And you're familiar with the long history of the barrier program in the South Delta? 11 12 MR. HOLDERMAN: Yes. 13 MR. HERRICK: And are you familiar with the fact that some parties allege that Southern Delta water 14 15 rights are dependant upon the flow of the San Joaquin 16 River and no other waters? MR. HOLDERMAN: Yes. 17 18 MR. HERRICK: And what is the time period 19 during which the permanent Head of Old River barrier 20 would be operated under the petition -- or may be 21 operated under the petition? 22 MR. HOLDERMAN: The period that's being 23 proposed for Head of Old River barrier gate would begin 24 as early as January, and it would extend to the end of 25 November.

1 Now, it wouldn't be closed that entire time; 2 there are different criteria during that time -- but 3 potentially from January through end of November. 4 MR. HERRICK: Does the petition anticipate permanent tidal barriers, the other three barriers 5 6 being permanent also? 7 MR. HOLDERMAN: Not as part of this project. MR. HERRICK: Are there any concerns that you 8 9 might have might by having a permanent fish barrier and 10 the other two -- three barriers not being permanent? Remember, you're under oath, Mr. Holderman. 11 12 MR. BERLINGER: Objection --13 CO-HEARING OFFICER DODUC: Mr. Herrick, let's not revert back to the old Mr. Herrick. 14 MR. HOLDERMAN: John and I have a history 15 16 here, so we banter back and forth like that. 17 CO-HEARING OFFICER DODUC: Not here, you 18 don't. MR. HOLDERMAN: I understand. 19 20 The Head of Old River barrier that's being 21 proposed has longer operational period than the rock 22 Head of Old River barrier that we typically install 23 every year. When we install that Head of Old River 24 25 barrier, rock barrier, we also install rock barriers --

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three rock barriers downstream to basically ensure that water levels are kept reasonable while the Head of Old River barrier is in place. That's something we've been doing for many, many years.

5 The fact that this is going to be a permanent 6 gate gives a lot more flexibility than a rock barrier 7 at the head and allows us to operate it on real time, 8 unlike rock barriers.

9 We will be installing rock barriers -- at 10 least I anticipate we will be installing rock barriers 11 during this time as well. And that's described in the 12 proposal, that those rock barriers will still be in 13 place until some future time, I guess, when barriers 14 might be considered and installed under a separate 15 program.

I guess my only -- my only concern is because there will be some operations in the January and February, March timeframe potentially with some gate closures at the Head of Old River barrier and without having rock barriers downstream that they'd have to operate it in a way that will be protective of the South Delta water levels and circulation.

I don't -- I understand that's going to be done in real time, but I don't have any details other than that. They will have the flexibility with

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1 multiple gates to allow water downstream similar to the 2 rock barriers. So I anticipate that they would be 3 monitoring water levels and salinity downstream and 4 making operational changes as needed during that 5 January-through-March timeframe.

6 MR. HERRICK: Mr. Holderman, do the fishery 7 agencies' approvals for the operation of the temporary 8 rock barriers, I'll say, ever coincide with the needs 9 for water levels in the South Delta?

10 MR. HOLDERMAN: The rock barriers in the South 11 Delta used to have a narrow window when we installed 12 them. Now we've been able to install them a little 13 earlier than we used to.

One of the reasons is in order to protect water levels earlier in the year, in the March timeframes. Right now we do start installing barriers in March at the Head of Old River barrier, if that's requested -- and the rock barriers as well. I lost track of the rest of that question.

20 MR. HERRICK: Well, let me cut to the chase. 21 The fishery agencies' approval of the temporary 22 barriers, the rock barriers, the operation of those 23 barriers is dependant upon fishery agency 24 determinations, correct, not upon South Delta water 25 level needs?

1 MR. HOLDERMAN: It's both. We install 2 barriers in the spring for water levels -- for South 3 Delta Water Agency commitment. And sometimes we have 4 to leave culverts open or not finish those barriers 5 until the Delta smelt concerns are passed. So that 6 would be a fishery issue.

7 But we also have conditions in our permit that, if things go south, basically, in the South Delta 8 9 in terms of water quality and it's staged, then we can 10 come back and request an earlier closure or closure of 11 the culverts so that we can respond to that and protect those levels and circulation. So there is some leeway 12 13 there. And that's kind of part of the real-time 14 operations.

15 MR. HERRICK: But that leeway currently is the 16 Grant Line barrier can't be closed, whether there are 17 problems in the South Delta or not, until after 18 June 1st if some need is shown; is that correct? 19 MR. HOLDERMAN: That's -- normally, right. Ιf 20 there's smelt in the area and -- they generally don't 21 want us to close the Grant Line. But if we see 22 problems -- and generally during that same time, exports are at very low levels, usually at 1500 cfs or 23 24 so. So there's not a huge impact on water levels due 25 to project operations.

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1 However, we still monitor all of that. And if 2 we see problems, like the trigger points of those water 3 levels being approached, we go back to the fishery 4 agencies and ask if we can close the Grant Line 5 barrier. 6 So we haven't had -- really had a lot of that 7 occur, the problems during that time frame. But we do have that mechanism where can, you know, basically go 8 9 back to fish agencies and try to get some permission to 10 respond. 11 MR. HERRICK: Well, I'm not sure that's an 12 answer. 13 Don't we regularly have problems with water levels and the inability to fully install and fully 14 15 operate the barriers every year? 16 MR. HOLDERMAN: No, not every year. 17 MR. HERRICK: Most years? 18 MR. HOLDERMAN: Some. Depends on the 19 hydrology, how much water is coming down the San Joaquin, how much rainfall, runoff, all that. 20 Obviously we've had some pretty wet years where we 21 22 didn't even install the rock barriers because water 23 levels were so high. In fact, we were at certain --24 almost flood stage. But not recently, obviously. 25 During the drought years, it's been more of an issue.

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1 MR. HERRICK: We have two agreements dealing 2 with the installation and operation and removal of the 3 Head of Old River barrier; is that correct? By "we," I 4 mean South Delta projects.

MR. HOLDERMAN: Yes, yes.

5

6 MR. HERRICK: Does the petition itself have 7 any provision for working out those installation and 8 operation criteria?

9 MR. HOLDERMAN: Well, those agreements are the 10 emergency response plan at -- the Old River barrier and 11 the operations plan were based on a rock barrier with 12 culverts. So they were very specific to that kind of 13 structure, particularly the emergency response, because 14 we have a limit on when we can install the barrier 15 and -- in terms of maximum flow.

And then if flows become too high, we have to remove that barrier, otherwise it could potentially cause flooding problems. So that's -- because a rock barrier can't respond in real time.

20 With the permanent gate, you wouldn't have 21 that emergency response plan, not the same kind, 22 because they can obviously open the gates up if flood 23 flows are coming downstream. And the operation plan 24 is, again, how to operate the culverts in order to 25 alleviate stage problems or water quality problems

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1 downstream.

2	There are from my read of the Recirculated
3	Draft EIR, the EIS is that that similar type of
4	operation will occur with the a permanent gate, that
5	all those things will be monitored same as we do now,
6	and that gates will be opened to alleviate problems
7	downstream if necessary.
8	MR. HERRICK: Wouldn't it be
9	CO-HEARING OFFICER DODUC: Mr. Herrick, please
10	wrap up.
11	MR. HERRICK: I will.
12	Wouldn't it be prudent to have those agreeable
13	operating conditions for the permanent Old River
14	barrier before the petition is adopted?
15	MR. HOLDERMAN: I don't I think you would
16	want to have some agreements in place perhaps before
17	the barrier was constructed or completed, certainly.
18	But that's a long, long ways away from now.
19	So I don't think that would be something that
20	would have to be worked out prior to this proceeding
21	coming to a close.
22	MR. HERRICK: We started this line of
23	questioning I'll finish right here.
24	We started this line of questioning with me
25	asking whether or not some parties believed that the
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1 water rights in the South Delta were dependant upon 2 San Joaquin River flow. Do you recall that? MR. HOLDERMAN: Yes. 3 4 MR. HERRICK: So if the fishery agencies order the closure of the Head of Old River barrier, might 5 that not affect the available water under a water 6 7 rights issue for South Delta people? 8 MR. BERLINER: I'm going to object. That 9 calls for a legal conclusion. 10 CO-HEARING OFFICER DODUC: To the best your ability, Mr. Holderman. 11 12 MR. HOLDERMAN: I think I can respond to that. 13 MR. BERLINER: I appreciate that, but that calls for a legal conclusion. And it's a highly 14 15 complex question, the interplay between water rights. 16 CO-HEARING OFFICER DODUC: Mr. Berliner, your objection is noted. And we will use that in weighing 17 18 the testimony. 19 But Mr. Holderman, please answer. 20 MR. HOLDERMAN: Obviously, there's a need for water to flow down Old River under certain 21 22 circumstances. A lot of the water volume that's 23 available in the South Delta is due to tidal action. 24 So there's -- you know, right now, there's very little 25 water coming down the San Joaquin, but there's still

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lots of water in the South Delta. That's because it's
 a tidal estuary and ebbs and flows twice a day. So
 there's a lot of filling and emptying.

So if, in the springtime -- usually in the springtime there's a lot more flow than what we're experiencing right now. And the flow naturally splits down Old River and San Joaquin at the Head of Old River.

9 With the rock barrier in place in the 10 springtime, we have eight culverts that are wide open. 11 That's default position. And so far, that's what we've 12 always done. That's to allow water into the South 13 Delta, which is more than adequate to take care of any 14 water supply downstream during that time of the year.

I would imagine that -- and this is just me thinking about the operation at Old River gate, is that the fishery agencies would also allow us to do -- open the gates similarly because, right now, they have not demanded that we close those culverts just because fish might be coming downstream at that moment.

21 So I don't believe that they would require us 22 to protect fish and in -- at the -- at the expense of 23 South Delta water supply or water quality.

24 MR. HERRICK: But you don't think we should 25 resolve that before we move forward on the project?

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MR. BERLINER: Objection, asked and answered. 1 2 MR. HOLDERMAN: I think that will get resolved 3 eventually. But I don't know if it's necessary to do 4 it right now. 5 CO-HEARING OFFICER DODUC: Thank you, 6 Mr. Holderman. And thank you Mr. Herrick. 7 With that, we will take a 15-minute break, and we will resume at 2:37 -- we'll make it 2:40. 8 9 (Recess taken) 10 CO-HEARING OFFICER DODUC: It is 2:40, so welcome back. Let me confirm at this point, Group 22, 11 City of Stockton, are you here? 12 13 (No response) CO-HEARING OFFICER DODUC: All right. 14 15 23, Stockton East? 16 (No response) 17 CO-HEARING OFFICER DODUC: All right. 18 We are on to Group No. 24. 19 And 25, County of Solano, I don't expect we'll get to you today. 20 Ms. Morris? 21 22 MS. MORRIS: Yes. For the record, I'd like to 23 make clarification. The original exhibits that Mr. Herrick marked as -- he starts marking with the 24 25 SDWA dash whatever number. And then throughout the California Reporting, LLC - (510) 224-4476

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cross-examination, he changed to calling everything
 "South Delta" whatever number. So for purposes of the
 record, I think it needs to be clear that, when he said
 "South Delta," it really is the naming mechanism that
 you assigned him, SDWA.
 CO-HEARING OFFICER DODUC: Yes, my oversight

7 in not clarifying that before I excused Mr. Herrick.

8 Mr. Ochenduszko I think has addressed that or9 will be addressing it.

10 MR. OCHENDUSZKO: Sure. So there have been a number of handouts that were provided as part of the 11 12 last cross-examination. And we asked Mr. Herrick to 13 provide all of those in electronic format to the service list. As soon as those are received by Board 14 15 staff, we will then post them on the website for identification purposes only. That will happen next 16 week. 17

18 MR. BERLINER: And those will include the 2119 through 25 numbers?

20 MR. OCHENDUSZKO: That's correct. We ask that 21 all the handouts that he provided and everything that 22 he referenced in his cross-examination be submitted to 23 the entire service list and us.

24 MR. BERLINER: Great.

25 CO-HEARING OFFICER DODUC: All right. With

1 that, then, Ms. Spaletta and Mr. Keeling -- who is not 2 wearing my favor colors today. 3 MR. KEELING: I realized once again it's 4 casual Friday, so I dressed accordingly. 5 CO-HEARING OFFICER DODUC: You may begin. 6 Thank you. 7 CROSS-EXAMINATION BY MS. SPALETTA 8 MS. SPALETTA: Thank you. 9 Good afternoon. My name is Jennifer Spaletta. 10 I'll be asking questions today on behalf of North 11 fourth. It is late in the week and late in the day, 12 and so I appreciate your patience and your endurance. 13 If my questions are bad, please tell me, and I will rephrase them. Or if you feel that you need to 14 15 take a break because you're tired, please say so so 16 that we can have a nice, clean record today. 17 The first thing I would like to do is start 18 with some basic concepts that I think everyone may 19 think they understand but they're not actually in the 20 record yet. So let's look at DWR Exhibit 331, which is a 21 22 map. 23 And while we're pulling that up, if Mr. 24 Leahigh could just generally describe for me the path 25 that the State Water Project and Central Valley Project

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1 water from north of the Delta takes to get from the 2 Sacramento River to the existing export facilities at 3 the South Delta. 4 WITNESS LEAHIGH: I assume this is under current operations? 5 6 MS. SPALETTA: Correct. 7 WITNESS LEAHIGH: Yes? MS. SPALETTA: Correct. 8 9 WITNESS LEAHIGH: So I take it by your 10 question -- are you talking about when we're moving 11 stored water or any water in particular? 12 MS. SPALETTA: Any water of the State or 13 Federal projects that originates north of the Delta, how does it currently get to the export pumps at the 14 15 south of the Delta? 16 WITNESS LEAHIGH: Okay. So that will somewhat 17 depend on what time of year and the source of that 18 water from north of Delta. So I think as part of my 19 written testimony I talk about, generally, in the 20 winter and spring period, we're picking up excess 21 flows, unregulated flows, non-stored project flows. 22 And during that period, typically, the Cross Channel gate is closed. So -- and inflows are coming in from 23 24 various locations into the Delta during that period, 25 including the eastside tributaries, San Joaquin system.

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So during that period, you know, there's a
 multitude of different inflow locations for that -- for
 that flow.

4 Some of the Sacramento flow, often through the -- well, through the tidal action, will make its 5 way through when the Cross Channel gate is closed --6 7 also when it's open -- but Georgiana Slough is one of 8 the paths to the central part of the Delta and Three 9 Mile Slough further downstream. So those are -- so 10 those are some of the primary pathways to the south. 11 When the we're in the summertime in an average 12 to drier year, when we're releasing stored water for 13 diversion in the South Delta, an additional path would be the Cross Channel, when the Cross Channel gate is 14 15 open typically. So some of that fresher water is 16 mixing, again, through the tidal flux, and is 17 influencing the general water quality in the Central 18 Delta as well. 19 And so that Cross Channel feeds into the

20 Mokelumne River which feeds into the Lower San Joaquin 21 River to the central part of the Delta. And then that 22 fresher water -- again, this is through the sloshing 23 action of the tides. But generally there's a net 24 negative flow towards the pumping facilities in the 25 South Delta. And so that fresher water will be brought

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1 down through that corridor towards the pumps.

2 So that's a general characterization. 3 MS. SPALETTA: Thank you. I'm going to ask 4 you two clarifying questions. One is, based on what you just described, isn't it true then that water from 5 the Sacramento River can move through any of the Delta 6 7 channels that are essentially south of Freeport on its 8 way down to the export pumps? 9 WITNESS LEAHIGH: So any -- I think your 10 question is "any channel." Well, certainly the channels that I described and perhaps others. And 11 12 again, as far as the Cross Channel is concerned, it's 13 whether or not the gate it opened or closed. MS. SPALETTA: And then my second clarifying 14 15 question is you said that, during times of excess flow, 16 there are contributions from the eastside streams. I 17 just want to clarify that that means contributions from 18 the Cosumnes, from the Mokelumne, from the Calaveras, 19 from the Stanislaus, from the San Joaquin -- all of which enter the Delta south of the location of the 20 21 proposed new intakes; is that correct? 22 WITNESS LEAHIGH: Yes. So when I was -- when 23 I mentioned the eastside tributaries, I was talking 24 about the Calaveras, Mokelumne, and the Cosumnes. And 25 so the Stanislaus feeds into the San Joaquin River

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1 upstream of Vernalis and then -- yes, that would flow 2 into the Delta as well.

MS. SPALETTA: Okay. Now, for comparative 3 4 purposes, using the map that you have provided as 5 Exhibit 331, please explain when -- where -- or the path, I should say, that the water will take from your 6 7 new proposed North Delta intakes to the export pumps. 8 WITNESS LEAHIGH: So I take it, at times when 9 the North Delta diversion -- when we're diverting water 10 from the proposed new intakes -- so there would be --11 so a portion of the diversions would come immediately 12 from those intakes and isolated conveyance directly to 13 Clifton Court. There would still be the other pathway, 14 15 though, as far as -- again, depending on whether the 16 Cross Channel gate was open or not -- the Cross Channel down Sacramento River, Georgiana Slough, Three Mile 17 18 Slough again. Depending on the rate of pumping in the 19 South Delta, some of the flow could actually come 20 around Sherman Island. But that would be the case even without the 21 22 view WaterFix. So any of the supplies going to the 23 South Delta diversion point as is currently the case,

24 there would still be those pathways as well.

25 MS. SPALETTA: So if I understand your

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1 testimony correctly, to the extent that any water is 2 diverted at the new North Delta facilities, the pathway 3 for that water would go through the isolated facility 4 to the export pumps, and it would not include movement 5 of that water through the Delta channels, correct? 6 WITNESS LEAHIGH: Yes, that's correct. So the 7 portion of the diversion that comes from the proposed North Delta diversions would only flow to that point on 8 9 the Sacramento River and then be isolated, not flow 10 through the Delta channels, go directly to Clifton 11 Court.

MS. SPALETTA: Okay. So overall, to the extent that the proposed petition for change includes diversion of Sacramento River water at the North Delta intakes, that diversion will reduce the amount of Sacramento River flow that would otherwise flow through the channels at the Delta located south of the diversion points?

19 WITNESS LEAHIGH: Yeah. Generally, that may 20 be a little bit too simplistic of a description. So 21 when I was describing -- when I first started to 22 describe the route of flow through the Delta, I talked 23 about the tidal mixing. So this is -- you know, 24 generally, there's a mixing of -- the fresher water 25 from the Sacramento gets blended with some of the

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other -- from some of the flow in the other channels,
 Delta channels, if you will. But generally, yes,
 that's the case.

MS. SPALETTA: And I just want take make sure I'm clear on what you just said. The Sacramento River water is considered the fresher water source of the sources of water to the Delta, correct?

8 WITNESS LEAHIGH: Yeah, generally, and by 9 volume, certainly would be the fresher water. Some of 10 the tributaries could be -- depending on the hydrology, 11 could be fairly fresh as well but would be smaller 12 volumes generally than the Sacramento River.

Ms. SPALETTA: So overall, the effect of the petition for change, to the extent any Sacramento River water is diverted at the North Delta intakes, it is to reduce the amount of the fresher water that is flowing through the remainder of the Delta, correct?

18 WITNESS LEAHIGH: Well, the time periods when 19 the new Delta diversion -- proposed North Delta 20 diversion intakes would be used would be during those 21 periods as I just showed in my example, when we have 22 very high flows coming down the Sacramento River.

23 So much of that flow would bypass the intakes 24 as well, and they would also be providing fresher water 25 to the rest of the Delta as well. And that shows up in

the modeling results, that -- the water quality results of the scenario that -- that we ran the water quality comparison on.

MS. SPALETTA: I'd I like to move to strike the last answer as non-responsive to the question. The question was a yes-or-no question.

CO-HEARING OFFICER DODUC: Yes. And since
it's the third time she's asked it, just answer,
Mr. Leahigh.

10 WITNESS LEAHIGH: Well, I wasn't sure that it 11 was a yes-or-no response. It's -- it's a more 12 complicated question, if you will, than yes or no.

13 CO-HEARING OFFICER DODUC: If you have a flow 14 coming down and you, through the proposed new intake, 15 remove some of that flow, unless there's an additional 16 source somewhere after that -- what Ms. Spaletta is 17 asking is, you have a flow, you have an export. What 18 remains is less than what you would have without that 19 export.

20 MS. SPALETTA: That was my question.

21 CO-HEARING OFFICER DODUC: Seems like a 22 logical question.

23 MS. SPALETTA: I think the answer is simply 24 yes, but it was never stated anywhere in the testimony 25 for the operations panel. So I just wanted to confirm

1 it.

2	MS. MORRIS: This is Ms. Morris for the State
3	Water Contractors. Because I'm now not sure what the
4	question is, could the court reporter read the question
5	back, or Ms. Spaletta ask the question?
6	CO-HEARING OFFICER DODUC: Ms. Spaletta,
7	please ask, for the fourth time, your question, and
8	make it as simple as possible.
9	MS. SPALETTA: My question is, comparing
10	current operations without the North Delta diversions
11	to the proposed operations with the North Delta
12	diversions, isn't it true that the proposed operations
13	to divert more Sacramento River water from the new
14	North Delta intakes will reduce the amount of fresher
15	Sacramento River water that would otherwise flow
16	through the Delta channels than without the project?
17	CO-HEARING OFFICER DODUC: During the time of
18	export.
19	MS. SPALETTA: Correct.
20	WITNESS LEAHIGH: Yes, that's generally true.
21	CO-HEARING OFFICER DODUC: Thank you.
22	Let's move on, Ms. Spaletta.
23	MS. SPALETTA: Now, I'd like to look at
24	DWR Exhibit 515, please. And this even though this
25	is a complicated exhibit, I'm trying to ask, actually,

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1 a rather simple question. I'm going to preface it with 2 this explanation.

3 When I reviewed the testimony of the 4 operations panel, I was expecting to find a chart showing how much water would be diverted from the North 5 Delta intakes and how much would be diverted from the 6 7 existing export pumps, different period of time in different year types. And I did not find that chart. 8 9 So my question -- and this can be answered 10 from anyone on the panel -- is is there an explanation 11 some where in the Petitioner's case, either in 12 Exhibit 515 or elsewhere, that states how much water 13 the petitioners are proposing to export from the new North Delta intakes in different periods of time in 14 15 different year types? 16 WITNESS LEAHIGH: Yeah, that type of information is going to be provided by the modeling 17 18 panel. 19 MS. SPALETTA: So as the operations panel, as 20 you sit here today, are you able to identify any chart 21 or a list that contains the information that I just 22 described? 23 WITNESS LEAHIGH: I'm trying to think of 24 the -- I'm not aware that it's part of the exhibits 25 that I've seen, but the modeling panel may be able to

1 add more clarity.

2	MS. SPALETTA: So my next question is then
3	kind of a chicken-and-egg question. Who developed the
4	potential operational scenarios for the North Delta
5	diversions? Were they developed by the modeling panel
6	and provided to the operators of the project, or did
7	the operators of the project develop the potential
8	operations scenarios and then ask the modelers to model
9	them?
10	WITNESS LEAHIGH: Well, all I can say is, as
11	an operator, I did not develop the proposed criteria
12	here as part of these.
13	MS. SPALETTA: Mr. Milligan?
14	MR. MILLIGAN: I don't think it's necessarily
15	either of those two choices. I think the criteria for
16	the operations in the North Delta diversions,
17	specifically things as we talked about in some earlier
18	testimony about low flow periods and criteria about
19	bypass flows of the screens were actually developed
20	through subgroups that were interested screen dynamics
21	and being protective of the fisheries. So a number of
22	criteria were developed.
23	Basically, we try to deal with what would be
24	the right criteria to be protective for fish, help
25	reduce entrainment. And then that material was then
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1 input to the model with some input then from the 2 operators about how that may be reasonably constructed. 3 And then some results were then developed from that 4 point. 5 MS. SPALETTA: Thank you. That's helpful. 6 So in the Petitioner's petition for change, 7 which is State Water Resources Control Board Exhibits 1 and 2, the description of the project was 8 9 Alternative 4A in the Draft EIR. 10 So now I have up on the screen for you what has been identified as the modeling assumptions. And 11 there are various columns with different labels. 12 13 Can you please tell me which one of these labeled columns matches the modeling assumptions most 14 15 closely to the Petition's description of 16 Alternative 4A? WITNESS LEAHIGH: Alternative 4A includes both 17 18 H3 and H4 as boundary. 19 MS. SPALETTA: Okay. So having reviewed 20 Exhibit 515, it describes different things about each alternative. And there are North Delta diversion 21 22 operations criteria; there's South Delta export 23 restrictions; and there are the North Delta bypass close; and then the Old and Middle River flows. 24 25 My general understanding, after reviewing your

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1 testimony and this exhibit, was that your proposed 2 operation was to divert or export as much water as 3 possible from either the North Delta intakes or the 4 existing South Delta diversion points after you had 5 complied with the criteria set forth in these modeling 6 assumptions and Decision 1641 and the applicable BiOps. 7 Is that an accurate description of what you 8 are proposing? 9 WITNESS LEAHIGH: Yes, I think that's 10 accurate. 11 MS. SPALETTA: And as you sit here today, do 12 you know what those quantities of water are or would 13 you be able to identify an exhibit that contains them? WITNESS LEAHIGH: Yes, I believe there is an 14 15 exhibit, one of the modeling panel's exhibits. If I 16 could see the list of exhibits, I could tell you which 17 one. 18 MS. SPALETTA: Maybe when we take a break, 19 we'll do that. I don't want to waste time because we 20 are trying to get out of here today. 21 Maybe if counsel for DWR would simply agree to 22 provide the exhibit number, that would be sufficient 23 for my purposes. 24 CO-HEARING OFFICER DODUC: Thank you. 25 Please do so.

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MR. HOLDERMAN: We will.

2 MS. SPALETTA: My next question is who put 3 together the modeling assumptions that are described on 4 DWR-515?

5 WITNESS LEAHIGH: I don't know all the folks6 that were involved in putting this together.

7 MS. SPALETTA: Was it limited to folks at DWR,8 or were there others involved?

9 WITNESS LEAHIGH: Well, I think part of the 10 criteria was developed by CH2M Hill that was contracted 11 by DWR. But I think there was also interaction with 12 fisher agencies in order to develop these criteria.

MS. SPALETTA: Was there interaction with any of the contractors of the State or Federal project?

15 WITNESS LEAHIGH: That, I'm not sure.

MS. SPALETTA: Did you personally participate
in the development of the criteria?

18 WITNESS LEAHIGH: I was involved in reviewing 19 some of the modeling results from the criteria, in 20 checking the feasibility of operating to some of the 21 criteria. There may have been some feedback to the 22 modelers on the feasibility aspect and maybe some back 23 and forth with regard to that aspect of the criteria. 24 MS. SPALETTA: So if you look at Page 2 of 25 DWR-515 -- I'm looking at the first row under "South

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1 Delta Export Revisions." Under H3, there is a 2 description of a July-through-September total pumping 3 of 3,000 cfs. And then it says, "No specific intake 4 preference is assumed beyond 3,000 cfs." 5 Does that mean that after that quantity of 6 diversion, you could be utilizing either the existing 7 South Delta diversion point and/or the North Delta intakes for any diversion amounts over 3,000? 8 9 WITNESS LEAHIGH: Yeah, I think that's what 10 that means. I think these are the modeling assumptions in this -- in this table, if I'm not mistaken. 11 12 MS. SPALETTA: Let's make a distinction 13 because we're here to talk about how you would actually operate the proposed project. 14 15 So is that the rule you would use for actual 16 operations, assuming the project is approved and built? 17 WITNESS LEAHIGH: I generally agree with the 18 characterization that there would need to be some 19 amount of South Delta pumping necessary in order to meet the objectives, the D1641 objectives. 20 21 So I do agree generally that there needs to 22 be, and we would operate that way. We would have to in order to meet the objectives -- a certain amount of 23 South Delta diversion. 24 25 MS. SPALETTA: In order to meet which

1 objectives?

2 WITNESS LEAHIGH: The MNI objectives in the 3 Delta. Those would be the primary ones that would 4 require, I think, this amount of flow that's assumed in 5 this H3. 6 MS. SPALETTA: Is that because that amount of 7 pumping will potentially pull the fresher Sacramento River water down into that area of the Delta to assist 8 9 in meeting the objective? 10 WITNESS LEAHIGH: Yes, that's essentially the 11 reason. 12 MS. SPALETTA: Looking at Page 3 of 13 Exhibit 515, this is in the column labeled H4, discussing the Delta outflow requirement. There's a 14 15 comment that says, "This additional spring outflow is 16 not considered an in-basin use for coordinating 17 operations." 18 Why is that not considered an in-basin use, 19 and what would be the effect of considering it one? MR. BERLINER: Objection, asked and answered. 20 21 We went through this at great length the other day. 22 CO-HEARING OFFICER DODUC: Hold on. 23 Ms. Spaletta, repeat your question for me. 24 MS. SPALETTA: Why is the additional spring 25 outflow not considered an in-basin use? And I

1 apologize that this may have been covered when I was 2 not here. If I could get just a cursory answer, that 3 would be sufficient.

CO-HEARING OFFICER DODUC: Please answer. 4 WITNESS LEAHIGH: Again, this is modeling 5 assumptions. And quite frankly, I see this as an 6 7 artifact of the modeling that, if they did not make this assumption, the model would -- would have split 8 9 the -- the release requirements from upstream according 10 to the existing COA as it treats other outflow requirements. And so it was trying -- so this was a 11 12 way to change that modeling assumption so that the 13 releases would come from Oroville Reservoir rather than the typical split for an outflow requirement, which 14 15 is -- the model would typically split that sharing 16 from -- some from the Central Valley Project reservoirs 17 and some from the State Water Project reservoirs. 18 MS. SPALETTA: Thank you. And then I just 19 have a follow-up clarification. In the same paragraph, 20 it says at the end, "The additional flow needed to meet 21 the outflow target is released from the Oroville 22 Reservoir as long as its projected end-of-May storage 23 is at or above 2 million acre feet." 24 My question is where is the additional flow 25 released from if Oroville storage is not above

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1 2 million feet for projected end-of-May storage?

2 WITNESS LEAHIGH: My understanding is, if the 3 upstream criteria is not met at Oroville, then 4 additional releases are not made from anywhere else. MS. SPALETTA: So then is the outflow standard 5 6 not met? 7 WITNESS LEAHIGH: The outflow standard is essentially being defined by these assumptions in this 8 9 box. So to the extent that releases are not made from 10 Lake Oroville because of being below the 2 million end-of-May, then in effect that would be the -- the 11 12 resulting outflow would be the targeted outflow as part 13 of this H4 scenario. MS. SPALETTA: Okay. So the H4 scenario, 14 15 then, is proposing to adjust the current outflow 16 objective of D1641 to something less based on this 17 operative assumption? 18 WITNESS LEAHIGH: No, no, it wouldn't. Ιt 19 Would actually increase the outflow requirement as 20 compared to D1641, but there would be a limit on that 21 increase in outflow based on the criteria. 22 MS. SPALETTA: So for the limited time period, 23 what would be outflow be? 24 WITNESS LEAHIGH: You know, it depends on 25 if -- the outflow would not be the same in every year.

1 MS. SPALETTA: So who would know the answer to 2 the question as to what it would be in the each year 3 type? Is that you or is that the modeling panel? I 4 don't want to waste your time. 5 WITNESS MILLIGAN: I would just say the

6 modeling results would indicate when the off ramp to 7 this criteria would come into play. It's not strictly 8 by year type. It will depend on projected end-of-May 9 storage at 2 million acre feet. And the modelers are 10 pretty well versed and would be able to tease that out 11 of the output results.

MS. SPALETTA: Okay. Different line of questioning. This line of questioning is actually for each of you, but I'll start with Mr. Leahigh.

Did you analyze whether the proposed change would injure any other legal user of water?

17 WITNESS LEAHIGH: I didn't look at that 18 specifically. I was looking to see if the Water 19 Quality Control Plan standards were met.

20 MS. SPALETTA: Mr. Milligan, did you analyze 21 whether the proposed change would injure any other 22 legal user of water?

23 WITNESS MILLIGAN: That's a pretty broad 24 analysis as it relates to the operations. I've 25 reviewed the outputs, and it does not appear that the

1 operations would.

2	MS. SPALETTA: When you say you've reviewed
3	the outputs, what are you referring to?
4	WITNESS MILLIGAN: The model outputs, as well
5	as my understanding of the operation of the project.
6	MS. SPALETTA: What is that understanding
7	based on? What is it in the outputs that you saw that
8	led you to reach that conclusion?
9	WITNESS MILLIGAN: Different salinity
10	projections, flow rates, releases from the upstream
11	reservoirs quite a number of the outputs from the
12	modeling because the various types of legal users of
13	water is pretty widespread geographically.
14	MS. SPALETTA: So is there someone else
15	associated with either DWR or the Bureau of Reclamation
16	who did conduct analysis of whether the proposed change
17	would injure any other legal user of water?
18	If either of you know? You can say "I don't
19	know" if you don't know.
20	WITNESS LEAHIGH: Yeah, I don't know.
21	WITNESS MILLIGAN: I don't know specifically
22	or if there's one of the documents that whether it's
23	in the context of this material or the EIS/EIR has
24	specific information about the facts of the project.
25	Obviously, the EIS/EIR have that and can be used as the

1 basis for such a -- bringing that kind of analysis

2 together.

3 MS. SPALETTA: But that was not the purpose of 4 your testimony, Mr. Milligan?

5 WITNESS MILLIGAN: No. Ours has been to talk6 about the operation of the project.

7 MS. SPALETTA: Okay. Mr. Leahigh, in your 8 testimony, which was DWR Exhibit 61, Page 2, Line 25, 9 it stated, "My testimony will focus on the effects of 10 the CWF on other legal users of water." What portion 11 of that testimony did that?

12 WITNESS LEAHIGH: Yeah, so that was -- I was 13 trying to distinguish between the Water Quality Control 14 Plan objectives that are for fish and wildlife 15 purposes, which my understanding is that's going to be 16 taken up as part of Part 2 of this hearing.

17 So what I was trying to do is distinguish that 18 I was looking at the agricultural and municipal and 19 industrial standards only as part of this particular 20 portion of -- phase of the hearing.

21 MS. SPALETTA: And when you used the term 22 "effects of the CWF," what does "CWF" stand for, which 23 operational scenario?

24 WITNESS LEAHIGH: It was and in my testimony I
25 say it's California WaterFix H3 scenario.

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1 MS. SPALETTA: So is it fair to say that, for 2 purposes of your testimony, you were assuming that, as 3 long as the projects substantially complied with the 4 D1641 agricultural or MNI water quality standards that 5 there was no injury to legal users of water? 6 WITNESS LEAHIGH: Well, that could be one 7 interpretation, yes. I was looking at -- well, we had the graph that showed the effects to water quality with 8 9 and without the project in operations and also showed 10 that incremental effect in relation to the actual 11 objectives. 12 MS. SPALETTA: So is it also true, then, that 13 you are assuming that a degradation of water quality short of an exceedance of a water quality objective was 14 15 not injury? 16 WITNESS LEAHIGH: Well, that could be one conclusion. I think that asks for a legal conclusion, 17 18 but that's open to interpretation. 19 MS. SPALETTA: So let's look at the graph that you're talking about, which was DWR Exhibit 412. This 20 21 was the daily average EC at Bacon Island for the time 22 period December 1st through April 30th, December 1st,

23 2015 through April 30th, 2016, correct?

24 MR. MIZELL: Yes, that's correct.

25 MS. SPALETTA: Is this the one you were just

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referring to in your testimony?

2 WITNESS LEAHIGH: Yes, it is. 3 MS. SPALETTA: Where is this EC station in 4 relation to the closest water quality objective 5 location? 6 WITNESS LEAHIGH: So this is Bacon Island 7 station on Old River. So this is fairly close to where Rock Slough comes off of Old River. So it's closest to 8 9 that -- the Pumping Plant No. 1 at Contra Costa Canal. MS. SPALETTA: Now, your testimony did not 10 include a similar graph showing an entire year, 11 12 correct? 13 WITNESS LEAHIGH: Right. The analysis we looked at was only for this time period shown. 14 15 MS. SPALETTA: And for this time period shown, 16 it was a time period of above average precipitation, 17 correct? 18 WITNESS LEAHIGH: That's correct. 19 MS. SPALETTA: And your testimony did not 20 include --WITNESS LEAHIGH: Well, for the most part. 21 22 Early on -- yeah. No, that would be correct for the 23 entire period, including December. We didn't get the 24 response right away from the precipitation, but it was 25 above average precipitation.

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MS. SPALETTA: Your testimony does not include
 any kind of a similar graphic analysis for a below
 normal or critical year type, correct?

MR. BERLINER: Yes, we were only looking for the -- the actual hydrology that occurred earlier this year. We were really testing the opportunity for use of the new facility in the opportunistic way of capturing excess outflows that are unavailable to the projects now.

10 MS. SPALETTA: But if I understand your prior 11 testimony correctly, the proposed project does not 12 limit use of the North Delta intakes to only 13 excess-flow-type periods, correct?

14 WITNESS LEAHIGH: That's correct, it would not 15 be limited to excess flows at that -- direct excess 16 flows. But that is the -- that would be the primary 17 new source of water for the -- for use with the new 18 North Delta intakes.

19 MS. SPALETTA: As you sit here today, you are 20 not able to distinguish between the total quantities 21 that would be taken during the excess time period 22 versus all other time periods, correct?

23 WITNESS LEAHIGH: Generally, reviewing the 24 modeling results, I can make that conclusion that the 25 majority of the time that the new intakes are used is

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1 when there's direct excess flows into the Delta.

2 MS. SPALETTA: What's "majority" mean? 3 WITNESS LEAHIGH: Significantly more than 4 50 percent, so, I don't know. Rough numbers would 5 probably be 70, 80 percent. 6 MS. SPALETTA: So according to your testimony 7 today, that would be somewhere between 20 to 30 percent of the time that you would be operating the North Delta 8 9 intakes at a time other than when there was excess 10 flows? WITNESS LEAHIGH: Well, I can't -- I'd have to 11 12 look at the modeling results to really get a good 13 number. 14 MS. SPALETTA: So as you sit here today, 15 you're not sure? 16 WITNESS LEAHIGH: That's correct. MS. SPALETTA: Okay. Let's look at your 17 testimony again, Exhibit 51, Page 4, Lines 1 through 7. 18 19 This is really just a clarification question 20 for me. It says, "For the purposes of this testimony, 21 in-basin requirements include legal users of water in 22 the Sacramento basin." You have that term capitalized. 23 What do you intend the term "Sacramento basin" to mean? 24 THE WITNESS: Oh, there we go. 25 Yes, that would be -- so, there, I'm talking

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about any legal users of water in the entire watershed
 of the Sacramento River.

3 MS. SPALETTA: Okay. Where does that watershed end? 4 5 WITNESS LEAHIGH: Well, the in-basin 6 requirements include the -- meeting all of the 7 Bay-Delta objectives, so it would end in the Delta. MS. SPALETTA: It would include the entire 8 9 legal Delta? 10 WITNESS LEAHIGH: I don't know if I could say 11 that. MS. SPALETTA: Would it include the entire 12 13 area encompassed within Central Delta Water Agency and South Delta Water Agency? 14 WITNESS LEAHIGH: Yes. And the caveat is 15 16 that -- so the in-basin, I've defined "in-basin" as 17 both meeting all the Water Quality Control Plan 18 objectives plus any legal users of water. So I think 19 that would include any legal users of water in the 20 Delta. 21 MS. SPALETTA: All right. Let's look at your

Exhibit 411, which was your conceptual California
WaterFix operation for the time period December 1st,
2015 through April 30th, 2016. And you've already
testified that this was an example to illustrate how

1 the North Delta diversions could operate during excess 2 flow conditions.

3 So my question is is there a similar graph 4 anywhere in your testimony or exhibits that shows an 5 entire year? 6 WITNESS LEAHIGH: No, there's not. 7 MS. SPALETTA: Is there a similar graph for 8 any other year type? 9 WITNESS LEAHIGH: No. 10 MS. SPALETTA: And as we look at this graph, how would we know what proportion of the total proposed 11 12 CWF outflow would be taken at the North Delta intakes 13 as opposed to the existing export pumps? WITNESS LEAHIGH: You can't tell precisely, 14 15 but generally the solid red line represents the --16 because that's the existing case, that is the South Delta diversion. So the -- the majority of the 17 18 difference between the dotted red line and the solid 19 red line would be North Delta diversion with the caveat 20 that, under -- I know there was a few days in here 21 where the South Delta diversion under the WaterFix 22 rules would be -- would have resulted in lower South 23 Delta diversions. 24 So at times, the North Delta diversion 25 component would be greater than the difference between

1 the dotted red line and the solid red line. But for 2 the most part, that would be the difference is -- solid 3 red line is South Delta diversion and dotted red line 4 is North Delta diversion. 5 MS. SPALETTA: And right now, during excess flow conditions such as what you've illustrated here, 6 7 right now, without the California WaterFix, where does 8 that water go once it is exported? 9 WITNESS LEAHIGH: Once is exported? The 10 additional? 11 MS. SPALETTA: Between the time period of 12 December and April, where does water go once it is 13 exported? WITNESS LEAHIGH: So during this period, some 14 15 of the water that we divert goes to direct demand, but 16 much of the water that's diverted during this time 17 period would be temporarily stored in San Luis 18 Reservoir south of the Delta. 19 MS. SPALETTA: Is the water delivered to 20 underground storage anywhere? 21 WITNESS LEAHIGH: Generally, or this year 22 or --23 MS. SPALETTA: Generally. 24 WITNESS LEAHIGH: Generally? It is possible, 25 yes.

MS. SPALETTA: And in fact, during this time 1 2 period of the year, December through April, that is the 3 time period of lowest irrigation demand for the year, 4 correct? WITNESS LEAHIGH: Yes, typically, that's a --5 a low period for irrigation. Perhaps mid April, start 6 7 to see some increase in that demand. MS. SPALETTA: What is the State's share of 8 9 the San Luis capacity? 10 WITNESS LEAHIGH: It's a little over half of San Luis Reservoir. 11 MS. SPALETTA: What is the acre feet? 12 13 WITNESS LEAHIGH: Acre feet is 1,062,000 acre 14 feet. 15 MS. SPALETTA: So in your previous exhibit we 16 looked at, which was exhibit 411, you were showing that 17 with the North Delta diversions you would be able to 18 take an additional diversion amount of 1.2 million acre 19 feet, which exceeds the entire capacity for State's 20 share of San Lewis, correct? WITNESS LEAHIGH: Yeah. This additional 21 22 diversion could be a combination of both Central Valley 23 project and State Water Project additional diversion. MS. SPALETTA: The additional diversion amount 24 25 would fill up more than half of San Luis?

WITNESS LEAHIGH: That's correct. And we did 1 a check on that to ensure that there would have been a 2 3 place for this. We -- San Luis was only about half 4 full this year. So there would be a number of 5 assumptions that you'd have to make if this additional 6 diversion occurred. It could have also possibly 7 changed the diversion, the direct diversion response 8 from our contractors as well.

9 MS. SPALETTA: But if there is minimal 10 irrigation demand during this time period, where are 11 your contractors going to put the water?

12 WITNESS LEAHIGH: Well, certainly there's 13 groundwater recharge locations in the San Joaquin 14 Valley. There -- over the last two or three years of 15 drought, many of our contractors have drawn down their 16 internal surface supplies. And certainly there would 17 be lots of opportunity to refill many of those depleted 18 localized surface storage.

MS. SPALETTA: I have a question for you, again, going back to your testimony. This is a statement you made. This is Exhibit 61, Page 17, Lines 5 through 7. The statement was that, "The projects will continue to meet existing Delta water quality and fishery objectives and any additional regulatory requirements for the CWF at a similar success rate as

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demonstrated historically."

2 What additional regulatory requirements are 3 you referring to? Are you talking about things that 4 exist today or things that might be imposed? 5 WITNESS LEAHIGH: I'm trying to find the exact 6 context here. 7 MS. SPALETTA: Okay. I'll give you a minute. MR. BERLINER: Do you have line numbers? 8 MR. LONG: 5 through 7. 9 10 MR. BERLINER: 5 through 7? MR. LONG: Yes. 11 MS. SPALETTA: Yes, I'm sorry. I thought did 12 13 that. Lines 5 through 7 on Page 17. WITNESS LEAHIGH: Trying to think back, I 14 can't think exactly what I was thinking of in terms of 15 your question was in terms of -- were there any 16 additional regulatory requirements? 17 18 MS. SPALETTA: Mm-hmm. 19 WITNESS LEAHIGH: I can't remember exactly what I had in mind at that time. 20 MS. SPALETTA: Are you expressing an opinion 21 22 about compliance with regulatory requirements that have 23 yet to be developed? Or are you expressing an opinion about compliance with regulatory requirements that 24 25 already exist?

1 WITNESS LEAHIGH: Well, I was thinking about 2 the -- the water quality objectives that were already 3 existed. So I'm trying to figure out what I would have 4 been thinking about as far as the additional regulatory 5 requirements.

I suppose it could have been modifications tothe existing requirements.

8 MS. SPALETTA: As you sit here today, since 9 you don't know what those modifications are, isn't it 10 true that you cannot express an opinion about whether 11 the projects can comply with something that is 12 currently unknown?

13 WITNESS LEAHIGH: That's true, depending on 14 what those additional regulatory requirements are. 15 But -- so this probably have been more accurate to say 16 the existing Delta water quality and fishery 17 objectives.

MS. SPALETTA: Now let's talk about that. Your testimony included an analysis of the percentage of time that the projects have complied and the percentage of time that they have exceeded various water quality objectives.

And I have a question about how those numbers were computed with respect to the time periods where the projects have only had to comply with the relaxed

version of the objective because the State Board has
 approved a temporary urgency change.

3 So let me try ask a clear question on this. 4 The time period that your staff analyzed for the purposes of putting together this information in 5 your testimony, did it include time periods where the 6 7 water quality standards had been relaxed by the State 8 Board? 9 WITNESS LEAHIGH: It included the modified 10 requirements in 2014 and 2015. 11 MS. SPALETTA: Any other years? 12 WITNESS LEAHIGH: I believe those are the only 13 two years in which we had modified standards. MS. SPALETTA: So to the extent that the 14 projects were successful in meeting the relaxed 15 16 standard, did your staff count that as a compliance or as an exceedance? 17 18 WITNESS LEAHIGH: We treated it as a 19 compliance because the Water Board had approved those 20 modifications. 21 MS. SPALETTA: I see. I just wanted to 22 clarify that the percentage of times for compliance and 23 exceedance and the pie charts that you put in your 24 PowerPoint only analyze what has happened in the past; 25 they do not provide percentages of compliance or

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1 exceedance for the proposed project, correct?

2 WITNESS LEAHIGH: The pie charts are only3 based on historical data.

MS. SPALETTA: And you have not prepared any
similar charts to reflect the modeling for the future,
correct?

7 WITNESS LEAHIGH: No. There were charts for8 projections from the modeling group.

9 MS. SPALETTA: But that was not part of your 10 testimony?

11 WITNESS LEAHIGH: That was not. The part of 12 my testimony was that our compliance rate in real life 13 is much better than what the models would have projected for a no-action alternative, for example, 14 15 even under current conditions. It shows much higher 16 exceedance rates than our historical record. That was 17 one of the primary points of my written testimony. 18 MS. SPALETTA: But you did not attempt to put in 19 your written testimony what the actual results of those 20 model runs for the proposed project were, correct? WITNESS LEAHIGH: Well, those -- those are 21 22 available as part of the modeling exhibits. 23 MS. SPALETTA: I understand that. But they're 24 not part of your testimony? 25 WITNESS LEAHIGH: No, because we didn't -- we

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1 did not develop any of that information in our office.

2 MS. SPALETTA: I believe, though, that part of 3 your testimony expressed an opinion that the projects 4 will continue to meet the objectives. So are you 5 saying that the opinion you expressed is based on the 6 work of others?

7 WITNESS LEAHIGH: No, it's -- the opinion is 8 expressed based on our historical compliance rate and, 9 added to that, the fact that the California WaterFix 10 would just add additional flexibility or tools 11 available to the projects in order to comply with the 12 current standards.

So, if anything, we would expect an improvement with additional tools to meet the same objectives in the future.

16 MS. SPALETTA: Let's talk about that because you did testify previously about flexibility. And you 17 18 were describing the knobs that the project has to work 19 with. You said one knob you have right now was releases from storage. Another knob you have was the 20 21 quantity of exports from the South Delta. And so 22 having these North Delta diversion facilities 23 essentially gave you a third knob to turn for flexibility. Do you recall that testimony? 24 25 WITNESS LEAHIGH: Yes.

MS. SPALETTA: And in your testimony, you said that one of the examples of what you could do with this third knob is to address the situation where you had salinity problems in the South Delta and that, by moving some of your exports from the south pumps to the new North Delta intakes, that would help you with the South Delta salinity problem.

8

Do you remember that testimony?

9 WITNESS LEAHIGH: No, I don't believe I said 10 South Delta because in my mind that would reference 11 more the South Delta objectives locations where we have 12 very limited to no control over the objectives. That 13 was part of Mr. Herrick's cross.

I was referring to the -- the ag standards,
the Western, Central Delta ag standards. So that would
be Jersey Point, San Andreas, those other locations in
the Central Delta.

MS. SPALETTA: Those locations are actually located south of the North Delta intakes, correct? WITNESS LEAHIGH: That's correct. I would characterize them more as in the central part of the Delta though.

23 MS. SPALETTA: So how would extracting more of 24 the fresher Sacramento River water north of those 25 locations help meet the salinity standards in the

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1 Central Delta?

2 WITNESS LEAHIGH: So, yeah, we didn't really 3 talk about that aspect of the operations, which is 4 there is a certain amount of reverse flow that's 5 necessary down Old and Middle River in order to bring 6 some of that fresher water down the corridor from the 7 north locations.

But there's a certain point, if our pumping 8 gets high enough, it actually becomes more detrimental 9 10 in that we start pulling on some of the -- I talked about the different paths that you had asked me about. 11 And one of those paths would be pulling Sacramento 12 13 water around the tip of Sherman Island, if you will. And if we're pumping high enough, we're actually 14 15 drawing in saltier ocean water into the Central Delta, 16 which starts to become more of a detriment than a 17 positive.

18 So under those conditions when we're bringing 19 in the saltier water and we're having issues with 20 compliance at Jersey Point, let's say, we would want to 21 shut down the effect of that draw on the -- to the 22 South Delta export locations in order to minimize that 23 draw of saltier water. So that's when we would want to 24 shift from the South Delta to the North Delta diversion 25 location, if -- assuming water quality conditions were

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1 okay on the Sacramento River side of the Delta.

2 MS. SPALETTA: Wouldn't that shift, though, 3 also improve the quality of the water that you're able 4 to export?

5 WITNESS LEAHIGH: Yeah, depending on what the 6 actual water quality conditions were.

MS. SPALETTA: Now, your testimony said that the South Delta salinity objectives are at times beyond the reasonable control of the projects. What do you mean by "reasonable"? Why did you use that qualifier? MITNESS LEAHIGH: I'm sorry. So in which --I'm sorry. Can you repeat the question?

MS. SPALETTA: Sure. In your testimony, you said that at times, meeting the South Delta salinity objectives is beyond the reasonable control of the projects. Why did you use the qualifier "reasonable" as opposed to just saying it was beyond the control? MITNESS LEAHIGH: You're talking about the South Delta standards?

20 MS. SPALETTA: Correct.

21 WITNESS LEAHIGH: Well, so what we've -- our 22 export changes, as I've noted before in part of my 23 testimony. The South Delta channels are very poor 24 circulation patterns. And that, coupled with the poor 25 water quality sources that are in the South Delta

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1 channels themselves, represent a real challenge.

2 I think one thing that the Department was 3 pursuing was the operable gates. Right now we put in 4 the temporary barrier. We have a temporary barrier 5 program, the rock barriers. But in order to help 6 address this circulation issue, we have proposed 7 building the permanent operable gates, which would have helped alleviate part of that circulation issue to 8 9 bring in some of the fresher water from the Old and 10 Middle River corridor into that area. 11 So far, we are -- as part of the NMFS BiOp, we 12 were not allowed to, at least for now, put in those 13 perform with those gates. And so I guess that's part of what I mean by "reasonable" in that it's not 14 15 completely in our control. 16 MS. SPALETTA: I see. Thank you. 17 Okay. Now I'm going to ask a question of both 18 you. 19 Mr. Milligan, what is the source of water that 20 the CVP picks up when it uses Jones or Banks to pump 21 its water? 22 WITNESS MILLIGAN: That depends on the time of 23 year, the day of the year that the pumping is 24 occurring. 25 MS. SPALETTA: And that's because all of the

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different sources of water that flow into the Delta co-mingle, so there could be any culmination on any given date depending on circumstances present at those pumps, correct?

WITNESS MILLIGAN: That is an element of it. 5 The other aspect is what types of conditions we're 6 7 under. Are we in a place where we're predominantly moving a volume that is was previously stored, meaning 8 9 more -- balanced conditions is the terminology we've 10 been using, where we're in excess conditions, which 11 could have flood flows from the San Joaquin River, for example, maybe, when the projects are pumping on a 12 13 particular day.

14 MS. SPALETTA: And at times it could actually 15 be flows that entered the Delta from Martinez with the 16 tide, correct?

WITNESS MILLIGAN: Could be. Could be molecules of water that -- particularly ones that have some salt attached to them.

20 MS. SPALETTA: And, Mr. Leahigh, is the answer 21 the same if I asked you the question as to State Water 22 Project as to the source of water that you divert? 23 WITNESS LEAHIGH: Yes, I think I generally 24 agree with Mr. Milligan's characterization. 25 MS. SPALETTA: So what you propose with this

1 project is to change a point of diversion and add a new 2 point of diversion at a point much higher north in the 3 Delta, the North Delta intake locations. 4 When you pump water from the North Delta 5 intake locations what will be the source, Mr. Milligan? 6 WITNESS MILLIGAN: I would say the Sacramento 7 River. 8 MS. SPALETTA: And is your answer the same, 9 Mr. Leahigh? 10 WITNESS LEAHIGH: Yes, almost under every circumstance, it would be -- should be Sacramento 11 12 River. 13 MS. SPALETTA: Thank you. I have a technical question about your petitions for change. If you don't 14 15 know the answer to this and it's better for the water 16 rates panel, please tell me. 17 But my understanding is there was only one 18 petition for change submitted, even though it is to 19 apply to multiple water rights for each of the 20 projects; is that correct? Either of you can answer. 21 WITNESS MILLIGAN: I believe that's probably 22 most expediently done with the water rights panel. 23 MS. SPALETTA: And was there any inclusion in 24 the petition for change of an underground storage 25 supplement to allow for groundwater recharge with any

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1 of the water that you pick up at the pumps during

2 excess conditions? 3 WITNESS LEAHIGH: I don't know if that would 4 be necessary, but I think that will be best addressed 5 by the water rights panel. 6 MS. SPALETTA: So you don't know? 7 WITNESS LEAHIGH: I don't know. MS. SPALETTA: When the water is delivered to 8 9 your contractors and used for groundwater recharge and 10 groundwater banking, are you counting that as a 11 beneficial use of water upon delivery? 12 WITNESS LEAHIGH: I think the same response, 13 the water rights panel is better to address that question. 14 15 MS. SPALETTA: All right. I have no further 16 questions for the panel. 17 CO-HEARING OFFICER DODUC: Thank you 18 Ms. Spaletta. 19 Mr. Keeling? MR. KEELING: Give us one minute? 20 21 CO-HEARING OFFICER DODUC: Okay. 22 CROSS-EXAMINATION BY MR. KEELING 23 MR. KEELING: Thanks to the epic cross-exam 24 from Mr. Herrick and Ms. Spaletta, I will be brief. I 25 spent most of the time crossing off questions.

1 CO-HEARING OFFICER DODUC: Bless you, 2 Mr. Keeling. 3 MS. SPALETTA: I expect to get us out of here 4 by 4:59, no later. 5 CO-HEARING OFFICER DODUC: You just lost some 6 brownie points with that. 7 MR. KEELING: I didn't know I had any. Gentlemen, can you put up DWR-61, Page 3, and 8 9 I'll be referring to Lines 4 through 15 and. 10 This is from DWR-61, your written testimony, Mr. Leahigh. Do you have that in front of you? 11 12 CO-HEARING OFFICER DODUC: Mr. Keeling, could 13 you please move the microphone closer to you? WITNESS LEAHIGH: Yes, I have it. 14 15 MR. KEELING: On Line 12, it says, "I will 16 describe how the SWP/CVP with the CWF would operate to 17 continue to comply with all applicable requirements on 18 the SWP/CVP to ensure other legal users of water are 19 able to exercise their water rights." 20 And my question of you is, the phrase "all 21 applicable requirements," I know we've talked about 22 aspects of that so far in your examination. Can you 23 tell me what you meant by that phrase besides Decision 1641 and the water contractors' contracts and 24 25 the water rights of in-Delta legal users, which you've

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1 already referred to as part of your in-basin

2 requirements definition?

3 WITNESS LEAHIGH: Other than the ones you just 4 described, nothing else comes to mind at the moment. 5 The BiOp requirements would be the -- yeah, any applicable requirements. I can't think of anything 6 7 else offhand, other than what you've mentioned. MR. KEELING: You will recall that this 8 9 morning Mr. Herrick asked you about Water Code Sections 10 12200 through 12205; do you recall that testimony? 11 WITNESS LEAHIGH: Yes, I recall that. 12 MR. KEELING: I may have misunderstood this, 13 and if so, correct me, please. I understood that those statutory provisions were not included in your 14 15 understanding of applicable requirements. 16 WITNESS LEAHIGH: Well, I wasn't -- as I stated at the time, I wasn't familiar -- that familiar 17 18 with those statutes when I was looking at them to the 19 extent that those statutes have been incorporated in 20 any of our other requirements, I'm not clear. 21 MR. KEELING: Thank you. I have essentially 22 the same question with respect to Watershed Protection 23 Statute of 1933, Water Code Section 114630 through 24 11465. Do you have any familiarity at all with those 25 statutes?

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WITNESS LEAHIGH: Offhand, I -- I without 1 2 seeing them, I couldn't say one way or the other for 3 sure. But I don't believe I have much familiarity with 4 them. 5 MS. SPALETTA: So as you sit here today, you 6 don't think those are included in what you called "all 7 applicable requirements for purposes of operations"? 8 MR. BERLINER: Objection, misstates his 9 testimony. 10 MR. KEELING: If I've misstated it, please 11 correct me. WITNESS LEAHIGH: Well, I don't know what's in 12 13 those provisions as I'm sitting here. I don't have it in front of me here. 14 15 MR. KEELING: Have you ever heard of the 16 Watershed Protection statute? WITNESS LEAHIGH: I've heard of -- yeah, I 17 18 think I've heard of it. 19 MR. KEELING: Have you ever heard of the 20 county of origin law? 21 WITNESS LEAHIGH: Yes. 22 MR. KEELING: Are you familiar with that 23 statute? 24 WITNESS LEAHIGH: Generally. 25 MS. SPALETTA: Is that a statute the

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1 provisions of which you would include in your

2 understanding of the phrase "all applicable

3 requirements"?

4 MR. BERLINER: Objection, vague and ambiguous. 5 This is -- we're talking about operations, and this 6 statute really is kind of an apples and oranges 7 discussion here.

8 CO-HEARING OFFICER DODUC: Mr. Leahigh, just 9 answer to the best of your ability given the general 10 nature of the question.

11 WITNESS LEAHIGH: Well, again, to the extent 12 that that statute is already incorporated to -- in any 13 of our other permits or requirements, I can't say. So 14 I can't say for sure one way or the other.

MR. KEELING: Do any of these three statutes we've just discussed, the Delta Protection Act of 1959, the Water Protection Statute of 1933 or the County Origin Laws 1931, did they play any role in your preparation of testimony as to the standards that would govern the operation of the project if the WaterFix is approved?

22 WITNESS LEAHIGH: Again, I don't know to what 23 extent those might have been included in any of our 24 other permits and requirements.

25 MR. KEELING: Mr. Leahigh, have you ever -- in

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1 your capacity as a civil engineering working in water 2 matters, have you ever worked on a large estuary in 3 California other than the Delta? 4 WITNESS LEAHIGH: Worked on? No. MR. KEELING: So you've never -- at least in 5 California, you've never had experience with a project 6 7 that entailed significant reductions in freshwater 8 flows from an estuary? 9 MR. BERLINER: Objection, misstates his 10 testimony. CO-HEARING OFFICER DODUC: Please rephrase, 11 12 Mr. Keeling. 13 MR. KEELING: Mr. Leahigh, in your work as an engineer in water-related matters, have you ever worked 14 15 on a project that entailed a significant reduction in 16 freshwater flows from a large estuary? WITNESS LEAHIGH: Did you say "other than 17 18 the" -- I'm sorry. Can you repeat the question? MR. KEELING: In your work, I'm asking about 19 20 you individually, have you ever worked on a project which entailed a significant reduction in -- of 21 22 freshwater flows into a large estuary? 23 MR. BERLINER: I'm going to object as to the word -- use of the word "project." It's undefined in 24 25 this context. Are we talking about an existing

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project, a new project?

2 CO-HEARING OFFICER DODUC: Any project.
3 MR. KEELING: Well, that's a fair
4 qualification.

5 CO-HEARING OFFICER DODUC: Where are you going 6 with this, Mr. Keeling?

7 MR. KEELING: A new project.

8 CO-HEARING OFFICER DODUC: But Mr. Keeling,9 where are you going with this?

10 MR. KEELING: Well, at the risk of jumping 11 ahead when I probably shouldn't as a cross-examiner, I 12 want to find out how much experience these folks have 13 taking freshwater flows, great quantities of freshwater 14 flows out of existing estuaries and what the results 15 were. Because -- from an operations point of view.

16 THE COURT: Okay. Fair enough.

WITNESS LEAHIGH: You qualified your question
in terms of a new project. I don't have any
experience.

20 MR. KEELING: Mr. Leahigh, are you aware of 21 any project that was constructed in California in the 22 last 50 years that resulted in significant reductions 23 in freshwater flows through a large estuary? 24 WITNESS LEAHIGH: Well, certainly some would 25 say the State Water Project certainly affects --

1 certainly affects flows in the Bay-Delta Estuary, yes. 2 MR. KEELING: That's why I qualified the last 3 50 years. The State Water Project is older than 50 4 years, is it not? 5 WITNESS LEAHIGH: Pretty close. 6 MR. KEELING: Other than the State Water 7 Project, is the answer no? 8 WITNESS LEAHIGH: That's correct. 9 MR. KEELING: Are you aware of any project in 10 the last 50 years anywhere in the United States that entailed a substantial reduction of freshwater flows 11 12 into an estuary? MR. BERLINER: Objection, relevance. 13 CO-HEARING OFFICER DODUC: Mr. Keeling? 14 15 MR. KEELING: I'd like to know what they 16 looked at and what they studied before they concluded 17 from an operations point of view a project that does 18 exactly what this project proposes to do would be a 19 good deal and wouldn't harm people. MR. BERLINER: That's a very different 20 21 question. 22 CO-HEARING OFFICER DODUC: Let's answer that 23 question. I like direct questions, Mr. Keeling. 24 Repeat that direct question. 25 MR. KEELING: What studies or prior examples,

1 if any, did you review involving projects that resulted in substantial reductions of freshwater flows through 2 3 large estuaries? WITNESS LEAHIGH: I haven't been involved in 4 5 any studies of that sort. 6 MR. KEELING: Mr. Milligan, I have the same 7 question for you. WITNESS MILLIGAN: Might you repeat the 8 9 question, please? 10 MR. KEELING: What studies or analyses or examples did you review that -- involving projects that 11 12 entailed a substantial reduction of freshwater flows 13 into a large estuary? MR. BERLINER: I'm going to object on the 14 15 grounds of vagueness with reference to the phrases 16 studies or analyses, also as to what that encompasses. CO-HEARING OFFICER DODUC: It's late on a 17 18 Friday. I don't know that we want to dissect the words 19 "study" and "analysis," but Mr. Keeling? 20 MR. KEELING: I was asking the question in 21 response to your request that I go out to the direct, 22 broader question. 23 So I could dissect it. We'd be here a while. CO-HEARING OFFICER DODUC: In arriving at the 24 25 conclusions that you have made in your various

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1 testimonies, did you consider information beyond what 2 was developed by your modelers and your contractors in 3 support -- that was submitted to us? Was there any additional information considered that was not 4 5 generated by the modelers specific for this hearing? 6 I'm trying, Mr. Keeling. 7 MR. KEELING: Fair enough. WITNESS MILLIGAN: Hopefully this is a fair 8 9 answer. 10 The Delta-San Joaquin -- Sacramento-San Joaquin River Delta is very unique, and even the categories of 11 12 large estuaries. It's really not the same as the 13 Everglades or Chesapeake Bay. So it's a rather unique estuary, and I would 14 15 say most of the work that's been done related to 16 salinity, the effects of the various fisheries involved 17 have been pretty unique related to the vast amount of 18 work we've done with our current Delta System. 19 Even species involved -- a lot of work has 20 been done related to the species -- are pretty unique to the Delta. From my understanding that work has been 21 22 predominantly based on studies within the current 23 geographical area. It may be a good question for the second phase 24 25 as to relate to some of the species. I do think

1 there's maybe been some thought given to smelt,

2 smelt-related questions as it relates to Pacific
3 Northwest. There's some similar species there. And I
4 think there may have been some work done as relates to
5 some of the terrestrial that may be applicable to some
6 other areas.

7 But maybe to be direct to your questions as relates to myself, my understanding of the studies or 8 9 work that have been done within the Department of 10 Interior within the Everglades and let's say Chesapeake Bay as two examples, probably -- I haven't seen 11 something that I would be able to call upon in a very 12 13 direct sense as it relates to the dynamics here. Most of my experience or observation from 14 15 reading literature related to those projects in those 16 two areas have been trying to balance resources and 17 needs between MNI uses, agricultural, and then the 18 wildlife habitat with both fishery and the terrestrial. 19 And the Everglades is a great example of that. 20 MR. KEELING: Thank you very much for that

21 clarification. Did you study -- Mr. Milligan, did you 22 study any estuaries not in the United States on this 23 issue?

24 WITNESS MILLIGAN: I have not. But I have 25 seen at some symposiums some efforts by biologists to

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1 pull on experiences on a number of estuaries around the 2 world and tried to see how they may be able to relate 3 to some of our questions here.

4 And the physical -- the topography of our Delta makes it a more difficult question, particularly 5 with the agricultural use that's within the Delta and 6 7 land subsidence associated with that in the -- although we have graded channels and you find that in other 8 9 places, the degree that they're heavily leveed, armored 10 and the types of diversions we have with agriculture 11 seem to be very unique.

MR. KEELING: Thank you very much.

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And this is for Mr. Leahigh to complete this line of questioning. Would I be correct, sir, in my understanding that you are not aware of any completed project during the last 50 years anywhere in which reducing substantial amounts of freshwater flow into a large estuary did not result in a reduction in water quality?

20 WITNESS LEAHIGH: I'm sorry. That was a very 21 long question.

22 MR. KEELING: And it had two negatives in it, 23 and I apologize. Why don't I see if I can get rid of 24 one of the negatives.

25 Are you aware of any project completed in the

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1 last 50 years that involved a substantial reduction of 2 freshwater flows through a large estuary in which, as a 3 result of the completed project, water quality was not 4 reduced? 5 CO-HEARING OFFICER DODUC: Could we break that

6 into two questions, Mr. Keeling?

7 So go ahead. Can you do that? Just start8 your question, and I will stop it.

9 MR. KEELING: Do you have any understanding of 10 any large project completed within the last 50 years 11 that entailed a substantial reduction of freshwater 12 flows --

13 CO-HEARING OFFICER DODUC: Stop right there.14 Answer that question, please.

15 WITNESS LEAHIGH: Completed? It's -- I don't 16 know. This is a very vague question. I don't know.

MR. KEELING: So if you don't know, it would be fair to infer, would it not, that you're not aware of any such project, completed project, that did not

20 result in reduced water quality?

21 CO-HEARING OFFICER DODUC: That's not what he 22 said.

23 MR. KEELING: Well, I'm asking.

24 CO-HEARING OFFICER DODUC: No. Let's move on,25 Mr. Keeling.

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1 MR. MIZELL: This has been a very long week 2 for our witnesses, and it's clear that they're getting 3 a bit fatigued. If there's any way that we can --4 given Mr. Keeling informed us that that was the last question in that line of questioning. If there's any 5 way we could break for the week, these folks would be 6 7 able to supply the Board with more information if they had a rest. 8 9 CO-HEARING OFFICER DODUC: Mr. Keeling, what 10 are your other lines of questioning? 11 MR. KEELING: I have -- I could probably 12 finish this up in ten minutes, if that would help. 13 CO-HEARING OFFICER DODUC: Let's attempt to do 14 that. 15 MR. KEELING: I mean, I have control over the 16 questions, not the responses. In State Water projects, Mr. Leahigh -- excuse 17 18 me, in operations, do you now currently employ any 19 strategies or methods for the purpose of reducing harmful algal blooms in the Delta? 20 WITNESS LEAHIGH: No, not as part of -- I 21 22 don't believe so as part of my current -- specifically 23 looking at what you're asking, no. MR. KEELING: In State Water Project 24 25 operations under the WaterFix, if it's approved,

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1 assuming it's approved, have you put in place or planned any strategies or methods for the purpose of 2 reducing harmful algal blooms in the Delta? 3 4 MS. MORRIS: I'm going to object. Hold on. CO-HEARING OFFICER DODUC: Ms. Morris? 5 6 MS. MORRIS: I'm going to object to this line 7 of questioning. It assumes facts not in evidence. 8 Does Mr. Keeling has some evidence that the 9 State Water Project or Central Valley Project 10 operations cause or exacerbate harmful algal blooms? 11 CO-HEARING OFFICER DODUC: Mr. Keeling. 12 MR. KEELING: I thought this hearing was all 13 about harm to legal users of water if the WaterFix is approved, and that, of course, will go to the 14 15 conditions in which harmful algal blooms develop and 16 flourish, reductions of freshwater flows, temperature changes, and the like. 17 CO-HEARING OFFICER DODUC: I think she is 18 19 objecting to you making that correlation. 20 I believe you can answer -- you can ask that 21 question without making that correlation, Mr. Keeling. 22 MR. KEELING: Well, I didn't make the 23 correlation except in response to the objection, so -and in fact, I think there's no question pending. I 24 25 think I got the answer to it.

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1 CO-HEARING OFFICER DODUC: Did you? 2 WITNESS LEAHIGH: Okay. So to your question, 3 your second question, I don't think I did respond to, which was with the California WaterFix. 4 5 MS. MORRIS: Is there a ruling on the 6 objection or -- I'm sorry. Is there a ruling on the 7 objection before the witness --8 CO-HEARING OFFICER DODUC: The ruling, 9 Ms. Morris, is that Mr. Leahigh will answer the 10 question, and we will not recognize any sort of linkage 11 between Mr. Keeling's implication of algal bloom and 12 the proposed WaterFix, meaning one being a consequence 13 of the other. MR. KEELING: Right. 14 15 WITNESS LEAHIGH: No, not directly. 16 MR. KEELING: Thank you. Are you familiar with the term "residence time"? 17 18 WITNESS LEAHIGH: In the context of what? 19 MR. KEELING: In operating the State Water 20 Project in the Delta, in that context. WITNESS LEAHIGH: I'm familiar with the use 21 22 that some folks have in terms of residence time, yes. MR. KEELING: What is your understanding of 23 24 the meaning of that term? 25 MR. BERLINER: Objection, relevance. Maybe

1 there's a question here, but --

2 CO-HEARING OFFICER DODUC: Let's go directly
3 to your question, Mr. Keeling with respect to residence
4 time.

5 MR. KEELING: Your experience -- and you may 6 not be the right witness. Maybe you could tell me who 7 it would be.

8 But in your experience, would a reduction in 9 freshwater flows from the Sacramento River to the Delta 10 affect residence time in any part of the Delta?

11 WITNESS LEAHIGH: I don't believe so, but 12 that's better answered by the modeling panel.

13 MR. KEELING: Fair enough. In formulating 14 your testimony about project operations under the 15 WaterFix, did you consult with engineers employed by 16 San Joaquin County? Did anyone on your team consult 17 with employees of San Joaquin County?

18 WITNESS LEAHIGH: I can't speak for all of DWR19 but no, I personally did not.

20 MR. KEELING: Did you consult with engineers 21 retained by reclamation districts located in San 22 Joaquin county?

23 WITNESS LEAHIGH: I personally did not.
24 MR. KEELING: Are you aware of any such
25 discussions by any members of your team?

2 speak for the rest of DWR. 3 MR. KEELING: In formulating your testimony, 4 did you consult with anyone in San Joaquin County who, 5 to your knowledge, has responsibility for groundwater 6 management? 7 WITNESS LEAHIGH: I have not, but I can't speak for everyone in DWR. 8 9 MR. KEELING: In formulating your testimony, 10 at this hearing, did you consult with any employee of 11 Metropolitan Water District? WITNESS LEAHIGH: No. 12 13 MR. KEELING: Did you consult with any representative or agent of Metropolitan Water District? 14 15 WITNESS LEAHIGH: No. 16 MR. KEELING: Did you consult with any representative or agent of any of the Federal 17 18 Contractors? WITNESS LEAHIGH: No. 19 20 MR. KEELING: Same question for the State 21 Contractors. 22 WITNESS LEAHIGH: No. 23 MR. KEELING: I really hate to disappoint you. It's been so much fun. But I'm going to have to end it 24

WITNESS LEAHIGH: I'm not aware. I can't

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25 here. I can't figure out a way to bring us to 4:59.

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2 on a Friday afternoon, for the entire panel. 3 CO-HEARING OFFICER DODUC: Thank you, 4 Mr. Keeling. 5 And I will also add my thanks to the entire panel, actually, Mr. Milligan and Mr. Leahigh, it's 6 7 been a long week. I admire your fortitude. I hope you get a lot of rest between now and Thursday, when we 8 9 shall see you again. 10 We will reconvene at 9:00 o'clock on Thursday, 11 thank you. A reminder from Mr. Ochenduszko, we will be 12 13 reconvening in the Coastal Hearing Room and not this 14 room. 15 MS. MESERVE: Sorry I was closing down my 16 computer. May I just put one thing on the record, please? Sorry. It will be very quick, I promise 17 18 everyone. I'm here on behalf of the Environmental 19 Justice Coalition for Water, I'm an authorized 20

And by the way, thank you very much for your patience

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20 Justice Coalition for Water, I'm an authorized 21 representative. And I would just like to let the 22 hearing officers know that the EJCW would like to join 23 in the recent requests for extension of time. They 24 would appreciate a tiny bit more time to prepare their 25 cases in chief because they have very limited funding

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and very few people. And they were not able to prepare a written response and asked me to convey that to you. CO-HEARING OFFICER DODUC: Thank you, Ms. Meserve. MR. MIZELL: It should also be stated -- this is Tripp Mizell. It should also be stated that DWR's preparing a response to all the requests for extensions of time, and we will be submitting that on Monday. CO-HEARING OFFICER DODUC: On Monday. Thank you. All right. Thank you, everyone. Have a good weekend. (Whereupon, the proceedings recessed at 4:12 p.m.) 

1 STATE OF CALIFORNIA

) ss. 2 COUNTY OF MARIN ) 3 I, DEBORAH FUQUA, a Certified Shorthand 4 Reporter of the State of California, do hereby certify 5 that the foregoing proceedings were reported by me, a 6 disinterested person, and thereafter transcribed under 7 my direction into typewriting and is a true and correct 8 transcription of said proceedings. 9 I further certify that I am not of counsel or 10 attorney for either or any of the parties in the 11 foregoing proceeding and caption named, nor in any way interested in the outcome of the cause named in said 12 13 caption. 14 Dated the 19th day of August, 2016. 15 16 17 DEBORAH FUQUA 18 CSR NO. 12948 19 20 21 22 23 24 25

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