

1 APPEARANCES

2 CALIFORNIA WATER RESOURCES BOARD

3 Division of Water Rights

4 Board Members Present:

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

8 Staff Present:

9 Andrew Deeringer, Senior Staff Attorney
10 Conny Mitterhofer, Supervising Water Resource Control
11 Engineer
12 Jean McCue, Water Resource Control Engineer

13

14 PART 2

15 For Petitioners:

16 California Department of Water Resources:

17 James (Tripp) Mizell
18 Jolie-Anne Ansley

19

20 INTERESTED PARTIES:

21 For Save the California Delta Alliance; Janet & Michael
22 McCleary; Frank Morgan; and Captain Morgan's Delta
23 Adventures, LLC:

24 Michael Brodsky

25 For The City of Roseville, Sacramento Suburban Water
District, San Juan Water District, The City of Folsom,
Yuba County Water Agency and The City of Roseville:

Ryan Bezerra

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APPEARANCES (Continued)

INTERESTED PARTIES(Continued)

For The Environmental Justice Coalition for Water, Islands, Inc., Local Agencies of the North Delta, Bogle Vineyards/Delta Watershed Landowner Coalition, Diablo Vineyards and Brad Lange/Delta Watershed Landowner Coalition, Stillwater Orchards/Delta Watershed Landowner Coalition, Brett G. Baker and Daniel Wilson:

Osha Meserve

For Natural Resources Defense Council, The Bay Institute, and Defenders of Wildlife:

Doug Obegi

For Central Delta Water Agency, South Delta Water Agency (Delta Agencies), Lafayette Ranch, Heritage Lands Inc., Mark Bachetti Farms and Rudy Mussi Investments L.P.:

Dean Ruiz
John Herrick

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

Michael Jackson (*)

For Snug Harbor Resorts, LLC:

Nicole S. Suard, Esq. (*)

For The Placer County Water Agency:

Kelley Taber

For San Luis & Delta-Mendota Water Authority:

Daniel J. O'Hanlon

For North Delta Water Agency & Member Districts and Contra Costa Water District:

Kevin O'Brien

1 APPEARANCES (Continued)

2 INTERESTED PARTIES(Continued)

3 For State Water Contractors:

4 Stefanie Morris

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1 Monday, April 23, 2018 9:30 a.m.

2 PROCEEDINGS

3 ---000---

4 CO-HEARING OFFICER DODUC: Good morning. It
5 is 9:30.

6 We are missing some witnesses and Mr. Brodsky.
7 Hopefully they are outside congregating.

8 (Mr. Bezerra exits the hearing room.)

9 CO-HEARING OFFICER DODUC: Thank you,
10 Mr. Bezerra.

11 Welcome back to this Water Right Change
12 Petition hearing for the California WaterFix Project.

13 I am Tam Doduc. To my right is Board Chair
14 and Co-Hearing Officer Felicia Marcus. Soon to be
15 joining us and sitting to the Chair's right will be
16 Board Member Dee Dee D'Adamo.

17 To my left are Andrew Deeringer, Conny
18 Mitterhofer, and Hwaseong Jin. We're also being
19 assisted today by Mr. Hunt.

20 Our unusual announcements:

21 In the event of an emergency, an alarm will
22 sound. We will evacuate using the stairs, not the
23 elevators, down to the first floor, and we will meet up
24 in the park across the street. If you're not able to
25 use the stairs, please flag down one of the safety

1 monitors and they will direct you to a protective area.

2 Secondly, this hearing is being recorded and
3 Webcasted, so, as always, please speak into the
4 microphone after ensuring that it is on, that the green
5 light is lit, and begin by stating your name and
6 affiliation.

7 Our court reporter is here with us. Thank you
8 as always for coming back and bearing through this with
9 us.

10 If you need a copy of the transcript sooner
11 than at the end of Part 2, please make her -- your
12 arrangements directly with her.

13 And since we are coming back from a weekend --
14 hope everyone celebrated Earth Day yesterday -- please
15 take a moment and make sure all noise-making devices
16 are on silent, vibrate and do not disturb.

17 All right. With that, before we turn to
18 Mr. Brodsky's redirect of his witnesses, are there any
19 housekeeping matters we need to address?

20 First, Mr. Bezerra, and then Miss Meserve.

21 MR. BEZERRA: Yes. Thank you. Good morning.

22 Just a quick question: We seem to be rapidly
23 coming to the conclusion of Part 2 cases in chief.

24 CO-HEARING OFFICER DODUC: You jinxed us now.
25 It's going to go on.

1 MR. BEZERRA: Okay. I'll remove the adverb.
2 I don't like those very much, anyway.

3 We seem to be approaching the conclusion of
4 cases in chief, so I was wondering:

5 Will you want input on what rebuttal should
6 look like? Do you have -- Do you have some idea of how
7 we're submitting rebuttal?

8 CO-HEARING OFFICER DODUC: The Chair and I
9 will be discussing that during our lunch break. We
10 will soon have directions for all of you.

11 MR. BEZERRA: Thank you.

12 CO-HEARING OFFICER DODUC: Thank you for
13 bringing it up.

14 Miss Meserve.

15 MS. MESERVE: Osha Meserve for LAND and
16 others.

17 Just with respect to the last issue, giving
18 the announcement on -- or information received on
19 Friday, I think Protestants would like the opportunity
20 to weigh in on the implications of the additional new
21 information coming in from DWR, if that would be
22 possible.

23 In addition, I understand on Friday there was
24 some discussion about whether an Admin Draft
25 Supplemental EIR was received by the Water Board with

1 respect to the phased alternative.

2 And I tried to ask around. I couldn't watch
3 the video.

4 But if there is information as to when it was
5 received at the Board, if it was, and by whom, I would
6 be interested in that information as it pertains to
7 several issues.

8 Last, I was hoping to conduct a very brief
9 cross-examination of this panel, just five minutes, if
10 that would be possible.

11 CO-HEARING OFFICER DODUC: Nope, no, no, no.
12 Cross-examination concluded on Friday.

13 Of course, if you listen very carefully to
14 Mr. Brodsky's redirect, there might be an opportunity
15 for recross, of course.

16 MR. BRODSKY: I mean, I believe Mr. Jackson
17 had signed up for cross on Friday and we didn't get to
18 him.

19 CO-HEARING OFFICER DODUC: Nope. He wasn't
20 here. Cross was completed on Friday.

21 MR. BRODSKY: Okay.

22 CO-HEARING OFFICER DODUC: We're now moving to
23 redirect.

24 MR. BRODSKY: Okay. So if I could just ask
25 procedurally:

1 Are -- Mr. Salter and Mr. Storesund are here.
2 Should they be up here now or do you want them to wait
3 or . . .

4 CO-HEARING OFFICER DODUC: Let's wait. Hang
5 on. We're still on housekeeping --

6 MR. BRODSKY: Okay.

7 CO-HEARING OFFICER DODUC: -- so we'll get
8 back to you.

9 Miss Ansley, I assume you're here to address
10 the issue that Miss Meserve raised.

11 MS. ANSLEY: I -- I actually am not. I have
12 the next housekeeping issue --

13 CO-HEARING OFFICER DODUC: Oh.

14 MS. ANSLEY: -- with Miss Meserve.

15 CO-HEARING OFFICER DODUC: Well, then, before
16 you get to that, let me get clarification from
17 Mr. Deeringer on whether we have received anything.

18 MR. DEERINGER: We don't have any new
19 information since Friday, but I think there's some
20 people we still have to hear back from within the Water
21 Board to know for sure, so . . .

22 No new information but it's only because we
23 haven't heard back.

24 CO-HEARING OFFICER DODUC: Right.

25 MS. ANSLEY: And, hopefully, this will be a

1 quick housekeeping matter.

2 Miss Meserve and I actually consulted over the
3 weekend regarding my objections to Snug Harbor Resort's
4 revised testimony and the evidence, and I believe that
5 we have come to an agreement.

6 And I will let Miss Meserve clarify, but it's
7 my understanding they are going to submit an errata to
8 Miss Suard's testimony, which will take care of all of
9 my objections, as well as a Revised Index List, which
10 will take care of all of my objections to their
11 exhibits.

12 And I will let her address the beginning.

13 CO-HEARING OFFICER DODUC: Will you be
14 submitting that in writing, Miss Meserve?

15 MS. MESERVE: Yes. I think, since
16 Miss Suard's here today, if we could have until the end
17 of the day tomorrow to submit that.

18 And then I think what that means is that we
19 don't need to do any briefing about the evidentiary
20 issues.

21 Oh, if -- Actually, she's reminded me.

22 If it could be until the end of cross-exam for
23 Miss Suard because she has some more of her slides she
24 may use on cross, and that may enlarge slightly the
25 list of slides that would be included from certain

1 exhibits.

2 So if it --

3 CO-HEARING OFFICER DODUC: Her introduction of
4 cross-examining -- cross-examination exhibits is
5 different than her introduction or her moving into the
6 record of her case in chief exhibits.

7 MS. MESERVE: Yes. I mean, if you would like
8 that done, it's just it may need to be done twice if we
9 do it sooner because some of -- Miss Suard intends to
10 use some of those same slides that were in, I believe,
11 244 --

12 CO-HEARING OFFICER DODUC: All right.
13 Since --

14 MS. MESERVE: -- so it might just make things
15 simpler if we --

16 CO-HEARING OFFICER DODUC: All right.

17 MS. MESERVE: -- waited until the end to
18 submit that.

19 CO-HEARING OFFICER DODUC: It seems like --
20 Without repeating Mr. Bezerra's mistake of jinxing us,
21 it seems like we are close to that, so it might be
22 wiser to wait for Miss Suard to do so.

23 Thank you both for working that out.

24 Mr. Obegi.

25 MR. OBEGI: Doug Obegi on behalf of NRDC.

1 We have a pending housekeeping motion to
2 extend the breaks during Dr. Rosenfield's testimony.
3 I'm not sure if you already ruled on that.

4 CO-HEARING OFFICER DODUC: We ruled on that on
5 Friday. You must not have been listening.

6 MR. OBEGI: I had other things that I had to
7 do.

8 So thank you very much.

9 CO-HEARING OFFICER DODUC: All right.
10 Actually, Mr. Obegi, since you are up here:

11 Since we are -- we will be honoring the
12 request and taking a 15-minute break after each hour,
13 does -- would Dr. Rosenfield have a problem with going
14 later to, say, maybe about 6 o'clock today and
15 tomorrow, if necessary?

16 MR. OBEGI: Can I confer with him to
17 double-check? He's on his way.

18 CO-HEARING OFFICER DODUC: All right. And we
19 might take a shorter lunch break again since we will be
20 taking a 15-minute break after each hour.

21 MR. OBEGI: Thank you.

22 CO-HEARING OFFICER DODUC: Are there any other
23 housekeeping matter?

24 All right. Mr. Brodsky, let's finish up this
25 panel before you call up your next panel.

1 MR. BRODSKY: Shall I have them go back to the
2 audience or --

3 CO-HEARING OFFICER DODUC: Oh, are they here?

4 MR. BRODSKY: Yeah. Mr. Salter and
5 Mr. Storesund are seated.

6 CO-HEARING OFFICER DODUC: Their name tags
7 aren't.

8 They may sit there as long as you focus on the
9 redirect that you need to conduct.

10 MR. BRODSKY: Okay. Okay.

11 Good morning. Michael Brodsky on behalf of
12 Save the California Delta Alliance.

13 And if we could see Exhibit SCDA-72.

14 (Exhibit displayed on screen.)

15

16 Bill Wells,

17 Chris Kinzel,

18 Frank Morgan

19 and

20 Russel Ooms,

21 recalled as witnesses by the Save the

22 California Delta Alliance, et al., having

23 been previously duly sworn, were examined

24 and testified further as follows:

25

1 REDIRECT EXAMINATION BY

2 MR. BRODSKY: And, Mr. Morgan, you were asked
3 on cross-examination about the accuracy of this
4 exhibit.

5 And over on the right-hand side, there's a
6 legend there with a red dashed line.

7 And what do those red dashed lines indicate?

8 WITNESS MORGAN: Proposed barge routes.

9 MR. BRODSKY: And how did you determine where
10 to place those barge routes? I noticed some rivers and
11 sloughs have red dashed lines indicating a barge route,
12 and others don't.

13 How did you determine where the barge routes
14 are?

15 WITNESS MORGAN: Well, I utilized in the EIR
16 the Biological Opinion, SCDA-103, if you want to pull
17 that up, and on Page 155.

18 (Exhibit displayed on screen.)

19 WITNESS MORGAN: You can see in the third
20 large paragraph, where it starts with "Vessels
21 originating."

22 So in this whole section, depending on which
23 barge route we're talking about, it clearly lays out
24 the path that barges would come from in the three --
25 from three major ports, Antioch, Stockton, and

1 San Francisco.

2 And we -- I utilized the verbiage in the EIR's
3 Biological Opinion to then determine the route based on
4 my knowledge of the Delta.

5 MR. BRODSKY: Okay. And . . .

6 So, for example, I'm seeing about midway
7 through the paragraph, it says (reading):

8 "Barges destined for Bouldin Island
9 will enter Potato Slough from the
10 San Joaquin River . . ."

11 And then could we switch back to SCDA-72.

12 (Exhibit displayed on screen.)

13 MR. BRODSKY: And is that -- Near the middle
14 of the page, there's a large muck dump located and then
15 an arrow pointing to a barge landing.

16 Is that the barge landing on Potato Slough
17 that was indicated by that last sentence I read?

18 WITNESS MORGAN: Yes.

19 MR. BRODSKY: Okay. And you -- I don't want
20 to drag us through every -- every sentence in the
21 thing.

22 But you did this for each of these routes.
23 You followed that narrative in the Biological Opinion.

24 WITNESS MORGAN: That's correct.

25 MR. BRODSKY: Okay. And then I'd like to go

1 to SCDA-73.

2 (Exhibit displayed on screen.)

3 MR. BRODSKY: So, there are two photographs
4 there. Maybe if we could just scroll so we can see
5 both photographs.

6 (Exhibit displayed on screen.)

7 MR. BRODSKY: Yeah. Two photographs. One is
8 labored -- labeled "Upper Snodgrass Slough Anchorage"
9 and the other is labeled "Meadows Slough Anchorage."

10 How do you know those were accurate depictions
11 of Upper Snodgrass and Meadows Slough?

12 WITNESS MORGAN: Well, besides spending many
13 years, starting at age 14, in the Meadows and
14 recreating -- it's a beautiful spot -- I actually took
15 both of those pictures last summer.

16 MR. BRODSKY: Okay. Then also on the map
17 portion there, there are various labels of construction
18 features, concrete batch plant, electrical substation,
19 et cetera, et cetera.

20 How did you determine that those features are
21 where they're shown and are what those labels say they
22 are?

23 WITNESS MORGAN: Well, by utilizing the EIR's
24 M15-4 Index and Sheets 1 through 8, I believe. Yeah, 1
25 through 8.

1 It lays out the different fueling station
2 locations, muck dumps, concrete batch plants and so
3 forth. And then by identifying them on that map,
4 attaching just the larger labels to them.

5 MR. BRODSKY: Okay. So could we take a look
6 at -- Then it would be in -- I believe the EIR is
7 SWRCB-102, if memory serves me.

8 It's a sign I don't have much of a life if I
9 have the exhibit numbers memorized.

10 (Exhibit displayed on screen.)

11 MR. BRODSKY: And then if we scroll down to
12 Chapter 15.

13 (Exhibit displayed on screen.)

14 MR. BRODSKY: And there's a mapbook there.

15 (Exhibit displayed on screen.)

16 MR. BRODSKY: And then you actually have to
17 scroll down quite a ways to get to M15-4.

18 (Exhibit displayed on screen.)

19 MR. BRODSKY: And -- Yeah. That's M15-4,
20 Sheet 1 of 8, if I -- if my eyes are serving me.

21 And . . . So I can see there . . .

22 We -- We don't have screens.

23 (Approaching monitor.)

24 MR. BRODSKY: So, for example, next to Intake
25 Number 3, there's a label there that says "Fuel

1 Station."

2 And so you -- You would have simply just taken
3 that information from this map and -- and put it onto
4 the other map in a larger format so it's more readable.

5 WITNESS MORGAN: That's correct.

6 MR. BRODSKY: All right. And then if we could
7 scroll down to the next Sheet 2 of 8.

8 (Exhibit displayed on screen.)

9 MR. BRODSKY: It will be the next one. Sorry.
10 Three, I guess it would be.

11 (Exhibit displayed on screen.)

12 MR. BRODSKY: So could we go down a little bit
13 so we can see those features at the top of the page?

14 (Exhibit displayed on screen.)

15 MR. BRODSKY: Yeah.

16 So, there's quite a few hatched areas there
17 near the top of the page and labels of construction
18 features.

19 What -- What area of the Delta is that from
20 your familiarity with the Delta?

21 WITNESS MORGAN: It's Snodgrass Slough and the
22 Meadows.

23 MR. BRODSKY: And there's -- I can see there
24 is an indication "Barge Landing." I think I see "RTM
25 Conveyer Facility" and some other labels.

1 And is this where you obtained the information
2 for SCDA-73?

3 WITNESS MORGAN: Yes.

4 MR. BRODSKY: Okay. Then I'd like to scroll
5 down to Sheet 6, I believe it is.

6 (Exhibit displayed on screen.)

7 MR. BRODSKY: Yes. And could we scroll so we
8 can see the top of the page.

9 (Exhibit displayed on screen.)

10 MR. BRODSKY: There we go.

11 And, so, in the top left corner, there's some
12 waterways and streets depicted.

13 Do you recognize that feature there?

14 WITNESS MORGAN: Yes.

15 MR. BRODSKY: And what is that?

16 WITNESS MORGAN: Discovery Bay proper.

17 MR. BRODSKY: Okay. And, on cross-examination
18 Friday, it was -- there's a -- Down lower there, the
19 area labeled "Clifton Court Forebay," there's a barge
20 landing noted there on Clifton Court Forebay.

21 And on cross-examination Friday, I was asked
22 (sic) what the effect of that barge landing at that
23 location would have on -- on road traffic on Highway 4.

24 Could -- Could you expand on that a little
25 bit.

1 WITNESS MORGAN: Sure.

2 In fact, this bridge -- the Highway 4 Middle
3 River Bridge, in my opinion, could represent the
4 biggest impact on traffic anywhere in the Proposed
5 Action.

6 Currently, that bridge -- You know, I've been
7 motoring the waters professionally for six and a half
8 years and I've only seen the bridge opened twice. I
9 radioed it once, and they couldn't open it because it
10 was a hot day and the bridge swells, and so they
11 couldn't release the pins to open the bridge.

12 Very few large boats are down south of
13 Highway 4, so it's -- it's not open very often at all.

14 But the traffic on that road -- When you come
15 out of Discovery Bay, you either go east or west out of
16 the main exit there, out of the main entrance to
17 Discovery Bay.

18 And on any day, on any workday, the traffic is
19 steady and solid all the way from Discovery Bay going
20 west towards Bixler and going east over the bridge.

21 And if you're going to open that bridge eight
22 times a day, you could easily back up traffic from the
23 bridge west all the way past Discovery Bay and possibly
24 to Bixler.

25 And not to mention the truck routes that are

1 indicated -- the two new roads that are actually east
2 of the river on Highway 4.

3 They show road improvements to the purple
4 lines there, where they'll be hauling in tunnel liners
5 and other equipment and things via these new roads.
6 Obviously, it will add a lot more truck traffic on
7 those roads.

8 So I -- I -- I wonder -- And one of my main
9 concerns about that road and the bridge opening is
10 things such as emergency vehicles. I just can't
11 imagine that bridge being open for 20 minutes or so for
12 a barge to pass through with the road congested -- it's
13 a two -- two-road highway -- what that would do for any
14 kind of emergency in Discovery Bay for vehicles coming
15 from the east to access that. If the bridge is open,
16 they're done. There is no passing until they can get
17 the bridge shut. So that could present a -- a
18 significant issue.

19 Also, the tunnel liners. I -- I haven't seen
20 anywhere where it talks about the size of those liners,
21 but they're going to put them on trucks.

22 Are these oversized liners? Because once you
23 go over the bridges, the bridges are narrow. And just
24 a simple -- a couple of vans passing each other,
25 mirrors are just inches apart.

1 So, if a truck hauling liners was wide -- a
2 wide load, wider than the bed of the truck, it would be
3 a one-way lane across that bridge anytime you had truck
4 traffic going across that bridge as well.

5 There are many significant issues with that
6 bridge, and all the bridges, that I don't think DWR has
7 given thought to by everything I have read, in that --
8 and just the scheduling of a bridge.

9 Not all bridges are open 24 hours a day seven
10 days a week. In fact, most of them are not.

11 There are train bridges that, when a train
12 comes by, they don't -- that -- that train has
13 priority. The op -- They shut the bridge and keep it
14 shut. And they'll shut it where you have to wait 20 or
15 30 minutes before they'll open a train bridge and it
16 gets cleared.

17 So there's bridges throughout the Delta that
18 have significant issues in scheduling. I know that we
19 talked a lot about the Mokelumne River Bridge, but this
20 would go for the one down here off Highway 4 as -- as
21 well.

22 When you operate a bridge, you call the Bridge
23 Master, if you're on a boat, to open the bridge. They
24 will only open that bridge on the half hour, every half
25 hour, because of backing up traffic, say, on Highway 12

1 or something, to keep the traffic flowing.

2 Well, how does that work if you have a yacht
3 club that has 30 boats, like this last weekend, that
4 cruises up to Old Sacramento for a cruise-out, and they
5 go up and then, a couple days later, they come back.

6 And you're waiting at, say, the Mokelumne
7 River Bridge, and they open that bridge for a -- for a
8 barge to go through that takes 20 minutes. They're
9 going to shut the bridge again.

10 So you could literally sit there in a boat for
11 an hour, hour and a half, waiting to get 20 or 30 boats
12 through at a time. And that's how they travel, those
13 cruise-outs.

14 So, to sum it up, there are significant issues
15 with the bridges, specifically this one on Highway 4,
16 being a major, major focus that should be given. If --
17 If this Project goes forward, which obviously we -- we
18 agree that we don't believe it should. But if it did,
19 there should be significant focus on bridges and
20 especially the one on Highway 4.

21 MR. BRODSKY: So -- Well, first, let me ask
22 you:

23 You said that the bridge is going to open
24 eight times a day. How -- How do you know that?

25 WITNESS MORGAN: Through the Biological

1 Opinion, again, SCDA-103.

2 They talk about barge traffic and how many
3 trips they're going to make to each location. And
4 that's -- Also, it's -- Let me look here quick.

5 (Exhibit displayed on screen.)

6 WITNESS MORGAN: Yes. It's, again, on
7 Page 155 of the Biological Opinion, SDA -- SCDA-103.

8 And up in the top paragraph and the second
9 paragraph, you can see they lay out how many barge
10 trips and the number going each way with a total barge
11 trips over a period of five to six years of 9,400 barge
12 trips.

13 And so, in there, they lay out how many go
14 down to Clifton Court, which is basically four one-way
15 trips, and four return trips, so that's eight trips a
16 day.

17 I don't even know how that bridge would open
18 eight times a day, to tell you the truth, in the
19 summertime.

20 MR. BRODSKY: So when you say if the Project
21 goes ahead, this problem needs to be addressed somehow,
22 for example, building a new bridge there with a higher
23 clearance would be one way it could be addressed?

24 WITNESS MORGAN: Doubtful, but -- I mean, if
25 they could do that, they could.

1 But the levee -- the width of the levee
2 dictates the bridge. You can't go -- You know, the
3 grade would be just like climbing a mountain and
4 straight back down. You couldn't do that. The nar --
5 The river is too narrow.

6 They usually only do taller bridges over a
7 larger span. This is a very narrow part of the river
8 and so you're limited to -- to what you could do for a
9 bridge for height.

10 Speaking of the height of the bridge, I went
11 back over the weekend and took a look at a map, and
12 every proposed barge route in this EIR proposal would
13 require opening the bridge, except for when they come
14 under the -- you know, everything east of the Antioch
15 Bridge. So the Antioch Bridge is tall enough to get
16 under without it.

17 And also, like I said the other day, you have
18 Tower Park Marina's bridge is tall enough but they
19 don't propose any barge routes up Potato Slough that
20 far.

21 MR. BRODSKY: Okay.

22 WITNESS MORGAN: So every other bridge would
23 be required to be open.

24 MR. BRODSKY: Okay. So, then, it says that
25 the Clifton Court Forebay is one of the main

1 distribution points. That's why there's eight
2 round-trips per day.

3 So would, then, not having Clifton Court
4 Forebay as one of the main distribution points, and
5 putting it somewhere else, be a way to lessen the
6 amount of times that bridge would have to open?

7 WITNESS MORGAN: Absolutely.

8 MR. BRODSKY: Okay. That concludes my
9 redirect.

10 CO-HEARING OFFICER DODUC: Thank you,
11 Mr. Brodsky.

12 Recross by anyone?

13 All right. Thank you very much.

14 And, then, at this time, I will ask the
15 witnesses for Mr. Brodsky's second panel to please
16 stand and raise your right hands.

17

18 Charles Salter,

19 and

20 Rune Storesund,

21 called as witnesses by Save the
22 California Delta Alliance, et al., having
23 been duly sworn, were examined and
24 testified as follows:

25 CO-HEARING OFFICER DODUC: Thank you. Please

1 be seated.

2 MR. BRODSKY: Okay. Thank you.

3 DIRECT EXAMINATION BY

4 MR. BRODSKY: Okay. I'd like to introduce
5 Mr. Charles Salter, who's an Acoustical Engineer.

6 And I'd like to start by asking Mr. Salter to
7 give us a two- or -- two- to three-minute overview of
8 his qualifications.

9 WITNESS SALTER: I have three college
10 degrees --

11 Is this on?

12 MR. BRODSKY: No.

13 WITNESS SALTER: I have three college degrees.
14 I've studied --

15 CO-HEARING OFFICER DODUC: Could you move the
16 microphone closer.

17 WITNESS SALTER: I have three college degrees:
18 Engineering, architecture and business. And I've used
19 this education in my practice of Acoustical Engineer in
20 the last 50 years.

21 I am registered with -- as a Mechanical
22 Engineer in the State of California, Board-certified
23 Acoustical Engineer by the Institute of Noise Control
24 Engineering.

25 And I've taught at the College of

1 Environmental Design, U.C. Berkeley, a course in
2 acoustics for 45 years.

3 I have a firm of 57 employees. And we do lots
4 of Acoustical Engineering work, including environmental
5 acoustics.

6 MR. BRODSKY: And this California WaterFix,
7 this is a very large, complicated Project.

8 Have you dis -- Have you participated in
9 Projects that are anything similar to this in terms of
10 complexity and difficulty of issues?

11 WITNESS SALTER: I have. And the three
12 environmental acoustics projects that I think bear on
13 my opinion in this case are as follows:

14 47 years ago, I was working for a firm. We
15 were hired by the State of Georgia to redo an
16 environmental noise study that was judged by the
17 Federal government as being unfair and biased to the
18 communities. And so this was my first Project that I
19 managed.

20 I went down to Georgia, and I did a fair and
21 balanced study of the noise impacts of various routes
22 through Central Georgia. That was my first experience,
23 and I think it bears on my opinion in this case.

24 Second, the work I did for the Devil's Sli --
25 Devil's Slide Environmental Noise Study.

1 So the State of California decided that what
2 Caltrans did in the way of studying environmental noise
3 for the Devil's Slide Study was inadequate, in part
4 because the people that prepared that Environmental
5 Noise Study didn't measure ambient noise, nor did they
6 take into account the specific impacts that would be
7 caused on the parkland and people who are recreating in
8 that particular area. And so we redid the study on
9 behalf of Caltrans.

10 The third issue is the fourth bore that goes
11 from Contra Costa County to Alameda County. And
12 Caltrans wanted to have their construction yard right
13 next to --

14 MR. BRODSKY: Can I just interrupt for a
15 moment.

16 Are you speaking of the Caldecott Tunnel?

17 WITNESS SALTER: Caldecott Tunnel, fourth
18 bore, several years ago.

19 Caltrans wanted to have their construction
20 yard and build 24 hours a day right next to a community
21 project, and so City of Berkeley and Oakland protested.
22 There were threat of litigation.

23 And I came up with an idea that would mitigate
24 the noise impact. My idea was to build a temporary
25 35-foot-tall wall that went for a thousand feet. And

1 when I pitched this idea to Caltrans, they said to
2 me, "Caltrans doesn't build 35-foot-tall walls."

3 And then, when they realized the economic
4 factors, they relented, because they spent a million
5 dollars for the wall and they saved \$40 million by not
6 impacting the community.

7 And then I got into the details with the Mayor
8 of Oakland. She was concerned about noise bouncing off
9 the wall, and so I clad the wall with soundproofing
10 material. And then she wanted to make sure it was a
11 green material. So I told her it was a green material.

12 And so they built the wall that many of you
13 may have seen, and it protected the community not just
14 from noise but also from dirt and light pollution.

15 CO-HEARING OFFICER DODUC: All right.

16 MR. BRODSKY: So let's pause for just a
17 moment --

18 CO-HEARING OFFICER DODUC: Let's pause.

19 MR. BRODSKY: -- Mr. Salter.

20 CO-HEARING OFFICER DODUC: Thank you.

21 Miss --

22 MR. BRODSKY: Opposing counsel has something
23 to say, so we'll just pause for a moment and allow her
24 to speak.

25 CO-HEARING OFFICER DODUC: Miss Ansley.

1 MS. ANSLEY: Yes.

2 I do not see these projects that he's starting
3 to talk about that he feels are analogous situations or
4 any more in his statement qualifications or his direct
5 testimony.

6 So, I mean, when I was first listening, I just
7 thought it was a little bit of extra qualifications,
8 but it got very detailed. And so I would move to
9 strike these examples to the extent that they are
10 analogized to the situation here.

11 CO-HEARING OFFICER DODUC: Mr. Brodsky.

12 MR. BRODSKY: So, Mr. Salter's Statement of
13 Qualifications does list categories of projects and
14 that he's been involved in numerous complex projects.

15 I think we've gone on long enough. We don't
16 need to go any further. But I think just giving some
17 examples, Caldecott Tunnel Project and Georgia, is
18 appropriate and within the scope.

19 CO-HEARING OFFICER DODUC: All right. Let's
20 keep it that way, and let's move on.

21 MR. BRODSKY: Okay. Thank you, Mr. Salter.

22 So, have you had a chance to review Chapter 23
23 of the Environmental Impact Report for CWF?

24 WITNESS SALTER: Yes.

25 MR. BRODSKY: And also, have you had a chance

1 to review in particular the EIR mapbooks M15, Sheets 1
2 through 8, which show location of construction
3 facilities?

4 WITNESS SALTER: Yes, I have.

5 MR. BRODSKY: And, also, have you had a chance
6 to review the Biological Assessment mapbooks which show
7 the location of -- of construction activities?

8 WITNESS SALTER: Yes, I have.

9 MR. BRODSKY: And there is an appendix to the
10 Biological Assessment, which is labeled pile driving
11 assumptions," which gives latitude and longitude and --
12 of location of pile driving, and number of piles, and
13 other information about pile driving.

14 Have you had a chance to review that?

15 WITNESS SALTER: Yes, I have.

16 MR. BRODSKY: And based on a review of those
17 documents, could you give us your -- any opinions you
18 may have about the environmental assessment that was
19 done or the noise impacts that this -- and/or the noise
20 impacts that this Project is going to have?

21 WITNESS SALTER: Yes.

22 I have a prepared statement I'd like to
23 briefly read.

24 (Reading):

25 "In planning the California WaterFix

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1 Project, and accounting for the effects
2 on surrounding communities of the noise
3 from driving tens of thousands of piles
4 involving millions of pile strikes, DWR
5 made a fundamental error by assuming that
6 because the communities and locales where
7 the pile driving will take place are
8 quiet rural communities, the large amount
9 of intruding noise from the pile driving
10 will be less disruptive to community
11 life. DWR planned the Project using 'the
12 general principle that receptors in less
13 noisy areas may tolerate greater
14 increases in noise than communities
15 already exposed to higher levels.' In
16 making this assumption, DWR misunderstood
17 published literature on noise annoyance.
18 In fact, the quiet rural nature of Delta
19 communities and the large difference in
20 character and level between existing
21 ambient noise and intruding construction
22 noise" is a lot more annoying,
23 "'penalizes' the intruding noise' by an
24 additional 5 to 12 decibels based on the
25 literature that the DWR misunderstood."

1 Now, DWR referenced work done by a former
2 colleague of mine, Ted Shultz. And so I worked with
3 him at the time that this was published, and I'm
4 familiar with his work.

5 And they, in my professional opinion,
6 misapplied Dr. Shultz's work and literature on noise
7 annoyance factors that depends on it.

8 (Reading further):

9 "Common sense tells us that . . .
10 sudden loud noises that are different in
11 quality from existing background noise
12 will be disruptive. Common human
13 experience . . . tells us that loud
14 noises intruding into a landscape of
15 peace and quiet will be annoying and
16 disruptive. These common understandings
17 of human experience are borne out by
18 scientific literature on noise annoyance.
19 DWR's misunderstanding of the amount of
20 disruption that would be caused by pile
21 driving . . . is contrary to common sense
22 and established acoustical engineering
23 principals. It represents a significant
24 engineering error in Project planning.

25 "A substantial amount of in-water

1 pile driving will take place at . . .
2 three inlets, located near Hood on the
3 Sacramento River. A total of 3,090
4 foundation piles and 7500 sheet piles
5 will be driven in the water. In
6 addition, several thousand piles will be
7 driven on land to support the realignment
8 of Highway 160, intake control
9 structures, and sediment basins on (sic)
10 the intake.

11 ". . . noise levels from pile-driving
12 activities (sic) at the three intakes
13 projected (sic) out over the Sacramento
14 River will reach 91 decibels for a zone
15 of 800 feet from the pile driving and 85
16 dB for a zone of (sic) 1600 feet from the
17 pile-driving activity. The noise levels
18 from construction activities (sic) and
19 pile driving will likely reach 76 to 80
20 dBA at the Town of Hood, 75 dBA at the
21 Clarksburg marina, 79 dBA at the edge of
22 the Town of Clarksburg, 76dB at (sic) the
23 center of Clarksburg at the Clarksburg
24 library, and 75dB in the center of
25 Clarksburg at the Clarksburg School

1 campus."

2 So let me evaluate those sound levels that
3 I've been talking about.

4 75 to 91 decibels. That is so loud that
5 people will not be able to have a telephone
6 conversation, not be able to use your cellphones, not
7 be able to watch television indoors, won't be in class.
8 That's how loud these sound levels are that I've just
9 described in various communities cited.

10 (Reading further):

11 "Because of . . . intruding
12 construction and pile-driving noise (sic)
13 is . . . a different character of (sic)
14 ambient noise in these quiet rural
15 locations . . . because the intruding
16 noise is impulsive, it will have an
17 annoyance factor . . ."

18 Much louder than if, let's say, traffic noise
19 was 75 to 91.

20 So you have the noise interference of the pile
21 driving and then you also have a heightened annoyance
22 factor because it's very different than the ambient
23 noise, and it's impulsive noise.

24 Not only will it affect the communities, but
25 it will also adversely affect recreation areas and

1 people who are recreating at the marina.

2 As I mentioned before, it would limit speech
3 communication, and so people will not be able to, as I
4 say, carry on conversations of the type that they have,
5 are used to.

6 And so I understand that there's a proposal to
7 do the exact Project construction without pile driving,
8 and this assessment is beyond my expertise.

9 But from an acoustical engineering point of
10 view, any alternative method which is available that
11 would avoid the significant hardship that I expect will
12 protect these communities from excessive noise. And so
13 these alternative methods should be considered.

14 So in summary, the flaws I see in the
15 environmental study are as follows:

16 Number one. They didn't measure the
17 background noise, didn't measure the ambient noise.
18 And from my experience of 47 years, you always quantify
19 the existing conditions when you're doing environmental
20 noise impact.

21 Then they used the wrong sound source level.
22 In this document, they assume that pile-driving noise
23 as 102 decibels at 50 feet and the Water Resources
24 directs use of a sound level of 115-decibel. A
25 13-decibel difference is very significant.

1 Then, in their analysis of how the sound would
2 be carried to the communities, they used a dropoff of
3 8 decibels per doubling the distance. And the standard
4 way to do this is 6 decibels for doubling the distance.

5 So they underestimated the amount of noise
6 extrapolated to the nearby communities.

7 And then, as I started off my testimony, the
8 basic assumption that you have a quiet community, you
9 substantially increase the noise, that people will
10 no -- not be adversely affected is incorrect.

11 And then the last part of my commentary, tying
12 back to the fourth bore study, where the Mitigation
13 Measure that Caltrans adopted was engineered and funded
14 prior to project approval, whereas I see that the
15 mitigation for this Project is very general, and
16 they're going to wait and see if people complain, and
17 then they'll consider mitigation.

18 In my experience, that typically doesn't work
19 because, once the Contractor gets started, they just
20 want to go. And it's very, very difficult to fund
21 mitigation -- to do the mitigation noise studies at
22 that point in the middle of a Project waiting for
23 people to complain.

24 That ends my testimony.

25 MR. BRODSKY: May I ask a couple of questions.

1 So, Mr. Salter, you said that DWR in the EIR
2 assumed that the source noise from pile driving would
3 be 102 decibels at 50 feet.

4 WITNESS SALTER: That's correct.

5 MR. BRODSKY: But that the correct figure is
6 115 decibels.

7 WITNESS SALTER: That's correct.

8 MR. BRODSKY: And could I ask to see SCDA-80.

9 (Exhibit displayed on screen.)

10 MR. BRODSKY: And if we could go to Page 7.14.
11 That's about 12 pages into the document, I think.

12 (Exhibit displayed on screen.)

13 MR. BRODSKY: There it is.

14 WITNESS SALTER: Yes.

15 MR. BRODSKY: And there's a yellow highlighted
16 sentence there.

17 Could you read that?

18 THE WITNESS: Yes.

19 (Reading):

20 "When conducting an in-air noise
21 assessment involving impact driving of
22 hollow steel piles, U.S. Fish and
23 Wildlife Service currently recommends
24 assuming a noise level of
25 115 decibels . . ."

1 And this is for 30-inch-diameter piles.

2 And my understanding is that, for this
3 Project, they're proposing the use of 42-inch-diameter
4 piles. So this particular noise level could be lower
5 than the actual pile driving noise.

6 MR. BRODSKY: And so that's U.S. Fish and
7 Wildlife Service's recommendation.

8 And just in your personal professional
9 experience, do you believe that -- which would be the
10 correct assumption: 102 or 115 or more?

11 WITNESS SALTER: 115 would be what I would
12 rely on.

13 MR. BRODSKY: Okay. And let's take a look, if
14 we could, at SCDA-70.

15 (Exhibit displayed on screen.)

16 MR. BRODSKY: So the caption on this reads
17 (reading):

18 "Town of Hood Dwarfed By
19 Construction Sites."

20 And there's a -- for lack of a better word --
21 some kind of cartoonish depictions of the intakes.

22 And how did you determine the location of the
23 intakes on this -- on this photograph? And where did
24 those depictions come from?

25 WITNESS SALTER: It was a combination of the

1 EIR maps and the depiction and the information of
2 pile-driving longitude and latitude, as well as Google
3 Earth.

4 MR. BRODSKY: Okay. Could -- Could we take a
5 look at SWRCB-104.

6 (Exhibit displayed on screen.)

7 MR. BRODSKY: And then the mapbook
8 Appendix 3.A.

9 (Exhibit displayed on screen.)

10 MR. BRODSKY: And if we could scroll down.

11 (Exhibit displayed on screen.)

12 MR. BRODSKY: Next page.

13 (Exhibit displayed on screen.)

14 MR. BRODSKY: So that -- We see Intake 2 and 3
15 and those sort of cartoonish figures.

16 This is where you took the depiction from?

17 WITNESS SALTER: Correct.

18 MR. BRODSKY: Okay. And if we could scroll
19 down to the next sheet.

20 (Exhibit displayed on screen.)

21 MR. BRODSKY: This shows Intake 5. And . . .
22 it -- It's hard to see, but is that the town of Hood
23 just north of Intake 5?

24 WITNESS SALTER: Yes, and the construction
25 there.

1 MR. BRODSKY: Okay. And then if we could go
2 back to SCDA-70.

3 (Exhibit displayed on screen.)

4 MR. BRODSKY: So we see the town of Hood there
5 and the in-water foundation pile driving, land-based
6 pile driving, construction yard.

7 In your opinion -- I mean, how is it going to
8 be for the residents of Hood -- this is a very small
9 town there -- noise-wise during a construction period?

10 WITNESS SALTER: Well, to the extent that the
11 sound level exceeds 60, you're not going to be able to
12 talk on a cellphone, carry on normal communications.
13 And then every 10 decibels higher than 60, it's going
14 to be perceived as twice as loud.

15 And our calculations indicate that it's going
16 to be unacceptably noisy on many levels for the reasons
17 that I've stated and, therefore, this analysis needs to
18 be redone so as to protect the town of Hood and other
19 people who would be exposed to the predicted noise
20 level.

21 MR. BRODSKY: Okay. And have you -- Did you
22 have an opportunity, when you were looking at
23 Chapter 23, to look at DWR's proposed Mitigation
24 Measures?

25 WITNESS SALTER: I did.

1 I reviewed their Mitigation Measure, and my
2 recollection, just to generalize them, it was very
3 general and "We'll see," and they talk about, they
4 could build sound walls, but with any particular type
5 of analysis.

6 Now, you really can't build a sound wall to
7 mitigate the noise of pile driving if the piles are
8 100 feet in the air. That -- That is infeasible.

9 And so, therefore, pile driving, which is the
10 predicted -- the most impactful source of delays, to
11 find another way of installing the foundations is
12 recommendation to mitigate that.

13 MR. BRODSKY: Okay. So, you mentioned in your
14 experience on previous projects a number of major
15 projects basically where the project proponent blew it
16 on the EIR.

17 And you were able to step in and help the
18 project proponent and come up with a plan that allowed
19 the project to go ahead and that also protected the
20 adjacent communities.

21 From -- From your review of this Project, do
22 you think you're capable of doing that here?

23 WITNESS SALTER: Absolutely. I'd be glad to
24 help.

25 MR. BRODSKY: Okay. Thank you.

1 That concludes my questions for Mr. Salter.

2 CO-HEARING OFFICER DODUC: Please move on to
3 your next witness.

4 MR. BRODSKY: Okay. I'd like to introduce
5 Mr. Rune Storesund. And Mr. Storesund is a Structural
6 Engineer, various other qualifications.

7 And I'd like to ask Mr. Storesund to begin by
8 giving us a brief overview of his qualifications.

9 WITNESS STORESUND: I don't see a green light
10 on the microphone.

11 Oh, there it is.

12 Okay. Good morning. Can you hear me okay?

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

14 WITNESS STORESUND: My name is Rune Storesund.
15 I'm a Licensed Civil Engineer in California,
16 Washington, Hawaii and Louisiana. And here in
17 California, I'm also a licensed Geotechnical Engineer,
18 not a Structural Engineer.

19 I have about 17 years of experience in Civil
20 Engineering, and I have about 12 years of experience
21 focused on forensics, kind of looking at how things go
22 well or how things go wrong.

23 I mainly practice in the areas of
24 Geotechnical, Water Resource and Environmental
25 Engineering.

1 I have a Doctorate of Engineering from U.C.
2 Berkeley in civil engineering --

3 CO-HEARING OFFICER DODUC: Yes!

4 WITNESS STORESUND: -- a Master's in
5 geotechnical engineering at Berkeley.

6 And I participated in a dual-degree program
7 between U.C. Santa Cruz and U.C. Berkeley. So I did
8 all my surfing and sailing at Santa Cruz, and have a BA
9 in Anthropology. And I did Civil Engineering Bachelors
10 Degree at Berkeley.

11 I'm also a licensed Contractor, a Class A and
12 Class B, so I can build big things in California.

13 And I'm also the Executive Director for the
14 Center of Catastrophic Risk Management at U.C.
15 Berkeley. And that research center is a group of
16 academic researchers and practitioners who recognize
17 the need for interdisciplinary solutions to avoid and
18 mitigate tragic events.

19 The group is internationally rec -- is
20 composed of an internationally recognized body of
21 experts in the fields of engineering, social science,
22 medicine, public health, public policy, and law, and
23 was formed in the wake of Hurricane Katrina.

24 And it was really an effort to -- to gather a
25 group of individuals with disparate background

1 knowledge to -- to be helpful in addressing some of the
2 more challenging problems that are out there in the
3 world.

4 I'm also certified by the National Academy of
5 Forensic Engineers as a Forensic Engineer and serve as
6 a Technical Reviewer for that organization.

7 MR. BRODSKY: Thank you, Mr. Storesund.

8 So, Mr. Storesund, you earlier heard
9 Mr. Salter testify about the enormous amount of noise
10 and problems that are going to come from impact driving
11 42-inch-diameter steel piles to support the foundation
12 of the intake structure.

13 In your opinion, is there an alternative
14 method that could be used where that impact driving of
15 those large piles would not be necessary?

16 WITNESS STORESUND: Yeah, absolutely.

17 Not only are there other structural
18 alternatives, but there are also other ground
19 improvement techniques that can be used to provide
20 suitable foundation conditions for the intake
21 structures.

22 I can summarize kind of that statement that
23 I --

24 MR. BRODSKY: Could you summarize your
25 statement. Then we'll go on with some questions.

1 WITNESS STORESUND: Sure.

2 So, there was a substantial amount of
3 available information that I sorted through and
4 reviewed.

5 And based on all that material that I looked
6 at, I didn't see any impediments to using alternative
7 approaches from pile driving to provide suitable
8 foundation conditions for those intake structures.

9 I also reached out to several Contractors, and
10 one of them, in the time that I had, was able to put
11 together a quote and that was kind of validation for me
12 that it's not just my opinion, but if I talk to other
13 Contractors out there, it's a very feasible thing.
14 They can put real dollars do it, and it's routinely
15 done.

16 And, let's see, one of the -- Exhibit SCDA-127
17 would be an example from Malcolm Drilling on the
18 alternative foundation techniques.

19 MR. BRODSKY: Can we see 127?

20 (Exhibit displayed on screen.)

21 WITNESS STORESUND: So this would be the
22 letter that I received from Malcolm Drilling.

23 I would expect if you would go out to any
24 other Deep Foundation Contractor, you would get a very
25 similar letter. The dollar amounts may range a little

1 bit, but Malcolm had a quote of about \$250 per lineal
2 foot.

3 MR. BRODSKY: So, if I understand it
4 correctly, in your professional opinion, non-impact
5 methods such as CFA piles are feasible for this Project
6 instead of the 42-inch-diameter driven piles.

7 WITNESS STORESUND: That's right.

8 And one of the items that I reviewed in my
9 opinion was the Conceptual Engineering Report prepared
10 by DWR. In that document, they specifically reference
11 the use of drill piers as the foundation support.

12 So, from my standpoint, it seems like there's
13 agreement all around that drill piers would be a
14 suitable solution for these intake structures.

15 MR. BRODSKY: And in addition to your opinion,
16 you reached out to Malcolm Drilling, and I'm seeing
17 here in this letter from Malcolm Drilling, on the last
18 page, which is just a two-page letter.

19 (Exhibit displayed on screen.)

20 MR. BRODSKY: At the top here, it says
21 (reading):

22 "A reasonable budget price for CFA
23 piles for the California WaterFix intake
24 foundations would be \$250 per lineal foot
25 for 42-inch by 100-foot piles."

1 And the last sentence of that paragraph says
2 (reading):

3 "Malcolm Drilling would be
4 interested in performing the pile
5 installation for this project."

6 So does that confirm to you that non-impact
7 piles are feasible? We've got a Contractor ready,
8 willing and able to do it.

9 WITNESS STORESUND: Yes. That's another point
10 of confirmation.

11 MR. BRODSKY: Okay. And then if we could
12 scroll down this 127.

13 (Exhibit displayed on screen.)

14 MR. BRODSKY: Then on that -- This is a
15 brochure from Malcolm Drilling. And then up -- Well,
16 down at the bottom there, it says (reading):

17 "Cased Drilled Shafts, Uncased
18 Drilled Shafts, Omega Piles, CFA Piles."
19 Those are all non-impact foundation methods?

20 WITNESS STORESUND: Correct.

21 MR. BRODSKY: And then if we could maybe just
22 scroll through this brochure here, just to see pictures
23 of people.

24 (Exhibit displayed on screen.)

25 MR. BRODSKY: And this is a major company, and

1 illustrations of non-impact methods and . . .

2 So do you have confidence when Malcolm
3 Drilling says they can do this with a non-impact
4 method, that they can do it?

5 WITNESS STORESUND: Absolutely. I've designed
6 projects using drill pier foundations. I've designed
7 projects where Malcolm Drilling has installed those
8 drill pier foundations.

9 Drill piers are a very common foundation
10 technique that's used, so absolutely.

11 MR. BRODSKY: Now, when I questioned DWR's
12 Engineer -- it was actually Metropolitan's Engineer --
13 Mr. Bednarski, he said they wanted to do more
14 geotechnical exploration before they could know that
15 non-impact methods are feasible.

16 Do you know of anything they could find in
17 further geotechnical exploration that would make
18 non-impact methods infeasible?

19 ~~WITNESS STORESUND: I haven't seen anything in~~
20 ~~the documentation that would lend me to that~~
21 ~~conclusion.~~

22 ~~I will note that, in the Conceptual~~
23 ~~Engineering Report, they were able to complete a number~~
24 ~~of engineering analyses. They were able to figure out~~
25 ~~the flexions of the piles.~~

1 And there was no notation in the Conceptual
2 Engineering Report saying, hey, we're going to have to
3 collect a whole bunch of this additional data in order
4 to figure out if drill piers are feasible.

5 So, just based on the Conceptual Engineer
6 Report, it seems they addressed a number of those
7 issues and have had the ability to do at least initial
8 configurations of those foundation systems.

9 CO-HEARING OFFICER DODUC: Miss Ansley.

10 MS. ANSLEY: Yeah.

11 I'm going to object and move to strike.

12 This testimony is now off his written
13 testimony, which is all of two pages long. And now
14 we're getting to a critique of the Conceptual
15 Engineering Report specifically.

16 I see where he is recommending an alternative
17 method to pile driving, but he does not reference
18 Mr. Bednarski's testimony, which in this case he would
19 have had access to Part 1 before he did this Part 2.

20 But, regardless, he does not have a specific
21 critique of Mr. Bednarski, nor a specific critique with
22 reference to the Conceptual Engineering Report.

23 I do see the documents he reviewed in reaching
24 his general conclusions on Page 1 of his testimony.

25 MR. BRODSKY: Okay. Well, with regard to the

1 Conceptual Engineering Report, materials reviewed in
2 reaching my opinion, the Conceptual Engineering Report
3 is listed.

4 CO-HEARING OFFICER DODUC: Yes. But does his
5 written opinion, his written testimony, actually
6 include his specific critiques of those documents?
7 That's what she's objecting to.

8 WITNESS STORESUND: On Page 2, Line 3, I
9 called out the Conceptual Engineering Report, and then
10 it references specifically the use of drill piers.

11 MR. BRODSKY: Yeah. It does say (reading):

12 "The Conceptual Engineering Report
13 (submitted to U.S. Fish and Wildlife
14 Service to render their Biological
15 Opinion) specifically calls out for use
16 of steel cased drill piers."

17 CO-HEARING OFFICER DODUC: Yes. But that
18 also -- But that is the extent of it. He didn't go
19 into the detail that he just provided orally.

20 MR. BRODSKY: I -- I don't think he went very
21 much beyond that. He just said the Conceptual
22 Engineering Report included use of drill piers and
23 didn't rule them out.

24 That's what I heard.

25 CO-HEARING OFFICER DODUC: Miss Ansley.

1 MS. ANSLEY: My objection is that what we seem
2 to be doing as verging over from him saying that
3 conclusion to what is essentially a cross-examination
4 of his own witness to add factual testimony.

5 So I still move to strike.

6 I'm happy to have the witness state his --
7 that conclusion about the Conceptual Engineering
8 Report.

9 CO-HEARING OFFICER DODUC: Sustained.

10 MR. BRODSKY: What, if any, conclusions do you
11 have about the Conceptual Engineering Report?

12 CO-HEARING OFFICER DODUC: That is reflected
13 in your written testimony.

14 WITNESS STORESUND: Sure.

15 So the Conceptual Engineering Report confirms
16 the use of drill piers as a foundation technique.

17 ~~MR. BRODSKY: Okay. And are you aware of~~
18 ~~anything, based on your examination of those materials~~
19 ~~reviewed, that further geotechnical exploration could~~
20 ~~uncover that would preclude the use of drilled piers?~~

21 WITNESS STORESUND: No.

22 CO-HEARING OFFICER DODUC: Miss Ansley.

23 MS. ANSLEY: Yes.

24 He doesn't talk about Conceptual Engineering
25 Report, nor the plan to do further geotechnical

1 engineering, nor his opinion on that further
2 geotechnical work will not show anything that would
3 change his opinion.

4 I'm just saying that he is -- I see his
5 general conclusions. This is cross-examination of his
6 own witness, and I move to strike.

7 MR. BRODSKY: Well, it says here on Line 7 on
8 Page 1 (reading):

9 "No evidence has been presented that
10 precludes the use of these lower
11 vibration/lower noise techniques for
12 construction of the California WaterFix
13 intake (sic) structure."

14 And it says that he's -- And then, on Page 2,
15 it says that he's reviewed the geotechnical reports.

16 CO-HEARING OFFICER DODUC: And that's the
17 extent of his written testimony, Mr. Brodsky.

18 MS. ANSLEY: But --

19 MR. BRODSKY: That is correct.

20 MS. ANSLEY: But what Mr. Brodsky's doing --

21 CO-HEARING OFFICER DODUC: I understand.

22 MS. ANSLEY: -- from Part 1 is, he's adding
23 additional details --

24 CO-HEARING OFFICER DODUC: Yes.

25 MS. ANSLEY: -- by cross-examining his own

1 witness.

2 CO-HEARING OFFICER DODUC: Sustained.

3 MR. BRODSKY: Okay. In -- In summary . . .

4 MS. ANSLEY: And that was an -- that was not
5 just an objection. That was a move to strike these
6 additional details from the record.

7 CO-HEARING OFFICER DODUC: So moved. I mean,
8 so stricken.

9 I'm having flashback to better days.

10 CO-HEARING OFFICER MARCUS: Tuesday. Tuesday.

11 MR. BRODSKY: Okay. Just so there's not any
12 confusion, without referencing the geotechnical report
13 or my question about Mr. Bednarski, in three or four
14 sentences, just summarize your conclusion about
15 non-impact methods.

16 WITNESS STORESUND: So, it's my opinion that
17 non-impact foundation techniques are very feasible and
18 can be used for this Project. I've seen no evidence
19 that would preclude the consideration or use for them.

20 And I would be happy to lend my services if
21 there are technical challenges to -- to overcome that
22 and move towards a non-impact foundation solution.

23 MR. BRODSKY: Okay. Thank you, Mr. Storesund.

24 CO-HEARING OFFICER DODUC: And does that
25 conclude your direct, Mr. Brodsky?

1 MR. BRODSKY: Yes.

2 CO-HEARING OFFICER DODUC: All right. Let me
3 at this time get an estimate of cross-examination of
4 this panel.

5 Does anyone else wish to conduct cross besides
6 DWR?

7 MR. MIZELL: Tripp Mizell, Department of Water
8 Resources.

9 15 at the most. I'll shoot for 10.

10 CO-HEARING OFFICER DODUC: Thank you.

11 Mr. Ruiz.

12 MR. RUIZ: Yes. Good morning.

13 I'm just going to reserve 10 minutes possibly.

14 CO-HEARING OFFICER DODUC: Mr. Jackson.

15 MR. JACKSON: I think 10 minutes would be
16 fine.

17 CO-HEARING OFFICER DODUC: Miss Meserve.

18 MS. MESERVE: Osha Meserve for LAND.

19 10 minutes, please.

20 MS. SUARD: Nicki Suard for Snug Harbor.

21 10 minutes, please.

22 CO-HEARING OFFICER DODUC: All right. If
23 you're okay with moving on, Candace?

24 THE REPORTER: (Nodding head.)

25 CO-HEARING OFFICER DODUC: Okay. DWR.

1 MR. MIZELL: Good morning. Tripp Mizell for
2 Department of Water Resources.

3 The testimonies are short enough that --

4 CO-HEARING OFFICER DODUC: Just go ahead.

5 MR. MIZELL: Okay.

6 CROSS-EXAMINATION BY

7 MR. MIZELL: So, Mr. Salter, I'm going to --
8 I'm going to start with you this morning.

9 How are you, sir?

10 WITNESS SALTER: I'm doing very well. Thank
11 you.

12 MR. MIZELL: Okay. So you stated in your
13 verbal testimony just now that you reviewed the Final
14 Impact -- Final Environmental Impact Report and the
15 mitigations contained within that; is that correct,
16 sir?

17 WITNESS SALTER: The noise study, yes.

18 MR. MIZELL: Thank you.

19 Did you review the Petitioners' Part 1
20 engineering testimony?

21 WITNESS SALTER: (Examining documents.)

22 I have something that may or may not be what
23 you have in mind.

24 SCDA-84. Is that . . . commentary on my -- my
25 findings. Is that what -- Is that what you're talking

1 about?

2 MR. MIZELL: Is SDCA-84 commentary on the
3 testimony from Part 1?

4 WITNESS SALTER: I have this document
5 (indicating) which has my comments of them in relation
6 to Final EIR/EIS. That's rebuttal.

7 Is that what you had in mind?

8 MR. MIZELL: It sounds as though your review
9 was of the Final EIR/EIS and not the testimony.

10 WITNESS SALTER: I might not have reviewed the
11 testimony.

12 MR. BRODSKY: Can I just -- I think
13 Mr. Mizell's referring to his witnesses that appeared
14 earlier in these proceedings and testified as we are
15 now, and there were transcripts that were produced.

16 And he's asking if you've looked at those.

17 WITNESS SALTER: No.

18 MR. MIZELL: And the exhibit -- the written
19 exhibits of their testimony and supporting
20 documentation?

21 WITNESS SALTER: I did not review that.

22 MR. MIZELL: Okay. Thank you.

23 If we could bring up your written testimony,
24 SCDA-65, please.

25 (Exhibit displayed on screen.)

1 MR. MIZELL: And going past the title page to
2 the top of Page 1.

3 (Exhibit displayed on screen.)

4 MR. MIZELL: Thank you.

5 So I'm going to focus you on Line 6, sir.

6 Here, it seems as though your concerns and
7 your testimony are upon millions of pile strikes; is
8 that correct?

9 WITNESS SALTER: Correct.

10 MR. MIZELL: And those would be impact hammer
11 pile driving technique; is that correct?

12 WITNESS SALTER: Yes.

13 MR. MIZELL: And then -- And please do correct
14 me if I misstate something. I'm just trying summarize
15 things for expedience sake.

16 Is it your opinion that DWR should consider
17 alternatives to impact pile driving for this Project?

18 WITNESS SALTER: Yes.

19 MR. MIZELL: All right. Mr. Hunt, if we could
20 bring up SWRCB-102, please.

21 (Exhibit displayed on screen.)

22 MR. MIZELL: And at the bottom . . .

23 It should be the mitigation monitoring at the
24 bottom of the web page, past all the chapters.

25 (Exhibit displayed on screen.)

1 MR. MIZELL: Yeah. Down towards the bottom,
2 You see MMRP -- California WaterFix MMRP at the bottom
3 there.

4 (Exhibit displayed on screen.)

5 MR. MIZELL: Thank you.

6 And if we could bring up .pdf Page 143,
7 please.

8 (Exhibit displayed on screen.)

9 MR. MIZELL: Okay. Sir, in your verbal
10 testimony, you indicated you had reviewed the
11 Mitigation Measures for the Final EIR/EIS.

12 So I'm assuming you're familiar with or at
13 least have reviewed this Mitigation Measure; is that
14 correct?

15 WITNESS SALTER: (Examining document.)

16 I've reviewed the Mitigating Measures for
17 noise, that's correct.

18 MR. MIZELL: Okay. And doesn't this
19 Mitigation Measure indicate that the Department would
20 negate noise by implementing vibratory hammers under
21 the action statement in here on Line 24?

22 WITNESS SALTER: (Examining document.)

23 You're talking about 253? Is that what you're
24 talking about?

25 MR. MIZELL: Yes, sir.

1 Specifically the Lines 24 and 25.

2 WITNESS SALTER: 24 and 25.

3 (Examining document.)

4 WITNESS SALTER: That's talking about reducing
5 vibration.

6 So this --

7 MR. MIZELL: Correct.

8 WITNESS SALTER: -- section that I read talks
9 about mitigating vibration, and my testimony focused on
10 noise, not vibration.

11 MR. MIZELL: Very good.

12 Would you agree that a vibratory hammer is
13 different than a striking hammer when installing
14 pilings?

15 WITNESS SALTER: Different?

16 MR. MIZELL: In terms of noise impacts.

17 WITNESS SALTER: Yes.

18 MR. MIZELL: So if we were to employ vibratory
19 hammers in lieu of striking hammers, the noise impacts
20 would be reduced.

21 WITNESS SALTER: That's what I would expect.

22 MR. MIZELL: And in this Mitigation Measure,
23 is it your understanding that the Department is
24 committing to using vibratory hammers and not striking
25 hammers?

1 WITNESS SALTER: I -- When I read this, I
2 didn't see it that way, that they would not have impact
3 hammers as part of the Project.

4 MR. MIZELL: Okay. Can we scroll to the top
5 of the next page, please.

6 (Exhibit displayed on screen.)

7 MR. MIZELL: And you see the bullet point at
8 the very top of the page there, sir?

9 WITNESS SALTER: Yes.

10 MR. MIZELL: Is -- Does this bullet point list
11 impact pile driving as any of the methods that the
12 Department would be considering for pile driving?

13 WITNESS SALTER: (Examining document.)

14 It seems to generally talk about it.

15 But, as I say, my understanding from reading
16 the documents is, they are planning to use impact pile
17 driving, 102 dBA at 50 feet, et cetera, rather than
18 committing to other means.

19 MR. MIZELL: And that conclusion is based upon
20 a reading of the FEIR chapters and not the Mitigation
21 Measures that the Department has committed to.

22 WITNESS SALTER: Having to do with noise,
23 correct.

24 MR. MIZELL: Okay. Would your opinion change
25 if you were informed that these Mitigation Measures

1 were something the Department was committing to?

2 WITNESS SALTER: Yes.

3 But a lot of my comments still need to be
4 taken into account:

5 The dropoff of sound with distance;

6 Correctly estimating the noise of the
7 foundation methodology they have in mind that they're
8 committing to, if it's not impact pile driving;

9 And seriously considering some of the other
10 things that I've talked about with respect to the
11 damage that excessive noise can do to the surrounding
12 communities.

13 MR. MIZELL: Okay. Thank you.

14 If we could bring up SCDA-65 again, please.

15 (Exhibit displayed on screen.)

16 MR. MIZELL: And let's scroll to the next
17 page, the middle of the page --

18 (Exhibit displayed on screen.)

19 MR. MIZELL: -- Lines -- roughly Lines 10
20 through 16.

21 Sir, could you provide me the citation for the
22 numbers you describe in this paragraph.

23 WITNESS SALTER: Did you say "citation"?

24 MR. MIZELL: Where did you -- Where did you
25 find these numbers?

1 WITNESS SALTER: It's based on a source sound
2 level of 115 decibels with a distance of 50 feet due to
3 one impact pile driver.

4 And then I used the dropoff formula of
5 6 decibels for doubling the distance.

6 And that's what I relied on to come up with
7 each of these numbers shown.

8 MR. MIZELL: So, if I understand you
9 correctly, this paragraph are a series of calculations
10 that you performed based upon an initial number of
11 115 decibels.

12 WITNESS SALTER: Correct.

13 MR. MIZELL: Okay. And the 115-decibel number
14 is based upon what?

15 WITNESS SALTER: The Fish and Wildlife
16 document that we previously cited in my testimony.

17 MR. MIZELL: Okay. Thank you.

18 Thank you very much, sir.

19 WITNESS SALTER: You're welcome.

20 MR. MIZELL: Mr. Storesund, good morning.

21 WITNESS STORESUND: Good morning.

22 MR. MIZELL: And should I say, "Go Bears."

23 WITNESS STORESUND: Go Bears.

24 MR. BRODSKY: There's an inside joke here, Cal
25 versus Stanford, for the new witness.

1 WITNESS STORESUND: Oh, boy.

2 MR. MIZELL: Mr. Hunt, if we could bring up
3 SCDA-125, please.

4 (Exhibit displayed on screen.)

5 MR. MIZELL: If we could go to the top of the
6 next page, please.

7 (Exhibit displayed on screen.)

8 MR. MIZELL: So, sir, you're recommending that
9 the Department explore cast and drilled hole pilings;
10 is that correct?

11 WITNESS STORESUND: Yeah. It's my opinion
12 that you have the ability to provide suitable
13 foundation conditions for the intake structures using
14 non-impact techniques.

15 MR. MIZELL: And if I heard you correctly
16 during your verbal testimony, you indicated that you
17 could find a commitment to exploring cast and drilled
18 holes within the CER; is that correct?

19 WITNESS STORESUND: That's correct.

20 I believe it is in Chapter 6, there was a
21 discussion of the foundation design evaluations for the
22 feasibility study.

23 MR. MIZELL: And in your testimony, sir, you
24 list the Final EIR/EIS as a document that you reviewed;
25 is that correct?

1 WITNESS STORESUND: Yeah.

2 In my testimony, Page 2, Section 2, Materials
3 Reviewed, a listing of all the documents that I
4 reviewed.

5 MR. MIZELL: And Item 5 in that list is the
6 Final EIR/EIS?

7 WITNESS STORESUND: That's correct, dated
8 2016.

9 MR. MIZELL: Okay. And just to confirm, it's
10 not on the list, but did you review the written
11 testimony and supporting exhibits of the Department
12 from Part 1?

13 WITNESS STORESUND: I did not, no.

14 MR. MIZELL: Very similar questions here, I
15 know, so bear with me a bit.

16 So going back to the Mitigation Measure that
17 we just reviewed on screen, do you recall that from
18 just a minute ago, or would you like me to bring it up?

19 WITNESS STORESUND: I do recall, but if you
20 can bring it up, that would be handy.

21 (Exhibit displayed on screen.)

22 MR. MIZELL: Mr. Hunt, if we could go back to
23 102 -- SWRCB-102. Thank you.

24 (Exhibit displayed on screen.)

25 MR. MIZELL: It's up on the screen.

1 So, in reviewing this Mitigation Measure, is
2 it your understanding that casting drilled holes would
3 be something that the Department could explore?

4 Is there anything -- I guess a different way
5 of phrasing it is: Is there anything in this
6 Mitigation Measure that preclude the Department from
7 using technology that you advocate for in your
8 testimony?

9 WITNESS STORESUND: No. There's -- There's
10 nothing in this Mitigation Measure that would preclude
11 the use of that.

12 MR. MIZELL: Thank you very much.

13 No further questions.

14 CO-HEARING OFFICER DODUC: Thank you,
15 Mr. Mizell.

16 Next up, I believe, is Mr. Ruiz.

17 I'm sorry, no. It's Miss Meserve,
18 representing LAND.

19 She wears many hats. LAND just happened to
20 come before Central Delta.

21 MS. MESERVE: Good morning, again. Osha
22 Meserve with Local Agencies of the North Delta.

23 Just for introduction, that's a Coalition of
24 Reclamation and Water Districts in the northern part of
25 the Delta.

1 I just have a few questions for Mr. Salter and
2 Mr. Storesund on their analysis.

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

4 CROSS-EXAMINATION BY

5 MS. MESERVE: First beginning with you,
6 Mr. Salter, if I could.

7 Could you please -- You discussed in the -- in
8 your direct the mitigation wall for the Caldecott
9 Tunnel?

10 WITNESS SALTER: Yes.

11 MS. MSERVE: Was -- Could you please describe
12 why you think that mitigation wall might be analogous
13 to mitigation that could be put in place for this
14 Project?

15 WITNESS SALTER: I'm not suggesting that wall
16 for this Project. I'm -- I use that as an example of a
17 very unusual Mitigation Measure that suited the
18 Caldecott Tunnel situation. Because the homes were
19 high up on the hill looking down on the construction
20 site, ergo, you needed a tall wall, and -- a very
21 expensive tall wall to mitigate the noise.

22 So I'm not suggesting that for this. I'm
23 saying that the mitigation for this potential noise
24 impacts need to be determined, I believe, as part of
25 the Project planning, not after construction and impact

1 has occurred and then people begin to decide what
2 they're going to do.

3 So -- So that's my opinion for this Project.

4 MS. MSERVE: And what would be the problems
5 with trying to formulate or modify mitigation after the
6 construction begins?

7 WITNESS SALTER: As I stated, in my
8 experience, with the cost of construction, it's very,
9 very difficult to stop in midstream and do the
10 acoustical analysis at that point in time.

11 Because, for the Caldecott Tunnel wall, it
12 took us weeks of back and forth looking at various
13 proposals to mitigate that construction noise site
14 before something that was a winning strategy was
15 adopted.

16 And, so, I would like to avoid weeks or months
17 of evaluation while people are suffering. I'd like to
18 have the planning done sooner rather than later in the
19 middle of construction.

20 MS. MSERVE: So would you be concerned about
21 from a -- Are you familiar with contracting procedures
22 for large construction projects, first of all?

23 WITNESS SALTER: Yes.

24 MS. MSERVE: Would you be concerned about the
25 ability to make those kind of modifications once the

1 contracts were already in place?

2 WITNESS SALTER: I'd be very concerned, given
3 my experience.

4 MS. MSERVE: And why?

5 WITNESS SALTER: The clearer things are, the
6 better it is for all concerned.

7 If you task a Contractor with this nebulous
8 potential of impact, then I would expect that a
9 Contractor's going to have to throw in a large dollar
10 number to cover this unknown.

11 The minute you have a fixed mitigation as
12 planned for the Project, it can plan for adroitly
13 built, and it's going to be, I think, more deft and
14 efficient for both the Contractor as well as the
15 funding for the Project.

16 MS. MSERVE: And with respect to the other
17 noise issues you've worked on, have you seen
18 Contractors be adept at responding to community
19 concerns?

20 Is that -- Would that be your expectation?

21 WITNESS SALTER: I've not found that to be the
22 case. In fact, I've other project experience with
23 similar situations where, in the middle of a major
24 construction project, there's a dispute about whether
25 the noise is met, not met, lawyers piling up on both

1 sides.

2 We get hired to do an evaluation; other
3 Acoustical Engineers get hired. Complaints abound. It
4 gets very messy and very damaging for all concerned.

5 So, that's been my experience. That's why
6 I've testified the way I have.

7 MS. MSERVE: And if the contracting was
8 already in place, would additional noise mitigation
9 likely come out of the Contractor's profit that he or
10 she had expected from the Project?

11 WITNESS SALTER: As I say, that is not what I
12 found in the contract is pretty strong in the dealing
13 with.

14 One of the issues that we've not mentioned but
15 may perhaps protect the communities is a requirement
16 for noise monitoring.

17 As part of the Caldecott Tunnel Project, there
18 was a requirement for continuous noise monitoring at
19 seven different locations. And the data was available
20 to the community, and there was a certain sound level
21 limit. And this was all part of the planning of the
22 project, the funding of the project, before it was
23 allowed to go through.

24 And so that -- So if an appropriate
25 Environmental Noise Study and mitigation was done for

1 this Project, a requirement for noise monitoring may
2 also be part of the planning for it.

3 MS. MSERVE: And if we could look at, please,
4 SCDA-67. That's the Intake Number 2 figure.

5 (Exhibit displayed on screen.)

6 MS. MSERVE: I believe, Mr. Salter, you
7 testified that you thought that, at the school, which
8 is across the river and to the north of Intake Proposed
9 Number 2, that the dBA might be 79 from the impact
10 drilling or pile driving; is that correct?

11 WITNESS SALTER: That is correct.

12 MS. MSERVE: And the school --

13 MR. BRODSKY: Could I just suggest for
14 convenience a different figure?

15 MS. MSERVE: Certainly.

16 MR. BRODSKY: It would be SCDA-71.

17 MS. MSERVE: 71? Sure.

18 (Exhibit displayed on screen.)

19 MS. MSERVE: Oh, thank you. Yes.

20 So just touching on the 79 dBA in your
21 testimony, what do you think the impact of that level
22 of noise would be on school children?

23 WITNESS SALTER: Well, as I say, you can't
24 carry on a conversation. It will be very disruptive.
25 And so that's the outdoor noise.

1 The minute -- Even when you bring the noise
2 indoors in terms of the impact on a classroom with
3 direct line of sight, the class will be unable to carry
4 on with that level of intruding noise.

5 So it's both outdoors as well as indoors.

6 MS. MSERVE: And thinking about indoors, did
7 you -- do you recall from the noise analysis that you
8 reviewed what kind of attenuation was assigned to the
9 building's ability to reduce the noise?

10 WITNESS SALTER: I can't remember the value
11 they use, but it varies whether the windows are open or
12 closed.

13 MS. MSERVE: And would that kind of evaluation
14 need to necessarily be very site- and
15 building-specific?

16 WITNESS SALTER: Correct.

17 MS. MSERVE: So a different building might
18 have a completely different attenuation factor for
19 noise; correct?

20 WITNESS SALTER: Exactly.

21 MS. MSERVE: Are you aware whether that kind
22 of analysis was done with respect to the several
23 schools right there in Clarksburg?

24 WITNESS SALTER: I didn't see it. And even if
25 I had done it, it would have been wrong, because the

1 source sound level in the dropoff was wrong, in my
2 opinion, and, therefore, they would have gotten the
3 wrong answer with respect to the effect outdoors as
4 well as indoors.

5 MS. MSERVE: So your opinion is that the noise
6 levels, both outdoor and indoor, would be quite a bit
7 higher than estimated in the EIR?

8 WITNESS SALTER: Yes.

9 MS. MSERVE: And just to make sure I
10 understood correctly.

11 You aren't necessarily suggesting that sound
12 walls for this particular Project would work to reduce
13 the -- those noise levels; correct?

14 WITNESS SALTER: Correct.

15 MS. MSERVE: And in a -- Be -- With respect to
16 other types of noises, like from traffic and truck
17 traffic, did you look at those noise sources?

18 WITNESS SALTER: I didn't. I mean, I -- I was
19 aware that was part of the analysis.

20 I looked at it, but I don't see that truck
21 traffic -- increased truck traffic noise as being
22 impactful and damaging as the construction activities.

23 MS. MSERVE: But you didn't review that
24 specifically.

25 WITNESS SALTER: I -- I did look at it but I

1 didn't study it just because I -- I didn't find that
2 that was the major issue.

3 MS. MSERVE: And you're aware that just to the
4 east of Proposed Intake 3, that's a National Wildlife
5 Refuge to the east there. And it's shown on some of
6 the other maps.

7 MR. BRODSKY: Could I suggest SCDA-85?

8 MS. MSERVE: Certainly.

9 A fellow map lover.

10 (Exhibit displayed on screen.)

11 MS. MSERVE: And the --

12 MR. BRODSKY: I really don't have a life.

13 (Laughter.)

14 WITNESS SALTER: Yes.

15 MS. MSERVE: So, the areas in green on this
16 map here are -- are owned in fee title by the Refuge or
17 other public entities, but there's a much larger area
18 that is part of the National Wildlife Refuge.

19 You're aware of that?

20 WITNESS SALTER: No.

21 MS. MSERVE: And did you consider at all the
22 effect of noise from, whether it be traffic or pile
23 driving, on wildlife?

24 WITNESS SALTER: I did not.

25 MS. MSERVE: And would that be something that,

1 in your professional opinion, should be studied and
2 mitigated?

3 WITNESS SALTER: Absolutely.

4 (Timer rings.)

5 MS. MSERVE: If I might have five additional
6 minutes, I can wrap up here.

7 CO-HEARING OFFICER DODUC: All right.

8 MS. MSERVE: If we could look at -- back to
9 the Mitigation Measure, NO-2, which was in the MMRP.

10 (Exhibit displayed on screen.)

11 MS. MSERVE: And now focusing, Mr. Salter, on
12 Line 27.

13 Do you see where it says (reading):

14 ". . . if the measures are applicable and
15 feasible."

16 WITNESS SALTER: Yes.

17 MS. MSERVE: Would you be concerned about
18 whether this mitigation might be considered not
19 applicable or not feasible by DWR or a Contractor
20 carrying out this Project?

21 WITNESS SALTER: Yes.

22 MS. MSERVE: Earlier, you stated, I believe,
23 that you didn't see any reason why they couldn't put in
24 place some of these measures.

25 But isn't that caveat of "applicable and

1 feasible" somewhat of a concern?

2 WITNESS SALTER: I am -- I am led to believe,
3 based on the testimony you've heard today, that there
4 are other means by which to install the foundations
5 other than the loud pile driving. And so, obviously,
6 those should be considered.

7 But this is beyond my area of expertise.

8 MS. MSERVE: And then wouldn't -- Would
9 another concern with this wording of the Mitigation
10 Measure be back to something you did opine on, that it
11 says at the top there, right after action, "during
12 construction"?

13 WITNESS SALTER: Yes. Well, correct.

14 MS. MSERVE: So it doesn't appear necessarily
15 that these measures would be formulated and put in
16 place prior to construction as you had recommended;
17 right?

18 WITNESS SALTER: Correct.

19 MS. MSERVE: Thank you.

20 I just have a couple of questions for
21 Dr. Storesund.

22 In your testimony on Page 2, Line 11, you used
23 the acronym "CFA."

24 I just -- Could you clarify what -- what that
25 means?

1 WITNESS STORESUND: Yes. "CFA" stands for
2 "continuous flight auger."

3 Think of it as a really long drill bit that
4 goes into the ground.

5 MS. MSERVE: And is that different or the same
6 as the cast in drilled hole that you reference up on
7 Line 5?

8 WITNESS STORESUND: It's all the same.
9 Non-vibratory.

10 Basically, you drill a whole in the ground.
11 That's what makes the void space where you can
12 construct a structural member.

13 The difference between the CFA is that you
14 have a physical structural drill bit in the ground. It
15 helps keep the hole open and stable so you don't have
16 things falling into the hole.

17 Depending the materials that you're drilling
18 through, the more sandy types of material will have a
19 tendency to kind of fall into the hole. So having
20 something structural in the hole keeps everything open,
21 and that way you have more of an assurance that you're
22 going to get the actual structural section that you're
23 looking for in the foundational end.

24 MS. MSERVE: And thinking on a couple of the
25 questions I just asked Mr. Salter.

1 If some of these alternative techniques that
2 you've recommended were to be implemented, wouldn't
3 they need to be developed prior to construction?

4 WITNESS STORESUND: Absolutely. And so I did
5 have some thoughts here based on what I heard
6 Mr. Salter testify to.

7 And that's: You know, essentially at the end
8 of the day, we're talking about noise and we're talking
9 about vibrations, and we're talking about coming up
10 with reasonable thresholds of, is this okay, is this
11 not okay.

12 Test programs are a wonderful resource that
13 can be built into the permitting process, where instead
14 of people arguing about what the numbers are, you would
15 actually go out and measure them and say, well, this
16 technique has this sort of impact. I think those are
17 very useful things.

18 Right now, I'm serving as an expert for a
19 construction noise and vibration dispute in New Orleans
20 for a drainage improvement project that's on the order
21 of 3 to \$7 billion. I'd have to go back. Billions of
22 dollars and it's many years.

23 There was some discussion up front about
24 metrics put into place to see, are we causing impact or
25 not?

1 If the permitting language and the Project
2 specifications are kind of vague and ambiguous, the
3 Contractor's going to pick whatever method that they
4 want to use.

5 And if our concern is about time, and our
6 concern's about budget, it's very difficult mid-process
7 to say, "Oh, this isn't working. We need to stop,
8 think about what we're going to do that better meets
9 what these criteria are.

10 So, earlier the question was, well, what if
11 DWR would commit to this or commit to that.

12 I think the permitting process would be an
13 excellent means to really solidify what that commitment
14 is as opposed to, you know, "This is what we're seeing
15 this round, and we have more engineering to go. We may
16 update that."

17 MS. MSERVE: And making -- As an Engineer,
18 making a change mid-course could be very problematic in
19 terms of materials and budget and -- I mean, what all
20 things could be impacted if you were trying to adjust
21 in mid-course?

22 WITNESS STORESUND: Sure.

23 Changes happen all the time. I have a number
24 of projects that I'm working on right now where we have
25 to make changes for one reason or another. It has a

1 very direct impact on the schedule, has a very direct
2 impact on the budget.

3 And then to the degree that you can leverage
4 these test programs, or if you know that you have an
5 area with uncertainty, that you can get out in front of
6 that before the formal construction starts.

7 We used this sort of an approach on the Doyle
8 Drive replacement project in San Francisco, where
9 there's some question about technique. We went out and
10 tried some things, tested them. They seemed to work as
11 anticipated, and the process moved forward very
12 efficiently.

13 MS. MSERVE: I have just one last question.

14 CO-HEARING OFFICER DODUC: Okay.

15 MS. MSERVE: And you had indicated that you
16 reviewed the 2015 CER.

17 And you understand that the design is still
18 conceptual, and there's not a tremendous amount of
19 geotechnical data gathered yet for the size of the
20 Project.

21 But would you think that the lack of such data
22 would hinder the ability to develop these alternative
23 techniques that -- that you've suggested?

24 WITNESS STORESUND: Absolutely not.

25 And, as I mentioned before, in that Conceptual

1 Engineering Report, they -- they actually did go
2 through the process of performing engineering analyses
3 on drill piers and they were able to get some answers.
4 So I don't see any reason why that process wouldn't be
5 able to move forward.

6 MS. MSERVE: Thank you.

7 CO-HEARING OFFICER DODUC: Thank you,
8 Miss Meserve.

9 I need to give the court reporter, who's been
10 bearing with us, a break, so let's return at 11:25?

11 Yes.

12 MR. BRODSKY: 11:25.

13 CO-HEARING OFFICER DODUC: And, actually,
14 before we break.

15 Mr. Obegi, I have another 30 minutes of cross,
16 and that's without direct -- redirect -- potentially
17 redirect.

18 So we'll take a lunch break and then we'll get
19 to Dr. Rosenfield.

20 MR. OBEGI: Thank you.

21 MR. BRODSKY: We're going to try to finish US
22 before lunch?

23 CO-HEARING OFFICER DODUC: That's the plan.

24 MR. BRODSKY: Okay.

25 (Recess taken at 11:08 a.m.)

1 (Proceedings resumed at 11:25 a.m.):

2 CO-HEARING OFFICER DODUC: All right. It's
3 11:25.

4 We are back with Mr. Ruiz for his cross.

5 MR. RUIZ: Good morning. Dean Ruiz for the
6 South Delta Water Agency Protestants.

7 And I just have literally four questions.

8 The first is one for Mr. Salter.

9 CROSS-EXAMINATION BY

10 MR. RUIZ: Mr. Salter, you mentioned a moment
11 ago, in response to a question, that noise monitoring
12 is something you thought might be effective in this
13 Project and something that's typical in most projects;
14 correct?

15 WITNESS SALTER: I don't think I said exactly
16 what you said.

17 I said it should be considered -- It should be
18 considered because it is considered for projects of
19 this type.

20 MR. RUIZ: But noise monitoring in itself
21 isn't an effective Mitigation Measure. And if you
22 don't have readily available Mitigation Measures
23 associated with noise monitoring, the noise monitoring
24 doesn't do anything for us; correct?

25 WITNESS SALTER: Correct.

1 So, part and parcel of having a requirement
2 for noise monitoring is having an acoustic criteria to
3 protect the community and agreed-upon criteria daytime
4 and nighttime sound levels.

5 MR. RUIZ: Is it fair to say you also have to
6 have, though, an actual available Mitigation Measure or
7 Mitigation Measures to address, say, exceedance of a
8 certain noise criteria?

9 Otherwise, you just have noise monitoring;
10 right?

11 WITNESS SALTER: Well, you're 100 percent
12 correct.

13 So you first have to have a Mitigation Plan
14 that protects the community. And then you have the
15 noise monitoring to verify that that sound level limit,
16 daytime/nighttime, has not been exceeded.

17 MR. RUIZ: Thank you.

18 Just a couple questions for Dr. Storesund.

19 In your opinion, is there any reason to
20 believe that the alternative method that you've spoken
21 about with regard to construction of the -- of the
22 intake foundations be any less appropriate from an
23 engineering standpoint than the pile-driving approach?

24 WITNESS STORESUND: Absolutely not.

25 MR. RUIZ: You testified about some built-in

1 time that might be needed to figure out -- maybe to do
2 some testing as part of the permitting.

3 But all things being equal, just comparing the
4 alternative method you testified about today to the
5 traditional pile-driving method, what's the difference,
6 if there is a difference, in terms of construction
7 timing?

8 For instance, the duration of the
9 construction.

10 WITNESS STORESUND: So, the -- the short
11 answer to that is: Probably not much, if any. That's
12 always a function of the Contractor, the equipment, and
13 so forth and so on.

14 But with enough lead time, pretty much any
15 Contractor would be able to put together a decent crew
16 that would need -- that would be able to accomplish the
17 things that needed to be done.

18 So I -- I don't see the technique as -- as the
19 issue.

20 MR. RUIZ: Thank you.

21 That's all I have.

22 CO-HEARING OFFICER DODUC: Thank you,

23 Mr. Ruiz.

24 Mr. Jackson.

25 Followed by Miss Suard.

1 CROSS-EXAMINATION BY

2 MR. JACKSON: Mr. Salter, the . . .

3 You had some conclusions that what you saw
4 wasn't the fact that they didn't measure the background
5 noise before they came up with their mitigations.

6 Is that a fair description?

7 WITNESS SALTER: When they -- Okay. They
8 didn't measure the background noise, which I have found
9 to be a requirement for all environmental noise
10 studies.

11 So when you're studying noise impact -- this
12 is way before mitigation -- you evaluate the existing
13 conditions first. Then you accurately estimate the
14 future noise of various activities in various locales.
15 And then, to the extent it exceeds the acoustic
16 criteria, then you apply effective mitigating measures.

17 MR. JACKSON: Now, in that regard, you did
18 that in -- in . . .

19 You're making those comments in regard to
20 people living in the area; correct?

21 WITNESS SALTER: Well, I've testified about
22 people rather than animals --

23 MR. JACKSON: Right.

24 WITNESS SALTER: -- that's correct.

25 MR. JACKSON: And do you -- It -- Do people in

1 your line of business have the ability to determine
2 what the background noise is for fish and wildlife?

3 Let's say wildlife, birds.

4 WITNESS SALTER: There are experts who study
5 that. We don't, but there are people who we've worked
6 with on projects like this who address the adverse
7 effects of noise on wildlife.

8 MR. JACKSON: And did you, in your review of
9 information, find anything that did that in terms of
10 the background?

11 WITNESS SALTER: Not that I can recall.

12 MR. JACKSON: Now, you also indicated that, in
13 regard to people, that DWR used the wrong sound source
14 level, which, then, in the mathematical work that was
15 done would lead to an underestimation of noise levels.

16 WITNESS SALTER: Gross underestimation, that's
17 correct.

18 MR. JACKSON: What do you mean by "gross"?

19 WITNESS SALTER: Well, there are two errors
20 they made in estimating sound levels.

21 The source sound level's off by 15 -- by
22 13 decibels, and then every doubling of distance,
23 they're off by another 2 decibels.

24 So if you have five doublings, from 50 to --
25 to . . . 500 or so, then you're off by another 10. So

1 that's a significant underestimation of the sound
2 levels.

3 MR. JACKSON: Now, in -- Would the same kind
4 of mistake change the calculation whether you were
5 talking about people or birds and wildlife?

6 WITNESS SALTER: Yes. The sound levels would
7 be grossly underestimated.

8 MR. JACKSON: You saw the maps indicating that
9 there's wildlife areas in the neighborhoods, so to
10 speak.

11 WITNESS SALTER: Correct.

12 MR. JACKSON: And so the mistakes that you
13 identified for people would be true for . . . wildlife
14 as well.

15 WITNESS SALTER: Correct.

16 MR. JACKSON: The -- The third comment you
17 made in regard to people was the mistake that basically
18 said a quiet community will accept noise levels more
19 readily than areas that are already impacted with
20 noise?

21 WITNESS SALTER: Correct.

22 MR. JACKSON: Do you presume -- And I think
23 you indicated that that was wrong.

24 WITNESS SALTER: Yes.

25 MR. JACKSON: Is there anything that would

1 lead you to believe that it wouldn't be wrong for
2 wildlife as well?

3 WITNESS SALTER: As I say, I'm not an expert
4 in wildlife so --

5 MR. JACKSON: I understand.

6 WITNESS SALTER: -- I can't really opine on
7 that question.

8 MR. JACKSON: I may come back to you in just a
9 minute.

10 But, Mr. Storesund.

11 WITNESS STORESUND: Hello.

12 MR. JACKSON: Hello.

13 CO-HEARING OFFICER MARCUS: It would be nice
14 if you said Dr. Storesund.

15 MR. JACKSON: Excuse me. Dr. --

16 WITNESS STORESUND: That's fine.

17 MR. JACKSON: I'm sorry. And I saw "Dr."
18 right there but I just sort of assumed everybody knew
19 you were a doctor and I apologize for that.

20 WITNESS STORESUND: You can call me "Rune," if
21 you'd like.

22 MR. JACKSON: I've been instructed to call you
23 doctor. And I presume that's because of the Berkeley
24 affiliation.

25 CO-HEARING OFFICER DODUC: I noticed it was

1 not this Berkeley grad who gave that direction.

2 MR. JACKSON: Listen, I couldn't get into
3 Berkeley, couldn't get into Stanford, so I'm not part
4 of this fight. U.C. Santa Barbara did fine my me.

5 The -- You indicate one of your -- one of your
6 hats is you're Executive Director of the Center for
7 Risk Management at U.C. Berkeley?

8 WITNESS STORESUND: Catastrophic Risk
9 Management, correct.

10 MR. JACKSON: Catastrophic.

11 WITNESS STORESUND: Correct.

12 MR. JACKSON: And some of your testimony
13 indicated that you . . . have been called upon at
14 various times to -- to take a look at multidisciplinary
15 activities dealing with risk management; is -- is that
16 correct?

17 WITNESS STORESUND: That's right.

18 MR. JACKSON: And there's been a use of the
19 term "risk" in this hearing and the term "uncertainty."

20 Are those the same things?

21 WITNESS STORESUND: They are not. And I would
22 love to talk about both of them, but I'm not sure that
23 we have the time.

24 Uncertainty is an element of risk.

25 MR. JACKSON: And the -- "Uncertainty" is the

1 situation in which you can't evaluate a risk; correct?

2 WITNESS STORESUND: Well, the way I look at
3 risk, there's a consequence and there's a likelihood of
4 that consequence occurring.

5 You can have uncertainty in both the
6 likelihood, you know, is this going to happen or not,
7 and you can have uncertainty in the consequences.

8 So there's not -- There's con -- There's
9 uncertainty in both elements of risk.

10 MR. JACKSON: And is that uncertainty negated
11 in -- in the typical project the closer we get to it
12 being actually built?

13 WITNESS STORESUND: I don't want to reply in a
14 confusing manner. But when we talk about risk, there
15 are things that we know and there are things that we
16 don't know.

17 What I can tell you is that there will be
18 things that you will encounter as the Project unfolds
19 that we don't know right now; right? And those would
20 be things that, oh, we have an idea that they're out
21 there but we don't necessarily know what the magnitude
22 of that is.

23 What we can do, you know, is, we can leverage
24 those activities that we know of right now that have a
25 large uncertainty band on the Project, maybe a question

1 about, you know, how likely is that to happen?

2 We're kind of having that discussion now when
3 we're talking about this decibel or that decibel or
4 whatever it is. Is it going to be impactful? Is it
5 not going to be impactful? I don't know. There's a
6 lot of disagreement among various parties.

7 So you can think of -- You can think of it in
8 terms of a Risk Reduction Program, where you would say,
9 hey, there's a lot of controversy with this activity
10 over here. Instead of hoping that that doesn't become
11 a problem, let's just nip that in the bud right here.

12 There's agreement between the parties that
13 there's an alternative way to do it. Let's say it's
14 drilled piers or whatever it is. Let's make that a
15 known. Let's build that into the permitting process.

16 And now what you've done is, you've reduced
17 the amount of uncertainty that Project has to deal with
18 down the road.

19 So, low hanging fruit, you know, like this
20 where we've identified issues, complaints have already
21 surfaced, and we know there's disagreement and not
22 necessarily an easy answer, but we have an alternative
23 construction approach.

24 My strong recommendation would be to use that
25 as a risk reduction process or strategy and then focus

1 on the other stuff that we haven't quite uncovered yet
2 so that we can work through those issues.

3 MR. JACKSON: All right. Could I have DWR-212
4 up on the screen, at Page 155.

5 (Exhibit displayed on screen.)

6 MR. JACKSON: Now, what -- what you're seeing
7 on the screen at the present time is a DWR map showing
8 gas wells in the Delta. The . . .

9 Applying your understanding that the earlier
10 we deal with unknowns or uncertainties, the . . . the
11 more likely the Project is to go well.

12 Confronted with this particular map, would it
13 be a good idea to begin to analyze this problem before
14 we approve the Project?

15 (Timer rings.)

16 WITNESS STORESUND: If I may I answer?

17 CO-HEARING OFFICER DODUC: Yes, please.

18 WITNESS STORESUND: Okay.

19 So . . . Yes. I mean, you -- you want to
20 evaluate all of the existing constraints that are in
21 your way, both physical constraints and human or
22 organizational constraints.

23 If you have oil and gas wells that are in the
24 alignment of the water conveyance feature, you would
25 definitely want to be looking at those things.

1 And, again, what I would say is, in addition
2 to the stuff that you know about, maybe you haven't
3 gotten to it yet, is, you also want to reserve some
4 additional capacity to deal with those things that you
5 haven't done.

6 Getting those things formalized as part of a
7 permitting process would make a lot of sense. There
8 would be direction. There would be structure. It
9 wouldn't be open to interpretation. And that is going
10 to help the Project stay on budget and stay on
11 schedule.

12 MR. JACKSON: And there's a risk if you -- if
13 you don't deal with the uncertainties. For instance,
14 are these the right locations?

15 WITNESS STORESUND: That's right.

16 So, instead of saying "the risk," I would say
17 that there will be consequences if you don't deal with
18 validating locations of things, absolutely, yeah.

19 CO-HEARING OFFICER DODUC: And how much
20 additional time do you need, Mr. Jackson?

21 MR. JACKSON: I actually have just one
22 question.

23 CO-HEARING OFFICER DODUC: Okay.

24 MR. JACKSON: I'd like to call up SCDA-82 at
25 Page 3.E.

1 (Exhibit displayed on screen.)

2 MR. JACKSON: And I believe it's the fourth --
3 E-4.

4 (Exhibit displayed on screen.)

5 MR. JACKSON: Calling your attention to table
6 E-2, looking at the Intake 2 -- 2, 3 and 5, strikes per
7 pile. There's approximately 1500 strikes per pile
8 required.

9 If we did use the non-impact methods that have
10 been referred to, should that be -- Both Mr. Salter and
11 Mr. Storesund -- Dr. Storesund. Excuse me.

12 Are you recommending that the Board would
13 require as a condition of Project approval that these
14 42-inch diameter piles be non-impact methods to deal
15 with the noise and vibration problems?

16 WITNESS SALTER: Yes, I am.

17 MR. JACKSON: Do you agree with that, sir?

18 WITNESS STORESUND: Yes. It would be my
19 recommendation to the -- to the Board to build into the
20 permitting process the use of non-impact foundation
21 elements to streamline and stay away from this whole
22 issue.

23 MR. JACKSON: Thank you.

24 I have no further questions.

25 CO-HEARING OFFICER DODUC: Thank you,

1 Mr. Jackson.

2 Miss Suard.

3 MS. SUARD: Good morning. I'm Nicki Suard
4 with Snug Harbor Resorts, LLC.

5 And I have just a few questions regarding
6 sound impacts. I'm -- I -- One of my concerns is was
7 all the sound possibilities considered.

8 CROSS EXAMINATION BY

9 MS. SUARD: When you were reviewing for the
10 EIR/EIS, was there any consideration of echo impact
11 from pile driving?

12 WITNESS SALTER: Not that I can recall.

13 MS. SUARD: Okay. If -- If one is sitting on
14 one side of the levee, like by Clarksburg, the narrow
15 area of the Sacramento River, and you hear a duck
16 quack, you actually hear three quacks because of the
17 echoing back and forth.

18 So, in your opinion, if -- if this -- if the
19 echo effect in certain areas of the Delta have not been
20 considered, would that indicate the sound level really
21 is not adequately assessed?

22 WITNESS SALTER: In my experience with echoes,
23 it's something you could identify but wouldn't
24 significantly increase the noise level.

25 MS. SUARD: Would it increase the number of

1 sounds one might hear?

2 WITNESS SALTER: It would increase the
3 detectability of a sound. You hear two or three sounds
4 rather than just one sound, so you notice it. It's
5 unusual.

6 But when you measure the effect of that echo,
7 it's not a significant increase in sound.

8 MS. SUARD: In the -- In the volume level, you
9 mean.

10 WITNESS SALTER: In the volume level, correct.

11 MS. SUARD: Okay. So, that you know of, there
12 was no consideration of echo impacts, either.

13 WITNESS SALTER: Not that I can recall.

14 MS. SUARD: Okay. Thank you.

15 Did you do any analysis of the impacts of --
16 of sound, whether it will carry further than what the
17 EIR/EIS says?

18 WITNESS SALTER: Yes.

19 Based on my findings, the sound will carry
20 further than what the -- than what is indicated in the
21 EIR/EIS, that's correct.

22 MS. SUARD: Does -- Does sound carry further
23 on water in particular?

24 WITNESS SALTER: Sound carries well along
25 water as contrasted with sound carrying through a

1 forest, for example.

2 MS. SUARD: Thank you. That's exactly my
3 observation as well.

4 Okay. Did -- Was the impact from the sounds
5 on the waterside from pile driving -- And I -- This may
6 have been asked already.

7 But the consideration of the impact to noise
8 levels in the Meadows area, a favorite boating area,
9 was that an -- was there analysis of that at all that
10 you saw?

11 WITNESS SALTER: Yes.

12 I -- In my testimony, I identified the noise
13 impact on recreational areas around water as being
14 profound, not appropriately considered will have a
15 devastating impact because I don't believe that people
16 will be wanting to be there relaxing, carrying on
17 conversation, and because the pile driving's so loud,
18 they won't be able to talk.

19 And so who would want to be out there
20 relaxing, enjoying life on the Delta under that
21 circumstance?

22 MS. SUARD: I agree with you.

23 If -- If they're not there boating and
24 recreating, do you think that that has an overall
25 impact on the ancillary services for boating as well?

1 So it's not just the recreation persons
2 themselves but all the ancillary -- like, the
3 restaurants and stores and . . .

4 WITNESS SALTER: I would expect that to be the
5 case.

6 MS. SUARD: Thank you.

7 I'm not sure. Am I allowed to ask Bill Wells
8 any questions?

9 CO-HEARING OFFICER DODUC: No.

10 MS. SUARD: Okay.

11 CO-HEARING OFFICER DODUC: He's been
12 dismissed.

13 MR. BRODSKY: He just likes it here.

14 MS. SUARD: Okay. Thank you very much.

15 CO-HEARING OFFICER DODUC: Thank you,
16 Miss Suard.

17 Any redirect, Mr. Brodsky?

18 MR. BRODSKY: No redirect.

19 CO-HEARING OFFICER DODUC: At this time, does
20 this conclude your case in chief? And, if so, would
21 you like to move your exhibits into the record?

22 MR. BRODSKY: Yes, it does.

23 And we would like to move our exhibits into
24 the record.

25 CO-HEARING OFFICER DODUC: Any objections?

1 Not seeing any, so moved. Yes, they have
2 been.

3 CO-HEARING OFFICER MARCUS: Are you just
4 wishing --

5 CO-HEARING OFFICER DODUC: Yes. I enjoy our
6 Board meetings way too much.

7 And the exhibits are entered into the record.

8 (Save the California Delta Alliance, et al. Exhibits
9 SCDA-65 through SCDA-87, SCDA-100 through SCDA-104,
10 SCDA-106 & SCDA-107, SCDA-130 & SCDA-131, SCDA-125
11 through SCDA-127, SCDA-150 through SCDA-152, SCDA-200
12 & SCDA-201 and SCDA-203 through SCDA-224 received in
13 evidence)

14 CO-HEARING OFFICER DODUC: Thank you,
15 Mr. Brodsky.

16 And thank you all, especially the Cal
17 graduates, for taken time to be here today.

18 MR. BRODSKY: Thank you.

19 CO-HEARING OFFICER DODUC: With that, we will
20 go ahead and take our lunch break --

21 WITNESS WELLS: Thank you.

22 CO-HEARING OFFICER DODUC: -- and we'll return
23 at 1 o'clock.

24 (Lunch recess at 11:50 a.m.)

25 * * *

1 Monday, April 23, 2018 1:00 p.m.

2 PROCEEDINGS

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4 CO-HEARING OFFICER DODUC: All right. It's
5 1 o'clock and we are resuming.

6 Before we get to NRDC's, et al., case in
7 chief, or the second part of your case in chief, I have
8 a housekeeping matter that I want to go over.

9 And, Mr. Mizell, thank you for coming up.

10 I have a question. I wanted to get some
11 clarity on the answer that you provided to our
12 questions on our March -- I'm sorry. This was our
13 April 18th, 2018, ruling.

14 On April 20th, you provided a written response
15 that was shared with the Service List.

16 So my question for you is: From reading your
17 letter, you say that (reading):

18 "Information of a level equivalent
19 to the Draft Supplemental EIR/EIS
20 regarding the potential impacts
21 associated with the additional
22 engineering detail proposed for the
23 California WaterFix will be available on
24 June 5th, 2018."

25 Is it your understanding that that information

1 that would be available on June 5th will be made
2 available to all parties in this proceeding?

3 MR. MIZELL: The information available on
4 June 5th is not currently planned to be rolled out to
5 the entire public. It would -- What is going to be
6 released on June 5th is the review copy for the -- for
7 the agencies listed there, the co-lead agencies and the
8 other, I guess it was, services, CFW and Army Corps.

9 CO-HEARING OFFICER DODUC: And that --

10 MR. MIZELL: So --

11 CO-HEARING OFFICER DODUC: -- does not include
12 the Board.

13 MR. MIZELL: That does not include the Board.

14 Of course, should you desire to make that the
15 copy that you're going to base rebuttal off of, we
16 could make it public. We were providing you both dates
17 so that you would understand what the schedule of the
18 rollout of the information is.

19 The draft that is currently scheduled to be
20 made public is the actual Draft Supplemental, and that
21 is the July 6th date.

22 CO-HEARING OFFICER DODUC: Thank you.

23 And let's be very clear on something else.

24 You also said that the Department is not
25 pursuing staged construction of the California

1 WaterFix.

2 So does that mean that the Draft Supplemental
3 EIR/EIS that will be released in July will only be
4 focused on the original -- the additional engineering
5 detail that was proposed on March 28th?

6 MR. MIZELL: Yes, that is correct.

7 CO-HEARING OFFICER DODUC: Thank you.

8 Are there any other questions for DWR?

9 All right. At this time, since Mr. Bezerra
10 raised the issue earlier this morning, the Co-Hearing
11 Officer and I have met, and we are still meeting. We
12 are still considering the issue of rebuttal,
13 recognizing that cases in chief will probably wrap up
14 this week and we do need to provide some direction
15 pretty soon.

16 So, at this time, given what we just heard
17 from Mr. Mizell, I welcome any comment or input that
18 parties would like to provide at this time regarding
19 rebuttal.

20 We'll start with Mr. Bezerra, who did tee up
21 this issue this morning.

22 MR. BEZERRA: I just have a question about
23 what we just heard, just to be extraordinarily clear,
24 because it's very important.

25 I understood Mr. Mizell to be saying the

1 Department is not pursuing a staged project, period.

2 CO-HEARING OFFICER DODUC: That is my
3 understanding of his response.

4 MR. BEZERRA: Okay. Thank you.

5 CO-HEARING OFFICER DODUC: Do you have any
6 other input into the rebuttal process that you wish to
7 share?

8 MR. BEZERRA: I -- I don't, other than . . .

9 You know, it will be difficult for people to
10 understand the full scope of rebuttal they might need
11 to present other -- if they don't have the Supplemental
12 EIR at hand, or at least a draft. That's not so
13 crucial.

14 It sounds like, to my clients, which are
15 concerned primarily about operations, but to the wide
16 swath of other parties that are concerned about
17 alignments and terrestrial impacts and that sort of
18 thing, it will be difficult for them to proceed, I
19 imagine, without some sort of Supplemental EIR that
20 explains the physical nature of the Project.

21 CO-HEARING OFFICER DODUC: Miss Meserve, I
22 expect your client will have some concern over that
23 information.

24 MS. MESERVE: Yes, definitely.

25 And it -- I guess I would just note that this

1 may warrant some, you know, short briefing or
2 something, if the -- if you get to that part as you
3 start -- continuing thinking about what the schedule
4 should be.

5 But just off the top of my head, I mean, I
6 think one thing that we're very concerned about is
7 about making sure we have transcripts available to
8 prepare rebuttal off of. Using the videos, it's very
9 difficult for trying to verify that, you know, the
10 topics are indeed responsive to especially things that
11 occurred on cross.

12 Then with respect to the changes in the
13 Project, you know, I mean, there's obviously a long
14 history of all these things. But, you know, having a
15 stable Project Description to respond to has been,
16 really, one of the Achilles heels of this process.

17 And so, you know, it's my belief that we
18 really should have a Certified Final Supplemental EIR
19 before we should be triggered to continue on with this
20 hearing process and prepare evidence, so that we
21 wouldn't be stuck with this constant possibilities of
22 doubling back to try to redo issues that were already
23 addressed.

24 So I think it would be appropriate to wait
25 until there was a Final Certified EIR with MMRP, with

1 that detailed design information that the Water Board's
2 question -- or ruling mentioned.

3 And . . . in addition, there are Part 1 issues
4 that get implicated with a change in tunnel route and
5 individual water users.

6 So I just flag that as something that there
7 may be Part 1 issues that, just from the very cryptic,
8 short information we've received about the scope of the
9 Supplemental EIR, we just can't tell.

10 So I would just flag that as something that
11 the schedule will need to account for the ability of
12 Protestants to double back on those Part 1 issues as
13 well.

14 And I just think, given the sort of
15 inefficiency of moving -- continuing to move forward
16 when things are still changing, that it really,
17 especially, you know, now where we're at, having seen
18 the impact of that, I would really urge the Hearing
19 Officers to consider a schedule that really requires
20 that there not be additional moving parts and we just
21 respond to whatever that Final Project is and then move
22 through the rest of the hearing, you know, on that
23 basis.

24 CO-HEARING OFFICER DODUC: Thank you.

25 Anyone else?

1 And Mr. Mizell or Miss Ansley, I will ask you
2 to come back up to address these comments.

3 Mr. Jackson.

4 MR. JACKSON: Yes.

5 Sometimes it's useful to begin at the end and
6 work backwards.

7 We've still got a number of things to do,
8 which is rebuttal, surrebuttal.

9 We reserved -- For instance, the CSPA folks
10 reserved briefing from Part 1 and Part 2 so that we
11 could do a coherent brief, we hope. We're going to
12 need the transcripts to do that, from rebuttal as well.

13 There's going to be a certain amount of time
14 that takes place in terms of the draft comments on the
15 supplemental because we're going to have to read it
16 before we can be -- after it comes out.

17 So, the -- It seems to me like September or
18 October would be the appropriate time to really finish
19 rebuttal, because we've got this supplemental
20 environmental document that I think implicates Part 1
21 and Part 2, but I'm not going to know that until I see
22 it.

23 And then there's a period where we've got to
24 respond to it.

25 So it -- Realistically, it seems to me that

1 it's going to be very hard to be trying to rebut a case
2 that may have changed and -- and going backwards
3 doesn't help anybody.

4 So it just -- It just seems to me that -- that
5 there is going to be -- should be a hiatus here while
6 we take a look at DWR's new material.

7 And then that's got to be included in the
8 briefing, and that's going to depend upon the
9 transcript.

10 Thanks.

11 CO-HEARING OFFICER DODUC: Mr. Herrick.

12 MR. HERRICK: Thank you.

13 John Herrick, South Delta parties.

14 I hope I haven't misread the stuff that we've
15 received so far with regards to these engineering
16 changes. But my concern is the changes to Clifton
17 Court Forebay. Rather than having a separate two
18 forebay, it's -- now it's back to the one.

19 And so tunnel water flowing into the forebay
20 may affect the ability to divert into the forebay from
21 the Old River, so there are operational issues that
22 could change modeling done for Part 1.

23 I don't know that's the case, but that's my
24 concern. So until we see what's going on, we won't
25 know if it actually involves operational changes rather

1 than just physical changes of alignment or locations or
2 stuff.

3 So, that's very important to me, that I may
4 have to redo Part 1 modeling to correct it for a change
5 in operations.

6 So, as Mr. Jackson said, I don't see how this
7 gets going until substantial time after the Final
8 Supplemental comes out. That's up to you guys.

9 But we need time to look at what they're
10 actually going to do and then model it to see if there
11 are changes.

12 Thank you.

13 CO-HEARING OFFICER DODUC: Miss Taber.

14 MS. TABER: Good afternoon. Kelley Taber for
15 the County of Sacramento.

16 I'd just like to endorse the comments of the
17 speakers before me, Miss Meserve, Mr. Jackson and
18 Mr. Herrick, and also ask that the Hearing Officers
19 consider -- or give some consideration to the
20 possibility of staged submittal of rebuttal testimony.

21 Without the EIR in front of us, and without
22 any testimony from DWR, it's hard to know how that
23 information will be addressed by the Department and by
24 Reclamation.

25 But one thing I did observe so far in Part 2

1 is challenges that the parties had under
2 cross-examination where questions were put to them by
3 the Petitioners about their witnesses' failure to
4 address the CWF H3+ which, of course, hadn't been
5 feasible in their case in chief testimony because of
6 the simultaneous submittal of testimony.

7 So, it seems to me that, in addition to having
8 time to review the document and prepare appropriate
9 rebuttal testimony that addresses the information
10 that's in that document when it's certified, it would
11 be efficient and more helpful to the parties and to the
12 Hearing Officers if the Protestants had the opportunity
13 to submit their rebuttal testimony following DWR and
14 Reclamation, so that they could address any expert
15 testimony that was provided by the Petitioners related
16 to the analysis in the -- of the Project changes.

17 CO-HEARING OFFICER DODUC: Thank you,
18 Miss Taber.

19 And without having all of you come back up, I
20 would assume the previous speakers would degree with
21 that-Miss Taber.

22 And I see nodding heads.

23 Mr. Obegi.

24 MR. OBEGI: Doug Obegi for NRDC.

25 I also agree with the idea of staggered

1 briefing.

2 It seems to me the Project has changed in one
3 very important way that was not discussed by
4 Mr. Mizell, which is that the CVP and CVP contractors
5 will not be moving their water through the North Delta
6 intakes as indicated in the modeling in the
7 Final EIS/EIR.

8 And that has the potential to significantly
9 change both the distribution of water between the
10 Projects and potentially operations, particularly given
11 some of the ambiguities regarding South Delta
12 operations that have been discussed during
13 cross-examination in this hearing.

14 And so I would hope that the Supplemental
15 EIS/EIR will actually analyze a Project where the CVP
16 is only using the South Delta and the State Water
17 Project is using the North Delta and the South Delta.

18 Secondly, with respect to the timing of
19 rebuttal, I do believe that it is important to give the
20 parties adequate time to get the final transcripts,
21 review those transcripts, and review the supplemental
22 environmental analysis that Mr. Mizell has represented
23 will be made available, and that we use staggered
24 briefing so that the Petitioners can present their
25 information and the Protestants have an ample

1 opportunity to respond.

2 Thank you.

3 CO-HEARING OFFICER DODUC: Thank you,
4 Mr. Obegi.

5 Mr. Bezerra, have you thought of something to
6 add?

7 MR. BEZERRA: Mr. Obegi reminded me of an
8 extremely important point, which is that if the two
9 Projects will not operate in a way it's modeled, and
10 that CVP operations will be unjoined from State Water
11 Project operations, that could dramatically affect
12 everything, because the current modeling assumes that
13 there would be -- I believe the witnesses have
14 testified that the Projects would share obligations
15 under current COA and that sort of thing.

16 If that's not the case, that would
17 dramatically affect projected operations with the
18 Project in place.

19 CO-HEARING OFFICER DODUC: All right. Anyone
20 else before I ask Mr. Mizell to respond?

21 Mr. Mizell.

22 MR. MIZELL: Are there any questions
23 specifically you'd like me to address? Otherwise, I
24 can just go through what I believe I heard.

25 CO-HEARING OFFICER DODUC: Go ahead, and then

1 if we -- We might ask questions afterwards.

2 MR. MIZELL: Very good.

3 The timing of the Final Supplemental EIR/EIS
4 has not been made nor will be made at this time.

5 I do believe, though, that waiting for a Final
6 Supplemental is not necessary. As per our course of
7 action through Parts 1 and 2, a draft -- public draft
8 environmental document was sufficient to provide a
9 level of certainty to produce testimony.

10 As far as having an opportunity to fully
11 review the Draft Supplemental in order to produce
12 rebuttal testimony, the Department would agree with
13 that.

14 The Draft Supplemental will need to come out
15 before -- before people could really rely upon the
16 information that will be contained in it.

17 And so we don't have any objection to people
18 looking for adequate time to review that document prior
19 to the testimony.

20 If the Board -- If the Hearing Officers, if
21 you choose to proceed with the earlier administrative
22 review copies instead of the public draft document, if
23 that's your choice, then certainly people could make --
24 distribute that, and their testimony could be based
25 upon those review copies, if you prefer.

1 I'll leave that up to you.

2 The notion of providing staged submissions of
3 the rebuttal materials I don't believe is necessary or
4 appropriate given the justification for doing so in
5 Part 1 versus the situation we're facing here.

6 This is more akin to how we produced testimony
7 for the cases in chief in Part 2. The draft document
8 will come out and all parties, including the
9 Department, will then have a stable document on which
10 to base their rebuttal.

11 So I believe that, based upon the . . . the
12 justification for why we did not pursue a staged
13 approach to the cases in chief in Part 2, that also
14 applies here as well.

15 And as far as the participation of the U.S.
16 Bureau of Reclamation, I am unaware of any statement by
17 Reclamation saying they are withdrawing as a
18 Petitioner.

19 It is my understanding they are still a
20 Petitioner and, therefore, we would have no reason to
21 believe at this time that the modeling should be
22 shifted to account for a State-only Project.

23 So maybe Mr. Obegi can inform us of what
24 decision he's relying upon when he made the statement
25 that the Bureau will not have any water moving through

1 the Project.

2 But that's not my understanding of the
3 Project. It's not it the -- It's not the Project that
4 we petitioned for and it's not the Project that we're
5 pursuing under CWF H3+.

6 When it comes to the operational scenario, the
7 CWF H3+ remains consistent with the Proposed Project
8 under the supplemental document. So there is no
9 modification to that operational scenario that's being
10 considered at this time, as far as I'm aware.

11 So we should see the same Operational Criteria
12 which will drive the hydrologic modeling at this point.

13 So that would, I think, address Mr. Herrick's
14 concern about operations of the South Delta pumps.

15 CO-HEARING OFFICER DODUC: Clarifying
16 question:

17 The Draft -- Well, the Administrative Draft
18 review chapters that will be available on June 5th are,
19 then, subject to change given -- after the holding
20 agencies conduct their review; correct?

21 MR. MIZELL: That is correct.

22 CO-HEARING OFFICER DODUC: Any other
23 questions?

24 MR. DEERINGER: I do hate to belabor this
25 point, since I think you covered it really well, but

1 this is just for clarification.

2 Do we read the letter you sent on Friday
3 correctly in that, in saying that DWR's not -- or,
4 excuse me -- Petitioners are not pursuing a staged
5 implementation approach, that also means they are not
6 considering and not analyzing that avenue any further?

7 MR. MIZELL: That's correct.

8 MR. DEERINGER: Okay. Great. Thank you.

9 CO-HEARING OFFICER DODUC: All right. Thank
10 you all. We will take all of that under consideration.

11 And now it is with great pleasure that we
12 welcome Dr. Rosenfield.

13 Please stand and raise your right hand.

14

15 Jonathan Rosenfield,
16 called as a witness by the Natural
17 Resources Defense Council, The Bay
18 Institute, and Defenders of Wildlife,
19 having been duly sworn, were examined and
20 testified as follows:

21 CO-HEARING OFFICER DODUC: Thank you.

22 Mr. Obegi, you have an Opening Statement and
23 then 20 minutes for Dr. Rosenfield's direct?

24 MR. OBEGI: That is correct.

25 CO-HEARING OFFICER DODUC: And then we'll a

1 survey of cross-exam and figure out the timing of
2 breaks.

3 MR. OBEGI: Thank you.

4 Doug Obegi on behalf of the National Resources
5 Defense Council, The Bay Institute, and Defenders of
6 Wildlife.

7 OPENING STATEMENT BY

8 MR. OBEGI: The evidence introduced in this
9 hearing will demonstrate that granting the Petition
10 will cause unreasonable impacts to fish and wildlife,
11 is not in the public interest, and is contrary to law.

12 First, the best-available science shows that
13 granting the Petition will worsen water quality and
14 worsen impacts to fish and wildlife in the Delta
15 Watershed.

16 And, second, the granting of the Petition is
17 not in the public interest and is contrary to law
18 because the Petitioners have alternative water supplies
19 available to them to be able to reduce reliance on the
20 Delta and because the law requires them to reduce
21 reliance on the Delta, and the Proposed Project
22 violates the substantive requirements of the California
23 Endangered Species Act and the Federal Endangered
24 Species Act.

25 We, therefore, request that the Board deny the

1 Petition.

2 However, should the Board decline to deny the
3 Petition, they should adopt the terms and conditions
4 that are proposed in our opening statement, in our
5 testimony.

6 These are terms and conditions which are
7 necessary to ensure that appropriate -- one,
8 appropriate flow criteria and conditions will minimize
9 and avoid unreasonable impacts to fish and wildlife;
10 and, two, that the Central Valley Project and State
11 Water Project Contractors who participate in the
12 Projects will improve water use efficiency and regional
13 water management to reduce reliance on the Delta and
14 significantly reduce diversions from the estuaries
15 while sustaining the economy.

16 With respect to our first point, the evidence
17 in this hearing will show that granting the Petition
18 will cause unreasonable impacts to fish and wildlife.

19 It is important to recognize that, under the
20 status quo, operations of the State and Federal Water
21 Projects are causing unreasonable impacts to fish and
22 wildlife.

23 The Board has obligations that go beyond the
24 minimum requirements of the State and Federal
25 Endangered Species Acts and merely preventing the

1 extinction of these species.

2 We have to -- As officers of the Court and the
3 Board itself must protect the public interest and the
4 public trust to the extent feasible, must ensure that
5 flows below dams are sufficient to maintain fish in
6 good condition, and must ensure that flows are adequate
7 to achieve the Narrative Salmon Doubling Objective and
8 to protect estuarian habitat and other native fish and
9 wildlife beneficial uses.

10 The abundance of Delta Smelt, Longfin Smelt
11 four runs of Salmon, Steelhead, and other native
12 species have declined significantly in the past several
13 decades and particularly during the most recent
14 drought.

15 In 2016, the U.S. Bureau of Reclamation
16 reinitiated consultation under the Endangered Species
17 Act because the current operations were jeopardizing
18 the continued existence of listed species, and because
19 new scientific information demonstrated that current
20 protections were inadequate.

21 Unreasonable impacts to fish and wildlife
22 occur both within the Delta and upstream in terms of
23 inadequate temperature control at Shasta Dam and
24 inadequate instream flows in the Sacramento River that
25 significantly reduce Salmon survivor.

1 Because the California of Department of Water
2 Resources and the U.S. Bureau of Reclamation have
3 petitioned this Board to change the point of diversion,
4 that necessarily triggered the Board's obligations
5 under the Public Trust Doctrine, and the Board must
6 consider the full range of impacts of the coordinated
7 operations of the Projects with WaterFix in considering
8 the full range of impacts and to set appropriate flow
9 criteria as required by Section 85086 of the Water
10 Code.

11 Second, despite the degraded ecological
12 conditions in the estuary, the testimony and evidence
13 will show that WaterFix will worsen those conditions
14 and will harm fish and wildlife, including species
15 listed under the Endangered Species Acts and CESA.

16 Analyses and modeling of the Biological
17 Opinions will show that the impacts are worse than the
18 status quo. And the evidence in this hearing will show
19 that the analyses in those Biological Opinions
20 frequently understate or fail to use the best-available
21 science to document the adverse impacts.

22 Finally, evidence presented during Part 2 of
23 this hearing is also likely to show unreasonable
24 impacts to birds and terrestrial species within the
25 Delta and south of the Delta. This includes millions

1 of birds that migrate along the Pacific Flyway, Giant
2 Garter Snakes, which are listed under the State and
3 Federal Endangered Species Acts, and other
4 wetland-dependent species.

5 I want to briefly summarize the adverse
6 impacts to fish that we -- that we see in this -- that
7 will be substantiated by the testimony.

8 First, with respect to Salmonids, the evidence
9 presented will show that Salmon survival through the
10 Delta will worsen as a result of WaterFix.

11 Salmon survival through the Delta is already
12 precariously low, and yet WaterFix will reduce survival
13 as a result of reduced flows below the intakes, reduced
14 turbidity, increased predation, and impingement on the
15 fish screens.

16 Any reduction in through-Delta survival is
17 contrary to the NMFS Recovery Plan for these species as
18 well as the Salmon Doubling Objectives in the Water
19 Quality Control Plan.

20 The proposed bypass flows are not adequate to
21 prevent unreasonable impacts to Salmon, and they rely
22 on real-time management which has frequently been shown
23 to be inadequate because those protections are not
24 implemented in a timely manner, because monitoring is
25 inadequate to fully avoid those impacts, and because

1 certain species like fall-run Chinook Salmon would not
2 be protected at all by the real-time operations.

3 In addition, WaterFix will maintain or worsen
4 unreasonable impacts upstream of the Delta, including
5 temperature-dependent mortality below Shasta Dam,
6 increased redd dewatering and temperature-dependent
7 mortality in other reservoirs, and reduce flows in the
8 Sacramento River which significantly reduce Salmon
9 survival.

10 Second, with respect to Longfin Smelt,
11 WaterFix proposes to reduce winter/spring Delta
12 outflow, and the evidence presented in this hearing
13 will demonstrate that this jeopardizes the continued
14 existence of the species and will lead to further
15 declines despite the species being at very low
16 abundance.

17 Evidence will demonstrate there's no
18 scientific basis for allowing reductions in winter
19 outflows, nor for reducing spring outflows in the
20 March-to-May period when outflows are higher than
21 44,500 cfs as proposed.

22 This was identified as a flow threshold where
23 there is a greater than 50 percent chance of population
24 growth, yet the -- the flow -- outflow abundance
25 relationship is essentially linear and higher abundance

1 results from higher flows.

2 Moreover, the methods and analyses in the
3 Biological Opinion and in the Permits understate the
4 adverse effects to Water -- of WaterFix on Longfin
5 Smelt because they fail to synthesize the full ranges
6 of those adverse effects. That includes reduced
7 turbidity in the Delta, increased harmful algal blooms,
8 as well as the fact that they're modeling analysis
9 fails to account for the prior abundance of Longfin
10 Smelt which, thus, understates the impacts of
11 successive dry years and overstates the species
12 recovery in a single wet year.

13 Finally, reductions in Delta outflow are also
14 likely to adversely affect prey species for Longfin
15 Smelt as there are strong outflow abundance
16 relationcesies (phonetic) -- relationships for several
17 zooplankton species.

18 With respect to Delta Smelt, testimony will
19 show that WaterFix will cause unreasonable impacts to
20 Delta Smelt, which is critically endangered.

21 Evidence will show that Delta outflow is
22 important to the abundance and survival of Delta Smelt
23 in virtually all months of the year, clearly in the
24 fall, spring and summer months, and yet WaterFix will
25 reduce outflow in the spring and in the summer months,

1 which has already been identified by the U.S. Fish and
2 Wildlife Service as a significant impact.

3 Second, WaterFix will reduce turbidity by
4 capturing sediment in the North Delta intakes, and
5 reduced turbidity will harm Delta Smelt and their prey
6 species by increasing predation and reducing food
7 availability.

8 Third, the reduction in flows, the increased
9 residence time, and the elimination of turbidity will
10 increase the frequency and magnitude of harmful algal
11 blooms which will harm Delta Smelt and other species.

12 In order to avoid these unreasonable impacts
13 to fish and wildlife, we have recommended a suite of
14 flow and operational measures designed to reduce or
15 avoid those impacts, which are included in our Opening
16 Statement and will be included in the briefing we
17 provide.

18 Secondly, testimony and evidence in this
19 hearing will show that granting the Petition is not in
20 the public interest and is contrary to law.

21 Testimony, including testimony by Doug Obegi,
22 will demonstrate that there are significant
23 opportunities to increase the availability of local and
24 regional water supplies, thereby reducing reliance on
25 the Delta and enabling the economy to continue while we

1 reduce water diversions from the estuary. This
2 includes improved agricultural and urban water use
3 efficiency, storm water capture and water recycling.

4 This testimony is relevant to the State
5 Board's determination of whether granting the Petition
6 is in the public interest as well as for determining to
7 what extent protections for the public trust are
8 feasible.

9 This testimony is also relevant to show that
10 the Projects are not reducing reliance on the Delta as
11 required by the Delta Reform Act.

12 And in order to protect the public interest
13 and public trust, we have provided a suite of terms and
14 conditions to require significant improvements in urban
15 and agricultural water use efficiency, water recycling,
16 and storm -- urban storm water capture in the service
17 areas that participate in WaterFix.

18 In order to keep this short and to reduce the
19 amount of time that Mr. Rosenfield -- Dr. Rosenfield's
20 here, I'm going to skip over our proposed terms and
21 conditions. They are in our writing.

22 In conclusion, we ask the Board to deny this
23 Petition because the Project will cause unreasonable
24 impacts to fish and wildlife, is not in the public
25 interest, and is contrary to law.

1 Should the Board grant the Petition, we urge
2 the Board to impose terms and conditions that will:
3 One, ensure that appropriate flow criteria as proposed
4 in our Opening Statement and testimony are implemented
5 and will adequately protect fish and wildlife; and,
6 two, ensure that Petitioners will reduce reliance on
7 the Delta and reduce reliance on water supply from the
8 Delta -- sorry -- improve water efficiency and regional
9 self-reliance, and help sustain local economies despite
10 significant reductions in diversions of water in the
11 Delta.

12 Thank you.

13 CO-HEARING OFFICER DODUC: Thank you,
14 Mr. Obegi.

15 Now, please proceed with your direct of
16 Dr. Rosenfield.

17 MR. OBEGI: Thank you very much.

18 DIRECT EXAMINATION BY

19 MR. OBEGI: Dr. Rosenfield, good afternoon.

20 WITNESS ROSENFIELD: Good afternoon.

21 MR. OBEGI: It's nice to see you here.

22 WITNESS ROSENFIELD: Believe it or not, it's
23 good to be here.

24 (Laughter.)

25 MR. OBEGI: Considering the alternatives is --

1 WITNESS ROSENFELD: Yes.

2 MR. OBEGI: -- always a good thing to do.

3 Dr. Rosenfield, is NRDC-58 a true and correct
4 copy of your written testimony?

5 WITNESS ROSENFELD: Yes, it is.

6 MR. OBEGI: Is NRDC-59 a true and correct copy
7 of your Statement of Qualifications?

8 WITNESS ROSENFELD: Yes, it is.

9 MR. OBEGI: Would you, therefore, please
10 summarize your written testimony in 20 minutes.

11 WITNESS ROSENFELD: Yes, I will.

12 The main points of my written testimony are
13 that the Cal WaterFix documents themselves show that
14 the Project contributes to accelerated degradation of
15 fish populations and water quality conditions.

16 And, two, the analyses used in those documents
17 are often biased towards a more favorable outcome than
18 should be expected.

19 As a result, the Project is not protective of
20 a variety of species or ecosystem conditions and we
21 believe -- I believe the Board should not approve the
22 Cal WaterFix as currently proposed.

23 The Bay Estuary ecosystem currently shows
24 numerous signs of collapse, including six endangered
25 fish species, fisheries restrictions and closures that

1 become more and more widespread, and emerging water
2 quality concerns.

3 Two of the major drivers of decline in the
4 estuary and its watershed are a reduction in the
5 magnitude of freshwater flows and an alteration and
6 timing of those flows.

7 The trend towards increased modification
8 continues to this day. Typically, less than half of
9 the unimpaired runoff in the watershed during the
10 winter/spring months makes it through the Delta to the
11 rest of the San Francisco Estuary. This fraction has
12 been declining for decades and has -- and the decline
13 has continued since the Bay-Delta Accords of 1995.

14 Current status quo water management needs to
15 decline in inefficient wildlife populations.
16 Maintaining status quo management will lead to further
17 declines and is not -- are not reasonably protective of
18 native fish and wildlife species or water quality.

19 Even management that might appear adequate to
20 maintain current population levels of native fishes
21 would not be reasonably protective because those
22 populations are already at an elevated risk of
23 extinction, extirpation, or at levels that cannot
24 support public trust fisheries.

25 Evaluations of the effect of additional water

1 diversion facilities must occur in the context of these
2 facts.

3 In my written testimony, I provide examples of
4 negative effects of the Cal WaterFix and poor analyses
5 or interpretation of those effects from four species
6 groups.

7 In addition, I describe a sample of
8 ecosystem-wide negative effects caused by Cal WaterFix,
9 including decreased turbidity, increased frequency of
10 harmful algal blooms, and a resources.

11 These ecosystem effects will potentially
12 impact imperiled species, water quality, and public
13 fisheries. In the interest of time, I will not
14 describe the ecosystem-wide impacts in my direct
15 testimony today.

16 Much of the analyses of Cal WaterFix focuses
17 on impacts to Central Valley Salmonids. There are four
18 distinct populations of Chinook Salmon and one distinct
19 population of Steelhead that spawn in Sacramento River
20 Watershed.

21 The best-available science shows that
22 maintenance of status quo flow and temperature
23 conditions threatens the continued existence and
24 recovery of Salmonid populations in this watershed.

25 However, Cal WaterFix does not maintain status

1 quo flow and temperature conditions. It exacerbates
2 already intolerable conditions.

3 Overall, the Cal WaterFix Salmonids analysis
4 reveals various impacts to Chinook Salmon and
5 Steelhead, whose cumulative effect is to accelerate the
6 demise of these species beyond the rate of their
7 current decline.

8 These impacts result directly from diversion
9 of -- of the Cal WaterFix and indirectly as a result of
10 changes in reservoir storage and operations upstream.

11 In addition, the analyses do not incorporate
12 all -- all of the foreseeable impacts to Central Valley
13 Salmonids caused by the Water Projects and the addition
14 of the Cal WaterFix to -- to the Projects.

15 Finally, the status quo to which Cal WaterFix
16 impacts are compared is already unsustainable and
17 inadequately protective of Central Valley Salmonids.

18 To begin, I'll talk about native effects
19 downstream on Salmonids.

20 Through-Delta survival rates for Salmonids are
21 already extraordinarily low. In its BDCP
22 documentation, NMFS concluded (reading):

23 "It is highly unlikely that Central
24 Valley Salmonids can be recovered without
25 major improvement in Delta survival."

1 Cal WaterFix uses several through-Delta
2 survival models to project effects of Cal WaterFix
3 operations on migrating juvenile Salmon.

4 The Delta Passage Model and Perry Survival
5 Model both project that reduced flow into the Delta
6 caused by Cal WaterFix operations will increase
7 through-Delta mortality.

8 In addition, there are negative effects on
9 flows and temperatures upstream that will cause
10 negative effects for spawning and rearing Salmonids
11 upstream of the Delta.

12 In general, Cal WaterFix Project documents
13 find little difference on average between temperatures
14 modeled for the No-Action Alternative versus the
15 Project Alternative and, thus, conclude that there's
16 little marginal effect of the Cal WaterFix Project.

17 But, in fact, there are temperature and flow
18 differences that would have deleterious consequences
19 for winter-run Chinook Salmon, fall-run and
20 late-fall-run Chinook Salmon in the Sacramento River.

21 For example, the NMFS Biological Opinion finds
22 monthly average temperature increases during the
23 winter-run Chinook Salmon spawning and incubation
24 period in below normal, dry, and critically dry years.

25 Modeling of the effects of those temperature

1 increases reveals a 59 percent increase in
2 temperature-related egg mortality for winter-run when
3 hydrology is below normal and an increase in
4 temperature-related historical mortality in half of
5 years.

6 The modeling also shows a 56 percent increase
7 in temperature-related egg mortality during dry years
8 for fall-run Chinook Salmon, and a 223 percent increase
9 in temperature-related impacts to the egg larval
10 survival stages on late-fall-run normal and wet years
11 and an overall decline in these life stages in every
12 year.

13 One major problem with Cal WaterFix analyses
14 of impacts for Salmonids and other species is the
15 characterization of marginal effects as "small." This
16 is misleading because magnitude of the change in the
17 environmental parameters, such as temperature, may not
18 match the magnitude of the population or ecosystem
19 response to that environmental change.

20 For example, we know that small changes in
21 temperature or flow rates can produce
22 disproportionately large increases in mortality and
23 decreases in the geographic range in which these fish
24 can develop.

25 Temperature increases also increase sublethal

1 effects which lead to increased mortality in subsequent
2 life stages.

3 Finally, Cal WaterFix's characterization of
4 temperature changes percentage terms is scientifically
5 meaningless.

6 The temperature analyses also exemplify
7 another general problem with Cal WaterFix analyses,
8 which is that they average impacts over long periods of
9 time or across year-types.

10 The assumption here that improvements in some
11 months or year-types mitigate for degraded conditions
12 in other months or years is incorrect. For example,
13 eggs that die due to high temperatures in one month
14 will not benefit from temperature improvements in
15 earlier or later months.

16 Also, averaging temperatures across years
17 discounts the effects to the population in individual
18 year-types because hydrology that leads to poor
19 outcomes may occur for many years in a row.

20 But the focus on marginal temperature and flow
21 effects of Cal WaterFix is somewhat besides the point,
22 given that temperatures projected for both the Project
23 Alternative and the No-Action Alternative are well
24 beyond limits that would protect Chinook Salmon
25 populations.

1 The Biological Opinion repeatedly notes that
2 current temperatures and those under the No-Action
3 Alternative cause unacceptably high impacts.

4 The Biological Opinion also notes that climate
5 change will result in higher temperatures in the future
6 that will negatively affect population viability and
7 recovery potential for imperiled Salmonids.

8 But the BiOp does not analyze the effects of
9 climate change after the year 2030, and this is about
10 when the Cal WaterFix operations might begin.
11 Therefore, the temperatures analyzed do not represent
12 conditions that would prevail through the lifespan of
13 the Cal WaterFix Project.

14 With or without the Cal WaterFix, the State
15 Water Project and Central Valley Project are expected
16 to cause major negative impacts to Central Valley
17 Salmonids developed upstream, though the WaterFix
18 clearly increases the likelihood and magnitude of those
19 impacts.

20 Under such circumstances, reporting only
21 marginal changes in water temperatures or flows
22 obscures the point that the Projects will need to be
23 substantially modified in order to protect endangered
24 and public trust resources going forward.

25 Indeed, NMFS is currently developing an

1 amendment to its Shasta temperature control RPA which
2 would increase carryover storage, use more protective
3 water temperature thresholds based on more recent
4 scientific information and set biological objectives
5 for survival.

6 Implementation of a revised and more
7 protective RPA will be necessary to maintain successful
8 Salmonids farming and rearing downstream of the Project
9 reservoirs.

10 The WaterFix synthesizes -- Unlike for other
11 species, the WaterFix does attempt to synthesize
12 effects through the water cycle for Salmonids.

13 Both of the Life Cycle Models employed by the
14 NMFS Biological Opinion project very large proportional
15 reductions in Chinook Salmon populations as a result of
16 the Proposed Project.

17 For example, the IOS Life Cycle Model predicts
18 (reading):

19 ". . . a 25 percent reduction of adult
20 winter-run Chinook Salmon spawners under
21 the Project alternative."

22 The other modeling used is the NMFS Life Cycle
23 Model. And I should note here that my written
24 testimony erroneously stated that the NMFS Life Cycle
25 Model did not incorporate additional near-field

1 mortality anticipated at the North Delta diversion.
2 Those effects are modeled in the various scenarios for
3 the -- for the NMFS Life Cycle Model.

4 But with or without additional near-field
5 mortality at the North Delta diversion, the NMFS Life
6 Cycle Model anticipates roughly a seven to eight
7 percent decline in cohort return rates and states
8 (reading):

9 "The probability that would be
10 higher abundance in the Project
11 Alternative relative to the No-Action
12 Alternative . . . was approximately
13 zero."

14 As a result of these considerations, my
15 professional judgment is that operations under Cal
16 WaterFix are not adequately protective of Central
17 Valley's -- Central Valley Salmonids.

18 As another example, we can look downstream to
19 pelagic fishes such as Longfin Smelt. The Cal WaterFix
20 analyses projected decline in winter/spring Delta
21 outflow even as they acknowledge that outflows through
22 the -- throughout winter/spring are the best predictor
23 of Longfin Smelt populations' future performance.

24 They fail to acknowledge that the proposed
25 supplemental March-through-May flows are inadequate,

1 uncertain with regard to their effect, and speculative
2 with regard to the likelihood that they will ever
3 materialize.

4 The analyses also projected decline in Longfin
5 Smelt abundance above and beyond the current decline.
6 These projected negative effects occur even though the
7 analyses fail to account for the effective declining
8 adult population on the size of subsequent generations.

9 They fail to incorporate additional juvenile
10 entrainment expected under the Cal WaterFix, and they
11 fail to incorporate degradation and other water quality
12 parameters that are expected under the Cal WaterFix.

13 The strong significant and persistent
14 influence of winter/spring Delta outflows on the
15 abundance of Longfin Smelt in subsequent fall is one of
16 the best-documented relationships in this estuary.

17 The environmental status quo has caused
18 dramatic declines in the estuary's Longfin Smelt
19 population, punctuated by brief increases in the
20 population during very wet years when diversions and
21 Delta exports are overwhelmed by Central Valley runoff.

22 These wet-year population increases are what
23 currently saves the population from extirpation, so
24 impacts to wet-year conditions must be taken serious.

25 Nevertheless, WaterFix proposes to reduce

1 winter/spring outflow compared to the status quo.

2 The Cal WaterFix ITP purports to maintain
3 Delta outflows expected under the No-Action Alternative
4 from March through May, setting aside for the moment
5 the fact that the status quo outflows are largely
6 responsible for the catastrophic decline in Longfin
7 Smelt abundance.

8 There is no evidence that simply maintaining
9 March-through-May outflows alone will compensate for
10 the reduced outflows during December through February.

11 Evidence indicates the flows from December
12 through May or December through June are important to
13 the reproductive success of this species. But we don't
14 know exactly when Delta outflows have the maximum
15 effect or even if there's a difference in effect among
16 months. September through February flows are expected
17 to decline under Cal WaterFix.

18 The issues that, in addition to reducing the
19 magnitude of Delta outflows, Cal WaterFix proposes to
20 alter the timing of flows into the estuary. We can't
21 just assume that this changed pattern of timing has no
22 effect on the fishes.

23 Furthermore, the supplemental March through
24 May flows don't fully mitigate for flow reductions even
25 in the months when they would be applied because the

1 Permit condition does not protect flows greater than
2 44,500 cfs or that the most that we could reduce
3 exports below 1500 cfs even though the Longfin Smelt
4 abundance flow relationship persists at these flow
5 levels.

6 Cal WaterFix conclusions also likely
7 underestimate the magnitude of Longfin Smelt decline
8 because the models and analyses used to evaluate
9 WaterFix impacts on this population fail to incorporate
10 the best-available scientific understanding of the
11 species population dynamics in this estuary. Also, Cal
12 WaterFix fails to include all impacts of the Project,
13 such as increased juvenile entrainment.

14 So, regarding the modeling, the ITP projects
15 potential Cal WaterFix impacts using a modification of
16 the X2 Longfin Smelt abundance regression produced by
17 Kimmerer et al. in 2009. This model assumes that
18 Longfin Smelt abundance in any years is a function of
19 average springtime X2.

20 It also relies on a series of "step decline
21 parameters" to make the flow abundance relationship
22 track actual population indices.

23 The approach taken by Kimmerer et al. (2009)
24 was never intended as a predictor of future Longfin
25 Smelt abundance over the long-term and, in fact, the

1 using of periodic ad hoc step declines in order to make
2 the model tract abundance trends is a strong indication
3 that this linear approach should not be used to make
4 predictions about Longfin Smelt abundance in isolation
5 or into the distant future.

6 In fact, Matt Nobriga of the U.S. Fish and
7 Wildlife Service and I in 2016 published a paper
8 showing significant effect of the Delta abundance in
9 one generation on subsequent generation size tracking
10 and flow.

11 When we accounted for this effect, the step
12 declines required by the Cal WaterFix model became much
13 less important and may have disappeared entirely.

14 Instead, the population can be modeled in a
15 much less mysterious way where abundance in one year is
16 a function of abundance in the prior generation
17 December through May Delta outflow, a juvenile-to-adult
18 survival parameter and density dependence at high
19 population levels.

20 Moreover, the linear modeling approach Cal
21 WaterFix uses to project future impacts to Longfin
22 Smelt fails to consider and synthesize other adverse
23 effects of WaterFix on Longfin Smelt.

24 For example, although the Project is expected
25 to increase South Delta salvage of Longfin Smelt by up

1 to 29 percent in some year-types, this negative effect
2 has not incorporated its quantitative projections of
3 Cal WaterFix's effect on the Longfin Smelt population.

4 I can only conclude that the Cal WaterFix will
5 cause unreasonable impacts to Longfin Smelt because
6 WaterFix proposes declines in winter/spring outflows
7 that this species depends upon, models the population
8 in a way that will tend to obscure future population
9 declines, and fails to incorporate potentially
10 important new impacts to the specie's life cycle.

11 My final example of species level impacts
12 would be for Delta Smelt.

13 The environmental status quo has caused
14 catastrophic decline in this endemic population, and
15 maintenance of these conditions throughout these
16 populations' continued existence.

17 The best-available science shows that planned
18 WaterFix operations do not maintain status quo
19 conditions and will negatively affect Delta Smelt, both
20 because of reductions in winter and summer Delta
21 outflows, which means that WaterFix will limit the
22 extent and suitability of rearing habitat for larval
23 and juvenile Delta Smelt in many years, but also
24 because Cal WaterFix fails to substantially reduce
25 entrainment mortality risks.

1 Regarding Delta outflows, recent studies
2 indicate a strong significant influence of Delta
3 outflow on survival of Delta Smelt to subsequent life
4 stages.

5 Years in which flows are higher than average
6 for a given month tend to be years in which the Delta
7 Smelt population grows. The outflow relationship holds
8 in nearly every month of the year.

9 WaterFix proposes to reduce Delta outflow in
10 winter, spring and summer months compared to the status
11 quo. This will harm Delta Smelt and impair the
12 population's ability to recover.

13 The U.S. Fish and Wildlife Service's WaterFix
14 Biological Opinion concludes that lower outflow will
15 increase salinity and limit the extent and quality of
16 western parts of this specie's critical habitat.

17 Regarding entrainment, WaterFix operations are
18 expected to maintain high levels of entrainment
19 mortality in dryer years, which are exactly the
20 year-types when the population is most stressed and can
21 least tolerate added human-induced mortality.

22 The CESA Findings of Fact -- The State CESA
23 Findings of Fact explain that, although the percentage
24 of entrainment in juvenile Delta Smelt -- of larval and
25 juvenile Delta Smelt is expected to be similar under

1 the Project and the No-Action Alternative scenarios in
2 many years, entrainment will increase in dryer years
3 because on-water flows are more negative during dryer
4 years as a result of Project operations.

5 So, to conclude, based on my review of Cal
6 WaterFix Project documents and my professional
7 expertise in this ecosystem and with imperiled species
8 at large, I conclude that status quo management of
9 aquatic resources is unsustainable and unacceptable in
10 terms of protecting public trust values.

11 The Project documents reveal that, in
12 important ways, Cal WaterFix will contribute to the
13 acceleration of the degradation of this ecosystem; and,
14 furthermore, that the analyses in the Project documents
15 often do not represent the best-available science and
16 are biased -- or interpretation of their outputs is
17 biased towards a favorable view of the Project.

18 And that concludes my direct testimony.

19 CO-HEARING OFFICER DODUC: Thank you,
20 Dr. Rosenfield.

21 At this time, Mr. Obegi, does that conclude
22 your direct?

23 MR. OBEGI: It does.

24 CO-HEARING OFFICER DODUC: Let me get some
25 estimates, please, of cross-examination for

1 Dr. Rosenfield.

2 We'll begin with DWR.

3 MS. ANSLEY: As to be expected -- Jolie-Anne
4 Ansley for the Department of Water Resources.

5 As to be expected, we have some fairly
6 extensive cross for Dr. Rosenfield. I would put it on
7 the order of hour and a half, but it could be longer
8 depending on how questions are answered, of course.

9 CO-HEARING OFFICER DODUC: All right.

10 MR. O'HANLON: Good afternoon. Daniel
11 O'Hanlon for the San Luis & Delta-Mendota Authority and
12 Westlands Water District, Groups 4 and 5.

13 I estimate about 30 minutes.

14 CO-HEARING OFFICER DODUC: 30 minutes.

15 MR. O'BRIEN: Kevin O'Brien for the nonmarine
16 clients.

17 I estimate about 20 minutes.

18 CO-HEARING OFFICER DODUC: And that's Group 7.

19 MR. BEZERRA: Ryan Bezerra, also Group 7,
20 Cities of Folsom and Roseville, Sac Suburban Water
21 District, San Juan Water District.

22 I estimate about an hour. We'll see what
23 other people ask ahead of me.

24 CO-HEARING OFFICER DODUC: Okay.

25 MS. MORRIS: Stefanie Morris, Group Number 3,

1 State Water Contractors.

2 I estimate about 30 minutes, depending on what
3 happens before.

4 MR. HERRICK: John Herrick, South Delta
5 parties.

6 About a half an hour.

7 MR. JACKSON: Michael Jackson for the CSPA
8 parties.

9 I would estimate about 30 minutes.

10 MS. MESERVE: Osha Meserve for LAND.

11 15 minutes. Thank you.

12 CO-HEARING OFFICER DODUC: All right. Looks
13 like you will be coming back tomorrow, Dr. Rosenfield.
14 We'll try to wrap up today around 5 o'clock.

15 And with that, why don't we go ahead and take
16 a break before the DWR begins the first hour of its
17 cross-examination.

18 And we will return at 2:10.

19 (Recess taken at 1:54 p.m.)

20 (Proceedings resumed at 2:10 p.m.):

21 CO-HEARING OFFICER DODUC: All right. It is
22 2:10 and we are back.

23 Miss Ansley, Mr. Mizell, we will go to 3:10
24 and then take a break, or thereabout. It doesn't have
25 to be exactly but thereabout.

1 MS. ANSLEY: Would you like a list of topics?

2 CO-HEARING OFFICER DODUC: Yes, please.

3 MS. ANSLEY: Good afternoon. My name is
4 Jolie-Anne Ansley for the Department of Water
5 Resources.

6 I have an initial objection to make to Mr. --
7 Dr. Rosenfield's testimony.

8 Then I have a series of sort of foundational
9 questions regarding the -- the analysis that he did;
10 one or two questions regarding his qualifications; and
11 I believe that, in his direct testimony today, that he
12 made an errata and I'm going to go back over it and
13 confirm.

14 Then I'm going to basically walk through the
15 topics of his testimony.

16 I have questions on impacts to Salmon in which
17 he talked about flow models and life cycle models.

18 I have a little bit on entrainment of Salmon.

19 I have questions regarding, obviously, Longfin
20 the X2 and flow models; questions regarding Delta
21 Smelt.

22 So, as you can see, we're walking through his
23 topics. I have a couple questions on other
24 environmental factors that come at the end of his
25 testimony regarding the food web, turbidity and

1 Microcystis.

2 And then my final couple questions will be
3 regarding some of the conditions that are proposed.

4 So I do not plan, except for maybe in my
5 beginning foundational questions, to stray at all from
6 the topics he raises in his testimony.

7 CO-HEARING OFFICER DODUC: All right. Let's
8 hear your objection, then.

9 MS. ANSLEY: So if we could look at
10 Dr. Rosenfield's testimony, which is NRDC-58.

11 And if we could go to Page 3, Lines 3 through
12 7.

13 CROSS-EXAMINATION BY

14 MS. ANSLEY: Dr. Rosenfield, do you have a
15 copy of your testimony in front of you as well?

16 WITNESS ROSENFELD: I do.

17 MS. ANSLEY: I will try to make sure it's
18 projected on the screen, but we're going to walk
19 through a lot of documents.

20 WITNESS ROSENFELD: Okay.

21 MS. ANSLEY: So my initial objection is, it
22 appears on Line 7 that -- Well, first, I wanted to ask
23 a couple quick questions about which documents we're
24 exactly referring to here. I believe they are marked
25 as NRDC exhibits.

1 And then my objection will go to incorporating
2 those exhibits, if they are intended to be incorporated
3 fully into the testimony.

4 Dr. Rosenfield, looking at Page -- Looking at
5 Lines between 4 and 5, do you see the NRDC et al. 2015
6 reference?

7 WITNESS ROSENFELD: Yes, I do.

8 MS. ANSLEY: Can you confirm whether that is
9 NRDC-23 exhibit in this proceeding?

10 WITNESS ROSENFELD: Let me see.

11 MS. ANSLEY: And if you need us to bring up
12 the Exhibit Index . . .

13 WITNESS ROSENFELD: Yeah. If you could bring
14 it up on the screen, that would help.

15 MS. ANSLEY: That would be fine.

16 So I think -- I'm trying -- I was trying to
17 identify which documents you're talking about, but I
18 believe it's NRDC-23.

19 (Exhibit displayed on screen.)

20 MS. ANSLEY: Do I have that correct?

21 Can you see that? They can blow it up if
22 you'd like to.

23 Is that the document you're referencing there?

24 WITNESS ROSENFELD: Yes, that's correct.

25 MS. ANSLEY: And then is NRDC-24 attachments

1 to that document?

2 WITNESS ROSENFELD: (Examining document.)

3 Yes, that's what it says.

4 MS. ANSLEY: And am I correct in that NRDC is
5 the 99-page document, roughly, in your memory?

6 You're welcome to have them open it but my
7 opening shows that it's 99 pages.

8 WITNESS ROSENFELD: I remember it being quite
9 long.

10 MS. ANSLEY: Do you recall that the
11 attachments were approximately just under 2,000 pages?

12 WITNESS ROSENFELD: I don't recall the length
13 of the attachments.

14 MS. ANSLEY: And then on the next line down,
15 which is between 5 and 6 there in your testimony, is
16 the Defenders of Wildlife, et al., 2014, is that a
17 reference to NRDC-25?

18 If we could flashback to the Exhibit Index.

19 (Exhibit displayed on screen.)

20 WITNESS ROSENFELD: Yes.

21 MS. ANSLEY: And do you recall that that
22 document is on the scope or order of about 258 pages?

23 WITNESS ROSENFELD: That sounds right.

24 MS. ANSLEY: And so, then, the nature of my
25 objection on Number 7 is that, in the February 21st,

1 2017, ruling, the Board found that people could rely on
2 our site as exhibits, the comments to the earlier
3 environmental review documents, some of which were
4 obviously quite extensive, but ruled that it was
5 improper to incorporate as a whole in their direct
6 testimony in this proceeding voluminous documents like
7 that.

8 So the objection is -- and maybe it could just
9 be clarified -- that if this is lines to be
10 incorporated wholly by reference as direct testimony
11 those extensive comments, then I have an objection I
12 believe is already covered by the February 21st, 2017,
13 ruling.

14 If it's only intended to be relied on as an
15 exhibit, then I believe the objection is obviated.

16 CO-HEARING OFFICER DODUC: Mr. Obegi.

17 MR. OBEGI: I believe the intent is only to
18 rely on it as exhibits for NRDC-25, 24 and NRDC-23.

19 MS. ANSLEY: And then it would be possible,
20 then, to have a motion to strike the -- Line 7 so
21 there's no misunderstanding, incorporate those
22 comments, I believe, by reference?

23 CO-HEARING OFFICER DODUC: Mr. Obegi, any
24 objection to that?

25 MR. OBEGI: No objection.

1 CO-HEARING OFFICER DODUC: Let's make that
2 happen.

3 MS. ANSLEY: Thank you.

4 Then can if we could go to -- I earlier --
5 Just to clear up the errata issue, then.

6 I heard you on direct say, in reference to
7 Page 18 of your testimony . . .

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: Let's see make sure we get it
10 correct.

11 Around -- Around Line 14, I believe, you talk
12 about -- Oh, yeah.

13 So Lines 14 to 20 roughly, you talk about the
14 NMFS Life Cycle Model. And I thought I heard you had a
15 correction to that earlier today; is that correct?

16 WITNESS ROSENFELD: That's correct.

17 MS. ANSLEY: And -- And could you -- I'm sorry
18 to make you repeat, but could you clarify for the
19 record what that correction would be and what testimony
20 here you are altering or striking?

21 WITNESS ROSENFELD: Yeah. On Line 17 and 18,
22 I say that (reading):

23 ". . . the NMFS Life Cycle Model does not
24 incorporate the negative effect of
25 increased predation mortality or

1 impingement mortality at the WaterFix
2 diversion facilities . . ."

3 And on subsequent study, I found out there
4 were scenarios where those effects were incorporated
5 into the NMFS Life Cycle Modeling.

6 MS. ANSLEY: And so are you moving to strike
7 that sentence that begins with the word "as" on Line 17
8 through the end of that sentence, which would be on
9 Line 20 with your reference to Appendix H?

10 Would that resolve the problem?

11 WITNESS ROSENFELD: That would resolve the
12 problem, yes.

13 MR. OBEGI: No objection.

14 CO-HEARING OFFICER DODUC: All right. It's
15 stricken.

16 MS. ANSLEY: Thank you very much.

17 And just to confirm that point and -- Was your
18 further investigation of the NMFS BiOp, was that
19 because you found the section in the BiOp that
20 discussed near-field mortality?

21 WITNESS ROSENFELD: I don't recall what
22 section -- what the section label was, but I was
23 reviewing the NMFS Life Cycle Modeling and found out
24 there were various scenarios, some of which included
25 near-field mortality, some of which did not.

1 And the outcome, whether near-field mortality
2 was included or not, was not very different. So that's
3 my recollection of what I was reading.

4 MS. ANSLEY: Okay. Well, that's a few less
5 questions for my chart. Thank you.

6 And then I'd like to move on to some
7 foundational questions on the qualifications.

8 So I reviewed your Statement of Qualifications
9 here, Dr. Rosenfield, and I just wanted to confirm a
10 couple minor things.

11 You have never been an employee of a State or
12 local water supply agency; have you?

13 Well, let's break it down. I see you
14 thinking.

15 WITNESS ROSENFELD: Yeah.

16 MS. ANSLEY: I've seen your resumi.

17 Have you been directly employed by a State or
18 local Water Agency?

19 WITNESS ROSENFELD: No to my recollection,
20 no.

21 MS. ANSLEY: And are you trying to recall
22 that -- whether you were employed when you were a
23 consultant to a water supply agency?

24 WITNESS ROSENFELD: Yes.

25 MS. ANSLEY: And do you have a recollection of

1 that?

2 WITNESS ROSENFELD: Well, when I was employed
3 as a consultant, I served as a -- I can think of an
4 example where I was a subconsultant to another
5 consultant on a project that I believe DWR was a client
6 on.

7 So I don't know whether that counts to your
8 question or not.

9 MS. ANSLEY: Did you have any -- Did your role
10 on being a consultant have anything to do with water
11 supply?

12 WITNESS ROSENFELD: Tangentially, yeah.

13 MS. ANSLEY: In what way?

14 WITNESS ROSENFELD: Well, the example I'm
15 recalling is the Delta risk management strategy, which
16 had to do with the -- My section, or the section that I
17 worked on, was the ecolog -- the projected ecological
18 effects of a widespread levee collapse in the Delta.

19 MS. ANSLEY: Can you recall any other Project
20 besides the widespread levee collapse?

21 WITNESS ROSENFELD: Can you repeat the
22 question?

23 MS. ANSLEY: I think that I started out the
24 question asking whether you were -- if you've ever been
25 a direct employee of the -- of a local or State water

1 supply agency.

2 And I think there where we went then was in
3 your -- I noticed that you were a consultant for a year
4 or two, at least, and that we had moved on to whether
5 you had any Projects where you were employed as a
6 consultant to a water supply agency.

7 WITNESS ROSENFELD: Right. So I don't recall
8 any other examples.

9 MS. ANSLEY: And you have never managed a
10 water supply system.

11 WITNESS ROSENFELD: That's correct.

12 MS. ANSLEY: And --

13 WITNESS ROSENFELD: Outside of my house.

14 (Laughter.)

15 MS. ANSLEY: Have you ever conducted any
16 modeling in CalSim II or DSM-II?

17 WITNESS ROSENFELD: No, I have not.

18 MS. ANSLEY: And did you prepare your
19 testimony here today?

20 WITNESS ROSENFELD: Yes, I did.

21 MS. ANSLEY: And did anyone assist you in the
22 preparation of your testimony?

23 WITNESS ROSENFELD: Well, this is my
24 testimony, but I always rely on input from my
25 colleagues and assistance from my colleagues.

1 So I did receive assistance in identifying key
2 issues and researching how key issues that we had
3 raised in previous comments on the WaterFix, whether
4 they were still relevant given the new documentation.

5 Mr. Obegi helped me with that prior to my
6 own's in September and/or October in 2017.

7 Following to my return to work, I did ask
8 Ms. Kate Poole, Ms. Rachel Zwillinger, Gary Bobker, my
9 boss at the Bay Institute, and some staff members --
10 other staff members at the Bay Institute to review my
11 written testimony for editorial concerns, organization,
12 use of language that might be interpreted differently
13 in the legal context than it is for Biologists,
14 et cetera.

15 MS. ANSLEY: Were there any key issues that
16 you address in your testimony that were identified by
17 anybody else besides yourself?

18 WITNESS ROSENFELD: Well, as I just
19 mentioned, Mr. Obegi helped me identify key issues
20 prior to my own's in 2017 just based on the volume of
21 issues that we raised.

22 As you pointed out, in our previous testimony,
23 it's not a one-person task to track down all of those
24 previous comments and see how they translate into a new
25 raft of documents. So I got some help in seeing how

1 those issues translated.

2 But in the end, the testimony is mine.

3 MS. ANSLEY: And did anyone make any review --
4 Or did anyone revise or modify your testimony after it
5 was first drafted?

6 WITNESS ROSENFELD: Again, I did ask for and
7 receive editorial advice from my boss at Bay Institute,
8 Miss Poole at NRDC, Mrs. Zwillinger at Defenders of
9 Wildlife, and other members of TBI staff, and they made
10 suggestions, and sometimes I accepted those suggestions
11 and sometimes I rejected those objections.

12 MS. ANSLEY: And I guess I'll finish with:

13 Did anyone draft a section of your testimony
14 that was not you?

15 WITNESS ROSENFELD: In identifying key
16 issues, there was writing, some of which I verified and
17 used in my final, some -- a lot of which I did not use.

18 So, again, it depends on what you mean by
19 "drafted."

20 MS. ANSLEY: I mean drafted the language
21 that's in your testimony here.

22 WITNESS ROSENFELD: There -- There's wording
23 that appeared in the identification of key issues that
24 I subsequently used, after confirming that it was my
25 testimony, that that was correct.

1 MS. ANSLEY: On Page 2 of your testimony -- If
2 you'd look at that with me.

3 (Exhibit displayed on screen.)

4 MS. ANSLEY: On the bottom, on Lines 23 to 26,
5 you state that (reading):

6 "I have neither reviewed nor
7 discussed with anyone the written
8 testimony to the State Water Board . . ."

9 WITNESS ROSENFELD: 23 through 26? Yeah.

10 MS. ANSLEY: Yeah.

11 Do you see that testimony there?

12 WITNESS ROSENFELD: I do.

13 MS. ANSLEY: And so do you -- Are you aware of
14 anyone else at the Bay Institute or NRDC or any of the
15 groups that are -- for whom your testimony is submitted
16 had discussions with any other parties to this
17 proceeding regarding your testimony?

18 WITNESS ROSENFELD: I'm sorry. I don't
19 understand your question.

20 MS. ANSLEY: Okay. So you state that you had
21 no discussion regarding your testimony with any other
22 party; is that correct?

23 WITNESS ROSENFELD: Other than that I just
24 identified, yes.

25 MS. ANSLEY: Other -- other --

1 WITNESS ROSENFELD: Other than those folks
2 that I just identified.

3 MS. ANSLEY: Any other party to this
4 proceeding I'm saying.

5 WITNESS ROSENFELD: Yes, that's correct.

6 MS. ANSLEY: And meaning other than the NRDC,
7 The Bay Institute and Defenders of Wildlife. Those would
8 be the three parties that you're here as a witness for;
9 is that correct?

10 WITNESS ROSENFELD: That's correct.

11 MS. ANSLEY: Okay. Are you aware if anyone
12 else at NRDC had any discussions with any other parties
13 to this proceeding regarding your testimony?

14 WITNESS ROSENFELD: I'm not aware of any of
15 those discussions.

16 I know that I limited my interactions with
17 Mr. Obegi after returning from my medical condition
18 because there was -- because he had been involved in
19 these proceedings and we wanted to steer very clear,
20 make very certain that I wasn't violating the condition
21 of my testimony, which was not to review transcripts
22 or -- or otherwise hear what the testimony of other
23 parties was.

24 MS. ANSLEY: So you were not aware of any
25 other discussions with other parties to this proceeding

1 regarding the content of your testimony.

2 WITNESS ROSENFELD: That's correct.

3 MS. ANSLEY: On Page 4 of your testimony --

4 And this is going to some foundational questions.

5 On Page 4 of your testimony --

6 (Exhibit displayed on screen.)

7 MS. ANSLEY: -- you state that you -- on

8 Lines 16 and 17 -- you reviewed (reading):

9 ". . . Project documents and those

10 relating to permits necessary to build

11 and operate the Project . . ."

12 Do you see that? Page 4.

13 WITNESS ROSENFELD: Page 4. What were the
14 line numbers?

15 MS. ANSLEY: Roughly 16 to 17, 15 to 17.

16 WITNESS ROSENFELD: (Examining document.)

17 Where it says, "Based on my review of Project
18 documents"? Is that what you're referring to?

19 MS. ANSLEY: Yes, that's what I'm referring
20 to.

21 WITNESS ROSENFELD: Yes, I see that.

22 MS. ANSLEY: Does this include the Final EIR
23 for the California WaterFix adopted in July of 2017?

24 WITNESS ROSENFELD: I can't recall which
25 version of the -- I mean, I can't recall whether I

1 reviewed sections of that or not, because there are
2 various chapters, Biological Effects Analyses,
3 et cetera, and it's hard to know which document that
4 comes as a piece of. So --

5 MS. ANSLEY: Well, if you look at Page -- Just
6 real quickly, if you look at Page 38 of your testimony.

7 WITNESS ROSENFELD: Yeah.

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: Do you see that on Line 13?

10 WITNESS ROSENFELD: (Examining document.)

11 Right. That refers to the -- to the previous
12 Revised Draft Environmental Impact Report and
13 Substitute Draft Environmental Impact Statement that
14 were the subject of our comments in the NRDC, et al.,
15 exhibit.

16 MS. ANSLEY: And is --

17 WITNESS ROSENFELD: So that's not a reference
18 to a document that was updated in 2017.

19 MS. ANSLEY: Correct.

20 But you understand that there was a subsequent
21 Final EIR issued for the California WaterFix in 2017.

22 WITNESS ROSENFELD: I do.

23 MS. ANSLEY: And I did not see any references
24 to that document in your testimony; is that correct?

25 WITNESS ROSENFELD: I can't -- I -- Without

1 reading through it, I wouldn't know whether I
2 referenced it or not.

3 MS. ANSLEY: As you sit here today, though, do
4 you -- do you know whether you reviewed the final
5 chapter on water quality from the FEIR adopted in 2017?

6 WITNESS ROSENFELD: I don't recall reviewing
7 that.

8 MS. ANSLEY: How about the chapter on aquatic
9 resources, which would be Chapter 11 to the Final EIR.

10 WITNESS ROSENFELD: I believe I did review
11 Chapter 11, although, again, it may have been
12 Chapter 11 of a different document. I mean, some of
13 this is going back into 2017, so which version of which
14 document I was reviewing.

15 MS. ANSLEY: Was it your understanding that
16 the Recirculated Draft EIR was issued before 2017?

17 WITNESS ROSENFELD: The document that we were
18 just referring to? The --

19 MS. ANSLEY: The one that you cite in your
20 testimony.

21 WITNESS ROSENFELD: Yes. That came out
22 before 2017.

23 MS. ANSLEY: And so -- But as you sit here
24 today, did you -- you cannot specifically recall if you
25 reviewed Chapter 11 on aquatic resources in the

1 Final EIR adopted in 2017?

2 WITNESS ROSENFELD: I believe I did, but I
3 can't swear that I did.

4 MS. ANSLEY: And did you also review the
5 developments after publication of the Proposed Final
6 Environmental Report, which was also part of the
7 adoption of the Final EIR in July 2017?

8 And this is SR -- SWRCB-108. If we could
9 bring that up real quick, just the cover page. Mike
10 sure you know which document I'm talking about.

11 (Exhibit displayed on screen.)

12 MS. ANSLEY: And if you need to look at the
13 next page, that's fine.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: Do you recall reviewing this
16 document after its issuance in July 2017?

17 WITNESS ROSENFELD: Again, it's hard to
18 recall from the cover sheet which documents I've read
19 parts of or didn't.

20 I mean, I certainly reviewed updated export
21 and Delta outflow analyses and large portions of other
22 documents that are cited in my testimony.

23 I mean, it's -- That's sort of a problem with
24 the Cal WaterFix, is knowing which version of which of
25 these copious documents is the most up-to-date.

1 MS. ANSLEY: But you are aware of the
2 environmental review process under CEQA and NEPA; is
3 that correct?

4 WITNESS ROSENFELD: I'm generally aware of
5 the process, yeah.

6 MS. ANSLEY: And you know that, generally,
7 there's a Final Environmental Impact -- or impact
8 Report and/or a Final Environmental Impact Statement
9 that is issued after drafts?

10 WITNESS ROSENFELD: Yes, that's my
11 understanding.

12 MS. ANSLEY: In reaching your conclusions in
13 NRDC-58, did you perform any independent modeling of
14 the impacts of the California WaterFix on
15 hydrodynamics?

16 WITNESS ROSENFELD: Independent mod -- Can
17 you define "independent modeling" and "hydrodynamics"?

18 MS. ANSLEY: Sure.

19 So, earlier today, you said -- Half an hour
20 ago, you said you do -- you did not use CalSim II or
21 DSM-II to model; is that correct?

22 WITNESS ROSENFELD: That's correct.

23 MS. ANSLEY: So, when I say "independent
24 modeling," I mean, did you use some model, a
25 hydrodynamic model -- and you don't have to be limited

1 to those two -- to independently analyze the California
2 WaterFix?

3 WITNESS ROSENFELD: No, I did not.

4 MS. ANSLEY: And that would include -- When I
5 say "hydrodynamics," I also include issues of residence
6 time.

7 Did you model residence time impacts of
8 California WaterFix?

9 WITNESS ROSENFELD: No, I did not.

10 MS. ANSLEY: What about any other water
11 quality constituent such as temperature or turbidity?

12 WITNESS ROSENFELD: I did not model
13 temperature or turbidity.

14 MS. ANSLEY: And I realize -- and we will
15 discuss -- that you reviewed the modeling done for the
16 Biological Opinions and the ITP Permit.

17 But did you yourself perform any modeling of
18 Salmon -- juvenile Salmon survival, for example, using
19 the Delta Passage Model or the Perry Model or any
20 independent model that looked at the specific impacts
21 of the California WaterFix?

22 WITNESS ROSENFELD: No. I did not model
23 independently. I didn't need additional tasks and
24 things to read.

25 But the documents speak for themselves, I

1 think.

2 MS. ANSLEY: And you're here today to provide
3 testimony on the impacts of the California WaterFix on
4 the fish species you mentioned in your testimony; is
5 that correct?

6 WITNESS ROSENFELD: That's correct.

7 MS. ANSLEY: And it's your understanding that
8 one of the key issues identified for this hearing is
9 whether the proposed change will have an unreasonable
10 effect on fish, wildlife, or other instream beneficial
11 uses --

12 WITNESS ROSENFELD: That's --

13 MS. ANSLEY: -- of water?

14 WITNESS ROSENFELD: -- my understanding.

15 MS. ANSLEY: That that is a key Part 2 hearing
16 issue.

17 WITNESS ROSENFELD: Yes.

18 MS. ANSLEY: Okay. And you also understand
19 that the Hearing Officers in this proceeding have
20 stated that the focus of this issue is on effects of
21 the proposed change and not existing or overall effects
22 of the Projects?

23 MR. OBEGI: I'm going to object to that
24 question: Assumes facts not in evidence. Or at least
25 that have been presented to the witness.

1 CO-HEARING OFFICER DODUC: Miss Ansley.

2 MS. ANSLEY: Well, I mean, is he aware that
3 the -- in the pre-hearing -- Are you -- Did you review
4 the Part 1 hearing here and the testimony submitted
5 there?

6 WITNESS ROSENFELD: In Part 1 of this
7 proceeding?

8 MS. ANSLEY: Um-hmm.

9 WITNESS ROSENFELD: No, I did not.

10 MS. ANSLEY: And did that include -- Did you
11 review the pre-hearing conference of the hearing -- of
12 this proceeding whereby the Hearing Officers laid out
13 the key hearing issues that started this whole thing
14 off?

15 WITNESS ROSENFELD: I did not review that.

16 I presented by testimony from my vantage point
17 as a biological expert, and I leave it to the Board and
18 others to determine the relevance of my expertise or
19 the impressions or opinions formed based on that
20 expertise to this proceeding.

21 MS. ANSLEY: And you relied on your expertise
22 in framing the Part 2 hearing issue that we just
23 discussed?

24 WITNESS ROSENFELD: That's correct.

25 MS. ANSLEY: And I'd like to move on to

1 questions regarding Salmon, flow, and Life Cycle
2 Models.

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

4 MS. ANSLEY: Several places in your testimony,
5 you cite a study by Klimley, et al. (2017).

6 Are you familiar with that study?

7 WITNESS ROSENFELD: Yes.

8 MS. ANSLEY: Can we call up DWR-1161 which is
9 on the flash drive, Mr. Hunt?

10 (Exhibit displayed on screen.)

11 MS. ANSLEY: And just to make sure we're on
12 the same page.

13 This is the study that you reference in your
14 testimony; is that correct?

15 WITNESS ROSENFELD: (Examining document.)

16 I'm not sure that that is the --

17 MS. ANSLEY: Well, let's look at your
18 reference list --

19 WITNESS ROSENFELD: Right.

20 MS. ANSLEY: -- which is on Page -- Let's look
21 at Page 45 --

22 (Exhibit displayed on screen.)

23 MS. ANSLEY: -- on Lines 11 through 13.

24 Do you see the study cited there by Klimley?

25 WITNESS ROSENFELD: Yes. So that is the --

1 that's the version.

2 MS. ANSLEY: Okay. And, then, this is the
3 study you rely on, on -- And you do have a copy of your
4 testimony in front of you; correct?

5 WITNESS ROSENFELD: Yes.

6 MS. ANSLEY: This is the study you rely on, on
7 Page 8, Lines 3 through 5.

8 Do you see that?

9 WITNESS ROSENFELD: (Examining document.)

10 (Exhibit displayed on screen.)

11 WITNESS ROSENFELD: Yes, I see that.

12 MS. ANSLEY: And then if you turn to Page 10,
13 Lines 21 through 23.

14 (Exhibit displayed on screen.)

15 WITNESS ROSENFELD: That's correct. Although
16 I should say that I recall reading a -- another Klimley
17 paper also published in 2017 that was about the same
18 period of study.

19 MS. ANSLEY: Okay. Do you have a copy of this
20 11 -- It's not on the screen anymore.

21 Do you have a copy of the Klimley study that
22 you cited in your testimony with you today?

23 WITNESS ROSENFELD: Let me see.

24 MS. ANSLEY: If you don't, I did bring an
25 extra copy.

1 WITNESS ROSENFELD: I could use the extra
2 copy.

3 MS. ANSLEY: (Handing document to witness.)
4 And this is marked 1161. There's no changes.

5 WITNESS ROSENFELD: (Examining document.)

6 MS. ANSLEY: So, generally, your testimony
7 does not provide page numbers.

8 Can you point us to where in this study by
9 Klimley, et al., your statement at Page 10, 21 through
10 28 is supported?

11 And on the page, you say -- stated that this
12 study documents reasonably (reading):

13 ". . . lower survival of acoustically
14 tagged spring-run Chinook Salmon in the
15 Sacramento River at lower flows, and much
16 higher survival in higher flows."

17 WITNESS ROSENFELD: Yeah. And I'm looking at
18 this paper, and I believe that it is possible I made an
19 error in the citation to the paper that I was reading.

20 Because this paper does not appear to cover
21 the same material that -- that I was referring to.

22 So, I apologize for that, and I can produce
23 the document that I was referring to here.

24 MS. ANSLEY: To make sure I close the door on
25 this for now:

1 So, you're saying now that -- And if you want
2 to look -- I had cited for you -- I'll cite three
3 places where you cite this study: Page 8, Lines 3
4 through 5, which we just -- we looked at before;
5 Page 10, Lines 21 through Page 11, Line 3.

6 And then I have one more spot: Page 20,
7 Lines 19 through 22.

8 And I can repeat those, but would you confirm
9 with me now that this is not -- this study by Klimley,
10 et al., (2017) that is cited in your testimony does not
11 support these statements?

12 WITNESS ROSENFELD: I have to review this
13 paper again to see exactly what this paper reports
14 versus the other paper that I was also reading by the
15 same first author.

16 MS. ANSLEY: I'm happy to give you a moment to
17 review that paper or abstract or whatever you need.

18 WITNESS ROSENFELD: And can you also give me
19 the first page/line numbers citation that you offered?

20 MS. ANSLEY: Oh, I'm sorry. Yes.

21 So, the first page I offered was Page 8,
22 Lines 3 through 5.

23 WITNESS ROSENFELD: 3 through 5. Okay.

24 MS. ANSLEY: Then Page 10, Lines 21 through
25 Page 11, Line 3.

1 WITNESS ROSENFELD: Um-hmm.

2 MS. ANSLEY: And then the third place you cite
3 Klimley is Page 20, Lines 18 through 22.

4 WITNESS ROSENFELD: 18 through 22.

5 Okay. If you want to give me a moment to
6 review this.

7 MS. ANSLEY: Sure.

8 It is my understanding that this study looks
9 at outward migration and the effects of bridges and
10 cables on electromagnetic fields that got examined to
11 the ocean.

12 WITNESS ROSENFELD: (Examining document.)

13 Yeah. I'm going to have to, after a brief
14 review, conclude that this was not the paper that I was
15 referring to, as the study period for this paper
16 appears to be 2014, and the paper that I was
17 referencing included 2015 results.

18 So, again, my apologies for including the
19 wrong citation, but I can provide the proper citation.

20 MS. ANSLEY: Then moving on to . . . another
21 study of outmigrating Salmon.

22 Can we look add NRDC-38.

23 (Exhibit displayed on screen.)

24 MS. ANSLEY: Are you familiar with this study?
25 I didn't see it cited in your testimony.

1 WITNESS ROSENFELD: (Examining document.)

2 I'm familiar with it, yeah, vaguely.

3 MS. ANSLEY: Do you know why, if it's not
4 cited in your testimony, why it's included here as an
5 exhibit?

6 WITNESS ROSENFELD: I can't say.

7 MR. OBEGI: I'm going to object to that
8 question.

9 Parties are allowed to have exhibits that are
10 not referenced in testimony of a witness.

11 CO-HEARING OFFICER DODUC: And she's allowed
12 to ask.

13 MS. ANSLEY: Yeah.

14 If we could look at Page 38 of this study.

15 (Exhibit displayed on screen.)

16 MS. ANSLEY: Excuse me. This is a Master's
17 dissertation -- or thesis by Jeremy Notch.

18 WITNESS ROSENFELD: Right.

19 MS. ANSLEY: Don't let me misrepresent it.

20 And is it your understanding that this thesis
21 or this research acoustically tagged out-migrating
22 Salmon Smolts from Mill Creek to the Golden Gate?

23 Are you familiar enough to recall that?

24 WITNESS ROSENFELD: That's my recollection,
25 yes.

1 MS. ANSLEY: And that Notch evaluated survival
2 over a range of environmental conditions?

3 WITNESS ROSENFELD: In a range of years, yes.

4 MS. ANSLEY: Okay. And, then, based on my
5 review of your own papers, I assume that you are
6 familiar with AIC -- C score -- I don't know how to
7 refer that -- AICC scores?

8 What's the proper way to --

9 WITNESS ROSENFELD: AIC scores.

10 MS. ANSLEY: AIC scores.

11 And this is the way to select the best model
12 explaining statistical relationships; is that correct?

13 WITNESS ROSENFELD: I would rephrase that a
14 little bit to say that is a way of evaluating the
15 statistical relevance of different models and choosing
16 among them based on their statistical properties, which
17 might not be the best model, but it's the model that
18 explains the data the best.

19 MS. ANSLEY: Understood.

20 And this -- You used AIC scores in your
21 Nobriga and Rosenfield 2016 paper; is that correct?

22 WITNESS ROSENFELD: That's correct.

23 MS. ANSLEY: And isn't it correct that models
24 with lower AIC scores are more supported than models
25 with higher AIC scores, just generally?

1 WITNESS ROSENFELD: That's correct.

2 MS. ANSLEY: And is it -- Isn't it true that
3 models with scores in the range of about nine to 11
4 have relatively little support and scores above 20 have
5 no empirical support?

6 Is that a rule of thumb?

7 WITNESS ROSENFELD: I'm not familiar with
8 that rule of number.

9 MS. ANSLEY: Can we call up DWR-1162?

10 I'm sorry. This would be on our thumb drive,
11 Mr. Hunt. I'm sorry.

12 (Exhibit displayed on screen.)

13 MS. ANSLEY: Are you familiar with this paper
14 by Burnham, et al., of 2011?

15 WITNESS ROSENFELD: I'm not. Not at least
16 from -- Maybe if I started reading it, I would
17 recognize it, but . . .

18 MS. ANSLEY: You're not familiar with it as
19 you sit here today?

20 WITNESS ROSENFELD: No. I don't recall it.

21 MS. ANSLEY: And can we go back to the
22 NRDC-38, Page 38, which is the Table 3 again.

23 (Exhibit displayed on screen.)

24 MS. ANSLEY: Okay. And this is looking back
25 at Notch -- Notch's AIC scores for the various models

1 that he was investigating.

2 Do you see that on the screen?

3 (Exhibit displayed on screen.)

4 WITNESS ROSENFELD: I see it on the screen.

5 I'm trying to find it in my reprint.

6 MS. ANSLEY: Oh, sure.

7 I have a copy that's falling apart.

8 WITNESS ROSENFELD: It's Page 38?

9 MS. ANSLEY: Yeah, Page 38.

10 WITNESS ROSENFELD: Okay.

11 MS. ANSLEY: And doesn't this show that flow
12 alone as a factor was among the least or second least
13 supported of the models that he investigated?

14 WITNESS ROSENFELD: It shows that flow alone
15 doesn't have very much support.

16 MS. ANSLEY: And is the same true of
17 Sacramento River flows as well? Those all have numbers
18 that are at least greater than -- for the most part,
19 greater than 16. I see one exception at seven.

20 WITNESS ROSENFELD: (Examining document.)

21 All right. And are you looking at the Reach
22 Specific Model or the Regional Model?

23 MS. ANSLEY: I'm looking at both.

24 WITNESS ROSENFELD: Okay.

25 MS. ANSLEY: I'm looking at both.

1 WITNESS ROSENFELD: I see that those models
2 have less support than other models listed.

3 MS. ANSLEY: And then turning back to your
4 testimony, NRDC-58. I'd like to ask a couple questions
5 about your testimony --

6 (Exhibit displayed on screen.)

7 MS. ANSLEY: -- regarding the IOS Model which
8 I believe is on Page 17.

9 (Exhibit displayed on screen.)

10 MS. ANSLEY: Okay. And here you state the --
11 And I believe I heard you also do it on your direct
12 testimony earlier.

13 You talk about the IOS Model estimating
14 escapement at 25 percent lower under the Cal WaterFix.

15 Do you see that testimony? It's at Line 23.

16 WITNESS ROSENFELD: I do.

17 MS. ANSLEY: Okay. And isn't it true that the
18 NMFS CWF Biological Opinion at Page 795, which you
19 cite, refers to the Biological Assessment as its
20 support?

21 WITNESS ROSENFELD: I'd have to see --

22 MS. ANSLEY: Sure.

23 WITNESS ROSENFELD: -- the document at that
24 page.

25 Can we go to the SWRCB-106, Page 795.

1 (Exhibit displayed on screen.)

2 MS. ANSLEY: I'm sorry. Not .pdf but actual
3 Page 795. I apologize, Mr. Hunt. So just a couple
4 pages down.

5 (Exhibit displayed on screen.)

6 MS. ANSLEY: Then keep scrolling down.

7 (Exhibit displayed on screen.)

8 MS. ANSLEY: So, looking at -- Unbelievably,
9 that section number is 2.5.1.2.7.5.1.3.

10 Do you see in the second paragraph there that
11 starts, "Throughout," that it's referencing BA
12 Section 5.4.1.3.1.2.1.3.4?

13 WITNESS ROSENFELD: I see the reference to
14 that BA section in the second sentence. It doesn't
15 necessarily apply to the other sentences, though.

16 MS. ANSLEY: It's not your understanding that
17 that is the support for where the 25 percent number is
18 discussed and comes from for the IOS Model?

19 WITNESS ROSENFELD: It seems -- Yes, that
20 quote seems to be coming from that --

21 MS. ANSLEY: And did you --

22 WITNESS ROSENFELD: -- Biological Assessment
23 section.

24 MS. ANSLEY: I'm sorry.

25 Did you review the Biological Assessment, that

1 section that was cited there?

2 WITNESS ROSENFELD: Again, I can't recall
3 exactly which sections I reviewed or not.

4 I mean, there was -- As you can see from the
5 long section number, there's quite a bit of detail here
6 and a lot of cross-referencing.

7 MS. ANSLEY: Yes.

8 WITNESS ROSENFELD: So I don't think I took
9 it direct from this statement here.

10 I mean, I referenced that line here on this
11 page, but I don't -- I think I was looking also at the
12 results.

13 MS. ANSLEY: So you did review the Biological
14 Assessment that had the actual analysis.

15 WITNESS ROSENFELD: Yes. I reviewed -- I
16 reviewed a lot of the Biological Assessment. Whether I
17 reviewed it for this component, or perhaps I also
18 looked at the graphic that's just a little bit above on
19 this same page.

20 MS. ANSLEY: Well, can we go to DWR-1142.

21 Now, that is already submitted, Mr. Hunt.

22 And that would be Page 5-177.

23 (Exhibit displayed on screen.)

24 MR. HUNT: Can you repeat the page number?

25 MS. ANSLEY: Sure. It's 5-177.

1 (Exhibit displayed on screen.)

2 MS. ANSLEY: Five. 5-177.

3 (Exhibit displayed on screen.)

4 MS. ANSLEY: Yeah.

5 And then do you see the paragraph that's
6 starting, "In contrast to OBAN"?

7 WITNESS ROSENFELD: I see the paragraph,
8 yeah.

9 MS. ANSLEY: And if you need him to scroll up
10 to confirm that it's the same section, we can do that.

11 (Exhibit displayed on screen.)

12 MS. ANSLEY: Keep scrolling up, Mr. Hunt, for
13 a minute.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: But it's the same section
16 reference on the page you cited in the NMFS BiOp, if
17 you can remember that string of numbers.

18 And then scrolling back down to the paragraph
19 that we were talking about.

20 (Exhibit displayed on screen.)

21 MS. ANSLEY: And then do you see the
22 sentence -- And I'll try and do a good job here
23 referencing it.

24 Do you see the sentence where it talks
25 about . . .

1 (Exhibit displayed on screen.)

2 MS. ANSLEY: Thank you.

3 -- that starts, "However"? I believe it's the
4 second sentence of that paragraph. It says, "However,
5 the variability."

6 And maybe you could read that paragraph.

7 WITNESS ROSENFELD: I see the sentence and --
8 and --

9 MS. ANSLEY: And feel free just to maybe read
10 that paragraph really quickly and I'll --

11 WITNESS ROSENFELD: Yeah.

12 MS. ANSLEY: -- ask my questions.

13 WITNESS ROSENFELD: I'm trying, yeah.

14 (Examining document.)

15 WITNESS ROSENFELD: Okay. I've read the
16 paragraph.

17 MS. ANSLEY: Okay. And do you see the -- So
18 the sentence that I was pointing to that starts with
19 "however," sort of the second half of it goes on to say
20 (reading):

21 ". . . that the escapement confidence
22 intervals for the PA and NAA overlapped
23 in all years . . ."

24 Do you see that?

25 WITNESS ROSENFELD: I see that.

1 MS. ANSLEY: And then goes on, saying

2 (reading):

3 ". . . years with greatest differences in
4 escapement between PA and NAA, the
5 95 percent confidence intervals spread
6 over two orders of magnitude."

7 WITNESS ROSENFELD: I see that.

8 MS. ANSLEY: When the confidence intervals
9 overlap, doesn't that mean that there's uncertainty as
10 to whether the model shows an actual difference between
11 the PA -- the PA and the NAA?

12 WITNESS ROSENFELD: Well, that's true when
13 you're dealing with actual data. It's a little
14 different when you use a model and then generate
15 uncertainties from the model.

16 I mean, it is showing that the model has a lot
17 of uncertainty, but it's also -- the model's best
18 estimate is the result of meeting the 25 percent lower
19 escapement.

20 So, there's a lot of variability in model
21 estimates, and this model has a lot of model
22 variability.

23 But, as a reader, I'm assuming that the reason
24 that it was used and the reason that the result was
25 presented is that there is some faith in using this

1 model.

2 And, again, the model result speaks for
3 itself. The median 25 percent lower escapement for the
4 Project Alternative over the 81-year simulated means
5 that that's the best estimate of this model of the
6 difference between the Project Alternative and the
7 No-Project Alternative.

8 Yes, there's wide variance which, you know,
9 means, well, how much do we believe this model. But
10 the model -- the Project Proponents presented this
11 model, you know, knowing that no one else asked them to
12 present this model.

13 MS. ANSLEY: And based on your experience,
14 with the 95 percent confidence intervals covering two
15 orders of magnitude for the NAA and PA, doesn't that
16 suggest -- I believe you just stated it -- the high
17 level of uncertainty in the IOS -- IOS Model results?

18 WITNESS ROSENFELD: The two levels of
19 uncertainty is not the -- I mean, two orders of
20 magnitude is not necessarily the source of concern.

21 I mean, the -- the reason that there's so much
22 variability is that there -- over the history that we
23 have of measurements of Chinook Salmon, there's a lot
24 of variability from very high levels to very low
25 levels, so that builds in a lot of variance. And then,

1 you know, you're compounding uncertainty by estimating
2 model parameters.

3 So the two orders of magnitude is not what
4 would give me any pause.

5 Again, the model has uncertainty in it, and so
6 do a lot of models that are used in the Cal WaterFix.
7 But, to reiterate, the best estimate that this model
8 can produce is that the Project Alternative will result
9 in 25 percent lower escapement.

10 MS. ANSLEY: And now I'd like to ask you a
11 couple questions on the NMFS Life Cycle Model which I
12 believe is on Page 18 of your testimony, starting at
13 the top of the page.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: Do you have that in front of you?

16 WITNESS ROSENFELD: Page 18, yeah.

17 MS. ANSLEY: Yeah.

18 And -- And here you report results from the
19 NMFS Life Cycle Model; is that correct? In the first
20 paragraph there, 1 through 8?

21 WITNESS ROSENFELD: Yes.

22 MS. ANSLEY: And isn't it true that the
23 Revised Biological Assessment and the NMFS BiOp
24 included actions that would mitigate the potential
25 impacts identified by the NMFS Life Cycle Model?

1 WITNESS ROSENFELD: I'm not aware -- I'm not
2 aware that -- Your question assumes that they would
3 mitigate, and I'm not aware that they would.

4 MS. ANSLEY: You're not aware that the
5 NMFS . . .

6 Perhaps I didn't understand the answer.

7 So, you're not aware that the NMFS BiOp
8 included actions that would mitigate for the potential
9 of impacts identified by the NMFS Life Cycle Model?

10 WITNESS ROSENFELD: I'm aware the NMFS BiOp
11 included actions. I'm not aware that -- I'm not
12 necessarily in agreement that they would mitigate.

13 MS. ANSLEY: Okay. I think I see the
14 distinction.

15 But do you would agree that the -- that NMFS
16 at least concluded that they would mitigate potential
17 impacts.

18 WITNESS ROSENFELD: No. I don't know that I
19 agree with that assessment as well.

20 The NMFS Biological Opinion, for instance,
21 repeats over and over again that water temperature
22 conditions and flow conditions upstream are an impact
23 to the fish species and will continue to impact
24 viability parameters such as abundance, life history,
25 diversity and spatial distribution.

1 So, I'm aware that NMFS proposed Mitigation
2 Measures. I accept that they believe that these make
3 the situation a little better, but I don't accept
4 that -- I can't say that they claim that these will
5 resolve the problems of Cal WaterFix and the Projects.

6 MS. ANSLEY: Is that your opinion or NMFS'
7 opinion now?

8 WITNESS ROSENFELD: I said I can't say what
9 NMFS opinion is.

10 MS. ANSLEY: But from your review of the
11 document.

12 WITNESS ROSENFELD: Right.

13 I mean, NMFS identified mitigations, but they
14 also identified that the -- The mitigations are for the
15 Cal WaterFix component of the decline.

16 But they also identified that No-Action
17 Alternative itself projected out into the future would
18 represent a big impact for these fish.

19 So I'm saying that I don't -- I don't recall
20 NMFS saying that their Mitigation Measures for the Cal
21 WaterFix component of -- of the State Water Project and
22 Central Valley Project, that those mitigation measures
23 would correct the problems associated with the State
24 Water Project and Central Valley Project going forward.

25 MS. ANSLEY: Well, can we look at SWRCB-106,

1 Page 913, where it discusses the winter-run Chinook
2 Salmon, which I believe is -- is what you're discussing
3 on the top of Page 18.

4 (Exhibit displayed on screen.)

5 MS. ANSLEY: And pardon me a minute. I'm
6 going to try and identify where I'm looking because I
7 don't have excerpts in mind.

8 Is this Page 913? Okay.

9 If you could continue scrolling down.

10 (Exhibit displayed on screen.)

11 MS. ANSLEY: Thank you. And maybe to the next
12 page.

13 (Exhibit displayed on screen.)

14 MS. ANSLEY: Oh, so you see at the bottom of
15 913 there where it says (reading):

16 ". . . the following commitments and
17 criteria, described in the revised
18 Proposed Action are expected to limit the
19 impact of operations such that they would
20 affect a small reduction to the
21 production . . ."

22 And you can read the rest of the sentence.

23 I'm orienting you to where I'm referring.

24 And then if you'd like to scroll to the next
25 page after you've read that.

1 WITNESS ROSENFELD: Hold on a second.

2 MS. ANSLEY: Okay. You're welcome to look at
3 whatever you need to on that page.

4 WITNESS ROSENFELD: (Examining document.)

5 Yes. So I've read Page 913.

6 Would you like me to respond based on that or
7 continue reading?

8 MS. ANSLEY: Well, and then -- My
9 understanding is Page 914 sets out the following
10 commitments and criteria that was referenced on the top
11 of 913.

12 I apologize that it breaks over a page so it's
13 a little difficult.

14 Do you have a copy of the NMFS BiOp with you?

15 WITNESS S: I don't. It's -- As I say, it's a
16 little long.

17 MR. OBEGI: With counsel -- With counsel's
18 permission, can I have him look at my computer so he
19 doesn't have to strain his eyes to look at the rest of
20 this?

21 MS. ANSLEY: Yeah. I know it's impossible to
22 see the screen. I'm looking at this one.

23 WITNESS ROSENFELD: (Examining computer
24 screen.)

25 Okay. I haven't read every paragraph in

1 detail but --

2 MS. ANSLEY: Sure.

3 WITNESS ROSENFELD: -- I get the gist.

4 MS. ANSLEY: And is it your understanding that
5 with these measures -- Pardon me.

6 And is it your understanding that with these
7 measures, NMFS determined that the overall effects of
8 operations would be minimal? And this is winter-run
9 Chinook obviously.

10 WITNESS ROSENFELD: That's not my
11 understanding.

12 If you'd scroll up to the bottom of Page 913.

13 MS. ANSLEY: Um-hmm.

14 (Exhibit displayed on screen.)

15 WITNESS ROSENFELD: It's my understanding
16 that, as modeled, the Project alternative would
17 significantly reduce the production of VSP parameter of
18 the winter-run Chinook Salmon.

19 MS. ANSLEY: Can we scroll down to the bottom
20 of Page 9 --

21 WITNESS ROSENFELD: The --

22 MS. ANSLEY: Excuse me. Were you going to
23 read more?

24 WITNESS ROSENFELD: Yeah, I'm going to read
25 more (reading):

1 "However, the following commitments
2 and criteria, described in the revised
3 Project Alternative are expected to limit
4 the impact of operations such that they
5 would affect a small reduction to the
6 production VSP parameter of winter-run
7 Chinook Salmon."

8 So two things there:

9 One, there's still a reduction in -- to the
10 production VSP parameter identified here.

11 And this paragraph and everything that comes
12 below is dealing with operations of the Cal WaterFix
13 solely, as I understand it, not with the unsustainable
14 impacts of the State Water Project and Central Valley
15 Project to winter-run Chinook Salmon.

16 So it's just mitigating a marginal effect on
17 top of an already unsustainable and, you know,
18 ultimately a pathway that will lead to extinction of
19 winter-run Chinook Salmon.

20 So I don't accept that the mitigation
21 eliminates even the effect to Cal WaterFix. But, even
22 if it did eliminate the effect of just the Cal
23 WaterFix, it will -- this does not say that it would
24 eliminate the impacts of the Project that are leading
25 to extinction of winter-run Chinook Salmon.

1 MS. ANSLEY: Okay. But my questions were
2 related to what NMFS concluded.

3 This is the NMFS Biological Opinion to the Cal
4 WaterFix -- correct?-- this document.

5 WITNESS ROSENFELD: Right. What I read is
6 from the California WaterFix Biological Opinions, and
7 it says they would affect a small reduction to the
8 production VSP parameters. So there's still a
9 reduction in the production of the VSP parameter.

10 MS. ANSLEY: Can we scroll down to the end of
11 the next page, please.

12 (Exhibit displayed on screen.)

13 MS. ANSLEY: I'm sorry. That section.

14 And do you see the final section of that
15 section which says (reading):

16 "These commitments support a
17 conclusion that any reduction in the
18 productivity VSP parameter of the
19 population caused by the overall effects
20 of operations will be minimal."

21 WITNESS ROSENFELD: I see that that is, to
22 your point, NMFS's interpretation of the effect of the
23 assurances given above.

24 MS. ANSLEY: And we're agreeing this is NMFS'
25 conclusion.

1 WITNESS ROSENFELD: Yes.

2 MS. ANSLEY: I'm not imparting that to you;
3 I'm imparting that to NMFS.

4 WITNESS ROSENFELD: Right.

5 MS. ANSLEY: Okay.

6 WITNESS ROSENFELD: But I would say that
7 sentence is a contradiction to the sentence that I read
8 above.

9 And to emphasize, small reductions in
10 production of an already -- of a fish that's already
11 circling the drain, if you will, represent large
12 impacts.

13 The current status of winter-run Chinook
14 Salmon is that it is an endangered species. Even
15 maintaining the current population numbers represents a
16 grave risk to that population.

17 So simply mitigating additional effects
18 doesn't mean that the -- that the population is
19 well-protected by the Cal WaterFix. It means that Cal
20 WaterFix will achieve the status quo, which is
21 endangered, which means very -- that the population is
22 exposed to an extraordinary amount of risk from things
23 even outside of the WaterFix --

24 MS. ANSLEY: Dr. Rosenfield, I understand
25 that's your understanding and your conclusions in your

1 testimony, but my questions were all to -- confirming
2 that you understood what the conclusions of NMFS were
3 on the same --

4 WITNESS ROSENFELD: Right.

5 MS. ANSLEY: -- topic.

6 WITNESS ROSENFELD: I have --

7 MS. ANSLEY: So I --

8 CO-HEARING OFFICE DODUC: Enough.

9 MS. ANSLEY: -- think that --

10 CO-HEARING OFFICER DODUC: Enough.

11 MS. ANSLEY: I think that I'd like -- Yeah. I
12 have a great deal of questions, and your own attorney
13 can open up these issues again with you on redirect
14 since I have opened the door to these topics.

15 CO-HEARING OFFICER DODUC: Let's move on,
16 Miss Ansley.

17 MS. ANSLEY: Thank you.

18 But I would appreciate answers to my
19 questions.

20 WITNESS ROSENFELD: Well, I -- Just to be
21 fair, you asked me for my understanding of NMFS'
22 conclusion and I was stating what I read NMFS'
23 conclusion to be.

24 MS. ANSLEY: Okay.

25 CO-HEARING OFFICER DODUC: Correct.

1 MS. ANSLEY: So, I'm starting a new topic of
2 entrainment.

3 CO-HEARING OFFICER DODUC: Since you're moving
4 to a new topic --

5 MS. ANSLEY: Yes.

6 CO-HEARING OFFICER DODUC: -- perhaps we
7 should take our break now.

8 MS. ANSLEY: Yes.

9 CO-HEARING OFFICER DODUC: All right. We will
10 return at 3:25.

11 I'm sorry. I'm -- I'm giving you way too much
12 time.

13 WITNESS ROSENFELD: Don't do that.

14 CO-HEARING OFFICE DODUC: 3:20.

15 WITNESS ROSENFELD: 3:20.

16 (Recess taken at 3:07 p.m.)

17 (Proceedings resumed at 3:20 p.m.):)

18 CO-HEARING OFFICER DODUC: It is 3:20. We are
19 back in session.

20 Let's do a little bit of time checking here.

21 Assuming that Miss Ansley --

22 MS. ANSLEY: I am moving definitely slower
23 than I thought I would move. I -- I definitely will
24 not be sticking to my original hour and a half time
25 estimate.

1 But I am moving, and I have crossed out a
2 number of questions, so I will try to pick the pace up
3 a little.

4 CO-HEARING OFFICER DODUC: All right.

5 MS. ANSLEY: But I am a little less than
6 halfway through.

7 CO-HEARING OFFICER DODUC: All right. So,
8 then, at most, then, we might get through to the State
9 Water Contractors and San Luis Delta-Mendota/Westlands
10 today, at most.

11 So, for Mr. O'Brien and Mr. Bezerra, we will
12 not get to you until tomorrow along with everyone else.

13 And by my calculations, we have anywhere from
14 three to maybe three and a half -- depending how
15 quickly things go today -- of cross remaining tomorrow,
16 and potentially redirect.

17 So, with respect to Mr. Jackson's witnesses,
18 how much cross-examination do we expect for them?

19 MS. ANSLEY: I know that we have limited to no
20 cross for Mr. Piero (sic), although we do have
21 objections and then -- And for Mr. Smith.

22 So it's extremely limited. It cannot be more
23 than 15 to 20 minutes.

24 I think I need to check in about Mr. -- There
25 was a replacement witness for Mr. Sjovold. I don't

1 know how to say his name.

2 CO-HEARING OFFICER DODUC: Yes.

3 MS. ANSLEY: And so I need to check around and
4 see if someone has a refined estimate for that
5 particular witness, but . . .

6 But I don't -- I don't know. I'm not going to
7 say what that estimate is for that particular witness.

8 CO-HEARING OFFICER DODUC: So, at this time,
9 Mr. Jackson, we'll plan to get to your witnesses
10 tomorrow afternoon. Not in the morning, in the
11 afternoon.

12 And let's see how things go. But if we can
13 conclude your panel tomorrow, I'd like to do that
14 without having them return on Wednesday, so that means
15 we might go as late as 6 o'clock tomorrow; okay?

16 Is that acceptable?

17 MS. ANSLEY: And we did just get a notice that
18 it may be about 30 minutes for . . .

19 I think it would probably be closer to 30
20 minutes in total for the panel of CalSPA.

21 CO-HEARING OFFICER DODUC: Got it. Okay.

22 Mr. Jackson.

23 MR. JACKSON: May I call Mr. Del Piero and
24 tell him that he needs to be here in the afternoon
25 instead of at 9:30?

1 CO-HEARING OFFICER DODUC: Yes, because we do
2 have a lot more cross-examination for Mr. Rosenfield.

3 MR. JACKSON: All right. And that would be
4 1 o'clock maybe?

5 CO-HEARING OFFICER DODUC: After 1 o'clock.

6 MR. JACKSON: All right. Thanks.

7 CO-HEARING OFFICER DODUC: All right. With
8 that, we will turn back to Miss Ansley.

9 And at this point, Miss Ansley, you're about
10 six minutes left of your hour, and you are halfway
11 through?

12 MS. ANSLEY: Yeah. I would say roughly, given
13 the number of questions I've crossed out, I'm about
14 halfway through.

15 CO-HEARING OFFICER DODUC: So should we add
16 another 30 minutes for now to your six minutes?

17 MS. ANSLEY: Of course, that's up to you, but
18 I definitely think I'll be closer to an hour, and then
19 I'll be done.

20 CO-HEARING OFFICER DODUC: All right. Let's
21 go ahead and set the clock for an hour, and there will
22 be time for another break.

23 MS. ANSLEY: And, hopefully, I'm dispensing
24 with questions of some later parties, so -- Hopefully.

25 And I do have a followup to what we ended

1 with, and then I have my next topic, which is
2 entrainment testimony.

3 So, following up, Dr. Rosenfield, on what we
4 were just discussing regarding the conclusions of NMFS.

5 Is it -- Is it also your understanding that
6 the California Department of Fish and Wildlife
7 concluded that, with the issuance of the ITP, that it
8 would not be jeopardy on any of the covered species
9 analyzed there?

10 WITNESS ROSENFELD: That's my understanding.

11 MS. ANSLEY: And those species included
12 winter-run Chinook and spring-run Chinook?

13 WITNESS ROSENFELD: That's correct.

14 And, again, they relied, though, on some of
15 the same Mitigation Measures that you were pointing to
16 in our last set of questions.

17 MS. ANSLEY: And is it your understanding that
18 the ITP required full mitigation of identified impacts?

19 WITNESS ROSENFELD: It's my understanding
20 that that's the requirement.

21 MS. ANSLEY: Yes. That was my question.

22 Moving on to Salmon entrainment.

23 If we could look at NRDC-58, which is your
24 testimony, Page 11 now.

25 (Exhibit displayed on screen.)

1 MS. ANSLEY: And I'm looking at the bottom
2 where, on Page -- on Lines 26 through 28 --

3 (Exhibit displayed on screen.)

4 MS. ANSLEY: -- carrying over to the next
5 page, Lines 1 through 2, I guess.

6 And do you see that testimony?

7 WITNESS ROSENFELD: Yes, I can.

8 MS. ANSLEY: And we see a "See example site,"
9 but we -- I assume that this is not a -- Lines 26
10 through 27, to the end of the sentence, I guess, on the
11 next page, this is not a quote from the NMFS Biological
12 Opinion; is it?

13 WITNESS ROSENFELD: It's not a quote, no.

14 MS. ANSLEY: And do you recall where in the
15 NMFS Biological Opinion this conclusion was? We could
16 not find it.

17 WITNESS ROSENFELD: Well, the Life Cycle
18 Models that we've just reviewed . . . are that
19 conclusion.

20 MS. ANSLEY: Is this based on your
21 interpretation of the Life Cycle Model results reported
22 by NMFS?

23 WITNESS ROSENFELD: The Life Cycle Models
24 reported by NMFS, as we've been over, report a decline.

25 And so my testimony, just to be clear, shows

1 that the adverse effects of WaterFix exceed the
2 benefits of reduced pumping from the South Delta.
3 That's the tradeoff. That's implied by WaterFix, that
4 reduced South Delta pumping will provide benefit and
5 the Life Cycle Models show that that benefit doesn't
6 materialize. In fact, the populations continue to
7 decline.

8 MS. ANSLEY: I guess what I'm trying to get at
9 is, the confusion stems from your Line 26 where you say
10 (reading):

11 "The NMFS Biological Opinion
12 concludes . . ."

13 Is this your conclusion based on the data
14 reported in the NMFS Biological Opinion? Or can you
15 point to a conclusion in the NMFS Biological Opinion
16 that states what you state on Lines 26 and 27?

17 WITNESS ROSENFELD: It's my conclusion based
18 on their presentation of modeling results.

19 MS. ANSLEY: And just to close the door:

20 And this is the Life Cycle Modeling results
21 that you and I were discussing, the NMFS Life Cycle
22 Model and the IOS Model.

23 WITNESS ROSENFELD: Correct.

24 MS. ANSLEY: Okay. And isn't it true that the
25 NMFS BiOp for the California WaterFix -- excuse me if I

1 don't ever clarify, I mean the California WaterFix
2 BiOp -- shows significant reductions in South Delta
3 entrainment under the Cal WaterFix for winter-run and
4 spring-run?

5 Well, let's start with winter-run.

6 WITNESS ROSENFELD: I'd have to review the
7 exact results, but my recollection is that it does show
8 a reduction in entrainment in at least some water
9 year-types.

10 MS. ANSLEY: Can we look at the NMFS BiOp
11 which is SWRCB-106, .pdf Page 1168.

12 (Exhibit displayed on screen.)

13 MS. ANSLEY: 1168, .pdf Page 1168. This time
14 I'm actually saying the .pdf. I'm sorry. Trying to
15 help but not helping.

16 (Exhibit displayed on screen.)

17 MS. ANSLEY: There we go.

18 So if you look at Table 2-293, do you recall
19 this table?

20 WITNESS ROSENFELD: Yes, I do.

21 MS. ANSLEY: And that it is NMFS' conclusion
22 based on this modeling that the reductions in South
23 Delta entrainment were between 17 and 69 percent lower
24 under the Cal WaterFix compared to the No-Action
25 Alternative?

1 WITNESS ROSENFELD: That's what that table
2 says, yes.

3 MS. ANSLEY: And do you agree that there are
4 cumulative losses of spring-run Steelhead and Green
5 Sturgeon are similarly reduced under the Cal WaterFix?

6 WITNESS ROSENFELD: I'd have to refresh my
7 memory.

8 MS. ANSLEY: Can we look at .pdf Page 1169.

9 (Exhibit displayed on screen.)

10 MS. ANSLEY: Is that .pdf Page 1169? Maybe if
11 you scroll down.

12 (Exhibit displayed on screen.)

13 MS. ANSLEY: There. Table 2-295.

14 And this is Central Valley spring-run Chinook;
15 correct?

16 WITNESS ROSENFELD: Yes, that's what the data
17 says.

18 MS. ANSLEY: And this shows percent reductions
19 of 16 to 83 percent under this modeling?

20 WITNESS ROSENFELD: Yes.

21 MS. ANSLEY: And then can we go to .pdf
22 Page 1170.

23 (Exhibit displayed on screen.)

24 MS. ANSLEY: And this is Table 2-297.

25 Do you recall this table?

1 WITNESS ROSENFELD: I do.

2 MS. ANSLEY: And though I agree that this is a
3 lesser reduction, do you see that this also shows --
4 and, I'm sorry, it carries over to the next page --
5 this also shows reduction in entrainment of Central
6 Valley Steelhead?

7 WITNESS ROSENFELD: Yes, using this
8 cumulative loss fish density -- I'm sorry -- Fish
9 Density Model changes, yes.

10 MS. ANSLEY: And do you recall that there was
11 the same result for Green Sturgeon?

12 WITNESS ROSENFELD: I would, again, have to
13 look at the numbers to state affirmatively.

14 MS. ANSLEY: If we could go to .pdf Page 1171.

15 (Exhibit displayed on screen.)

16 MS. ANSLEY: And can we scroll down?

17 (Exhibit displayed on screen.)

18 MS. ANSLEY: And there are some caveats here
19 but do you see the sentence that starts with (reading):

20 "The model did provide information
21 regarding annual salvage . . ."

22 WITNESS ROSENFELD: Can you point me to the
23 paragraph?

24 MS. ANSLEY: Yeah. So, if you look at the
25 title here that says "Operations of NDD - Delta

1 Survival" and you go up two paragraphs. The paragraph
2 starts, "The fish density model."

3 Do you see that?

4 WITNESS ROSENFELD: Yes.

5 MS. ANSLEY: It can always be blown up if
6 you're having trouble.

7 WITNESS ROSENFELD: No. I can see it.

8 MS. ANSLEY: And do you also see that the
9 model provided information that annual salvage Green
10 Sturgeon would also be reduced by the proposed action?

11 WITNESS ROSENFELD: Yes, that's what it says.

12 MS. ANSLEY: Okay. And then moving to
13 entrainment at the North Delta diversions.

14 Looking at your testimony, Page 14 of NRDC-58.

15 (Exhibit displayed on screen.)

16 MS. ANSLEY: And you dis -- Well, not just
17 entrainment, but you discuss combined mortality of
18 winter-run at the North Delta diversion; is that
19 correct?

20 On the top -- Lines 1 through 10, your first
21 bullet point.

22 WITNESS ROSENFELD: (Examining document.)

23 That's correct. I'm just looking to see.

24 (Examining document.)

25 This is regarding the Delta Passage Model,

1 yes.

2 MS. ANSLEY: Okay. And then on Lines -- And
3 then you also suggest that it would be unclear how even
4 higher mortality at the North Delta diversion would be
5 avoided?

6 WITNESS ROSENFELD: That's correct.

7 MS. ANSLEY: And you cite the Biological
8 Opinion at Page 905; is that correct? Page -- Lines 4
9 to 5.

10 WITNESS ROSENFELD: For the quote (reading):

11 ". . . combined injury and mortality from
12 impingement would be less than
13 9 percent."

14 Yes.

15 MS. ANSLEY: And doesn't the NMFS Biological
16 Opinion at that page also explain that this estimated
17 mortality would be further reduced through the
18 subsequently adopted unlimited pulse protection and the
19 phased testing of the fish screens?

20 WITNESS ROSENFELD: If you want to go to that
21 page in the Biological Opinion.

22 MS. ANSLEY: Sure.

23 That would be NMFS -- SWRCB-106, Page 905.
24 That's the actual page, not the .pdf.

25 (Exhibit displayed on screen.)

1 MS. ANSLEY: If we look at -- please scroll
2 up.

3 MS. ANSLEY: Yeah. 905.

4 And if we look at -- Please scroll up.

5 (Exhibit displayed on screen.)

6 MS. ANSLEY: If we look at the section that's
7 shown on the screen, it says (reading):

8 "Operations (Impingement and
9 Entrainment)."

10 And if you look over at the -- I believe we're
11 looking at the -- the columns under the P -- I think --
12 I think the last column is under the PA perhaps.

13 But it states that it was expected --
14 (Reading):

15 "The proportion of the population
16 exposed is expected to be reduced by the
17 commitment to the" Unlimited Pulse
18 Protection -- "UPP and phased testing to
19 ensure the fish screens meet NMFS
20 criteria."

21 Do you see that?

22 WITNESS ROSENFELD: I do see that.

23 And I'm aware that NMFS is relying on
24 unlimited protection and a to-be-determined bypass
25 regime -- flow regime that they will study going

1 forward to reach their conclusion.

2 But that doesn't provide a lot of evidence of
3 what exactly will happen for the --

4 MS. ANSLEY: We are in agreement this is NMFS'
5 conclusion, which was my question, that this is what
6 NMFS concluded on Page 905.

7 WITNESS ROSENFELD: That's what it says on
8 905.

9 But, elsewhere in their document, the NMFS
10 Biological Opinion reviews the mortality estimates
11 associated with unlimited pulse protection and finds
12 several reasons why it might -- their modeling of
13 unlimited pulse protection might underestimate
14 mortality and underestimate the migration timing of
15 winter-run and spring-run.

16 So, there are caveats to their conclusion that
17 aren't presented in this table.

18 MS. ANSLEY: So after the unlimited pulse
19 protection was added to the Project Description, NMFS
20 used the Perry Model to provide new estimates of
21 winter-run losses -- is that correct? -- at the North
22 Delta diversions.

23 WITNESS ROSENFELD: That's correct. That's
24 my understanding.

25 MS. ANSLEY: And their revised winter-run

1 losses estimates at the North Delta diversion are
2 between .7 and 3 percent -- .7 percent and 3 percent;
3 is that correct?

4 WITNESS ROSENFELD: You'd have to point me to
5 the page for those numbers.

6 MS. ANSLEY: Sure.

7 Can we look at Page 791.

8 CO-HEARING OFFICER DODUC: Is that .pdf?

9 MS. ANSLEY: That's the page. I'm sorry that
10 we're inconsistent.

11 (Exhibit displayed on screen.)

12 MS. ANSLEY: Mr. Hunt, I'm very sorry.

13 And you see the -- the bottom row in that
14 chart that says (reading):

15 "Perry Survival Model - Modified
16 Analysis for UPP Scenario."

17 WITNESS ROSENFELD: I see the paragraph. If
18 you'd give me a minute to read it.

19 MS. ANSLEY: Oh, of course.

20 WITNESS ROSENFELD: (Examining document.)

21 Okay. I've read the paragraph.

22 MS. ANSLEY: Okay. And so we agree that,
23 after -- that using -- after unlimited pulse protection
24 was added, NMFS used the Perry Model and came up with
25 revised winter-run loss estimates at the North Delta

1 diversions between .7 percent and 3 percent; is that
2 correct?

3 WITNESS ROSENFELD: So, that's what that
4 says.

5 MS. ANSLEY: Okay.

6 WITNESS ROSENFELD: But in my testimony, I
7 identified pages in the Biological --

8 MS. ANSLEY: I'm sorry. That wasn't an answer
9 to my question.

10 CO-HEARING OFFICER DODUC: Hold on. Let's --
11 Let's stick with the question.

12 MS. ANSLEY: Thank you.

13 And are you aware -- Switching gears from the
14 NMFS BiOp.

15 Are you aware that the California Department
16 of Fish and Wildlife ITP requires that the California
17 WaterFix achieve pre-Cal WaterFix survival rates to
18 Chips Island?

19 WITNESS ROSENFELD: I'm not aware of that,
20 no.

21 MS. ANSLEY: Are you aware that DWR is
22 required to consider additional Monitoring Stations and
23 techniques as part of the ITP?

24 WITNESS ROSENFELD: I'm aware that there's a
25 commitment to do that.

1 MS. ANSLEY: Are you aware that implementing
2 pulse protection within 24 hours of detection of fish
3 is a Permit condition?

4 WITNESS ROSENFELD: I'm aware of the general
5 Permit condition. I can't speak to the details of the
6 24 hours. I don't recall.

7 MS. ANSLEY: Can we look at SWRCB-107, and
8 that would be the California WaterFix ITP.

9 And that's, I hope, the actual page.

10 (Exhibit displayed on screen.)

11 MR. HUNT: Can you repeat the page, please?

12 MS. ANSLEY: Oh, sure. Page 191, and it's not
13 .pdf page, but let's hope that gets us close.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: It does.

16 If you look at the second bullet point, do you
17 see there where it says that (reading):

18 "Pulse protection operations shall
19 be implemented within 24 hours of
20 detection of a fish pulse."

21 WITNESS ROSENFELD: Yes, I do.

22 MS. ANSLEY: Okay. And as a Permit condition,
23 is it your understanding that this is a mandatory
24 requirement?

25 WITNESS ROSENFELD: It says "shall," so I --

1 yes, I interpret that as mandatory.

2 MS. ANSLEY: And then I have just a couple
3 more questions on Salmon, and then I'm ready to move on
4 to Longfin in my topics.

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

6 MS. ANSLEY: So, looking at Page 13 of your
7 testimony --

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: -- Lines 20 through 22. Oh, and
10 10 through 12.

11 So, in two places on Page 13 of your
12 testimony --

13 Do you have that in front of you?

14 WITNESS ROSENFELD: I do.

15 MS. ANSLEY: -- you compare the Cal -- the
16 WaterFix to the status quo; is that correct?

17 So if you look at Line 11 and then if you look
18 at Line 21 and 22.

19 WITNESS ROSENFELD: Yes. The status quo
20 under the Proposed Action.

21 MS. ANSLEY: I just want to make sure that I'm
22 clear that, by "status quo," what you mean in these
23 sentences, and when you use the term "status quo" in
24 other parts of your testimony -- which I can go through
25 if you like -- you mean existing conditions now.

1 WITNESS ROSENFELD: Well, I believe here that
2 I meant both, although I can see why there would be
3 confusion, because the Delta Passage Model was modeled
4 under the No-Action Alternative.

5 I don't believe it was modeled to the status
6 quo. I mean "status quo" meaning current conditions
7 that occur on the ground today.

8 MS. ANSLEY: I think I'm asking on this page
9 what you mean by "status quo" to make sure that I
10 understand what you're comparing the California
11 WaterFix to.

12 WITNESS ROSENFELD: As, again, I said, I
13 believe that we're referring to both the No-Action
14 Alternative and current conditions, because it say
15 (reading):

16 ". . . status quo under the Proposed
17 Action."

18 And Delta Passage Model was modeled for the
19 No-Action Alternative and the Proposed Action.

20 MS. ANSLEY: Okay. And so that's your
21 understanding for your discussion of the -- of the
22 Delta Passage Model.

23 Can we look at Page 15, Line 6, then.

24 (Exhibit displayed on screen.)

25 MS. ANSLEY: And here again you're comparing

1 the WaterFix to what you term the status quo.

2 Is it your understanding that that's meant by
3 you to mean existing conditions?

4 WITNESS ROSENFELD: Yes. I believe, again,
5 it's referring to both.

6 MS. ANSLEY: You believe it's referring to
7 both.

8 WITNESS ROSENFELD: Both current conditions
9 and No-Action Alternative.

10 MS. ANSLEY: And then can we look at
11 Page 21-3.

12 (Exhibit displayed on screen.)

13 WITNESS ROSENFELD: Page 21?

14 MS. ANSLEY: Um-hmm. Line 3.

15 I'm just going to go over it really fast,
16 there's one more after this, because I did not think
17 that was a complicated question. I was making sure I
18 understood.

19 Most of the time in this hearing we say
20 existing conditions or No-Action Alternative and I was
21 just trying to quickly clarify what you meant.

22 But if you look at 21, Line 3. There, again,
23 you use the phrase "status quo."

24 Can you tell us what you meant by the words
25 "status quo" there?

1 WITNESS ROSENFELD: (Examining document.)

2 No-Action Alternative.

3 I'm sorry for the confusion in terms, but
4 the . . . the terms are confusing.

5 MS. ANSLEY: So on 21, Line 3, you're
6 representing that that should be the No-Action
7 Alternative.

8 WITNESS ROSENFELD: (Examining document.)

9 I'm just rereading for clarity.

10 MS. ANSLEY: I'm sorry. Are you reviewing --
11 Are you reviewing some more? I don't want to interrupt
12 you but --

13 WITNESS ROSENFELD: I was reading my wording.

14 MS. ANSLEY: You are reading or --

15 WITNESS ROSENFELD: Yeah.

16 MS. ANSLEY: -- I can move on.

17 WITNESS ROSENFELD: I'm rereading my wording
18 to provide you an answer to your questions.

19 MS. ANSLEY: Per Line -- Page 21, Line 3?

20 WITNESS ROSENFELD: Yes.

21 MS. ANSLEY: Okay.

22 WITNESS ROSENFELD: Yes.

23 Again, I believe that the modeling is Project
24 Alternative versus No-Action Alternative.

25 MS. ANSLEY: And then can we look at Page 25,

1 Line 23.

2 And I'm not entirely sure I caught them all,
3 so . . .

4 (Exhibit displayed on screen.)

5 MS. ANSLEY: I will try and check before the
6 end, but . . .

7 Here again, are you talking -- What is your
8 reference to the status quo in this section of your
9 testimony?

10 WITNESS ROSENFELD: (Examining document.)

11 Here, I believe it's both, compared to the
12 current conditions and -- and compared to the No-Action
13 Alternative.

14 And I apologize for any confusion in terms.
15 You know, I'm not an attorney, and understanding the
16 difference between current conditions and a No-Action
17 Alternative based on currently existing regulations is
18 a little bit -- was a little bit difficult for me to
19 track, so . . .

20 Anyway, you have my answers.

21 MS. ANSLEY: And you understand that the --
22 when the NMFS Biological Opinion -- For example, when
23 we were looking at entrainment losses, that there are
24 modeling scenarios that were run by the California
25 WaterFix that include either the existing conditions or

1 the No-Action Alternative?

2 WITNESS ROSENFELD: I would have to review
3 that section to -- to remember exactly what the --

4 MS. ANSLEY: Well, I'm --

5 WITNESS ROSENFELD: -- modeling scenarios --

6 MS. ANSLEY: -- thinking more generally now.

7 WITNESS ROSENFELD: -- were done.

8 But my recollection is that the -- part of the
9 confusion is that the modeling is sometimes status quo,
10 existing conditions and sometimes No-Action
11 Alternative. So it's a little bit difficult to track
12 which one is which and leads to -- Although I believe
13 that I did track it, it lead to confusion, or
14 imprecision, I should say, in my wording.

15 MS. ANSLEY: Just to make sure we have an
16 understanding.

17 You have prepared comments to the
18 environmental documents, or as part of a team, you have
19 helped prepare comments of the environmental documents
20 for the California WaterFix; is that correct?

21 WITNESS ROSENFELD: Are we referring to his
22 testimony here or to previous comments?

23 MS. ANSLEY: I'm referring to previous
24 comments.

25 WITNESS ROSENFELD: Yes, that's correct.

1 MS. ANSLEY: And it's your understanding that
2 the environmental -- in the environmental review
3 documents, and in particular, I think you -- you stated
4 that you may have reviewed Chapter 11 of the FEIR but
5 you certainly reviewed the Recirculated Draft EIR; is
6 that correct?

7 WITNESS ROSENFELD: Yes.

8 MS. ANSLEY: And it's your understanding that
9 there are separate modeling runs for the existing
10 conditions and the No-Action Alternative; is that
11 correct?

12 WITNESS ROSENFELD: In many cases, there are,
13 yes.

14 MS. ANSLEY: In those documents. I'm not
15 trying to --

16 WITNESS ROSENFELD: Yeah. In many cases in
17 those documents but not in all cases in those documents
18 is my recollection.

19 MS. ANSLEY: And is it your -- What is your
20 understanding of the difference between the Existing
21 Condition Scenario and the No-Action Alternative
22 Scenario?

23 WITNESS ROSENFELD: The No-Action
24 Alternative -- I mean, the No-Action Alternative refers
25 to conditions in the future that are parallel to the

1 Project Alternative in the future, whereas current
2 conditions refers to what actually has taken place now.

3 MS. ANSLEY: And it is your understanding that
4 the No-Action Alternative is a Without-Project
5 alternative in the future?

6 WITNESS ROSENFELD: That's correct. That's
7 my understanding.

8 MS. ANSLEY: That incorporates climate change
9 projections?

10 WITNESS ROSENFELD: It incorporates climate
11 change projections to 2030, is my understanding.

12 MS. ANSLEY: And sea-level rise?

13 WITNESS ROSENFELD: My understanding, to
14 2030.

15 MS. ANSLEY: Okay. And so we will try and
16 check. I'm not sure I caught all the places where
17 "status quo" is used in your testimony.

18 But I -- We will check that and try and get
19 that cleared up, so I know what we're referring to.

20 And I'm ready to move on to Long -- your
21 testimony on Longfin Smelt, which I believe starts --
22 my questions start on Page 24 of your testimony.

23 (Exhibit displayed on screen.)

24 MS. ANSLEY: Do you have that in front of you?

25 WITNESS ROSENFELD: I do.

1 MS. ANSLEY: And hold on.

2 Can I have a minute, please?

3 CO-HEARING OFFICER DODUC: Sure.

4 And, Dr. Rosenfield, we agreed to the 15
5 minutes per hour, but if you feel the need for a break
6 sooner, just let us know.

7 WITNESS ROSENFELD: Okay. Thank you. I
8 will.

9 And I appreciate the accommodation. Thank
10 you.

11 MS. ANSLEY: Okay. So looking at Page 24. I
12 believe I'm looking at Lines 21 through 24, 25,
13 roughly.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: You characterize Longfin Smelt as
16 a food source for other fishes; is that correct?

17 WITNESS ROSENFELD: That's correct.

18 MS. ANSLEY: And, in making this statement,
19 were you relying on a specific study that shows Longfin
20 Smelt are a food source for Starry Flounder?

21 WITNESS ROSENFELD: The study that I had in
22 mind was Jassby, et al. (1995) which shows a simplified
23 version of the food web conceptual model that those
24 researchers had at that time.

25 And my knowledge of Longfin Smelt and the

1 habitat that they aggregate in, and that habitat being
2 very similar to the habitat that Starry Flounder --
3 especially older Starry Flounder would use -- and that
4 Starry Flounder are predators, that all informed my
5 opinion.

6 MS. ANSLEY: But it was not on a specific
7 study that looked at Longfin Smelt as a food source for
8 Starry Flounder --

9 WITNESS ROSENFELD: No.

10 MS. ANSLEY: -- specifically.

11 Now I'd like to move to your study, Nobriga
12 and Rosenfield (2016).

13 WITNESS ROSENFELD: All right.

14 MS. ANSLEY: And I am not going to ask you if
15 you're a co-author. That's obvious.

16 But I believe you cite this on -- in a couple
17 places in your testimony, but what I'm looking at is
18 Page 26, Line 16 through 19.

19 (Exhibit displayed on screen.)

20 MS. ANSLEY: And I see the reference there on
21 18 to 19.

22 Do you have that in front of you?

23 WITNESS ROSENFELD: I do.

24 MS. ANSLEY: And you're discussing the
25 winter/spring outflow proposed from March to May; is

1 that correct?

2 WITNESS ROSENFELD: On Page (sic) 15, 16,
3 yeah. I mean, on Line 15, 16, yes.

4 MS. ANSLEY: Okay. And I'm kind of looking at
5 that whole paragraph but --

6 WITNESS ROSENFELD: Yeah.

7 MS. ANSLEY: -- feel free to correct me on the
8 line numbers.

9 And -- And you are proposing that the correct
10 time period is January to June?

11 WITNESS ROSENFELD: December through May is
12 what Nobriga and Rosenfield used. Other studies have
13 used January through June.

14 In terms of the flow component, the larger
15 point is that it's difficult to segregate the flow in
16 any one of those particular months on a particular
17 effect on Longfin Smelt because of the co-correlation
18 of flows across those months.

19 MS. ANSLEY: I think you've answered my
20 question.

21 WITNESS ROSENFELD: Okay.

22 MS. ANSLEY: Okay. And -- And you state on
23 Line 21 to 26 that there's (reading):

24 ". . . no compelling evidence that any
25 particular" month is "more or less

1 important than . . ."

2 . . . the January to June timeframe; is that
3 correct?

4 WITNESS ROSENFELD: Yes. That's what I just
5 said.

6 MS. ANSLEY: And you -- Yes.

7 And you cite your own study, Nobriga and
8 Rosenfield, for that appropriation; is that correct?

9 WITNESS ROSENFELD: Where are you looking
10 now?

11 MS. ANSLEY: Lines 25 to 26 now, which would
12 be the end of that sentence -- pardon me -- where you
13 have a clause that starts, "There is no compelling
14 evidence" --

15 WITNESS ROSENFELD: Yes.

16 MS. ANSLEY: -- and ends with that cite.

17 WITNESS ROSENFELD: Correct.

18 MS. ANSLEY: And isn't it true that you paper
19 in Nobriga and Rosenfield did not conduct any
20 statistical analysis of whether any particular month
21 was more or less important?

22 WITNESS ROSENFELD: That was -- The evidence
23 for that was in research that we did in production of
24 that paper.

25 So we landed on December through May because

1 we were unable to discriminate an effect in -- in
2 December versus January versus February, March,
3 et cetera.

4 MS. ANSLEY: But my question was: That paper
5 did not conduct -- was not an analysis of whether any
6 particular month was important.

7 I understand what you analyzed in that paper.

8 WITNESS ROSENFELD: Right.

9 MS. ANSLEY: Is that correct? Am I correct?

10 WITNESS ROSENFELD: The -- The -- It's --
11 You're correct that it's not included in the methods of
12 that paper, but it was a result that was part and
13 parcel of the production of that research.

14 MS. ANSLEY: Isn't it true that, in the ITP,
15 the California -- of the California WaterFix, the
16 entire January-through-June time period was used when
17 estimating the effects of changes on winter/spring
18 outflow on Longfin Smelt?

19 WITNESS ROSENFELD: (Examining document.)

20 The -- I'm sorry. Can you repeat that?

21 MS. ANSLEY: Yes.

22 And I'm sorry if it was muddled.

23 And then I'm asking is: In the ITP, issued by
24 the California Department of Fish and Wildlife, wasn't
25 the entire January-through-June time period used when

1 estimating the effects of changes on winter/spring
2 outflow on Longfin Smelt?

3 WITNESS ROSENFELD: I can't remember whether
4 they used January through June or December through May.

5 The California Department of Fish and Wildlife
6 has used December through May as the relevant time
7 period for flows before, so I would expect that they
8 used that, but I can't recall whether they switched to
9 January through June for this analysis.

10 MS. ANSLEY: And I'm going to backtrack and
11 apologize and reask that question. I made a mistake.

12 I was talking about the ITP Application. It
13 may be true in the ITP, but what I'm looking at is the
14 ITP Application.

15 Is it your memory that the entire
16 January-through-June time period was used when
17 estimating effects of changes of winter/spring outflow
18 and Longfin Smelt?

19 WITNESS ROSENFELD: Again, I can't recall
20 whether it was January through June.

21 But, yes, the flows during several months of
22 winter/spring, the entire winter/spring period are used
23 in the model that's derived from the Kimmerer et al.
24 (2009) X2 abundance equations.

25 MS. ANSLEY: Can we pull up DWR-1036 . . .

1 Chapter 4.

2 (Exhibit displayed on screen.)

3 MS. ANSLEY: In Chapter 4, can we look at
4 Page 4-298.

5 (Exhibit displayed on screen.)

6 MS. ANSLEY: This would be the actually
7 Page 4-298.

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: Are we on -- Is that the correct
10 page?

11 WITNESS ROSENFELD: Actually, I can maybe
12 save some time.

13 MS. ANSLEY: Do you have that in front of you?

14 WITNESS ROSENFELD: Yeah. I've looked back
15 in my notes.

16 I don't remember --

17 MS. ANSLEY: Well, I prefer to call it up.
18 It's Table 4.2.3, and maybe it's actually under . . .

19 And can you scroll up, please.

20 (Exhibit displayed on screen.)

21 MS. ANSLEY: And you see 4.2? It might be
22 there. I'm sorry.

23 (Exhibit displayed on screen.)

24 MS. ANSLEY: Or not.

25 (Exhibit displayed on screen.)

1 MS. ANSLEY: Yes. Four-point -- I didn't
2 realize it was a separate link. I'm sorry. 4-298.

3 WITNESS ROSENFELD: You have my sympathies.

4 MS. ANSLEY: I think it should be Mr. Hunt.

5 And can we -- On the bottom -- I just saw the
6 graph flash by.

7 Could we go to the table on the bottom of that
8 page. Thank you.

9 (Exhibit displayed on screen.)

10 MS. ANSLEY: Obviously, you're familiar with
11 it if you have it in front of you; correct?

12 WITNESS ROSENFELD: I have this table. I
13 was -- What I have in front of me was, you were asking
14 about DWR's ITP application and CFA. In my notes, that
15 they tested both January through June and March through
16 May flows and found statistical evidence that the
17 January period through June period was statistically
18 superior to just using the March through May flows.

19 MS. ANSLEY: You find that in the ITP
20 Application?

21 WITNESS ROSENFELD: Yes.

22 MS. ANSLEY: And what table would that be?

23 Well, let's dispense with this table.

24 And does this analysis show no difference
25 between the NAA and the PA; correct?

1 WITNESS ROSENFELD: It does not show that.

2 MS. ANSLEY: But does it show a range of a
3 6 percent benefit to a negative 1 percent decrease?

4 WITNESS ROSENFELD: It -- That's part of the
5 problem with representing things in percentage terms.

6 If you add up the numbers, the non-percent
7 numbers on the right column, you'll see that there's
8 a . . . overall decrease.

9 MS. ANSLEY: I'm sorry. I'm looking back at
10 two sentences to your previous answer.

11 And what table were you referring to in the
12 ITP Application?

13 WITNESS ROSENFELD: For -- For the -- What
14 flow period was used?

15 MS. ANSLEY: For the March-through-May
16 analysis. I believe you tried to reference a table and
17 we were sort of speaking at cross-purposes, so I'm --

18 WITNESS ROSENFELD: Yeah.

19 MS. ANSLEY: -- asking you what table you were
20 looking at.

21 WITNESS ROSENFELD: I was looking at -- My
22 notes say 4.A.1-2 through 4.A.1-3.

23 MS. ANSLEY: And this is from the ITP
24 Application?

25 WITNESS ROSENFELD: I believe so.

1 MS. ANSLEY: And then looking at your
2 testimony on Page 26 --

3 (Exhibit displayed on screen.)

4 MS. ANSLEY: -- Line 16 to 19.

5 You also state that (reading):

6 ". . . persistent decline" in Longfin
7 Smelt "is tied to inadequate . . .
8 winter/spring outflow."

9 Is that correct?

10 WITNESS ROSENFELD: Yes.

11 MS. ANSLEY: And, again, one of the cites that
12 you provide is to your Nobriga and Rosenfield (2016)
13 study.

14 WITNESS ROSENFELD: That's correct.

15 MS. ANSLEY: And just to make sure that I have
16 this correct.

17 The objective of the paper, Nobriga and
18 Rosenfield (2016) was to evaluate conceptual models to
19 better understand the mechanisms that drive population
20 dynamics of Longfin Smelt?

21 WITNESS ROSENFELD: Well, as with any
22 scientific paper, there are, you know, multiple points
23 to be served. What you said is one of them.

24 MS. ANSLEY: Was that the objective that was
25 cited in the abstract of the paper?

1 Do you have your paper in front of you?

2 WITNESS ROSENFELD: I can look at the
3 abstract.

4 MS. ANSLEY: I'm sorry. Could you --

5 WITNESS ROSENFELD: I can look at it, or if
6 you call it up on the screen.

7 MS. ANSLEY: However you like. I believe it's
8 NRDC-36; is that correct?

9 MR. OBEGI: (Nodding head.)

10 MS. ANSLEY: Yes.

11 (Exhibit displayed on screen.)

12 MS. ANSLEY: And if you look at the abstract,
13 and the sentence begins "Our objective" and it's about
14 halfway down the abstract.

15 Do you see that?

16 WITNESS ROSENFELD: Yes.

17 MS. ANSLEY: And that's what I was -- That's
18 what I was merely confirming was the stated objective
19 of your study.

20 WITNESS ROSENFELD: Yes.

21 And I'm just saying that there are other --
22 other information comes out of a study like this.

23 But, yes, that was the objective.

24 MS. ANSLEY: And the -- And this study doesn't
25 conclude that persistent decline in Longfin Smelt is

1 tied to inadequate winter/spring outflow; does it?

2 WITNESS ROSENFELD: That's my interpretation
3 of the results.

4 MS. ANSLEY: But it is not listed as a
5 conclusion of the study.

6 It's your interpretation based on your
7 experience, as well as this study, but it's not a
8 conclusion of that study; is that correct?

9 WITNESS ROSENFELD: Well, the study shows
10 that there is an effective winter/spring outflows on
11 production of age 0 fish given a stock of adult
12 spawners, age 0 fish being younger fish.

13 It also shows that there's a survival
14 component between age 1 and age 2. We were unable to
15 discriminate between models that allowed that survival
16 component to decline versus ones that just maintained
17 the survival component, and yet the population declines
18 in either of those models with or without the age 1 to
19 age 2 -- age 0 to age 2 survival component.

20 So the decline -- There is a decline -- a
21 component of the decline that is due to freshwater
22 flows since that's the only thing that affects the
23 other life stage that we studied, age 2 to age 0.

24 MS. ANSLEY: And my understanding -- and you
25 can obviously feel free to correct me.

1 My memory says that you looked at a -- you
2 looked at -- you looked at flow, you looked at -- and
3 then two water quality parameters, temperature and --
4 Was it clarity or turbidity?

5 WITNESS ROSENFELD: (Examining document.)

6 I'm just reviewing my notes here.

7 Yes. Various forms of transparency; second
8 depth.

9 MS. ANSLEY: Yeah. I'm sorry. I have it now.

10 WITNESS ROSENFELD: Yeah.

11 MS. ANSLEY: So you looked at outflow,
12 temperature, and water transparency were the only three
13 parameters that were used in your modeling.

14 WITNESS ROSENFELD: No, that's not correct.

15 MS. ANSLEY: What are the other?

16 WITNESS ROSENFELD: Well, there -- We looked
17 for evidence of density dependence, for instance, and
18 we looked for effect of stock size, meaning the
19 abundance of age 2 spawning adults, and we found
20 evidence for both of those.

21 MS. ANSLEY: But you did not look at other
22 water quality parameters?

23 WITNESS ROSENFELD: No, I did not.

24 MS. ANSLEY: You did not look at, like,
25 predation?

1 WITNESS ROSENFELD: No. I wouldn't count
2 predation as a water quality parameter.

3 But, no, I didn't look at predation. There
4 are no predation on Longfin Smelt so far as I know.

5 MS. ANSLEY: I'm just asking what your
6 parameters were that were the modeling that you --

7 WITNESS ROSENFELD: Right.

8 MS. ANSLEY: -- the hypothesis -- the one,
9 two -- the five models that you tested.

10 And, so, to confirm what you just said, that
11 it was your conclusion that flow was not controlling on
12 Longfin survival based on these models, and I have
13 written from age 0 to 2 but you said age 1 to 2.

14 WITNESS ROSENFELD: Age 0 to 2 --

15 MS. ANSLEY: Okay.

16 WITNESS ROSENFELD: -- yes.

17 MS. ANSLEY: And then you found --

18 WITNESS ROSENFELD: Flows were not an effect.

19 We did not detect an effect of flow, I should
20 say. We did not detect an effect of flow on survival
21 from age 0 to age 2.

22 MS. ANSLEY: And isn't it true that you also
23 found that density-dependent -- that it was density
24 dependency that controlled during a portion of this --
25 this portion of the Longfin life cycle?

1 WITNESS ROSENFELD: It was not the only thing
2 that controlled. There was the survival parameter as
3 well.

4 And the density dependence, to my
5 recollection, occurred when you include the population,
6 but when it was at its highest, which is not
7 surprising.

8 MS. ANSLEY: Right.

9 And it was -- You found that density
10 dependence occurred during the summer and early fall;
11 is that correct?

12 WITNESS ROSENFELD: We found that density
13 dependence occurred between age 0 when the age 0
14 population is measured, and when the age 2 population
15 is measured.

16 MS. ANSLEY: And that would be when juvenile
17 Longfin Smelt are in the Bay and ocean?

18 I believe you said mesohaline -- haline
19 environments and goes to the ocean; is --

20 WITNESS ROSENFELD: Yeah.

21 MS. ANSLEY: -- that correct?

22 WITNESS ROSENFELD: So between when the age 0
23 fish are measured, as reported here in the
24 San Francisco Bay Study, and when age 2 fish are
25 measured again by the San Francisco Bay Study, the fish

1 are widely distributed throughout the estuary.

2 But mostly for -- or for significant portions
3 they're found in Central Bay. They may migrate out to
4 the ocean during that time period. They're found in
5 San Pablo Bay, Suisun Bay.

6 So down -- downstream of the Delta is their
7 primary distribution during those months between
8 age 0 -- when age 0 is measured and when age 2 is
9 measured.

10 MS. ANSLEY: Okay. And -- And so this
11 constraint, this density dependence, I understand you
12 also added in the survival parameter, occur when
13 Longfin Smelt are downstream of the Delta; is that
14 correct? That you -- That you identified.

15 WITNESS ROSENFELD: Yeah. That's one of the
16 inferences we made from this.

17 I mean, it would require more -- We're trying
18 to point to where more analyses needs to be done of the
19 life history and ecology of these fish downstream of
20 the Delta, since that's where there's a sort of, you
21 know, black box survival effect, or not.

22 I mean, our -- Again, our model was -- Our
23 modeling was unable to distinguish between allowing
24 survival effect to change and not allowing the survival
25 effect to change.

1 In the age 2 to age 0 production of juveniles,
2 which is the bulk of the population that's measured,
3 say, in the Fall Midwater Trawl, it's real clear that
4 flow is the -- Delta outflow is the driving effect.

5 MS. ANSLEY: I think you answered my question
6 with, yes, Longfin Smelt -- it occurs when Longfin
7 Smelt are downstream of the Delta.

8 And in your paper on Page 56, you state that
9 (reading):

10 ". . . freshwater flow variation has been
11 linked to productivity early in the life
12 cycle . . ."

13 WITNESS ROSENFELD: I'm sorry. In my paper,
14 or in my testimony?

15 MS. ANSLEY: In your paper. I'm sorry. In
16 your paper.

17 WITNESS ROSENFELD: Page 56?

18 MS. ANSLEY: Yes. Page 56.

19 (Exhibit displayed on screen.)

20 MS. ANSLEY: It's sort of the first full
21 sentence of the left-hand column.

22 So, you state that (reading):

23 ". . . freshwater flow variation has been
24 linked to productivity early in the life
25 cycle -- an effect that is subsequently

1 tempered by density-dependent survival
2 during the juvenile life stage."

3 Correct?

4 WITNESS ROSENFELD: Yes, that's what it says.
5 And it should be . . .

6 We found evidence of density dependence. We
7 did not prove density dependence. The
8 density-dependent effect, as we state in this -- in
9 this same paragraph, can be driven by things like
10 predation, can be driven by things like the sampling
11 apparatus that's used.

12 So, I would just caution that our paper
13 doesn't prove that there is density dependence. It
14 finds evidence that density dependence could be a
15 factor.

16 MS. ANSLEY: Did you evaluate whether outflow
17 could be used to increase the population of Longfin
18 Smelt in this paper?

19 WITNESS ROSENFELD: No. We didn't model
20 changes in outflows. I mean, changes in outflows other
21 than what occurred in the -- in the history --
22 historically.

23 MS. ANSLEY: And based on what you determined
24 in this study, which did detect an indication of
25 density dependent -- dependence, wouldn't density

1 dependence limit the ability to use flow to increase
2 Longfin Smelt abundance over time?

3 WITNESS ROSENFELD: It depends on what you
4 mean by "limit."

5 MS. ANSLEY: Of limited use. Or it would mean
6 there would be --

7 WITNESS ROSENFELD: I would not agree to
8 that, no.

9 I mean, at -- at some population level,
10 everything becomes density-dependent; right? So the
11 fact that there is evidence of density dependence that
12 arises because of population at a high level, that
13 doesn't mean that, given the current level of this
14 fish, that modifying outflows is of limited use, as you
15 say, in supporting or increasing the population.

16 At a certain level of population abundance,
17 density dependence will control. That's -- That's just
18 ecology.

19 MS. ANSLEY: Okay. Moving on in your
20 testimony to Page 27, Lines 10 through 16.

21 WITNESS ROSENFELD: Testimony?

22 MS. ANSLEY: Your testimony again, NRDC-58 --

23 WITNESS ROSENFELD: Page 27.

24 MS. ANSLEY: Page 27, Lines 10 through 16 --

25 WITNESS ROSENFELD: 10 through 16.

1 MS. ANSLEY: -- you discuss Kimmerer et. al
2 (2009) and their model of springtime X2-Longfin Smelt
3 abundance.

4 Do you see that?

5 WITNESS ROSENFELD: Just a clarification.

6 I'm discussing the ITP's modification of a
7 model that was originally produced by Kimmerer et al.
8 (2009). But, yes, if that's what you meant.

9 MS. ANSLEY: And what months are you referring
10 to as "spring"?

11 WITNESS ROSENFELD: April, May, June.

12 The same as the calendar delineations of those
13 months.

14 MS. ANSLEY: And the Kimmerer et al. (2009)
15 paper was January through June; is that correct?

16 WITNESS ROSENFELD: The Kimmerer et al.
17 (2009) paper, my recollection is that they used flows
18 from January through June as the -- or X2s -- I'm
19 sorry -- from January through June as the basis for
20 their community model.

21 MS. ANSLEY: In looking at Page 28 --

22 I'm trying to speed up because I have a lot to
23 go and we're running down on time.

24 WITNESS ROSENFELD: "Miles to go before we
25 sleep."

1 MS. ANSLEY: Yes. You have some dense
2 testimony going on.

3 On Page 27 -- No.

4 On Page 28, Lines 18 through 21 --
5 (Exhibit displayed on screen.)

6 MS. ANSLEY: -- you discuss the Longfin Smelt
7 spring outflow analysis. And you note that the method
8 cannot predict future step-declines in abundance.

9 Do you see that testimony?

10 WITNESS ROSENFELD: Let me just review the
11 sentence that I think you're talking about.

12 (Examining document.)

13 MS. ANSLEY: Lines 18 to 21.

14 WITNESS ROSENFELD: Right.

15 It says (reading):

16 ". . . the ITP's model does not allow one
17 to predict size, timing, or frequency of
18 such . . . declines."

19 Is that what you were referring to?

20 MS. ANSLEY: And -- Yes.

21 And I just was going to follow up.

22 Neither the X2 abundance relationship, so the
23 Kimmerer, et al. (2009) model maybe as modified, nor
24 the methods in your Nobriga and Rosenfield (2016) allow
25 prediction of step-changes; is that correct? That

1 method of those models.

2 WITNESS ROSENFELD: That is correct. I mean,
3 the step-change is sort of a black box.

4 MS. ANSLEY: And, then, moving on --

5 WITNESS ROSENFELD: It's a correction -- It's
6 a correction of the model to make it true-up, but
7 what's causing the need to true-up the model is, you
8 know, not known and, in most cases, not known and would
9 require further study.

10 And certainly predicting when the next
11 step-change would occur is -- is not known if you don't
12 know the cause of the initial step-changes.

13 MS. ANSLEY: So where I'm at is, I'm moving on
14 to -- I have a couple of questions on Longfin
15 entrainment; I have a couple questions on the Delta
16 Smelt testimony; and then I have questions on
17 Microcystis.

18 CO-HEARING OFFICER DODUC: You're not going to
19 get done in 11 minutes.

20 MS. ANSLEY: Turbidity and -- No, I'm not.

21 And then I have a couple questions on his
22 recommended conditions that he ends with.

23 So I'm not -- I think that I'm about 30
24 minutes. But I wanted to give you a heads-up on the
25 topics that are remaining.

1 CO-HEARING OFFICER DODUC: Yes, and they're
2 all pretty relevant.

3 Let's go ahead and take a break right now for
4 Dr. Rosenfield.

5 MS. ANSLEY: Yes.

6 CO-HEARING OFFICER DODUC: But while he is
7 taking a break, we are not.

8 Let me ask all those who are planning to
9 cross.

10 It seems like Miss Ansley is covering quite a
11 lot of ground. Does that change any of your estimates
12 with respect to time?

13 MR. HERRICK: (Shaking head.)

14 CO-HEARING OFFICER DODUC: No.

15 Mr. Obegi, don't go away. Only Mr. -- Only
16 Dr. Rosenfield gets a break.

17 Okay. Given what you've heard so far, and
18 granted we're just not even, you know, through the
19 first cross yet, do you anticipate redirect?

20 MR. OBEGI: Given Dr. Rosenfield's medical
21 condition, I was not planning to redirect. We'll see.

22 But we'll see what comes up in cross the rest
23 of the time.

24 CO-HEARING OFFICER DODUC: Okay. Because I'm
25 looking -- This is for Mr. Jackson's benefit.

1 I'm looking at now -- Assuming we wrap up
2 today with DWR only and then continuing tomorrow, I'm
3 looking at, with breaks, four and a half hours. That
4 doesn't count the lunch break, so five and a half
5 hours. That means the earliest we might get to
6 Mr. Jackson might be 2:30.

7 MR. JACKSON: (Nodding head.)

8 CO-HEARING OFFICER DODUC: But, again, I'm --
9 Before you run with that time, Mr. Jackson, I will want
10 to re-evaluate after Miss Ansley is done and see
11 whether or not that changes anyone's estimate of the
12 time they need for cross.

13 All right. With that, now, you may all have a
14 break and we will return at 4:25.

15 (Recess taken at 4:14 p.m.)

16 (Proceedings resumed at 4:25 p.m.):

17 CO-HEARING OFFICER DODUC: All right. It's
18 4:25.

19 And before we return to Miss Ansley, let's --
20 I have a housekeeping matter.

21 Mr. Jackson, since tomorrow looks to be a very
22 long day for Dr. Rosenfield, I'm suggesting that we
23 move some of your witnesses to Wednesday. I believe
24 you do have a witness who is already here who you would
25 like to have heard tomorrow.

1 Who would that be?

2 MR. JACKSON: Aaron Budgor.

3 CO-HEARING OFFICER DODUC: Budgor. And that
4 is the substitute --

5 MR. JACKSON: For C-WIN.

6 CO-HEARING OFFICER DODUC: Yes.

7 So, Miss Ansley, Mr. Mizell, just so we know,
8 we will hear CSPA witness Aaron . . .

9 MR. JACKSON: Budgor.

10 CO-HEARING OFFICER DODUC: Budgor tomorrow.

11 And then Del Piero and Mr. Fix -- Mr. Smith --
12 I'm sorry. Trying to combine Felix and Smith at the
13 same time -- will appear on Wednesday.

14 And that should give us time to go through the
15 rest of Dr. Rosenfield's cross as well as any redirect
16 and not feel like we are being jammed.

17 It's been my experience that, if I plan for a
18 long day, it will be short; if I plan for a short day,
19 it will be long.

20 MR. JACKSON: Thank you.

21 We'll -- We're certainly willing to do it that
22 way.

23 CO-HEARING OFFICER DODUC: All right.

24 Miss Morris, you have . . .

25 MS. MORRIS: A housekeeping, please.

1 CO-HEARING OFFICER DODUC: A housekeeping
2 item.

3 MS. MORRIS: I have a presentation that I
4 committed to make in Orange County tomorrow morning. I
5 thought for sure I would be crossing today.

6 I've asked Mr. Obegi and everybody except for
7 Miss Taber, who was on the phone, if they would mind if
8 I could be moved to the end. And I've changed my
9 flight to try to get back. But I'm going to do my
10 best. But I was hoping that you would be able to make
11 that accommodation since --

12 CO-HEARING OFFICER DODUC: We will move you to
13 the end, but we will not hold Dr. Rosenfield for you.

14 MS. MORRIS: I wouldn't ask you to do that.

15 But I may send somebody else on my behalf if
16 there's a flight issue or something of that nature.

17 I'll --

18 CO-HEARING OFFICER DODUC: All right.

19 MS. MORRIS: -- leave word through
20 Miss Sheehan.

21 CO-HEARING OFFICER DODUC: Since there's no
22 objection, we will go ahead and do that.

23 I like it when the parties play nice with each
24 other.

25 All right. Miss Ansley, we'll now turn back

1 to you, and we will be stopping at 5 o'clock.

2 MS. ANSLEY: (Nodding head.)

3 And I've endeavored to streamline my questions
4 over the break.

5 I am now moving on to some topics -- questions
6 on Longfin entrainment, which you discuss on Page 30 of
7 your testimony --

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: -- Lines 9 through 18.

10 Do you have that testimony in front of you?

11 WITNESS ROSENFELD: I do.

12 MS. ANSLEY: And in your testimony, you
13 identify predicted changes in Longfin entrainment, and
14 you attribute those changes to changes in OMR flows; is
15 that correct?

16 WITNESS ROSENFELD: The model that's used to
17 do the estimate is Grimaldo, et al. (2009), I believe,
18 which is based on OMR flows.

19 MS. ANSLEY: And you cite the -- the figure in
20 the ITP Application; is that correct?

21 On the left-hand --

22 WITNESS ROSENFELD: Yes. At Line 10, yes.

23 MS. ANSLEY: And, of course, we could -- we
24 can always call things up, but I'm trying to move
25 quickly so you'll have to let me know.

1 Do you recall that the text above the figure
2 you cite explains that these differences are a result
3 of HOR gate operations?

4 WITNESS ROSENFELD: I don't recall that. If
5 you could call up the paper, that would help.

6 MS. ANSLEY: So, if we look at DWR-1036,
7 Page 4.A, so we must be looking at Appendix A.

8 (Exhibit displayed on screen.)

9 MS. ANSLEY: There we go. Four -- It's
10 Page 4.A.1-54.

11 (Exhibit displayed on screen.)

12 MS. ANSLEY: Thank you, Mr. Hunt.

13 And if you scroll down, please.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: And then if you look at -- In the
16 middle of the largest paragraph that we're looking at
17 here, do you see where it says, "This indicates. It's
18 literally in the center. I apologize.

19 (Reading):

20 "This indicates . . . the
21 differences in Old and Middle River flows
22 between Proposed Project and No-Action
23 Alternative were largely a result of the
24 operation of the HOR gate . . ."

25 WITNESS ROSENFELD: Yes, I see that.

1 MS. ANSLEY: And if we keep scrolling down
2 until we get . . .

3 (Exhibit displayed on screen.)

4 MS. ANSLEY: Keep scrolling down after that.

5 (Exhibit displayed on screen.)

6 MS. ANSLEY: Okay. And in your testimony at
7 Page 32 -- so I'm jumping a little to some questions --
8 you indicate that (reading):

9 "WaterFix assumes no Longfin . . .

10 entrainment at the North Delta

11 diversions."

12 Is that correct?

13 That would be Lines 11 through 13, if you're
14 looking.

15 WITNESS ROSENFELD: Yes, that's my
16 understanding.

17 MS. ANSLEY: Isn't it true that the ITP
18 Application considered the potential entrainment of
19 Longfin Smelt at the North Delta diversions?

20 WITNESS ROSENFELD: I don't recall. I do
21 recall the CESA Findings of Fact indicating that
22 Longfin Smelt are in the area, and reviewing sampling
23 data myself to show that Longfin Smelt are in the area.

24 But I looked to see whether that had been
25 incorporated into estimates of population level impacts

1 and did not find it.

2 MS. ANSLEY: And is it your understanding that
3 the ITP analysis or the ITP Application considered
4 recent trawl data for the assessing the distribution of
5 Longfin Smelt?

6 WITNESS ROSENFELD: I didn't -- I don't
7 recall what the ITP did with regard to recent trawl
8 data, but I myself looked at recent trawl data in
9 preparation of this testimony to confirm my suspicion
10 that Longfin Smelt do occur at the northern end of the
11 sampling zone, which would be the closest sampling
12 sites to the North -- the new North Delta diversion.

13 MS. ANSLEY: Did you look at the ITP analysis
14 in preparation, and the trawl data that it reports?

15 WITNESS ROSENFELD: Again, I can't recall
16 whether I looked at their trawl data. I certainly
17 looked at the ITP and the ITP Application.

18 I can't recall what the ITP said about the
19 trawl -- their use of trawl data.

20 But my look at the trawl data showed that
21 Longfin Smelt are likely to occur in that area, or at
22 least there's no evidence that they don't occur in that
23 area.

24 And the CESA Findings of Fact re-emphasized
25 that -- that Longfin Smelt -- there is some likelihood

1 that Longfin Smelt occur in the area of the North Delta
2 diversion -- the new North Delta diversion; thus, they
3 could be impacted by entrainment or impingement.

4 MS. ANSLEY: Can we look at DWR-1036. Oh,
5 we're there.

6 And Page 4-274.

7 (Exhibit displayed on screen.)

8 MS. ANSLEY: And scroll up.

9 (Exhibit displayed on screen.)

10 MS. ANSLEY: Stay right there on North Delta
11 stations.

12 Is this part of the data that you reviewed?

13 WITNESS ROSENFELD: I looked at this table.

14 MS. ANSLEY: Okay. Looking at Page 34 of your
15 testimony.

16 (Exhibit displayed on screen.)

17 MS. ANSLEY: And now we're -- I'm moving on to
18 Delta Smelt.

19 Sorry. I'm trying to skip over questions I
20 crossed out.

21 On Page 34, you -- you state on Lines 5
22 through 7 roughly -- and you can look at the testimony
23 there -- regarding the influence of outflow on survival
24 of Delta Smelt.

25 Do you see that testimony?

1 WITNESS ROSENFELD: Yes, I do.

2 MS. ANSLEY: And you cite to -- you provide
3 three sites, MAST 2015, CDFW 2016 and U.S. Fish and
4 Wildlife Service 2016a.

5 Do you see that?

6 WITNESS ROSENFELD: Yes.

7 MS. ANSLEY: And the MAST 2015 study was a
8 current conceptual models paper; wasn't it?

9 WITNESS ROSENFELD: Yes. It was reviewing
10 conceptual models.

11 MS. ANSLEY: And the CDFW 2016 and 20 -- and
12 U.S. Fish and Wildlife Service 2016a are unpublished
13 analyses; is that correct?

14 WITNESS ROSENFELD: That's correct.

15 But they were the basis of those agencies'
16 recommendations during the recent drought years to
17 improve Delta outflows to protect Delta Smelt from dire
18 effects of the drought. Some agencies relying on
19 those -- on those analyses to -- as -- as far as I can
20 see.

21 MS. ANSLEY: As far as you can see.

22 These were -- These were handouts or papers
23 informally discussed at the CAMT meeting; is that
24 correct?

25 WITNESS ROSENFELD: I'm not aware they were

1 originally distributed but I know that I received them,
2 discussed them with representatives from the Fish and
3 Wildlife Service at least, and then also that we
4 brought those to the attention of the State Water Board
5 because of the dire situation of Delta Smelt during the
6 drought.

7 And I'm also aware that the Department of the
8 Interior called for improved outflows to protect Delta
9 Smelt during the recent drought.

10 And I believe it was based on these analyses,
11 although I would have to check to see what was
12 referenced, but they're contemporaneous with each
13 other.

14 MS. ANSLEY: Okay. But, as you sit here
15 today, you can't -- you don't know that for sure.

16 WITNESS ROSENFELD: No. I don't know what
17 was going through the Secretary of the Interior's mind.

18 MS. ANSLEY: And these documents have not been
19 peer reviewed.

20 WITNESS ROSENFELD: I don't know what review
21 they've received.

22 MS. ANSLEY: And the CW -- CDFW 2016 and the
23 U.S. Fish and Wildlife Service 2016a cites, they
24 pertain to summer outflow; is that correct?

25 WITNESS ROSENFELD: I'm sorry. Can you

1 repeat which?

2 MS. ANSLEY: So the cites -- not the MAST 2015
3 cite, but the other two cites, the CDFW 2016 and the
4 U.S. Fish and Wildlife Service 2016a that you
5 provide --

6 WITNESS ROSENFELD: Um-hmm.

7 MS. ANSLEY: -- at Line 7, those pertain to
8 summer outflow; is that correct?

9 WITNESS ROSENFELD: At least one of them
10 pertains to outflows in all months of the year.
11 There's an analyses -- analysis in there that shows the
12 affect of flows in every month of the year.

13 MS. ANSLEY: And looking at the MAST 2015
14 study, do you recall -- That's a very large report or
15 document.

16 Do you recall what you were specifically
17 citing to? I'm not exactly asking you for a page
18 number, but do you recall what analysis you were citing
19 to?

20 WITNESS ROSENFELD: I don't recall at the
21 moment exactly what that said. It's been a long time
22 since I read that report.

23 MS. ANSLEY: Could -- Could it be the
24 20-millimeter larval survey?

25 WITNESS ROSENFELD: Again, I would have to

1 look at the report to refresh my memory about what
2 results they were talking about.

3 But, I mean, I also interact with several of
4 the authors of the MAST Report formally and informally,
5 and my understanding grows from reading that report and
6 from discussing it with them.

7 MS. ANSLEY: I understand that.

8 But my -- my issue here is that you've cited
9 the MAST 2015 Report which is large and extensive and
10 includes a number of analyses, so I was hoping that you
11 could help me center down which analysis you were
12 citing to inform this statement.

13 WITNESS ROSENFELD: I -- I really don't
14 recall which particular part of that lengthy report.

15 But, again, I sympathize with lengthy
16 documents with lots of analyses in them.

17 MS. ANSLEY: So I would like to move on to
18 your other environmental factors testimony, which is
19 the largest section, although I have removed a bunch of
20 questions.

21 So, on your testimony on Page 39 --

22 (Exhibit displayed on screen.)

23 MS. ANSLEY: -- you state that Crangon
24 Shrimp --

25 Am I pronouncing that right? Crangon Shrimp?

1 WITNESS ROSENFELD: Crangon is the genus,
2 yes.

3 MS. ANSLEY: -- have a positive flow
4 relationship, did you mean Bay Shrimp? Is that the
5 same?

6 WITNESS ROSENFELD: Crangon and -- Bay Shrimp
7 is the generic com -- I should say a common term for
8 one species of Crangon Shrimp, yes.

9 MS. ANSLEY: Okay. And you are familiar with
10 Kimmerer et al. (2009); is that correct?

11 WITNESS ROSENFELD: I am familiar with it,
12 yes.

13 MS. ANSLEY: Isn't it true that Kimmerer et
14 al. (2009) found that Bay Shrimp abundance was
15 moderately related to flow?

16 WITNESS ROSENFELD: I don't remember the
17 details of the Kimmerer (2009) with respect to Crangon.
18 And I -- I don't know what you mean by "moderately."

19 MS. ANSLEY: I'm using a term used in Kimmerer
20 et al. (2009) where he said the abundant indices for
21 Bay Shrimp were moderately related to flow so . . .

22 If that clarifies what I mean by "moderately
23 related to flows," I mean however Kimmerer et al.
24 (2009) used the word.

25 WITNESS ROSENFELD: My recollection from his

1 2009 paper is that it found the same as his 20 --
2 Kimmerer 2002 paper, which was that there is a X2
3 abundance relationship which is -- X2 is inversely
4 related to flow. So that there's a flow abundance
5 relationship or an X2 -- Yeah.

6 What the metric is, is a point of discussion,
7 but flow and X2 are intimately related.

8 MS. ANSLEY: But in your testimony, you said
9 it displays (reading):

10 ". . . strong, persistent, and
11 significant positive relationship . . ."

12 Is that true?

13 WITNESS ROSENFELD: Yes, that's true.

14 MS. ANSLEY: Can we call up DWR-1163.

15 It's on the jump drive. Excuse me.

16 (Exhibit displayed on screen.)

17 MS. ANSLEY: And can we go to Page 7, please.

18 (Exhibit displayed on screen.)

19 MS. ANSLEY: Can we scroll down? This will
20 take me a second.

21 (Exhibit displayed on screen.)

22 MS. ANSLEY: And then -- Oh, I'm sorry. It's
23 highlighted.

24 So do you see the highlighted sentence there?
25 This is where I'm getting my conclusions from Kimmerer

1 et al. (2009).

2 Does that refresh your recollection as to
3 Kimmerer's results or conclusion?

4 WITNESS ROSENFELD: (Examining document.)

5 I'd have to refresh my memory more about the
6 first part of that sentence, "the habitat indices were
7 not related to flow."

8 But it is my recollection that the second
9 part, the "abundance indices for both species were
10 moderately related to flow" is Kimmerer's wording.

11 MS. ANSLEY: Okay. And then you're also
12 familiar with Kimmerer et al. (2013); is that correct?

13 WITNESS ROSENFELD: There might be more than
14 one Kimmerer (2013), so . . .

15 MS. ANSLEY: Can we look at DWR-1155.

16 (Exhibit displayed on screen.)

17 MS. ANSLEY: I have the right one.

18 Does that help refresh your recollection?

19 WITNESS ROSENFELD: Yes, I've seen this paper
20 before.

21 MS. ANSLEY: And is it your understanding that
22 this paper, Kimmerer et al. (2013), reported that
23 (reading):

24 "Phytoplankton primary production
25 and specifically (sic) growth rate . . .

1 did not appreciably (sic) change as flow
2 decreased . . ."

3 Can we go to Page 11.

4 (Exhibit displayed on screen.)

5 MS. ANSLEY: Is there --

6 WITNESS ROSENFELD: Oh, I --

7 MS. ANSLEY: Scroll down. Is there any
8 highlighted text?

9 Oh, Page 11. Excuse me.

10 (Exhibit displayed on screen.)

11 MS. ANSLEY: All right. Are you familiar --
12 Does this refresh your recollection as to the results
13 that Kimmerer et al. found in 2013?

14 WITNESS ROSENFELD: (Examining document.)

15 Yes. That's his finding with regard to
16 phytoplankton.

17 But my testimony was about Delta Smelt and
18 Longfin Smelt, among other species, and they're not
19 primarily phytoplankton consumers. They're primarily
20 zooplankton consumers, which destine the issue of is
21 that Kimmerer has been working on for years about what
22 is the effect that's driving the flow abundance
23 relationship for Longfin Smelt and others.

24 And the effect doesn't necessarily translate
25 up the trophic web to produce the -- the results. So,

1 he's continuing to try and find the -- the rationale or
2 the linkage between flow and the abundance of these
3 important fish, but phytoplankton, again, is not a --
4 not the primary food source for these fish.

5 So the interesting disconnect is that
6 phytoplankton, he finds, has this effect, but those
7 that eat phytoplankton show a different population
8 behavior. And the things -- And the Longfin Smelt eat
9 those things show the different population behavior.

10 MS. ANSLEY: I'd like to -- I have just a
11 couple questions on turbidity and then a couple
12 questions on his final conditions, and then I'm done.

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

14 MS. ANSLEY: So, on Page 37 to 39 of your
15 testimony, you discuss turbidity.

16 Do you see that general section?

17 WITNESS ROSENFELD: 37?

18 MS. ANSLEY: Page 37. You have a section that
19 starts on Page 37 --

20 WITNESS ROSENFELD: Okay.

21 MS. ANSLEY: -- that goes through 38 on
22 turbidity.

23 Do you have that in front of you?

24 WITNESS ROSENFELD: Yes, I do.

25 MS. ANSLEY: And at the top of Page 38, you

1 reference an ICF memo.

2 Do you see that on Line 2 --

3 WITNESS ROSENFELD: Yes.

4 MS. ANSLEY: -- Page 38?

5 WITNESS ROSENFELD: Yes.

6 MS. ANSLEY: Isn't it true that this memo is
7 from 2015, as you note here?

8 WITNESS ROSENFELD: That's when I wrote it,
9 yes.

10 MS. ANSLEY: And the -- the Proposed Project
11 in 2015 was different than what is currently proposed?

12 WITNESS ROSENFELD: I'm not aware that it was
13 different with regard to the sediments that's being
14 discussed here, which is the ability to reintroduce
15 recaptured sediments into the ecosystem.

16 MS. ANSLEY: And the memo you're referencing
17 was not a final document that was made public?

18 WITNESS ROSENFELD: It's a memo.

19 MS. ANSLEY: Is it your understanding that it
20 was a draft?

21 WITNESS ROSENFELD: I don't recall whether it
22 was a draft. I recall it being a memo with a "from"
23 and "to" and date on it.

24 I can't attest to whether it was actually sent
25 or not, but I also don't recall it being a draft.

1 MS. ANSLEY: And then . . .

2 Is it your understanding that the version that
3 you looked at had comments? Like, you know, how people
4 red line and there's bubble comments on the side.

5 Did the version you looked at have bubble
6 comments?

7 WITNESS ROSENFELD: I believe we entered this
8 as an exhibit. If someone could refresh my memory
9 about the exhibit, I could take a look at the document
10 and see.

11 MS. ANSLEY: I apologize. I don't have the
12 exhibit number written down.

13 MR. OBEGI: I believe it's NRDC-63.

14 (Exhibit displayed on screen.)

15 MS. ANSLEY: Can you scroll down?

16 (Exhibit displayed on screen.)

17 MS. ANSLEY: Do you see how it has that
18 shading on the right-hand side that indicates that it's
19 subject to red-lining and comments?

20 WITNESS ROSENFELD: Yes, I do see that.

21 MS. ANSLEY: Does this refresh your
22 recollection that this was not perhaps a final document
23 circulated for publication?

24 WITNESS ROSENFELD: I hope that they didn't
25 circulate it with the comment bubbles, yeah.

1 MS. ANSLEY: And then you . . .

2 Maybe you can refresh my recollection before I
3 start on these questions.

4 Is it -- Did you review Chapter 8, the water
5 quality chapter, of the Final EIR?

6 WITNESS ROSENFELD: I don't recall the de --
7 which parts of that I may or may not have reviewed.

8 MS. ANSLEY: Did you review the analysis on --
9 for Alt 4A, which is the alternative currently proposed
10 before the Board, the effect on turbidity in the Delta?

11 WITNESS ROSENFELD: You're still talking
12 about the Final EIR?

13 MS. ANSLEY: I am. The Final EIR from July of
14 2017.

15 WITNESS ROSENFELD: Yeah. I don't recall if
16 I reviewed that or not.

17 MS. ANSLEY: And did you --

18 WITNESS ROSENFELD: I did review the earlier
19 Draft Environmental Impact Report and the CESA Findings
20 of Fact --

21 MS. ANSLEY: And so you are --

22 WITNESS ROSENFELD: -- with regard to this
23 question.

24 MS. ANSLEY: And so you're unaware that Alt 4A
25 was expected to have a minimal effect on turbidity

1 compared to the No-Action Alternative.

2 WITNESS ROSENFELD: Well, it depends on the
3 meaning of the word "minimal."

4 The RDEIR/SDEIS indicates that the WaterFix
5 operation will reduce sediment supply by 8 to
6 9 percent. And the Findings of Fact, which I assume
7 are about the new Project, indicate that that reduction
8 will be 10 percent.

9 MS. ANSLEY: Okay. But you are citing to the
10 RDEIR, not the FEIR. And you can't recall as you sit
11 here today the conclusions of the FEIR?

12 WITNESS ROSENFELD: I can't recall, but,
13 again, the CESA Findings of Fact confirmed -- confirmed
14 my earlier impression that the Project reduces
15 turbidity in the Delta by what I would term a not
16 insignificant amount.

17 MS. ANSLEY: And then looking, finally, at
18 your conditions that you propose at the end of your
19 testimony, starting on Page 42.

20 Well, I think it maybe starts the page before,
21 starting on Page 41.

22 (Exhibit displayed on screen.)

23 MS. ANSLEY: I just have a couple quick
24 questions.

25 Is your 2a on Page 42 for December-to-June

1 outflows, is that based on the 2010 . . .

2 Well, first, let me ask:

3 So you recommend a number of Delta outflows on
4 Page 42 carrying over onto Page 43; correct?

5 WITNESS ROSENFELD: Correct.

6 MS. ANSLEY: Have you done any modeling on the
7 impacts of these recommended outflows on other
8 beneficial uses, including water supply?

9 WITNESS ROSENFELD: I have not modeled the
10 effect on water supply of these particular
11 recordations.

12 I have modeled the effect on beneficial uses
13 such as fish and wildlife protection.

14 MS. ANSLEY: And would that be just fish or
15 would that be fish and wildlife? Or would that be
16 aquatic or terrestrial or just aquatic?

17 WITNESS ROSENFELD: Aquatic.

18 MS. ANSLEY: And have -- And is your 2a -- You
19 don't provide any cites, but is that based on the 2010
20 Delta Flow Criteria Report?

21 WITNESS ROSENFELD: It's actually based on my
22 analysis that I did in preparation for the -- and
23 submitted to the 2010 proceedings that produced the
24 2010 State Board Report.

25 And my -- The State Board in its 2010 Report

1 rolled up recommendations from various parties into a
2 percentage of unimpaired.

3 MS. ANSLEY: And --

4 WITNESS ROSENFELD: So that's where the
5 percentage of unimpaired part comes from.

6 But the -- the -- Well, actually, in
7 retrospect, I might have been talking about percentage
8 amount of impaired as well. I'd have to look at my
9 analysis.

10 But this is based on my analyses that the
11 State Water Board combined with other analyses and --
12 and derived their results, the 75 percent number
13 certainly comes from that.

14 MS. ANSLEY: And to confirm: This looks
15 solely at -- Your analysis looks solely -- at that
16 time, in 2010 or earlier -- looks solely on impacts to
17 aquatic resources and not other beneficial uses of
18 water supply; right? That analysis.

19 WITNESS ROSENFELD: Can you repeat the
20 question?

21 MS. ANSLEY: That analysis that you are now
22 testifying to that underlies your 2a --

23 WITNESS ROSENFELD: Um-hmm.

24 MS. ANSLEY: -- recommendation did not include
25 an analysis of impacts on water supply.

1 WITNESS ROSENFELD: It did not include an
2 analysis of impacts on water supply, to my
3 recollection.

4 MS. ANSLEY: And it did not include an
5 analysis of impacts to terrestrial resources or
6 terrestrial species.

7 WITNESS ROSENFELD: I have to think about
8 that for a minute.

9 MS. ANSLEY: Okay.

10 WITNESS ROSENFELD: I do believe that's
11 correct.

12 MS. ANSLEY: And it did not include an
13 analysis of impacts to any other beneficial uses
14 outside of whatever aquatic resources you analyzed; is
15 that correct?

16 For example, beneficial uses include things
17 like recreation or . . . sportfishing.

18 Any other beneficial uses?

19 WITNESS ROSENFELD: Well, I think that those
20 are -- I mean, taken together, the recommendations that
21 I and others at TBI and other people contributed to
22 that testimony, we were putting together
23 recommendations for the biological protection of public
24 trust resources.

25 But those public trust resources, the fish in

1 particular -- well, the fish and the aquatic
2 invertebrates, are the source of recreational and
3 commercial -- are the basis of recreational and
4 commercial fisheries. So implicit is that we're
5 analyzing --

6 MS. ANSLEY: Okay.

7 WITNESS ROSENFELD: -- the level that support
8 that.

9 MS. ANSLEY: That that would be fishing. I
10 guess I was trying to think of beneficial uses.

11 But, for example, another recreational use
12 would be, like, boating, or --

13 WITNESS ROSENFELD: Right.

14 MS. ANSLEY: -- things that have anything to
15 do necessarily directly with species.

16 WITNESS ROSENFELD: Correct.

17 MS. ANSLEY: Okay. And then looking at

18 Page 43 --

19 These are my last two questions.

20 (Exhibit displayed on screen.)

21 MS. ANSLEY: -- you mention that -- and you
22 directly testified earlier today about the revised
23 Shasta RPA.

24 Do you see that there, Number 4?

25 WITNESS ROSENFELD: Yes.

1 MS. ANSLEY: And if NMFS indeed did adopt a
2 revised Shasta RPA, is it your understanding that the
3 Projects would be required to comply with that?

4 WITNESS ROSENFELD: I'm not an attorney, so I
5 can't speak to what -- how the requirements end up.

6 MS. ANSLEY: Okay. Then looking at Number 5,
7 the Yolo Bypass RPA, is it your understanding that this
8 is an ongoing project currently?

9 WITNESS ROSENFELD: The -- The achieving
10 Yolo -- the Yolo Bypass RPA acreage and inundation
11 criteria?

12 MS. ANSLEY: I mean the actual Yolo Bypass RPA
13 project.

14 Is it your understanding that environmental
15 review, for example, has been issued for that?

16 WITNESS ROSENFELD: I don't know the status
17 of the environmental review. It is my understanding
18 that this is ongoing. It's also my understanding that
19 it hasn't been completed, and I believe that it's
20 beyond the date that it was expected to be completed in
21 the RPA.

22 MS. ANSLEY: And this is a current RPA on the
23 Projects?

24 WITNESS ROSENFELD: This is referring to the
25 2008/2009, whichever year it was, RPA.

1 MS. ANSLEY: So it's something that the
2 Projects are already required to comply with; is that
3 correct?

4 WITNESS ROSENFELD: Correct.

5 MS. ANSLEY: Okay. I have no further
6 questions.

7 WITNESS ROSENFELD: Well, again, with the
8 modification of I don't speak to what's required in a
9 legal sense but --

10 MS. ANSLEY: Your understanding is fine.

11 WITNESS ROSENFELD: Yes.

12 CO-HEARING OFFICER DODUC: All right.

13 MS. ANSLEY: Oh, we have one more -- We have
14 one more request for Dr. Rosenfield.

15 We would like the -- the citation to the -- We
16 had discussed the MAST 2015, and I've been saying that
17 it was a very large report and we were unable to find
18 or pinpoint which -- what was your exact cite?

19 It would be -- We'd like to, if we could, be
20 provided with a cite tomorrow that's more specific in
21 that document --

22 CO-HEARING OFFICER DODUC: Mr. Obegi.

23 MS. ANSLEY: -- to what's being referred to.

24 MR. OBEGI: Yeah. With DWR's concurrence, we
25 would be happy to provide an errata that both provides

1 that level of detail as well as corrects the improper
2 citation to the Klimley paper. So we'd include the
3 correct Klimley paper. And we can provide that to you
4 tomorrow morning.

5 We can't provide the full errata but we can
6 provide that information to you.

7 MS. ANSLEY: Okay. That would be great.

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

10 Are there any other questions?

11 MR. DEERINGER: Just in that errata, I believe
12 there were -- Maybe this is what you're referring to.
13 There were also some stipulated -- stipulations on
14 Motions to Strike?

15 MR. OBEGI: Yeah. My -- My hope would be that
16 after the conclusion of our case in chief tomorrow, and
17 we move our exhibits into evidence on Wednesday or
18 Thursday, I would follow up with a corrected errata of
19 his testimony that includes those two -- those two
20 provisions that were stricken.

21 CO-HEARING OFFICER DODUC: But you will
22 provide tomorrow Miss Ansley with a verbal response.

23 MS. ANSLEY: To the --

24 MR. OBEGI: That is correct.

25 MS. ANSLEY: -- MAST citations specifically.

1 Okay. Great.

2 CO-HEARING OFFICER DODUC: All right. Thank
3 you everyone.

4 Actually, let me ask: Does that change
5 anyone's estimate of their cross-examination time, now
6 that you've heard all of Miss Ansley's.

7 Nope?

8 Mr. Herrick.

9 MR. HERRICK: Are we at the Regional Board
10 tomorrow?

11 CO-HEARING OFFICER MARCUS: Oh. Are we?

12 CO-HEARING OFFICER DODUC: Oh. Are we?

13 MR. HERRICK: My schedule says that, but that
14 doesn't mean it's correct.

15 CO-HEARING OFFICER DODUC: We are in Byron
16 Sher tomorrow.

17 MR. HERRICK: I'm sorry.

18 CO-HEARING OFFICER MARCUS: No. Always good
19 to know.

20 CO-HEARING OFFICER DODUC: All right. Thank
21 you all.

22 We'll see you at 9:30 tomorrow.

23 (Proceedings adjourned at 4:56 p.m.)

24

25

1 State of California)
2 County of Sacramento)

3

4 I, Candace L. Yount, Certified Shorthand Reporter
5 for the State of California, County of Sacramento, do
6 hereby certify:

7 That I was present at the time of the above
8 proceedings;

9 That I took down in machine shorthand notes all
10 proceedings had and testimony given;

11 That I thereafter transcribed said shorthand notes
12 with the aid of a computer;

13 That the above and foregoing is a full, true, and
14 correct transcription of said shorthand notes, and a
15 full, true and correct transcript of all proceedings
16 had and testimony taken;

17 That I am not a party to the action or related to
18 a party or counsel;

19 That I have no financial or other interest in the
20 outcome of the action.

21

22 Dated: April 28, 2018

23

24

25

Candace L. Yount, CSR No. 2737