

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA WATERFIX WATER)
RIGHT CHANGE PETITION)
HEARING)

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

PART 2

Monday, March 5, 2018
9:30 A.M.

VOLUME 10

Pages 1 - 232

Reported By: Deborah Fuqua, CSR No. 1248

Computerized Transcription by ProCAT

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 and Co-Hearing Officer:
7 Dorene D'Adamo, Board Member
8 Staff Present
9 Andrew Deeringer, Staff Attorney
10 Conny Mitterhofer, Senior Water Resources Control Engr.
11 Hwaseong Jin, staff
12
13 For California Department of Water Resources
14 Tripp Mizell, Senior Attorney
15 Duane Morris, LLP
16 By: Jolie-Anne Ansley, Attorney at Law
17
18 U.S. Department of the Interior, Bureau of Reclamation,
19 and Fish and Wildlife Service
20 Amy Aufdemberge, Assistant Regional Solicitor
21
22 State Water Contractors
23 Stefanie Morris
24 Adam Kear
25 Becky Sheehan
26
27 Cities of Folsom and Roseville, San Juan Water
28 District, and Sacramento Suburban Water District
29 Ryan Bezerra
30
31 (Continued)
32
33

1 APPEARANCES (continued)

2

3 Local Agencies of the North Delta
Osha Meserve

4

5 Tehama-Colusa Canal Authority & water service
6 contractors in its area
Meredith Nikkel

7

8 County of San Joaquin, San Joaquin County Flood Control
9 and Water Conservation District and Mokelumne River
Water and Power Authority

10 Thomas H. Keeling

11

12 East Bay Municipal Utility District
Fred Etheridge

13

14 California Water Research
Deirdre Des Jardins

15

16 County of Sacramento
17 Aaron Ferguson

18

19 Snugg Harbor Resort
Nikki Suard

20

21

22 ---o0o---

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

PAGE

Opening Remarks 1
by Co-Hearing Officer Doduc

--o0o--

WITNESSES CALLED BY PETITIONER

PANEL 3: JOHN BEDNARSKI, CHRISTOPHER EARLE,
DAVID RISCHBIETER

DIRECT EXAMINATION BY: PAGE

Mr. Mizell 10

CROSS-EXAMINATION BY: PAGE

Mr. Bezerra 54

Ms. Nikkel 89

Mr. Etheridge 91

Mr. Keeling 110

Ms. Meserve 147

---o0o---

1 Monday, March 5, 2018 9:30 a.m.

2 PROCEEDINGS

3 ---000---

4 CO-HEARING OFFICER DODUC: Good morning --
5 good morning, everyone. Welcome back. Hope everyone
6 had a nice weekend. You're here hopefully for the
7 California WaterFix Water Rights Change Petition
8 hearing. I'm Tam Doduc. To my right is Board Chair
9 and Co-Hearing Officer Felicia Marcus. To the Chair's
10 right, Board Member DeeDee D'Amado. To my left are
11 Andrew Deeringer, Conny Mitterhofer, and Hwaseong Jin.
12 We are being assisted today by Mr. Hunt, Ms. Perry, and
13 Mr. Baker.

14 The usual announcement, although -- I do see
15 some new faces. Please take a moment right now and
16 identify the exit closest to you. In the event of an
17 emergency, an alarm will sound. We will evacuate by
18 taking the stairs, not the elevators, down to the first
19 floor and exit to the park across the street. If
20 you're not able to use the stairs, please flag down one
21 of the orange-colored-wearing people in the hallway,
22 and they will be directing you to a protective area.

23 Secondly, this is being recorded and Webcasted
24 so please provide your comments by speaking into the
25 microphone and begin by identifying yourself and

1 stating your affiliation.

2 Our court reporter is back with us, and if you
3 would like to have the transcript earlier than at the
4 end of Part 2, then please make your arrangements
5 directly with her.

6 And finally, and most importantly, please take
7 a moment and make sure all your noise-making devices
8 are set on silent, vibrate, do not disturb. I see the
9 Chair double-checking. That is very good.

10 All right. Before we begin, are there any
11 housekeeping items?

12 Mr. Bezerra.

13 MR. BEZERRA: Thank you. I just received an
14 e-mail that the Webcast is not currently working, just
15 as an FYI matter.

16 CO-HEARING OFFICER DODUC: Or is the
17 individual operating from the Safari or from what
18 system?

19 MR. BEZERRA: I don't know. I'll send an
20 e-mail back and let them know to perhaps switch browser
21 they're using.

22 CO-HEARING OFFICER DODUC: In the meantime,
23 Mr. Hunt will go check.

24 Let's take a moment and go through the other
25 housekeeping matters I received. Although I don't see

1 counsel in the audience, I received -- we received a
2 request from Mr. Simmons, Mr. Emrick, and
3 Mr. O'Laughlin. Anybody here?

4 (No response)

5 CO-HEARING OFFICER DODUC: All right. They
6 requested a change in the order for a presentation of
7 cases in chief. They stated that a consultant with the
8 Department and the Bureau, and no party objects to the
9 requested modifications.

10 If that is indeed the case, we will grant the
11 request to change the order. However, they also made a
12 request in their letter for specific dates where their
13 counsel will not be present.

14 It is our standard practice that the parties
15 work amongst themselves when you have scheduling
16 conflicts to make sure that there is no gap in our
17 hearing. So to the extent Mr. Simmons, Mr. Emrick, and
18 Mr. O'Laughlin, that other parties like Contra Costa
19 County, CSPA, and others are available to go on
20 March 12th when you were not available, then we will
21 proceed.

22 But I would encourage you to, as always, work
23 amongst yourselves and try to find the most efficient
24 way to proceed. We would rather not get into the
25 process of trying to schedule all of your cases in

1 chief.

2 Any other issues? Mr. Mizell?

3 MR. MIZELL: Yes, thank you. Tripp Mizell,
4 DWR.

5 We were aware of a request by Ms. Taber, and I
6 had talked to Mr. Hitchings about that request. I'm
7 not as familiar with the request you just named off.

8 CO-HEARING OFFICER DODUC: This just came in.
9 I'm not aware of the requests from Ms. Taber.

10 MR. MIZELL: Though to the extent that --
11 there's a request for SJTA, it may be the case that I
12 still need to have a look at it.

13 CO-HEARING OFFICER DODUC: Yes. I did caveat
14 it "in case no party objects." So please take a look,
15 Mr. Mizell. It did just come in, so let us know.
16 We'll do housekeeping at the end of the day, and you
17 can tell us.

18 And Ms. Taber, whatever request it was that
19 you discussed with Mr. Mizell, if it is going to be a
20 request made officially, please send it in to the
21 entire service list.

22 And Mr. Hunt, you came back. Did you check on
23 the status of the webcast?

24 MR. HUNT: Yes, I did. They estimate it will
25 be up in about ten minutes. The recording is going.

1 CO-HEARING OFFICER DODUC: Actually, if it's
2 going to be up in about ten minutes, and we're about to
3 begin with Panel 3, I suggest we wait ten minutes if no
4 one objects.

5 All right. Let's wait for the Webcast. We
6 hope to reconvene at 9:45.

7 (Recess taken)

8 CO-HEARING OFFICER DODUC: We've been advised
9 that the technical people are working on it but there's
10 no assurance of when the webcast might be back on. My
11 counsel has assured me that we will -- in compliance
12 with our legal requirements by recording this hearing
13 as well as having a court reporter present, it is an
14 convenience for those would have been depending on the
15 Webcast, but they should have planned for that
16 contingency.

17 So with that, Mr. Mizell, we will go ahead and
18 turn to your panel there. And I will ask that they
19 stand -- with the exception of Mr. Bednarski, who just
20 did so a few days ago -- please stand up and raise your
21 right hand.

22 (Witnesses sworn)

23 CHRISTOPHER EARLE, DOUGLAS RISCHBIETER,

24 and JOHN BEDNARSKI,

25 called as Panel 3 witnesses by the

1 petitioners, having been first or
2 previously duly sworn, were examined
3 and testified as hereinafter set
4 forth:

5 CO-HEARING OFFICER DODUC: Thank you very
6 much.

7 All yours, Mr. Mizell and Ms. Ansley.

8 DIRECT EXAMINATION BY MR. MIZELL

9 MR. MIZELL: Thank you. Good morning. So
10 today we'll be hearing from Panel 3. I estimate that
11 this panel will summarize their written testimony in
12 approximately one hour or slightly less.

13 Again, Dr. Earle is here for terrestrial
14 biology and the Adaptive Management program.
15 Mr. Bednarski and Mr. Rischbieter are here for
16 recreation.

17 So Dr. Earle, is DWR-1003 a true and correct
18 copy of your statement of qualifications?

19 WITNESS EARLE: Yes, it is.

20 MR. MIZELL: And is DWR-1014 a true and
21 current copy of your testimony?

22 WITNESS EARLE: Yes, it is.

23 MR. MIZELL: Mr. Bednarski asserted to his
24 testimony earlier in this hearing, so I'll skip having
25 him repeat that.

1 Mr. Rischbieter, is DWR-1007 a true and
2 correct copy of your statement of qualifications?

3 WITNESS RISCHBIETER: Yes, it is.

4 MR. MIZELL: And is DWR-1024 a true and
5 correct copy of your testimony.

6 WITNESS RISCHBIETER: Yes, it is.

7 MR. MIZELL: Thank you.

8 So the order I'd like to present in, unless
9 you have any preference is we will go with
10 Mr. Bednarski first, followed by Mr. Rischbieter,
11 followed by Dr. Earle.

12 CO-HEARING OFFICER DODUC: Rischbieter?

13 WITNESS RISCHBIETER: Correct.

14 CO-HEARING OFFICER DODUC: I will try my best
15 to pronounce it correctly.

16 WITNESS RISCHBIETER: Thank you.

17 MR. MIZELL: And with that, I'll turn it over
18 to you, Mr. Bednarski.

19 WITNESS BEDNARSKI: Okay. Thank you.

20 My testimony addresses potential impacts to
21 navigation from construction of intake structures on
22 the Sacramento River, Head of Old River Gate, barge
23 unloading facilities and barge traffic and the
24 feasibility of constructing the proposed fish
25 protection systems.

1 The information presented in my testimony is
2 based on conceptual-level design which will be continue
3 to be refined in future engineering phases, primarily
4 preliminary and final design. However, any future
5 refinements in preliminary and final design will
6 utilize the mitigation measures described in previous
7 testimonies, DWR-57, DWR-75, and is not anticipated to
8 result in any effects beyond the scope of the
9 discussion contained in my testimony. Thank you.

10 MR. MIZELL: Mr. Rischbieter?

11 WITNESS RISCHBIETER: Good morning, Hearing
12 Officers. My name is Douglas Rischbieter, and I'm here
13 representing the California Department of Water
14 Resources, where I'm a senior environmental scientist.
15 I've worked for DWR since 1990, and my primary
16 responsibilities have related to recreation policy,
17 management, planning, measurement.

18 And I'm also a certified fishery scientist for
19 the -- as per the American Fishery Society. I work
20 part-time as the fisheries biologist for California
21 State Parks.

22 I'm here today on behalf of DWR. My testimony
23 will demonstrate that constructing and operating
24 Cal WaterFix facilities and changing the point of
25 diversion to do so will reasonably protect recreation.

1 My opinion and professional judgment are based
2 on the project description that's Alternative 4A
3 Operational Scenario H3+; the environmental analyses
4 completed for California WaterFix; modeling results
5 that have been presented to me by engineers and
6 hydrologists and as testified to by the modelers; and
7 additional studies of Delta and upstream recreation.

8 In summary, my testimony is going to give an
9 overview of relevant identified potential Cal WaterFix
10 H3+ impacts. I'm going to summarize how Delta upstream
11 conditions relating to recreation compare during
12 CWF H3+ implementation and operation and the No Action
13 Alternative and current conditions.

14 I have two lines of analysis that support my
15 opinion that recreational uses are going to be
16 reasonably protected. And I'm going to present an
17 overview of the existing beneficial uses, references to
18 model -- water quality modeling results. And the --
19 this will lead to a conclusion that a reasonable
20 protection of recreation will continue to be achieved
21 when Cal WaterFix is implemented and operated.

22 To start with, for context, I think many of us
23 are familiar that the Delta is the largest estuary
24 system on the West Coast. This area of over 1100
25 square miles provides more than 500 miles of navigable

1 waterways, and those offer approximately 57,000
2 navigable surface areas.

3 Within the Delta itself, there are about 211
4 facilities, both public and private, to host and
5 support recreation users and their activities.

6 The most popular recreation activities in the
7 Delta are fishing and boating. But participants in
8 those activities also take part in a number of other
9 activities, like wildlife viewing, sightseeing,
10 walking, picnicking, camping. The facilities that
11 support these activities broadly include marinas,
12 developed fishing access sites, managed hunting areas,
13 public boat ramps, established trailheads, campgrounds,
14 windsurfing access points, and probably others.

15 The typical recreationist in the Delta, in a
16 trip, enjoys more than one of these activities in a
17 single trip, and thus there's an interrelated network
18 between these recreationists and these activities which
19 can be land based and water based.

20 Also, for context, there are waterways
21 upstream of the Delta, including several SWP and CVP
22 reservoirs such as Shasta, Whiskeytown, Lake Oroville,
23 Folsom Lake. And the rivers downstream from those
24 reservoir, which provide additional recreation
25 opportunities and facilities and host many more tens of

1 thousands, hundreds of thousands, perhaps millions of
2 recreation days.

3 I mention these regional reservoirs and the
4 waterways downstream from them because, during the
5 analysis of Cal WaterFix and its alternatives, possible
6 impacts to these upstream facilities were considered
7 because changes to the operations of those facilities
8 may have entered -- may have affected their suitability
9 for recreation in the future. But ultimately, under
10 Cal WaterFix H3+ modeling analysis, the end-of-May and
11 end-of-September storage levels in the reservoirs were
12 consistent with the No Action Alternative.

13 The two lines of reasoning that have allowed
14 me to reach the conclusion that recreation will be
15 reasonably protected under the construction and
16 operation of new point of diversion for Cal WaterFix
17 included, No. 1, evaluating and analyzing potential
18 Cal WaterFix effects on Delta water quality parameters
19 at compliance points that are currently deemed
20 protective of Delta water quality standards when met
21 pursuant to the 2006 Water Quality Control Plan.

22 We also evaluated and analyzed possible
23 Cal WaterFix effects on the recreation resources in the
24 Delta and in the regions upstream in the Final EIR/EIS,
25 including public comments and responses thereto.

1 Through the first line of reasoning, the 2006
2 water quality standards for the Delta determined that
3 the objectives in Table 1, which are headlined or
4 termed "Municipal and Industrial Uses" also provide
5 reasonable protection of beneficial uses termed REC-1
6 and REC-2.

7 Those water quality standards include
8 objectives for parameters such as chloride at specific
9 compliance points and, based on the modeling as
10 testified to by the modelers, under Cal WaterFix H3+
11 operation, the water quality objectives in Table 1 will
12 continue to generally be met. Thus I conclude that Cal
13 WaterFix operations will also reasonably protect the
14 REC-1 and REC-2 beneficial uses in the future.

15 Those 2006 Delta water quality standards also
16 determined that the water quality objectives in
17 Table 3 -- I believe those are headlined and termed
18 "Fish and Wildlife Recreation Beneficial Uses," provide
19 reasonable protection of beneficial uses of COMM, which
20 is commercial fisheries, as well as other
21 recreation-related beneficial uses which protect and
22 benefit the fish and wildlife on some -- on which some
23 recreation uses are dependant: cold-water/warm-water
24 fisheries, migration, spawning, shellfish collection,
25 harvesting, and navigation.

1 Those Table 3 water quality standards include
2 objectives for several parameters including dissolved
3 oxygen; EC, electric conductivity; outflow index; flow
4 rate in the Sacramento River; export rate; and closure
5 of gates at Delta Cross Channel.

6 Based on the modeling output as testified to
7 by the modelers, the water quality objectives in
8 Table 3 will continue to be met under Cal WaterFix H3+
9 operation. Thus the conclusion forthcoming is that the
10 operation of Cal WaterFix will continue to reasonably
11 protect those beneficial uses -- commercial fishing
12 through navigation; cold-water/warm-water sportfish; et
13 cetera.

14 CO-HEARING OFFICER DODUC: Hold on one minute,
15 please, Mr. Rischbieter.

16 Ms. Des Jardins.

17 MS. DES JARDINS: I would like to move to
18 strike Mr. Rischbieter's testimony under the precedent
19 in In re Lockheed Litigation Cases (2004) 115
20 Cal.App.4th 558. The Court found that the matter that
21 the expert relies on must provide a reasonable case --
22 basis for the particular opinion offered and that an
23 expert opinion based on speculation or conjecture is
24 inadmissible. This is at Page 564 of that opinion.

25 Second --

1 CO-HEARING OFFICER DODUC: Hold on, hold on.

2 Response to that?

3 MS. ANSLEY: I don't have a response to that
4 specific case at this point. What I'd like is some
5 clarification on what we're moving to strike so that I
6 can follow along.

7 CO-HEARING OFFICER DODUC: Ms. Des Jardins.

8 MS. DES JARDINS: I would like to strike the
9 opinions that have been expressed regarding compliance
10 with water quality standards, regarding reasonable
11 protection for beneficial uses. These are based on a
12 matter which -- of a type -- these are based on
13 modeling results and operations that are speculative
14 or, as has been shown in previous testimony, some of
15 the modeling assumptions don't match the proposed
16 criteria.

17 I also would like to raise the leading case
18 for exception of expert testimony is Sargon Enterprises
19 versus University of California, (2012) 55 Cal.4th 747.
20 The California Supreme Court held that, under Evidence
21 Code Section 801, Subdivision (e) and 802, the trial
22 court acts as a gatekeeper to exclude expert opinion
23 testimony that is, one, based on matter of a type on
24 which an expert may not reasonably rely; 2, based on
25 reasons unsupported by the material on which the expert

1 relies; or 3, speculative. This is on Page 771 of the
2 Sargon Enterprises California Supreme Court opinion.

3 There has been numerous testimony that many of
4 the most basic assumptions about this model -- about
5 these operations are speculative, they will be
6 determined in the future under adaptive management, the
7 coordinated operating agreement is subject to change
8 which governs upstream reservoir releases. And
9 finally, to the extent that Mr. Rischbieter
10 testifies --

11 I am sorry. Is that how I say your name?

12 WITNESS RISCHBIETER: Rischbieter.

13 MS. DES JARDINS: -- Rischbieter testifies
14 about reservoirs impacts, it was revealed on
15 cross-examination, my cross-examination, that the
16 reservoir operations weren't validated and don't
17 represent the current reservoir operation of carryover
18 storage targets for Oroville. And it's not clear that
19 the rest of the model accurately represents the other
20 reservoir carryover storage targets.

21 This is utterly speculative. And these --
22 this Board should not rely on opinions about protection
23 based on this speculative operational scenario or on
24 modeling which fundamentally fails verification that
25 the operations represented in the model represented the

1 actual proposed operations in the Incidental Take
2 Permit and the Biological Opinions. Thank you.

3 CO-HEARING OFFICER DODUC: Thank you,
4 Ms. Des Jardins.

5 Ms. Ansley, since you do have access to the
6 rough transcript, unless you are prepared to respond
7 right now, I will allow you until 5:00 p.m. tomorrow to
8 respond to Ms. Des Jardins' objection.

9 MR. MIZELL: I can respond initially right
10 now. But in terms of detailed responses to the key
11 citations Ms. Des Jardins provided, I would like time
12 if it proves to be necessary. But I think it can be
13 disposed of here.

14 As I understand, based on her clarifications,
15 her objection and motion to strike Mr. Rischbieter's
16 testimony is based upon her disagreement with the
17 veracity of the modeling as well as the direct
18 statements included in the State Water Board's Water
19 Quality Control Plan update.

20 Mr. Rischbieter has not reinterpreted that
21 document, and he's not relying on his own opinions to
22 make the statement that the text of the Water Quality
23 Control Plan states that the criteria contained in it
24 are for the protection of beneficial uses as identified
25 by that plan. So to the extent that he is an expert in

1 recreation, as I believe his statement of
2 qualifications would thoroughly support, he's allowed
3 to rely upon the published documentation and regulatory
4 requirements that this Board has put forward. And the
5 modeling that he relies upon has been admitted into
6 evidence in Part 1, and the results for H3+ are now
7 under consideration in our exhibits before the Board in
8 our case in chief for Part 2.

9 And therefore, he can rely upon that
10 information. To the extent Ms. Des Jardins disagrees
11 with that information, she is more than capable of
12 asking questions in cross-examination as to the extent
13 of that reliance, or putting on a case in chief of her
14 own.

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

17 Enough, Ms. Des Jardins. Actually, the other
18 aspect of your objection is it goes to weight of the
19 evidence presented by Mr. Rischbieter, and that is best
20 served for closing briefs. So, objection denied,
21 motion denied, whatever it is that you made. And we
22 are going to proceed with Mr. Rischbieter's testimony.

23 I've just been handed a note that the webcast
24 seems, underlined, to be back up.

25 You are on camera, Mr. Rischbieter.

1 WITNESS RISCHBIETER: Thank you,
2 Hearing Officer Doduc.

3 I'm very close to completing the summary of my
4 written testimony.

5 The other vein of reasoning I used in addition
6 to the Water Quality Control Plan determinations and
7 the modeling is outlined in detail in the
8 Final EIR/EIS. The EIR/EIS did identify that there's a
9 significant unavoidable effect on recreation resources
10 at eight Delta locations due to Cal WaterFix
11 construction.

12 These effects include noise and visual
13 disturbances plus surface impacts in two of those eight
14 locations, being -- those two being Clifton Court
15 Forebay and the Cosumnes River Preserve. It's
16 important to note that these significant and
17 unavoidable effects are from construction and not
18 operation and thus are temporary for the duration of
19 construction.

20 There are mitigation measures and
21 environmental commitments included in Cal WaterFix H3+
22 which would reduce the impacts on wildlife, visual
23 setting, transportation, and noise conditions that
24 could otherwise detract from recreation experiences.

25 However, due to the dispersed effects on

1 recreation throughout several -- at several points
2 throughout the Delta, it's not certain that the
3 mitigation would reduce the level of these impacts to
4 less than significant in all instances.

5 So as a whole, Cal WaterFix H3 impacts to
6 recreation are considered significant and unavoidable.
7 However, the impacts specifically related to
8 construction at the intakes would be less than
9 significant.

10 Additionally, during the construction period,
11 there will be reduced recreational navigational
12 opportunities, but it's important to note that these
13 significant and unavoidable affects are from
14 construction, not operation, thus are temporary. The
15 project construction has been designed to keep
16 waterways open so that passage can occur. The
17 Department has acknowledged that there may be speed
18 zones for safety in proximity to these construction
19 areas that may have an impact on some recreation
20 activities there and that these construction-related
21 impacts could last at a specific site for two to five
22 years.

23 As Mr. Bednarski has testified in, I believe,
24 in Panel 2 and perhaps in Part 1, there are
25 sufficient -- there is sufficient width in respective

1 channels in construction areas to allow boat passage
2 during construction. The operable barrier at the head
3 of Old River, which is part of Cal WaterFix H3+ will be
4 mitigated by a boat lock, which would be in use
5 whenever the barrier is completely or partially closed.
6 And coupled with other mitigation measures, such as
7 TRANS-1a, to effectively inform the public of
8 construction activities and speed limitations, these
9 components would cause less than significant impacts on
10 the recreational navigation at most locations,
11 including Old River.

12 The EIR/EIS included that Cal WaterFix H3+
13 operations will have no significant impact on long-term
14 recreational fisheries opportunities. And as I
15 mentioned earlier, regionally, Cal WaterFix H3+
16 operation will not cause a significant change in
17 reservoir or lake elevations. That comparison between
18 Cal WaterFix H3+ operations, in most cases, as is
19 compared to the No Action Alternative, wherein most
20 cases these changes to CVP and SWP reservoir elevations
21 in the future are primarily attributable to sea level
22 rise and climate change.

23 Based on the facility descriptions,
24 construction methods, modeling results, and mitigation
25 measures I believe that Cal WaterFix H3+ construction

1 and operation will not result in any unreasonable
2 impact to or loss of recreational beneficial uses of
3 Delta or upstream waters.

4 Thank you. And to complete our Panel 3
5 presentation, I will turn it over to Dr. Earle

6 WITNESS EARLE: Thank you, Mr. Rischbieter.

7 I have a visual presentation, if we can get
8 that up. I was wondering if there's a remote or if we
9 go by voice cues? Thank you.

10 While we get that up -- so my name is
11 Chris Earle. I'm an employee of ICF, who is a
12 contractor to DWR in this project. Twenty-five years
13 ago, I received a Ph.D. from the University of
14 Washington in ecology and since that time have been
15 employed as a consulting ecologist.

16 I first became involved with this project
17 eight years ago, in May of 2010, when ICF came on as a
18 contractor to DWR. At that time, my responsibilities
19 included coordinating the preparation of the BDCP
20 document.

21 In early 2015, when lead agencies agreed to
22 transition to the project that we now call the
23 California WaterFix, I have, since that time,
24 coordinated the preparation of the 2081 application --
25 that is the application for the Incidental Take

1 Permit -- and also the Biological Assessment. I've
2 also supported the EIR/EIS process through, for
3 instance, addressing comments on the document.

4 Now -- let's see how this works.

5 Now, today I'm going to be talking to you
6 about adaptive management and about wildlife resources
7 affected by project. And I'm going to suggest to you
8 my opinions that the adaptive management monitoring
9 program is likely to benefit fish and wildlife in the
10 Delta and that the program in general being proposed
11 will reasonably protect wildlife.

12 The basis for this "reasonably protect"
13 concept is -- can be found in four environmental
14 documents that have been prepared so far. The first is
15 the EIR/EIS, which represents determinations under NEPA
16 and CEQA. With regard to this document, there are over
17 140 impact determinations that address the issue of how
18 the project would affect wildlife. A large number is
19 due to a multiplicity of impacts as well as a large
20 number of different wildlife groups that were
21 investigated.

22 None of these impacts were found to be
23 significant and unavoidable. Approximately a fifth to
24 a quarter of them were found to be less than
25 significant with mitigation. The remainder were simply

1 less than significant.

2 That determination I interpret as indicating
3 from a CEQA and NEPA point of view the project would be
4 reasonably protective of wildlife resources.

5 By the way, I should mention that the CEQA
6 analysis was also the basis of analysis of effects on
7 fully protected species through the responsibilities of
8 California Department of Fish and Wildlife, and fully
9 protected species are going to be a fairly consistent
10 them in this discussion.

11 Threatened and endangered species were
12 addressed by two other documents. One was a biological
13 opinion produced by the U.S. Fish and Wildlife Service
14 for species that are protected under the Federal
15 Endangered Species Act. In that case, some species the
16 project was found to have no effect whatsoever on them.
17 Others, they reached a determination that the project
18 may affect but would not be likely to adversely affect,
19 which is a very low level effect that indicates that no
20 animals would be injured or killed by the proposed
21 action or would lose habitat.

22 And for a number of species it was found that
23 there was a possibility of incidental take. And the
24 Biological Opinion provided an incidental take
25 authorization for those species. For these species,

1 the determination was that the project would not
2 jeopardize the species, nor would it destroy or
3 adversely modify designated critical habitat.

4 I might add that, in our work with U.S. Fish
5 and Wildlife Service negotiating this document, I can
6 understand that they generally interpreted an adverse
7 affect on a species population as indicating a
8 potential jeopardy situation and that any net loss of
9 habitat would indicate potential adverse modification
10 of critical habitat. So I interpret their
11 determination that these outcomes would not ensue as
12 indicating that the project is reasonably protective of
13 federally listed fish and wildlife species.

14 And finally, with regard to the California
15 ESA, the legal standard for performance under that
16 statute is quite a bit higher and requires full
17 mitigation for all impacts to the species. And by
18 issuing their Incidental Take Permit, the California
19 Department of Fish and Wildlife has indicated that that
20 standard has been met. And I interpret that as
21 indicating that, with regard to species protected under
22 the California Endangered Species Act project, again,
23 is reasonably protective of wildlife resources.

24 Now, as I said, we'll proceed with the
25 discussion, first of the Adaptive Management program

1 and impacts to terrestrial species. I skipped one.

2 Okay.

3 With regard to the terrestrial species -- I'll
4 come back to it later.

5 Adaptive Management Program, now, adaptive
6 management is regarded as a science-based and flexible
7 approach to decision making. That means it's a
8 structured decision making process. It follows rules
9 that are agreed upon by all participants in advance of
10 the process. So it's a structured process. It's
11 flexible in the sense that the rules are not dependant
12 upon the material that you're examining. They're
13 dependant upon the procedures that are agreed upon.

14 Consequently, it's a useful tool for
15 management because it's capable of dealing with a wide
16 variety of potentially unexpected situations that arise
17 in the course of resource management. Adaptive
18 management has been around for a long time. It's been
19 an operational concept in natural resources management
20 since the late 1970s. And there are a variety of
21 existing examples of it being implemented in the Delta.

22 It is expected to benefit fish and wildlife in
23 the Delta. Now, I have several reasons for saying
24 that. It is identified in the Delta Reform Act as a
25 necessary activity to reduce uncertainty about Delta

1 management. There have also been peer reviews that
2 have been generated in the past by the Delta Science
3 Program and also by the National Resource Council
4 specifically addressing the use of adaptive management
5 in the BDCP process and also encourage the use of
6 adaptive management for resource management in the
7 Delta.

8 Also in the environmental documents that I've
9 referred to here, particularly the Biological Opinion
10 and the Incidental Take Permit, it's identified as a
11 preferred strategy, and in fact, implementation of an
12 adaptive management program is required by those
13 documents.

14 All of those documents cite a document called
15 the Adaptive Management Program and included it as an
16 attachment or appendix to those documents. This
17 illustration that we have up on the screen right now is
18 taken from that plan, and it is intended to summarize
19 the conceptual model behind the proposed Adaptive
20 Management Plan.

21 I apologize for it being such a complicated
22 graphic. I did not generate it. It's taken directly
23 from the plan. We call it the snowman graphic due to
24 its appearance.

25 Now, going through this graphic, I'd like to

1 mainly call your attention to the three snowballs. The
2 top one is realtime operations. This refers to
3 realtime operations program that has been implemented
4 since the Biological Opinions for the 2008-2009
5 operations of the Central Valley Project and State
6 Water Project. It is not actually part of the Adaptive
7 Management Program, but it does provide a valuable
8 resource of data.

9 There is a great deal of information that's
10 generated through the realtime operation program. It's
11 generated at a high temporal frequency. They make
12 decisions every week. And it provides a lot of useful
13 information about how fish are actually using habitat
14 in the rivers and how they're interacting with the two
15 water projects. So this is an important input to the
16 Adaptive Management process.

17 Now, the central snowball is label "Annual
18 Operations." And this is the core of the Adaptive
19 Management Program. There is a water operations plan
20 and a science plan that are generated each year through
21 the Adaptive Management Program. And these plans
22 recount the results of work that happened in the
23 previous year, and they set forth planned operations
24 and planned scientific studies, respectively, for the
25 ensuing year.

1 It is through the preparation of these plans
2 that actual adaptive management decisions are
3 contemplated, discussed, and made.

4 Finally, the bottom snowball is labeled
5 "Research and Monitoring." And this operates at still
6 longer time scales. It's expected that normally a
7 research study would take at least three years and, in
8 some cases, substantially longer. Some are essentially
9 open-ended and continue throughout the period of
10 project operations.

11 This research and monitoring provides a great
12 deal of information that is used as the basis for
13 adaptive management decisions. And I'll talk about
14 that process a little more on the next slide here.

15 The Adaptive Management Program is a
16 four-phase process. The first phase is as shown here,
17 labeled "Planning." And this consists of setting
18 initial priorities through the operations plan and the
19 science plan. This phase, for instance, has already
20 been done effectively in the Biological Opinions and in
21 the Incidental Take Permit. That gives us plenty to
22 work with to start the Adaptive Management Program.
23 And then it's iterated cyclically on an annual basis
24 through the process.

25 Phase 2 is assess. And this refers to the

1 researched that I identified in the previous diagram.
2 It also includes assessment of other forms of
3 information, such as information from monitoring,
4 information that's presented in peer reviewed
5 literature and so forth.

6 The third phase is called "Integrate." This
7 refers to development of management proposals for
8 scientific studies or other potential adaptive
9 management responses that are discussed between and
10 agreed to by the five agencies that implement this
11 Adaptive Management Plan. I did not mention them
12 earlier. They include Reclamation, DWR, CDFW, NMFS,
13 and U.S. Fish and Wildlife Service.

14 I recognize that the role of the Water Board
15 in this process is at this time, still somewhat
16 unclear. And I hope there will be clarification on
17 that in the near future.

18 Finally, Phase 4 is called "Adapt." And this
19 is when the proposed adaptive management solutions are
20 actually implemented. And this is, in some ways, the
21 most complex of the four stages because this is where
22 all the associated regulatory compliance and other
23 actions that have to occur in order to implement a
24 proposed change occur. Those are all part of the
25 Phase 4 process.

1 So depending upon complexity of the proposed
2 change and upon its regulatory ramifications, this
3 could be a relatively simple or a very complicated
4 phase.

5 The Adaptive Management and Monitoring Program
6 includes a lot of monitoring. First of all, there's
7 all the existing monitoring that's going on. For
8 instance, there's a lot of monitoring that's required
9 under terms of the 2008-2009 Biological Opinions for
10 operation of the projects.

11 It's not listed on this slide, but there is
12 also monitoring conducted by the Interagency Ecological
13 Program, the U.S. Ecological Survey and additional
14 sources of monitoring, such as water quality data.
15 Then in addition to the monitoring, there are a variety
16 of pre-construction studies that are actually
17 identified in the Biological Opinions and the
18 Incidental Take Permit that are necessary to do things
19 like determine how best to finalize the design of the
20 fish screen, or how to finalize the design of the
21 forebay changes.

22 And these studies are going to be conducted
23 collaboratively with the fish and wildlife agencies.
24 And, again, it's anticipated that to some degree
25 they're iterative studies; that is, the results of

1 these studies will not only be used to modify the
2 project but will also be used guide additional study.

3 There is construction compliance monitoring
4 that will occur. You're probably most familiar with,
5 for instance, the stormwater modeling that would be
6 required. There's a variety of other types of
7 monitoring as well, such as monitoring for the presence
8 of wildlife species. There are a variety of avoidance
9 and minimization measures that require that we
10 establish the species is not present before, for
11 instance, habitat clearing can go on.

12 Then there are operational studies. Once the
13 project is complete and the intakes begin their initial
14 operations, there are uncertainties regarding exactly
15 what their effects will be. And there will also be a
16 tuning process whereby various parameters that can be
17 adjusted operationally on these new intakes will be
18 optimized with regard to the hydrologic behavior of the
19 system. So those operational studies are going to
20 continue for a somewhat arbitrary period of time
21 following initial operations of the project.

22 And finally, as I've mentioned, the Adaptive
23 Management process itself will produce studies which
24 constitute part of the feedback which continues
25 throughout the duration of the project. There is no

1 end point for the Adaptive Management process.

2 So in conclusion, I suggest to you that the
3 Adaptive Management and Monitoring Program will be a
4 benefit to fish and wildlife in the Delta. And I base
5 this opinion primarily upon the fact that the Delta
6 Reform Act of 2009 specifically calls for adaptive
7 management as a desired approach to reduce uncertainty
8 about the actual system. And also that the Adaptive
9 Management Program has been adopted and indeed required
10 as a necessary part of the conservation strategy in the
11 Biological Opinions in the Incidental Take Permit.

12 Now, the thing that I forget earlier, since
13 I've established that all of the environmental
14 documents concluded so far find that there are no
15 substantially adverse impacts to wildlife in the Delta,
16 why do we still have something to talk about?

17 There have been a variety of issues raised by
18 the public throughout the process, going back to 2006
19 when BDCP began, identifying concerns with certain
20 primarily charismatic species or locations in the
21 Delta. For instance, sandhill cranes have been a
22 continuous theme in commentary on the project.

23 There have been concerns raised with potential
24 project effects on the Stone Lakes National Wildlife
25 Refuge, which is located directly adjacent to the

1 proposed new intakes. There are also issues with
2 potential bird strikes on power lines. And all of
3 these things, although, as I've indicated,
4 environmental documents completed so far found these
5 not to be substantial objections to the project, have
6 remained as consistent points of controversy. And we
7 have anticipated that you may be hearing about them
8 from other petitioners. So I thought it best to give
9 you DWR's perspective on these things.

10 So to begin with, there is a known risk that
11 birds and bats may collide with and be electrocuted by
12 power lines. There are a number of existing power
13 lines that are out in this area already, and they are
14 known to have impacts on wildlife. There are also some
15 new lines that are proposed under project. Most of the
16 new lines would be temporary, but there is a small
17 mileage that would be permanent.

18 Now, there is really an insignificant risk of
19 electric conduction by this mechanism. Electrocution
20 has been recognized as a risk in this country for some
21 decades, and current design standards for power lines
22 basically space the wires far enough apart that even
23 large birds are not at risk of electrocution.

24 However, there continues to be a substantial
25 risk of collision with power lines, particularly with

1 the ground line, which is usually the highest line
2 in -- connecting the tops of the poles and is usually
3 smaller in diameter than the other conductors. It's
4 hard for the birds to see, and sometimes they run into
5 it. Such collisions are almost always fatal.

6 Now, our proposed action here is intended to
7 minimize that collision risk. And a variety of design
8 strategies are being proposed to do that. I mentioned
9 that there are existing standards on this. This is an
10 example of a couple of publications that we've referred
11 to. The 2006 publication on the left deals with
12 standards for avoiding electrocution, and it's widely
13 adopted and generally collective.

14 The publication on the right, "Reducing Avian
15 Collisions with Power Lines," was last revised in 2012.
16 It's published by the -- by an organization that is
17 dedicated to studying this particular issue. And it's,
18 as I say, it represents an area of continuing research.
19 And best available science as always will be applied to
20 the final avoidance and minimization solutions that are
21 used for minimizing collisions.

22 Now, this subject was analyzed qualitatively
23 in the BDCP which identified 31 different species or
24 species groups. Waterfowl, for instance, would be a
25 species group that were potentially at risk of

1 collision with power lines. They were all birds; bats
2 had not been evaluated.

3 They found that there was an appreciable
4 collision risk for nine species or species groups.
5 This occurred because, for instance, the birds flew at
6 approximately the same height as the power lines. The
7 birds may have had limited maneuverability. They may
8 have had less acute eyesight than some other species of
9 birds. So these are the kinds of factors that render a
10 bird vulnerable to collision.

11 One of those nine species was the greater
12 sandhill crane, which is a fully protected species.
13 And consequently, due to concern about avoiding any
14 potential mortality or injury to those birds, the
15 analysis of collisions has subsequently focused
16 primarily on greater sandhill cranes.

17 By the way, I'm going to be talking about bird
18 diverters a little bit. And the photograph here on the
19 right is an example of some of the bird diverters that
20 are in current use. Again, this is an area where the
21 technology is currently evolving, and new designs may
22 be in use by the time construction happens under the
23 WaterFix.

24 Now, there's a performance standard that's
25 been established of no incidental take of greater

1 sandhill cranes due to collision with power lines.
2 That performance standard, of course, will also benefit
3 all other bird species that are at risk of collision.
4 It includes measures such as locating power lines in
5 low-risk zones; that is to say, some bird species
6 preferentially use certain corridors for migration and
7 daily movement within the Delta. Power lines that are
8 located perpendicular to those corridors would
9 constitute high-risk zones. Or power lines that are
10 located close to overnight roosts, for instance, would
11 constitute a high-risk zone. So there's preference for
12 avoiding those areas.

13 There's also a proposal to remove, relocate,
14 or place underground existing lines. In this
15 particular -- for instance Staten Island is an area
16 where there's a high level of concern about potential
17 power line effects on greater sandhill cranes. Power
18 lines running to Staten Island will be underground.

19 It's possible that diesel generators could be
20 used in lieu of installing new lines. Those have their
21 own issues related to air quality. And frankly, that
22 measure is not likely to be implemented, but it is
23 available.

24 And then bird strike diverters, these devices
25 make the line more highly visible to birds. They've

1 been shown to be about 60 percent effective. This is
2 based upon studies that have been performed in the
3 Delta. And bird strike diverters will be installed on
4 all new lines. They will also be retrofitted to a
5 certain mileage of existing lines sufficient to ensure
6 that there is no net increase in bird strikes as a
7 result of the proposed power lines that would be built
8 for the California WaterFix.

9 And, finally, there are a variety of measures
10 that would manage habitat to shift through sites,
11 particularly roosts of greater sandhill cranes, away
12 from the location of transmission line risks, and
13 essentially a higher quality habitat would be created
14 farther away from the project site.

15 In conclusion, it's my opinion that the
16 avoidance and minimization measures I've just described
17 will minimize risk to birds by achieving a performance
18 standard established through the CEQA analysis of
19 avoiding any take of greater sandhill cranes and,
20 secondly, that the WaterFix will not result in any net
21 increase in bird mortality risk at power lines. We
22 still have the option of reducing the net risk.

23 The next issue I'd like to talk about is
24 potential effects on Stone Lakes National Wildlife
25 Refuge. I should mention that this overlaps with the

1 fatal collision and the sandhill crane issues because
2 they're all sort of collocated.

3 But besides the risk of power line collisions,
4 there is also a risk that construction noise, that
5 light generated in association with construction, and
6 that increased vehicular traffic potentially causing
7 road kill could occur in proximity to Stone Lakes. And
8 these effects would be avoided and minimized and, when
9 necessary, mitigated at and near Stone Lakes National
10 Wildlife Refuge.

11 In a little bit, I'll talk about the avoidance
12 and minimization measures. The mitigation consists of
13 environmental commitments that are intended to improve
14 the quality of habitat at or near the wildlife refuge.
15 And currently, most of the habitat out there consists
16 of crop land. Under this measure, certain performance
17 standards are established, and that habitat will be
18 managed for the benefit of the particular species.

19 This is just a map to show you what I'm
20 talking about. The areas shown in orange here are
21 portions of the California WaterFix project. The
22 orange areas toward the right side of the picture are
23 the locations of the intakes and their associated
24 sedimentation basins and other infrastructure
25 facilities.

1 The ones located near the left end of the
2 figure are the areas proposed for recycled, reusable
3 tunnel material siting.

4 The areas shown in green include both the
5 current boundary of Stone Lakes National Wildlife
6 Refuge and also certain lands that have been approved
7 for future addition to the refuge, should something
8 become available for that.

9 So as you can see here, some of the project
10 will actually be located within those lands, primarily
11 the reusable tunnel material disposal areas. And some
12 of that project will be located in very close proximity
13 to those lands, so there's potential exposure to things
14 like noise and light impacts.

15 There are also some access routes to the
16 project that run through the refuge.

17 Now, among the avoidance and minimization
18 measures include preconstruction surveys so that
19 occupied habitat will be avoided for most sensitive
20 wildlife species. In general, this would be done by
21 not clearing the land during the time of year when that
22 habitat is being used by those species, thereby
23 avoiding any risk of mortality. Mitigation would be
24 necessary by creating or enhancing suitable habitat
25 elsewhere. I should note that, in every case, such

1 mitigation is going to be implemented prior to the
2 impacts, so at no time do the animals experience a net
3 loss of habitat.

4 There are also a variety of measures that are
5 proposed to reduce noise and light effects. These
6 include things like erecting light barriers in some
7 locations so that, for instance, headlights won't shine
8 into a roost site; reducing the amount of noise that's
9 produced at certain times of the day so that, for
10 instance, birds are not disturbed while they're on
11 their night roosts; timing activities to when the birds
12 are not present, for instance, there will be seasonal
13 restrictions on pile-driving noise, construction;
14 reducing speed limits for the routes that go through
15 the national wildlife refuge and placing new signage
16 making people aware of the potential risk to sensitive
17 species; and actually quite a slate of other
18 environmental commitments that would combine to protect
19 and restore habitat on the refuge.

20 As a result of these measures, it's my opinion
21 that we will achieve at least net neutral effects on
22 wildlife associated with Stone Lakes National Wildlife
23 Refuge and potentially some benefit. In particular,
24 the habitat protection and restoration will yield a
25 long-term benefit because impacts such as reusable

1 tunnel material storage, which last for several years
2 but terminate essentially with completion of the
3 project, will nonetheless have been fully mitigated by
4 that time. And that mitigation will remain in place
5 and remain subject to performance measures for at least
6 the duration of the project and, in principle, in
7 perpetuity.

8 Another somewhat overlapping issue but one
9 which has again attracted considerable public attention
10 is potential effects upon the greater sandhill crane
11 fully protected species.

12 And I will suggest to you that both
13 construction and operations of WaterFix will avoid and
14 minimize effects on the cranes and will protect and
15 restore their habitat, thereby yielding at least a
16 maintenance and probably a net improvement in the
17 quality and availability of crane habitat in the Delta.

18 A little bit about the sandhill cranes, they
19 winter in the Delta, but they do not breed there. So
20 they're not present in the summertime. They roost
21 primarily in shallowly flooded open fields or wetlands,
22 which are areas where they have the long sight lines so
23 they can detect the potential approach of predators.
24 And they forage in a wide variety of cover types,
25 again, mostly open areas, mostly cultivated lands of

1 certain particular types.

2 I might add that about 15 percent of the
3 sandhill cranes in the Delta are the greater sandhill
4 cranes, which are fully protected. About 85 percent of
5 them are lesser sandhill cranes. To a large degree,
6 they mix; they use the same habitat at the same times.
7 And all of the activities that are proposed to minimize
8 take of greater -- or to avoid take of greater sandhill
9 cranes will also involve some collateral benefits to
10 lesser sandhill cranes as well.

11 Now, the primary effects on greater sandhill
12 cranes include power line effects, which I've already
13 discussed, the loss and conversion of habitat
14 associated with construction effects, such as from
15 reusable tunnel material. And certain other
16 construction-related effects, such as exposure to
17 noise, exposure to light from the project, exposure to
18 the sight of vehicles and people moving around, which
19 can be disturbing to the cranes, and potentially
20 exposure to increased selenium, which is something I'll
21 be talking about a little later in my presentation.

22 The -- as I mentioned for the greater sandhill
23 crane as for other threatened and endangered species,
24 there's a commitment to protect and restore their
25 habitat. And this restoration or protection will occur

1 prior to construction so as to ensure that there is at
2 no point a net loss of habitat available to the
3 species.

4 I've earlier alluded to performance standards
5 that are specific to Staten Island. Among these are
6 the underground, you know, the new power lines. There
7 are a variety of others. These are all listed in
8 AMM-20 -- that means Avoidance and Minimization Measure
9 No. 20 -- which is identified in Mitigation, Monitoring
10 and Reporting Plan. I'm sorry, I don't recall the
11 exhibit number right now. It's a rather detailed
12 provision that goes on for about eight pages about all
13 the detailed ways that impacts to sandhill cranes are
14 going to be minimized and avoided.

15 But some of the high points are the
16 restrictions on construction, noise and light
17 generation that I've mentioned already. Additional
18 mitigation for noise-affected habitat -- noise-affected
19 habitat will be mitigated with 1 acre of permanent
20 habitat creation for every 1/10th acre of land that's
21 affected by noise, even on a temporary basis; barriers
22 to avoid light effects; and the power line requirements
23 that I've mentioned before.

24 All of these measures taken together are
25 intended to meet the performance standard of entirely

1 avoiding take of this fully protected species. The
2 habitat quality due to the amount of restoration that's
3 being done will be improved compared to current
4 conditions. And consequently, the project should have
5 a somewhat of a net beneficial effect on greater
6 sandhill cranes.

7 Next I'd like to talk a little bit about bats.
8 Bats are not actually addressed in the Draft EIS, but
9 perhaps due to the effects of the white-nose syndrome
10 epidemic back East, there's a lot more concern about
11 effects on bats these days. And they're evaluated
12 under, I believe, four different impacts that are
13 looked at in the Final EIS.

14 And I'm going to suggest to that you the
15 WaterFix is reasonably protective of bats because of
16 protective measures that are intended to avoid and
17 minimize effects on bats and again because of measures
18 that are committed to creating high quality bat habitat
19 in the Delta.

20 Now, there are at least 13 bat species known
21 to occur out on the Delta. Four of these are listed as
22 species of special concern by CDFW. None of them are
23 at this time threatened or endangered. They include
24 roosting colonies of bats, both solitary bats and
25 colonial bats. These use both artificial structures

1 and biological structures, technically referred to as
2 trees.

3 And the colonial roosts, many have large
4 numbers of bats in them on occasion. These bats forage
5 in almost every community type that you find out there.
6 They forage over open water; they forage over cropland;
7 they forage over natural vegetation. They even used
8 developed areas to some degree. So they're essentially
9 ubiquitous. Effects on bats potentially include loss
10 of habitat, direct mortality if bats are killed, and
11 variety of indirect effects like I've talked about for
12 the bird species before, such as light, vibration, and
13 noise effects.

14 Measures that are intended to prevent this
15 include preconstruction surveys. This is an important
16 one. Any bat colonies that are found, no habitat
17 clearing will occur while the bat colony is present in
18 that area. Seasonally they'll move to another
19 location, and then clearing could proceed. Maternal
20 roosts are a particular example of that. There's a
21 commitment to avoid all maternal roosts.

22 And finally, when habitat is removed for the
23 project, either temporarily or permanently, because
24 even the temporary impacts tend to last for several
25 years so have potential population level effects on the

1 species, there will be restoration or enhancement of
2 habitat at other locations. As I mentioned before,
3 this will happen before the impact occurs, and it will
4 be maintained at least for the duration of the project,
5 presumably in perpetuity.

6 On the basis of those things, I suggest that
7 the WaterFix is reasonably protective of bats.

8 Finally, I'd like to talk a little bit about
9 selenium. Now, this again is largely a perceptual
10 issue. In Panel 2, Dr. Harry Ohlendorf testified to
11 you about the studies on selenium that he's done that
12 indicate that, within the range of selenium
13 concentrations that are potentially foreseeable under
14 California WaterFix, there is essentially no change in
15 bioaccumulation of selenium. That is to say, at higher
16 selenium concentrations, biological uptake of selenium
17 is expected to reduce. So we're not actually expecting
18 to see any effects on fish and wildlife; however, there
19 are, nonetheless, measures in the proposed project that
20 directly address the potential biological effects of
21 increased selenium exposure.

22 Primarily, this is an issue in restoration
23 sites. This is mainly referring to tidal restoration
24 sites. The issue arises not so much because there's
25 more selenium but, because there's more food, there's

1 more activity that's going to be occurring at these
2 restoration sites. There will be more birds using
3 these sites, for instance. So the total uptake of
4 selenium will be increased.

5 However, at the same time, it's a restoration
6 site. It's been agreed by the agencies that these
7 sites have a beneficial outcome for the fish and
8 wildlife, regardless of selenium effects. In fact,
9 it's noteworthy that neither the Biological Opinions
10 nor the Incidental Take Permit identify any potential
11 adverse effects on any of these species as a result of
12 increased selenium exposure.

13 Couple of other things about selenium. It's a
14 natural trace element. It is harmful to birds in high
15 concentrations, concentrations that are not anticipated
16 to be exposed as a result of California WaterFix and
17 have been seen in other sites, such as the southern San
18 Joaquin Valley.

19 There is a TMDL that's been promulgated for
20 selenium in the Delta. That TMDL identifies a variety
21 of sources of selenium, including the San Joaquin
22 River, also the Yolo Bypass, oil refinery discharge,
23 and a variety of other minor sources.

24 The project can affect the amount of selenium
25 out there, as you have heard before, by reducing the

1 export of San Joaquin River water and increasing the
2 export of Sacramento River water, thereby leaving more
3 San Joaquin water in the Delta and therefore more
4 selenium. As I noted though, Dr. Ohlendorf's testimony
5 shows that these relatively small changes in selenium
6 concentration do not translate to changes in biological
7 uptake of selenium. And, as I just mentioned, there
8 would be an increase in tidal habitat due to the
9 restoration activities.

10 The proposed action includes an Avoidance and
11 Minimization Measure, AMM 27, that is intended to
12 manage selenium. It basically means that, for each
13 restoration site, a selenium monitoring and management
14 plan would be developed, and this would identify any
15 opportunities in the design or the maintenance of the
16 proposed restoration site to minimize potential
17 exposure to selenium. And the plan would be
18 implemented in the restoration project design and
19 management.

20 But ultimately, when you're restoring habitat,
21 it's going to increase populations of birds out there,
22 it's going to increase the availability of food for
23 these organisms. And these effects offset any
24 potential adverse consequence from the exposure to
25 selenium. So that's my conclusion with regard to

1 selenium.

2 In short, I reiterate my conclusion that the
3 Adaptive Management Program is likely to have
4 beneficial outcomes, and that all of the issues that
5 have been identified with regard to potential adverse
6 consequences on wildlife are not substantive, that the
7 environmental documentation has established reasonable
8 protection of these species. And I ask you to concur
9 with that conclusion.

10 Thank you.

11 MR. MIZELL: That concludes the summary of
12 their testimony. And at this point these witnesses are
13 available for cross-examination.

14 CO-HEARING OFFICER DODUC: Thank you. Before
15 we take our morning break, I'd like to hear from those
16 parties who intend to cross-examine this panel. If you
17 could come up, identify yourself, provide your group
18 number, please, and give me a time estimate.

19 MR. BEZERRA: Ryan Bezerra for Cities of
20 Folsom and Roseville, Sacramento Suburban Water
21 District, and San Juan Water District, I have about an
22 hour.

23 CO-HEARING OFFICER DODUC: Group 7?

24 MR. BEZERRA: Yes, Group 7.

25 CO-HEARING OFFICER DODUC: Thank you.

1 MS. NIKKEL: Meredith Nikkel for Group 9, ten
2 minutes.

3 MR. KEELING: Tom Keeling for the San Joaquin
4 County Protestants, Group 24, about an hour.

5 MR. ETHERIDGE: Fred Etheridge for the East
6 Bay Municipal Utility District, Group No. 15. Estimate
7 about 30 minutes. Thank you.

8 MS. MESERVE: Osha Meserve, Local Agencies of
9 the North Delta, et al., in addition, Friends of Stone
10 Lakes National Wildlife Refuge, estimate two hours.

11 CO-HEARING OFFICER DODUC: That's 19 and 20?

12 MS. MESERVE: It's 47 is the second one.
13 Sorry.

14 CO-HEARING OFFICER DODUC: 47. That's why I
15 always ask for the group number. Thank you.

16 MS. DES JARDINS: Deirdre Des Jardins with
17 California Water Research. I'll have about half an
18 hour. And I'm also allowing my expert, who's the chair
19 of the San Joaquin Audubon Society, to ask questions.
20 And he has about an hour. And I would ask --

21 CO-HEARING OFFICER DODUC: I'm sorry?

22 MS. DES JARDINS: He also has about an hour,
23 so it's about a total of an hour and a half.

24 CO-HEARING OFFICER DODUC: All right.

25 MS. DES JARDINS: And also CWIN, CSPA has

1 about an hour.

2 CO-HEARING OFFICER DODUC: Mr. Ferguson.

3 MR. FERGUSON: Good morning, Aaron Ferguson,
4 County of Sacramento, about 30 minutes for Group 45.

5 CO-HEARING OFFICER DODUC: Ms. Meserve, I
6 believe you have a request to voice?

7 MS. MESERVE: Yes, thank you. Group 32
8 Restore the Delta, is not available today and is hoping
9 that, if the panel is still here, they might go on
10 Thursday. So I believe that other parties have agreed
11 to go in front of Restore the Delta, that I've talked
12 with at least, so.

13 CO-HEARING OFFICER DODUC: Do you have a time
14 estimate for them?

15 MS. MESERVE: One hour.

16 CO-HEARING OFFICER DODUC: Okay. If we're not
17 done today, then we will afford them that opportunity
18 on Thursday.

19 All right. That's quite a bit. If I look at
20 the group number correctly, we will begin with
21 Mr. Bezerra when we return from our break, and we will
22 do that at 11:10.

23 (Recess taken)

24 CO-HEARING OFFICER DODUC: All right. It's
25 11:10. We're back. A couple of housekeeping items

1 before we turn this over to Mr. Bezerra for
2 cross-examination.

3 Apparently we are not being especially -- what
4 is the word? We're not the focus, I guess, of the
5 webcast outage that's been occurring. We just got an
6 e-mail I believe that the entire system here is
7 experiencing difficulties. So I apologize to anyone
8 who's depending on the webcast. But we will proceed
9 and hope that we will be able to view the video or read
10 the transcript later on for the proceedings today.

11 And just for the record, Mr. Ruiz came in and
12 requested 30 minutes of cross-examination on behalf of
13 Group 21.

14 Ms. Meserve could I get a clarification from
15 you? You are representing Groups 19, 20, 47, and 48.
16 In what order do you wish to conduct your
17 cross-examination, meaning do you want a group to
18 conduct as part of 19, 20 or 47, 48?

19 MS. MESERVE: I was going to just go in the
20 Group 19 slot. It seemed like it would be beneficial.

21 CO-HEARING OFFICER DODUC: All right. We'll
22 move you up to that slot.

23 Ms. Des Jardins.

24 MS. DES JARDINS: I have an e-mail from
25 Ms. Suard, and she would like an hour for

1 cross-examination.

2 CO-HEARING OFFICER DODUC: She is Group 41?

3 All right. I'd like to get through with Mr. Bezerra's
4 cross-examination and Ms. Nikkel who has only estimated
5 10 minutes. So that should take us to around the 12:30
6 time point for our lunch break.

7 We will then revisit after the lunch break,
8 but it does not look like we'll get through this panel
9 today. But we will confirm that later on this
10 afternoon for the benefit of Group 4 and 5, I believe,
11 who were up next with their case in chief.

12 With that, Mr. Bezerra.

13 MR. BEZERRA: Thank you very much.

14 My name is Ryan Bezerra. As you may have
15 heard just before the break, I represent a number of
16 public agencies in the Sacramento area.

17 This morning, I'm going to attempt to
18 operationalize some questions I've prepared.

19 CO-HEARING OFFICER DODUC: Someone has been
20 practicing. Congratulations.

21 MR. BEZERRA: Thank you.

22 If we could please, Mr. Hunt or Ms. Perry,
23 could we please pull up Exhibit DWR-1014.

24 CO-HEARING OFFICER DODUC: And you'll go
25 through the list of topics?

1 MR. BEZERRA: I apologize, yes. Four topics,
2 the scope of adaptive management, specific adaptive
3 management of flows, the adaptive management process.
4 And then decision making under adaptive management
5 process.

6 CO-HEARING OFFICER DODUC: Thank you.

7 CROSS-EXAMINATION BY MR. BEZERRA

8 MR. BEZERRA: If we could please go to the
9 bottom of Page 4 and the top of Page 5, beginning on
10 Line 28 of Page 4. And if we could scroll up just a
11 little more so we could see through Line 6 on Page 5.
12 Thank you.

13 I'm going to attempt to cut through some of
14 the cross pretty quickly as opposed to marching through
15 line by line. If we need to go back at any point to
16 catch something specific, you know, let me know, and we
17 can do that.

18 So, Dr. Earle, do you see your testimony here,
19 Line 28 on Page 4 through Line 6 on Page 5?

20 WITNESS EARLE: Yes

21 MR. BEZERRA: And this testimony generally
22 means that the adaptive management program will include
23 implementation of the Incidental Take Permit issued by
24 California Department of Fish and Wildlife for
25 California WaterFix, correct?

1 WITNESS EARLE: The Adaptive Management
2 Program is part of the proposed action. And the action
3 is proposed to be compliant with the terms of the
4 Incidental Take Permit.

5 MR. BEZERRA: Okay. Thank you.

6 WITNESS EARLE: I would not say that the
7 Adaptive Management Program is part of the Incidental
8 Take Permit though.

9 MR. BEZERRA: Okay. Let me clarify. So the
10 Adaptive Management Program would apply to operations
11 under the Incidental Take Permit, correct?

12 WITNESS EARLE: Potentially, yes.

13 MR. BEZERRA: Okay. Thank you.

14 If we could please scroll down a little
15 further on Page 5 of Mr. Earle's testimony to Line 18.
16 And then scroll down a little further so we can see
17 page -- thank you very much.

18 Dr. Earle, do you see the sentence in your
19 testimony beginning on Line 18 continuing through
20 Line 23?

21 WITNESS EARLE: Yes.

22 MR. BEZERRA: And that sentence indicates that
23 the five agencies that will be responsible for making
24 decisions in the Adaptive Management Program are the
25 Department of Water Resources, the Bureau of

1 Reclamation, the United States Fish and Wildlife
2 Service, the National Marine Fisheries Service and the
3 California Department of Fish and Wildlife, correct?

4 WITNESS EARLE: That's correct.

5 MR. BEZERRA: As of now, the State Water
6 Resources Control Board is not included among those
7 five agencies, correct?

8 WITNESS EARLE: That is correct.

9 MR. BEZERRA: You made a statement a little
10 earlier this morning that I don't think is in your
11 testimony that I want to understand. I believe you
12 said that the State Water Resources Control Board
13 currently is not part of this group but that's under
14 discussion. Is that accurate?

15 WITNESS EARLE: It's accurate that they're not
16 currently part of it, and it's accurate that there have
17 been discussions. But I don't think that there is any
18 formal determination applicable.

19 MR. BEZERRA: Well, that's what I want to
20 understand. What is the current discussion about
21 including the State Water Board among the agencies to
22 make decisions in the Adaptive Management Program

23 WITNESS EARLE: If an adaptive change is
24 proposed that requires a permitted authorization or
25 otherwise participation by any agency other than the

1 five agencies, then, as the plan is currently
2 presented, their engagement would occur during Phase 4
3 of the plan and would be determined by their authority
4 with regard to the proposed adaptive change.

5 MR. BEZERRA: And Phase 4 would be the adapt
6 portion of adaptive management?

7 WITNESS EARLE: That is correct, the proposal
8 to implement an adaptive recommendation.

9 MR. BEZERRA: So it's possible the State Water
10 Board would be included in that part of the Adaptive
11 Management Program?

12 WITNESS EARLE: Yes.

13 MR. BEZERRA: But that's not defined at this
14 point, correct?

15 WITNESS EARLE: No. It would depend upon the
16 specific change that's being proposed.

17 MR. BEZERRA: Okay. Thank you.

18 If we could please pull up exhibit SWRCB-107,
19 which is the Incidental Take Permit, and Attachment 5
20 to that permit, please.

21 Dr. Earle, this Attachment 5 is the Adaptive
22 Management Program, correct?

23 WITNESS EARLE: That is correct.

24 MR. BEZERRA: Could we please go to Page 3,
25 and specifically the third full paragraph that begins

1 "Together, the five agencies..." Okay. Thank you.

2 Dr. Earle do you see the first sentence that
3 begins, "Together, the five agencies commit...?"

4 WITNESS EARLE: Yes.

5 MR. BEZERRA: As described in that sentence,
6 the Adaptive Management Program would cover both the
7 combined operations of the Central Valley Project and
8 the State Water Project as well as operations under the
9 California WaterFix, correct?

10 WITNESS EARLE: That is what it says.

11 MR. BEZERRA: So the Adaptive Management
12 Program for California WaterFix potentially could apply
13 to the entire operation of the Central Valley Project
14 and the State Water Project, correct?

15 WITNESS EARLE: I do not see a statement to
16 that effect.

17 MR. BEZERRA: Do you have an understanding as
18 to what the scope of the current Biological Opinions
19 for the combined operations of the Central Valley
20 Project and the State Water Project is?

21 WITNESS EARLE: I have some acquaintance with
22 those documents.

23 MR. BEZERRA: Do you understand that those
24 documents apply to the entire operations of the two
25 water projects?

1 WITNESS EARLE: That is my understanding

2 MR. BEZERRA: Okay. Thank you. If we could

3 please go back to Dr. Earle's testimony, exhibit

4 DWR-1014, and specifically Page 7. There we go.

5 Line -- actually, scroll back up to Line 5, please.

6 Dr. Earle, as described in this portion of

7 your testimony, including the bullet points that follow

8 this section, there will be a great deal of data

9 collected under the Adaptive Management Program,

10 correct?

11 WITNESS EARLE: That is the expectation.

12 MR. BEZERRA: If we could please scroll down

13 to Line 24 in this portion of Dr. Earle's testimony.

14 So back up to Page 7. Thank you.

15 Dr. Earle, do you see the paragraph there with

16 the bullet that begins "Monitoring and Studies"?

17 WITNESS EARLE: Yes.

18 MR. BEZERRA: In that paragraph, on Line --

19 well, in between Lines 25 and 26, you identify the new

20 facilities. What do you mean by "the new facilities"

21 in that testimony?

22 WITNESS EARLE: The new facilities primarily

23 concern the proposed North Delta intakes as well as the

24 Head of Old River Gate.

25 MR. BEZERRA: Okay. Thank you. And in that

1 portion of your testimony, it states it will be
2 necessary to monitor both species and habitat
3 conditions that may be influenced by the new
4 facilities, e.g., upstream water temperatures -- excuse
5 me, "upstream temperatures."

6 What do you mean by "upstream temperatures" in
7 this portion of your testimony?

8 WITNESS EARLE: Not a specific references to
9 anything in particular.

10 MR. BEZERRA: No, I just want to understand
11 what --

12 WITNESS EARLE: Example of a water quality
13 parameter that could be monitored.

14 Although if you were referring to, for
15 instance, temperatures in the Sacramento River as
16 influenced by the -- by the projects, that does come
17 under the scope of the effects analysis that are
18 assessed in the California WaterFix Biological Opinion.
19 So it's an example of something that could be
20 monitored.

21 MR. BEZERRA: So your testimony is that
22 temperatures upstream of the Delta could be affected by
23 the operations of the California WaterFix, correct?

24 WITNESS EARLE: No. My testimony is that
25 water temperatures upstream of the Delta could change

1 in the future. And this could have implications for
2 the operations conducted under the California WaterFix.

3 MR. BEZERRA: I want to understand your
4 testimony then because you state that there are
5 "species and habitat conditions that may be influenced
6 by the new facilities" and that those include upstream
7 temperatures.

8 Do you actually believe that upstream
9 temperatures could be effect- -- influenced by the new
10 facilities?

11 WITNESS EARLE: I believe that on Panel 2
12 Dr. Wilder testified extensively on this. It is not
13 within my scope to discuss how the project might
14 affect -- or if the project might affect upstream water
15 temperatures. However, it has been a subject of
16 ongoing discussion. There have been people that have
17 alleged that such impacts could occur, and consequently
18 monitoring is one technique that could be used to
19 ascertain whether they do occur.

20 MR. BEZERRA: Well, you've gone a little
21 beyond what I was trying to identify. I just want to
22 understand this portion of your testimony.

23 It says, "species and habitat conditions that
24 may be influenced by the new facilities (e.g., upstream
25 temperatures..."

1 MS. ANSLEY: Objection, asked and answered now
2 for about the third time. I believe that Dr. Earle has
3 answered what he means by the upstream temperatures.
4 And he's added more detail three times now. But I
5 believe it's been asked and answered.

6 MR. BEZERRA: I have asked it. I don't know
7 that it's answered. I want to understand Dr. Earle's
8 opinion here.

9 CO-HEARING OFFICER DODUC: Hold on. I would
10 agree with Mr. Bezerra in that I also don't quite
11 understand Dr. Earle's answer either.

12 In this section of your testimony, when you
13 refer to "upstream temperatures," do you have any
14 particular location in mind?

15 WITNESS EARLE: No, I do not.

16 CO-HEARING OFFICER DODUC: Why did you include
17 "upstream temperatures" as a factor or a condition that
18 may be influenced by the new facilities?

19 WITNESS EARLE: It is an example of an
20 environmental variable that has been alleged to
21 potentially be affected by the facilities. It
22 represents an ongoing source of controversy, and
23 therefore potentially a source of scientific
24 uncertainty.

25 CO-HEARING OFFICER DODUC: But you don't have

1 any particular location upstream in mind?

2 WITNESS EARLE: No, I do not.

3 MR. BEZERRA: Thank you. Moving on to the
4 next subject, if we could please go up to Page 3 of
5 Dr. Earle's testimony, DWR-1014, and in particular
6 Lines 22 through 25.

7 And for the record, this sentence reads,
8 "These conclusions show that CWF is reasonably
9 protective of wildlife and plant species as covered by
10 the Mitigation Monitoring and Reporting Program for the
11 CWF," and it continues on, "and terms and conditions of
12 the ITP and BOs."

13 Dr. Earle, in this portion of your testimony
14 what do you mean by the term "CWF"?

15 WITNESS EARLE: California WaterFix.

16 MR. BEZERRA: Does that include the modeling
17 scenario CWF H3+?

18 WITNESS EARLE: I'm testifying here about
19 wildlife impacts. Nothing in the wildlife analysis
20 considers water flow alternatives.

21 MR. BEZERRA: Okay.

22 WITNESS EARLE: Now, the ITPs and BOs, I think
23 it's been established, are predicated upon H3+, and so
24 the conclusion of the ITP and BO would seem to be
25 applicable to that water operation scenario.

1 MR. BEZERRA: Could we please go to Page 2 of
2 Dr. Earle's testimony, specifically Line 19.

3 Okay. Dr. Earle, do you see there beginning
4 on Line 19 there's the sentence, "The adopted project
5 is referred to as CWF H3+"?

6 WITNESS EARLE: Yes.

7 MR. BEZERRA: And what did you mean by "CWF
8 H3+" in that instance?

9 WITNESS EARLE: That's a convention of
10 terminology that DWR has chosen to use for the purpose
11 of submitting this testimony.

12 MR. BEZERRA: Do you understand that it's a
13 specific modeling scenario?

14 WITNESS EARLE: Yes.

15 MR. BEZERRA: Okay. So if we could please go
16 back to Page 3, Line 22. Now, in this sentence that
17 begins, "These conclusions," it concludes with "terms
18 and conditions of the ITP..." Do you understand that
19 the CWF H3+ modeling scenario does not include certain
20 terms of the Incidental Take Permit?

21 WITNESS EARLE: I'm not sure that I do,
22 particularly with regard to impacts on terrestrial
23 species.

24 MR. BEZERRA: Okay. Thank you. So that --
25 does that uncertainty make any difference to your

1 opinion that you state in this sentence, that CWF is
2 reasonably protective of wildlife?

3 WITNESS EARLE: No.

4 MR. BEZERRA: Thank you very much.

5 If we could please go to SWRCB-107,
6 Attachment 2.

7 Dr. Earle, do you understand this Attachment 2
8 to be the Mitigation Monitoring and Reporting Program
9 for the Incidental Take Permit?

10 WITNESS EARLE: Yes.

11 MR. BEZERRA: And you rely on this plan in
12 supporting your opinion that CWF is reasonably
13 protective of wildlife, correct?

14 WITNESS EARLE: Correct.

15 MR. BEZERRA: Could we please go to Page 60 of
16 this document, and specifically Mitigation Measure 132.

17 60, six, oh, please. Thank you. Thank you.
18 And please scroll down so we can catch the top of the
19 next page as well.

20 Dr. Earle, do you see Biological Criterion 3
21 in this mitigation measure?

22 WITNESS EARLE: Yes.

23 MR. BEZERRA: And this mitigation measure
24 applies to the Incidental Take Permit's Condition of
25 Approval 9.9, correct? And we can walk back through

1 the permit if necessary.

2 WITNESS EARLE: Yes, you would have to do
3 that.

4 MR. BEZERRA: Okay. Actually, we can scroll
5 back up to the mitigation measure.

6 Do you see from this portion of the mitigation
7 measure, it applies to Condition 9.9 of the Incidental
8 Take Permit?

9 WITNESS EARLE: Yes, I do.

10 MR. BEZERRA: Biological Criterion 3 generally
11 states that the project shall not result in the overall
12 decrease in population of longfin smelt, correct?

13 WITNESS EARLE: Yes.

14 MR. BEZERRA: Thank you. So this performance
15 measure is an actual requirement of the Incidental Take
16 Permit, correct?

17 WITNESS EARLE: Yes.

18 MR. BEZERRA: Can we please pull up
19 Exhibit BKS-264.

20 And as this pulls up, I'll state for the
21 record what it is. It is a video excerpt of this
22 Board's proceeding on February 8th, 2018. It is an
23 excerpt of CDFW Director Bonham's statement in which he
24 discusses these biological measures.

25 And for the record, this excerpt occurs at

1 approximately 1 hour, 18 minutes, and 30 seconds to
2 1 hour, 19 minutes, and 45 seconds of the Board's
3 archived webcast.

4 CO-HEARING OFFICER DODUC: You just don't look
5 the same without the red microphones. But you have an
6 objection?

7 MR. MIZELL: Yes. You know, I could just
8 bring my red nose. That might work equally well.

9 I'm going to object on one ground, and I
10 believe Ms. Ansley's going to object on a second
11 ground. But my objection is based upon the fact that
12 Mr. Bonham's policy statement --

13 CO-HEARING OFFICER DODUC: Let's stop the
14 director for a minute.

15 Okay. That's a much better image upon which
16 to stop him.

17 Mr. Mizell.

18 MR. MIZELL: Yes. Mr. Bonham's statements in
19 the policy section are not evidence and are not
20 submitted by this witness nor DWR as evidence. The
21 witness's previous answers to questions about the
22 aquatic biology aspects of ITP were that he isn't --
23 he's not here to testify about the aquatic biology but
24 about the terrestrial biology. And so I would say -- I
25 would object on the basis of relevance and also on the

1 basis of admissibility since it was a policy statement,
2 not evidence.

3 CO-HEARING OFFICER DODUC: Ms. Ansley?

4 MS. ANSLEY: Yeah, I would add that it assumes
5 facts not in evidence. The witness has said that he's
6 here to testify as to wildlife and terrestrial impacts
7 generally. Mr. Bezerra has not confirmed that he is
8 familiar with or here to provide relevant information
9 on Delta smelt and longfin smelt.

10 So I believe there's some earlier questions
11 that must be asked to establish whether this witness
12 feels comfortable providing testimony on a term in the
13 ITP that applies to aquatic species.

14 CO-HEARING OFFICER DODUC: I appreciate that
15 distinction, Ms. Ansley and Mr. Mizell. But if I
16 recall Dr. Earle's written testimony correctly, he
17 refers to what he considers to be discussion of the
18 Adaptive Management Program used for both aquatic and
19 terrestrial species. So he is covering aquatic species
20 to the extent that the Adaptive Management Program is
21 being applied; is that correct?

22 MR. MIZELL: That's correct. Dr. Earle is
23 being presented to discuss the Adaptive Management
24 Program as it would be applied to the project. As to
25 the specifics of an aquatic biology condition, however,

1 other than to say does adaptive management apply or not
2 to that condition, it would be beyond the scope of what
3 he's here to testify.

4 CO-HEARING OFFICER DODUC: Understood.

5 Mr. Keeling?

6 MR. KEELING: Tom Keeling for the San Joaquin
7 County protestants.

8 It sounds as if you, Hearing Officer Doduc,
9 are going to the path that I'm going in. But this
10 witness --

11 CO-HEARING OFFICER DODUC: Don't change my
12 mind now, Mr. Keeling.

13 MR. KEELING: -- has been presented on
14 questions of policy and commitment which go beyond the
15 technical evidence and do go to policy issues.

16 CO-HEARING OFFICER DODUC: Ms. Des Jardins.

17 MS. DES JARDINS: In case in chief --

18 CO-HEARING OFFICER DODUC: Your microphone is
19 not on.

20 MS. DES JARDINS: In case-in-chief
21 cross-examination, you're allowed to go beyond the --
22 the scope of the testimony. This is not rebuttal. And
23 cross-examination is an absolute right. And I provided
24 argument on that previously in my support for NRDC.
25 Thank you.

1 CO-HEARING OFFICER DODUC: Mr. Bezerra, any
2 further response from you?

3 MR. BEZERRA: Briefly. The witness relies on
4 the Mitigation Monitoring and Reporting Plan as part of
5 his testimony. I'm attempting to determine what the
6 effect of that plan is.

7 I will make an offer of proof that, in his
8 statement, Director Bonham offered an interpretation of
9 the specific biological criterion we just discussed,
10 and I'd like to understand whether or not that is the
11 applicable interpretation of it.

12 CO-HEARING OFFICER DODUC: You may question
13 Dr. Earle on his understanding in his interpretation of
14 those criteria --

15 MR. BEZERRA: Yes.

16 CO-HEARING OFFICER DODUC: -- without alluding
17 to something that's not in the evidentiary record
18 before us.

19 MR. BEZERRA: That's what I plan to do.

20 CO-HEARING OFFICER DODUC: Let's do that then.
21 Objection is overruled. You may proceed Mr. Bezerra.

22 MR. BEZERRA: If we could please play --

23 CO-HEARING OFFICER DODUC: Ask your question
24 without pulling up the policy statement, which is not
25 in our evidentiary record.

1 MR. BEZERRA: I'd like to ask fore some
2 clarification on that. Director Bonham specifically
3 recommended to you in this excerpt that you adopt these
4 three biological criterion as terms and conditions on
5 your approval of this project.

6 CO-HEARING OFFICER DODUC: Mr. Bezerra, in a
7 policy statement that is not an evidentiary record,
8 which has no bearing on our consideration.

9 MR. BEZERRA: Thank you.

10 If we could please go back to Attachment 2 to
11 the Biological -- excuse me, the Incidental Take
12 Permit. And again, Page 60, six, oh. And scroll down
13 to Biological Criterion 3.

14 And Dr. Earle, so it is your understanding
15 that Biological Criterion 3 is a mandatory term that
16 applies to the operation of the California WaterFix
17 project, correct?

18 WITNESS EARLE: Correct.

19 MR. BEZERRA: Thank you. So if we could
20 please go back now to the Incidental Take Permit
21 itself, which is SWRCB-107. There you go. The primary
22 file. Thank you. And the bottom of Page 188 of
23 that -- or actually, we can just stay here.

24 So, Dr. Earle, based on that biological
25 criterion, is it your understanding that this term of

1 the Incidental Take Permit, 9.9.4.3, would be subject
2 to adaptive management in order to implement that
3 Biological Criterion 3?

4 WITNESS EARLE: I'd like to see a little more
5 context. If we could scroll up to the top of 9.9?

6 MR. BEZERRA: Sure. And I believe that's on
7 Page 176.

8 WITNESS EARLE: Can we go back to 188? Please
9 scroll up to the top of the page.

10 Mr. Bezerra could you please repeat your
11 question?

12 MR. BEZERRA: Certainly. Is it your
13 understanding that the Adaptive Management Program
14 could result in adaptive management of the terms
15 contained in this condition, 9.9.4.3, "Spring Outflow:
16 Abiotic Habitat for Longfin Smelt," in order to
17 implement the Biological Criterion 3?

18 WITNESS EARLE: The spring outflow criterion
19 is a performance criterion based on the operational
20 criteria.

21 And the operational criteria could be
22 considered for revision on the basis of information
23 collected through the Adaptive Management Program.

24 So the Adaptive Management Program could
25 investigate the validity of the conceptual model that

1 underpins this spring outflow critereon.

2 MR. BEZERRA: Thank you. And the goal of that
3 adaptive management would be to implement continued --
4 the continued level of longfin smelt abundance stated
5 in that Biological Criterion 3 we discussed, correct?

6 WITNESS EARLE: Well, in fact, the criterion
7 itself could also be reconsidered through the adaptive
8 management process.

9 MR. BEZERRA: Okay. So your testimony is that
10 Biological Critereon 3, the maintenance of current
11 longfin smelt populations, could be revised via
12 adaptive management?

13 WITNESS EARLE: Yes.

14 MR. BEZERRA: Okay. Thank you.

15 Could we please scroll up to Page 181 of
16 SWRCB-107.

17 Okay. Dr. Earle, we just discussed the spring
18 outflow indicated on this page. I'd like to talk to
19 you about a couple of the other items. The Rio Vista
20 minimum flow standard stated on this page, would that
21 be subjected to potential changes under the Adaptive
22 Management Program?

23 WITNESS EARLE: Provided that all other
24 applicable environmental regulatory criteria were
25 observed, then, yes.

1 MR. BEZERRA: Do you have a similar conclusion
2 regarding the fall outflow criteria stated on this
3 Page 181?

4 WITNESS EARLE: Again, yes, subject to
5 compliance with all other applicable environmental
6 standards.

7 MR. BEZERRA: Thank you. So moving on to the
8 mechanics of the adaptive management program, could we
9 please go back to Dr. Earle's testimony, DWR-1014, and
10 specifically the bottom of Page 6.

11 If we could scroll down to Line 27, please.
12 And then we'd like to pick up the top of Page 7 as
13 well. Thank you.

14 So Dr. Earle, the portion of your testimony on
15 Page 26, Line 27 through Page 7 Line 3, this concerns
16 the adapt portion of the adaptive management process,
17 correct?

18 WITNESS EARLE: That's correct.

19 MR. BEZERRA: And that's the part where
20 agencies decide whether or not to change management,
21 correct?

22 WITNESS EARLE: That's correct.

23 MR. BEZERRA: And in this case, this is the
24 five agencies we previously discussed making that
25 decision, correct?

1 WITNESS EARLE: That's correct.

2 MR. BEZERRA: So that adapt portion of
3 adaptive management process, that could result in
4 amendments to the Incidental Take Permit, correct?

5 WITNESS EARLE: It could result in a wide
6 variety of changes in regulatory authorizations, among
7 them amendment to the Incidental Take Permit.

8 MR. BEZERRA: Could it also result in changes
9 to the environmental opinions that govern Central
10 Valley Project and State Water Project operations
11 generally?

12 WITNESS EARLE: That is somewhat speculative,
13 given that a new Section 7 compliance process on those
14 Biological Opinions is being initiated shortly. But if
15 a new process were not initiated and the opinions
16 continued to enforce in their present form, then, yes.

17 MR. BEZERRA: And if at some point in the
18 indefinite future with the California WaterFix
19 operation, could this adaptive management program
20 result in changes to the Biological Opinions that
21 govern all CVP and SWP operations at that point in
22 time?

23 WITNESS EARLE: I don't think it's an accurate
24 characterization to say that the Adaptive Management
25 Program would result in those changes. It would be

1 within the authority of one or more of the five
2 agencies to advocate such changes in the future.

3 MR. BEZERRA: Okay. Could we please go to
4 Attachment 5 of SWRCB-107.

5 And I believe you stated this previously, but
6 just for the record, this Attachment 5, it is the
7 Adaptive Management Program, correct?

8 WITNESS EARLE: That is correct.

9 MR. BEZERRA: Could we please go to Page 2 and
10 Figure 5-5 in this document. I'm sorry, Page 22. I
11 apologize. If we could scroll down and pick up the
12 whole -- thank you.

13 Dr. Earle, this figure depicts a schematic of
14 how the "Adapt" phase of the Adaptive Management
15 Program would work, correct?

16 WITNESS EARLE: I believe that was the intent
17 of the authors of this document.

18 MR. BEZERRA: Is there any particular portion
19 of the Incidental Take Permit that could not be amended
20 via this process?

21 WITNESS EARLE: I'm afraid I'm not qualified
22 to answer that question, which is basically a legal
23 one, and more to the point, falls within the
24 jurisdiction of CDFW.

25 MR. BEZERRA: But your testimony is that the

1 Adaptive Management Program will support California
2 WaterFix being implemented in a manner reasonably
3 protective of wildlife, correct?

4 WITNESS EARLE: That's correct.

5 MR. BEZERRA: Thank you. I'd like to go to
6 about the middle of this graphic. Do you see the box
7 with the language "CVP/SWP Changes"?

8 WITNESS EARLE: Yes.

9 MR. BEZERRA: What does that mean?

10 WITNESS EARLE: Well, again, I was not an
11 author of this document. So I can offer you, at best,
12 an interpretation of what was meant.

13 MR. BEZERRA: Okay. Well, let me stop you
14 there, then. There is a separate box, "CWF Changes."
15 That box would mean California WaterFix changes,
16 correct?

17 WITNESS EARLE: That would be my
18 interpretation.

19 MR. BEZERRA: And the separate box for
20 "CVP/SWP Changes" would be different than California
21 WaterFix changes, correct?

22 MS. ANSLEY: Objection. Is he asking for just
23 how Dr. Earle interprets this graphic, not being the
24 drafter of it, making us guess as to what these people
25 might have meant in interpreting it? If so, I object

1 on the grounds of speculation.

2 He clearly testified that he is not the author
3 of this graphic and that he is only offering,
4 basically, what his guess is as to what the drafter --

5 CO-HEARING OFFICER DODUC: Yes, but he is your
6 expert witness on the issue of adaptive management,
7 which includes Phase 4.

8 MS. ANSLEY: Sure. And he can answer
9 questions about specific clings. But in terms of what
10 the person who drafted this flow chart meant, I believe
11 it crosses the line into speculation.

12 CO-HEARING OFFICER DODUC: Mr. Bezerra, are
13 you asking Dr. Earle to read someone's mind, or are you
14 asking his interpretation based on his expertise in
15 adaptive management on these boxes?

16 MR. BEZERRA: I can only ask for his
17 interpretation.

18 CO-HEARING OFFICER DODUC: Thank you.

19 Overruled.

20 WITNESS EARLE: Please repeat your question.

21 MR. BEZERRA: Sure.

22 The box "CVP/SWP Changes" is separate and
23 distinct from the box for "California WaterFix
24 Changes," correct?

25 WITNESS EARLE: Yes.

1 MR. BEZERRA: Those are two different items
2 that may be covered in the adaptive management process
3 established for California WaterFix, correct?

4 WITNESS EARLE: My interpretation of this
5 diagram is that the authors felt that management
6 decisions for the California WaterFix could occur
7 through a variety of different pathways. And they
8 chose these three boxes to represent the range of
9 possible pathways.

10 Whether that is a complete list of the
11 possible pathways or even the most appropriate way of
12 breaking down the possibilities, I do not know.

13 MR. BEZERRA: You rely on this Adaptive
14 Management Program to support your opinions in your
15 testimony, correct?

16 WITNESS EARLE: That is correct.

17 MR. BEZERRA: Thank you. Could we please
18 refer to the sentence on this page just above
19 Figure 5-5? Thank you.

20 There's a sentence that states, "The final
21 decision will be consistent with the requirements of
22 all relevant laws and regulations including ESA, CESA,
23 NEPA, the California Environmental Quality Act, Clean
24 Water Act, Delta Plan and the Bay Delta Water Quality
25 Control Plan."

1 That sentence does not include the State Water
2 Resources Control Board's water right process,
3 correct -- water right change process, correct?

4 WITNESS EARLE: I do not see it stated there.

5 MR. BEZERRA: Do you know why the State Water
6 Board's water right change process was not included as
7 one of the relevant processes for the Adaptive
8 Management Program

9 WITNESS EARLE: I do not.

10 MR. BEZERRA: Thank you. Moving on to the
11 decision making for adaptive management, could we
12 please go to Page 10 in this attachment? And the text
13 under the heading 4.1, "Decision Making."

14 So, Dr. Earle, do you see the sentence that
15 begins about a third of the way into that paragraph
16 that states, "The five agencies commit to working" --
17 begins, "The five agencies commit to working through
18 the collaborative process"? Do you see that sentence?

19 WITNESS EARLE: Yes.

20 MR. BEZERRA: And, again, these are the five
21 agencies we identified at the beginning, correct?

22 WITNESS EARLE: That's correct

23 MR. BEZERRA: Could we please go to PDF
24 Page 72 of this attachment? Actually, can we stop for
25 a second; I have one additional question here.

1 In this paragraph, it identifies the agreement
2 for implementation of an adaptive management program
3 for project operations. So that's the agreement the
4 five agencies would use to implement adaptive
5 management, correct?

6 WITNESS EARLE: I suspect that's an
7 oversimplification. A wide variety of documents would
8 be used to implement adaptive management. They state
9 that collaborative process is outlined in that document
10 and that they would abide by it to reach consensus on
11 operational decisions and other management actions to
12 the extent possible. It's a fairly highly qualified
13 statement.

14 MR. BEZERRA: Okay. So could we please now go
15 to Page 72 of this document?

16 And Dr. Earle, this document contained within
17 Attachment 5, this is the -- if we could go back to the
18 top of Page 72.

19 Dr. Earle this is the agreement previously
20 referenced as at least being relevant to the Adaptive
21 Management Program, correct?

22 WITNESS EARLE: That appears to be the case.

23 MR. BEZERRA: Can we please scroll down to
24 Section 2.0 on this page.

25 Dr. Earle, this paragraph indicates that, in

1 addition to the five agencies, certain State Water
2 Project and Central Valley Project contractor water
3 agencies would participate in the adaptive management
4 process, correct?

5 WITNESS EARLE: It does refer to the State
6 Water Project and Central Valley Project contractor
7 water agencies. Does not specify a role for them in
8 the adaptive management process however.

9 MR. BEZERRA: Okay. Could we please scroll
10 down to the following page and Section 3.1.5.

11 Dr. Earle, do you see this paragraph? It
12 generally states that only Central Valley Project and
13 State Water Project contractors who will fund a portion
14 of the cost to implement the proposed California
15 WaterFix project are included in this program, correct?

16 WITNESS EARLE: No, I don't see it saying
17 that. It does not specifically exclude any members of
18 the contractors.

19 MR. BEZERRA: Let me back up. So this is
20 defining the term "SWP/CVP Contractors" for purposes of
21 this agreement, correct?

22 WITNESS EARLE: That appears to be a
23 reasonable interpretation. Again, I was not party to
24 the drafting of this document in general and
25 particularly not of this MOA.

1 MR. BEZERRA: This is contained within the
2 Adaptive Management Program that supports your
3 testimony, correct?

4 WITNESS EARLE: Well, this is contained the
5 Adaptive Management Program that I refer to in my
6 testimony.

7 MR. BEZERRA: Thank you. Do you see the
8 second sentence in Section 3.1.5 where it's further
9 identifying "SWP/CVP Contractors" and it states "These
10 public water agencies will fund a portion of the cost
11 to implement the California WaterFix project, including
12 a portion of the Adaptive Management Program"?

13 WITNESS EARLE: Yes, I see that.

14 MR. BEZERRA: No CVP contractors who would not
15 contribute to California WaterFix are included in this,
16 correct?

17 CO-HEARING OFFICER DODUC: Are you able to
18 answer the question, Dr. Earle?

19 WITNESS EARLE: It's -- I don't see any
20 reference in this text to such a situation.

21 MR. BEZERRA: Okay. Could we please scroll
22 down to Page 47 in Section 4.1 which defines "Action"
23 for purposes of this agreement. Could we please scroll
24 down so we can pick up all of 4.1.

25 And do you see little roman iv, Dr. Earle?

1 WITNESS EARLE: Yes.

2 MR. BEZERRA: It states that, "Other
3 CVP/SWP-related actions as agreed by the 'Interagency
4 Implementation Coordination Group.'" So only -- that
5 group would be the group deciding what additional
6 actions maybe taken under Adaptive Management Program,
7 correct?

8 WITNESS EARLE: Yes. That's the directing
9 group for the Adaptive Management Program.

10 MR. BEZERRA: Thank you. Could we please
11 scroll down to Page 81 and specifically Section 5.3.2.

12 This paragraph defines the Interagency
13 Implementation Coordination Group, correct?

14 WITNESS EARLE: Correct.

15 MR. BEZERRA: And that group would consist
16 of a participant participating State Water Project
17 contractor and a participating federal CVP contractor,
18 correct?

19 WITNESS EARLE: That's what it says.

20 MR. BEZERRA: And those contractors would be
21 the signatories to this agreement, correct?

22 WITNESS EARLE: I would infer that to be
23 correct.

24 MR. BEZERRA: Okay. Thank you.

25 Could we please go down to Page 86 of this

1 document? And scroll down to pick up the entirety. I
2 think there might be a little bit more on the signature
3 line. There we go. Thank you.

4 So the signatories to this agreement include
5 the California Department of Fish and Wildlife, the
6 California Department of Water Resources, National
7 Marine Fisheries Service, United States Bureau of
8 Reclamation. Those are four of the five agencies,
9 correct?

10 You might scroll down a little bit more.
11 There might be a little bit more, though. Okay.

12 So the left-hand-side set of signature lines
13 are for the five agencies, correct?

14 WITNESS EARLE: Five of the five agencies.

15 MR. BEZERRA: Five of the five agencies. The
16 right-hand set of signatories are all State Water
17 Project or Central Valley Project contractors who would
18 benefit from the California WaterFix project, correct?

19 WITNESS EARLE: They all appear to be state or
20 federal water project contractors.

21 MR. BEZERRA: Do you understand them to all be
22 potential beneficiaries of the California WaterFix
23 project?

24 WITNESS EARLE: No, I have not made that
25 interpretation.

1 MR. BEZERRA: And why you have you not made
2 that interpretation?

3 WITNESS EARLE: It really has nothing to do
4 with my job on this project.

5 MR. BEZERRA: So -- okay. You are testifying
6 about the Adaptive Management Program for California
7 WaterFix, correct?

8 WITNESS EARLE: That's correct.

9 MR. BEZERRA: Do you not have an understanding
10 as to what State Water Project and Central Valley
11 Project contractors might benefit from California
12 WaterFix?

13 MR. MIZELL: Objection, asked and answered.

14 CO-HEARING OFFICER DODUC: Sustained.

15 MR. BEZERRA: Thank you.

16 Is it your understanding that any state or --
17 State Water Project contractors or Central Valley
18 Project contractors other than the ones listed in this
19 document would be able to participate in the
20 Interagency Implementation Coordination Group?

21 WITNESS EARLE: My understanding of the
22 membership of the IICG is as was stated in the section
23 that we just looked at, which included representation
24 of one from the State Water Project contractors and one
25 from the Central Valley Project contractors.

1 MR. BEZERRA: And I believe you stated that
2 you understood those to be the signatories to this
3 agreement.

4 WITNESS EARLE: Correct, yes.

5 MR. BEZERRA: Do you understand that this
6 agreement would set up any procedures for any other
7 Central Valley Project contractors to participate in
8 the IICG?

9 WITNESS EARLE: I am not aware of provisions
10 to include anyone other than the representative of each
11 of those groups.

12 MR. BEZERRA: Would the IICG conduct any
13 public proceedings in implementing the Adaptive
14 Management Program?

15 WITNESS EARLE: I don't know that there's been
16 a determination about that. One -- there is some
17 discussion in the Adaptive Management Program of the
18 initial tasks of the IICG, and things like establishing
19 a mission, establishing operational standards are
20 included there.

21 So I'm not aware that a public process for
22 IICG deliberations has been established or even
23 discussed.

24 MR. BEZERRA: Okay. Do you understand whether
25 the IICG's implementation of the Adaptive Management

1 Program would involve any water right change petitions
2 to the State Water Resources Control Board?

3 WITNESS EARLE: I do not know if that has been
4 discussed or has been presented as part of their
5 duties.

6 MR. BEZERRA: Okay. Thank you very much.
7 That completes my cross-examination.

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

10 If I might, Doctor, ask for some
11 clarification. Is it your testimony that only these
12 agencies listed here as signatory to this agreement
13 would be able to serve on the IICG?

14 WITNESS EARLE: I do not know if this
15 agreement is final at this point. That is, I'm not
16 even testifying that it has been signed.

17 CO-HEARING OFFICER DODUC: And you're not
18 asserting anything?

19 WITNESS EARLE: Correct.

20 CO-HEARING OFFICER DODUC: Thank you because I
21 thought I heard otherwise. All right. Appreciate it.

22 Thank you, Mr. Bezerra.

23 Ms. Nikkel?

24 Mr. Bezerra was so efficient, we actually
25 might get an early lunch.

1 CROSS-EXAMINATION BY MS. NIKKEL

2 MS. NIKKEL: Meredith Nikkel on behalf of
3 Group 9, North Delta Water Agency.

4 I just have a few a few follow-up questions.
5 Most of my questions were addressed already, so I think
6 we'll be quick.

7 Just to follow up on that last point,
8 Dr. Earle, are you aware in general of any formal role
9 that the Adaptive Management Program has for water
10 users who do not benefit -- or will not benefit from
11 the operation of WaterFix?

12 WITNESS EARLE: No, I'm not aware that the
13 Adaptive Management Program has any particular
14 provisions that are applicable to those groups.

15 MS. NIKKEL: Do you understand that the State
16 Water Board, in making a decision on this proceeding,
17 must make a finding that the proposed project will not
18 injure any legal user of water?

19 WITNESS EARLE: I'm not familiar with the full
20 scope of the findings that the Board must make.

21 MS. NIKKEL: Okay. That concludes my
22 cross-examination.

23 CO-HEARING OFFICER DODUC: Thank you,
24 Ms. Nikkel.

25 With that, we will adjourn for our lunch

1 break, and we will return at 1:10. You may thank
2 Mr. Bezerra for the extra two minutes.

3 (Whereupon, the luncheon recess was
4 taken at 12:09 p.m.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 AFTERNOON SESSION

2 ---o0o---

3 (Whereupon, the appearance of all
4 parties having been duly noted for
5 the record, the proceedings resumed
6 at 1:11 p.m.)

7 CO-HEARING OFFICER DODUC: Good afternoon,
8 everyone. Good afternoon. Welcome back. I hope you
9 got a chance to go outside. It is fantastically
10 gorgeous. I almost didn't come back. But here we are.

11 Are there any housekeeping items we need to
12 address before I turn to Mr. Etheridge?

13 (No response)

14 CO-HEARING OFFICER DODUC: All right.

15 Mr. Etheridge, please.

16 CROSS-EXAMINATION BY MR. ETHERIDGE

17 MR. ETHERIDGE: I'm Fred Etheridge. I'm an
18 attorney in the General Counsel's Office of the East
19 Bay Municipal Utilities District.

20 I have some questions today for Mr. Earle.
21 The topics I will cover include the development of the
22 Adaptive Management Program, the intent of the Adaptive
23 Management Program, species covered by the program, and
24 the scope of the adaptive management changes.

25 CO-HEARING OFFICER DODUC: I'm sorry. The

1 scope of --

2 MR. ETHERIDGE: -- adaptive management
3 changes.

4 If you can please pull up Dr. Earle's
5 testimony, DWR Exhibit 1014, and turn to Page 5,
6 Line 6.

7 Dr. Earle, your testimony states that the
8 Adaptive Management Program is the primary basis for
9 your testimony about adaptive management and
10 monitoring; is that correct?

11 WITNESS EARLE: That's correct.

12 MR. ETHERIDGE: Thank you. And reiterating
13 from this morning, your testimony states that the
14 Adaptive Management Program is attached to various
15 documents, including the ITP, which your testimony
16 identifies as State Board Exhibit 107, Attachment 5; is
17 that correct?

18 WITNESS EARLE: Yes, that is correct.

19 MR. ETHERIDGE: Thank you. You testified this
20 morning that the Adaptive Management Program identifies
21 what it calls five agencies. Do you recall that?

22 WITNESS EARLE: Yes.

23 MR. ETHERIDGE: And those agencies are the
24 Bureau of Reclamation --

25 CO-HEARING OFFICER DODUC: We all recall that,

1 Mr. Etheridge. Please move on.

2 MR. ETHERIDGE: And you also testified this
3 morning about an Interagency Implementation
4 Coordination Group, the IICG; is that correct?

5 WITNESS EARLE: Yes.

6 MR. ETHERIDGE: And is it true that together
7 the IICG and the five agencies are referred to in the
8 AMP as the implementing agencies?

9 WITNESS EARLE: I don't recall that
10 definition.

11 MR. ETHERIDGE: If we could turn to Page 3 of
12 your testimony.

13 I'm sorry, Page 3 of the Adaptive Management
14 Program, and the fourth paragraph. On Page 3 of the
15 adaptive management program. We're looking for the
16 Adaptive Management Program that is State Board
17 Exhibit 107, Attachment 5.

18 MS. PERRY: Sorry.

19 MR. ETHERIDGE: Thank you.

20 It's State Board Exhibit 107, and then it's
21 Attachment 5. And if you could turn to Page 3 of that
22 document.

23 Dr. Earle, in the fourth paragraph on Page 3
24 of the Adaptive Management Program, that paragraph
25 begins, "Together the IICG," do you see that first

1 sentence?

2 WITNESS EARLE: Yes, I do, yes.

3 MR. ETHERIDGE: So now you understand the
4 implementing agencies [sic]. Thank you.

5 If we could please turn to Page 6 of the AMP.

6 CO-HEARING OFFICER DODUC: Just for
7 clarification, you mean implementing entities, right,
8 not "agencies"?

9 MR. ETHERIDGE: That's correct.

10 Now, Dr. Earle, Page 6 of the Adaptive
11 Management Program lists the intent of the program; is
12 that correct?

13 WITNESS EARLE: That is what it states.

14 MR. ETHERIDGE: And is it true that part of
15 the intent of the program is to guide the implementing
16 entities as it created an adaptive management plan?

17 WITNESS EARLE: That is what it states.

18 MR. ETHERIDGE: If you look on Page 6 of the
19 Adaptive Management Program, Point No. 5, does that
20 state that one of the intents of the AMP is to guide
21 the implementing entities as they communicate and
22 provide transparency to the broader community of state,
23 federal, and local agencies, universities, scientific
24 investigators, public water agencies, and
25 non-governmental stakeholders?

1 WITNESS EARLE: That is what it states.

2 MR. ETHERIDGE: Do you know how the
3 implementing entities will communicate proposed
4 adaptive management actions to local agencies and
5 public water agencies?

6 WITNESS EARLE: To best of my knowledge, that
7 has not yet been determined.

8 MR. ETHERIDGE: Okay.

9 WITNESS EARLE: And particularly that the IICG
10 has not yet been convened.

11 MR. ETHERIDGE: Thank you.

12 If you look on that same page, Page 6,
13 Item No. 3, the listing intent of the Adaptive
14 Management Program states that, to "Identify the key
15 uncertainties about how Central Valley water operations
16 and other management actions to benefit the species can
17 be implemented to avoid jeopardy and meet other
18 regulatory standards applicable to state and federally
19 listed fishes, including future effects associated with
20 the CWF"; is that correct?

21 WITNESS EARLE: That is what it states.

22 MR. ETHERIDGE: Do you know how the Adaptive
23 Management Program intends to cover non-listed species?

24 WITNESS EARLE: I have not seen any discussion
25 of how that will be addressed.

1 MR. ETHERIDGE: Okay. Thank you. In your
2 answer to cross-examination this morning by
3 Mr. Bezerra, he asked you some questions about
4 membership on the IICG. Do you recall that?

5 WITNESS EARLE: Yes.

6 MR. ETHERIDGE: Do you know, to your
7 knowledge, will the IICG include any representatives
8 from the East Side Delta tributaries?

9 WITNESS EARLE: I do not know that to be the
10 case.

11 MR. ETHERIDGE: Okay. Thank you.

12 I have a couple questions on how adaptive
13 management decisions will be made. If you turn to
14 Page 3 of the Adaptive Management Program, in the
15 fourth paragraph on that page, the second sentence
16 reads, "For all adaptive management changes affecting
17 Delta operations and other adaptive management changes
18 outside the Delta otherwise agreed to by the IICG, the
19 IICG shall make its recommendations to the five
20 agencies for a decision by the agency or agencies with
21 final decision making authority." Do you see that?

22 WITNESS EARLE: Yes.

23 MR. ETHERIDGE: So is it true from this that
24 the IICG makes recommendations but not decisions? Is
25 that correct?

1 WITNESS EARLE: That is what it states here.

2 MR. ETHERIDGE: Do you know who will make the
3 final adaptive management decisions?

4 WITNESS EARLE: As stated here, it is by the
5 agency or agencies with final decision making
6 authority, which would depend upon the nature of the
7 recommendation being made.

8 MR. ETHERIDGE: Okay. Thank you.

9 WITNESS EARLE: It's possible to conceive
10 recommendations that fall solely within the
11 jurisdiction of a single agency as well as others that
12 involve multiple agencies.

13 MR. ETHERIDGE: Okay. Thank you.

14 Would you please turn to Page 21 of the
15 Adaptive Management Program.

16 You see on the bottom of that page there's an
17 inset box? It's got a header that says "Phase 4:
18 Adapt."

19 The first -- do you see the first sentence of
20 that inset box which states, "The decision and final
21 authority regarding whether to adopt or reject a
22 management adjustment lies with the agency or agencies
23 with decision-making authority (most often the Bureau
24 of Reclamation or the Department of Water Resources in
25 their respective capacities as operators of the CVP and

1 SWP)"?

2 WITNESS EARLE: That is what it states.

3 MR. ETHERIDGE: Okay. Thank you.

4 Suppose an adaptive management recommendation
5 was made by the IICG to close the Delta Cross Channel
6 in October to protect out-migrating fall-run Mokolumne
7 Chinook salmon. Do you know which agency would make
8 the final decision on whether to actually close the
9 Delta Cross Channel?

10 MS. ANSLEY: Objection, calls for a legal
11 conclusion. But if the witness knows.

12 CO-HEARING OFFICER DODUC: You may answer
13 though -- if he does not know.

14 WITNESS EARLE: I know this Delta Cross
15 Channel is a facility that is owned and operated by the
16 U.S. Bureau of Reclamation.

17 MR. ETHERIDGE: Okay. Thank you.

18 I'm going to turn to Page 15 of the Adaptive
19 Management Program. And underneath that graphic, it's
20 the second paragraph that begins, "The IICG..." Go
21 down a bit farther. There you go.

22 Dr. Earle, on Page 15 of the Adaptive
23 Management Program, the second paragraph, it states
24 that, "The IICG anticipate continuing to explore many
25 of the questions and uncertainties related to the

1 effects of the Projects' operation on listed species."

2 Do you see that?

3 WITNESS EARLE: Yes, that is what it says.

4 MR. ETHERIDGE: So is it true that the IICG's
5 focus will be on listed species under the federal and
6 State Endangered Species Acts, correct?

7 WITNESS EARLE: I believe that is the intent,
8 that the Adaptive Management Program would focus on the
9 needs of listed species under the State and federal
10 ESAs.

11 MR. ETHERIDGE: Thank you. If we could please
12 turn to Appendix 1 of the Adaptive Management Program.
13 It's on Page 49, I believe. Thank you.

14 Dr. Earle, you see that this table here is
15 entitled "Species-Specific Objectives"?

16 WITNESS EARLE: Yes.

17 MR. ETHERIDGE: Now, this appendix lists
18 numerous species, but is it true that they all appear
19 to be listed species under federal and State Endangered
20 Species Acts, correct?

21 WITNESS EARLE: If we could scroll down and
22 look at the rest of the table.

23 Yes, it is true that all those species are
24 listed under either or both of the Acts.

25 MR. ETHERIDGE: Thank you. So the list does

1 not include the fall-run Mokelumne River Chinook salmon
2 population, correct?

3 WITNESS EARLE: The list identified species
4 according to their official names, under the CESA or
5 the ESA. I'm not aware that the Mokelumne River
6 population is regarded as a distinct population segment
7 by either of those agencies.

8 MR. ETHERIDGE: Thank you. If we could turn
9 Page 7 of the Adaptive Management Program.

10 As you can see in this header on the top of
11 the page, that's entitled "Key Uncertainties"; is that
12 correct?

13 WITNESS EARLE: That is what it says.

14 MR. ETHERIDGE: If you look at the bullets in
15 the middle of the page -- if you scroll down a bit;
16 thank you.

17 You see the second bullet there that states,
18 "Refine entrainment and transport estimates of all life
19 stages of Delta smelt to quantify their effect on
20 overall population viability"?

21 WITNESS EARLE: Yes. It states that that was
22 a key recommendation from the MAST report.

23 MR. ETHERIDGE: Thank you. Are you aware of
24 whether the Adaptive Management Program would look at
25 entrainment of out-migrating Mokelumne River juvenile

1 steelhead and salmon?

2 WITNESS EARLE: To the best of my knowledge,
3 that specific study is not identified at this time.

4 MR. ETHERIDGE: Okay. Thank you.

5 If we could turn -- please turn to Page 33 of
6 the Adaptive Management Program, the start of the third
7 paragraph on that page. Just scroll down a couple more
8 lines. Thank you.

9 Dr. Earle, do you see the first sentence in
10 Section 5.3.2.2? It states, "Landscape-scale survival
11 studies suggest that the route a fish uses during
12 out-migration strongly influences their survival to the
13 ocean."

14 WITNESS EARLE: That is what it says.

15 MR. ETHERIDGE: Do you agree with that
16 statement?

17 WITNESS EARLE: I neither agree nor disagree
18 with that statement. It concerns an aspect of fish
19 biology I have not studied.

20 MR. ETHERIDGE: Okay. Thank you.

21 Let's shift now to some questions on the
22 result of adaptive management decisions. Dr. Earle, is
23 it your understanding that the model scenario submitted
24 for Part 2 of this hearing representing the proposed
25 project is CWF H3+?

1 WITNESS EARLE: Please repeat that question.

2 MR. ETHERIDGE: Yes. Is it your understanding
3 that the model scenario submitted for Part 2 of this
4 hearing representing the proposed project is CWF H3+?

5 WITNESS EARLE: Yes, it is.

6 MR. ETHERIDGE: Okay, thank you. And is
7 CWF H3+ representative of a change in infrastructure
8 and associated changes in the SWP and CVP system
9 operations resulting from the proposed project?

10 WITNESS EARLE: The change from --

11 MS. ANSLEY: Objection, vague and ambiguous.
12 The changes from the proposed project? Maybe that
13 question can be rephrased.

14 MR. ETHERIDGE: I'm going to try it again.

15 Is CVP H3+ representative of a change in
16 infrastructure and associated changes in the SWP and
17 CVP system operations resulting from the proposed
18 project relative to the No Action Alternative?

19 CO-HEARING OFFICER DODUC: And why are you
20 asking Dr. Earle this question?

21 MR. ETHERIDGE: Well, because his testimony
22 states, read from on Page 2, that the project is
23 CWF H3+, and we're speaking here about adaptive
24 management changes; we're trying to get a sense of the
25 scope of potential adaptive management changes. And

1 because the modeling of the CWF H3+ is purported to
2 define what that project's impacts will be, I want to
3 get a sense of what adaptive management will change
4 what has been modeled.

5 CO-HEARING OFFICER DODUC: I'm not sure I
6 follow.

7 MR. ETHERIDGE: I can ask it another way.

8 CO-HEARING OFFICER DODUC: Please do.

9 MR. ETHERIDGE: Dr. Earle, is it your
10 understanding that adaptive management is a part of the
11 proposed project that's before this Board?

12 WITNESS EARLE: The implementation of the
13 Adaptive Management Program described in this appendix
14 that we've been reviewing is part of the proposed
15 action under the California WaterFix. And so, yes, it
16 is part of the action that the Board is reviewing.

17 MR. ETHERIDGE: Okay. Thank you.

18 Would you agree that, as a result of adaptive
19 management decisions, DWR or the Bureau can operate the
20 SWP and CVP in a manner outside the operating criteria
21 modeled in CWF H3+?

22 WITNESS EARLE: I agree that through adaptive
23 management they can propose changes in water operations
24 which would then be subject to review under all
25 applicable environmental regulation.

1 MR. ETHERIDGE: Thank you. Earlier, this
2 morning, you answered some questions on the agreement
3 that is attached to the Adaptive Management Program.
4 Do you recall that?

5 WITNESS EARLE: Somewhat.

6 MR. ETHERIDGE: I want to speed through those.
7 At the back of the Adaptive Management Program there is
8 an agreement attached; is that correct?

9 WITNESS EARLE: That is correct.

10 MR. ETHERIDGE: And I should note Mr. Bezerra
11 already asked many of the other questions I was going
12 to ask on this agreement, so saved us all some time.

13 Do you see on Page 12 of the agreement a
14 Section 7.1?

15 WITNESS EARLE: I have to pull up the
16 agreement on the screen.

17 MR. ETHERIDGE: It should be about Page 84 of
18 the pdf. Go up a bit, 7.1. Just scroll up a bit.
19 There you go. Thank you.

20 You see Section 7.1 on the screen now?

21 WITNESS EARLE: I see it.

22 MR. ETHERIDGE: You see the second sentence
23 there that reads, "This agreement is legally
24 non-binding and in no way: (i) impairs any party from
25 continuing its own finding of project implementation,"

1 and it goes on from there.

2 MS. ANSLEY: I'm going to lodge an objection
3 here.

4 I'm not sure --

5 CO-HEARING OFFICER DODUC: All he's asked is
6 what's on the paper. So maybe you want to hold that
7 objection for a little bit.

8 MS. ANSLEY: If he was asked if that's what
9 it says, then I can wait a minute.

10 CO-HEARING OFFICER DODUC: I think that's what
11 he's asking for now.

12 WITNESS EARLE: To reply, yes, I do see that
13 sentence.

14 MR. ETHERIDGE: Thank you. Now, on the one
15 hand, the Adaptive Management Program states that DWR
16 and the Bureau commit to adaptive management; is that
17 correct? Overall, they commit to Adaptive Management
18 Program?

19 WITNESS EARLE: That is my understanding.

20 MR. ETHERIDGE: So just help me understand
21 that, if that's the case, then why would this agreement
22 which is to implement the Adaptive Management Program
23 being non-binding?

24 MS. ANSLEY: Now I'm going to object. And
25 this is going to kind of bring in a bunch of objections

1 that have been in the back of my mind.

2 I'm not sure this witness is wholly familiar
3 with a draft legal agreement that's attached to the
4 Adaptive Management Plan, which is a framework. And a
5 lot of the interpretation of -- particularly of this
6 legalese is subject to legal conclusion. So I think
7 there's some foundational questions to be laid about
8 whether this witness is familiar with this document.

9 I didn't say this earlier with Mr. Bezerra,
10 but if he needs a moment to review the document in
11 context -- I'm not sure he's truly familiar with the
12 draft contract that's not been signed or executed.

13 CO-HEARING OFFICER DODUC: Mr. Etheridge?

14 MR. ETHERIDGE: I would just point out that
15 very early in his testimony he states that his
16 testimony is based on the Adaptive Management Program.
17 This agreement, entitled "Agreement for Implementation
18 of Adaptive Management Program for Project Operations,"
19 is attached to that very same Adaptive Management
20 Program.

21 And I'm just trying to discern what in the
22 witness's view that statement means if the agreement to
23 implement adaptive management is non-binding.

24 CO-HEARING OFFICER DODUC: I will allow the
25 question, but we will all keep in mind Ms. Ansley's

1 objection that the witness is not an attorney and
2 therefore will not be able to provide legal opinions
3 regarding what a contract might mean.

4 But to the extent that you, Dr. Earle, can
5 answer the question based on your expertise and your
6 analysis of the adaptive management, please try your
7 best to do so.

8 WITNESS EARLE: In context of Mr. Etheridge's
9 question, I would like to point out that all of my
10 testimony on adaptive management is based on the
11 content of this agreement. I suggested the opinion
12 that is protective of wildlife species and fish species
13 based on the fact that adaptive management has been
14 adopted as the preferred procedure by each of the fish
15 and wildlife agencies and they have agreed in principle
16 to implement this Adaptive Management Plan.

17 It does not mean that I am familiar with all
18 of the aspects of this as-yet-unresolved agreement.
19 But the point in my testimony is that the fact that the
20 fish and wildlife agencies have committed to this
21 program and have stated in their decision documents
22 that this program is protective of threatened and
23 endangered species is the basis of my opinion.

24 MR. ETHERIDGE: Okay. Thank you very much.
25 That concludes my questions.

1 CO-HEARING OFFICER DODUC: Thank you,
2 Mr. Etheridge.

3 Ms. Meserve, you're up. You don't have all
4 your materials.

5 MS. MESERVE: Madam Chair, over the lunch it
6 was determined that Mr. Keeling should precede me, so
7 with your indulgence, I will switch with him.

8 CO-HEARING OFFICER DODUC: Your request to
9 switch places with Mr. Keeling?

10 MR. KEELING: I heard it as a command.

11 CO-HEARING OFFICER DODUC: So we'll have
12 Mr. Keeling and then Mr. Ruiz? Oh, you're here.

13 MR. RUIZ: Yes. I have a request also.
14 Mr. Shutes and I were going to change places, if that's
15 okay with the Hearing Officers.

16 CO-HEARING OFFICER DODUC: You guys are trying
17 my patience, but because I had a nice walk during lunch
18 and the sunshine rejuvenated me, I will allow you this
19 swapping at the last minute.

20 MR. RUIZ: Thank you.

21 CO-HEARING OFFICER DODUC: So we will have
22 Mr. Keeling, Mr. Shutes -- Ms. Meserve?

23 Mr. Ruiz?

24 MR. RUIZ: Actually, the only thing is
25 Group 19, Ms. Meserve, is going to go before

1 Mr. Shutes, if that's okay. I'm sorry.

2 CO-HEARING OFFICER DODUC: So it's Keeling,
3 Meserve, Shutes, and Ruiz.

4 MR. RUIZ: Yes.

5 CO-HEARING OFFICER DODUC: That will be the
6 only allowance I will make for you in Part 2.

7 MR. RUIZ: Thank you. I won't ask for
8 anything else.

9 CO-HEARING OFFICER DODUC: Mr. Keeling, your
10 topics, please.

11 MR. KEELING: All of my questions will be for
12 Dr. Earle, and they will all concern adaptive
13 management.

14 CO-HEARING OFFICER DODUC: Well, gee that's
15 such a surprise.

16 MR. KEELING: Unless you have some questions
17 you'd like me to ask the other witnesses.

18 CO-HEARING OFFICER DODUC: I think you've
19 spent enough time on that, Mr. Keeling.

20 I will encourage you, though, as always, to
21 not repeat questions that have already been asked.
22 There's only so much that we can cover with Dr. Earle
23 on adaptive management. Leave something for
24 Ms. Meserve, will you?

25 MR. KEELING: I will.

1 CROSS-EXAMINATION BY MR. KEELING

2 MR. KEELING: Good afternoon, Dr. Earle. My
3 name is Tom Keeling, and I represent the San Joaquin
4 County protestants. I'm going to ask you a few
5 questions about your written testimony, especially with
6 respect to adaptive management. And that testimony is
7 DWR-1014 as I recall.

8 Right?

9 WITNESS EARLE: That's correct.

10 MR. KEELING: Mr. Hunt, are you in charge?
11 Could you put up that exhibit, 1014, at Page 5? Thank
12 you.

13 Dr. Earle, how many adaptive management plans
14 have you worked with during your career?

15 WITNESS EARLE: I'm going to take a while to
16 add all those up. I don't know. Can we say several?

17 MR. KEELING: You can say anything you want,
18 but then I'm going to ask you to list them.

19 WITNESS EARLE: Okay. One example was an
20 adaptive management plan for an experimental ocean
21 energy project off the Oregon coast where, as you can
22 imagine, there were some significant scientific
23 uncertainties about the effects of the project. And we
24 developed an adaptive management plan for review by the
25 National Marine Fisheries Service, and that was

1 implemented.

2 Another was an adaptive management plan for a
3 habitat conservation plan, evaluating the effects of a
4 large treated-wastewater outfall up in King County,
5 Washington. That particular habitat conservation plan
6 was terminated. It was another one that turned into a
7 Section 7 consultation. And in the end, they decided
8 that adaptive management plan wasn't necessary, so that
9 was not finalized.

10 Let's see. Another was an adaptive management
11 plan for a forest practices habitat conservation plan
12 for implementation in eastern Lewis County, Washington.
13 And that plan was, to some degree, implemented and I
14 believe is ongoing at this time. It's fairly a
15 small-scale habitat conservation plan, didn't have
16 substantial uncertainties associated with it.

17 Another was adaptive management provisions for
18 a habitat conservation plan that Snohomish County,
19 Washington Transportation Department was undertaking.
20 Particularly they had significant uncertainties about
21 the indirect effects of the proposed development
22 projects. That was the focus of that plan. That was
23 another plan that, due to other regulatory changes that
24 went on, was not concluded. And at that point, my
25 involvement with it ended. And I don't know if the

1 adaptive management component went forward or not.

2 Those are all the ones I recall at this
3 moment.

4 MR. KEELING: You said the forest practices
5 habitat conservation plan up in east Lewis County,
6 Washington --

7 WITNESS EARLE: Yes.

8 MR. KEELING: -- was small scale?

9 WITNESS EARLE: Small scale.

10 MR. KEELING: By which you mean what?

11 WITNESS EARLE: I think it was 40,000 acres.

12 MR. KEELING: How many?

13 WITNESS EARLE: 40,000.

14 MR. KEELING: What was the scale of the Oregon
15 coast project?

16 WITNESS EARLE: They didn't really draw a
17 close line around it. But that was one of the
18 uncertainties, actually, was how far electromagnetic
19 effects could extend in the aquatic environment. For
20 instance, it's an area where green sturgeon migrate
21 through that area. So there was concern about the
22 distance of which fish might potentially be affected.

23 I think we anticipated effects might be
24 observable out to a radius of a couple of miles, so
25 maybe 10,000 acres.

1 MR. KEELING: When were you involved in that
2 Oregon coast project?

3 WITNESS EARLE: I think that was about 2010.

4 MR. KEELING: And you said that plan has been
5 implemented?

6 WITNESS EARLE: Yes.

7 MR. KEELING: Have you followed up and
8 evaluated the results of that adaptive management plan
9 to date?

10 WITNESS EARLE: I said my involvement in that
11 project ended at the beginning of project
12 implementation.

13 MR. KEELING: Is that a no?

14 WITNESS EARLE: That's a no.

15 MR. KEELING: With respect to the east Lewis
16 County, Washington habitat conservation plan, you said
17 it was to some degree implemented. What did you mean
18 by that?

19 WITNESS EARLE: Well, this was back in the
20 mid-to-late 1990s, and it was implemented to the degree
21 that U.S. Fish and Wildlife kept tracking it and asking
22 for results. And after they got about seven or eight
23 years into the plan, they kind of lost interest and
24 stopped asking for results. And that was about the
25 time that my involvement as a consultant ended, and so

1 I don't -- I haven't tracked the status of that plan
2 since that time. But I suspect that it's effectively
3 inactive.

4 MR. KEELING: By "it," you mean the plan?

5 WITNESS EARLE: Yes.

6 MR. KEELING: Any other adaptive management
7 plans in which you've participated which you can
8 recall?

9 WITNESS EARLE: None that I can recall at this
10 time.

11 MR. KEELING: Of the four plans that you've
12 described, how many in your view were correctly
13 designed and implemented?

14 MR. MIZELL: Objection, vague and ambiguous as
15 to the use of the term "correctly."

16 MR. KEELING: That's fine. I appreciate that.
17 Let's scroll down to Lines 10 through 11 of this page.

18 WITNESS EARLE: Very well.

19 MR. KEELING: Dr. Earle, do you see the
20 language that says, "When correctly designed and
21 executed, adaptive management programs provide the
22 ability to make and implement decisions while
23 simultaneously conducting research to reduce the
24 ecological uncertainty of a decision's outcome"? Do
25 you see that?

1 WITNESS EARLE: I do see that.

2 MR. KEELING: That was your language?

3 WITNESS EARLE: Yes.

4 MR. KEELING: And I'm using the phrase
5 "correctly designed and executed" as you used it?

6 WITNESS EARLE: Well --

7 CO-HEARING OFFICER DODUC: Shall we apply that
8 to something that is actually before us, meaning this
9 project proposal, rather than some project conducted in
10 the distant past?

11 MR. KEELING: Dr. Earle clearly has an
12 understanding of what it means to have a correctly
13 designed and executed adaptive management plan. And
14 I'm asking him only if any of the plans with which he
15 has personal experience were, in his view as he uses
16 the term, correctly designed and executed.

17 CO-HEARING OFFICER DODUC: But that would be
18 meaningless to me because I'm not familiar with those
19 plans. So I would rather have him explain what he
20 means by -- what was the term -- "correctly designed
21 and executed."

22 MR. KEELING: We can ask that question first.

23 CO-HEARING OFFICER DODUC: Let's do that.

24 MR. KEELING: What did you mean by that?

25 WITNESS EARLE: Most of the adaptive

1 management plans that have been proposed and
2 implemented in the past, judging by my review of
3 literature during preparation of draft versions of the
4 Adaptive Management Plan for the BDCP and also for the
5 California WaterFix -- and this connection I should
6 make clear that, although I was not an author of the
7 plan that's presented in the project before us, I did
8 work on earlier versions of that document.

9 And anyway, as I say, most plans historically
10 as recounted in literature have not been successful.
11 And in fact, in many cases, it seems the words
12 "adaptive management" have been sort of the kiss of
13 death. There are a lot of good examples of adaptive
14 management plans that are out there that are not called
15 adaptive management plans. Okay?

16 Adaptive management basically describes the
17 concept of organizational learning. Human beings learn
18 by doing things wrong and then they do them right.

19 Organizations can do things wrong an infinite
20 number of times and still keep doing them wrong. They
21 have to adopt systematic changes in order to improve
22 their behavior. Adaptive management is simply another
23 way of the describing this capability for an
24 organization to learn from its mistakes and to
25 incorporate that new information into operational

1 parameters.

2 Many adaptive management plans in the past
3 have been written and put on the shelf and have never
4 altered the operational parameters of the organization.
5 And a variety of studies have been done analyzing the
6 reasons for that. I'm not prepared to discuss those
7 studies today. I haven't reviewed any of them closely,
8 lately.

9 But examples of common reasons for the failure
10 include a poorly designed plan, a plan that does not
11 include sufficient funding to do the necessary work, a
12 plan that does not have a clear implementation process
13 involving people that have the authority to make the
14 necessary changes.

15 So as time has passed -- and I believe I
16 mentioned earlier that the adaptive management
17 techniques have been around since the late 1970s -- a
18 lot of organizations have learned from these mistakes.
19 And the numbers of studies out there that criticize
20 adaptive management plans for their failure has dropped
21 over time. And today, there are at least some examples
22 of plans that have been well-funded and have been
23 implemented by people that have decision making
24 authority and have been making adaptive changes that
25 stick. One of the most commonly cited examples is the

1 adaptive management plan for the Everglades.

2 So I would say a plan that's correctly
3 designed and executed is one that has these critical
4 factors, such as the appropriate decision-making
5 structure and adequate funding to implement the plan.

6 MR. KEELING: You cited insufficient funding
7 is one reason for failure. In any of your reading of
8 the literature about adaptive management plans, have
9 you encountered the observation that political
10 pressure, and more specifically the adaptive management
11 plan's failure to address future political pressure, is
12 a reason for failure in some cases?

13 WITNESS EARLE: I'm not sure I've seen that
14 discussed in those terms in peer reviewed literature.

15 MR. KEELING: How about in general terms?

16 WITNESS EARLE: In general terms, people
17 suggest that there may be political pressures.

18 MR. KEELING: Have any of the adaptive
19 management plans you've been associated with tried to
20 address in the plan itself at the time of adoption a
21 possibility that project objectives would be altered by
22 future political pressure?

23 WITNESS EARLE: Well, in the case of the
24 California WaterFix Adaptive Management Plan, we have
25 commitments to the adaptive management process that are

1 specified in the authorizing documents. Okay? In
2 order to implement the California WaterFix, the
3 Adaptive Management Plan must be implemented. It's a
4 requirement of the Biological Opinions. It's a
5 requirement of the Incidental Take Permit. And,
6 actually, the NMFS Biological Opinion includes funding
7 levels for the plan. These are not optional.

8 So since it's essentially regulation at this
9 point, it's not particularly vulnerable to political
10 pressure.

11 MR. KEELING: The IICG will be making adaptive
12 management decisions at some point, will they not?

13 WITNESS EARLE: They will be making adaptive
14 management recommendations, yes.

15 MR. KEELING: Is there a mechanism to insulate
16 those future decisions by the IICG from political
17 pressure?

18 MS. ANSLEY: Misstates testimony.
19 "recommendations," please. That's what the witness
20 said.

21 CO-HEARING OFFICER DODUC: "Recommendations,"
22 not "decisions," Mr. Keeling.

23 MR. KEELING: Recommendations? Not decisions.

24 WITNESS EARLE: I'm not aware of a mechanism
25 that has stated such an intent. And I really haven't

1 reviewed the Adaptive Management Program with -- with
2 an eye to that being a potential outcome.

3 MR. KEELING: Which entities are the
4 participants again in the IICG?

5 WITNESS EARLE: I believe they are the five
6 agencies.

7 MR. KEELING: Have all of the five agencies
8 put in place a funding plan that, in your opinion, is
9 sufficient to assure the continued efficient running of
10 the Adaptive Management Plan for its life?

11 WITNESS EARLE: Some of the agencies are
12 currently still precluded from doing so, due to, for
13 instance, the fact that the NEPA process is not yet
14 concluded.

15 MR. KEELING: Do you think that would be an
16 important part of the NEPA process?

17 WITNESS EARLE: It would be an irrevocable
18 commitment, or it might be. Frankly, I should note
19 that I am not really qualified to answer that question.

20 MR. KEELING: Other than the Florida
21 Everglades plan, how many adaptive management plans
22 have you studied in addition to the ones you've just
23 mentioned you have participated in?

24 WITNESS EARLE: There have been none that I've
25 studied closely. Mostly I've looked at the review

1 literature. One that did I look into a little more is
2 the Adaptive Management Program that has been
3 implemented for operations at the Glen Canyon Dam with
4 a eye to providing some protection for endangered
5 Colorado River fishes found downstream in the Grand
6 Canyon and below, above Lake Mead. And that has often
7 been cited as an example of a successful Adaptive
8 Management Plan.

9 MR. KEELING: How many participants were there
10 in that Adaptive Management Plan?

11 WITNESS EARLE: I don't know.

12 MR. KEELING: Is it fully funded?

13 WITNESS EARLE: I don't know.

14 MR. KEELING: By what metrics do you
15 understand that that was successful?

16 WITNESS EARLE: They have conceived, executed,
17 and reported on studies that evaluate the effect of
18 reservoir operations on endangered fishes and have
19 implemented changes in reservoir operations on the
20 basis of the results of those studies.

21 MR. KEELING: Those are published results?

22 WITNESS EARLE: Either in the -- either in the
23 journal literature or in the form of government
24 reports. They're all publicly available.

25 MR. KEELING: Let's turn, then, to the Florida

1 Everglades plan which is referenced in State Water
2 Resources Control Board Exhibit 107, Attachment 5.
3 Page 13, keep going down. There you are.

4 This says, does it not, that the Adaptive
5 Management Plan for WaterFix is modeled after the
6 adaptive management approach used in the comprehensive
7 Everglades Restoration plan; is that right?

8 WITNESS EARLE: That is what it says.

9 MR. KEELING: Were you personally involved in
10 the Everglades plan?

11 WITNESS EARLE: I was not.

12 MR. KEELING: Have you ever performed any work
13 in connection with that restoration plan?

14 WITNESS EARLE: I have not.

15 MR. KEELING: Have you conducted any studies
16 in the Everglades focusing on the implementation of or
17 assessment of that restoration plan?

18 WITNESS EARLE: I've not.

19 MR. KEELING: Have you reviewed any written
20 reports on the restoration efforts in Everglades under
21 this program?

22 WITNESS EARLE: I have some years ago.

23 MR. KEELING: Can you cite me to any study
24 you've read?

25 WITNESS EARLE: I would have to go back and

1 see if I could recover that work. That was circa 2011.

2 MR. KEELING: Well, is that a plan that you
3 believe was correctly designed and executed, as you
4 used that phrase?

5 WITNESS EARLE: It was often cited as an
6 example of a successful adaptive management plan.
7 Based on those citations, I would say it's one of the
8 better examples of a correctly executed one.

9 MR. KEELING: Okay. Can you tell me why you
10 have that opinion?

11 WITNESS EARLE: Because it's been cited as an
12 example of one.

13 MR. KEELING: But can you give me any example
14 of somebody citing it for that purpose?

15 WITNESS EARLE: I would have to go back and
16 review the adaptive management literature for specific
17 citations.

18 MR. KEELING: Are you familiar with J.W.
19 Milon, C.F. Kiker's, and D.J. Lee's 2011 study entitled
20 "Adaptive Ecosystem Management and the Florida
21 Everglades: More than trial-and-error?" Are you
22 familiar with that study?

23 WITNESS EARLE: Is that one of the exhibits
24 that's been submitted?

25 MR. KEELING: I'm just asking if you're

1 familiar with that study.

2 WITNESS EARLE: That citation does not ring a
3 bell.

4 MS. ANSLEY: Is there a reference to the
5 organization that it comes out of that would refresh
6 his recollection other than just the author's names?

7 MR. KEELING: Why don't we put up CWIN-6 at
8 Page 10.

9 CO-HEARING OFFICER DODUC: Mr. Keeling just so
10 I'm -- just for my information, is this in response to
11 Ms. Ansley's question, or are you going on to a
12 different topic?

13 MR. KEELING: I'm hoping this will maybe
14 refresh the witness's recollection.

15 Is CWIN-6 the study?

16 MR. KEELING: It's not the study. This is the
17 Whitelaw report.

18 CO-HEARING OFFICER DODUC: I'm sorry, the
19 what?

20 MR. KEELING: The Whitelaw -- this is
21 Ed Whitelaw's analysis.

22 CO-HEARING OFFICER DODUC: Got it.

23 MR. KEELING: Mr. Hunt, if you could go to the
24 center of Page 10.

25 This may -- Dr. Earle, if you'd --

1 WITNESS EARLE: I cannot confirm that I've
2 read this review before.

3 MR. KEELING: Well, I'm going to ask you a
4 question based on the quote, which is sort of at the
5 bottom of the page and will go on to the next page. It
6 begins, "Questions remain about the ways in which
7 adaptive ecosystem management can influence the
8 planning process and how it would be implemented. The
9 progress of a particular case study, the South Florida
10 Everglades Ecosystem Restoration Initiative, suggests
11 that the design and practice of adaptive ecosystem
12 management have yet to fulfill the intellectual
13 challenge."

14 And you'll see the references there, the
15 footnote is to Milon, Kiker, Lee, the 2011 study I
16 referred to earlier.

17 CO-HEARING OFFICER DODUC: I'm sorry. Could
18 we scroll down to Footnote 37 --

19 MS. ANSLEY: Yes, can we see the footnote?

20 CO-HEARING OFFICER DODUC: -- so the witness
21 can see the citations?

22 WITNESS EARLE: Okay. I'm seeing that.

23 MR. KEELING: With this bit of refreshing
24 information, does this refresh your recollection as to
25 whether you've seen this study?

1 WITNESS EARLE: I may have seen this study,
2 but I cannot recall any particulars of it.

3 MR. KEELING: Did you review Mr. Whitelaw's
4 report?

5 WITNESS EARLE: The exhibit that we're
6 reviewing here?

7 MR. KEELING: Yes.

8 WITNESS EARLE: No, I've not.

9 MR. KEELING: I asked you earlier about your
10 basis for thinking that that was a successful plan.
11 Let me ask you now, have you seen any written reports
12 studies or assessments saying that this program or the
13 adaptive management associated with it have been
14 unsuccessful?

15 MR. KEELING: Objection, asked and answered.
16 To the extent that Mr. Keeling is trying to convince
17 the witness that reading an out-of-context quotation
18 from what is likely to be a lengthy study would now
19 familiarize him with the study enough to answer that
20 question differently seems a bit of an entrapment.

21 MR. KEELING: Either he remembers or not.

22 CO-HEARING OFFICER DODUC: Hold on. I'm
23 sustaining the objection.

24 And re-asking the question, Dr. Earle, putting
25 aside this 2011 study that you don't recall whether or

1 not you have seen, based on your review of the
2 literature regarding the Everglades Adaptive
3 Management, were there any that question its
4 effectiveness?

5 WITNESS EARLE: The Everglades Ecosystem has
6 some social, political, and economic similarities to
7 the Delta ecosystem in that it is an extremely
8 contentious area of ecological damage. And so, yes,
9 people have praised the Everglades work; people have
10 criticized the Everglades work; enormous amounts of
11 money have been spent on the Everglades work. And it
12 is likely to remain contentious into the future.

13 This, as well as the rhetoric in that quote,
14 does not address the question of whether it's
15 scientifically adequate. And that, in turn, also does
16 not address the question of whether it's going to be an
17 effective strategy here in the Delta.

18 Ultimately the success or failure of the Delta
19 program is dependant upon how well it's structured and
20 how well it's supported by the participating agencies.

21 CO-HEARING OFFICER DODUC: Thank you.

22 MR. KEELING: Thank you. You alluded to the
23 costs of the Everglades plan. Is it your understanding
24 that the adaptive management plan in the Everglades
25 program has experienced massive cost overruns?

1 WITNESS EARLE: I understand that its costs
2 have been a matter of much contention. I suspect that
3 whether or not there are overruns might depend on who
4 you ask.

5 MR. KEELING: But you would agree, would you
6 not, that inadequate funding can be a source of failure
7 for an adaptive management plan?

8 WITNESS EARLE: Certainly, which is why the
9 funding provisions in the Term and Condition 6.b of the
10 NMFS Biological Opinion are so important to the success
11 of this plan.

12 MR. KEELING: Earlier today, and I believe it
13 was in Mr. Bezerra's examination, there was some brief
14 discussion about a possibility of this Board, the State
15 Water Resources Control Board, either eventually being
16 part of the five agencies or the fact that it doesn't
17 seem to be expressly included as one of the five
18 agencies. Do you remember that testimony?

19 WITNESS EARLE: I remember discussion about
20 that point.

21 MR. KEELING: Are you aware of any discussions
22 between the petitioners -- that means any member of the
23 petitioner groups -- and anyone on the State Water
24 Resources Control Board about possibly adding the Board
25 to those agencies, I guess making it the sixth agency?

1 WITNESS EARLE: If such discussions have
2 occurred, no one has reported it to me. I'm not often
3 consulted by DWR on policy points.

4 MR. KEELING: So you have no idea whether
5 anybody's talked to this Board about their
6 participation in the Adaptive Management Plan should
7 this project be approved?

8 WITNESS EARLE: No one has told me that such
9 conversations have occurred.

10 MR. KEELING: Do you believe they have
11 occurred?

12 WITNESS EARLE: I would not be surprised.

13 MR. KEELING: And why do you say that?

14 WITNESS EARLE: They are critical agencies to
15 the entire process. You can't divorce, really, the
16 range of potential management actions that are going to
17 be occurring under California WaterFix from the
18 administrative scope of the Water Resources Control
19 Board.

20 MR. KEELING: Is that in part because the
21 adaptive management recommendations may involve
22 changing criteria, standards, and conditions that are
23 in fact conditions for the issuance of a permit at
24 issue in this proceeding?

25 WITNESS EARLE: I think of it as being a large

1 aquatic ecosystem that is under imminent threat from
2 multiple stressors with multiple agencies having
3 jurisdiction for its sustainability. Therefore, those
4 agencies have to cooperate and collaborate in order to
5 accomplish their respective missions.

6 MR. KEELING: I'm going to move to strike that
7 as unresponsive.

8 The question was is one of the reasons why you
9 would not be surprised at discussions between
10 petitioners and the State Board because adaptive
11 management may result in recommendations at odds with
12 the very standards, conditions, and criteria that might
13 be the basis for conditions of a permit?

14 MR. MIZELL: I'm going to object as asked and
15 answered. What Mr. Keeling is asking the witness to do
16 is speculate as to the outcome of any future regulatory
17 changes this Board may choose to take. Mr. -- or
18 Dr. Earle answered the question to the best of his
19 ability, which is the regulatory agencies will have to
20 be a part of a process that figures out how to achieve
21 the goals of the adaptive management process. He
22 cannot for --

23 CO-HEARING OFFICER DODUC: Thank you.
24 Sustained. And will attorneys please stop testifying.

25 Proceed, Mr. Keeling.

1 That goes for both attorneys.

2 MR. KEELING: I didn't want to be left out.

3 If we go to Page 5 of DWR-1014, Lines 25 and
4 26.

5 Dr. Earle, do you see the sentence that says,
6 "Together, the five agencies commit to ongoing adaptive
7 management under the current Biological Opinions of the
8 combined operations of the Central Valley Project and
9 the State Water Project as well as the effects of
10 future operations under California WaterFix"? Do you
11 see that?

12 WITNESS EARLE: I do see that.

13 MR. KEELING: Is that commitment you speak of
14 in that sentence memorialized in writing?

15 WITNESS EARLE: That sentence is largely taken
16 from the Adaptive Management Plan, I believe the
17 executive summary.

18 MR. KEELING: I'm asking you, as the
19 designated expert on adaptive management, if you're
20 aware of a writing in which that commitment is set
21 down.

22 WITNESS EARLE: Yes, the Adaptive Management
23 Program.

24 MR. KEELING. But the -- not the memo we
25 referred to earlier today but the program itself?

1 WITNESS EARLE: The AMP referred to in my
2 testimony and included as an appendix to each of the
3 Biological Opinions and the Incidental Take Permit.

4 MR. KEELING: And is it your belief that all
5 five agencies have signed such a commitment?

6 WITNESS EARLE: I do not -- it is not -- I do
7 not know that the agencies have yet signed that
8 commitment.

9 MR. KEELING: Could one or more of the five
10 agencies elect to withdraw from that commitment at some
11 point in the future?

12 WITNESS EARLE: I really am incapable of
13 answering that question. It really sounds like a legal
14 question.

15 MR. KEELING: I'm asking you if there is, to
16 your knowledge, a mechanism in the plan that would
17 allow for that?

18 WITNESS EARLE: Well, there's a dispute
19 resolution process in the plan. Whether that comes
20 under scope of things that might be addressed in the
21 dispute resolution process, I do not know.

22 MR. KEELING: Does the Adaptive Management
23 Plan include any enforcement mechanism that would be
24 triggered by one of those participant's failure or
25 refusal to participate?

1 WITNESS EARLE: There is no enforcement
2 mechanism specific to the Adaptive Management Plan. I
3 believe that assumes that each of the involved agencies
4 will abide by the law.

5 MR. KEELING: But do each of those agencies
6 have full funding in place that would allow them to
7 fulfill that commitment?

8 WITNESS EARLE: I have not had conversations
9 with representatives of those agencies that would allow
10 me to answer that question.

11 MR. KEELING: Now, adaptive management has a
12 lot of do with the future and future decision making.
13 But you understand, do you not, that what the
14 petitioners are asking for is for these decision makers
15 to make a decision now, not in the future, that is
16 based in large part on this Adaptive Management Plan.
17 Do you understand that?

18 WITNESS EARLE: No, I really don't necessarily
19 understand that. Changes under the Adaptive Management
20 Plan that would fall under the authority of these
21 decision makers would then be subject to their decision
22 at such time as those changes were proposed.

23 MR. KEELING. Mr. Hunt, let's go to Page 6,
24 Lines 6 through 7 of this exhibit.

25 Dr. Earle, this sentence that begins at Line 6

1 reads, "The AMP includes a framework for a structural
2 decision-making process with an iterative process for
3 reducing uncertainty relying upon four phases," and
4 then it goes ahead and lists the phases. Do you see
5 that?

6 WITNESS EARLE: Yes, I see what it says up
7 there.

8 MR. KEELING: As used in this sentence, quote,
9 "uncertainty," unquote, about what?

10 WITNESS EARLE: Uncertainty from a scientific
11 point of view.

12 MR. KEELING: About what?

13 WITNESS EARLE: Aspects of Delta ecosystems
14 and water operations that potentially affect outcomes
15 for threatened and endangered species.

16 MR. KEELING: How about uncertainty about
17 operational actions that might affect public health and
18 safety? Is that encompassed within the term
19 "uncertainty" here?

20 WITNESS EARLE: To the best of my knowledge,
21 no, that is not.

22 MR. KEELING: How about operational decisions
23 or WaterFix activities that might affect the Delta --
24 the Delta water supply project in Stockton?

25 WITNESS EARLE: I do not believe that is

1 mentioned in the document. It's -- the Adaptive
2 Management Program is focused on the needs of
3 threatened and endangered species. Uncertainties that
4 apply to other aspects of the project are not -- are
5 not covered directly by the Adaptive Management
6 Program.

7 MR. KEELING: So would it be correct, for
8 example, to say that WaterFix activities and decisions
9 that might affect tourism in the Delta would not be
10 subject to adaptive management as a mechanism for
11 addressing them?

12 WITNESS EARLE: No.

13 MR. KEELING: That would not be correct, or
14 that would be correct? I'm sorry.

15 WITNESS EARLE: It would be correct that
16 uncertainty about how an activity might affect tourism
17 would not be regarded as an occasion to initiate an
18 adaptive management action.

19 MR. KEELING: So the State Water Contractors
20 would be involved in deciding what might trigger an
21 adaptive management decision; is that right?

22 WITNESS EARLE: That's correct.

23 MR. KEELING: Federal Water Contractors?

24 WITNESS EARLE: Yes, a representative from
25 each.

1 MR. KEELING: How about San Joaquin County?
2 Would it be involved?

3 WITNESS EARLE: They are not identified as a
4 member of the IICG, and so they would not be involved
5 in formulating recommendations under adaptive
6 management.

7 MR. KEELING: How about the County of
8 Sacramento?

9 WITNESS EARLE: They're not identified as a
10 member of the IICG; therefore, they would not be
11 directly involved in formulating recommendations.

12 MR. KEELING: Would the same be true of the
13 Central Delta Water Agency and the South Delta Water
14 Agency?

15 WITNESS EARLE: I believe so.

16 MR. KEELING: And the entities that comprise
17 the local -- and the Local Agencies of the North Delta?

18 WITNESS EARLE: In order to avoid listing all
19 of the agencies --

20 CO-HEARING OFFICER DODUC: Thank you,
21 Dr. Earle, thank you.

22 WITNESS EARLE: I would like to point out that
23 concerns raised by such parties would be addressed in
24 Phase 4 of the adaptive management process, during
25 which the responsible member of the IICG determined

1 what was necessary in order to comply with all
2 applicable law and regulation.

3 MR. KEELING: I'm not talking about applicable
4 law and regulation. I'm talking about a decision
5 wrapped in the California WaterFix that affects the
6 interests of any of those groups.

7 WITNESS EARLE: Yes, I understand.

8 MR. KEELING: Okay. So would your answer be
9 the same?

10 WITNESS EARLE: Yes.

11 MR. KEELING: Because those other Delta
12 stakeholders are not involved in Phase 4 directly
13 either, are they? Such as the counties, the City of
14 Stockton, Local Agencies of the North Delta, they're
15 not involved in Phase 4, are they, directly?

16 WITNESS EARLE: Recommendations would be made
17 for adaptive management actions on the basis of the
18 IICG. The responsible member who's authority governed
19 implementation of the proposed adaptive management
20 action would comply with all applicable law and
21 regulation.

22 To the extent that that included engaging
23 stakeholders such as Delta residents, they would be
24 incorporated in the process; at that time, you would
25 have input.

1 MR. KEELING: Is there a mechanism in the plan
2 that's being presented to this Board that would allow
3 for that?

4 WITNESS EARLE: The plan does not include a
5 mechanism for direct public participation in the
6 decision-making process.

7 MR. KEELING: Is there any procedure or
8 mechanism in the plan by which Delta stakeholders could
9 challenge or appeal a decision of the IICG?

10 MR. MIZELL: I'm just going to object to the
11 use of the term "decision by the IICG."

12 MR. KEELING: Recommendation.

13 MR. MIZELL: Thank you.

14 WITNESS EARLE: To my knowledge, no.

15 MR. KEELING: Mr. Hunt, let's take a look at
16 State Water Resources Control Board 107, Attachment 5,
17 Page 3. Thank you.

18 I think I skipped these. I think we already
19 included enough about participants in the IICG. Why
20 don't we move to Page 5.

21 About six lines down, do you see the sentence
22 that begins, "Adaptive management is inherently
23 collaborative, requiring communication and transparency
24 among all interest groups as well as a willingness to
25 overcome the institutional barriers to collaborative

1 decision making"? Do you see that?

2 WITNESS EARLE: Yes, I do.

3 MR. KEELING: Do you have an understanding as
4 to what is included in the phrase "all interest groups"
5 as used in that sentence?

6 WITNESS EARLE: I do not.

7 MR. KEELING: You don't know if it would
8 include groups with a strong interest in a healthy
9 estuary, such as the County of Sacramento?

10 WITNESS EARLE: It would be possible to
11 speculate on what might have been anticipated --

12 MR. KEELING: I'm not going to ask you to
13 speculate. I'm not going to ask you to speculate.

14 WITNESS EARLE: Well, that is a quote from a
15 source that's cited, Luoma et al. 2015. Offhand that
16 does not look familiar. I'm not sure if I ever read
17 Luoma et al. 2015. I certainly don't know what context
18 that quote is taken from. And so to answer your
19 question, I would have to speculate.

20 MR. KEELING: Take a look at the other -- at
21 the rest of that sentence. Do you see that phrase, "to
22 overcome the institutional barriers to collaborative
23 decision making"?

24 WITNESS EARLE: Yes, I see that.

25 MR. KEELING: Do you have an understanding as

1 to what is meant by that?

2 MR. MIZELL: Objection, asked and answered.

3 MR. KEELING: It's a yes or no.

4 MR. MIZELL: He indicated that he would have
5 to speculate.

6 WITNESS EARLE: Let me just say that this is a
7 quote taken out of context from a paper that I have not
8 read. To explain to you what the authors meant by
9 saying that would require speculation.

10 CO-HEARING OFFICER DODUC: Fair enough.

11 MR. KEELING: All right. That's fair enough.

12 Well, regardless of what they meant, do you
13 believe there are institutional barriers to
14 collaborative decision making that an adaptive
15 management plan should address?

16 WITNESS EARLE: I can certainly conceive of
17 situations where that would be a problem.

18 MR. KEELING: For example?

19 WITNESS EARLE: As a matter of fact, it has
20 been criticized as a potential problem in the case of
21 the Delta. I was questioned by the Delta Science
22 Program about the Adaptive Management Program
23 approximately five years ago, and this is one of the
24 points that they've raised.

25 I know that the five agencies are aware of

1 this problem and have had conversations -- well, I
2 strongly suspect that the authors of the Adaptive
3 Management Program were aware of this problem when they
4 formulated the program, which is probably why they
5 included this quote in the introduction to their
6 document.

7 So I believe there has been an effort to
8 address this issue.

9 MR. KEELING: And I appreciate that. But I
10 was actually asking about your understanding, not the
11 conversation you had with others. I appreciate that,
12 too. But do you have an understanding as to whether
13 there are institutional barriers to collaborative
14 decision making?

15 WITNESS EARLE: I could not name examples of
16 such barriers in the Delta. So I'm willing to
17 entertain the proposition that they might exist, but
18 can't confirm that they do.

19 MR. KEELING: Mr. Hunt, let's turn to Page 7.

20 About 4/5ths of the way through that
21 paragraph, Dr. Earle, there's a reference to the
22 Management Analysis and Synthesis Team going by the
23 acronym MAST. Do you see that?

24 WITNESS EARLE: Yes, I see that.

25 MR. KEELING: What is the function of that

1 team?

2 WITNESS EARLE: It has a role with regard to
3 fisheries management, but I'm not familiar with its
4 operation.

5 MR. KEELING: A few lines further down, do you
6 see the sentence that says "Key recommendations for the
7 MAST report to address critical data and information
8 gaps include," colon, and there are several bullets?

9 WITNESS EARLE: Yes, I see that.

10 MR. KEELING: And the final one says,
11 "Research the control and suppression of harmful algal
12 blooms," which we refer to as HABs. Do you see that?

13 WITNESS EARLE: Yes.

14 MR. KEELING: Who -- what is the membership --
15 who is a member of this MAST?

16 WITNESS EARLE: I don't know.

17 MR. KEELING: Would it include, to your
18 knowledge, groups that are affected by HABs other than
19 environmental groups such as the City of Stockton?

20 MR. MIZELL: Objection, asked and answered.

21 CO-HEARING OFFICER DODUC: Sustained.

22 MR. KEELING: You have no idea who's on that
23 MAST, do you?

24 WITNESS EARLE: I have seen it in the past,
25 but I've had no professional contact with MAST and

1 fisheries agencies. But the full membership, whether
2 the membership includes other parties such as the City
3 of Stockton, no, I cannot answer that question, either
4 affirmatively or negatively.

5 MR. KEELING: Is there another witness, to
6 your knowledge, who could answer that question?

7 WITNESS EARLE: It's likely that Dr. Greenwood
8 on Panel 2 could.

9 MR. KEELING: Would it surprise you to know
10 that my questions of Ms. Buchholz and Dr. Greenwood
11 were referred to you?

12 WITNESS EARLE: That's unfortunate.

13 MR. KEELING: It is very unfortunate.

14 Is there a mechanism in place, to your
15 knowledge, anywhere in the Adaptive Management Program
16 where by Delta stakeholders adversely affected by HABS
17 would have a role in decision making, of MAST decision
18 making, whether they're members or not?

19 WITNESS EARLE: Well, again, their
20 participation occurs in Phase 4 of the adaptive
21 management process where all applicable regulations and
22 laws have to be complied with before an adaptive
23 management recommendation can be implemented.

24 MR. KEELING: I'm not asking you about
25 regulations and laws.

1 WITNESS EARLE: That is where those concerns
2 are accommodated.

3 MR. KEELING: What if it's an adverse affect
4 that is not directly addressed by a regulation or law?
5 How does that affected entity have a voice in this?

6 WITNESS EARLE: That seems very speculative to
7 me. Virtually any concern of that kind could be
8 addressed through, for instance, a CEQA compliance
9 process.

10 MR. KEELING: Take a look --

11 Mr. Hunt, can we go to Page 28, the paragraph
12 label "Harmful Algal Blooms."

13 Dr. Earle, take a moment to read that
14 paragraph. And my question of you is does this concern
15 with harmful algal blooms involve a concern about
16 anything other than fish and aquatic species?

17 WITNESS EARLE: In the scope of the Adaptive
18 Management Program, harmful algal blooms would be
19 investigated with regard to their potential effects on
20 threatened and endangered species. It is not within
21 the scope of the Adaptive Management Program to
22 identify or study other potential effects of harmful
23 algal blooms.

24 MR. KEELING: So the adverse effects of
25 harmful algal blooms on human health and safety would

1 not be the subject of adaptive management?

2 WITNESS EARLE: They would not be the subject
3 of the Adaptive Management Program described here.

4 MR. KEELING: Would they be the subject of any
5 other adaptive management program?

6 WITNESS EARLE: None that I'm aware of.

7 MR. KEELING: Dr. Earle, thank you for your
8 patience. That concludes my questions.

9 CO-HEARING OFFICER DODUC: Thank you.

10 Before we get to Ms. Meserve's
11 cross-examination, let's take a short break. We will
12 return at 2:45.

13 (Recess taken)

14 CO-HEARING OFFICER DODUC: It is 2:45. Before
15 we turn to Ms. Meserve, a couple housekeeping items.
16 For representatives of Groups 4 and 5, we will not get
17 to your case in chief today. We will likely get to it
18 on Thursday, so we will see you then.

19 Mr. Mizell, I believe you had looked, now, at
20 the request made by Mr. Simmons, Mr. Emrick, and
21 Mr. O'Laughlin regarding the changes in the order of
22 their presentation of cases in chief.

23 MR. MIZELL: Yes, thank you. I did have a
24 chance to look at it, and it is the same change that I
25 had discussions with Mr. Hitchings, and counsel is

1 correct.

2 CO-HEARING OFFICER DODUC: All right. We will
3 so approve those changes.

4 And I appreciate the notice that we have been
5 playing fast and loose with the cross-examination
6 order. But it is more important, I believe, with
7 respect to the cases in chief to make sure that we
8 don't make last-minute changes in order for parties to
9 prepare for cross-examination.

10 So I see Ms. Suard. I am reminded that you
11 had raised a request that you submitted, I believe it
12 was previously, perhaps it was even during Part 1. We
13 are still trying to find that request and are still
14 considering it. So I don't have a ruling for it right
15 now, but you are not forgotten.

16 MS. SUARD: Thank you.

17 CO-HEARING OFFICER DODUC: And we did receive
18 your request for cross-examination, and you're on the
19 list.

20 MS. SUARD: Thank you.

21 CO-HEARING OFFICER DODUC: All right.

22 Ms. Des Jardins?

23 MS. DES JARDINS: I have a February 7th, 2018
24 motion to formally consider information. I believe
25 it's submitted in -- to meet Board regulations in the

1 hearing. And Ms. Suard joined in that. And it was
2 that --

3 CO-HEARING OFFICER DODUC: Is that the thing
4 that I just said we are still considering?

5 MS. DES JARDINS: Well, you said you were
6 looking for it, yeah.

7 CO-HEARING OFFICER DODUC: My counsel is not
8 here -- Ms. Des Jardins, my counsel is not here. He's
9 the one that is looking for it, so we'll just defer
10 that to him.

11 MS. DES JARDINS: Okay.

12 CO-HEARING OFFICER DODUC: All right.

13 Ms. Meserve, we are finally to you. We're
14 going to go ahead and just put 60 minutes on the clock
15 and ask you to proceed. And upon demonstrating good
16 cause, we'll provide you additional time as needed.

17 MS. MESERVE: Thank you. I'm pretty sure I
18 will need additional time, as I mentioned in my
19 estimate.

20 CROSS-EXAMINATION BY MS. MESERVE

21 MS. MESERVE: So I first have questions for
22 Mr. Bednarski. Those relate to construction operation
23 and the effects on recreation. And secondly, I -- some
24 of those might bleed over into Mr. Rischbieter. And
25 then I have questions for Dr. Earle regarding local

1 habitat, impacts on Stone Lakes mitigation, supposed
2 benefits of the WaterFix to wildlife and also fully
3 protected species.

4 CO-HEARING OFFICER DODUC: Thank you.

5 MS. MESERVE: Starting with Mr. Bednarski,
6 good afternoon.

7 So you are a Metropolitan employee working on
8 the design of the California WaterFix project; is that
9 correct?

10 WITNESS BEDNARSKI: That's correct, the
11 conceptual design.

12 MS. MESERVE: And what year did you begin
13 working on the CWF for BDCP, the prior version?

14 WITNESS BEDNARSKI: I would estimate about
15 2012.

16 MS. MESERVE: And you just mentioned that the
17 design was conceptual, but you understand that how the
18 project would actually operate is what's important for
19 this hearing, correct?

20 WITNESS BEDNARSKI: Yes, I have a general
21 knowledge of that.

22 MS. MESERVE: And you've been involved in
23 large infrastructure projects prior to this assignment?

24 WITNESS BEDNARSKI: I have been.

25 MS. MESERVE: And are you aware of some of the

1 challenges to local communities for this project, CWF,
2 caused some 14 years of construction?

3 WITNESS BEDNARSKI: I'm aware of the
4 challenges and the interest in the communities that
5 we'll be working next to and that people are very
6 interested in how we're going to mitigate some of these
7 construction issues, yes.

8 MS. MESERVE: So are you aware that those
9 issues would include access to farms, water supply,
10 access to schools, emergency services, that kind of
11 thing?

12 WITNESS BEDNARSKI: Yes, I am.

13 MS. MESERVE: And what is the current proposal
14 for how to address those kind of community impacts
15 issues?

16 MR. MIZELL: Objection.

17 CO-HEARING OFFICER DODUC: Mr. Mizell?

18 MR. MIZELL: Yes, I'd like to maybe refresh
19 our collective recollection that Mr. Bednarski's
20 appearing a second time, not in order to allow for
21 additional cross of topics that were properly before
22 the Board in Panel 1, but instead to address topics
23 that are now in Panel 3, mainly construction impacts
24 related to recreation.

25 To the extent that Ms. Meserve is asking

1 questions as to access to farmlands and other
2 properties, if we could tie them back to recreation,
3 I'm happy to not speak up. It's just I believe at this
4 point we are not operating under those assurances. It
5 seems to me the questions are going directly to impacts
6 to legal users of water, which was more part of
7 Part 1 -- I mean Panel 1, sorry.

8 CO-HEARING OFFICER DODUC: Ms. Meserve?

9 MS. MESERVE: These are questions that pertain
10 to the public interest at stake. With respect that we
11 are looking at in Part 2, Mr. Bednarski's testimony
12 touches on only three topics; however, he is the
13 engineer that we've been presented with to answer our
14 questions.

15 And the fact that the later order of the
16 Water Board divided Mr. Bednarski into two places I
17 don't think would any way limit the questioning as long
18 as it's relevant to Part 2.

19 I would point out that DWR had intended to put
20 Mr. Bednarski on Panel 3 anyway. I have the paper for
21 that, if you'd like it.

22 CO-HEARING OFFICER DODUC: Well, Ms. Meserve,
23 to what extent are these questions directed at the
24 recreational impacts, and to what extent -- let me
25 phrase it this way. To what extent can you frame your

1 public interest question in relation to the
2 recreational aspect?

3 MS. MESERVE: I guess what I'm saying,
4 certainly I can make them relate directly to
5 recreation. But I don't really think my question
6 should be limited to recreation. This is the engineer
7 that's been put forth, and there were quite a few
8 questions that were asked of Panel 2 that they didn't
9 have the answers to.

10 So this is the last panel we get. And I think
11 we should see if Mr. Bednarski has the answers, and if
12 he doesn't, we can move on.

13 CO-HEARING OFFICER DODUC: But to what extent
14 are you reopening the door of cross-examination for all
15 to follow, given that we did break up Mr. Bednarski's
16 testimony into Part 1 and Part 3? Just because you
17 weren't here and were on vacation, Ms. Meserve, when
18 Panel 1 was up, does not mean that you now get to
19 revisit all of that.

20 But to the extent that you can phrase your
21 question in light of the testimony that Mr. Bednarski
22 is presenting in Panel 3, then I would encourage you to
23 try to do so.

24 MS. MESERVE: I certainly will, but the cross
25 is not limited to the scope of direct. We've been --

1 the rulings have been quite clear on that. Sometimes
2 during cross, we've been held to a different rule. The
3 rule is that it needs to be --

4 CO-HEARING OFFICER DODUC: Yes, it needs to be
5 related to the testimony that is being presented.

6 MS. MESERVE: Relevant to Part 2 issues, I
7 believe, is what the ruling says.

8 CO-HEARING OFFICER DODUC: But it has to be
9 presented -- testimony that is being presented by that
10 witness. And for Mr. Bednarski, we made it difficult
11 on ourselves by splitting up his testimony. So right
12 now, his testimony for Part 3 is based on recreational
13 impacts is my understanding.

14 MS. MESERVE: I don't believe it is so
15 limited. In addition, I did attempt to ask operational
16 questions of Mr. Miller that he could not answer
17 regarding operation of the facilities. So I believe
18 it's well within the scope for me to ask those
19 questions of Mr. Bednarski to see if he can answer
20 them.

21 CO-HEARING OFFICER DODUC: Well, to the extent
22 that Mr. Bednarski can be helpful and this does not
23 take up a lot of time, I will take Mr. Mizell's
24 objection under consideration for now because I do
25 believe you are clever enough to phrase these questions

1 in terms of the testimony that he presented, which is
2 broad for this particular panel.

3 But for now, let's go ahead and proceed
4 because I think, Mr. Mizell, we may be wasting more
5 time arguing this than matters, especially when I see
6 others standing up to chime in.

7 Proceed, Ms. Meserve.

8 MS. MESERVE: Thank you.

9 MS. DES JARDINS: I would like to object to
10 not being recognized. Thank you.

11 CO-HEARING OFFICER DODUC: I wish it were that
12 easy.

13 Ms. Meserve.

14 MS. MESERVE: Okay. Let's see. I believe the
15 question, Mr. Bednarski, was what is the current
16 proposal for how to address the types of issues that we
17 mentioned in terms of access and water supply that may
18 arise during construction?

19 WITNESS BEDNARSKI: Did you want me to refer
20 to access as in traffic? And can you provide some
21 clarification on water supply? I'm not sure what
22 you're asking there.

23 MS. MESERVE: What I'm asking about, actually,
24 is what is the process for the community that is part
25 of this. So it doesn't have to be particular to one of

1 the examples, but for instance, have you heard of,
2 like, an ombudsman office to deal with issues?

3 WITNESS BEDNARSKI: Yes, I'm aware that,
4 during construction, we will have designated points of
5 contact for the local communities to contact into the
6 project team, probably located at each of the project
7 sites, with the construction managers and also through
8 the home office, that they can -- they can lodge issues
9 that they may be concerned with.

10 I don't know if that person or persons have
11 been termed ombudsmen, but I know that we do have those
12 positions identified.

13 MS. MESERVE: And where is this described?

14 WITNESS BEDNARSKI: That's a good question. I
15 don't recall off the top of my head, but I do recall
16 seeing that somewhere.

17 MS. MESERVE: You believe it's part of the
18 project materials, not just a practice?

19 WITNESS BEDNARSKI: As far as that specific
20 requirement, yes, I do believe it's part of the project
21 requirements. I don't recall specifically, though,
22 where it is.

23 MS. MESERVE: Perhaps if you do find that
24 reference later, you could provide it?

25 WITNESS BEDNARSKI: Okay.

1 MS. MESERVE: And if that process that you've
2 mentioned doesn't work, Metropolitan could be the
3 entity that the local community would need to interface
4 with under Tort Claims Act if that process doesn't
5 work; is that correct?

6 WITNESS BEDNARSKI: To the best of my
7 knowledge, Metropolitan will not be involved in the
8 day-to-day construction activities. Those will be
9 conducted through what is now being called the Joint
10 Powers Authority, the design and construction
11 authority. And that would be the point that the public
12 would contact through.

13 MS. MESERVE: If you could please show from
14 my -- the LAND folder for Mr. Bednarski, LAND-121.

15 This is a question on the design. And this
16 has to do with the -- whether -- the intakes for this
17 project do extend out into the river under the design;
18 is that correct?

19 You don't need the picture to -- I'm sorry. I
20 gave it to you on the thumb drive.

21 It's LAND-226. Thank you. If you scroll down
22 to the next page.

23 This is just a 404 permit application which is
24 part of a larger exhibit. And I just excerpted out --
25 the following page has a diagram. Is it possible to

1 scroll down to the picture? Oh, okay. It's Page 53
2 that I'm looking for then, thank you.

3 And this is just a question about design. In
4 order to maintain flood control capacity, given the
5 extension into the river, is it possible you would need
6 to move the opposite levee to the west in order to
7 maintain that capacity?

8 WITNESS BEDNARSKI: I don't believe that
9 moving the levee on the west side is part of the
10 project. In fact, I'm sure it's not.

11 MS. MESERVE: Do you know why the delineation
12 would show the wetlands on the far side of the river if
13 there wasn't going to be any disturbance? Just if you
14 know.

15 WITNESS BEDNARSKI: I -- let's see. Is this
16 Intake No. 3? Is this what we're referring to here?
17 I'm trying to orient myself here as to where we are.
18 That's the town of Hood there?

19 MS. MESERVE: That would be yes, 3.

20 WITNESS BEDNARSKI: So this is Intake No. 3?

21 MS. MESERVE: It's the same on all the
22 intakes. This was just an example.

23 WITNESS BEDNARSKI: Okay. And I'm sorry.
24 Could you repeat your question then?

25 MS. MESERVE: Oh, it's whether you know why

1 they would have, in the delineations, identified
2 wetlands or water across from the intakes if there
3 wasn't going to be disturbance over there.

4 MS. ANSLEY: Objection --

5 WITNESS BEDNARSKI: I --

6 MS. ANSLEY: Hold on a second, please.

7 Objection, I think this assumes facts not in
8 evidence, and it lacks foundation. We don't -- I'm not
9 sure that he prepared these figures and so he would
10 know why things were delineated. I'm not sure that --
11 he's already testified that it's not his understanding
12 that the levees on the far bank will be moved. So I'm
13 not sure the basis for asking him his understanding of
14 why wetlands would be delineated on this figure for the
15 404 permit.

16 CO-HEARING OFFICER DODUC: Ms. Meserve.

17 MS. MESERVE: Well, perhaps I could just ask
18 Mr. Bednarski.

19 Did you assist in the 404 application?

20 WITNESS BEDNARSKI: We provided some
21 engineering input such as the footprint of the project.
22 I guess you could -- that's probably it, bounded in
23 white there. I'm not familiar with what wetlands they
24 delineated when they submitted this information,
25 though.

1 MS. MESERVE: I can move on then. Thank you.

2 Now, regarding operation of the project,
3 the -- the conceptual engineering design you're working
4 on includes two 40-foot-diameter tunnels for a
5 nonpressurized delivery to an expanded Clifton Court
6 Forebay; is that correct?

7 WITNESS BEDNARSKI: Yes, generally speaking.

8 MS. MESERVE: And under the proposed project,
9 CWF, is it true that each tunnel would have the
10 capacity to convey 4500 cfs of water?

11 WITNESS BEDNARSKI: That's our current design,
12 yes.

13 MS. MESERVE: Could the tunnels as currently
14 proposed in the project convey possibly more than 4500
15 cfs?

16 WITNESS BEDNARSKI: I believe I responded to
17 this line of questioning in Part 1. And I responded at
18 that time no they cannot under current configuration

19 MS. MESERVE: Would it be possible to retrofit
20 the tunnels to a pressurized system, or is there any
21 other engineering process that you're aware of?

22 MS. ANSLEY: Any other engineering process to
23 do what? There is this compound question.

24 MS. MESERVE: I apologize.

25 Is there a process by which the tunnels, after

1 built, could be changed so that they can convey more
2 than 4500 cfs?

3 WITNESS BEDNARSKI: Not with our present
4 configuration, they cannot. And that's all I can
5 respond to is our present configuration that we have a
6 conceptual design on.

7 The facilities would be fixed, and they'll be
8 design around delivering 4500 cfs per tunnel. And that
9 will be it.

10 MS. MESERVE: And your current design is not
11 for a pressurized system; is that correct?

12 WITNESS BEDNARSKI: Well, the tunnels will be
13 under pressure. I think in previous testimony under
14 Part 1 we presented results of hydraulic modeling that
15 had been done to estimate leakage on the tunnels. So
16 there will be pressure in the tunnels, but they will be
17 flowing by gravity. Perhaps what's what you're
18 referring to. They won't be pumped -- water will not
19 be pumped into the tunnels. They will flow by gravity
20 from the Sacramento River down to the Clifton Court
21 pump station. But they will be under pressure, slight
22 pressure.

23 MS. MESERVE: And when you say "by gravity,"
24 that's modified by the fact that the pumps at Clifton
25 Court would be pumping from the south end; isn't that

1 correct?

2 WITNESS BEDNARSKI: I don't -- water will
3 be -- water will be flowing in the tunnels based on the
4 level in the Sacramento River. And that water will
5 then flow down to the Clifton Court Forebay. And
6 depending on the hydraulic conditions in the Sacramento
7 River and the water surface elevation in the Clifton
8 Court Forebay, it could flow by gravity all the way
9 into Clifton Court. And I think I presented that in
10 Part 1 also.

11 Under different conditions, though, we will
12 have to turn the pumps on and lift the water into
13 Clifton Court Forebay. And I also testified to that in
14 Part 1.

15 MS. MESERVE: During Panel 2, we asked
16 Mr. Miller about the realtime operation of the proposed
17 North Delta diversions. Are you familiar with the
18 realtime operational plan for the intakes from your
19 conceptual engineering work?

20 WITNESS BEDNARSKI: No, I'm not.

21 MS. MESERVE: Are you at all familiar with the
22 need to provide pulse flows, for instance, if it's
23 determined that salmon are present in the river system?

24 WITNESS BEDNARSKI: I've heard of that term,
25 but as far as our design of the WaterFix facilities, I

1 don't believe that has any -- makes any consequence to
2 our design.

3 MS. MESERVE: In order to provide the pulse
4 flows, which would mean reducing diversions, wouldn't
5 the intakes or some aspect of the project have to be
6 able to make a change?

7 WITNESS BEDNARSKI: If there's a reduced
8 diversion required during those pulse flow conditions,
9 we would be able to dial back the diversions at the
10 intakes and in a variety of different ways. We
11 provided a lot of flexibility in the system.

12 MS. MESERVE: Are there gates at the
13 diversions that can be closed off to prevent the
14 diversions from --

15 WITNESS BEDNARSKI: Yes, there are.

16 MS. MESERVE: And where are those located?

17 WITNESS BEDNARSKI: They're located inside on
18 the -- they'd be inside the screen area. And I believe
19 I prepared those in Part 1 testimony also, with some
20 drawings and schematics of the facilities. They're
21 behind the screen area. And there are a couple of flow
22 meters to work together to assure an even distribution
23 of flow across the screens, working in concert with a
24 series of adjustable levers that will be tuned to
25 assure that we don't have any hot spots.

1 And those will be our primary devices. And
2 those devices will work in concert with the pumps down
3 at Clifton Court to make sure that diversions from each
4 intake are regulated to be at the level they should be
5 at.

6 MS. MESERVE: If you don't know, it's all
7 right, but do you have a citation or any reference you
8 can give me for the ability to close off diversions
9 right at the screens?

10 WITNESS BEDNARSKI: Do you mean in the river
11 right at the screens? Because we're providing
12 isolation capabilities in these conduits that carry
13 water from the screens to the sedimentation basins.

14 We also have the ability to close off portions
15 of the screens in conjunction with those valves with
16 stop logs or drop gates so that we can isolate certain
17 portions of the intakes for maintenance purposes.

18 But we don't do our primary open/close control
19 at the screens themselves. It's behind the screens
20 with the series of gates or valves I mentioned.

21 MS. MESERVE: And that's within the intake
22 structure?

23 WITNESS BEDNARSKI: We call it within the
24 intake structure, correct.

25 MS. MESERVE: And do you use the gates at the

1 intermediate forebay to control the rate of water
2 coming into the intakes at all?

3 WITNESS BEDNARSKI: No, we don't. Those are
4 just open/close.

5 MS. MESERVE: And do you know how --

6 CO-HEARING OFFICER DODUC: If you're going to
7 continue the walk down memory lane of Part 1, could you
8 perhaps explain to me the relevance of your line of
9 questioning?

10 MS. MESERVE: Yes. The ability to operate the
11 diversions in what has been described as realtime is
12 certainly a Part 2 issue because there are fish issues,
13 obviously, for the most part, and if they need to be
14 able to operate the diversions that way.

15 So we had tried to -- like I mentioned, we had
16 asked Mr. Miller some of these questions, but I had to
17 stop asking him because he didn't know how the facility
18 would operate.

19 CO-HEARING OFFICER DODUC: That actually was a
20 good explanation. Thank you. You may proceed.

21 MS. MESERVE: I think it will go rather
22 quickly, so then we'll move on.

23 And do you know, Mr. Bednarski, if the
24 operator was told to reduce diversions, how long it
25 would take to carry out that change?

1 WITNESS BEDNARSKI: I don't recall off the top
2 of my head. I'd have to go back and review some of the
3 hydraulic modeling that we did for it. But it could be
4 on the order of, say, 30 minutes. That's speculative
5 on my part at this point, without referring to some
6 studies that we had done.

7 MS. MESERVE: Do you believe those studies are
8 a part of DWR's case in chief in some place?

9 WITNESS BEDNARSKI: I believe they were
10 included in our conceptual engineering report. I don't
11 have the citation for that, but that would have
12 included all of our hydraulic modeling that we did,
13 yes.

14 MS. MESERVE: And that's the 2015 Conceptual
15 Engineering Report. Is there a more recent version of
16 that?

17 WITNESS BEDNARSKI: No, there is not.

18 MS. MESERVE: Have there been any changes to
19 the project since that report was made public?

20 WITNESS BEDNARSKI: No.

21 MS. MESERVE: Are you aware of any reason that
22 the pumps would ever be -- it would ever be necessary
23 for them to go to zero diversions?

24 WITNESS BEDNARSKI: I guess, again, I'm
25 speculating that there would be a requirement that

1 North Delta diversions were not to be entertained at
2 that time, and they would go to zero.

3 Also when I mentioned those certain hydraulic
4 conditions, when we're able to flow by gravity, the
5 pumps would not be operated at that point in time. So
6 it really would be dictated by the operators of the
7 facility whether the pumps would be running or not and
8 depending on the conditions they were trying to
9 achieve.

10 MS. MESERVE: You believe they could be shut
11 down the zero within 30 minutes?

12 WITNESS BEDNARSKI: That's my recollection.
13 Again, like I mentioned, I'd be speculating. But, you
14 know, 30 minutes, thereabouts.

15 MS. MESERVE: Are you aware whether the --
16 whether the fish screens are operated to include
17 dynamic baffling?

18 WITNESS BEDNARSKI: I am not familiar with
19 that term. I mean, if you explained it, defined it for
20 me, then I can respond possibly.

21 MS. MESERVE: Yes. In DWR-219 on Page 8, the
22 fish facilities technical team requested that dynamic
23 baffling would be considered to automatically regulate
24 flow through discrete portions of the screen. And it
25 would allow water to be diverted from selected areas of

1 the screen, is my understanding, from dynamic baffling.

2 Yes, DWR-219.

3 Is dynamic baffling part of the project?

4 WITNESS BEDNARSKI: Yes, it is. The way that
5 we have coupled the screen bays with these gates and
6 flow meters that I mentioned earlier, they operate in
7 conjunction with each other -- say, I'll give an
8 example. Two of four bays of screens operate with two
9 sets of control valves and two flow meters. And those
10 are isolated from screen bays that are either upstream
11 or downstream of those sets.

12 So they're compartmentalized to that extent,
13 per this request of the fish technical team. And that
14 gives us the ability to kind of finely tune and
15 distribute the water to make sure that we don't get hot
16 spots. And on top of that -- and hot spots would be
17 where you get faster flows through the screen than what
18 we would be looking for, which would be 0.2 feet per
19 second to protect the Delta smelt.

20 And then additionally, on top of that, we have
21 a series of -- I believe at this point they're manually
22 operated -- louvers that will further help us fine tune
23 the flow dynamics into those sets of screen bays. And
24 that tuning is done, you know, usually once and set,
25 but it could be adjusted if there's discrepancies that

1 are noted.

2 MS. MESERVE: And you believe this is
3 described in the 2015 CER?

4 WITNESS BEDNARSKI: Yes, it is. Those
5 capabilities are in there.

6 MS. MESERVE: Okay. I'm going to move on to
7 recreation questions.

8 Does your testimony regarding navigation,
9 Mr. Bednarski, include recreational navigation?

10 WITNESS BEDNARSKI: Yes. We looked at
11 recreational navigation as far as our impacts to --
12 potential impacts to keeping the rivers or the channels
13 open while we are doing our construction. So, yes, we
14 did.

15 MS. MESERVE: And on Page 4, Lines 6 and 7 of
16 your testimony, DWR-1022, you say that recreational
17 boat passage volume is low at the North Delta
18 diversions. Can you define what you mean by "low"?

19 WITNESS BEDNARSKI: Perhaps a better person to
20 answer would be the additional person on my panel,
21 Mr. Rischbieter.

22 MS. MESERVE: Well, before we move to
23 Mr. Rischbieter, I'm wondering why did you say "low"?

24 WITNESS BEDNARSKI: I believe there were some
25 studies done originally that looked at both weekday and

1 weekend traffic, and the corridors along the Sacramento
2 River were not qualitatively heavily traveled, so we
3 characterized them, again, in a qualitative manner as
4 low traffic.

5 MS. MESERVE: Do you know where those studies
6 are located?

7 WITNESS BEDNARSKI: I would have to look back
8 at these two exhibits that I cite here.

9 MS. MESERVE: If we could go to -- I think you
10 cite to the Final EIR. We have LAND-225 with an
11 excerpt that I think would bring us there.

12 I guess while we wait for that exhibit,
13 LAND-225 which I gave on a thumb drive, Mr.
14 Rischbieter, are you aware of any studies, like, actual
15 surveys of recreational levels in the Delta near the
16 diversions that are proposed?

17 WITNESS RISCHBIETER: Yes. I actually have
18 read Mr. Bednarski's testimony, and I'm familiar with
19 that sentence in the Chapter 15 of the EIR/EIS.

20 MS. MESERVE: And what were the studies that
21 led to that use of that adjective?

22 WITNESS RISCHBIETER: We -- during the early
23 phases of the Bay Delta Conservation Plan development,
24 DWR and its consultants conducted a boat traffic study
25 at several sites along waterways in the Delta. I

1 believe -- I don't mean to contradict Mr. Bednarski,
2 but the data collected were quantitative at a number of
3 sites. And results were compartmentalized into high,
4 medium, and low traffic areas.

5 MS. MESERVE: Do you know where I could find
6 that analysis?

7 WITNESS RISCHBIETER: I believe -- the only
8 place I'm aware that it resides is in the
9 administrative record of the Bay Delta Conservation
10 Plan. It's a boat traffic study memorandum authored
11 by -- I believe our consultant was AECOM, and it was
12 addressed to the Department.

13 MS. MESERVE: If we could please look at
14 LAND-222, which is on the thumb drive.

15 Because I was curious, I had a law clerk go
16 count watercraft in a summer day in 2012. It's a good
17 assignment. So without -- I don't have the boat
18 traffic study by DWR, but I do have this little mini
19 study from a Saturday in August in 2012. And there
20 were approximately 123 people using 54 water
21 watercrafts at the Clarksburg Marina, which is across
22 from proposed Intake No. 2.

23 Did you considered 154 people and 54
24 watercrafts during that 9:00 to 3:00 period to be low?

25 MR. MIZELL: Objection, we're not --

1 CO-HEARING OFFICER DODUC: Mr. Mizell.

2 MR. MIZELL: Yes. At this point, the
3 witnesses are being asked to opine upon a survey that
4 was conducted by a law clerk. We're not sure what sort
5 of scientific rigor was used nor if he was even
6 qualified to take such a study. So maybe we could --

7 CO-HEARING OFFICER DODUC: Could have been a
8 she.

9 MR. MIZELL: Very well could have. I think I
10 was trying to be global in my use of pronoun.

11 So at this point, these witnesses aren't even
12 familiar with the methodology, let alone the data
13 itself.

14 CO-HEARING OFFICER DODUC: But I am curious as
15 to where Ms. Meserve is going to go with this. So with
16 those caveats in mind, Ms. Meserve, please proceed.

17 MS. MESERVE: I think I can -- yeah, I'm not
18 asking the witnesses to opine on the quality of the
19 data. I understand that it's just being put forth.

20 But if it was true on a Saturday in the summer
21 that there were 123 people in 54 watercrafts at the
22 Clarksburg Boat Launch gone by, would you think that
23 was low, starting with Mr. Bednarski?

24 CO-HEARING OFFICER DODUC: "Low," as --

25 MS. MESERVE: I wasn't able to get a

1 definition of "low" previously, so I don't really have
2 anything to go on. I apologize.

3 MS. ANSLEY: So obviously I have an objection,
4 calls for speculation. If she doesn't know what's a
5 bench line or a base mark, you know, I'm not sure that
6 they would. I also --

7 CO-HEARING OFFICER DODUC: Let's find out. Do
8 they know, would this be a low level? I mean, you are
9 here to partly help educate and inform us as well. So
10 to the extent that you do have that knowledge.

11 MS. ANSLEY: I'd also like to add that we're
12 not sure -- I mean, I'm not sure whether we're
13 looking -- if this is multiple counts of the same boat.
14 So I do have some issues. I suppose if we caveat it
15 up, I'll leave it at calls for speculation.

16 WITNESS RISCHBIETER: I didn't want to
17 interrupt. I know that the question was directed at
18 Mr. Bednarski, but in the absence of that, am I being
19 invited to respond?

20 CO-HEARING OFFICER DODUC: Attorneys, take
21 note of his helpfulness and his politeness, not jumping
22 in and interrupting.

23 Oh, please, Mr. Rischbieter, please continue.

24 WITNESS RISCHBIETER: I will say that the
25 quantifiable -- the study that DWR had conducted was

1 stratified in time. It was not a single day or single
2 weekend. It didn't look at only weekends or only
3 weekdays. It looked at kind of random cross-section of
4 the entire boating season.

5 I believe that the statement in the EIR/EIS
6 which is duplicating Mr. Bednarski's testimony refers
7 to an average amount of traffic. So there may be some
8 days when there would be this much traffic, maybe some
9 days there are more. There's a preponderance of days
10 that are less.

11 So if somebody could restate the question, I
12 think I had I can characterize the source of the word
13 "low."

14 MS. MESERVE: I'm not sure what the question
15 is that Mr. Rischbieter wants to answer.

16 Well, based on your discussion of the boating,
17 most boating in the river would probably be on weekends
18 more heavily than during the week, would that be true?

19 WITNESS RISCHBIETER: Generally, yes.

20 MS. MESERVE: And if there were 54 separate
21 watercraft on a weekend day, in your opinion, is that
22 low, medium, or high?

23 WITNESS RISCHBIETER: In the study that I
24 referred you to, I don't recall the cut-off or the
25 threshold of those criteria, so I can't answer that

1 definitively.

2 MS. MESERVE: Going back to Mr. Bednarski, on
3 Page 4, you discuss minor travel delays as the only
4 impact to navigation. You do identify, however, that
5 detours would be posted at marinas. What detours were
6 you thinking of there that would be used?

7 WITNESS BEDNARSKI: I think our goal here
8 would be to make sure that there was adequate
9 information out to the general public, disseminating
10 that through the marinas as one point to let them know
11 where construction activities were taking place, where
12 these speed zones had been erected, and where they
13 could expect to come upon construction sites so that,
14 if they chose to take another route to avoid those
15 areas, that would be a detour.

16 I'm not sure we would set up a detour like you
17 would see on a state highway or something like that,
18 but they would have the opportunity through this
19 information to understand where the work's taking place
20 and what the restrictions around that work might be so
21 they could choose to take another route in their boat
22 or recreational vehicle.

23 MS. MESERVE: Could we please show LAND-5,
24 which I'm only showing this because it's sort of a map
25 that shows the area of the North Delta diversions.

1 And my question is along the stretch of the
2 proposed North Delta diversions, is there a detour that
3 could be taken if someone wanted to reach, say,
4 Sacramento from -- coming up the Sacramento River from
5 the south there, say, down toward Walnut Grove?

6 WITNESS BEDNARSKI: I'm not going to hazard a
7 guess as to whether there would be a detour or not. As
8 I mentioned we would be posting information to make it
9 generally available to the public so that they could be
10 aware of that.

11 Again, we're not closing off any of these
12 waterways. So a strict detour like you might see in
13 road construction is not necessary. They would
14 probably need to abide by slower speed zones as they
15 passed by those construction sites. And those will be
16 determined, whether there are speed zones or not, once
17 construction and start getting our permits, with
18 entities like the Coast Guard and other entities that
19 would regulate that environment.

20 MS. MESERVE: And are you aware of where
21 Elk Slough is located, which is just north of the
22 northernmost tip of proposed Intake No. 2 at the top
23 there?

24 WITNESS BEDNARSKI: I'm not familiar with
25 Elk Slough.

1 MS. MESERVE: You're not familiar with the
2 fact that Elk Slough is closed at the top?

3 WITNESS BEDNARSKI: Again, I'm not aware of
4 Elk Slough.

5 MS. MESERVE: The Final EIR, Mr. Bednarski, as
6 we discussed, does talk about a lower quality
7 recreational experience the Delta. Why isn't that
8 disclosed in your testimony?

9 WITNESS BEDNARSKI: Maybe Mr. Rischbieter
10 could discuss your comment. I'm not aware of that
11 comment in the EIR.

12 MS. MESERVE: I have it excerpted at LAND-225.
13 It is Page 15 of 270 of the Final EIR. I'll move on.
14 I mixed up the page numbers.

15 That does, however, Mr. Bednarski, does there
16 appear to be a disconnect between your testimony about
17 the low level of impact and then the disclosure in the
18 Final EIR that it's a significant and unavoidable
19 impact? Can you explain that, on recreation?

20 MS. ANSLEY: I'm sorry. The witness already
21 answered that he's not aware of that statement in the
22 Final EIR. So asking him again to explain a
23 discrepancy that he's not maybe aware of -- maybe it
24 can be rephrased.

25 CO-HEARING OFFICER DODUC: Sustained, unless

1 you can rephrase, Ms. Meserve.

2 MS. MESERVE: I'm going to move on.

3 Mr. Bednarski, on barge trips discussed in
4 your testimony on Page 5, you mention that 9400 barge
5 trips would be a small increase relative to existing
6 running traffic.

7 Can you explain how you came up with the
8 analysis that it would be a small increase?

9 WITNESS BEDNARSKI: My recollection is that we
10 looked at the Delta as a whole with all of the
11 waterways combined and averaged out the number of barge
12 trips over that period of time. I believe it was the
13 5.5 years. And that, when taken as a total over the
14 entire Delta and not focused in one specific area, that
15 we judged that to be a low impact.

16 MS. MESERVE: Is there anywhere that the ratio
17 of the total barge trips to the proposed project barge
18 trips is disclosed so that we could see how you came up
19 with that?

20 WITNESS BEDNARSKI: I'm sorry. Could you ask
21 that question again?

22 MS. MESERVE: Is there anywhere in this EIR or
23 somewhere that describes what that relationship is
24 numerically that allowed you to come up with the
25 conclusion that it was a small increase?

1 WITNESS BEDNARSKI: I believe we have an
2 appendix in this EIR that addresses barge travel, but I
3 don't recall that it looks at the entire water-borne
4 traffic in the Delta and makes that comparison. So I
5 don't have anything to point to at this moment.

6 MS. MESERVE: But you don't have any
7 foundation for that statement that you can tell me
8 about?

9 WITNESS BEDNARSKI: Well, I think I would
10 refer back to the citation that I have here in my
11 testimony, if we can go to that, State Water Resources
12 Control Board 104.

13 MS. MESERVE: I have excerpted that out maybe
14 to save some time.

15 WITNESS BEDNARSKI: Okay.

16 MS. MESERVE: LAND-224, and that's just the
17 first page. But if you scroll down, I've got the barge
18 section there. And I looked to see where this might
19 come from.

20 WITNESS BEDNARSKI: This is looks like the
21 CER. Is that DWR-212, I think? I don't have that with
22 me.

23 MS. MESERVE: Yes, it is.

24 WITNESS BEDNARSKI: So that's a different
25 reference, I believe, than what he had here. Perhaps

1 we had referenced the EIR here.

2 MS. MESERVE: The Section 23.3?

3 WITNESS BEDNARSKI: My testimony.

4 MS. ANSLEY: I'm sorry. I'm confused. Are we
5 looking at SWRCB-104?

6 MS. MESERVE: No. This is the CER. He
7 mentioned the CER, so I went to that section.

8 If you'd like --

9 WITNESS BEDNARSKI: I mentioned SWRCB-104.

10 MR. MIZELL: That's correct. The citation for
11 his comment was the SWRCB-104, Section 3.2.10.9.

12 MS. MESERVE: 3-76 is the page number, so I
13 believe it's going to be 76 pages into that.

14 Is this what you were thinking of where the
15 quantitative analysis may be?

16 WITNESS BEDNARSKI: I believe so. Perhaps if
17 we scroll down. Can you go down a little further? I'm
18 not seeing it there.

19 No, I don't see that quantitative analysis
20 there.

21 MS. MESERVE: So there's no quantitative
22 analysis in the BA or the CER for the small relative --
23 small increase relative to existing marine traffic,
24 although that's what you cited?

25 We can move on.

1 MS. ANSLEY: If he's taking a moment to review
2 the document, you're welcome to ask him if he needs
3 another moment.

4 WITNESS BEDNARSKI: Can you back up on that?

5 Yeah, I don't see it in that citation there.

6 MS. MESERVE: Yeah, I would move to strike the
7 "small relative increase." I don't see it there.
8 We've looked at things he cited, and I don't think
9 there's any basis for it.

10 MS. ANSLEY: I will note that that sentence is
11 actually right there on the page.

12 WITNESS BEDNARSKI: It is.

13 MS. ANSLEY: And there's a reference to
14 another cite. It may be the cite you were pulling up
15 earlier. But disagree that there is no foundation for
16 his statement.

17 His statement references this section of the
18 Biological Assessment. Indeed this section reaches
19 that conclusion in the final bullet point on
20 Page 3-77, so it does not lack foundation.

21 CO-HEARING OFFICER DODUC: I see it. Motion
22 denied, Ms. Meserve.

23 MS. MESERVE: I'm sorry. But nowhere -- it
24 just repeats the same conclusion, I guess is the
25 problem I'm having with it. There's no analysis or

1 numbers in either of the documents we've looked at. So
2 I understand if I need to move on, but.

3 Okay. I would request, if the information
4 becomes available regarding the number of barges or the
5 number of recreational boating trips in the Delta, that
6 that be made available so that we could understand
7 these statements better.

8 MS. ANSLEY: And I will offer that this is the
9 sources that we have, and Ms. Meserve is welcome to
10 bringing a case in chief that disputes the conclusion
11 that this is a small number to the total number of
12 barge trips. So I think that --

13 CO-HEARING OFFICER DODUC: So noted.

14 MS. ANSLEY: Okay.

15 CO-HEARING OFFICER DODUC: Let's move on,
16 people.

17 MS. MESERVE: Okay. Moving on to Dr. Earle,
18 would you like to take a break before that?

19 CO-HEARING OFFICER DODUC: It's up to the
20 court reporter.

21 THE REPORTER: Just a short five minutes?

22 CO-HEARING OFFICER DODUC: A short five minutes it
23 is. 3:40.

24 (Recess taken)

25 CO-HEARING OFFICER DODUC: All right.

1 Everyone please have your seats. Thanks to the court
2 reporter, we all had a five-minute stretch, so we're
3 now back to Ms. Meserve.

4 MS. MESERVE: Thank you. So now turn to
5 Dr. Earle.

6 CO-HEARING OFFICER DODUC: And hold on,
7 Ms. Meserve, I anticipate you will have a lot of
8 questions for Dr. Earle with respect to adaptive
9 management. How much time do you anticipate needing?

10 MS. MESERVE: I believe I'm going to have
11 about an hour of questions, and they actually don't
12 really pertain to adaptive management.

13 CO-HEARING OFFICER DODUC: Okay. That should
14 be interesting.

15 MS. MESERVE: We can take a break on that
16 particular topic.

17 CO-HEARING OFFICER DODUC: Wasn't that what
18 his testimony was about? Never mind.

19 MS. MESERVE: There's a lot more to it.

20 CO-HEARING OFFICER DODUC: I was going to say
21 we won't get to any other cross-examiners today, but
22 having just heard that from you, we'll see. Your
23 cross-examination may be longer or shorter depending on
24 what you ask and what the objections are and what my
25 rulings might be. So proceed, Ms. Meserve.

1 MS. MESERVE: I would estimate about an hour
2 if that's helpful.

3 CO-HEARING OFFICER DODUC: Let's go ahead and
4 put an hour on this. And we'll see what comes of it.

5 MS. MESERVE: Okay. So Dr. Earle, you have a
6 strong background in geology and some in forest
7 ecology. What's your individual experience in
8 terrestrial and avian biology?

9 WITNESS EARLE: Well, as I mentioned, I've
10 been a consulting ecologist since about 1993. Most of
11 that time has involved work with threatened and
12 endangered species, of which a wide variety have been
13 included -- bald eagles, no longer listed; marbled
14 marlots; lots of different fish species; various
15 wildlife species; lynx; wolf; grizzly bear; woodland
16 caribou; fair diversity of bird species; use of habitat
17 by marine birds.

18 It's -- however, I'm not appearing here today
19 as an expert in avian species. I may remind you that
20 my primary responsibility in preparing the documents
21 that I've describe earlier in my testimony was to
22 oversee a number of staff, including species experts
23 covering, well, in total over 200 species that are
24 addressed in these documents. And I'm here to describe
25 the results of that work. So in particular, I'm an

1 expert on the avian impacts of the California
2 WaterFix.

3 MS. MESERVE: Since this experience was not in
4 your educational background, would you describe it as
5 on-the-job training that you've just listed?

6 WITNESS EARLE: Yes. You can actually learn a
7 fair bit about something by working in it for 25 years.

8 MS. ANSLEY: And I would object that she's not
9 substantiated what his studies in forest ecology
10 entailed. And I believe that he has two degrees in
11 biology, one of which is an advanced Ph.D., so.

12 CO-HEARING OFFICER DODUC: Thank you for that
13 testimony.

14 Ms. Meserve?

15 MS. ANSLEY: As an ecologist, I just had to
16 say that too.

17 CO-HEARING OFFICER DODUC: Next question,
18 please.

19 MS. MESERVE: Is any of your experience with
20 behavioral ecology, which would be -- I would define as
21 a response to disturbance and other environmental
22 inputs?

23 WITNESS EARLE: I wouldn't define it as
24 behavioral responses.

25 Yes, it's a common issue in evaluating impacts

1 of proposed actions on threatened and endangered
2 species. Often construction -- construction work
3 involves potential disturbance of these animals and
4 modification of essential life history behavior, such
5 as foraging, breeding, roosting things like that.

6 MS. MESERVE: And what is your direct
7 experience with the greater sandhill cranes?

8 WITNESS EARLE: Primarily two projects, one we
9 know about, California WaterFix.

10 The other was a proposed habitat conservation
11 plan for a large port development in the Vancouver
12 lowlands of Washington, which is also an important
13 over-wintering habitat for the greater sandhill crane,
14 probably second only to Sacramento Delta in importance.

15 And that involved evaluating potential effects
16 of displacing cranes from a substantial parcel of
17 habitat, about 500 acres that they were currently
18 using, as well as potential effects of exposing them to
19 increased noise, light, activity, and railroad traffic.

20 MS. MESERVE: Do you believe that is the same
21 subspecies that visits here in the Delta of the greater
22 sandhill crane that goes to the Washington area that
23 you were studying?

24 WITNESS EARLE: The greater sandhill crane is
25 a subspecies of the sandhill crane, as is the lesser.

1 And, yes, it's been reported as the same by an expert
2 named Gary Ivey, whom you may be acquainted with.

3 MS. MESERVE: I was searching for the word --
4 the population. But we'll get to that later.

5 WITNESS EARLE: It is a different population.

6 MS. MESERVE: Let's see. And what's your
7 direct experience with the white-tailed kite?

8 WITNESS EARLE: I have had none.

9 MS. MESERVE: And with the Swainson's hawk?

10 WITNESS EARLE: Swainson's hawk has been
11 limited to evaluations of impacts associated with a
12 variety of development projects in California. The
13 California WaterFix, the BDCP before that, and a couple
14 of segments of California High-Speed Rail that I've
15 been evaluating in the last few years.

16 MS. MESERVE: Can we please look at
17 Exhibit LAND-3, which is in the regular exhibit list.
18 And zoom out a little bit just so we can see.

19 This is just a figure that we prepared and is
20 part of the evidence that just shows sort of the layout
21 in relation to some of the other features of the area.

22 Have you seen this map before?

23 WITNESS EARLE: I don't recognize this
24 particular version of it.

25 MS. MESERVE: Can you see where Elk Grove is

1 on the east side of the refuge boundary that's in
2 green?

3 WITNESS EARLE: Yes.

4 MS. MESERVE: And do you see where the city of
5 Sacramento is coming in from the very top of the
6 figure?

7 WITNESS EARLE: I see a concentration of
8 urbanization up there that is probably associated with
9 Sacramento Metropolitan Area.

10 MS. MESERVE: Now, I heard you describe
11 yourself earlier as an ecologist. Is that the term you
12 would like to use for yourself?

13 WITNESS BEDNARSKI: Yes.

14 MS. MESERVE: As an ecologist who focuses on
15 conservation, do you see that -- or do you agree that
16 urbanization and urban disruption is generally bad for
17 wildlife?

18 MS. ANSLEY: Objection, relevance,
19 "urbanization"?

20 WITNESS EARLE: Certainly --

21 CO-HEARING OFFICER DODUC: Hold on. Hold on.

22 MS. MESERVE: I'm trying to get to some of the
23 specifics of the site of the project, and part of that
24 is the urbanization.

25 CO-HEARING OFFICER DODUC: Overruled.

1 WITNESS EARLE: I would agree that habitat
2 loss often associated with land use changes, including
3 urbanization, has been identified as a factor
4 contributing to the decline of many threatened and
5 endangered species currently listed in California and
6 in the world in general.

7 MS. MESERVE: So for just in general, for
8 wildlife within the Stone Lakes boundary shown here in
9 the green area, would the project on the west side in
10 combination with the urbanization on the east side tend
11 to be a concern from a wildlife perspective?

12 WITNESS EARLE: Yes, it is a concern from a
13 wildlife perspective.

14 MS. MESERVE: Could we look at Exhibit ECOS-8?
15 So that will be in the regular exhibit list as well.

16 Dr. Earle, do you -- ECOS-8.

17 Are you familiar with the variety of habitats
18 in western Sacramento County from your work?

19 WITNESS EARLE: Moderately familiar, yes.

20 MS. MESERVE: And these habitats would include
21 things like permanent and seasonal wetland, valley
22 grassland, mixed riparian woodland, agricultural
23 cropland and, farther up in blue, oak woodland? Does
24 that sound correct?

25 WITNESS EARLE: You were referring to natural

1 community types?

2 MS. MESERVE: Yes.

3 WITNESS EARLE: Yes, those are examples of
4 natural community types that are common in this portion
5 of California.

6 MS. MESERVE: And these habitats support a
7 wide variety of species?

8 WITNESS EARLE: Is that a question?

9 MS. MESERVE: Yes, sorry.

10 WITNESS EARLE: I would agree that they
11 support a wide variety of species.

12 MS. MESERVE: And that would include the
13 migrating waterfowl along the Pacific Flyway as well?

14 WITNESS EARLE: There are wetland, riverine,
15 and lacustrine habitats that are used by waterfowl
16 along the Pacific Flyway.

17 MS. MESERVE: And just taking a look at the
18 map, which is an essential connectivity areas map
19 created by Fish and Game -- Fish and Wildlife, rather,
20 California Department of Fish and Wildlife, do you have
21 any opinion about why the areas in this -- in the map
22 that include the Delta and the project area would be
23 good for migrating waterfowl?

24 WITNESS EARLE: I am not familiar with the
25 study that was used to produce this map. I would say

1 that this map appears to be the product of a model of
2 habitat connectivity. And the utility of such a model
3 and its applicability to the species we're discussing
4 here would depend a great deal on the details of the
5 model. I would need to review it before I could really
6 address that question.

7 MS. MESERVE: Do you -- from your knowledge of
8 the project area and your other experience in
9 Sacramento County, is this Sacramento River an
10 important corridor for wildlife movement?

11 WITNESS EARLE: For some wildlife it is likely
12 to be an important corridor. It's prominent. It's
13 easy to navigate by, contains foraging resources,
14 contains some areas of, for instance, riparian habitat.
15 It really depends upon what species you're looking at.
16 And I have not reviewed literature specifically
17 addressing the value of the Sacramento River as a
18 corridor for individual species addressed in the
19 California WaterFix environmental analyses.

20 I would note that general impacts of the
21 project on habitat connectivity and corridor value were
22 assessed, are discussed in the EIR/EIS, and it was
23 agreed by the wildlife agencies that the project does
24 not pose a substantial barrier to connectivity of any
25 of the terrestrial species.

1 MS. MESERVE: Do you know where that specific
2 finding was made?

3 WITNESS EARLE: I would -- we could pull up
4 the 4,000-page chapter that it appears in, but I do not
5 recall specifically which impact addresses
6 connectivity. Although the subject isn't mentioned
7 very often in the chapter, we could probably find it
8 fairly quickly.

9 MS. MESERVE: I don't recall myself a
10 discussion of connectivity. But I'll take your word
11 for it at this point.

12 And the project that's proposed being
13 discussed here today would remove 1.02 linear miles of
14 channel margin habitat. Does that sound correct, from
15 the ITP?

16 WITNESS EARLE: That's -- I would have to
17 check the precise number, but it's certainly in that
18 ballpark.

19 MS. MESERVE: And then there would be various
20 other disturbances that are discussed in the EIR and
21 elsewhere. Would these kinds of disturbances be -- or
22 disrupt wildlife in the region?

23 CO-HEARING OFFICER DODUC: Ms. Ansley.

24 MS. ANSLEY: Objection, vague and ambiguous as
25 to "various other disturbances discussed in the EIR and

1 elsewhere."

2 CO-HEARING OFFICER DODUC: Ms. Meserve, can
3 you be more specific?

4 MS. MESERVE: Certainly.

5 Would the removal of channel margin habitat
6 and other disturbances such as wetland fill,
7 construction, all the different things we've been
8 talking about, would that be -- would that disrupt
9 wildlife in the vicinity of the project?

10 MS. ANSLEY: And I'm going to renew an
11 objection. I'm fine with the beginning part of that
12 sentence. I'm not fine with an "all the other things
13 we've been talking about." I'd like to witness to
14 answer more specifically. I know that -- I don't
15 expect -- "a disturbance" necessarily by "disturbance,"
16 but I don't want it as open as "and all other things
17 we've been discussing."

18 CO-HEARING OFFICER DODUC: Well, we'll strike
19 that part from Ms. Meserve's question. Now we'll
20 probably have to repeat it for Dr. Earle.

21 WITNESS EARLE: It would help.

22 MS. MESERVE: Well, let's see. Well, just
23 looking at two examples of disturbances, such as the
24 removal of channel margin habitat and the fill of
25 wetlands and the construction impacts, would those

1 disturb wildlife?

2 WITNESS EARLE: The removal of channel margin
3 habitat, in this case, refers to the removal of a
4 hardened rip-rap bank along the eastern shore of the
5 Sacramento River that has very little riparian
6 vegetation and very few trees.

7 This impact would be mitigated someplace in
8 fairly close proximity to that impact by creation of
9 enhanced channel margin, which means not a rip-rap
10 shore, natural vegetation, full coverage of the area,
11 and provides, conservatively, much higher habitat value
12 relative to the impact that we're talking about.

13 And the mitigation would be provided in
14 advance of the impact. Wildlife potentially impacted
15 would have to move to the new site or, in any event,
16 there would have to be compensating use of the new site
17 by wildlife. And in that sense, technically, yes, a
18 disturbance would occur. But the net change is
19 beneficial from the point of view of the affected
20 wildlife.

21 MS. MESERVE: Would the beneficial impact
22 you're describing here, wouldn't that depend on the
23 success of the restoration effort?

24 WITNESS EARLE: Yes, and that's why the
25 restoration requirements that are specified in the

1 Mitigation, Monitoring, and Reporting Plan have
2 performance requirements.

3 MS. MESERVE: And in your experience with
4 other large projects, do you believe restoration has a
5 quantifiable success record?

6 WITNESS EARLE: Well, it certainly has a
7 quantifiable --

8 (Reporter interruption)

9 WITNESS EARLE: Sorry. Yes, my experience
10 with other restoration projects is that they do have a
11 quantifiable success record. These days, it is
12 standard for restoration projects to be monitored for
13 at least ten years after construction. And in this
14 case, the proposal is to monitor them indefinitely
15 until they achieve their performance standards and even
16 to continue that monitoring on in perpetuity. That is
17 the performance standard that's identified, for
18 instance, in the Incidental Take Permit that's been
19 issued for the project.

20 MS. MESERVE: And you mentioned the removal of
21 trees along the river. Those trees currently serve as
22 nesting habitat potentially for Swainson's hawk and
23 other birds, correct?

24 WITNESS EARLE: Some of those trees may be
25 used by Swainson's hawk habitat. The analysis in the

1 EIR and in the Incidental Take Permit application -- I
2 should mention that Swainson's hawk is only a special
3 status species under state law -- identifies a
4 potential loss of one or may be two Swainson's hawk
5 nest trees as a result of the entire California
6 WaterFix implementation. And there is a detailed
7 description of how that impact would be mitigated.

8 MS. MESERVE: You mentioned that Swainson's
9 hawk is only a special -- what did you call it? A
10 special concern?

11 WITNESS EARLE: A special status species under
12 California law. It's not protected under the Federal
13 Endangered Species Act, although it is protected under
14 the Migratory Bird Treaty Act.

15 MS. MESERVE: Now, if a species isn't listed,
16 would you think that means that a species is not a
17 public trust resource?

18 WITNESS EARLE: Not at all.

19 MS. MESERVE: Do you think all the wildlife in
20 the region would be a public trust resource regardless
21 of listing status?

22 WITNESS EARLE: Some of the wildlife in the
23 region is explicitly -- for instance, the Norway rat is
24 not a protected species. But in general, the native
25 wildlife of California is all a protected resource

1 under the jurisdiction of the California Department of
2 Fish and Wildlife.

3 MS. MESERVE: And when you did your analysis
4 for this testimony, did you consider the effect on all
5 terrestrial and aquatic resources regardless of listing
6 status?

7 WITNESS EARLE: Yes, the analysis presented in
8 the EIR/EIS collectively addresses all native flora and
9 fauna that are anticipated to occur in the project
10 vicinity.

11 MS. MESERVE: I'd like to talk a little bit
12 about a local conservation effort. It's called the
13 South Sacramento Habitat Conservation Plan. Are you
14 familiar with that process, Dr. Earle?

15 WITNESS EARLE: I'm moderately familiar with
16 that process.

17 MS. MESERVE: Do you know how long that
18 process has been going?

19 WITNESS EARLE: I believe it's currently at 24
20 years and counting.

21 MS. MESERVE: And do you know when they
22 believe they may be able to finish it?

23 WITNESS EARLE: They have recently gone to a
24 public draft. If we take other large habitat
25 conservation plans that have been negotiated in central

1 California in the last 15 years as a baseline, we might
2 hope that they're done within the next three or four
3 years.

4 MS. MESERVE: Are you familiar with the
5 preserve system that is part of the South Sacramento
6 Habitat Conservation Plan that would be 36,000 acres of
7 habitat?

8 WITNESS EARLE: I am not familiar with the
9 demarcation or definition of that preserve system.

10 MS. MESERVE: Are you familiar with the fact
11 that the development of the area within the South Sac
12 HCP is contingent upon being able to obtain 36,000
13 acres of mitigation land within that same plan area?

14 WITNESS EARLE: I have seen allegations of
15 that in testimony submitted by protestants, but I have
16 not reviewed the Draft HCP to determine whether that is
17 an accurate statement.

18 MS. MESERVE: If they were able to complete
19 the south Sac HCP, do you think that would be a
20 beneficial accomplishment in general as an ecologist.

21 MR. MIZELL: Objection, relevance. We're now
22 talking about the success of a plan that is unconnected
23 to California WaterFix, and we haven't seen any
24 demonstration that its success or failure has any
25 bearing on the success or failure of the California

1 WaterFix.

2 CO-HEARING OFFICER DODUC: Ms. Meserve.

3 MS. MESERVE: I'm glad he mentioned it.

4 I would like to see SOSC-3, and I think I
5 could show the relevance.

6 CO-HEARING OFFICER DODUC: All right.

7 MS. MESERVE: SOSC-3 is a figure that shows
8 Preserved Planning Unit 6 of the South Sac HCP. Oh,
9 that's are some pictures. One moment, please.

10 CO-HEARING OFFICER DODUC: Take your time.
11 We'd like to gaze on the photos.

12 MS. MESERVE: Okay. Sorry.

13 Oh, I'm sorry. It's ECOS-3. I apologize for
14 the delay.

15 CO-HEARING OFFICER DODUC: No apologies.
16 Beautiful photos. Thank you.

17 MS. MESERVE: You'll see more photos later
18 when we present our direct.

19 This is a Preserve Planning Unit 6 from the
20 South Sac HCP. Now can you see, Dr. Earle, how this
21 includes the part of the project area for the tunnels
22 project?

23 WITNESS EARLE: Yes.

24 MS. MESERVE: Now going back to my prior
25 question regarding the area of acreage required for the

1 South Sac HCP, isn't it true that the tunnels project
2 also has a substantial demand for mitigation acreage?

3 WITNESS EARLE: Well, first of all, the South
4 Sac HCP is a habitat conservation plan, and as such, it
5 has no mitigation provisions. It has a conservation
6 strategy which calls for the protection, restoration,
7 or creation of habitat for the covered species. And
8 I've not reviewed the details of that.

9 I might also note that the mitigation
10 requirements -- which actually, technically, for the
11 most part are not mitigation in the case of the
12 California WaterFix but are environmental commitments
13 that are expressed as part of the basic proposition of
14 the proposed action, therefore eliminating the need for
15 mitigation -- have not yet been cited and do not
16 necessarily occur within this same area.

17 MS. MESERVE: Earlier you mentioned that
18 the -- the location of the channel margin habitat
19 mitigation or environmental commitment, whichever you
20 would like to call it, would be in the vicinity. So
21 isn't it true that you're -- you're representing that
22 the mitigation would be close to the area of impact?

23 WITNESS EARLE: Well, okay. The channel
24 margin acreage that we're talking about here is on the
25 order of 50 acres. Yes, there has been some discussion

1 that that 40 or 50 acres would be sited very close to
2 the location where the impact is occurring.

3 For other species that command the great
4 majority of the total mitigation acreage being put
5 forth -- for instance, I believe for Swainson's hawk,
6 it's on the order of 3,500 acres of mitigation -- that
7 has not yet been sited.

8 Also, I would have to note that this project
9 used to be called the BDCP. And under the BDCP, much
10 larger acreages were proposed for inclusion as part of
11 the conservation strategy. At that time, we performed
12 an analysis that determined whether the needs of the
13 BDCP conservation strategy could be met in
14 consideration of the needs of other habitat
15 conservation plans and development the area, such as
16 the Yolo Habitat Conservation Plan and South Sacramento
17 Habitat Conservation Plan.

18 And that analysis concluded that mitigation
19 opportunities were more than sufficient to address the
20 needs of all these disparate plans.

21 MS. MESERVE: Do you have a citation for that?

22 WITNESS EARLE: It's a portion of Chapter 6 of
23 the BDCP. I don't remember exactly which subsection.

24 MS. MESERVE: Do you recall if local
25 conservation groups agreed with this conclusion?

1 WITNESS EARLE: I recall that we were engaged
2 in active dialog with representatives of several of
3 these habitat conservation plans, including the South
4 Sac HCP. At the time, I can't give you the details of
5 what they thought about them.

6 MS. MESERVE: It's quite possible that they
7 didn't agree with the conclusion in Chapter 6 of the
8 BDCP though, isn't it?

9 MS. ANSLEY: Objection, calls for speculation.
10 It's asked and answered.

11 CO-HEARING OFFICER DODUC: Sustained.

12 MS. MESERVE: Though would it be possible that
13 the mitigation requirements or other commitments of the
14 tunnels project could come into competition with the
15 mitigation or habitat conservation requirements of the
16 South Sacramento HCP, particularly in Planning Area 6?

17 MS. ANSLEY: Objection, I think we just ran
18 over this territory, and he answered that -- his
19 understanding that there was a much broader scale
20 through the BDCP to see if there would be a conflict.
21 And he has testified that it is his understanding that,
22 under those prior, much larger acres of restoration or
23 mitigation, that there was no conflict with plans such
24 as the South Sacramento HCP.

25 Is she asking the same question again?

1 CO-HEARING OFFICER DODUC: Ms. Meserve?

2 MS. MESERVE: No, I'm asking about the
3 currently proposed project and the mitigation and
4 environmental commitments that are part of that
5 proposal and whether they may conflict or make more
6 difficult implementation of the conservation planned
7 for 20-plus years by the South Sac HCP.

8 MS. ANSLEY: I'm going to say asked and
9 answered.

10 CO-HEARING OFFICER DODUC: I think we can
11 infer that the answer would be no because it's smaller,
12 but let's let Dr. Earle answer that directly.

13 WITNESS EARLE: Well, for the benefit -- I
14 will have to say that to answer that directly I would
15 have to speculate.

16 CO-HEARING OFFICER DODUC: Okay.

17 WITNESS EARLE: But for the benefit of the
18 Hearing Officers, I would like to note that mitigation
19 land is in fact a limited resource. For instance, part
20 of the mitigation that's being provided for the
21 California WaterFix is going to consist of
22 mitigation -- I believe it's for California red-legged
23 frog -- that's being purchased from the mitigation
24 bank. And the available acreage in mitigation banks
25 right now is so low that the price is something on the

1 order of a quarter of a million dollars an acre for
2 that mitigation. So certainly when there is limited
3 access to mitigation lands, prices may go up.

4 Now the analysis in the BDCP looked at the
5 availability of land and market prices for land in the
6 Sacramento area. Agricultural lands in this part of
7 the world come on the market fairly regularly, but at
8 any given time, only a minority of them are actually
9 for sale. So whether there would be price competition
10 between the two projects would depend a great deal on
11 the timing of the proposed acquisition of the
12 conservation lands.

13 MS. MESERVE: I'd now like to look at
14 Exhibit FSL-6, Friends of Stone Lakes 6, which is the
15 Comprehensive Conservation Plan for the Stone Lakes
16 Refuge.

17 And Dr. Earle, are you familiar at all with
18 the Comprehensive Conservation Plan?

19 WITNESS EARLE: I have not reviewed the plan
20 for Stone Lakes, but I have written these for a variety
21 of other national wildlife refuges, so I'm familiar
22 with their use in planning.

23 MS. MESERVE: You conclude on Page 21 of your
24 testimony that the mitigation and habitat improvements
25 under the tunnels project would reasonably protect

1 wildlife resources at Stone Lakes Refuge. What do you
2 mean by "reasonably protect" in that context?

3 WITNESS EARLE: Well, as I identified in my
4 testimony this morning, I interpret "reasonably
5 protect" on the basis of approval of the project by the
6 fish and wildlife agencies. And in this case, I'd
7 particularly note that the U.S. Fish and Wildlife
8 Service has found that the project would not jeopardize
9 any listed species occurring in that area, nor would it
10 adversely modify their designated critical habitat.

11 Innumerable impacts to species occupying Stone
12 Lakes Wildlife Refuge are evaluated in the EIR/EIS, and
13 there again, they are found to be either less than
14 significant or less than significant with mitigation.
15 No unavoidable adverse impacts to species in that area.
16 That is the basis of my conclusion.

17 MS. MESERVE: If we could look at Page 15 of
18 the conservation plan, it describes in the right-hand
19 column on Page 15 -- Page 15.

20 The purpose is to conserve fish and wildlife
21 that are listed, threatened or endangered.

22 I apologize. I should have highlighted this.
23 It's not coming out.

24 MS. ANSLEY: Which paragraph is it in?

25 MS. MESERVE: I have a wrong cite. Let me

1 just look for the words.

2 CO-HEARING OFFICER DODUC: Is there a phrase
3 for which Mr. Hunt can search?

4 MS. MESERVE: Yeah, "conserve fish or
5 wildlife." It's talking about the purpose of the
6 refuge. And let me just -- I think it's -- 1.8, sorry.

7 Would you agree just generally, then, that one
8 of the purposes of the refuge system in general, as
9 well as Stone Lakes, is to provide habitat for listed
10 and threatened species? Does that sound correct,
11 Dr. Earle?

12 WITNESS EARLE: It is correct to say that
13 comprehensive conservation plans for national wildlife
14 refuges often identify species-specific needs, and
15 those needs are often targeted to threatened and
16 endangered species. Many wildlife refuges have
17 programs specifically to benefit certain species.

18 MS. MESERVE: And wouldn't it make it more
19 difficult for the refuge to meet these goals if
20 roosting and foraging habitat would be lost as a result
21 of this project?

22 WITNESS EARLE: Yes, it likely would, which is
23 the main reason why the proposal is that there be no
24 such loss, that in fact mitigation be committed to that
25 not only compensates for any loss of such lands but

1 that it provides performance standards that guarantee
2 improvement in habitat quality.

3 MS. MESERVE: This would all be if the
4 mitigation and environmental commitments were
5 successfully implemented, correct?

6 WITNESS EARLE: Yes, the project is required
7 to meet the performance standards. That's why they're
8 called that. It's not optional.

9 MS. MESERVE: But as discussed previously,
10 this project relies heavily on adaptive management,
11 which in the past has not been successful; isn't that
12 correct?

13 WITNESS EARLE: This has not been identified
14 as an area where adaptive management is necessary.
15 Habitat enhancement and protection for a species like
16 Swainson's hawk, tricolored blackbird, even sandhill
17 crane, it has a long history of implementation, and
18 it's pretty clear what needs to be done.

19 The primary uncertainties that are identified
20 with regard to the Adaptive Management Plan actually
21 concern fish habitat and other aspects of aquatic
22 ecology in the Delta. There are very few that are
23 addressing terrestrial species.

24 MS. MESERVE: Focusing on the terrestrial
25 species, there would need to be 11,870 acres of

1 cultivated lands to be protected or restored under
2 Environmental Commitment 3; is that correct?

3 WITNESS EARLE: Maybe. If we could bring up
4 Environmental Commitment 3, that would help.

5 MS. MESERVE: Yeah, I put it into FSL-40 on
6 the thumb drive, if you would like to see that.

7 WITNESS EARLE: That is what it is stated in
8 the Final EIS.

9 I should note that I believe there were some
10 relatively small changes in these acreages that
11 occurred between the issuance of the Final EIS and the
12 issuances of the Incidental Take Permit and the Final
13 Biological Opinion. So the corresponding tables from
14 those may provide a somewhat different number.

15 MS. MESERVE: Thank you. And just thinking
16 about cultivated lands, we mean farmland by making that
17 statement; is that correct?

18 WITNESS EARLE: Generally speaking, yes,
19 farmland, orchards, vineyards.

20 MS. MESERVE: And in your opinion, farmland in
21 the Delta is it threatened by urbanization?

22 WITNESS EARLE: Although I did not participate
23 in the analysis of the effects on that resource, I
24 think it's widely regarded as being an issue, yes.

25 MS. MESERVE: Are you aware of the

1 restrictions on the Delta primary zone and secondary
2 zone against urbanization?

3 WITNESS EARLE: No, I'm not. As I indicated,
4 I did not participate in that analysis. In fact, you
5 could say I avoided it.

6 MS. MESERVE: So just to be clear, it's your
7 opinion that urbanization is a threat to Delta
8 farmland?

9 WITNESS EARLE: No. I said I've heard that
10 it's controversial. But it's not been part of my
11 duties for project to evaluate that question.

12 MS. MESERVE: What -- why are the agricultural
13 practices in this area useful to protect sandhill
14 cranes and other wildlife?

15 WITNESS EARLE: Well, I can answer the part of
16 that question that addresses sandhill cranes. Sandhill
17 cranes, particularly greater sandhill cranes -- well,
18 both greater and lesser forage quite a bit in cropland.
19 They forage in fallow lands, they forage in lands that
20 have waste grains still in the field, which aren't very
21 many these days unless it's left there intentionally;
22 and that's actually one of the features of mitigation.
23 And they forage for amphibians, insects, a variety of
24 things that may be found in those areas, sometimes for
25 fish.

1 So open croplands are very important to them.
2 They don't use orchards. They don't use vineyards.
3 For the most part, they don't use fields that are under
4 heavy cultivation. After all, they're here in the
5 wintertime.

6 But, yes, those are the core habitat for
7 foraging by sandhill cranes.

8 MS. MESERVE: Much of that habitat is provided
9 by sustained farmland in the Delta under no easement or
10 other restrictions; isn't that correct?

11 WITNESS EARLE: Much of it is.

12 MS. MESERVE: Could we look at Friends of
13 Stone Lakes 41, which is from the thumb drive as well?

14 Dr. Earle, you mentioned the ITP. And there's
15 an Attachment 3A to the ITP that is designed for the
16 purpose, I believe, of helping to implement some of the
17 environmental commitments that have to do with
18 conservation. Are you familiar with this attachment?

19 WITNESS EARLE: No, I've not reviewed it
20 closely.

21 MS. MESERVE: Speaking generally about -- back
22 to the acreage of cultivated lands in Environmental
23 Commitment 3, is it your understanding that the
24 placement of an easement would require the kinds of
25 crops to be grown that sandhill cranes would forage on?

1 WITNESS EARLE: That is my understanding.

2 MS. MESERVE: Are you aware that an easement
3 restricts uses?

4 WITNESS EARLE: That is the intent.

5 MS. MESERVE: Though looking back at the
6 checklist, there's no other requirements besides an
7 easement in that list that relate to land management
8 that you can see, are there?

9 MS. ANSLEY: Objection, he's already testified
10 that he's not familiar with this checklist. So I'm not
11 sure if she's asking him to confirm what he sees on the
12 page, or she's asking him to confirm there are no other
13 requirements. So if she wants to give him time to
14 review it, I'm not sure of the total frame of the
15 question. But I would say that he's already said he's
16 not familiar with this particular checklist.

17 CO-HEARING OFFICER DODUC: Ms. Meserve.

18 MS. MESERVE: Just to direct the question,
19 yes. I mean, it looks like on the checklist, there's
20 the fully executed conservation easement is up there.

21 CO-HEARING OFFICER DODUC: Where is it?

22 MS. MESERVE: Sounds like according -- it's
23 the first box.

24 CO-HEARING OFFICER DODUC: Oh, okay.

25 MS. MESERVE: It's tiny.

1 So are you familiar, Dr. Earle, with covenants
2 or other types of agreements that may be necessary in
3 conservation to obtain a certain outcome with respect
4 to land management?

5 WITNESS EARLE: I am not familiar with the
6 types of legal restrictions that may be placed upon a
7 parcel of land in order to achieve a desired outcome.

8 MS. MESERVE: So Dr. Earle, is it your opinion
9 that, if there was a conservation easement restricting
10 uses that that would result in the provision of the
11 kinds of crops being grown that you're saying the
12 cranes would like to forage on?

13 MS. ANSLEY: Objection, I think that's been
14 asked and answered. He said that he believes there
15 would be conservation easements that would limit the
16 amount -- the types of crops that would be grown on the
17 land to provide forage. So I would say asked and
18 answered.

19 CO-HEARING OFFICER DODUC: Ms. Meserve.

20 MS. MESERVE: It's an important question
21 regarding, really, the feasibility and the thoroughness
22 of the ITP, which Dr. Earle is saying is going to
23 result in a certain outcome. I just have -- I could do
24 one further question then.

25 CO-HEARING OFFICER DODUC: Do one further

1 question.

2 MS. MESERVE: Thank you.

3 Wouldn't it be possible under a conservation
4 easement that restricted, say, permanent crops from
5 being grown, that it would be compliant with that
6 easement for the land to be laid fallow?

7 CO-HEARING OFFICER DODUC: Do you even know
8 the answer, Dr. Earle?

9 WITNESS EARLE: For the benefit of the Hearing
10 Officers, now that I've observed it for a couple of
11 minutes, this appears to be a document that implements
12 one minor part of the mitigation lands provisions of
13 the Mitigation, Monitoring, and Reporting Plan,
14 particularly of Environmental Commitment 3 and other
15 environmental commitments that apply to natural
16 community types.

17 The actual specifications of what must be
18 provided, that is to say the performance standards for
19 lands that mitigate for impacts to sandhill cranes, for
20 instance, these are contained in the Mitigation,
21 Monitoring, and Reporting Plan; they're not contained
22 here. This is simply a form that is used to implement
23 one aspect of a mitigation plan. This is far from a
24 comprehensive presentation of mitigation requirements.

25 And as to the legal instruments used in real

1 estate to implement a mitigation plan, I am not
2 qualified or prepared to discuss those at this time.

3 MS. MESERVE: So is it true then, Dr. Earle,
4 that you don't know how the MMRP would force someone to
5 grow the crops that the sandhill cranes would like to
6 forage on?

7 WITNESS EARLE: I don't know precisely, no.
8 That is something that will have to be worked out and
9 potentially has a different solution depending upon the
10 land owner. The MMRP sets the performance standards.
11 How those are met may vary from one site to another.

12 And, no, I will not be responsible for
13 implementing that aspect of the mitigation.

14 MS. MESERVE: Do you know who will be
15 responsible for managing the cultivated lands under
16 EC-3?

17 WITNESS EARLE: I believe DWR will contract
18 with the provider of those services. And to the best
19 of my knowledge, that has not -- that process has not
20 yet begun.

21 MS. MESERVE: Lets move on to transmission
22 lines. So I'm looking at Page 9 of Dr. Earle's
23 testimony. And you're discussing the risks from power
24 lines. And you mentioned on Line 25 -- well, beginning
25 on Line 25, you talk about locating power lines in

1 low-risk zones and installing diverters.

2 Are those the means that you've mentioned to
3 try to reduce those risks?

4 WITNESS EARLE: Those are -- those are two of
5 the means that are discussed in my testimony. I think
6 you may be referring to a different page in the
7 testimony.

8 MS. MESERVE: I apologize. Moving on to the
9 question around the high- and low-risk collision zones
10 I have is how are those defined?

11 WITNESS EARLE: I don't recall the mechanism
12 that was used for that. My testimony cites the study.
13 It was an element of the BDCP, performed, therefore,
14 approximately seven years ago. But we can pull it up.
15 Exhibit SWRCB-102, Page 12-108 -- oh. Oh, wait.
16 That's not the study. My testimony does cite it,
17 though.

18 MS. MESERVE: And are you looking at the top
19 of Page 10, Dr. Earle?

20 WITNESS EARLE: Yes, that's it, SWRCB-5,
21 Appendix 5.J, Attachment 5J.C.

22 (Reporter interruption)

23 MS. MESERVE: Let's see. I think I might just
24 skip ahead for a second.

25 Let's look first at Friends of Stone Lakes 43,

1 which is on the thumb drive. And it shows the power
2 lines plan from the Final EIR. And this is from
3 SWRCB-102. I just took it out to make it shorter.

4 Does this look like the power line plan for
5 the project, Dr. Earle?

6 MS. ANSLEY: Can we scroll down to the bottom
7 real fast, because I assume that's where the headings
8 are. Yeah, thank you.

9 WITNESS EARLE: Don't leave the bottom yet.

10 MS. MESERVE: Oh, it's Figure 3-25?

11 WITNESS EARLE: I just wanted to see which of
12 the alignments correspond to Alternative 4A, which is
13 the one we're talking about here.

14 MS. MESERVE: It's going to be the yellow
15 dotted line.

16 WITNESS EARLE: Yes. And if you could scroll
17 back up to the top, please.

18 This appears to be an accurate representation
19 of the power lines as they were proposed in the Final
20 EIR/EIS. I should note that early this year, there was
21 completed an amendment to the EIR/EIS that resulted in
22 relocation of the -- of the northernmost power line
23 there and overall reduction in power line length of
24 approximately three miles.

25 MS. MESERVE: And did you help prepare the EIR

1 addendum?

2 WITNESS EARLE: No, I did not.

3 MS. MESERVE: Is the EIR part of DWR's case in
4 chief?

5 WITNESS EARLE: I do not know if DWR has
6 amended their case in chief to include that.

7 WITNESS BEDNARSKI: If I might interject, I
8 believe that that was done by the Sacramento Municipal
9 Utilities District as they were moving forward with
10 some other portions of the project related to the
11 WaterFix, in support of the WaterFix.

12 And then I might also note on this drawing
13 that the orange line to the far right is not part of
14 Alternative 4A, nor is the green line on the left side.
15 It's really primarily the orange line that goes up the
16 center of the alignment, just for clarification
17 purposes.

18 MS. MESERVE: Are you sure, Mr. Bednarski,
19 that the addendum was prepared by Sacramento Municipal
20 Utility District?

21 WITNESS BEDNARSKI: I don't believe we've done
22 an addenda to our EIR at this point. I believe SMUD is
23 doing their own environmental clearance for the
24 project, and that's my understanding.

25 MS. MESERVE: And, Mr. Bednarski, are you

1 aware of when this information would be provided to the
2 hearing?

3 WITNESS BEDNARSKI: I don't have personal
4 knowledge of it. I wasn't involved in the preparation
5 of it. I would have to look to some other resource of
6 DWR to provide that information.

7 MS. ANSLEY: Can I ask a point of
8 clarification? This is a Friends of -- Friends of
9 Stone Lakes -- this is excerpt is Friends of Stone
10 Lakes 41?

11 MS. MESERVE: For purposes of
12 cross-examination, it's from SWRCB-102, Chapter 3.

13 MS. ANSLEY: Okay. Can we look at the figure
14 number again?

15 MS. MESERVE: 3-25.

16 MS. ANSLEY: Thanks. And this is -- this is
17 just for cross-examination; has this been circulated to
18 the parties, this excerpt? That's all I want to know.

19 MS. MESERVE: No. Since it was part of the
20 EIR, I just put it on a thumb drive, since it was just
21 a picture.

22 MS. ANSLEY: Okay, thanks.

23 MS. MESERVE: Now, could we look at -- just to
24 try to clarify what the project is here for a moment.
25 If we could look at -- if we could go to the FSL-45,

1 which is an excerpt from Attachment 6 of the ITP.

2 What I'm trying to get to is the ITP. I
3 thought I had it in FSL-45, but let's go just to
4 SWRCB-107 which is the ITP, Attachment 6. And this is
5 the maps that go with the ITP. And it's going to be
6 Page 4.7-1. Are you in Attachment 6? I apologize.
7 Let me see.

8 Dr. Earle, do you think that the ITP has an
9 accurate description of the power line plan?

10 WITNESS EARLE: You mean would it include the
11 contents of the latest amendment?

12 MS. MESERVE: Right.

13 WITNESS EARLE: No, it would not.

14 MS. MESERVE: And could you refresh my
15 recollection, Dr. Earle? Where did you think the
16 low-risk -- low- and high-risk zones with respect to
17 the power lines, where that information is located that
18 you based your opinion on?

19 WITNESS EARLE: It was located in the BDCP,
20 which is Exhibit SWRCB-5, in Appendix 5.J, specifically
21 in Attachment 5J.C provides the assessment of risk to
22 birds. I'm not certain of this [indicating]...

23 MS. MESERVE: And if we could go to FSL-30, or
24 actually 29, that is just the report you're talking
25 about, so that we don't have to take them through the

1 entire -- 29.

2 WITNESS EARLE: I think it's FSL-30, actually.

3 MS. MESERVE: That's just going to be a table.

4 29 is the complete appendix.

5 So is this where the low- and high-risk

6 collision zones are defined?

7 WITNESS EARLE: Well, we'll have to visit

8 Attachment 5J.C, Collision Risk, 3.1 on the left there.

9 Can you scroll down and see if there's a
10 reference to a figure? Can you scroll back up? Thank
11 you.

12 Figure 2, wherever that's located.

13 CO-HEARING OFFICER DODUC: Can you search for
14 Figure 2?

15 MS. MESERVE: If we were to find the right
16 location in this document, Dr. Earle --

17 WITNESS EARLE: There it is. That's it.

18 CO-HEARING OFFICER DODUC: There we go.

19 MS. MESERVE: Does this reflect the power line
20 plan?

21 WITNESS EARLE: I beg your pardon?

22 MS. MESERVE: Sorry. Go ahead.

23 WITNESS EARLE: If we could scroll up and look
24 at the legend a little more closely. So I believe
25 that, when we started down this trail, you were asking

1 about high risks being areas where the risk index are
2 greater than one. So this map should be able to
3 identify those areas.

4 MR. MIZELL: Dr. Earle, I might also mention
5 that screen to your right is much clearer.

6 WITNESS EARLE: Okay.

7 CO-HEARING OFFICER DODUC: Do you want to
8 mover down?

9 WITNESS EARLE: We can see this area centered
10 around Clarksburg, and there's another large area south
11 of Walnut Grove.

12 MS. MESERVE: So there is collision risk in
13 the vicinity of the transmission lines that are
14 proposed for this project?

15 WITNESS EARLE: Oh, yes.

16 CO-HEARING OFFICER DODUC: And that
17 transmission line would be the yellow and brown
18 line -- lines? Okay.

19 MS. MESERVE: And, Madam Chair, I will need a
20 little more time.

21 WITNESS BEDNARSKI: Yes, it is. And in that
22 dark area below Walnut Grove, you can see that the
23 yellow line stops. That would be the terminus. You
24 can see it's discontinuous there. That's because any
25 power lines on Staten Island would be placed under

1 ground to avoid the sandhill crane rescue area. So
2 that's a mitigation effort that we undertook as part of
3 the project development.

4 CO-HEARING OFFICER DODUC: We do have a hard
5 stop at 5:00, so please try to wrap up between now and
6 then.

7 MS. MESERVE: I shall try.

8 CO-HEARING OFFICER DODUC: Yes.

9 MS. MESERVE: Mr. Bednarski, you're talking
10 about undergrounding at Staten Island. Where is that
11 described in the documents submitted here to the Water
12 Board?

13 WITNESS EARLE: Actually, that's described in
14 AMM-20, which is in the Mitigation, Monitoring, and
15 Reporting Plan. It's part of SWRCB-111.

16 MS. MESERVE: Isn't it true Dr. Earle, that it
17 discusses undergrounding as an option but does not
18 require it?

19 WITNESS EARLE: Well, if we could bring up
20 SWRCB-111.

21 We're looking for Page 4-32, which should be
22 around Page 275 or so.

23 CO-HEARING OFFICER DODUC: 275.

24 WITNESS EARLE: There we go.

25 CO-HEARING OFFICER DODUC: Nice.

1 WITNESS EARLE: Okay, so if you scroll down a
2 little bit to where it says "Bird Strike Hazard,"
3 you'll see where it says, "No take of greater sandhill
4 crane," and that it will be accomplished by one of or
5 any combination of the following.

6 And the second bullet there identifies
7 removal, relocation, or undergrounding of exist lines
8 and specifically reducing the lines in high-risk zones.
9 And somewhere it addresses -- well, because it
10 undergrounds existing lines in high-risk zones, that's
11 where the provision to protect Staten Island comes in.

12 It's true that technically that measure is not
13 required. Frankly, I don't see how we would meet the
14 performance standard without doing that. So it's
15 expected at this point that undergrounding will occur
16 on Staten Island in addition to a variety of the other
17 measures that are listed here.

18 MS. MESERVE: Are you aware of the report,
19 Dr. Earle, that DWR prepared some years ago regarding
20 how it would be unfeasible to underground power lines
21 at Staten Island in that location?

22 WITNESS EARLE: I'm not aware of that.

23 MS. MESERVE: From your knowledge of the power
24 line plan, do you know how many miles would be
25 permanent in power lines that are being proposed?

1 WITNESS EARLE: Mr. Bednarski?

2 WITNESS BEDNARSKI: I know coming up from
3 Tracy to Bouldin Island there's about 27 miles of new
4 line that would be installed. I think there's around
5 seven to nine miles in the northern half of the
6 project. Some of that will be utilizing existing pole
7 lines and stringing new power lines onto those existing
8 poles. So not all of that in the north will be new
9 power line construction per se.

10 We've made efforts to avoid the need to
11 install new power lines on Staten Island by moving our
12 major tunneling operations off of that island and being
13 able to utilize the exist power lines that are there
14 and I do believe we have made a commitment to
15 underground those existing above-ground power lines.

16 So I think there has been a change in the DWR
17 position from the time that you mentioned a number of
18 years ago. We've gone through an evolution of the
19 project, especially on Staten Island.

20 MS. MESERVE: And with respect to the existing
21 power lines using those corridors, would the number of
22 lines on one pole be increased from current conditions?
23 Says for instance, if there were two power lines at the
24 top of an existing pole, would you guys be increasing
25 the numbers of lines of the vertical part of the pole?

1 WITNESS BEDNARSKI: I'm not exactly sure what
2 the municipal utility district's plans are, whether
3 they're increasing the number of lines or whether
4 they're just replacing the existing with upgraded lines
5 that can serve the power needs of the project and then
6 installing transformers to step that power down in
7 different locations. I don't know the detail of that.
8 That's part of their project design.

9 WITNESS EARLE: Yeah, if I may add, I believe
10 that the Sacramento Municipal Utility District
11 amendment that we've referred to does include a
12 commitment to collocate lines to the extent possible.
13 So that is, they may have a 16-kilovolt line and a
14 12-kilivolt line running on the same poles, thereby
15 reducing the number of ground wires that a bird could
16 potentially interact with.

17 MS. MESERVE: And when you say "a temporary
18 power line," how many miles of temporary line do you
19 anticipate?

20 WITNESS BEDNARSKI: I believe all of the vast
21 majority of the lines in the north are permanent lines
22 with the exception of the ones that run to the
23 intermediate forebay area, where we'll have temporary
24 construction impacts from tunneling. Those areas of
25 lines will be removed.

1 Then in the south portion of the project
2 coming up from Tracy, we'll have a permanent line that
3 runs from the Tracy substation to the Clifton Court
4 pumping plant. So that will remain after construction.
5 But during construction, that line will be extended
6 from Clifton Court up to Bouldin Island. That will be
7 a temporary line that will removed at the completion of
8 construction.

9 MS. MESERVE: And when you say "temporary,"
10 can you give me a range of years that isn't too --

11 WITNESS BEDNARSKI: Seven to nine years ago
12 while tunneling is underway at those specific sites.

13 MS. MESERVE: And on Page 9, Dr. Earle, of
14 your testimony, you've mentioned -- on Line 3, you
15 mentioned that there would be no net increase in bird
16 collisions. What do you mean by "no net increase"?

17 WITNESS EARLE: The primary mechanism for
18 ensuring that is the use of bird flight diverters.
19 Bird flight diverters, based on studies done in the
20 Delta, have been shown to be approximately 60 percent
21 effective in avoiding bird collisions. So all new
22 lines will be fitted with those. That achieves a
23 60 percent reduction. There's a remaining 40 percent
24 that would be achieved by retrofitting a mileage of
25 existing lines sufficient to achieve the performance

1 standards.

2 MS. MESERVE: And what does the term "zero
3 take" mean to you under fully protected species
4 provisions?

5 WITNESS EARLE: My understanding is that the
6 intent is that there will be no greater sandhill cranes
7 injured or killed.

8 MS. MESERVE: If a power line bird diverter
9 was 60 percent effective, doesn't that mean that it
10 wouldn't be effective 40 percent of the time?

11 WITNESS EARLE: Logically, yes.

12 MS. MESERVE: Though in that event, then,
13 there would be take of that species at times on that
14 line even though it was marked?

15 WITNESS EARLE: My perspective, and I think
16 it's shared by the California Department of Fish and
17 Wildlife, is that if fewer sandhill cranes die with the
18 project than without the project then the standard is
19 met.

20 MS. MESERVE: Though in your view, even if a
21 species is fully protected, it would be possible to
22 take some species as long as you protected other
23 individual species?

24 CO-HEARING OFFICER DODUC: I don't believe
25 that's --

1 WITNESS EARLE: No, I disagree.

2 CO-HEARING OFFICER DODUC: Go ahead.

3 WITNESS EARLE: That's not my view

4 MS. MESERVE: Okay. What is your view?

5 WITNESS EARLE: My view is that, if fewer
6 sandhill cranes are killed with the project than
7 without the project, then the performance standard of
8 "no take of the fully protected species" is met.

9 MS. MESERVE: Yet under the scenario you've
10 described, some birds would be taken, correct?

11 MR. MIZELL: I'm going to object as asked and
12 answered. We've been over this twice now, and
13 Dr. Earle has --

14 CO-HEARING OFFICER DODUC: Looking at the net,
15 is my understanding.

16 WITNESS EARLE: Yes.

17 MS. MESERVE: And you believe, Dr. Earle, that
18 fully protected species allows a net calculation.

19 WITNESS EARLE: That is a question about
20 interpreting the Fish and Game Code. What I believe is
21 that the project as proposed would result in the death
22 of fewer sandhill cranes than the absence of the
23 project.

24 And by the way, I should mention I've been
25 talking about sandhill cranes, but may I remind you

1 that only about 15 percent of the sandhill cranes out
2 there are the fully protected species, the greater
3 sandhill crane, the other 85 percent being the lesser
4 sandhill cranes, which is also a protected species but
5 not a fully protected one.

6 Our calculations indicate that, in all
7 likelihood, no greater sandhill cranes would be killed.
8 There are a very small number of them out there, and a
9 lot of measures, as I've described, are being
10 implemented to minimize the risk that a sandhill crane
11 would collide with a power line. It's not just about
12 bird flight diverters. Things like putting lines
13 underground are also very influential.

14 So actually, we expect that a very small
15 number of any kind of sandhill crane would be killed
16 and that no greater sandhill cranes would be.

17 MS. MESERVE: But the Incidental Take Permit,
18 SWRCB-107, does not permit any take of fully protected
19 species, does it?

20 WITNESS EARLE: Again, this is a legal
21 question. But for your benefit, I will let you know
22 that California Department of Fish and Wildlife
23 representatives, including Carl Wilcox, have informed
24 me that the California Endangered Species Act is
25 irrelevant to the Fish and Game Code applying to fully

1 protected species, that actually they exercise their
2 responsibilities relative to fully protected species
3 through the CEQA process.

4 MS. MESERVE: Okay. A new one.

5 Okay. Let's talk a little bit about the crane
6 habitat. When -- on -- in your testimony regarding
7 greater sandhill crane, how do you think they respond
8 to temporary impacts to roosting sites?

9 WITNESS EARLE: There's mixed literature on
10 this. In the analysis presented in the EIR/EIS, we
11 take the conservative perspective that disturbance by
12 light, noise, or human activity of the roosting site is
13 likely to cause flushing by the birds, which has
14 adverse life history consequences and may even cause
15 abandonment of the roost sites, which is why numerous
16 mitigation measures are imposed to ensure that this
17 outcome does not occur.

18 MS. MESERVE: And with respect to providing
19 replacement roosting or foraging habitat, do you have
20 any basis for the claim that the birds would just move
21 to the new areas provided?

22 WITNESS EARLE: This is an area where there
23 was active discussion between the wildlife agencies and
24 the consulting biologists and the representatives of
25 interested groups during the BDCP process. We

1 collaborated with the Friends of Stone Lakes National
2 Wildlife Refuge on this.

3 And the solution that was reached was that
4 additional roosting habitat would be created a year
5 prior to the impact by flooding. And during that year,
6 both sites of presumably suitable roosting habitat
7 would be maintained for use by the cranes. And then in
8 the following year, the year that the impact actually
9 occurred, the first site, the site that was at risk of
10 disturbance, would be dewatered so that it would not be
11 suitable for the cranes anymore, and hopefully they
12 would instead visit the site that had been created the
13 previous year.

14 That is the proposed mitigation, and it's been
15 mitigation that's been approved by the Fish and
16 Wildlife Agencies.

17 MS. MESERVE: Is there mitigation for cranes
18 in the ITP?

19 WITNESS EARLE: No. The mitigation for cranes
20 appears the CEQA document.

21 MS. MESERVE: And is there any study or other
22 scientific literature you can point to regarding the
23 ability to provide replacement habitat?

24 WITNESS EARLE: As I mentioned, this was the
25 solution that was reached through discussion with the

1 interest groups. It -- at the time, there was -- there
2 was no research available that provided a high
3 confidence conclusion there.

4 MS. MESERVE: Do you recall Mr. Worth
5 participating in those conversations? He has submitted
6 testimony here in Part 2.

7 WITNESS EARLE: I do not recall it.

8 MS. MESERVE: Have you heard that mitigation
9 ever been described as experimental?

10 WITNESS EARLE: No, I have not. DONE!

11 MS. MESERVE: Madam Chair, I'm not going to be
12 able to finish today. I don't have very many more
13 questions, and I think I could do it in 20 minutes.

14 CO-HEARING OFFICER DODUC: Well, you have
15 already used up the 120 minutes you asked for
16 previously. What additional lines of questioning do
17 you have for Dr. Earle?

18 MS. MESERVE: I have some specific questions
19 around riparian vegetation effects, also regarding the
20 effectiveness of bird diverters, and a couple of
21 questions about habitat modification.

22 I think I can consolidate them to not take
23 much of your time tomorrow, but I do need a little bit
24 more time.

25 CO-HEARING OFFICER DODUC: 15 minutes.

1 MS. MESERVE: I'll do my best.

2 CO-HEARING OFFICER DODUC: I would also
3 suggest, since you have other cross-examiners come up
4 behind you, you might also want to coordinate with them
5 to the extent they might be covering similar lines of
6 questioning.

7 MS. MESERVE: I have done that, and I shall do
8 that again.

9 CO-HEARING OFFICER DODUC: All right. We will
10 check in with you in the morning. And in the meantime,
11 we are adjourned until Thursday. Yes. We won't see
12 you until Thursday at 9:30.

13 (Whereupon, the proceedings recessed
14 at 5:00 p.m.)

15

16

17

18

19

20

21

22

23

24

25

1 STATE OF CALIFORNIA)
)
 2 COUNTY OF MARIN) ss.

3 I, DEBORAH FUQUA, a Certified Shorthand
 4 Reporter of the State of California, do hereby certify
 5 that the foregoing proceedings were reported by me, a
 6 disinterested person, and thereafter transcribed under
 7 my direction into typewriting and which typewriting is
 8 a true and correct transcription of said proceedings.

9 I further certify that I am not of counsel or
 10 attorney for either or any of the parties in the
 11 foregoing proceeding and caption named, nor in any way
 12 interested in the outcome of the cause named in said
 13 caption.

14 Dated the 25th day of March, 2018.

15

16

17 DEBORAH FUQUA

18 CSR NO. 12948

19

20

21

22

23

24

25