BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA WATERFIX WATER RIGHT CHANGE PETITION HEARING	)))

JOE SERNA, JR. BUILDING

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

BYRON SHER AUDITORIUM

1001 I STREET

SECOND FLOOR

SACRAMENTO, CALIFORNIA

PART 1A

Tuesday, August 9, 2016

9:00 A.M.

Volume 7

Pages 1 - 286

Reported By: Candace Yount, CSR No. 2737, RMR, CCRR
Certified Realtime Reporter

Computerized Transcription By Eclipse

California Reporting, LLC - (510) 224-4476
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Division of Water Rights

Board Members Present:

Tam Doduc, Co-Hearing Officer
Felicia Marcus, Chair & Co-Hearing Officer

Staff Present:

Diane Riddle, Environmental Program Manager
Dana Heinrich, Senior Staff Attorney
Kyle Ochenduszko, Senior Water Resources Control Engineer

PART I

For Petitioners:

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Thomas M. Berliner

INTERESTED PARTIES:

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

Michael Brodsky

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

Michael B. Jackson

Restore the Delta:

Barbara Barrigan-Parilla

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INTERESTED PARTIES (Continued):

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Jonas Minton

For California Water Research:

Deirdre Des Jardins

Sacramento Valley Water Users:

David Aladjem

Pacific Coast Federation of Fishermen's Associations and Institute for Fisheries Resources:

M. Benjamin Eichenberg

North Delta C.A.R.E.S.:

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Clifton Court, L.P.:

Suzanne Womack

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Tuesday, August 9, 2016 9:00 a.m.

PROCEEDINGS

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CO-HEARING OFFICER DODUC: (Banging gavel.)

Good morning, everyone. It's 9 o'clock so we're ready to resume.

Welcome back to the California WaterFix petition hearing. I am State Water Board Member and Hearing Officer Tam Doduc.

To my right is Board Chair and Co-Hearing Officer Felicia Marcus. We are expecting Board member Dee Dee D'Adamo to join us shortly.

To my left are Senior Staff Attorney Dana Heinrich, Environmental Program Manager Diane Riddle, and Senior Water Resources Control Engineer Kyle Ochenduszko.

We also have other staff here to assist us today.

First, the usual general announcements:

Please take a moment to look around and identify the exits closest to you. Should an alarm sound, we will evacuate the room immediately.

Please take the stairs and not the elevators down to the first floor and exit to the relocation site across the street in the park. If you cannot use stairs, you'll be directed to a protected vestibule inside a

stairwell.

This hearing is being Webcasted and recorded. Please speak clearly into the microphone when you provide your comments today and begin by stating your name and affiliation.

A court reporter is present and will prepare a transcript of this entire hearing. The transcript will be posted on our website as soon as possible after the completion of Part IA. If you would like to receive the transcript sooner, please make arrangements with the court reporting service.

I'll get to my favorite part of the general announcement.

Please take a moment to turn off or mute your cellphones or any other noise-making devices. Even if you think it's already off or muted, please take a moment to double-check, as I am doing right now.

Thank you.

Before we resume with cross-examination of Petitioners' second panel, I would like to put Petitioners on notice that Hearing Officer Marcus and I may request that some or all of your witnesses return for further questioning by us and our staff after all five panels have presented their direct testimony and been subject to cross-examination.

If we ask a witness to return, we do not propose to submit the witness to additional cross-examination by the other parties.

Hopefully, it will not be necessary to ask any of your witnesses to return, but for scheduling purposes, I wanted to notify you of that possibility now.

All right. With that, we will resume cross-examination of Panel 2.

Welcome back.

(Witnesses previously sworn.)

JOHN BEDNARSKI, GWEN BUCHHOLZ and SERGIO VALLES called as witnesses for the Petitioners, having been previously duly sworn, were examined and testified further as follows:

CO-HEARING OFFICER DODUC: First up will be Group Number 25, Solano County, Contra Costa County and Contra Costa County Water Agency.

Good morning.

MR. SIPTROTH: Good morning. I'm Stephen Siptroth, Deputy County Counsel for Contra Costa County.

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

MR. SIPTROTH: I'm sorry. There we are.

I'm Stephen Siptroth, Deputy County Counsel for

Contra Costa County, and I'm hearing representing Contra Costa County and Contra Costa County Water Agency.

It's my understanding, though we are grouped with Solano County, Solano County will not have a representative here today.

Good morning, Hearing Officers and staff, and good morning panelists.

CO-HEARING OFFICER DODUC: I'm sorry. Before you begin, could I have your name again?

MR. SIPTROTH: Yes. My name is Stephen Siptroth, and it's Stephen with a P-H.

For the court reporter, the last name is spelled S as in Sam-I-P as in Paul-T as in Tom-R-O-T as in Tom-H. I believe I'm listed as the attorney on list to appear.

CO-HEARING OFFICER DODUC: We'll have to update at least my list here. Thank you.

MR. SIPTROTH: Thank you.

CROSS-EXAMINATION BY

MR. SIPTROTH: I'm going to be referring to Exhibit DWR-2 errata.

I'm wonder if you could kindly display that on the overhead.

MR. BAKER: Could you repeat that?

MR. SIPTROTH: DWR-2 errata.

If you could bring that up, it provides a nice visual.

(Document displayed on screen.)

MR. SIPTROTH: Good morning, Mr. Bednarski.

WITNESS BEDNARSKI: Good morning.

MR. SIPTROTH: Did I pronounce your name correctly?

WITNESS BEDNARSKI: You did. Good job.

MR. SIPTROTH: I have questions about the design of various Project components that are depicted on Page 11 of DWR-2 errata.

First, on Page 8 of your testimony, you state that "The major engineering design criteria reflecting management decisions and that guided the conceptual design" included a number of different things which you outlined in your testimony.

This -- The current project is -- is a successor of an earlier project called the Bay-Delta Conservation Plan. Now we're -- This is now California WaterFix.

At any point in time, were you asked to design either BDCP or California WaterFix to be able to deliver up to 15,000 cfs to the north Clifton Court Forebay?

MR. MIZELL: Objection: Compound question. If he could break the two up.

MR. SIPTROTH: At any time, were you asked to design California WaterFix -- the California WaterFix Project to be able to deliver up to 15,000 cfs to the north Clifton Court Forebay?

WITNESS BEDNARSKI: No, we were not.

MR. SIPTROTH: So, for the current project called California WaterFix, you were asked to design the Project to deliver up to 9,000 cfs to the North Clifton Court Forebay; is that correct?

WITNESS BEDNARSKI: That's correct.

MR. SIPTROTH: And at what time was that design criterion communicated to you, approximately? Give me the year.

WITNESS BEDNARSKI: It was after the Administrative Draft was circulated. I think I have that on one of my slides.

If we could go back a few panels, we'd have the approximate date on there.

Keep going up. Right on that panel there. One more up.

(Document displayed on screen.)

WITNESS BEDNARSKI: So after the Administrative Draft in 2012, we received comments on the 15,000 cfs BDCP Project at that point in time and we were -- From those comments, I guess a decision was made to downsize

the Project to 9,000 cfs.

MR. SIPTROTH: Okay. And I apologize if this gets into testimony that you've already given.

But when you refer to "management decisions," who are you referring to when you say "management"?

WITNESS BEDNARSKI: I would have taken direction from Chuck Gardner, who was Program Director at the time.

MR. SIPTROTH: Okay. Thank you.

So going back to slide 11 of the exhibit.

(Document displayed on screen.)

MR. SIPTROTH: Slide 11 shows three on-bank intakes. And for this Project, each of the three on-bank intakes is designed to divert an maximum 3,000 cfs from the Sacramento River; is that correct?

WITNESS BEDNARSKI: That's correct.

MR. SIPTROTH: And that was a criterion reflecting management decisions; is that correct?

WITNESS BEDNARSKI: I'm not sure that I would call it management decision. It was a collective decision and recommendation coming from the Fish Facilities' Technical Team to the Project.

MR. SIPTROTH: Okay. The -- Okay. The recommendation coming from the -- What was the recommendation that came from the Fish Technical Team?

WITNESS BEDNARSKI: Well, there was -- There was more than just the size of the facilities. I mean, there was an entire technical memorandum that was written, and I believe that was in our documents that we've submitted.

MR. SIPTROTH: And the size of the facilities?

WITNESS BEDNARSKI: Was identified in that document.

MR. SIPTROTH: Very well. Thank you.

And which exhibit? Do you recall the name of the document or the --

WITNESS VALLES: It's actually in the presentation in terms of the criteria that we were asked to use.

Go up.

(Document displayed on screen.)

WITNESS VALLES: Oh, I'm sorry. It's the one you Number 12, it looks like.

That's the -- That's the criteria but it was based on Exhibit 219.

MR. SIPTROTH: Thank you.

So going back to slide 11.

(Document displayed on screen.)

MR. SIPTROTH: For this Project, is each of the three sedimentation channels designed to accommodate a

maximum diversions of 3,000 cfs?

WITNESS BEDNARSKI: That's correct.

MR. SIPTROTH: For the North Tunnels, are the North Tunnels collectively designed to convey more than 9,000 cfs?

WITNESS BEDNARSKI: No, they are not.

MR. SIPTROTH: Is 9,000 cfs the maximum conveyance capacity of the North Tunnels as currently designed?

WITNESS BEDNARSKI: Yes, it is.

MR. SIPTROTH: I noticed on the diagram, it appears that the 28 intake -- the top -- one of the 28-inch-diameter tunnels feed -- may feed into a 40-inch-diameter tunnel.

Does that represent -- I mean, is that correct, to say that a 28-inch tunnel feeds into the 40-inch tunnel?

WITNESS BEDNARSKI: Yes, a 28-foot tunnel feeding into a 40 diameter, that's correct.

MR. SIPTROTH: For this -- For this Project, is the Intermediate Forebay designed to receive more than 9,000 cfs?

WITNESS BEDNARSKI: No, it is not.

MR. SIPTROTH: Is 9,000 cfs the maximum amount of water that the Intermediate Forebay is designed to

receive?

WITNESS BEDNARSKI: Yes, it is.

MR. SIPTROTH: For this Project, does the design criteria reflecting management decisions include Main Dual Tunnels' conveyance capacity of up to 15,000 cfs?

WITNESS BEDNARSKI: I'm sorry. Could you repeat the question?

MR. SIPTROTH: Yes. For this Project, did the design criteria reflecting management decisions include Main Dual Tunnels' conveyance capacity of up to 15,000 cfs?

WITNESS BEDNARSKI: Or the -- When you refer to "this Project," the California WaterFix?

MR. SIPTROTH: Yes.

WITNESS BEDNARSKI: Then the management decision was for 9,000 cfs.

MR. SIPTROTH: What is the maximum conveyance capacity in cubic feet per second of each of the 40-foot diameter Dual Main Tunnels?

WITNESS BEDNARSKI: As part of the presently-configured California WaterFix, the capacity is 9,000 cfs --

MR. SIPTROTH: Each.

WITNESS BEDNARSKI: -- between both tunnels

split equally.

MR. SIPTROTH: For this Project, did the design criteria for the combined dual pumping plant include the ability to pump a maximum of 9,000 cfs?

WITNESS BEDNARSKI: For the California WaterFix as presently configured, yes.

MR. SIPTROTH: Going back to the Main Dual Tunnels.

Could the Main Dual Tunnels be designed to be smaller in diameter and still be able to convey up to 9,000 cfs to the North Clifton Court Forebay by gravity flow?

WITNESS BEDNARSKI: No, they could not.

MR. SIPTROTH: Assuming the California WaterFix Project as currently designed is constructed, if at some point in the future management were to decide that the Project should be modified to deliver 15,000 cfs to the North Clifton Court Forebay, what would be required from an engineering point of view to upgrade the proposed -- to upgrade the California WaterFix Project to be able to deliver that amount of water?

WITNESS BEDNARSKI: We would need to add two more intakes. I'm assuming the future intakes would be sized similarly to the ones that we have now.

So we would need to add two more intakes, some

additional tunnels in the north, and I -- I don't know what size those would be but some additional -- two tunnels at least would need to convey the water from the new intakes down to the Intermediate Forebay.

The Intermediate Forebay would need to be modified in -- in some manner perhaps by -- And I'm speculating here because we haven't done any calculations or any kind of preliminary or conceptual design for that.

We'd have to modify the Intermediate Forebay to accept those new tunnels and then to modify perhaps the embankments around the Intermediate Forebay. And then on the exit side, we'd probably have to make some modifications to that.

We have not done any hydraulics on the 40-foot tunnel so, again, I cannot speculate on whether those would accommodate that flow.

As we move down to the combined pumping plants, we would need to significantly modify that structure or build a new structure down there to convey and pump that water as the current hydraulic profile would no longer work with the pumps or the configuration of that facility that's down there so . . .

That -- That's kind of a high-level summary based on what we know. And, again, we have not done any conceptual design on that.

MR. SIPTROTH: Okay. Thank you.

Would you need to add more sedimentation channels?

WITNESS BEDNARSKI: Oh, yes. Yeah, each new intake would have a new sedimentation channel connected to it.

MR. SIPTROTH: And from a design engineering perspective only, each of the modifications that you described, those would all be physical -- would all those be physically possible?

CO-HEARING OFFICER DODUC: Let -- Before you answer and before you object, where are you going with this, because this speculative scenario is not before the Board.

MR. SIPTROTH: Thank you.

I'm trying to understand. It's -- It's our -- Well, it has been our view that it appears that some of the Project components were designed to convey 15,000 cfs.

CO-HEARING OFFICER DODUC: And you've asked him those questions and he said no.

MR. SIPTROTH: I'm trying to understand how the Project could be modified in the future if it is constructed as designed to convey 15,000 cfs? Based on our understanding of the components of the Project, still

appear to be designed to convey 15,000 cfs.

CO-HEARING OFFICER DODUC: Which component?

Perhaps you can focus specifically on that, because he's already answered with respect to at least some of the -- the current structure that's before this slide.

MR. SIPTROTH: Very well. I'll try to narrow my -- the scope of my question.

CO-HEARING OFFICER DODUC: And I would ask you to narrow on the current design aspect that you believe is currently designed, as you said, to convey more than the 9,000.

MR. SIPTROTH: So, going back to the Main Tunnels, your testimony -- and correct me if I'm wrong -- is that the Main Tunnels are designed to convey 9,000 cfs to the North Clifton Court Forebay; is that correct?

WITNESS BEDNARSKI: That is correct.

MR. SIPTROTH: And did -- I believe your testimony was that you did not know whether or not the Main Tunnels would need to be modified if the Project were reconfigured in the future to convey 15,000 cfs to the North Clifton Court Forebay.

WITNESS BEDNARSKI: That's correct, we have not studied that option.

MR. SIPTROTH: So are you able to say that

the -- that the main -- the Dual Main Tunnels are -- are unable to convey up to 15,000 cfs?

WITNESS BEDNARSKI: I'm not saying that they're unable to. We haven't studied that as part of our Project.

MR. SIPTROTH: Okay. What is . . .

Are the -- As currently designed, are the Dual Main Tunnels the minimum diameter necessary to convey 9,000 cfs to the North Clifton Court Forebay by gravity flow?

WITNESS BEDNARSKI: Yes, they are.

MR. SIPTROTH: Could you have tunnels with a smaller diameter and a steeper slope and still be able to convey up to 9,000 cfs to the North Clifton Court Forebay?

WITNESS BEDNARSKI: I -- I can't answer that. We didn't study that as part of our Project.

CO-HEARING OFFICER DODUC: Miss Morris.

MS. MORRIS: He answered the question, so . . . I'm not fast enough today.

MR. SIPTROTH: I believe that's all I have.

CO-HEARING OFFICER DODUC: Thank you very much.

MR. SIPTROTH: Thank you, Mr. Bednarski.

WITNESS BEDNARSKI: Thank you.

CO-HEARING OFFICER DODUC: I think you said

Group 26 is not here but, for the record, Group 26, Contra Costa Water District.

All right. Not here.

27, Antioch . . . not here.

28 . . . not here.

29 . . . not here.

30, Mr. Brodsky. Oh, Mr. Brodsky does not wish to cross-examine the Engineering Panel. We have that in the record.

31, Mr. Jackson.

MR. JACKSON: Madam Hearing Officer, what I intend to do is to go straight through Mr. Bednarski's testimony, and I will call out the page and the line as I do it, and I think it will be more cohesive that way.

CO-HEARING OFFICER DODUC: Thank you.

CROSS-EXAMINATION BY

MR. JACKSON: Mr. Bednarski, by whom are you employed?

WITNESS BEDNARSKI: Metropolitan Water District of Southern California.

MR. JACKSON: Is that on a contract with DWR?

WITNESS BEDNARSKI: No. I'm an employee of Metropolitan Water District. There's no contract involved, to the best of my knowledge.

MR. JACKSON: At Page 1, Line 25, you indicate

that your (reading):

". . . Testimony is submitted to provide the engineering project description for the CWF facilities."

(Document displayed on screen.)

MR. JACKSON: So, you are the person who prepared the Project Description?

WITNESS BEDNARSKI: Yes, I am.

MR. JACKSON: Who helped you with that?

WITNESS BEDNARSKI: Sergio Valles, Gwen Buchholz, and Praba Pirabarooban.

MR. JACKSON: Is Praba Pirabarooban going to be in this hearing?

WITNESS BEDNARSKI: He's not part of the panel because he is not available. I'm not sure if he'll be made available later.

CO-HEARING OFFICER DODUC: Hold on, Mr. Jackson.

Mr. Mizell.

MR. MIZELL: We've indicated Praba could be made available when he comes back.

CO-HEARING OFFICER DODUC: And that would be after August --

MR. MIZELL: 17th.

CO-HEARING OFFICER DODUC: 17th. Okay.

MR. JACKSON: So until that time, are you relying on Mr. Praba Pirabarooban for your testimony?

WITNESS BEDNARSKI: I'm -- I'm not sure that I -- I follow what you're -- your question.

You know, the work that we did together to compile this is as it's stated here. I'm here to testify on that; respond to questions.

MR. JACKSON: You do not rely on him for your testimony.

WITNESS BEDNARSKI: I don't believe so. I'll do the best that I can to answer your questions without him being here.

MR. JACKSON: And if you were relying on anything that he's told you, you'll let me know?

WITNESS BEDNARSKI: Yes.

MR. JACKSON: Thank you.

On Line 26 of Page 1, it says that (reading):

"The engineering project description is based on the engineering completed to date for the CWF and is described in detail in a Conceptual Engineering Report . . ."

What is -- What do you mean by the term "Conceptual Engineering Report"?

WITNESS BEDNARSKI: Conceptual Engineering Report, I believe, is identified as DWR-212, which

represents the current state of our engineering on the California WaterFix, and we've generally characterized it as about a 10 percent complete engineering effort.

MR. JACKSON: The Conceptual Engineering -- Does conceptual engineering have a -- a meaning in the engineering world?

WITNESS BEDNARSKI: I believe it does.

MR. JACKSON: And what is the standard view of what can -- of when conceptual engineering finishes and when the next stage begins?

WITNESS BEDNARSKI: It's -- It's not a hard-and-fast limit, depending on the agency or the organization that's doing the work.

But, in general, it allows you to identify your impacts for environmental processes, identify footprints so that you understand how large your facilities are going to be, allows you to understand the major engineering components that are part of your program, and some of the engineering parameters that go into that eventual Preliminary and Final Design that you'll be conducting later on.

So, many of the -- Well, conceptual, early engineering components are identified, sized, and, for cost stipulating purposes, you can use that to develop an initial cost estimate for the program.

MR. JACKSON: Is the initial cost estimate often different than the final cost estimate?

WITNESS BEDNARSKI: Are you asking on my experience on that?

MR. JACKSON: Yeah. Yeah in general.

WITNESS BEDNARSKI: It can be at times different, higher, or it could be lower.

MR. JACKSON: Now, you indicated in response to some questions, I guess, last week that you are presently finished with conceptual design and you are awaiting money to begin preliminary engineering; is that correct?

WITNESS BEDNARSKI: Yes, that's correct.

MR. JACKSON: Do you have a schedule for the begin -- Well, first of all, how long did the conceptual engineering process take on this Project?

WITNESS BEDNARSKI: Are you referring to the California WaterFix only or to its predecessor the BDCP facilities?

MR. JACKSON: Are there elements of the BDCP that still exist in California WaterFix?

WITNESS BEDNARSKI: Yes.

MR. JACKSON: Are there elements of impact analysis that are dependent on the BDCP examination?

WITNESS BEDNARSKI: There are --

MR. MIZELL: Excuse me.

WITNESS BEDNARSKI: Oh, sorry.

MR. MIZELL: Impact analysis isn't -- isn't within the scope of Mr. Bednarski's expertise. He's an engineer. And the EIR/EIS Team is the group of folks who would more appropriately discuss the impact analysis.

And we submitted that as a document that Mr. Jackson has access to.

CO-HEARING OFFICER DODUC: Mr. Bednarski is free to answer that it's outside of his expertise, if that is indeed the case.

WITNESS BEDNARSKI: I guess I would just say that the size and configuration of some BDCP facilities were carried forward into the California WaterFix.

MR. JACKSON: Did that include the siting of the -- of the diversions?

WITNESS BEDNARSKI: Yes, it did.

MR. JACKSON: Did that include the screen in -- information?

WITNESS BEDNARSKI: Yes.

MR. JACKSON: Has there been any work done on either of those two things, if you -- I guess that's compound, so I'll start with:

Has there been any work done on the siting since BDCP?

WITNESS BEDNARSKI: Not that I'm aware of.

MR. JACKSON: Has there been any work done on the screens since BDCP?

WITNESS BEDNARSKI: On the screens themselves, no; on the structure that it's attached to, yes, we've made modifications to that.

MR. JACKSON: Calling your attention to Footnote 2 on Page 2.

(Document displayed on screen.)

MR. JACKSON: You indicate that DWR, the Metropolitan and the consultants prepared the CER, which you've identified as DWR-212; is that correct?

WITNESS BEDNARSKI: That's correct.

MR. JACKSON: Was there anyone else other than DWR, the Metropolitan Water District, and, I would take it, the consultants for the -- for DWR, or Metropolitan? Is that whose reference you . . .

WITNESS BEDNARSKI: I'm sorry. Could you restate the question?

MR. JACKSON: Sure.

Were there any other governmental agencies involved in the CER?

WITNESS BEDNARSKI: Not that I'm aware of.

MR. JACKSON: And that is the document that is submitted for the pipeline/tunnel option and the Clifton Court Pumping Plant?

WITNESS BEDNARSKI: That -- That's right. DWR-212 is that document.

MR. JACKSON: All right. Will there be any work done in preliminary engineering or in final engineering in regard to updating that document?

WITNESS BEDNARSKI: I don't believe we would update that document. We would use the information from that document and begin preparing new documents.

MR. JACKSON: Now, you indicate in your testimony, on Page 2 at Line 3, that the (reading):

". . . Testimony focuses on potential construction impacts that could affect other users of water and measures to mitigate any impacts."

Was there any specific work done by you or anyone that you worked with to identify individual users of water and how the construction would affect them?

WITNESS BEDNARSKI: I believe I've testified to the diverters of water along the Sacramento River roughly at the sites of the intakes, that we've looked at those, yes.

MR. JACKSON: Did you also look at the other end of the Project, at the Clifton -- expanded Clifton Court and see what the effects would be on landowners that own the land that is the area of expansion?

WITNESS BEDNARSKI: We have -- We have looked

at those areas from the CEQA standpoint, yes, we have.

MR. JACKSON: And that's done in what document?

WITNESS BEDNARSKI: That's done in the Recirculated EIR/EIS.

MR. JACKSON: And have you examined individual landowners between the points of diversion and the points of the new Clifton Court Forebay?

WITNESS BEDNARSKI: Again, we've examined them from the standpoint of the Recirculated EIR/EIS as -- as far as all those components of that environment document that we'd be required to be studied, yes.

MR. JACKSON: So when you say that your testimony focuses on other users of water and measures to mitigate any impacts, you're relying solely on the Recirculated EIR?

MR. MIZELL: Objection: Misstates his testimony.

CO-HEARING OFFICER DODUC: Please reframe that.

MR. JACKSON: Can you tell me what else you're relying on.

WITNESS BEDNARSKI: We've relied on various site visits that we've made to look at the different diversions near the intakes, and . . . I guess that would be -- that would be it, added to the EIR/EIS.

MR. JACKSON: Who made the determine -- On --

On -- On Line 4 and 5 and 6, who made the determination that (reading):

"Construction impacts . . . are generally limited to potential impacts to existing water supply facilities and potential impacts to groundwater levels"?

WITNESS BEDNARSKI: In the development of the testimony, I believe our Team was asked to focus on those areas by our attorneys, since they felt that that was going to be the subject of our testimony here in front of the Board.

MR. JACKSON: And in doing so, did you independently -- you or your Team independently -- look at any other potential impacts other than the ones you're testifying to?

WITNESS BEDNARSKI: For the purposes of this hearing, these were the only ones that we've looked at.

MR. JACKSON: On Line 8, you talk about Best Management Practices.

Were those -- Are the Best Management Practices broader than what you looked at in terms of potential impacts to existing water users?

WITNESS BEDNARSKI: I believe the Best Management Practices are consistent in what we have documented in the Recirculated EIR/EIS.

MR. JACKSON: So that's where I would find that information --

WITNESS BEDNARSKI: That's correct.

MR. JACKSON: -- upon which you relied for this testimony?

WITNESS BEDNARSKI: That's correct.

MR. JACKSON: On Line 10 and 11 -- 9, 10 and 11, you talk about construction-related contaminants to surface water bodies. And I think there was some previous testimony about the Giza Pyramid or something to that effect.

It's a substantial amount of material; correct?

MR. MIZELL: Objection.

WITNESS BEDNARSKI: I'm not sure what you're referring to.

MR. JACKSON: All right. The -- You indicate in your testimony that the Best Management Practices will be implemented in the future.

Where would I find the Best Management Practices?

WITNESS BUCHHOLZ: Those are included in the Appendix 3B of the Draft EIR/Draft EIS and Recirculated Draft EIR, Supplemental Draft EIS as part of environmental commitments. Specifically, there are sections in that Appendix 3B addressing this.

MR. JACKSON: Thank you, Miss Buchholz.

And in that regard, the -- you've indicated that the State Water Board has an NPDES role in regard to that material; is that correct?

WITNESS BUCHHOLZ: Absolutely. It would roll up to the State Water Resources -- excuse me -- State Water Resources Control Board. We'd also potentially have to be working with -- sideway. We work in conjunction with Central Valley Regional Water Quality Control Board or just the State Water Resources Control Board.

MR. JACKSON: How many permits could you anticipate would be necessary under that system?

WITNESS BUCHHOLZ: The -- How the permits are separated out is something which will be determined in design.

Sometimes Projects of this level will have permits that will go along with time, and sometimes they'll go along with like facilities, and that type categorization of the storm water NPDES permits haven't been done at this time. That's usually done during design.

MR. JACKSON: And when would -- when would design be finished for this Project?

WITNESS BUCHHOLZ: It will take several years.

I don't remember the schedule offhand that's in the Conceptual Engineering Report.

WITNESS VALLES: I can also help answer that question.

MR. JACKSON: Mr. Valles, please.

WITNESS VALLES: It will take approximately four years once we're given the go-ahead to proceed with the design. It will take approximately four years for the overall design period.

MR. JACKSON: And that's both for Preliminary and Final?

WITNESS VALLES: That's correct.

MR. JACKSON: When does that process begin?

WITNESS VALLES: When we're given the go-ahead by -- by management and -- and this process that we're going through.

MR. JACKSON: Is there any work being done at this point on Preliminary Design?

WITNESS BEDNARSKI: No, there is not.

MR. JACKSON: But without 90 percent of the engineering, Mr. Bednarski, you feel that you can say there will be no adverse water quality effects to beneficial use from a Project that's only 10 percent conceptually designed?

MR. MIZELL: I'm going to object to that: He's

trying to put words into my witness's mouth.

Mr. Bednarski has not made a conclusion about whether or not the water quality impacts of this Engineering Project, what those will be. That's something that we will hear from in the Modeling Panel.

MR. JACKSON: I'm talking about Line 13 on Page 2, which says (reading):

". . . No adverse water quality effects to beneficial uses from construction-related activities would occur."

CO-HEARING OFFICER DODUC: Please answer, Mr. Bednarski, to the best of your knowledge.

WITNESS BEDNARSKI: Could you restate your -- Could you restate your question again?

MR. JACKSON: Probably not exactly.

WITNESS BEDNARSKI: No. Close enough.

MR. JACKSON: The -- But the question is: How can you come to a conclusion that there will be no construction-related activities, no adverse water quality effects to beneficial uses from construction-related activities at the point of 10 percent design?

Wouldn't you need to know what the Final Design is going to be to make that statement?

WITNESS BEDNARSKI: I -- I don't believe so. I believe we'll be operating under a number of different

permit requirements that will require us to construct the facilities in accordance with those permits, and as such, it's our belief that there will not be any construction-related impacts.

MR. JACKSON: So, from -- To come to the conclusion that there are no construction-related impacts, you are reliant on permit conditions and analysis that has not yet taken place?

WITNESS BEDNARSKI: Partially. We also have the rest of the environmental commitments for the EIR/EIS that will be required to maintain throughout the construction period, so all of those together.

MR. JACKSON: Do you, as you sit here today, know what those commitments are?

WITNESS BEDNARSKI: I'm aware of some of them. I believe Miss Buchholz is more aware of them than I am.

WITNESS BUCHHOLZ: The environmental commitments are outlined on Pages 3B-4 to . . . 3B-13 of Appendix 3B, and in the Recirculated Draft EIR/Supplemental Draft EIS, and the rest of the appendix goes into details.

We are relying upon our experience with achieving -- obtaining similar permits for similar types of construction, whether they be at intakes or on landside that we've had to -- we worked with Projects in

which they've incorporated the Best Management Practices to achieve the water quality objectives that are required by the Central Valley Regional Water Quality Control Board and State Water Resources Control Board during construction.

MR. JACKSON: When would you expect the Central Valley Water Quality Control Board to receive a Permit Application?

WITNESS BUCHHOLZ: Generally, those -- and in this case, too -- those permit applications are prepared with the attachments of -- of the plans and specifications that -- for a Design Project. So it's during design.

MR. JACKSON: At the start of design or toward the end of design?

WITNESS BUCHHOLZ: Generally, it's somewhere towards the -- Usually, it's around 70 percent design completion, because you have plans and you have the specifications completed at that time.

And so then the Best Management Practices are also defined specifically in the specifications for the design.

MR. JACKSON: So, Mr. Valles, in your four-year projection, 70 percent would be how many years into the Project?

WITNESS VALLES: Probably by the third year or so.

MR. JACKSON: What?

WITNESS VALLES: By the third year.

MR. JACKSON: By the third year?

WITNESS VALLES: Yeah.

WITNESS BEDNARSKI: I would just like to note that there -- there may be opportunities for us to start some work earlier than waiting for the full duration of four years to take place.

There may be some what we call site preparation contracts that would require permits that we've been discussing just now, and those could happen, you know -- I would -- I would project maybe within the first 12 to 18 months of the Project being authorized to move on to the next step.

MR. JACKSON: You could file with them, but after you file with them, you're on their schedule; aren't you?

WITNESS BEDNARSKI: I'm just clarifying Mr. Valles' comment about the design period.

MR. JACKSON: Right. Okay.

Calling your attention to Footnote 4 and the . . . in the area of Line 24, 25 and 26.

In that footnote, it talks about the fact that

you don't expect to substantially degrade water quality with respect to the constituents of concern on a long-term average basis.

Calling your attention to -- Well, what do you mean by "substantially"?

WITNESS BUCHHOLZ: When we put together on similar Projects the storm water NPDES Permit Applications, we worked through what -- our background levels of constituents of concern, and to work with the Regional Board -- Regional Water Control Board in the area or the State Water Resources Control Board staff to determine how -- if there -- there might be incremental increases.

But there'll be a determination based upon information such as in the Basin Plans or total Maximum Daily Limit Plans. These will be individual specific to those areas of discharge. So, numerically, you might have an increase between background conditions and conditions during construction.

But the word "substantial" would be put together so that there would be no adverse impacts based upon the water quality objectives for the area -- for the receiving waters.

MR. JACKSON: Miss Buchholz, or Mr. Bednarski, or Mr. Valles -- however this works -- have you ever -- I

mean, "substantial" is a word that we find often in CEQA and NEPA.

Do you know whether or not that's different than the no-injury rule that this Board is examining?

MR. MIZELL: Objection: Calls for a legal conclusion.

CO-HEARING OFFICER DODUC: The question is, do you know, and you may answer that if you know.

WITNESS BUCHHOLZ: I don't know legally how that would connect the dots. I'm much more oriented toward the State Water Resource Control Board's objectives on water quality.

CO-HEARING OFFICER DODUC: Thank you.

MR. JACKSON: So, the question of, "Based upon these findings" -- the last sentence in Footnote 4 -- "this impact is determined to be less than significant. No mitigation is required," is a CEQA determination?

WITNESS BUCHHOLZ: That would be -- For the State Water Resources Control Board, it would be a CEQA determination, yes.

MR. JACKSON: And not an opinion as to whether or not you've satisfied the no-injury rule.

WITNESS BUCHHOLZ: From my perspective, yes.

MR. JACKSON: I may have gotten myself into problems using the word "no," or not.

Do you know as you sit here today whether or not any injury at all is allowed?

MR. MIZELL: Again, calls for a legal conclusion.

WITNESS BUCHHOLZ: I'm not the water rights attorney to know that.

CO-HEARING OFFICER DODUC: Thank you.

MR. JACKSON: Calling your attention to Page 3, Lines 22 to 25.

(Document displayed on screen.)

MR. JACKSON: You're going to be modifying levees to some extent in this Project?

WITNESS BEDNARSKI: That is correct.

MR. JACKSON: And as you point out, they're under the jurisdiction of the United States Army Corps of Engineers.

Has there been any application for the 408 permit?

WITNESS VALLES: I don't believe that the 408 permit has been applied for yet. That's way down the road.

MR. JACKSON: And when would you expect that?

WITNESS VALLES: I'm trying to recall.

Probably three years from now, at 65 percent design completion of the intakes.

MR. JACKSON: Is that a requirement of the -- of the Army Corps, that it be 65 percent?

WITNESS VALLES: That's correct.

MR. JACKSON: And then there's another permit required with the Central Valley Flood Protection Board.

When would you expect that?

WITNESS VALLES: I believe that those are -- The 408 process . . . you have to do that first, and then -- then they submit the results of that to the Central Valley Flood Protection Board.

MR. JACKSON: And so, just doing rough math, if 65 percent was reached in Year 3 from beginning the Preliminary Design stage, you would need to get a completed permit from the Army Corps of Engineers before you could go forward to the Central Valley Flood Protection Board.

WITNESS VALLES: I believe so.

MR. JACKSON: So, is it fair to say that each of those processes will require an environmental analysis?

MR. MIZELL: Objection: Calls for a legal conclusion.

MR. JACKSON: Are you expecting to be able to do this without satisfying whatever the requirements are of those two agencies?

WITNESS VALLES: We would have to satisfy those -- their permitting requirements.

MR. JACKSON: Okay. Thank you.

I'll move on now to Page 3, Line 28.

(Document displayed on screen.)

MR. JACKSON: It says that (reading):

"The new . . . water conveyance facilities proposed . . . would introduce new operational flexibility into the SWP and CVP by enabling SWP or CVP water" -- and then over on Page 4 -- "to be diverted from the Sacramento River in the North Delta and conveyed" -- as you've showed us -- "to the South Delta . . ."

Mr. Bednarski, I understand we're only at the conceptual level, but BDCP seemed to believe that, in general, the North Delta facilities will be operated in times of -- in big water years or above normal water years; and the South Delta pumps would be the ones more utilized in low water years, in drought years; is that correct? Is that still the concept?

MR. BERLINER: Objection: Asked and answered. Miss Pierre was questioned on this.

CO-HEARING OFFICER DODUC: Mr. Jackson, I assume you're laying the foundation for --

MR. JACKSON: I am laying the foundation, and

I'm trying to get my record cleaned up because there are many, many people doing many, many things in here.

And I may ask questions for my purpose that are different than the reason why somebody else answered -- or asked.

CO-HEARING OFFICER DODUC: All right. I'll give you a little bit of leeway.

MR. JACKSON: Thank you.

CO-HEARING OFFICER DODUC: Mr. Bednarski.

WITNESS BEDNARSKI: I believe others can best respond to that as to when and how the facility would be operated, perhaps with the Modeling Group or in Miss Pierre's testimony.

MR. JACKSON: So what were you -- What were you relying on when you fashioned your testimony?

Somebody else?

WITNESS BEDNARSKI: It was the general understanding of -- of individuals working on the Project that that would be the way the system was operated.

MR. JACKSON: So, you can answer the question as a general impression?

WITNESS BEDNARSKI: As -- As a general impression, yes.

MR. JACKSON: Is that general impression consistent with the operation described in the WaterFix

draft document?

MR. BERLINER: Objection: Which draft document are you referring to?

MR. JACKSON: The latest WaterFix draft document.

MR. BERLINER: Same objection.

CO-HEARING OFFICER DODUC: Mr. Jackson, I, too, am confused.

Which document are you referring to?

MR. JACKSON: Well, it is confusing.

There is a BDCP document that is still evidently on the table, parts of the WaterFix document, and then the BA, and all of them are sort of jumbled up here.

And I'm trying to -- I'm trying to draw a line as to -- You know, I have a number from WaterFix and BDCP of sort of a concept. I'm trying to figure out if there's anything else I don't know about.

CO-HEARING OFFICER DODUC: Okay. I don't know that -- if that helped Mr. Bednarski in answering the question, though.

MR. JACKSON: It may not have.

CO-HEARING OFFICER DODUC: Miss Morris?

MS. MORRIS: I'm sorry for kind of a speaking objection, but I think the record's becoming unclear

because the question that's being asked is about operations, and Mr. Bednarski and the testimony that Mr. Jackson's pointing to is simply talking about not the actual how it's going to be operated, just that there's going to be two diversion points.

So, to me, the record is getting very mumbled here.

CO-HEARING OFFICER DODUC: I hear you. But Mr. Bednarski, as -- as was the case with other witnesses, may answer that it's, you know, outside of his expertise and defer to the Operations Panel if that's the case.

MR. MIZELL: I'd like to reiterate Tom's objection.

If Mr. Jackson has three separate documents, it would be nice to take them one at a time.

CO-HEARING OFFICER DODUC: Yes.

But it would be helpful, Mr. Jackson, to clarify your questions and keep them as focused as possible.

Let me put it this way, Mr. Jackson: If I don't understand the question you're asking --

MR. JACKSON: Then I'm not doing any good with it.

CO-HEARING OFFICER DODUC: Exactly.

MR. JACKSON: I mean -- And unless Miss Marcus understands it -- And she doesn't look like she did.

So, the -- the question is basically, how do you expect that this new operational flexibility will be used that you're talking about?

WITNESS BEDNARSKI: I -- I cannot speculate from an engineering standpoint how it would be used. You'd have to refer to the Modeling Group or one of the other groups that will testify to discuss the proposed operations of it.

The Engineering Group has provided capabilities and a system to do a variety of things, and that's what we feel we've provided.

MR. JACKSON: Fair enough.

Calling your attention to Page 4 --

(Document displayed on screen.)

MR. JACKSON: -- at Line 24, and then going on over into the next -- into the next page, Page 5.

You talk about (reading):

". . . The changes to the project achieved" in the "engineering refinements."

I have a couple questions about a number of them.

But a preparatory question is:

Do you expect there to be changes as you go

further into the engineering design?

MR. BERLINER: Objection: Changes with respect to what?

MR. JACKSON: Changes to the Project, like the changes that he's listed here on his -- in his testimony, Line 24.

CO-HEARING OFFICER DODUC: Mr. Jackson, changes to the Projects or changes to the impacts that are listed here?

MR. JACKSON: Well, actually, both. I was going to do changes to the Project first and then begin to do changes to the impact.

CO-HEARING OFFICER DODUC: Okay.

WITNESS BEDNARSKI: I'm not anticipating changes, per se. Perhaps I would call them, or refer to them, as refinements, but fine-tuning things, not changes significantly.

MR. JACKSON: So it's unlikely, for instance, on Page 5, that, in -- on Line 3, that the decision in regard to gravity flow at certain river conditions will be changed?

WITNESS BEDNARSKI: It's our plan to continue to keep that as part of the -- of the Project, the capability for gravity flow under certain river conditions, yes. I don't believe that will change.

MR. JACKSON: Is there also the possibility that you will change the location of the pumps?

WITNESS BEDNARSKI: That is not being considered at this time.

MR. JACKSON: Okay. Now, I'm going to go through this list of bullet points and -- and ask you a question.

When you use the word "reduce" as you do on Line 12, and as you do on Line 25, and as you do on Line 1, is that a recognition that there will some . . .

You've made some change to reduce.

Are you looking for options to reduce other things as you go forward?

MR. MIZELL: Objection: Vague. "Other things" could be anything. We'd like some specificity, if possible.

MR. JACKSON: It could. It could . . .

It could be, instead of reducing power requirements, you might decide -- You know, from before to now, you might decide to increase them for reasons that have to do with later design; is that correct?

WITNESS BEDNARSKI: That -- That's possible. It's not being planned right now.

MR. JACKSON: And on Line 5, where you used the term "revise," that you made changes to the Project,

revising intake facilities to eliminate the pumping plants at 10 percent design, is there any likelihood that you would change again prior to the end of the Project?

MR. BERLINER: Objection: Calls for speculation.

CO-HEARING OFFICER DODUC: Mr. Jackson, keeping in mind that this --

MR. JACKSON: Yeah.

CO-HEARING OFFICER DODUC: -- is the Project before us right now.

MR. JACKSON: I have a little bit of problem I'd like to address with the term "speculation."

You're being asked to make a monumentous (sic) -- monumental decision about people's rights, water rights and beneficial uses and all of those things on -- prematurely, in my opinion, on 10 percent of the design.

So . . . if I accept, without asking these questions, this may be my last shot. I mean, they'll finish the design after they get the Permit.

I mean, I presume that there's going to be a decision prior to the five-year period that was just outlined.

CO-HEARING OFFICER DODUC: I appreciate that, but I'm --

MR. JACKSON: So don't I have to --

CO-HEARING OFFICER DODUC: I'm hesitating at the productivity of this line of questioning if the witnesses cannot with any assurance give you an indication of what changes might occur.

MR. JACKSON: I was hoping to build a record that showed precisely that, that they could not answer the questions because they're not far enough along in the design.

CO-HEARING OFFICER DODUC: Mr. Mizell or Mr. Berliner?

MR. BERLINER: Yeah. If Mr. Jackson wants to rephrase the question, rather than possibilities that they plan to make changes, I don't think that would be an objectionable question.

MR. JACKSON: It also wouldn't be a very useful question, because I know what the answer to that's going to be.

CO-HEARING OFFICER DODUC: Okay. I'll let you produce but, again, I hesitate. It doesn't seem to be very productive at the moment, but go ahead.

MR. JACKSON: Is it possible that all of these changes that are listed on Pages 5 and 6, or 6 and 7 and 8 are subject to change based upon what you find in your 90 percent of engineering and design that hasn't happened yet?

WITNESS BEDNARSKI: I believe "change" is a relative and subjective term.

My personal opinion, representing our Team, is that we would -- we would fine-tune the concept that we have now to fit within the footprints that have been identified.

We are always looking for opportunities to reduce impacts on the community and private landowners, so if some good ideas come forward that we can implement to the Project, we would take advantage of those.

But the major components, it's my opinion that they are set in their locations that they're presently shown in the EIR/EIS.

MR. JACKSON: All right. So let me ask you three relatively specific questions about parts of your conceptual design.

You've made the decision, evidently, on Page 7, Line 1, that there will be (reading):

> ". . . Screened on-bank intake facilities along the Sacramento River sized to provide maximum approach velocities of .20 feet per second under operating conditions."

You cite the Met's work with DWR as your exhibit and justification for that.

If -- Are you going to do any more work on the

screens?

WITNESS BEDNARSKI: We are going to continue to work with the Fish Facilities Technical Team as we move into Preliminary Design.

There are still some open questions about the final, final configuration of what those screens look like, and we'll be, you know, working with that Team to -- to finalize that design.

MR. JACKSON: Well, how can -- how can the landowners and diverters and people with legal water rights downstream of these screens know what injury they're going to suffer if you're still working on the screens?

WITNESS BEDNARSKI: We believe we've identified the maximum footprint of the screens along the riverbank and have identified as part of the Recirculated EIR/EIS any of those water users -- legal water users, what those impacts would be, and we don't foresee those changing during this refinement process with the Fish Facilities Technical Team.

MR. JACKSON: So it's based -- What are you going to be working with them on if you've already designed it?

WITNESS BEDNARSKI: I'm not -- I'm not a fish expert, but I understand that there are a variety of fine

points of the design as far as the face of the screen that they would still like to give input to our Project Team on, and we've expressed a willingness to do that.

MR. JACKSON: Does that have anything to do with the fact that, in moving to the North -- the North Delta Diversion locations, that you've moved actually into the remaining smelt habitat?

MR. MIZELL: Objection: We're getting into biological information at this point.

The witness has already testified that the facility's Technical Team gave him the specifications for the engineering of the screen design, and we will have a lot of opportunities to discuss the merits of those screen designs and habitat, et cetera, when we get into Part II.

MR. JACKSON: We will, but I don't know that -- Are you telling me that this panel will be back in Part II?

CO-HEARING OFFICER DODUC: No. Before you get into back and forth, Mr. Jackson, I do appreciate this line of questioning, but I also recognize that this witness -- this panel of witnesses is going to be very limited in terms of what their expertise are in responding.

So, to the extent that you are able to respond,

please do. But as your attorney has pointed out, you may defer this to later panels if you feel more comfortable with their expertise.

WITNESS BEDNARSKI: Could I have the question one more time?

MR. JACKSON: Yes.

What is the purpose of -- If you've already decided that this is the footprint -- that -- that -- that this is where you're going to site these diversion facilities --

CO-HEARING OFFICER DODUC: Stop there.

Have you decided that this is where you're going to site these facilities?

I'm trying to break up Mr. Jackson's question so that he doesn't -- so that your attorney doesn't object that he is putting words in your mouth.

WITNESS BEDNARSKI: Can I respond to your question?

CO-HEARING OFFICER DODUC: Go ahead.

WITNESS BEDNARSKI: To the best of my knowledge, those -- those sites have been fixed, and I have no information that would indicate otherwise, that they're going to move in the future.

CO-HEARING OFFICER DODUC: Okay.

MR. MIZELL: A point of procedure:

Are we going to see the clock start to move again here?

CO-HEARING OFFICER DODUC: Has the clock not been moving?

MR. MIZELL: For a few minutes.

CO-HEARING OFFICER DODUC: I don't think we'll -- We'll grant Mr. Jackson a few minutes.

MR. JACKSON: Thank you.

Calling your attention to your testimony on Page 9, and it's Lines 11 through 17.

(Document displayed on screen.)

MR. JACKSON: This Fish Facilities Technical Team that you reference here, and the agencies that are involved in it, are still working on the screen problem?

WITNESS BEDNARSKI: I -- I -- I don't know if that Team is currently mobilized to -- to be studying anything at the present time.

MR. JACKSON: So, when -- It -- Is it fair to say from the . . .

Is the last -- When you reference the Fish Facilities Technical Team for siting and screen, are you referencing the BDCP fish facilities' technical memorandum of July 2011?

WITNESS BEDNARSKI: Yes, I am.

MR. JACKSON: Is there any later document, to

your knowledge, other -- within the last five years?

WITNESS BEDNARSKI: Not to my knowledge.

MR. JACKSON: Calling attention to your testimony on Page 10, Line -- Line 1 through Line 5.

(Document displayed on screen.)

MR. JACKSON: You talk about three in -- intakes along the Sacramento River.

By the way, these -- these locations are in the Sacramento River; is that right?

WITNESS BEDNARSKI: To the best of my knowledge, yes, they are.

MR. JACKSON: And your locations are in the Sacramento River.

WITNESS BEDNARSKI: Yes, they are.

MR. JACKSON: When you say "similar to the Sacramento River intakes owned" by these three Districts, what similarities are you talking about?

WITNESS BEDNARSKI: I believe there's a couple items. They're all what we call on-bank facilities as opposed to river facilities. They all utilize, I believe, the same approach velocity at the screens, and at least two of them are at or near the same capacity as the ones that we're proposing for California WaterFix.

MR. JACKSON: Are you familiar with the fact that the Glenn-Colusa Water District pumps are located

off river, diversion is off river?

WITNESS BEDNARSKI: Yes, I am.

MR. JACKSON: Okay. So that's not similar; right?

WITNESS BEDNARSKI: The location of the pumps is not similar to our Project, no.

MR. JACKSON: And Glenn-Colusa isn't similar to your Project in that regard.

WITNESS VALLES: Let me respond to that.

In terms of the actual physical screen, it's exactly the same. It's a 1.5 -- 1.75-millimeter grill. That's the same.

Slight difference in the approach velocity. It's a .33 approach velocity.

It has a sedimentation basin directly behind the intake screen. The length is different. Those are about 11/100th feet.

The -- But the capacity are very close. The Tehama-Colusa is 2500 cfs. The Glenn-Colusa is 3,000 cfs, 3,000 cfs being pretty much the same as ours.

MR. JACKSON: And then there's certain habitat differences. I mean, for instance, there are no pelagic fish at Hamilton City.

WITNESS VALLES: Yeah. That's a biological issue. It doesn't involve engineering.

MR. JACKSON: All right. And doesn't involving -- doesn't involve Modeling?

WITNESS VALLES: That's not an engineering issue for us.

MR. JACKSON: All right. So what you mean when you say "similar" is capacity.

WITNESS VALLES: Capacity, and the grillage itself, the cleaning system itself, the -- the cells themselves. The cells are about 15-foot-wide each cell. Our cells are almost identical.

And there'll be a baffling system directly behind the screens, which are exactly the same.

MR. JACKSON: All right. Now I'll go a little quicker because I've only got a little bit of time.

The -- On Page 16, Lines 14 through 17, Mr. Bednarski, you say that (reading):

"Before construction begins, geotechnical studies will be completed . . ."

How long is it going to take to do the geotechnical studies that you're talking about?

WITNESS VALLES: We're looking -- There's -- We've answered this question before, but there's -- Right now, the plan calls for about 1500 CPTs and borings.

We're looking at doing them in two phases. The first phase is about 650 borings. Based on the results

of those borings, then we go on possibly to do the remaining borings.

What we're looking for is, we're looking for consistency in the soil profile. And so far, based on the 209 borings that we've done, we're pretty consistent.

So we're looking at possibly about two years -- two, two and a half years to do all the borings.

MR. JACKSON: And that will start when you get funding for the -- the Preliminary?

WITNESS VALLES: That's correct.

MR. JACKSON: Okay. And a -- And you indicate, Mr. Bednarski, that a Monitoring Program will be in place to monitor groundwater effects.

WITNESS BEDNARSKI: That's correct.

MR. JACKSON: And you will be drilling monitoring wells?

WITNESS BEDNARSKI: Yes, monitoring wells.

MR. JACKSON: And how long will it take you to get that -- to design the program and get the monitoring wells installed?

WITNESS VALLES: I don't have that particular schedule, but it's also based on the soil borings at -- and the -- at the -- during groundwater levels and all that.

MR. JACKSON: In regard to the tunnels at

Line 21, or starting Line 20 (reading):

"Tunnel details, including proposed alignment, length, depth, and lining requirements, will be refined as geotechnical data becomes available during the next stages of project design."

So, you'll need to finish the two to two and a half years before you can know where the alignment, the length, the depth, and the lining requirements, what they'll actually be?

WITNESS BEDNARSKI: I believe all that work would be completed within the first two and a half years, yes.

MR. JACKSON: On Page 19, where we talk about excavated material disposal.

(Document displayed on screen.)

MR. JACKSON: You say that (reading):

"The excavated material will be saturated with water and might be plasticized due to the use of biodegradable additives."

If you add biodegradable additives, foam or soil conditioner, can you just turn around, then, and put that water back into the estuary?

WITNESS BUCHHOLZ: Again, the specifics will have to be determined during design and how we will include those in the specifications.

But as part of the storm water NPDES permit determinations, if we've got constituents that would -- would not comply with the Central Valley Regional Water Quality Control Board water quality objectives or protection of beneficial uses, we would have to treat that water before it's discharged, and it's a standard method of construction.

MR. JACKSON: And you would have to permit the treatment facility?

WITNESS BUCHHOLZ: Frequently, those permits -- the treatment facilities are brought in on, basically, boxes that are on the back of -- of rigs, truck rigs, and the -- they're sort of like a package plant.

And then the permit to discharge that water back to the receiving waters, they would have to be permitted as part of an NPDES program, yes.

MR. JACKSON: And it would also depend on the amount.

WITNESS BUCHHOLZ: The permit would include the amount, the water quality, the rate of discharge to avoid erosion or sediment issues within the receiving water bodies.

MR. JACKSON: And as you sit here today, is there any way, from your conceptual design, that you can determine what the volume of the water is, or what

you're -- what you're actually going to find?

WITNESS BUCHHOLZ: There were some early numbers for the Draft EIR/EIS and Recirculated -- primarily Draft EIR/EIS but -- however, that actual number's going to be determined based on the geotechnical studies, and the presence of goundwater at the depths of the tunneling activity.

MR. JACKSON: Calling your attention to Page 20, the section involving forebays at approximately Line 13.

(Document displayed on screen.)

MR. JACKSON: I have a couple of questions in regard to that.

You're going to be rebuilding Clifton Court Forebay as part of this concept?

WITNESS BEDNARSKI: We'll be expanding Clifton Court to the south and then bifurcating the entire reservoir so the screened water's in the north half and the existing operation will take place in the -- in the south half.

MR. JACKSON: Now, you -- you touched on my next question.

The screening's only going to protect the north half; correct?

WITNESS BEDNARSKI: Screened water from the

three river intakes will be in the north half of Clifton Court, yes.

MR. JACKSON: Has there been any thought given, to your knowledge, of screening the South Delta?

MR. BERLINER: Objection with regard to the South Delta.

MR. JACKSON: The South Delta Diversion.

MR. BERLINER: Are you referring to the South Clifton Court Forebay?

MR. JACKSON: I'm -- I'm -- Yeah, however it -- it's going to end up somehow. It's south of the North Forebay and it takes water off the San Joaquin River as well.

WITNESS BEDNARSKI: To the best of my knowledge, the Engineering Team has not been asked to look at that as a -- as a component of the California WaterFix.

MR. JACKSON: So there will be no improvement to the system that presently exists in terms of screening.

WITNESS BEDNARSKI: For the South Clifton Court, for the existing operation? Is that what you're question is --

MR. JACKSON:

WITNESS BEDNARSKI: -- referring to?

That is -- No improvements like what you've just represented are part of the California WaterFix.

MR. JACKSON: And that decision was made at some pay grade somewhere else?

WITNESS BUCHHOLZ: In Appendix 3A of the Draft EIR/EIS, there is a discussion of -- a summary of several reports completed by DWR, U.S. Fish and Wildlife Service, National Marine Fishery Services, California Department of Fish and Wildlife, looking at the potential for screening diversions of water into the existing Clifton Court Forebay.

It was determined through those processes, as summarized in Appendix 3A of the Draft EIR/EIS, that that was not physically feasible to do at that -- because of the location, and the direction, and the -- various fishery issues that I don't -- I could not cite, but it is in that document and in the referenced documents.

MR. JACKSON: Are you referencing the -- the old CALFED Team that was told by the Record of Decision to screen it, and it didn't?

WITNESS BUCHHOLZ: There were several reports that were completed in accordance with the findings in the Record of Decision, Notice of Determination, from the CALFED EIR/EIS, and that was -- these Projects were some of those, yes.

MR. JACKSON: Any other one after the CALFED recognition or CALFED examination that you're aware of?

MR. MIZELL: I'm going to object at this point.

We've not objected up to this point to try and allow Mr. Jackson to develop this line of questioning, but we're going into the biological protections that might or might not try to be applied to Clifton Court Forebay.

It's not part of this Project and, if anything, it really is something that we would want to have biology and fish agencies around to discuss the merits of that CALFED process and what was referenced in the appendix in the answer given by Mr. -- sorry -- Miss Buchholz.

MR. JACKSON: At this point, that's as far as I intended to go. I'll save all that for Part II.

CO-HEARING OFFICER DODUC: Thank you, Mr. Jackson.

Thank you, Miss Buchholz, for your attempt to answer.

MR. JACKSON: Calling your attention to Page 21, Lines 25 to 27.

(Document displayed on screen.)

MR. JACKSON: You indicate that it's "estimated that . . . 50 percent of the dredged materials will be reusable . . ." for various in-Delta applications.

WITNESS BEDNARSKI: That's correct.

MR. JACKSON: And on what do you base this 50 percent number?

WITNESS BEDNARSKI: On some preliminary geotechnical information that we received from explorations on DWR property.

MR. JACKSON: So, will that be refined in the course of the Preliminary?

WITNESS BEDNARSKI: Yes, it will be.

MR. JACKSON: And the Preliminary examination, Mr. Valles, will be how long?

WITNESS VALLES: I'm not sure what question you're asking.

MR. JACKSON: All right. Yeah. Let me -- Let me do that differently.

The Preliminary engineering process will take how long?

WITNESS VALLES: It's a -- It's split between the Preliminary and Final, the four years.

We're probably looking about two years for that --

MR. JACKSON: Okay.

WITNESS VALLES: -- maximum, but that's various components. Some components will go faster than other components, so --

MR. JACKSON: And will there be a Preliminary Report that people like me can look at?

WITNESS VALLES: We will develop a Preliminary Design Report.

MR. JACKSON: Thank you.

Now, while this Project doesn't include screening the existing South Delta pumps, it does include a Head of Old River Gate.

Why?

MR. MIZELL: Objection: Speculative.

MR. JACKSON: Well, the question is based upon the fact that they're not trying to improve the existing set of screens. Now they're going to put new screens in somewhere else.

CO-HEARING OFFICER DODUC: I understand, Mr. Jackson.

If you could answer to the best of your ability, Mr. Bednarski, or anyone else on the panel.

WITNESS BEDNARSKI: To the best of my knowledge, the -- the operable gate is to replace the rock barrier that is typically installed there.

MR. JACKSON: Did anyone tell you the long history of why there was no Permanent Head of Old River?

MR. MIZELL: Objection: Relevance.

CO-HEARING OFFICER DODUC: That's a yes or no.

WITNESS BEDNARSKI: No.

CO-HEARING OFFICER DODUC: And we're not going to go into the history, Mr. Jackson.

MR. JACKSON: All right. I got my note.

Calling your attention to Page 25 at Line 10, and this is back to the intake structures.

(Document displayed on screen.)

MR. JACKSON: (Reading):

"The elevation of the top of the intake structure is 18 inches above the 200-year flood level (including sea-level rise), while the finished levee at the structures is 3 feet above the 200-year flood level with sea-level rise."

Can you tell me what the elevation above sea level is for each of these three intakes?

WITNESS VALLES: That's all -- That's all identified in the CER. You can actually see what those elevations are.

I believe that the levee elevation ranges from about 32 feet to 34 feet.

MR. JACKSON: And the intakes go below the levee; right?

WITNESS VALLES: I believe so, I believe slightly below the levee.

MR. JACKSON: Estimate on feet below?

WITNESS VALLES: I could tell you what the level of water surface elevation. I can't recall the actual physical dimension above the water surface.

(Timer rings.)

MR. JACKSON: Well, if you get --

WITNESS VALLES: It's in the CER.

MR. JACKSON: If you get salt -- Let me ask this question:

If you get salt water to these pumps caused by sea-level rise, or by tides, or a combination of the above, does that harm your facility? Can you just turn it off without harm?

MR. MIZELL: Objection: Compound.

WITNESS BEDNARSKI: Which question would you like us to answer?

MR. JACKSON: First?

I would like you to answer the question of, it -- Does salt in the system have effects?

WITNESS VALLES: Let me try to address that.

Part of that question is a Modeling question. We don't know where that salt water line actually is.

But, yes, we can actually turn off those -- those cells, or any individual intake. We have ways of doing that.

CO-HEARING OFFICER DODUC: Mr. Jackson, how

much more time do you need to wrap up this line of questioning?

MR. JACKSON: Well, I thought it might -- it might be wise to go with the page numbers, so I actually have from -- I have one question on Page 26 and one question on Page 27, and then I want to talk a little about the conclusion.

I would expect, with the rapid response from these folks, that that would take me about an extra seven minutes.

CO-HEARING OFFICER DODUC: Okay. We'll give you an extra seven minutes.

MR. JACKSON: Thank you.

CO-HEARING OFFICER DODUC: And will the court reporter be okay with that? Then we'll take a 15-minute break.

THE REPORTER: Yeah.

CO-HEARING OFFICER DODUC: Thank you.

MR. JACKSON: On Page 26, Line 10, you have a sentence that says (reading):

"Existing levees in the Delta have been in place and stable for decades."

I take that's -- I take it that that's foundational to the rest of the paragraph, but I'm interested in that.

Where did you get the information that the -- that the levees have been in place and stable for decades?

WITNESS BEDNARSKI: I believe I received that from DWR staff that work in the Delta.

MR. JACKSON: So the design of this Project is dependent on the stability of the levees that they're sitting on; correct?

WITNESS BEDNARSKI: I'm sorry. Could you rephrase -- restate that question?

MR. JACKSON: Yeah. You're -- You're going to use the existing levees for the -- part of the footprint of this Project.

WITNESS BEDNARSKI: In some locations, we'll be temporarily using the levees as part of the footprint for this Project, yes.

MR. JACKSON: All right. And so it's important that you know that they've been stable for decades; correct? Is that what -- Is that what you meant in that reference?

WITNESS BEDNARSKI: What we meant with that reference was that it's our understanding that they are in general good condition, and that is a predecessor to our going out and doing additional studies perhaps in geotechnical investigations on those levees to confirm

their stability and ability to handle construction traffic that would be on those levees in those specific areas.

MR. JACKSON: Thank you.

Just to finish off that thought, on Page 27, Line 9, you say (reading):

"Though not expected, some settlement of the levee foundation could occur as the result of tunneling activities."

If the -- If there is settlement of the levee foundation as a result of tunneling activities, do you mean simply your sites, or does that include the rest of the levee system in the Delta?

WITNESS BEDNARSKI: I believe the sentence was referring to the levees in the proximity to our activities.

MR. JACKSON: All right. The last question, unless there's a followup:

In your conclusion, you indicate that (reading):

"Based upon the facilities descriptions" --

Which are conceptual; correct?

WITNESS BEDNARSKI: That is correct.

MR. JACKSON: , "(Reading):

-- "construction methods" --

Which are -- Well, I guess I -- They're also conceptual.

WITNESS BEDNARSKI: They're conceptual but they're well understood as to what would actually take place in the field.

MR. JACKSON: Well, I -- I presume there was a -- there was a con -- there was a lot of work done before -- in Seattle before they buried the tunnel, that tunneling equipment, and had to figure a way to get it out from under there.

WITNESS BEDNARSKI: I -- I can't offer an opinion on what took place in Seattle.

MR. JACKSON: Okay. And that was one mile; right?

WITNESS BEDNARSKI: I believe that's what I testified to earlier, yes.

MR. JACKSON: Do you have an emergency program if you get one of these seven . . . tunneling operations like we saw in your video? How do you get them out?

MR. MIZELL: Objection: Compound.

CO-HEARING OFFICER DODUC: I think the witness can answer that question.

WITNESS BEDNARSKI: Yes. We'll be developing those types of protocols as we develop our Preliminary and Final Design, as well as our construction

specifications for how to handle those types of potential unforeseen events.

MR. JACKSON: And that will be in the future.

WITNESS BEDNARSKI: What?

MR. JACKSON: That will be in the future.

WITNESS BEDNARSKI: The development of that information?

MR. JACKSON: Right.

WITNESS BEDNARSKI: Yes. The development of that information would take place in Preliminary and Final Design.

MR. JACKSON: Is your conclusion that you personally believe that the CWF construction will not result in any impairment of water quality or significantly affect other legal users of water based solely on the conceptual design that you've done so far and the Draft environmental documents that have been submitted to this Board?

WITNESS BEDNARSKI: Yes, that is my opinion.

MR. JACKSON: No further questions.

CO-HEARING OFFICER DODUC: Thank you, Mr. Jackson.

Before we take our break, two things:

First, I need to correct for the record that Board member Dee Dee D'Adamo will not be here today; and,

second, whoever's computer, laptop, iPad device is making that dinging noise, please turn it off during the break.

With that, we'll take a 15-minute break and we'll resume at 11 o'clock.

(Recess taken at 10:44 a.m.)

(Proceedings resumed at 11:00 a.m.)

CO-HEARING OFFICER DODUC: (Banging gavel.)

All right. It is 11 o'clock and we will resume.

And hopefully whomever it was that was making that dinging noise have now silenced their device.

We'll move on now to Group Number 32, Restore the Delta.

CROSS-EXAMINATION BY

MS. BARRIGAN-PARILLA: Good morning, Hearing Officer Doduc and Chair Marcus.

I have one question with two parts.

Good morning, Mr. Bednarski.

WITNESS BEDNARSKI: Good morning.

MS. BARRIGAN-PARILLA: I'm Barbara Barrigan-Parilla with Restore the Delta.

You stated today design will take four years. The other day you stated construction would take 13 years.

Is the four-year period for design part of the

construction -- 13--year construction period?

WITNESS BEDNARSKI: There would -- There would be overlaps between the design and the construction in our schedule that we're showing.

MS. BARRIGAN-PARILLA: Okay. So do you have a total time period in your mind with the overlap?

WITNESS VALLES: I think it's about 15 years total.

MS. BARRIGAN-PARILLA: Okay. Thank you.

CO-HEARING OFFICER DODUC: Thank you very much.

Group Number 33, PCL.

Actually, that's PCL, Friends of the River, and Sierra Club.

CROSS-EXAMINATION BY

MR. MINTON: Good morning, Mr. Bednarski. This is Jonas Minton, representing the Planning Conservation League and others.

When the tunnel-boring machine used in Seattle malfunctioned, do you know how it was accessed to make repairs?

MR. BERLINER: Objection: Relevance.

CO-HEARING OFFICER DODUC: Mr. Jonas (sic).

MR. MINTON: To determine whether there's going to be harm to lawful users of water, part of the Project includes use of large machines.

Experience with a similar machine in Seattle required repairs that could have impacts. So I would like to ask this witness what was done in that case, and whether similar remedial action might be required for this Project.

CO-HEARING OFFICER DODUC: Mr. Berliner.

MR. BERLINER: If Mr. Minton wants to ask about this Project, he should just ask about this Project, since every one of these Projects is unique.

CO-HEARING OFFICER DODUC: I will allow him a little leeway since that Seattle Project has been raised earlier in this hearing.

But I will advise Mr. Bednarski that, to the extent he cannot answer the question, he should feel free to say so.

WITNESS BEDNARSKI: (Nodding head.)

I know that a number of options were -- Just for my own personal interest and professional interest in the subject, a number of methodologies were examined. The one that was selected -- and I don't know why that methodology was selected -- is, they excavated a new shaft.

MR. MINTON: And they -- Is it correct that they moved the machine back up to the surface so that, with that malfunction, they were able to make the repair?

WITNESS BEDNARSKI: They removed a portion of the machine for repairs. Again, from my knowledge of what I've seen on the Internet, they pulled a portion of the machine out of the ground, not the entire machine.

MR. MINTON: Thank you.

Is it possible that there would be a situation with a significant failure of one of -- one or more of the tunnel-boring machines proposed for the WaterFix Project, that a similar excavation could be required to effect a repair?

MR. MIZELL: Objection: Speculative.

CO-HEARING OFFICER DODUC: Mr. Minton, perhaps you could rephrase that question and, also, break it up so that it is focused on what is being proposed.

MR. MINTON: Very well.

Is it possible that one of these tunnel-boring machines could suffer a significant enough malfunction that it would have -- that some or all of it would have to be excavated and removed from the site from down below? Is that possible?

WITNESS BEDNARSKI: I -- I think, in the -- in the world of all possibilities, that that's possible.

MR. MINTON: Um-hmm. Have you performed any analysis of what the impacts would be to the landowners or groundwater users of such an excavation and removal?

WITNESS BEDNARSKI: We -- We have not covered in our environmental impact, the EIR/EIS, that type of an intervention that would be required if that possibility did occur.

We have documented in the EIR/EIS and in the CER numerous shafts that will be constructed as part of the normal construction operation sequence. And if a shaft for that type of an operation to make a repair -- an unintended repair was required, we would utilize that same type of technology.

MR. MINTON: This would be an additional shaft; is that correct? If it -- If it did not happen to fail right at the location of an existing -- of one of the proposed shafts?

WITNESS BEDNARSKI: That's correct. It would be additive to the number of shafts that we've already identified as part of the California WaterFix.

MR. MINTON: And, obviously -- Or is it correct that you cannot speculate were such a -- a potential failure could occur to analyze what the impacts would be on that location because you don't know the location; is that correct?

WITNESS BEDNARSKI: No, I couldn't speculate on the location of where that might happen.

MR. MINTON: Right. Thank you.

That concludes my questioning.

CO-HEARING OFFICER DODUC: Thank you, Mr. Minton.

Group Number 34 . . . is not here.

Group Number 35 . . . is not here.

37, Miss Des Jardins.

MS. DES JARDINS: If I could have my slides up, please.

Good afternoon (sic), Mr. Bednarski. I'm Dierdre Des Jardins for California Water Research.

Good afternoon (sic), Miss Doduc and Miss Marcus.

CO-HEARING OFFICER DODUC: Actually, it's morning.

And, also, please get closer to the microphone.

MS. DES JARDINS: Sorry. Is that better?

CROSS-EXAMINATION BY

MS. DES JARDINS: Okay. So, you reviewed engineering document Exhibit 212; correct?

WITNESS BEDNARSKI: Yes, I did, um-hmm.

MS. DES JARDINS: Did -- So, part of the design is the seismic hazard analysis; is that correct?

WITNESS BEDNARSKI: Yes, it is.

(Document displayed on screen.)

MS. DES JARDINS: Did you review the seismic

hazard maps which are in the document? These are -- This is an excerpt.

WITNESS BEDNARSKI: Yes, I recognize that document.

MS. DES JARDINS: Okay. So this is a diagram of dates of major earthquakes in the area.

Is that what we're looking at?

WITNESS BEDNARSKI: Oh. Yes.

MS. DES JARDINS: Okay. I'm trying to get this to work.

And this diagram includes -- These are the blind faults in the Delta?

WITNESS BEDNARSKI: That's correct.

MS. DES JARDINS: So the line going down the middle, that's the Southern Midland Fault? Is that -- That's correct?

WITNESS BEDNARSKI: Yes, that's -- that's correct.

MS. DES JARDINS: And the line going under Clifton Court Forebay is the West Tracy Fault?

WITNESS BEDNARSKI: Yes.

MS. DES JARDINS: So there's these zones -- The Thornton -- What is the Thornton Arch Zone?

WITNESS BEDNARSKI: That's an area of potential seismicity in the north, northeast portion of the Delta.

MS. DES JARDINS: And, similarly, with the Northern Midland Zone and the Montezuma Hills Zone.

WITNESS BEDNARSKI: Yes, I believe so.

MS. DES JARDINS: And so the dotted lines are blind faults that aren't at the surface; is that correct?

WITNESS BEDNARSKI: That's my understanding of what a blind fault is.

MS. DES JARDINS: Yeah. And the solid lines are crustal faults, like the Greenville Fault and the Midway Fault, that they're surface faults?

WITNESS BEDNARSKI: Yes, that's my understanding.

MS. DES JARDINS: Okay. So, this is a map of the estimated -- Does "PGA" stand for peak ground acceleration?

WITNESS BEDNARSKI: Yes, it does.

MS. DES JARDINS: What is peak ground acceleration?

WITNESS VALLES: That's the maximum acceleration that will occur at that particular site.

MS. DES JARDINS: All right. And that's determined by the distance to the nearest active fault; is that --

WITNESS VALLES: That's correct.

MS. DES JARDINS: -- correct?

Yeah. So, generally, looking at this, there's higher -- you would say there's higher peak ground acceleration in the western part of the Delta?

WITNESS VALLES: Yes.

MS. DES JARDINS: Okay. And you said this is for a different return period.

So what's a 500-year return period? What does that mean?

WITNESS VALLES: That the earthquake would occur over a 500-year period.

MS. DES JARDINS: And what percentage chance that it would occur in any given year?

WITNESS VALLES: I'd have to look at the --

MS. DES JARDINS: Yeah. Thank you.

WITNESS VALLES: -- map to recall.

MS. DES JARDINS: Yeah. But there's obviously the longer -- this longer period you see a higher peak ground acceleration.

Would that be correct?

WITNESS VALLES: Yes.

MS. DES JARDINS: Sorry. I'm going backwards, I believe.

So, your design criteria is a 1,000-year period; is that correct?

WITNESS VALLES: It depends on the particular

facility.

MS. DES JARDINS: Okay.

WITNESS VALLES: It could be the 1 -- the 500-year return period or the 500-year --

MS. DES JARDINS: Okay.

WITNESS VALLES: -- the 1,000-year.

MS. DES JARDINS: 1,000 or 500.

Okay. So let's -- let's go to number two.

(Document displayed on screen.)

MS. DES JARDINS: All right. So here's the table from Page 46, and these are the values for peak ground acceleration.

Is it correct to say that these are the values that you're using for design?

WITNESS VALLES: That's in the tables, yes.

MS. DES JARDINS: Okay. So it says -- Just above the part -- I didn't highlight it, but it says (reading):

> "For the conceptual level design, and in the absence of more rigorous analyses, a value of approximately one-half of the surface peak ground acceleration was assumed for the structural analyses of the buried tunnel linings."

Can you explain how that estimate was -- was derived?

It's just above the highlighted part of 3.4.1.2.

Do you want me to read it to you again?

WITNESS VALLES: No, I'm reading it.

That typically comes from a geologist, and Prada would be best to answer that.

MS. DES JARDINS: Okay. The -- Are you planning to do more detailed analysis of that assumption as part of your design?

WITNESS VALLES: Yes.

MS. DES JARDINS: Okay. So the next thing, looking at the -- So you have a seismic hazard analysis for the forebay locations.

You say they'll be under the jurisdiction of DSOD. Does that stand for Division of the Safety of Dams?

WITNESS VALLES: That's correct.

MS. DES JARDINS: Isn't -- And the Clifton Court Forebay is currently under that jurisdiction?

WITNESS VALLES: Clifton Court and Intermediate Forebay would.

MS. DES JARDINS: At Clifton Court Forebay, the existing facility is currently -- Is that currently in --

WITNESS VALLES: That's correct.

MS. DES JARDINS: Okay. So you have --

Estimating hazard level is moderate bordering on high.

Do you have any more information on how that -- how -- how you got that rating?

WITNESS BEDNARSKI: I don't believe we have anything more than what's presented in here, based on those peak ground accelerations that you had on the previous table.

MS. DES JARDINS: Okay.

WITNESS BEDNARSKI: I believe there's a second table that talks about the deterministic method that would be used by DSOD to evaluate our design. You know, we -- we determined it to be moderate to high based on those -- those blind faults that are in the area and the PGAs that could be associated with those faults.

MS. DES JARDINS: Okay. So, this -- this is a table of active faults surrounding the Intermediate Forebay. It indicates you're not including the blind faults?

WITNESS BEDNARSKI: Could you flip back to that table?

MS. DES JARDINS: Yeah.

(Document displayed on screen.)

MR. MIZELL: Is there a question pending?

MS. DES JARDINS: Are you not including the blind faults in the seismic hazard analysis for the

Intermediate Forebay?

WITNESS BEDNARSKI: I -- I believe the Thornton Arch Zone is considered a blind fault area. That's to the best of my understanding.

I -- I believe that the other ones that are listed there as not analyzed will be examined in Preliminary and Final Design and in our approval process by DSOD. I do not know why they were not analyzed for the CER.

MS. DES JARDINS: It does say, for the deterministics -- On this page (reading):

"For the deterministic seismic hazard analysis at the forebay locations, PGA values were estimated from the occurrences of earthquakes on the crustal faults near the forebays."

So, is that just the surface faults or does that include the blind faults?

WITNESS BEDNARSKI: I am not aware as to which it includes. Our fourth panel member was going to be prepared to answer those questions.

MS. DES JARDINS: Okay.

WITNESS BEDNARSKI: He's a Geotechnical Engineer.

MS. DES JARDINS: When will he be -- He will be testifying in two weeks?

MR. MIZELL: He'll be available after August 17th.

MS. DES JARDINS: Okay. Thank you.

So I wanted to ask you about liquefaction, too.

So this shows (reading):

"Available subsurface information indicates that the potential for liquefaction exists along all sides of the expanded Clifton Court Forebay."

Have you reviewed this?

WITNESS BEDNARSKI: Yes, I have.

MS. DES JARDINS: Yeah. So that -- What kind of risks would that pose to the -- the forebay embankment if there was liquefaction?

WITNESS BEDNARSKI: It -- I -- From the text here, it says that it's -- it appears to be limited to the west and the south sides. If there was liquefaction, you'd see settlement or subsidence of the embankments.

MS. DES JARDINS: Okay. And it says here (reading):

"For the Main Tunnels, extensive liquefaction of the upper 40 to 60 feet is predicted in areas with soft and loose soils, and liquefaction-induced settlement of the Main Tunnel drive shafts and reception shafts working pad fills can be expected."

WITNESS BEDNARSKI: Yes, that's what we

documented.

MS. DES JARDINS: Okay. Next -- Next slide, please.

(Document displayed on screen.)

MS. DES JARDINS: Okay. So this brings me to your safety section.

And I see here that, you know (reading):

"There are active natural gas fields beneath the anticipated alignment . . ."

WITNESS BEDNARSKI: Yes, that's what we've documented in the CER.

MS. DES JARDINS: Do you have any mapping of the gas fields?

WITNESS BEDNARSKI: I believe we presented an exhibit in the CER, DWR-212, that showed an area-wide distribution of gas wells that we've been able to retrieve from State -- State logs.

MS. DES JARDINS: Yeah. So you're anticipating that (reading):

". . . OSHA might classify the tunnels as 'potentially gassy.'"

Let's go up.

(Document displayed on screen.)

MS. DES JARDINS: It says it (reading):

". . . Requires high levels of precautions

related to tunnel construction safety."

MS. RIDDLE: Miss Des Jardins, for the record, can you go and indicate what exhibit you're referring to and page number --

MS. DES JARDINS: Oh, yeah. Sorry. Sorry.

This is DWR-212, Page 1 -- the section on safety, Page 147 and 148.

So this is the (reading):

". . . Levels of precautions related to tunnel construction safety."

You're saying that (reading):

". . . Tunnel-boring machines are required to be equipped with gas monitoring equipment that automatically shut down . . . if gas is detected."

Are there any other safety precautions for the gas fields that you anticipate during construction?

WITNESS BEDNARSKI: The "potentially gassy" classification is -- is a fairly common classification by Cal/OSHA and there are a number of requirements, including the shutdown requirements. Ventilation requirements in the tunnel are increased above the tunnel that's not determined to be in that category.

And then, also, electrical components need to be designed in a -- in a certain manner that's more robust than a tunnel that's not classified as potentially

gassy.

MS. DES JARDINS: Will there be any way to alert neighboring properties if there is an accidental gas leak as a result of the boring?

WITNESS BEDNARSKI: Could you be more specific about a potential gas leak? We're -- We're not antici -- And I might just add, we're not anticipating that we are going to strike either an active or an abandoned well that would discharge gas into the tunnel.

The "potentially gassy" is more just gas present in the soil at that depth, and that is not representative of -- of gas well fields that are located thousands of feet below the tunnel alignment.

MS. DES JARDINS: So -- So . . . So you don't think you're going to -- going to hit any wells.

WITNESS BEDNARSKI: We plan to -- We plan to implement a very rigorous reconnaissance program as part of the Preliminary Design activities that would include going through the State's records to find the location of wells that are either active or have been abandoned but have been identified in that record.

And then beyond that, we will do a number of field investigations to find potentially undocumented abandoned wells that would be on our alignment, and to take the appropriate actions to either avoid those or to

remove them before our tunneling.

So we see this as a very important activity that will be done early in the design process.

MS. DES JARDINS: Is there any potential that you might strike a gas well that you haven't located or have not located correctly?

MR. MIZELL: Objection: It's speculative.

And I believe the witness has answered the question, that we'll do due diligence to find all gas lines.

CO-HEARING OFFICER DODUC: Miss Des Jardins --

MS. DES JARDINS: Okay.

CO-HEARING OFFICER DODUC: -- I would suggest you move on.

MS. DES JARDINS: Okay. The next thing in the safety thing is the behavior under seismic events.

And this states your Preliminary Design for the tunnels is for an average recurrence of a thousand years; is that correct?

WITNESS BEDNARSKI: Yes, that is correct.

MS. DES JARDINS: (Reading):

"All structural systems shall be considered as Essential Facilities per California Building Code, which means the key systems shall remain operational after the maximum considered earthquake."

This is Page 148 to 149 of Exhibit DWR-212.

I'm wondering, does this mean you're designing the systems to remain operational after the maximum considered earthquake?

WITNESS VALLES: Yes, that's correct.

MS. DES JARDINS: Does it mean you're proposing that they will be -- will continue to be operated after -- continuously after the maximum permitted earthquake?

WITNESS VALLES: Yes.

MS. DES JARDINS: Is -- Are you considering that to be part of the Diversion Permit?

WITNESS VALLES: This is part of the design criteria. It's a requirement of the Building Code --

MS. DES JARDINS: Yeah.

WITNESS VALLES: -- for essential facilities.

MS. DES JARDINS: So, in -- in doing so, have you reviewed failures of any similarly designed tunnels --

MR. BERLINER: Objection --

MS. DES JARDINS: -- of water supplies?

MR. BERLINER: Objection: Vague. "In doing so," referring to what?

MS. DES JARDINS: Yeah. In considering -- In considering that you will continue operating the system

after a maximum considered earthquake, do you have any plans for inspection of the system for potential leaks after an earth -- after a large seismic event?

WITNESS BEDNARSKI: I'm not entirely familiar with DWR's, like, emergency response procedures. But what you've mentioned would be prudent before they reinitiated operation of these facilities, would be to inspect them thoroughly to make sure that there wasn't any damage.

MS. DES JARDINS: Oh. The procedure here just says, "remain operational."

Is that conditioned on DWR's safety procedures? They're -- They're not referenced here.

WITNESS BEDNARSKI: We -- By -- What we intended with that sentence was that we would be able to have the capabilities to restart the system and deliver water after such an event without having to make major repairs to the system.

The definition of essential facilities per the Building Code is that you can return that facility back to its intended purpose without having to, you know, do significant repairs to its capabilities.

Now, whether DWR can divert under their permit after such an event, we don't have knowledge of that in the Engineering Group.

MS. DES JARDINS: Well, I think it would be -- Do you think it would be good to clarify what the proposed operating procedures would be after such an event?

MR. BERLINER: Objection: Relevance.

CO-HEARING OFFICER DODUC: Miss Des Jardins, perhaps you can save that question for the Operations Group.

MS. DES JARDINS: Okay. Thank you.

So let's get -- So, this talks about the conceptual design of the segment liner, and it says that you considered these different kinds of ground strains.

Did you include the conceptual design document of the segment liner? I found it referenced but I didn't see it in the submitted exhibits.

WITNESS BEDNARSKI: Yes, it's included in DWR-212. It's one of the appendices to that report.

MS. DES JARDINS: One of the appendices?

WITNESS BEDNARSKI: Yes.

MS. DES JARDINS: Okay. Thank you.

So it says here on Section 11.6 (reading):

"Recommended engineering analyses include . . . seismic motions and deformation . . . segment leakage analysis and design . . . evaluation of need for secondary lining or membrane due to internal

tunnel pressures."

So the status of these is that you're recommending that they be done?

WITNESS BEDNARSKI: We -- We are recommending that these additional analyses be done during Preliminary Design before we move into Final Design to answer these remaining questions.

MS. DES JARDINS: Is -- Is there -- So, why hasn't more of the seismic design been done? I mean, it's just at a conceptual level?

WITNESS BEDNARSKI: Yes, because it's at a conceptual level.

MS. DES JARDINS: Yeah.

WITNESS BEDNARSKI: We have a concept for the tunnel lining system.

MS. DES JARDINS: Is -- Is there -- "Recommendation" is not the same as "commitment" to do these analyses.

Is -- Is there any commitment to implement these recommendations?

WITNESS VALLES: These -- These are standard engineering practices. Engineers would be remiss by not doing these analysis as part of their design.

MS. DES JARDINS: Respectfully, the assumption of standard engineering practices is not always

justified.

CO-HEARING OFFICER DODUC: What is your question?

MS. DES JARDINS: Is there a commitment -- So there is no commitment.

You're saying that these are part of standard engineering practices, but there is not a commitment to do these?

MR. MIZELL: Asked and answered.

CO-HEARING OFFICER DODUC: Actually --

MS. DES JARDINS: Is there a --

CO-HEARING OFFICER DODUC: -- I didn't hear an answer so --

MS. DES JARDINS: Is there a commitment to use these standard engineering practices in this tunnel design?

WITNESS VALLES: Yes.

CO-HEARING OFFICER DODUC: You got your answer, Miss Des Jardins.

MS. DES JARDINS: Okay. Okay. Next -- Next slide.

(Document displayed on screen.)

MS. DES JARDINS: This is the tunnel joints. You're -- You're designing them to support these.

Are -- Are these a potential failure -- a

potential failure location during a seismic event?

WITNESS BEDNARSKI: I don't believe so.

MS. DES JARDINS: It says here (reading):

"Excessive leakage through the liner could lead to potential soil erosion, hydraulic fracturing and loss of liner support. Water leakage from the tunnel to the surrounded area also translates to economic loss."

Is -- If the tunnel -- If the liner did start to leak, how much water could be lost before it was stopped?

MR. BERLINER: Objection: Speculative; and incomplete hypothetical.

We don't have any criteria that she specified.

MS. DES JARDINS: Are there going to be shutoff valves in the tunnel to stop water -- to close it off in the event of such a leak?

WITNESS BEDNARSKI: There -- There would not be shutoff valves, I think, as many people would think of them as being somewhere along the tunnel alignment.

We would rely on isolating the -- the WaterFix facilities by lowering gates at the intake structure and down at the pump stations and then we would have a series of dewatering pumps that, you know, we could use to empty the tunnels if inspection was required.

MS. DES JARDINS: If you had a leakage, though, potentially, the volume of water that was in the tunnels could -- could leak?

WITNESS BEDNARSKI: I think that's highly un -- highly unlikely that we would lose the entire volume of water in the tunnels under the leakage scenario.

MS. DES JARDINS: Have you -- How much have you looked at other -- other failures in this kind of construction in seismic situations?

WITNESS BEDNARSKI: Actually, our investigations have shown that tunnels perform very well in seismic events, as evidenced by a number of examples throughout the world.

MS. DES JARDINS: Did you ever look at the Santa Clara conduit?

WITNESS BEDNARSKI: I -- I am not familiar with that project.

MS. DES JARDINS: So, again, this is a (reading):

"Finite element model . . . based on Maximum Considered Earthquake events."

So this has not been done yet?

WITNESS BEDNARSKI: No, it has not.

MS. DES JARDINS: And so the -- This is -- I mean, when you look at Maximum Considered Earthquake

events, will you consider the Southern Midland Fault as a source, as the -- as well as the crustal faults?

WITNESS VALLES: It will consider all faults and the energy that's anticipated to arrive at those particular facilities.

MS. DES JARDINS: Okay. Thank you.

Next slide, please.

(Document displayed on screen.)

MS. RIDDLE: Just for the record, those last two pages were DWR-212, Pages 142 and 143; correct?

CO-HEARING OFFICER DODUC: Is that correct, Miss Des Jardins?

MS. DES JARDINS: Yes.

Okay. And so this is DWR-60. This is a question about --

CO-HEARING OFFICER DODUC: I'm sorry. It says DWR-212.

MS. DES JARDINS: DWR-212, Page 60.

And this talks about Clifton Court Forebay. It says (reading):

"The . . . maximum storage is 28,653 acre-feet at the normal maximum water surface elevation."

That's correct?

WITNESS BEDNARSKI: Yes, it is.

MS. DES JARDINS: It says (reading):

"For future operations, and unless engineering improvements are made to the perimeter embankment around Clifton Court Forebay, the maximum operating water surface elevation has been reduced by one foot."

So you're familiar with that provision?

WITNESS BEDNARSKI: Yes, I am.

MS. DES JARDINS: Why would it need to be reduced by one foot?

WITNESS BEDNARSKI: My recollection is that in order to make the hydraulics work between the new California WaterFix facilities and the existing Clifton Court, that there is some loss in elevating -- elevation -- operating elevation in Clifton Court if this is -- the southern portion of Clifton Court Forebay.

MS. DES JARDINS: Do you recall when Clifton Court Forebay was constructed?

WITNESS BEDNARSKI: No, I do not.

MS. DES JARDINS: Do you know if a seismic hazard reevaluation was ever done for the forebay embankment?

MR. MIZELL: Objection: Relevance.

CO-HEARING OFFICER DODUC: I think the witness can answer a yes-or-no question.

WITNESS BEDNARSKI: I'm -- I'm not aware that

one has or has not been done.

MS. DES JARDINS: Are you considering -- In looking at the seismic design of the system, are you considering any -- any need for potential upgrades to Clifton Court Forebay, seismic upgrades?

WITNESS BEDNARSKI: We are planning to upgrade those portions of Clifton Court that are in the north portion of Clifton Court that will receive the screened water.

MS. DES JARDINS: Okay. Isn't it normal practice, if you discover significant new seismic sources, to do a seismic hazard evaluation -- reevaluation for a structure?

WITNESS VALLES: DSOD has a number of requirements, and they would dictate to us what we're obligated to do in terms of the seismic analysis.

MS. DES JARDINS: Can I go to -- I have a reference.

I -- I would like request to do this.

So, this is from -- I did look up the most recent seismic hazard analysis for Clifton Court Forebay, and I wanted to introduce it. I believe it is relevant to these questions.

That's -- That's the graph at the bottom.

(Document displayed on screen.)

And I wanted to -- Let's scroll down to the bottom.

(Document displayed on screen.)

MS. DES JARDINS: So this is from -- It's the Delta Levees Investigation, 1982. It was a hard copy and was scanned. It's Page 48. It refers to (reading):

"Revaluation of seismic hazards for Clifton Court Forebay, Bethany Dams and Reservoir, Patterson Reservoir, Del Valle Dam and Lake Del Valle," July 1979.

It states (reading):

"The Department of Water Resources reviewed the Midland Fault because it crosses the Central Delta and several recent levee failures are near it, suggesting a possible correlation. The fault was reported to be active and capable of producing a Richter" -- can we go to the top so I can read the rest -- "a Richter magnitude 7 earthquake. However, several more recent studies by the Department and by the Division of Mines and Geology conclude that it is Inactive, and there is no geologic evidence that the Midland Fault is active or has been active for about 20 million years."

So, would it be correct to say that this analysis -- seismic analysis assumes that the Midland

Fault was not active?

WITNESS BEDNARSKI: Which -- Which seismic analysis from you referring to? The one --

MS. DES JARDINS: Well --

THE WITNESS: -- that we're just reading here?

MS. DES JARDINS: Yes. This refers to -- The three stars, it refers down to the Seismic Hazard Revaluation of Clifton Court Forebay.

Would it be correct to say that the Seismic Hazard Revaluation which was done in 1979 assumed that the Midland Fault was not active?

MR. BERLINER: I'm going to object. This is one page out of an extensive document. If the questioner has the document available for the panel to review, but I think it's unfair to ask about one sentence in a lengthy document.

CO-HEARING OFFICER DODUC: Mr. Bednarski, are you familiar with this document?

WITNESS BEDNARSKI: No, I'm not familiar with that document.

MS. DES JARDINS: Okay.

CO-HEARING OFFICER DODUC: Miss Des Jardins, I appreciate that you want to introduce this as part of your cross-examine, but mindful that this is not something that's familiar to the witness, I --

MS. DES JARDINS: Section --

CO-HEARING OFFICER DODUC: -- I'm not sure how much further you can go with this.

MS. DES JARDINS: Section 11513(b) does allow one to question on related matters.

And I believe that the seismic hazard evaluation status of Clifton Court Forebay, which is clearly part of the proposed system, is relevant and --

CO-HEARING OFFICER DODUC: It is, and you may ask him those questions. But keep in mind if you're asking for his opinion on a report that he has not seen, is not familiar with, he will have to be limited in his response.

MS. DES JARDINS: Okay.

CO-HEARING OFFICER DODUC: So you may proceed with that caveat.

MS. DES JARDINS: Okay. So this is just a -- I introduced it and you looked at it. I do have the entire document. I have a declaration of where I downloaded it from.

CO-HEARING OFFICER DODUC: So you've introduced this.

MS. DES JARDINS: Yes.

CO-HEARING OFFICER DODUC: Tie this back to the Project that is before us and ask him the question that

you intend to.

MS. DES JARDINS: Given -- Do you -- Given this information, do you think that, in your -- As an engineer, do you think that it might be a good idea to do a seismic hazard revaluation of the entire Clifton Court Forebay?

WITNESS BEDNARSKI: I -- I don't think that I'm in a position to answer that. My focus has been on the California WaterFix, not on looking at, you know, necessarily the seismic stability of the entire Clifton Court area.

MS. DES JARDINS: But the forebay is part of your proposed design.

WITNESS BEDNARSKI: Yes, portions of the forebay are within the California WaterFix.

MS. DES JARDINS: And isn't it normal engineering practice, when you're doing an addition to a structure, to consider the seismic safety, not just of the portion that you're enlarging, in this case, but of the entire structure?

WITNESS BEDNARSKI: Our direction was to look at the portion that we were making improvements to and bring those facilities up to the same level of seismic resilience that the rest of the California WaterFix would be.

MS. DES JARDINS: As an engineer, can you say whether this would -- would upgrade the entire system to -- to an appropriate level or if -- up to an appropriate level?

WITNESS BEDNARSKI: As an engineer, I would respond that this work that we would do at North Clifton Court would bring that portion of Clifton Court up to a consistent level with the rest of the California WaterFix facilities that we are designing.

It does not address the southern part -- portion of Clifton Court necessarily in all of its -- all of its manners.

MS. DES JARDINS: If the southern portion failed in a seismic event, would that impact the operate -- the facility -- the Project operations?

MR. MIZELL: Objection: Vague.

Can she specify what -- you know, what magnitude seismic event she's talking about, what other factors might be at play in the hypothetical?

CO-HEARING OFFICER DODUC: Hold on.

Before she does, though:

Mr. Bednarski, earlier in this cross-examination, you deferred some of the seismic-related questions to your colleague who's not here, Mr. Pirabarooban, who will be here after

August 17th.

Is it sufficient to say that he is the seismic expert on this panel?

WITNESS BEDNARSKI: He's our geotechnical engineer and he would be able to answer these questions in more detail than I am.

CO-HEARING OFFICER DODUC: Keep that in mind, Miss Des Jardins.

MS. DES JARDINS: So the other thing -- So the Division of Safety of Dams is a division of the Department of Water Resources; is that correct?

WITNESS BEDNARSKI: I believe so, yes.

MS. DES JARDINS: Okay. Thank you.

I'd like to go to the next slide. It's -- I think it's number -- the one on the pumps, Number 6.

(Document displayed on screen.)

MS. DES JARDINS: So let's scroll down.

This is a question about your proposed pumping facilities at Clifton Court Forebay.

It states (reading):

"To provide the firm design capacity of 9,000 cfs, a total of 12 pumps will be provided in the two pumping plants. Eight of the pumps will have a design capacity of 1,125 cfs and four will have a design capacity of 563 cfs."

That's correct?

WITNESS BEDNARSKI: That's correct.

MS. DES JARDINS: Okay. Let's scroll down. This is Page 105 and 106 of DWR-212.

Let's go down to the bottom there.

(Document displayed on screen.)

MS. DES JARDINS: Yeah. So there's the total design flow of the impact capacities.

You're familiar with this table?

WITNESS BEDNARSKI: Yes, I am.

MS. DES JARDINS: Okay. Let's go to the next page.

(Document displayed on screen.)

MS. DES JARDINS: So this is -- shows the -- the head for the pumps and . . .

Can you explain what "head" means in this context?

WITNESS BEDNARSKI: The head is a hydraulic head that's acting on the pumps providing, you know, the ability of the pumps to lift the water.

MS. DES JARDINS: So -- And these curves that are coming down show, let's say, one pump, two pumps, et cetera.

Those show the operation with those pumps being brought online; is that correct?

WITNESS BEDNARSKI: Yes, it does.

MS. DES JARDINS: And so the curve with the design head shows how many pumps would be brought online with -- Is that the cfs at the bottom?

WITNESS BEDNARSKI: Yes, it is.

MS. DES JARDINS: Okay. And so you would be -- Does this curve show that you would be cycling these pumps on and off to maintain the design head?

WITNESS BEDNARSKI: No, we would not.

The design head is set by a number of factors, including the water level elevation in the Sacramento River, the amount of water that we'd be diverting as that translates to friction loss or head loss through the tunnels, and then, you know, the final head just at the pump -- pump bowl or the suction. That's the elevation there that you'd be lifting it, so . . .

MS. DES JARDINS: So you would be using -- using the pumps to maintain the -- the flow in the tunnels and to lift it to Clifton Court Forebay; is that correct?

WITNESS BEDNARSKI: Yes. I think what this graph is meant to show is that, under different operating conditions, based on what we refer to as high head, which is actually a low water surface elevation in the Sacramento River, all the way to what we consider a

normal low head, which would be a high water surface in the Sacramento River, we would utilize different number of pumps to provide different -- different flow rates, whatever DWR wants to provide, but -- Yeah.

MS. DES JARDINS: Okay. Thank you.

Let's scroll down a little more.

(Document displayed on screen.)

MS. DES JARDINS: Let's see. So it says (reading):

". . . The large pumps will provide flow increments of approximately 1,000 cfs with each additional pump that is put into service. Inclusion of the small pumps . . . reduces the operating flow increments by approximately half."

So -- And does this mean that you would be cycling the pumps on and off during the operations?

WITNESS BEDNARSKI: Depending on the specific operating conditions at any time, again, primarily driven by the water level in the Sacramento River and the desired pumping rate, you would turn on a certain number of these pumps with the install pumps being provided so that you could get increments in between the larger pumps, if necessary.

I don't necessarily see that as a cycling of on and off pumps.

MS. DES JARDINS: I see.

WITNESS BEDNARSKI: It's set based on water level.

MS. DES JARDINS: I agree cycling is not the appropriate thing.

So, would there be any reason that you couldn't turn all the pumps off if you needed to, to reduce diversions?

WITNESS BEDNARSKI: I'm sorry. I didn't -- Could you repeat that question?

MS. DES JARDINS: Would there be any reason that you couldn't turn all the pumps off?

WITNESS BEDNARSKI: No. You'd have the capability to turn all the pumps off, yes.

MS. DES JARDINS: Do you have any idea why it's not possible to turn the pumps off at the Banks Pumping Plant?

MR. MIZELL: Objection: Speculative.

She can get that answer from an operator more efficiently.

MS. DES JARDINS: Thank you.

If all the pumps are off, would there still be some flow through the tunnels? Would there still be some diversions?

WITNESS BEDNARSKI: I believe, as I previously

testified in my presentation in DWR-212, we've disclosed that under certain operating conditions of water flows in the Sacramento River, that you could flow entirely by gravity without any of the pumps running, if that's what your question was.

MS. DES JARDINS: Yeah. Do -- Do you -- It's -- Is there going to be a minimum diversion rate from the Sacramento River, and if so, have you looked at that, when the gates are open on the intakes?

WITNESS BEDNARSKI: It's -- It's my understanding that there might be some minimum flow in the California WaterFix, somewhere around 300 cfs possibly, but it could be zero if necessary.

MS. DES JARDINS: So that would depend on whether or not you closed or opened the gates to the intakes?

WITNESS BEDNARSKI: Yes. Without the gates being open, there would be no diversion.

MS. DES JARDINS: So, are there any proposed operating criteria for the gates as part of this Project?

MR. MIZELL: Objection: Beyond the scope of this expert's testimony, the operation --

CO-HEARING OFFICER DODUC: And he may answer so.

WITNESS BEDNARSKI: We're providing a great

deal of flexibility on the operation of those gates to respond to whatever, you know, operational requirements DWR has.

So what those operations would be specifically, I don't know, but we've provided a system that will provide successful operation over a wide range of conditions.

MS. DES JARDINS: Thank you.

I believe that concludes my questions.

CO-HEARING OFFICER DODUC: Thank you.

And since it's closing to the noon hour, we will take our lunch break and we will resume at 1 p.m.

Thank you.

(Luncheon recess was taken at 11:56 p.m.)

Tuesday, August 9, 2016 1:00 p.m.

PROCEEDINGS

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CO-HEARING OFFICER DODUC: (Banging gavel.)

All right.

Good afternoon. Welcome back.

Mr. Aladjem.

MR. ALADJEM: Yes, Chair Doduc. David Aladjem, Sacramento Valley Water Users.

Just a question of the Chair as to the plan for the afternoon, and would it be possible for us to know how long cross-examination is likely to go, because there's a great deal of interest in the next panel. I'd like to know when people could show up.

CO-HEARING OFFICER DODUC: Well, it depends on the cross-examiners, but I do not have many left, so I expect we will get to Panel Number 3 today, at least for their direct, anyway.

MR. ALADJEM: Thank you, Madam Chair.

CO-HEARING OFFICER DODUC: Okay. Not seeing anything else, please take a moment and make sure that you have not turned on any noise-making devices during your lunch break. You know how I feel about those dings and musical tones.

Everyone's checking.

All right. With that, we'll resume cross-examination with Group Number 38.

MR. EICHENBERG: I think we're 39.

CO-HEARING OFFICER DODUC: Oh, is Group Number 38 here?

Group Number 38 is not here so we move on to Group Number 39.

MR. EICHENBERG: Good afternoon. I'm Ben Eichenberg for PCFFA and IFR.

CO-HEARING OFFICER DODUC: I'm sorry. That is Group 38.

MR. EICHENBERG: Oh, it is Group 38? I'm sorry. I had it down wrong.

CO-HEARING OFFICER DODUC: Okay. Well, I have you as Group 38.

MR. EICHENBERG: Well, you're right.

CO-HEARING OFFICER DODUC: Thank you. I think you'll get an extra five minutes just for that.

(Laughter.)

CROSS-EXAMINATION BY

MR. EICHENBERG: Good afternoon, Miss Buchholz, Mr. Valles and Mr. Bednarski, if I got all those names right.

WITNESS BEDNARSKI: Good afternoon.

MR. EICHENBERG: On -- On your testimony on

Page 8, which I think I have a slide of --

(Document displayed on screen.)

MR. EICHENBERG: -- you state in your testimony that the clean WaterFix has the ability to (reading):

"Withstand a 200-year flood event with the sea level rise predicted from climate change.

Is that right?

WITNESS BEDNARSKI: That's correct.

MR. EICHENBERG: How was this design criteria selected?

WITNESS VALLES: That was given to us by the Department as a design criteria that we needed to apply.

MR. EICHENBERG: So you're -- You don't know what the process was for selecting that criteria?

WITNESS VALLES: No. I think -- I think that the Army Corps, for these levees, is requiring a 200-year flood event.

MR. EICHENBERG: Do you -- Do you know why a 200-year as opposed to, say, a 500-year flood event horizon --

WITNESS VALLES: No.

MR. EICHENBERG: -- was selected? No.

In your expertise as an engineer, is that a reasonable assumption to make or a design criteria to make?

WITNESS BEDNARSKI: Could I interject?

Our missing panel member was really specifically going to address those questions along with the geotechnical ones.

CO-HEARING OFFICER DODUC: All right. We'll save that one, if you don't mind.

MR. EICHENBERG: I'd like to object at this time to introduction of evidence based upon testimony of a missing panel member.

We were led to believe that there would be somebody here who we could ask these questions of --

CO-HEARING OFFICER DODUC: Yes. We --

MR. EICHENBERG: -- and it seems a big hardship to prepare twice, and I have to ask all the same questions because I don't know what these panel members might know and what the other panel members might know.

CO-HEARING OFFICER DODUC: You may ask the question. He, of course, may defer to his missing panel member. And we have already established that that member will not be available until after August 17th, at which time he will be available for questioning.

MR. EICHENBERG: So -- sorry -- does that mean that we're going to have another cross-examination session like this?

CO-HEARING OFFICER DODUC: Just for that fourth

member --

MR. EICHENBERG: Just that one member.

CO-HEARING OFFICER DODUC: -- specific to questions that have been deferred to him.

MR. EICHENBERG: Okay. Yeah. So, obviously, I have to ask all the same questions because, when he's sitting here in your seat, then I don't want him to say, "Well, those are the guys you should have asked."

So --

CO-HEARING OFFICER DODUC: I'm sorry. I didn't follow that.

MR. EICHENBERG: I'm explaining that I need to ask the questions even if I suspect that he might be the expert because I don't want -- When he's sitting in that seat, I don't want him to say, "Well, I don't know the answer to that question. That was the other panel that you should have asked, or that was my co-panelists that you should have asked."

Does that make sense?

CO-HEARING OFFICER DODUC: Let me see if I can help this along, Mr. Bednarski or Mr. Mizell or Mr. Berliner.

What specific topics is your fourth member especially -- especially addressing that is not within the scope of the expertise of these three panel members?

WITNESS BEDNARSKI: I would suggest the Geotechnical Engineering areas that we've previously acknowledged. These deal with -- The flood protection criteria were set with his involvement in some of those activities early on.

And then there was also some -- some river modeling as it might apply to, you know, the setup of the intakes, those -- those areas in particular, geotechnical and then the flood.

That's all I can think of at this time.

CO-HEARING OFFICER DODUC: Okay. Geotechnical and flood-related.

MR. EICHENBERG: Okay. And I feel like that's a lot of what my questions might center on, and it's a lot of -- I know that Miss Des Jardin's testimony -- cross centered on.

I might suggest that we -- that we suspend the current cross-examination and start again with the full panel when the full panel's available.

CO-HEARING OFFICER DODUC: I appreciate your suggestion, but that's not how we've been proceeding and so we will continue with these three witnesses, and we'll resume cross-examination of the fourth witness when he's available.

MR. EICHENBERG: Okay.

CO-HEARING OFFICER DODUC: I appreciate that it is somewhat out of order, but we -- we had to accommodate, I guess, his absence.

MR. EICHENBERG: Sure. No, I understand. We're doing our best.

CO-HEARING OFFICER DODUC: Thank you.

MR. EICHENBERG: And this is Mr. Pirabarooban?

WITNESS BEDNARSKI: Yes.

CO-HEARING OFFICER DODUC: And is there someone else involved in the project that has the same expertise as Mr. Pirabarooban?

WITNESS BEDNARSKI: Not at the present time.

MR. EICHENBERG: Is there a Supervisor, or something like that, who would know the same things that he knows?

WITNESS BEDNARSKI: Not that I'm aware of.

MR. EICHENBERG: In the event of Mr. Pirabarooban's unavailability due to, say, illness or something like that, is there anybody who would be able to step in and take his place in the project?

WITNESS BEDNARSKI: I would have to research that and see if there is. I'm not aware.

I'm sure that DWR does have someone that could respond, but I don't know the name of that person.

MR. EICHENBERG: Okay. If -- If, in an

eventuality where he was not available, would the planning for the project be significantly delayed due to his lack of availability?

WITNESS BEDNARSKI: Are you talking about the current phase when you refer to planning of the project?

I'm not quite sure what you're referring to when you --

MR. EICHENBERG: My understanding was, the current phase is finished. So I guess I'm talking about the next phase, if there's -- there's a final and I forget what they're called.

WITNESS BEDNARSKI: Preliminary and Final Design?

MR. EICHENBERG: Yeah. We've been talking about, like, a four-year planning phase divided between Preliminary and Final Design.

WITNESS BEDNARSKI: Right.

MR. EICHENBERG: Does that four-year planning, would that be significantly delayed by not having somebody as important as Mr. Pirabarooban?

WITNESS BEDNARSKI: I believe we would bring in a new individual, and they would acquaint themselves with the Project and be able to step in in a relatively short time.

MR. EICHENBERG: Thank you.

Does the population of the 200-year flood event, does that include 200 years of climate change?

WITNESS BEDNARSKI: I do not believe it does.

MR. EICHENBERG: Why not?

WITNESS BEDNARSKI: To the best of my knowledge -- and I don't know what this window was -- but a certain window of time in the future was established for what climate change would do to sea level rise at that point and that was -- that was the determining factor.

MR. EICHENBERG: Okay. You stated earlier that the WaterFix is designed for 100 years; is that right?

WITNESS BEDNARSKI: That's correct.

MR. EICHENBERG: What is the probability that a 200-year flood event will occur in any given year?

WITNESS BEDNARSKI: I don't have that number.

You know, off the top of my head, I know there's a calculation that you can run to calculate that. I don't have that available.

MR. EICHENBERG: I guess that goes to the definition of a 200-year flood event.

Do you know what the definition of a 200-year flood event is?

WITNESS BEDNARSKI: I'd be speculating. I'm not an expert on that on our panel.

MR. EICHENBERG: Has the performance of the Project been examined in the event of a 500-year flood event?

WITNESS BEDNARSKI: That was not part of the criteria that was given to the Engineering Team.

MR. EICHENBERG: And do you know the likelihood of a 500-year flood event occurring in a hundred years of the Project?

WITNESS BEDNARSKI: No, I do not.

MR. EICHENBERG: Why were 1,000-year and 500-year seismic events analyzed but not flood events?

WITNESS VALLES: Those are the -- Those, again, are criteria that are typically given to Engineers from the geotechnical world.

Prada, again, would be the best person to respond to that one.

MR. EICHENBERG: Is it your experience as Engineers that there's a difference between seismic events and flood events as far as event horizons, which is what we're talking about?

WITNESS VALLES: I would expect so, yes.

MR. EICHENBERG: And what -- In your experience, why is there a difference between the seismic events and flood events?

WITNESS VALLES: I can't answer that.

MR. EICHENBERG: Does the likelihood of an extreme storm event, such as a 200- or 500-year storm, does that increase as a result of climate change?

WITNESS BEDNARSKI: I really have no knowledge about climate science and whether it increases or not.

MR. EICHENBERG: Did -- Would Mr. Pirabarooban have additional knowledge on that or --

WITNESS BEDNARSKI: I don't know.

MR. EICHENBERG: -- is there anyone on the Project --

WITNESS BEDNARSKI: I wouldn't want to speculate about that. That might be another branch of science.

MR. EICHENBERG: Is there anyone with the Project who has -- who looked at climate size?

WITNESS BEDNARSKI: Not part of the Engineering Team, no.

MR. EICHENBERG: What about with the rest of the Project?

WITNESS BEDNARSKI: Perhaps another Department within DWR, there could be someone that could offer an opinion about that.

MR. EICHENBERG: You say perhaps, but that means you don't know?

WITNESS BEDNARSKI: I -- I don't know.

MR. EICHENBERG: Okay. Thanks.

CO-HEARING OFFICER DODUC: Mr. Mizell?

MR. MIZELL: Yeah. Just for answering the question:

The Department does have two Climate Scientists who will be part of later panels, one part of Operations and one part of Modeling.

CO-HEARING OFFICER DODUC: Thank you.

MR. EICHENBERG: But just for clarity, no Climate Scientist was consulted by the Engineering Team?

MR. MIZELL: Objection: Misstates the testimony.

MR. EICHENBERG: Was a Climate Scientist consulted by the Engineers?

WITNESS BEDNARSKI: Not during my tenure on the Project.

MR. EICHENBERG: Thank you.

Is sea level rise important to your design?

WITNESS BEDNARSKI: We've taken sea level rise into account in our design, yes.

MR. EICHENBERG: Can you explain why it's important?

WITNESS BEDNARSKI: We've been given that criteria to -- you know, additional increase in water elevation as one of our criteria, and we've taken that

into account to avoid flooding at some of our facilities in the future.

MR. EICHENBERG: And which facilities are we talking about that might be flooded by future sea level rise?

WITNESS BEDNARSKI: The intake facilities, any of the shafts' facilities that are determined to be permanent facilities, such as the launch and retrieval shafts. Those -- Those would be protected from those kind of conditions.

And then the facilities down in the south of the Project, North Clifton Court, and then the portions of South Clifton Court that are being constructed as part of this program.

MR. EICHENBERG: But, again, the whole of Clifton Court was not considered for sea level rise?

WITNESS BEDNARSKI: The -- The portion of Clifton -- of South Clifton Court that we are working on as part of this Project, which is a majority of the levees, has been considered for this, but it would exclude any of the other facilities that were not directly impacting. I believe that's delineated in the CER, the extent of that work.

MR. EICHENBERG: Wait. I'm a little confused from the last testimony.

So, you did consider all of the levees around Clifton Court as part of the engineering --

WITNESS BEDNARSKI: We are constructing new levees around a significant portion of Clifton Court, north and south --

MR. EICHENBERG: Um-hmm.

WITNESS BEDNARSKI: -- and those levees would be built to conform to this criteria.

MR. EICHENBERG: Can you define "a significant portion"?

WITNESS BEDNARSKI: I believe we can look at a drawing to see that, if we have it somewhere, but it's probably over 90 percent.

MR. EICHENBERG: Okay. So you did consider sea level rise as it applies to the levees for over 90 percent of the Clifton Court Forebay; is that . . .

WITNESS BEDNARSKI: For those levees that we're constructing, yes, and I characterize it as over 90 percent that would be taken into account.

MR. EICHENBERG: And what level -- sea level rise was factored into your design?

WITNESS VALLES: If I remember correctly, it's about 18 inches.

MR. EICHENBERG: What was the basis for selecting 18 inches?

WITNESS VALLES: Again, I'm trying to recall.
I think it was sea level rise based on 55 inches at the San Francisco Bay and translated to 18 inches down at Clifton Court or along our Project.
MR. EICHENBERG: Um-hmm. With due respect, that didn't answer my question.
Do you know why that was selected?
WITNESS VALLES: No.
MR. EICHENBERG: Thanks.
Did you consider any other sea level rise estimates?
WITNESS VALLES: No. I just stated it.
MR. EICHENBERG: Okay. So I have -- I have a slide, if you don't mind pulling it up. It's called Delta Vision. I'm looking at Page 3 and 4.
(Document displayed on screen.)
MR. EICHENBERG: Probably, actually, it would be three on this. Three or four, yeah. Thank you.
According to the Independent Science Board, as cited by the Blue Ribbon Panel, ice sheet instability alone could result in additional 39 inches in sea level rise by 2100.
Were you aware of this possibility?
MS. RIDDLE: Can you identify the document for the record, please?

MR. EICHENBERG: This is a letter from the Blue Ribbon Task Force summarizing Independent Science Board's conclusions about sea level rise.

I believe, if memory serves, it was cited -- the Blue Ribbon Task Force was cited as one of the bases for the Project selection of 18 inches.

WITNESS BEDNARSKI: No, we -- I think that mischaracterizes what we said. I don't think we mentioned the Blue Ribbon Panel.

MR. EICHENBERG: No, you did not, no. Sorry.

WITNESS BEDNARSKI: I don't believe I've seen this document before.

MR. EICHENBERG: Okay. So my question was: Were you aware of the possibility that an additional 39 inches of sea level rise may occur by 2100?

WITNESS BEDNARSKI: At what location would that take place?

MR. EICHENBERG: Due to melting issues.

The additional 39 inches would occur at most locations via the Golden Gate Bridge that would translate to a significant sea level rise in the Delta.

WITNESS BEDNARSKI: I'm sorry. I've lost track of what your question was.

MR. EICHENBERG: Were you aware of the possibility that the ice sheets might melt and cause this

additional sea level rise?

MS. MORRIS: Objection: Assumes facts not in evidence.

CO-HEARING OFFICER DODUC: I'm sorry, Miss Morris. I didn't hear your objection.

MS. MORRIS: The question assumes facts that are not in evidence, and -- and it's -- it's speculative. And in addition to that, he's not saying -- it's ambiguous because he's not identifying location as to where this supposed sea level rise is going to occur.

CO-HEARING OFFICER DODUC: I think you can rephrase your question.

MR. EICHENBERG: I'm not sure which part was objected to and --

CO-HEARING OFFICER DODUC: Just assume the whole thing was objected to --

MR. EICHENBERG: Okay.

CO-HEARING OFFICER DODUC: -- and then rephrase your question in a more focused way without assuming facts.

MR. EICHENBERG: Okay. Are you aware that it's possible that there could be additional sea level rise as a result of melting ice sheets?

WITNESS BEDNARSKI: Additional compared to . . .

MR. EICHENBERG: Compared to the 18 inches that you --

WITNESS BEDNARSKI: No, I'm not aware of that.

MR. EICHENBERG: -- referenced?

On Page --

WITNESS VALLES: Also, I think you need to be specific about where that 39 inches actually applies to, and I'm not sure -- Not seeing this document before --

MR. EICHENBERG: Can we -- Can we --

WITNESS VALLES: -- where does it really apply to?

MR. EICHENBERG: -- shrink that down a little bit? I think there's . . . So we can see the whole page perhaps.

(Document displayed on screen.)

MR. EICHENBERG: I think for that question, I think that's an answer that you've already said, so I'm fine to move forward.

On Page 4 of this document -- again, the Independent Science Board of the Blue Ribbon Task Force -- the most recent empirical models as of 2007 predict a mid-range rise essentially of 28 to 39 inches with a full range of variability of 28 to 55 inches.

Are you aware of these predictions? I think you already said --

WITNESS BEDNARSKI: No, we're not.

MR. EICHENBERG: Were you aware of any additional predictions in excess of the 18 inches upon which you based your design?

WITNESS BEDNARSKI: No.

MR. EICHENBERG: Do you agree with the Blue Ribbon Panel's evaluation of likely sea level rise?

WITNESS BEDNARSKI: I don't have an opinion on it.

MR. EICHENBERG: Do you agree with the Blue Ribbon Panel's statement that the range of sea level rise projections based on greenhouse gas emission scenarios contained in the IPCC 2007 report should be viewed at best as a minimum for planning purposes?

WITNESS BEDNARSKI: I don't have an opinion on that.

MR. EICHENBERG: I'd like to load slide Delta ISB final BDCP comments.

(Document displayed on screen.)

MR. EICHENBERG: Were you aware of the Delta Independent Science Board's draft ire EIS comments on the BDCP?

WITNESS BUCHHOLZ: I've seen these -- this document. I haven't reviewed all of the comments in here in detail, but I'm aware of the document.

MR. EICHENBERG: I'm sorry. Did you say you had reviewed all of the detail?

WITNESS BUCHHOLZ: I have not reviewed them all in detail, but I'm aware of this document and reviewed some of these comments.

MR. EICHENBERG: Thank you for that verification. That's fine.

In those comments, the Delta Independent Science Board stated that (reading):

"The potential effects of climate change on sea level rise on the implementation and outcomes of BDCP actions are not adequately evaluated."

Do you agree with these comments?

WITNESS BUCHHOLZ: We believe that we have looked at it for the purposes of the EIR/EIS as defined in Appendix 5A Section A and a range of sea level rises to be considered in the years for the -- for the EIR CEQA/NEPA analysis that would range out to the year 2060.

That was slightly different of an analysis than was done for consideration of sea level rise to be considered as part of the design criteria provided by DWR.

MR. EICHENBERG: Can you tell me how the criteria is different?

WITNESS BUCHHOLZ: The difference is, the DWR

criteria is set out to year 2100 because of the hundred-year life of the facilities.

MR. EICHENBERG: All right. Do you think that that distinction ameliorates the Independent Science Board's comment that it's inadequate in some way, or do you think --

WITNESS BUCHHOLZ: We are aware of the comment and will be providing responses to different comments in -- similar comments in the Final EIR/EIS, which hasn't been completed yet.

MR. EICHENBERG: Did you take this comment into account when you were designing the Project?

WITNESS BUCHHOLZ: The -- The criteria that was provided for the Engineering Panel for the design criteria is actually for a different timeframe than was done in the EIR/EIS, and so it was more conservative -- Or not conservative.

It was longer in timeframe because it went out to the year 2100, and it took into account, as it's described in the CER, is that it takes into account information compiled by the Department of Water Resources as well as information from the U.S. Army Corps of Engineers.

And at the time of design, if there's new information, I would assume that those would be

incorporated into the design criteria at the time of Predesign.

MR. EICHENBERG: So new criteria for additional sea level rise may be incorporated into Final Design of what's before the Board right now?

WITNESS BEDNARSKI: Yes. If that information is passed down to the Engineering Team, we would incorporate that.

MR. EICHENBERG: What kinds of design change might you anticipate for there to be additional sea level rise?

MR. MIZELL: I'm going to object as speculative.

And at this point, we would need to provide the Engineers with something far more complete than an amorphous sea level rise above the considered design criteria at the moment for them to give a coherent answer.

CO-HEARING OFFICER DODUC: Answer to the best of your ability.

WITNESS BEDNARSKI: Just in general, we'd probably raise the elevation of structures to a higher level to give us the same amount of safety factor that we have now with the 18 inches.

MR. EICHENBERG: Which -- Which structures

would you focus on for that?

WITNESS BEDNARSKI: Going back to my previous response to your question in that area, I would say the intakes would be revisited along with some of the shaft locations, possibly the embankments of the different forebays that we'll be working on and also the pump stations.

MR. EICHENBERG: And do you think any of that reevaluation might change your opinion on injuries to legal users?

WITNESS BEDNARSKI: I -- I don't believe so.

MR. EICHENBERG: If there's a change in the intake locations or the shaft locations, none of -- none of that information seems like it would impact legal users of water to you?

WITNESS BEDNARSKI: I didn't say we would be moving any structures. I said that we would be looking at raising the elevation of some of these structures to keep them from flooding. So I'm not anticipating we're going to be moving anything around.

MR. EICHENBERG: I meant the shafts. You said you might move shafts.

WITNESS BEDNARSKI: Raising the elevation of the shafts.

MR. EICHENBERG: But not moving locations of

the shafts?

WITNESS BEDNARSKI: I don't foresee that at this point.

MR. EICHENBERG: I must have misunderstood.

Let's look at Slide NOAA 2012 Sea Level Rise, Page 1 through 2.

MS. RIDDLE: Can I just clarify for the record that that last document was May 15, 2014, Delta Independent Science Board Review EIR/EIS of the Bay Delta Conservation Plan.

CO-HEARING OFFICER DODUC: Would you confirm that?

MR. EICHENBERG: Yes, I can confirm that.

UNIDENTIFIED SPEAKER: Could you repeat your next document?

MR. EICHENBERG: It's the ISB NOAA 2012 sea level, Page 1 through 2.

(Document displayed on screen.)

MR. EICHENBERG: Did you know that the National Oceanic and Atmospheric Administration in 2012 found that a number of recent studies projected increase in the weight and magnitude of global sea level rise, and that NOAA's preferred sea level rise prediction for projects like the WaterFix is 6.6 feet?

WITNESS BEDNARSKI: No, I was not aware of

that.

MR. EICHENBERG: In light of that Independent Science Board's comments, NOAA's recommendations and the Blue Ribbon Panel's conclusions regarding sea level rise, do you believe that 18 inches of sea level rise represents a reasonable engineering standard for projects with the magnitude of the WaterFix?

WITNESS BEDNARSKI: Those were the criteria that were given to the Engineering Team and we've implemented that throughout the California WaterFix.

MR. EICHENBERG: My question was whether, as an expert, you believe it to be reasonable.

WITNESS BEDNARSKI: I don't have an opinion on your statement.

MR. EICHENBERG: What would happen to the WaterFix if sea level rise was, instead, 39 inches as the Independent Science Board suggested?

MR. BERLINER: Objection: Vague and ambiguous.

MR. EICHENBERG: Is it so vague --

CO-HEARING OFFICER DODUC: Could you be more clear?

MR. EICHENBERG: It's exactly 39 inches as opposed to 18 inches.

CO-HEARING OFFICER DODUC: Was it in a scenario you have analyzed?

WITNESS BEDNARSKI: I don't believe our Team has analyzed that circumstance.

MR. EICHENBERG: The witness can say no. That's fine.

WITNESS BEDNARSKI: I don't know.

MR. EICHENBERG: What would happen to the WaterFix if it was 55 inches as the high point of variability as suggested by the Independent Science Board?

WITNESS BEDNARSKI: I don't know.

MR. BERLINER: I have the same objection.

And part of this was based on a comment by the panel that where the sea level rise occurs is relevant, and the questioner has asked merely about a 55-inch sea level rise without any reference to anything.

MR. EICHENBERG: No, I did make a reference. I said it was, instead of 18 inches, which is I think what the criteria they used was. So where you would apply 18 inches, you would apply 55 inches. It's pretty specific.

MR. BERLINER: In that case, I'm going to object to the basis of lack of foundation, because there's nothing in any document this questioner has cited to that would indicate there would be a 55-inch sea level rise at that location.

CO-HEARING OFFICER DODUC: Yes?

MR. EICHENBERG: It's a hypothetical posed to an engineer who's considering his Project and -- and maybe would consider what would happen to the Project were he wrong about some of the assumptions that he was given. I mean --

CO-HEARING OFFICER DODUC: I think --

MR. EICHENBERG: -- he's an expert.

CO-HEARING OFFICER DODUC: I think you've explored this line of questioning enough.

MR. EICHENBERG: Sure.

CO-HEARING OFFICER DODUC: Please move on to your next line of question.

MS. RIDDLE: With all these documents, can you please -- and other parties -- identify the date and title of the document so that the record is clear.

I know we have them, but they're not being entered into evidence right now. So for clarity, that would be important.

CO-HEARING OFFICER DODUC: Do you have an objection?

MS. DES JARDINS: I wanted to make an observation that --

CO-HEARING OFFICER DODUC: No, thank you.

MS. RIDDLE: And your mic isn't on.

CO-HEARING OFFICER DODUC: I'm not entertaining observations.

If you have an objection?

MS. DES JARDINS: My objection is DWR's objection was that they excluded the calculations for Port Chicago, which I represent. That is the closest sea level rise to which -- sea level gauge for which the information --

CO-HEARING OFFICER DODUC: I'm sorry. That's not an appropriate objection.

MS. DES JARDINS: Thank you. Okay.

CO-HEARING OFFICER DODUC: Thank you.

Please continue, Mr. Eichenberg, with your next line of questioning.

I think you've made your point with respect to this one.

MR. EICHENBERG: Sure. Thank you.

At what level of sea level rise would you expect salt water to enter into the tunnels, the intakes?

MR. BERLINER: Objection: Failure to identify any conditions that might be relevant.

CO-HEARING OFFICER DODUC: I think --

WITNESS VALLES: Also --

CO-HEARING OFFICER DODUC: -- the witness can attempt to answer that.

WITNESS VALLES: That, to me, is a Modeling question.

CO-HEARING OFFICER DODUC: Okay.

WITNESS VALLES: It's not important for us in the --

CO-HEARING OFFICER DODUC: How so?

WITNESS VALLES: -- engineering design.

Where the salt water is, it's -- The locations are actually defined for us already as to where we take the water. The actual salt water line, that's for the Modelers to establish for us.

MR. EICHENBERG: What is the historic extent of salt water intrusion into the Delta? Is that something you looked at?

WITNESS BEDNARSKI: I don't have any knowledge of that.

MR. EICHENBERG: So you don't know whether it's ever gone past -- historically, whether it's ever gone past where the intakes are situated?

WITNESS BEDNARSKI: I don't know.

WITNESS VALLES: Similar answer. That's a Model -- Modeling question.

MR. EICHENBERG: Did you consider the possibility of the failure or collapse of currently existing levees when compiling your design?

WITNESS BEDNARSKI: You'll have to be more definitive about "failure of levees" for me to be able to respond to that question.

MR. EICHENBERG: Did you consider any failure of any existing -- currently existing levees in the Delta area, in the Project area? I guess I --

WITNESS BEDNARSKI: You're talking about throughout the entire Delta?

MR. EICHENBERG: Yeah.

WITNESS BEDNARSKI: Yes, I -- I would say that we have, specifically in the areas where we have these shafts that will provide future access for DWR during operation -- during maintenance activities --

MR. EICHENBERG: Um-hmm.

WITNESS BEDNARSKI: -- that we are providing a -- an elevated location such that that would be -- you know, keep the facilities, you know, above -- above water level if there was to be a levee failure either during -- or sea level rise condition or during a 200-year flood, so, yeah, we have considered that.

MR. EICHENBERG: Would -- Would such failure or collapse necessitate regular outflow in order to keep saltwater intrusion to a minimum, or to a certain point?

WITNESS BEDNARSKI: You'd have to ask the Modelers about that.

MR. EICHENBERG: Your testimony at Page 16, you said that groundwater -- you (reading):

". . . Are not expected to have significant ongoing effects to groundwater during construction or operation."

So, you state that you took into account groundwater impacts from the construction of the WaterFix.

Did you also look comprehensively at the operational effects of the WaterFix on groundwater?

MR. MIZELL: Objection: Out of scope.

We'll have Operators here who can talk about the operations, we'll have Modelers who can talk about projections to water quality and water supply.

The Engineers, I believe, are here to discuss the design and construction of the facility itself.

MR. EICHENBERG: If the witness didn't consider operations in constructing his design, then he can say so, but to the extent that he did, I think it's relevant.

CO-HEARING OFFICER DODUC: Just answer the question.

WITNESS BEDNARSKI: Could you repeat your question?

MR. EICHENBERG: Did you also look comprehensively at the operational effects of the

WaterFix on groundwater?

WITNESS BUCHHOLZ: The Draft EIR/Draft EIS, Recirculated Draft EIR/Supplemental Draft EIS did consider the operations of the Alternatives 1 through 9, including one that would be similar to California's WaterFix on Alternative 4, and the operations of regional groundwater in the vicinity -- in the Delta.

MR. EICHENBERG: So that -- So, in your opinion, that's a yes -- That's a yes, you did comprehensively look at that?

WITNESS BUCHHOLZ: We -- We looked at it with a regional groundwater model, yes.

MR. EICHENBERG: What percentage of the total Sacramento River flow is the WaterFix diversion maximum of 9,000 cfs designed to take?

WITNESS BUCHHOLZ: It depends upon the North -- North Delta bypass flows, which are presented in the Recirculated -- excuse me -- in the Draft EIR/EIS in Table 3-16.

You have to remain a certain amount -- That's how we assumed it in the analysis, at least. We assumed a certain amount of flow that would be remaining in the river for protection of fish and downstream uses, and then the -- then there's a -- characteristics of looking at the -- how much could be exported through the North

Delta be the intakes and that would -- is going to be discussed in detail in the Modeling Panel.

MR. EICHENBERG: You said -- You said you assumed a certain amount of flow had to remain in the river.

WITNESS BUCHHOLZ: Right.

MR. EICHENBERG: Can you tell me how much flow that is?

WITNESS BUCHHOLZ: It's -- It's a very complicated table; it goes on for three pages. And it's in Chapter 3. It's Table 3-16 of the Draft EIR/Draft EIS. That's what we assumed.

MR. EICHENBERG: Does that table have a minimum flow for the Sacramento River?

WITNESS BUCHHOLZ: It assumes clear down to a minimum flow of the Sacramento River to a very high flow of the Sacramento River, yes.

MR. EICHENBERG: Is that minimum flow also a complex table or is it just a set number?

WITNESS BUCHHOLZ: No, it's not a set number. It's a complex table.

MR. EICHENBERG: What are --

WITNESS BUCHHOLZ: Assuming the -- There's a lot of criteria that goes into that table. Although the table is understandable, it's just very long.

MR. EICHENBERG: All right. Thank you.

Did you take into account dewatering effects from Project operations, specifically -- No, I think you already answered that.

But, specifically, did you examine impacts from lower recharge rates that would result in lower flows of the Sacramento River as a result of the Project?

WITNESS BUCHHOLZ: The Regional Groundwater Model incorporates the simulated flows from the CalSim II model in -- as an input to the CBHM Groundwater Model, yes.

So if there were changes in flows, that was from the CalSim model. That's why the Modeling Team really needs to answer this question in more detail.

MR. EICHENBERG: Okay. You stated that, I think in earlier testimony, slurry walls, and propo -- and proposed groundwater monitoring, toe drains, interceptor wells, and soil grounding will ensure that no significant groundwater has occurred. That's DWR-57, Page 23.

What -- What is the composition of the slurry that would be used?

WITNESS BEDNARSKI: Sand, cement, water, possibly bentonite.

MR. EICHENBERG: And what is the composition of

the soil grout that would be used?

WITNESS BEDNARSKI: Typically the same components, unless there's some special additives required, which I'm not aware of at this time.

MR. EICHENBERG: What kinds of special additives have been required, in your experience, in the past?

WITNESS BEDNARSKI: There could be some agents that assisted in setting up faster, something like that, so there's no migration. It would be kind of speculative at this point to, you know, guess as to what might be used.

MR. EICHENBERG: Could you please speculate.

WITNESS BEDNARSKI: That -- That's all I --

MR. BERLINER: I'll object.

CO-HEARING OFFICER DODUC: I think that's enough.

MR. EICHENBERG: Okay. Are you aware of any environmental hazards posed by any of the materials that might be used in the grout or . . .

WITNESS BEDNARSKI: No.

MR. EICHENBERG: Is the -- Is the use of slurry cutoff walls and grouting for construction intakes and tunnel shafts and forebay embankments, is a relatively last-minute addition to the EIR, such that it wasn't even

included in RDEIR/SDEIS?

Did you consider the possible environmental impacts on materials used in the soil, grouts and salinity? Did you consider those?

CO-HEARING OFFICER DODUC: I can hear your objection now about being a compound question.

MR. EICHENBERG: Did you consider the possible environmental impacts of the materials used in soil grouts?

WITNESS BUCHHOLZ: I would resolve that to the Water Quality Modeling Team.

MR. EICHENBERG: The same for slurry.

WITNESS BUCHHOLZ: Same what?

MR. EICHENBERG: Question.

Did you consider the possible environmental impacts of the materials used in the slurry?

WITNESS BUCHHOLZ: Again, that would be a water quality analysis from the Modeling Team.

MR. EICHENBERG: I believe you testified that no adverse water quality effects would occur from construction-related activities; is that right?

WITNESS BUCHHOLZ: The -- What we looked -- What we talked about prior to this point in the panel is to talking about the storm water NPDES Permit requirements, which require the construction activities

to comply with the water quality objectives and beneficial use protections, and a TMD -- Total Maximum Daily limits projections in the receiving water bodies.

And so, yes, those Permits, we believe, would result in no efforts on water quality impacts to those volumes.

MR. EICHENBERG: No adverse impact.

And so is that -- That's the only Permit requirement that you base that opinion, NPDES, on in --

WITNESS BUCHHOLZ: And from our experience with obtaining such Permits and having to monitor construction activities of other projects and the -- and the ability to avoid adverse water quality impacts in similar projects.

MR. EICHENBERG: You said your experience with obtaining some promising NPDES permits?

WITNESS BUCHHOLZ: Storm water NPDES permits for construction, yes.

MR. EICHENBERG: And so would you say the entirety of your opinion that there will be no water quality impact in construction is based upon the -- your experience with Permit requirements, expected Permit requirements?

WITNESS BUCHHOLZ: It's an experience with that because we know what the Permit requirements are. And if

we need to achieve and comply with those -- those Permit requirements for construction to -- to be initiated and continue through the process.

MR. EICHENBERG: And what -- What are those -- What do you expect those Permit requirements to be?

CO-HEARING OFFICER DODUC: We spent quite a bit of time today already covering the NPDES permits and other Permits relating to water quality.

So I'm wondering: Is there a different avenue that you're exploring here?

MR. EICHENBERG: I'm sorry. I don't recall having -- hearing what the expected Permit requirements would be. If I may have --

CO-HEARING OFFICER DODUC: We spent a lot of time this morning discussing the NPDES Permit and the fact that it's purely speculative at this point in terms of what might be required by the State or the Regional Water Board in those Permits.

MR. EICHENBERG: But -- So her opinion that there would be no water quality impacts was based on an expectation of what the water quality permits would -- would contain. That's why I was trying to find out what her expectation was, as the basis -- as the basis for her opinion.

CO-HEARING OFFICER DODUC: I think she's

answered that a couple times already.

What specifically are you asking her for? If you're asking for specific permit terms, I don't know that she can answer that.

MR. EICHENBERG: Oh, I think clearly she has some expected Permit terms that she -- that she believes would be --

CO-HEARING OFFICER DODUC: Well, rather than putting words in her mouth.

Miss Buchholz?

WITNESS BUCHHOLZ: I -- I anticipate that the Central Valley Regional Water Quality Control Board and the State Water -- and/or the State Water Resources Control Board will require us to comply with the water quality objectives to protect beneficial uses and the Total Maximum Daily limit criteria or any other similar criteria that we need to meet before discharge into a receiving water body.

And that -- that is -- We will have to modify and -- or design -- not modify, but design our discharges from -- from -- and drainage and flows off of the construction site to meet those requirements.

MR. EICHENBERG: Are you aware of what those specific criteria would be at this time?

WITNESS BUCHHOLZ: No. We don't have the

permits yet.

MR. EICHENBERG: It appears that, based on your testimony, that you based in part -- Your testimony's been based on that RDEIR/SDEIS; is that true?

WITNESS BUCHHOLZ: Yes.

MR. EICHENBERG: And you also testified that you're not an expert on the standard for injury used by the EIR/EIS, or did I get that wrong?

WITNESS BUCHHOLZ: No, I didn't say that.

MR. EICHENBERG: Okay.

WITNESS BUCHHOLZ: I testified that I'm not an expert on the -- and I kind of get the words wrong -- but the criteria of -- of showing injury to legal users -- other -- legal users of water.

MR. EICHENBERG: Which is that that's the standard for this Board. So --

WITNESS BUCHHOLZ: Yes.

MR. EICHENBERG: -- the RDEIR/RDEIS standard.

WITNESS BUCHHOLZ: I prepared and -- I prepared and managed the groups who prepared the surface water and groundwater sections of the EIR/EIS.

MR. EICHENBERG: That's what I thought and that's what your reputation is.

You are -- You are aware that the RDEIR and SDEIS is not a final document and the Project may change?

WITNESS BUCHHOLZ: Yes.

MR. EICHENBERG: Are you confident that there's no change that could be distributed in the Final EIR/EIS that could change the testimony you've given before this Board?

WITNESS BUCHHOLZ: I'm not sure how I could -- what I would have spoken to over the past two days or day and a half. It's why we are preparing the Final EIR/EIS at this time, believe that anything we've talked specifically -- I've talked specifically to this Board about DWR-218, that we are going to make a change in the Final EIR/EIS related to the slurry walls and toe drains to minimize the impacts to groundwater during construction -- during the dewatering construction.

MR. EICHENBERG: So there could be changes -- future changes in the testimony you've given based on the Final EIR/EIS?

WITNESS BUCHHOLZ: I don't believe so at this time, but I don't know what those other changes might be.

MR. EICHENBERG: It sounds like it's possible that there could be changes in your testimony.

WITNESS BUCHHOLZ: I don't believe --

MR. MIZELL: Objection: There's no question pending.

MR. EICHENBERG: Is it possible there could be

changes in your testimony?

WITNESS BUCHHOLZ: I don't believe at this time. And since I don't know what those changes would be right now, I don't perceive any other changes so, therefore, I don't believe my testimony would change.

MR. EICHENBERG: I'm going to ask this line of questions that will have some forbearance. I just want to establish where -- just to make sure that when the new witness comes, that I've asked the questions of the whole panel.

What seismic criteria were employed in your design?

WITNESS BEDNARSKI: Well, I -- I think that what the CER has gone about doing is identifying the criteria that will be utilized in our Preliminary and Final Design, which set forth those standards, identified some of the regional fault areas that would be expected under the planned analyses to generate, as we mentioned earlier, the peak ground accelerations that would be applied to the design.

So, facilities have not been designed at this point, but the CER has set forth the criteria that facilities in the future will be designed to, to be in accordance with the Building Code requirements and with our life expectancy of the Project and other criteria.

MR. EICHENBERG: Um-hmm. What is the designed earthquake for each component of the water base?

WITNESS BEDNARSKI: The design for -- Go ahead. Do you want to --

WITNESS VALLES: Yeah. If you'd look at -- If you'd look at Table 3-1 through 3-3, I believe, that's the criteria that we would use.

And, again, just to remind you, we're only at 10 percent design. We still have Preliminary and Final Design where we would finalize all of these criteria.

MR. EICHENBERG: Okay. I remember that.

Is -- Can you give me, like, a magnitude of earthquake that it was designed for?

WITNESS BEDNARSKI: It's not really designed for a specific magnitude. It's really designed for specific ground accelerations, both horizontal and vertical accelerations, that could be the result of faults that are close by or faults that are far away, events that are close by, events that are far away.

So it's really the maximum acceleration that we'd be designing for, not necessarily any, you know, seismic magnitude events people are most familiar with.

MR. EICHENBERG: Right.

WITNESS VALLES: But it also takes into account all of the magnitudes of all the local faults, and then

the energy that gets applied to -- to the individual facilities.

So that -- That results in the peak ground acceleration for each individual facility, and those are identified in Table 3-1 through 3-3.

MR. EICHENBERG: And what is the magnitude of the peak lateral acceleration, roughly, for -- I'm sure all the facilities are designed . . .

WITNESS VALLES: I don't recall but those are in those tables.

MR. EICHENBERG: Okay. All right. And I assume that the deep vertical acceleration/deep ground displacement are also in the tables.

WITNESS VALLES: I think. I mean, those tables, it's specifically talking about just the peak ground acceleration which is a horizontal component. And we --

MR. EICHENBERG: Is that the same as lateral? Sorry.

WITNESS VALLES: That's the lateral, yeah.

But there would also take into some consideration, most likely as a percentage of the horizontal or the lateral, a vertical component, and that'll be Final Design.

MR. EICHENBERG: I'm sorry. That'll be Final?

WITNESS VALLES: That will be during the Preliminary and Final Design levels.

MR. EICHENBERG: I see. So, currently -- I'm sorry. I'm not sure I understood that.

Currently, it just shows lateral acceleration with maybe some vertical acceleration that influences that?

WITNESS VALLES: It won't influence those particular numbers, but there will be some vertical component that will be applied.

MR. EICHENBERG: In the Final Design but not now.

WITNESS VALLES: In the Preliminary and the Final Design.

MR. EICHENBERG: All right. Is that true for ground displacement as well?

WITNESS VALLES: Yes.

MR. EICHENBERG: So in the -- At the conceptual stage, vertical acceleration and ground displacement were not taken into account in designing these facilities; is that correct?

WITNESS VALLES: I don't believe so.

MR. EICHENBERG: Were there emergency procedures contemplated if an earthquake exceeded design criteria?

WITNESS BEDNARSKI: Those have not been determined at this point. That would be an activity in Preliminary and Final Design.

MR. EICHENBERG: Did you look at any types of damage that you might anticipate in reaching to prepare for?

WITNESS BEDNARSKI: Can you be more specific about types of damage that you're referring to?

MR. EICHENBERG: Seismic -- Yeah, I'm sorry. Seismic-caused damage to the tunnel.

WITNESS BEDNARSKI: So seismic damage to the WaterFix facilities?

MR. EICHENBERG: To the WaterFix facilities, I'm sorry, yeah.

WITNESS BEDNARSKI: We have -- We have generally looked at that, understanding that tunnels underground will perform superior to surface-constructed facilities. But a lot of that detailed information will be developed in Preliminary and Final Design as to how things are actually assembled in -- in the field.

MR. EICHENBERG: Um-hmm. Did you look at seismic events in the area to prepare -- when you were preparing this design?

WITNESS BEDNARSKI: Yes. And I believe, as Mr. Valles has responded, those are listed in DWR-212. I

believe those tables that he referred to list those faults that we took into consideration and the events that they could generate.

MR. EICHENBERG: Are you familiar with the 1989 Loma Prieta earthquake?

WITNESS BEDNARSKI: Yes.

MR. EICHENBERG: With the damage that that caused to infrastructure in the . . .

WITNESS BEDNARSKI: Yes, I'm aware of that.

MR. EICHENBERG: Do you know what the magnitude of that earthquake was?

WITNESS BEDNARSKI: I -- I don't recall.

MR. EICHENBERG: Do you know how far from the epicenter we had significant damage to structure?

WITNESS BEDNARSKI: I don't know.

MR. EICHENBERG: I'd like a moment to review my notes.

That completes my cross-examination. Thank you.

CO-HEARING OFFICER DODUC: Thank you.

Group Number 39.

And since we may not be operating with the same number, that would be North Delta C.A.R.E.S.

CROSS-EXAMINATION BY

MS. DALY: Good afternoon. Good afternoon,

panel. Good afternoon, Board Members.

My name is Barbara Daly and I live in the Delta. I've lived there for 25 years, and I'm here to represent myself, my family and many of my neighbors who have -- that are generational farmers and they've lived there since the mid-1800s.

And it's a very beautiful place, and I'm here to ask some questions about how you would like to change it.

So I'll begin. Thank you.

According to your written testimony, Page 1 and 2 -- I'm sorry, I don't have a thumb drive. I don't have any slides.

According to your written testimony, Page 1 and 2, you're providing expertise regarding the WaterFix Project description, the status of the engineering prepared to date, preparation for flooding and seepage impacts and potential construction impacts to water users that would need to be mitigated; is that correct?

WITNESS BEDNARSKI: That's correct.

MS. DALY: There is a great deal of inconsistency throughout the EIR, the EIS, regarding the total number of years that construction will occur for the WaterFix Twin Tunnels Project.

Can you confirm again -- I know you've done

this before -- what the correct number of total construction years is?

WITNESS BEDNARSKI: For construction alone, we're anticipating about 13 years.

MS. DALY: And your testimony is based on a conceptual level of design; correct?

WITNESS BEDNARSKI: That's correct.

MS. DALY: Can you tell us what level of design the Project is currently at?

MR. BERLINER: Objection: Asked and answered. We've been over this material already.

MS. DALY: I'm almost --

CO-HEARING OFFICER DODUC: I'll give her a little bit of leeway. Let's go ahead and lay some foundation.

Mr. Bednarski?

MS. DALY: I'll explain I'm not a lawyer, and so I am not good at this.

CO-HEARING OFFICER DODUC: You're doing just fine.

Mr. Bednarski.

WITNESS BEDNARSKI: 10 percent.

MS. DALY: 10 percent?

The Conceptual Engineering Report that you referenced in your written testimony makes it clear there

are more substantial changes likely to occur in future engineering phases.

How many engineering phases are necessary to reach 100 percent completion?

MR. MIZELL: I'm going to object as it misstates the testimony by the word "substantial."

CO-HEARING OFFICER DODUC: Miss Daly, let me make a request.

MS. DALY: Yes.

CO-HEARING OFFICER DODUC: It's not necessary to preface your question with your interpretation of his testimony. Just ask the question.

MS. DALY: Okay.

CO-HEARING OFFICER DODUC: Try that.

MS. DALY: How many engineering phases are necessary to reach 100 percent completion?

WITNESS BEDNARSKI: Typically two. One is Preliminary Design and then the second is Final Design.

MS. DALY: Would you agree that substantial Project changes, such as those done in 2015 and 2016, could also alter the level of impacts on other water users?

WITNESS BEDNARSKI: No, I do not.

MS. DALY: Later in your testimony, you reference a more detailed level of design being provided

in the future.

Can you define what percentage of design level you will consider more detailed?

WITNESS BEDNARSKI: I would consider the completion of Preliminary Design as being the next substantial milestone for design.

MS. DALY: And what percent would that be?

WITNESS BEDNARSKI: Approximately 30 to 35 percent complete.

MS. DALY: Is it 40, or what percent, that the U.S. Army Corps of Engineers requires before you are allowed to apply for their 408 Permit?

WITNESS BEDNARSKI: I believe it's 65 percent.

MS. DALY: Can you please describe how many pipes will be installed to connect each of the three new North Delta Diversion intakes to the new Intermediate Forebay and then connected to the twin tunnels?

MR. MIZELL: Objection: Vague and ambiguous.

Are we talking tunnel segments or are we -- I mean, "pipes" hasn't been a term we've used so I'm unclear what the question means.

MS. DALY: From the diversion to the -- to the twin tunnels.

MR. MIZELL: Again, I'd like clarification on "pipes." I think that term's vague and ambiguous.

MS. DALY: There -- There will be some pipes that will be installed.

Can you tell me if they're going to be installed with an underground boring machine or will they be laid out through open trenching that will cut off access to parcels for farming?

WITNESS BEDNARSKI: Yes, we'll be using underground tunneling equipment to connect the intakes to the Intermediate Forebay.

MS. DALY: Will access to homes and businesses in the town of Hood be cut off due to this process?

WITNESS BEDNARSKI: Can you define the limits of the City of Hood as you're referring to them?

MS. DALY: The City of Hood is where the second intake facility is planned.

WITNESS BEDNARSKI: To the best of my knowledge, we're not planning to cut off anyone's access in the city -- in the city proper.

MS. DALY: Because it does appear on some of your schematics that the east-west access is going to be blocked by pipes connecting the intakes to each other as described in the 2014 Draft EIR/EIS.

That's not a question; is it?

So --

CO-HEARING OFFICER DODUC: Did you want to

retrace that as a question?

MS. DALY: Will the -- the pipes connecting the intakes to each other, as described in the 2014 Draft EIR/EIS, cut people off from their homes in an east-to-west direction in Hood?

WITNESS BEDNARSKI: No, they won't. We'll be using tunnels, so it will be about 150 -- well, 110 feet to the top of the tunnel below grade, 150 or so feet, maybe less, in that area, but still substantially below grade.

MS. DALY: Exhibit DWR-221 only lists a few local diversions near the intakes that will be impacted by the WaterFix construction, but it does not include existing siphons in areas where surface water elevations will be lowered to a foot and a half.

Can you please provide more details of local siphons that will be affected by local surface water elevations in various locations below the North Delta Diversions, such as along Steamboat Slough?

WITNESS BUCHHOLZ: Are you speaking during construction phases?

I don't anticipate that we're looking at --

MS. DALY: Both.

WITNESS BUCHHOLZ: -- change in elevation during construction phases.

And during the changes in surface water elevations during operations, they're going to be described in the Modeling Panel.

MS. DALY: Thank you.

And as stated in your written testimony on Page 3, the construction of the WaterFix intakes on the Sacramento River Project levees will require this 408 Permit from the U.S. Army Corps of Engineers.

Can you describe the types of mitigation that the Corps is most likely to require the Project to implement in order to avoid any reduction in existing level of flood protection on the Sacramento River.

WITNESS BEDNARSKI: So, one of the key components we'll be looking for is for us to install, as we showed on the video and have discussed, a slurry wall beneath the new intake structures and then tying that into the existing levees so that the part that we construct will be fully in accordance with any of their requirements.

We'll also have a slurry wall construction around the perimeter levee on the land side of the facilities, and then the levees themselves will be constructed in accordance with their requirements for this permit that we will obtain.

So everything that we'll do will be in

accordance with what the Army Corps of Engineers requires.

MS. DALY: Could you give me a couple of examples where this has been done before with these slurry walls?

WITNESS BUCHHOLZ: The Freeport Regional Water Authority intake that was constructed used those and tied the backings of the diaphragm wall back to the levee and actually modify the levee so that there would be no change in flood protection post-construction -- during construction or post-construction.

MS. DALY: That was a fairly small intake facility, only 300 cfs.

WITNESS BUCHHOLZ: It is, but --

MS. DALY: These are ten times bigger.

WITNESS BUCHHOLZ: But the same engineering aspects would be conducted for this size levee, too. It's the same kind of analysis.

MS. DALY: It would apply relative?

WITNESS BUCHHOLZ: Totally apply, um-hmm.

MS. DALY: Is there any other throughout the United States that might be the same size that -- that you can think of?

WITNESS BUCHHOLZ: The -- There are -- Every -- Every intake that's along an area that the U.S. Army

Corps of Engineers is responsible for in Flood Control, and that includes most of the Sacramento River, not all but most of the Sacramento River.

I am not sure if the Tehama-Colusa Canal Authority intake would have been in there, but they would be also looking at a no-change in Flood Control downstream of that, too.

MS. DALY: Thank you.

So, would mitigation include setting back levees on the Clarksburg side of the river?

WITNESS BUCHHOLZ: It's going to be a Preliminary Design aspect once the modeling is completed.

MS. DALY: Would that include looking at raising the levees on the river?

WITNESS BUCHHOLZ: Right now, in what we assumed in the Environmental Impact -- the Draft EIR and the Draft EIS and Recirculated Draft EIR and Supplemental Draft EIS is that that would not be occurring on that side.

Levees similar to those in the Freeport Regional Water Authority intake would be on the same side of the levee. But, again, that would be something that has to be done after detailed bathymetric surveys and subsequent modeling.

MS. DALY: In your professional opinion, if

they do have to be set back, how -- how far do you feel they would have to be set back? My home is right next to the levee.

WITNESS BUCHHOLZ: I don't want to speculate that that would even need to occur or what would happen because we don't have the bathymetric survey data and we don't have the modeling that we -- that's done to analyze those. They've not been completed yet. That's all Predesign.

MS. DALY: So you don't know how many miles there would be.

WITNESS BUCHHOLZ: I'm not sure many miles was used.

MS. DALY: Many, many homes right along the levee.

WITNESS BUCHHOLZ: No, I did not -- I did not say that. I said that, if you look at what happened at -- at the Freeport Regional Water Authority, it was immediately adjacent to the intake. It was on the same side of the river.

WITNESS BEDNARSKI: Based on our current Project Description, we're not expecting that there's any setback levees that would be required on the west side of the Sacramento River.

I think the footprints of our facilities --

proposed facilities are described in the CER in Volumes 1 and 2 and in the Draft EIR/EIS, and those locate all the footprints that we're anticipating at this point in time.

MS. DALY: Thank you.

Will reverse flows be created anywhere in the North Delta from operation of the three new intakes?

MR. MIZELL: Objection as to the scope of this panel's testimony.

CO-HEARING OFFICER DODUC: I think he's able to answer that it's outside of his scope.

WITNESS BEDNARSKI: Can you rephrase the question or restate it again?

MS. DALY: Yes. I can restate it.

Will reverse flows be created anywhere in the North Delta from operation of the three new intakes?

WITNESS BEDNARSKI: I think that's a Modeling question. I believe in the CER we disclosed that, under a surge condition, that there could be some very small reverse flows coming back through the intake structures, but that would be as far as my knowledge goes.

MS. DALY: Have you estimated how far north?

WITNESS BEDNARSKI: No. It -- It wouldn't go north up the river. It would just come out through the screens and be dissipated.

MS. DALY: Your testimony describes the

sedimentation basins at the three new locations as being twin, unlined and earthen -- unlined earthen.

Can you describe how the -- And I think you've done this before, but if you would, please, again.

Could you describe how groundwater will be protected from leakage at the sediment basins.

WITNESS BEDNARSKI: Well, the water surface elevation and sedimentation basins will really be no different than what it is in the Sacramento River at any given time, so we're not necessarily increasing the water level around -- in that area through the operation of these sedimentation basins, so we're not expecting that there will be any impact.

MS. DALY: Have you identified the number of existing irrigation ditches that could be exposed should there be leakage at all?

I know you're not expecting leakage, but should there be leakage, do you know about the number of existing irrigation ditches taken account?

WITNESS BEDNARSKI: I know that there was a -- There was an estimate of the number of irrigation ditches or agricultural ditches that could be conceivably impacted by any of our work on the surface. I don't recall that specific number.

But without being more specific about leakage

flows and things like that, I wouldn't really be able to respond to, you know, flows of water coming out of the tunnel, you know, coming to the surface and how many irrigation ditches would be affected.

MS. DALY: Would you be notifying these people at all that there's any potential that they'll be affected?

WITNESS BEDNARSKI: Of the potential of an effect, or if there -- if --

MS. DALY: Yes. Yeah. Perhaps.

WITNESS BEDNARSKI: We're not expecting that anyone would be affected by leakage. I think we're planning to design a tunnel that will -- with a liner system that will be watertight under the conditions that we'll be operating under.

MS. DALY: Are you aware that the State has financial liability for damages associated with failure of the Project levees?

MR. MIZELL: Objection: Calls for a legal conclusion.

CO-HEARING OFFICER DODUC: He's free to answer yes or no.

WITNESS BEDNARSKI: I don't know.

MS. DALY: Your testimony on Page 8 lists the engineering criteria that guided conceptual design for

the California WaterFix, but it does not include maintaining existing flood flow capacities.

It also doesn't mention the joint obligation of the State Water Project and the Central Valley Project to maintain water quality standards in the Delta.

Why aren't either one of these critically important public safety components included in the list?

WITNESS BEDNARSKI: I believe that question will be best answered by subsequent panels, the Operations or the Modeling panels.

MS. DALY: So they weren't -- You wouldn't know if they were priorities in the development of the scenarios that define the range of the WaterFix operations?

WITNESS BEDNARSKI: None of the criteria that are listed on Page 8, I don't believe, would go to answering your question. We didn't -- We were not given any of those types of criteria to -- to factor into our design.

MS. DALY: Historically, we have one major flood event every 10 years, and the EIR/EIS identifies a total of 11 coffer dams that will encroach into the rivers and channels of the Delta. Depending on the location, 70 to 320 feet.

Can you describe the analysis results regarding

the increased flood risks associated with a loss of channel capacity for flood flows?

WITNESS BUCHHOLZ: As I previously described, the requirements under the U.S. Army Corps of Engineers Permit and the Central Valley Flood Protection Board Permit approvals and DWR's responsibilities would not allow installation of the coffer dams in a manner that would increase the potential for flood occurrences, whether it's during construction or subsequently during operation.

So that would become -- During predesign, as I said, bathymetric surveys would be done and other analysis of modeling would be done and those would have to be incorporated in the design.

MS. DALY: So, the dewatering system is listed on Page 12, but there's no details provided in terms of how many dewatering pumps will be used, how far apart the pumps will be placed, the volume of water that each will discharge daily, the location of where dewatering discharges will occur, or even how much groundwater elevations will be lowered near the intakes, the forebays, the tunnel alignment or other facilities.

Are you aware that the EIR/EIS describes hundreds of dewatering pumps placed every 50 to 75 feet around the perimeter of WaterFix construction site that

are capable of pumping up to 10,300 gallons per minute, 24 hours a day, seven days a week, at each location?

WITNESS BUCHHOLZ: Yes. The Draft EIR/EIS included that and so did the analysis in the Recirculated Draft EIR and Supplemental Draft EIS in Chapter 7 of those documents.

In those documents, mitigation measures GW-1 and GW-2 included a recommendation to incorporate slurry walls around the construction sites to avoid those adverse impacts that we used -- we saw in the regional modeling that could extend for a half a mile out from the dewatering location.

Then, subsequently, following -- During the publication of the Recirculated Draft EIR/Supplemental Draft EIS at the intakes of the tunnel shafts, it was noted that the slurry walls would be constructed not just along the river but also around the entire construction sites of the intakes and around the entire tunnel shafts.

At that point, the dewatering would occur, as Mr. Bednarski said in his testimony, within the slurry walls, and so, therefore, we would avoid the adverse impacts on groundwater in the surrounding adjacent properties, and the reason we put that forward in DWR-218, and that will become part of the Final EIR/Final EIS.

MS. DALY: In your professional opinion, would you agree that the discharge of large volumes of water on a daily basis in multiple locations could result in changes in water quality, surface elevations and hydrodynamics?

MR. MIZELL: Objection: Vague and ambiguous.

CO-HEARING OFFICER DODUC: Ms. Daly, could you be more specific. Discharge where?

MS. DALY: Discharge of the -- Discharging the dewater -- the water that they're getting out is going to change water quality for us. Taking this water out changes our water quality.

CO-HEARING OFFICER DODUC: Will it change water quality?

MR. MIZELL: I'd also like to object on relevance.

Miss Buchholz has just explained that the information used by the questioner is out of date and has been supplanted by one of the exhibits in DWR's testimony that will be using slurry walls and not large-scale dewatering walls.

MS. DALY: Thank you.

The EIR/EIS says several concrete batch plants will be constructed and states each will require a clean source of water.

Neither the EIR, EIS, the Petition or your testimony describes how much water these concrete plants will use on a daily basis, and so we're asking how much will be used, where is the water source, where will it come from, and where will the wastewater be stored, treated or discharged?

WITNESS BUCHHOLZ: The -- The operation of the concrete batch plants is going to be varied at each site, varied in time depending on the phase of construction, because you're only going to need them when you're doing the concrete pours or batching the concrete forms.

The key will be, during Predesign, we'll be deciding how much water at each one of those locations, and the timing of that water demand, and availability of that water depending on, sometimes, it could be trucked in from permanent sources.

You know, that's just -- That is not part of this process in the sense that looking for a brand new source of water or water right for that water. This is associated with Predesign and we'll have to determine where that water right -- water supply will come out.

And that's pretty typical during construction, is to wait till that time.

MS. DALY: So you've done seepage -- There's been seepage analysis done on these slurry walls?

They're very tight, and it's hard to contain mud and water.

WITNESS BUCHHOLZ: Well, that -- And that's what's nice about the slurry walls is, they set up. That's why we use bentonite in them, just have them set up to become less permeable and so that we can control the dewatering activities within the walls, and it will also avoid water coming into the -- into the construction site and water leaving the construction site.

MS. DALY: That's good to know because, in the EIR/EIS, it does say that due to dewatering and other issues, the noise and the air quality, that people will abandon their homes. So --

WITNESS BUCHHOLZ: I'm not aware that it says that.

MS. DALY: It does.

CO-HEARING OFFICER DODUC: Before you get yourself into trouble --

MS. DALY: Okay.

CO-HEARING OFFICER DODUC: -- next question, please.

MS. DALY: All right.

Can you describe in detail the size of the muck storage areas and the analysis done to determine potential seepage and water quality -- Well, let's leave

out the seepage -- water quality impacts to nearby farmlands and irritation supplies.

Will the muck storage areas have slurry walls?

WITNESS VALLES: In terms of the RTM, I've actually answered this question in previous --

MS. DALY: I'm sorry.

WITNESS VALLES: -- discussion.

MS. DALY: You may have. Thank you.

WITNESS VALLES: Down at the Clifton Court, we're looking at about 900 acres, and it's about 6-foot tall there.

At Bouldin Island, we're looking at about 1200 acres, and they're -- that's about 6 feet.

Let me correct myself. Clifton Court's about 10 feet.

MS. DALY: Um-hmm.

WITNESS VALLES: At Intermediate Forebay, it's about 500 acres or so, and it's about up to 14 feet in height.

MS. DALY: Is there one by Scrivener Road?

WITNESS VALLES: Yeah. There's a very small one there. I can't recall the -- the actual acreage there, but it's a fairly small one.

MS. DALY: I believe I read 10 feet high.

WITNESS VALLES: That would not surprise me to

be up to that.

MS. DALY: Can you describe in more detail the analysis and results associated with your statement on Page 26 that levee damage will be caused by increased truck traffic hauling heavier loads on levee roads?

WITNESS BEDNARSKI: I believe my testimony says that, without mitigation, there could be foundation settlement and levee damage, not that there is going to be levee damage.

So, as I've previously testified, we will be doing a full reconnaissance and survey of those levees in the areas that we expect to have construction traffic through geotechnical investigations, establishing monitoring stations for survey monitoring and other methodology.

We will be making any improvements necessary coming out of those preliminary investigations so that those portions of the levees that we're accessing will not be damaged.

MS. DALY: So -- But there's potential for damage because of the -- the . . .

Well, I know when a truck goes by my house, it's pretty -- it can shake the whole house.

So, is there mitigation for the homes as well, besides the levees, for any damage due to the trucks

going by constantly? Because there's many homes next to the levees.

WITNESS BEDNARSKI: In which area are you referring to now?

MS. DALY: By the -- Well, I imagine they're going back and forth to the intake construction sites.

WITNESS BEDNARSKI: So the intake areas?

MS. DALY: Yes. Back and forth. They'll have to use the roads to get to their access.

WITNESS BEDNARSKI: That's correct.

I believe we've identified that either in noise or transportation that we'll be monitoring. Those potential impacts during construction, and responding to any inquiries we get from the public, from nearby residences and, you know, fully examining those if any of those situations arise.

We're not anticipating that they will but we're committed to responding to those if they do arise due to our construction traffic.

MS. DALY: And also the noise travels, and I guess now you're using a vibration for pile driving.

How is that different from the other type of pile driving?

WITNESS VALLES: There's -- There's two different types of pile driving. There's one where you

take an impact hammer and you basically pound it into place. You're just constantly just pounding it, driving it down --

MS. DALY: Like they're doing across the street right now.

WITNESS VALLES: -- with a great deal of force.

MS. DALY: Yes.

WITNESS VALLES: Then there's another one where you actually grab the top of the pile, and with a load, it literally vibrates that load, and that vibration translates through the pile and moves the pile down through its weight.

But the -- And that'll be done for the first 70 percent of that pile. The last 30 percent will be driven into place to make sure it's, you know, very secure at the bottom.

MS. DALY: So that's pretty serious vibration going on, I would say.

WITNESS VALLES: It's a very isolated vibration, just at the pile.

MS. DALY: Does it travel very far?

WITNESS VALLES: No.

MS. DALY: But to the homes against the levee perhaps?

And the reason I'm bringing this up is because,

again, the EIR/EIS says, that due to the noise decibels and the vibration, that 100-year-old homes will fall, so that's something that we're very concerned about out there.

MR. MIZELL: I'd like to object to some of these speaking objection --

MS. DALY: Sorry.

MR. MIZELL: -- statements where we don't have any citation as to the evidence she's relying upon in making these assertions.

If you can simply provide a reference to the EIR that says that, I think we'd all be a lot more comfortable with it.

CO-HEARING OFFICER DODUC: Or phrase it as a question.

MS. DALY: Is that in the EIR/EIS that you know of, that the noise decibels and the vibration could cause 100-year-old homes to fall?

WITNESS VALLES: I know that there's limits within the mitigation measures for vibration and noise. I don't recall that there's any statements that say that that vibration's going to knock down homes.

MS. DALY: Or buildings.

WITNESS VALLES: Or buildings.

MS. DALY: Yeah. You have to do the equation.

That's what it is. So if the equation says this many decibels will cause 100-year-old homes to fall . . .

So I'll move on.

MS. RIDDLE: Okay. If I -- If I may, Mitigation Measure NO 1 -- excuse me -- Noise-1A on Page 23-41 of the Draft EIR/EIS and -- is to employ the noise-reducing construction practices during construction to avoid that.

But even more important, mitigation measure Noise 1-B -- 1B would be prior to construction. DWR would initiate a complaint-response tracking program so that they would have background information on the monitoring and then would work with the landowners as the project -- as the construction moves forward.

MS. DALY: Thank you.

The Recirculated EIR/EIS says there are evacuation plans for construction workers and WaterFix worksites.

Is there also an evacuation plan for the homes on islands where levee construction is occurring, or any of the nearby communities, particularly Hood, Courtland, Clarksburg, Locke, and Walnut Grove?

WITNESS BEDNARSKI: I'm not aware of their current existence but it's not to say that some of those plans would -- would not be developed during Preliminary

and Final Design.

MS. DALY: So Ms. Pierre showed an Alternatives Comparison chart when she spoke last Thursday, this chart (indicating).

CO-HEARING OFFICER DODUC: I think you can put that up as the Alternatives chart from Miss Pierre's --

MS. RIDDLE: It's DWR --

MS. DALY: 114.

(Document displayed on screen.)

MS. DALY: So the first thing I noticed when I looked at this is that it -- it goes from Alternative 1 to Alternative 8.

Are those the only alternatives in the EIR/EIS?

MR. MIZELL: I'm just going to do an objection for form here, and that that's, you know, what was discussed in Jennifer's testimony, not what's discussed in the engineering testimony.

CO-HEARING OFFICER DODUC: So, Miss Daly, let's go to your questions for these witnesses.

MS. DALY: Yes. Okay. Thank you.

Are you aware that there are other alternatives in the EIR/EIS besides these?

WITNESS BUCHHOLZ: My understanding of this graphic -- and it's not my graphic -- is that it provides a range not of alternatives, per se, because in the Draft

EIR/EIS we had Alternatives 1 through 9, but it's all -- it's a -- We arranged the alternatives from Alt 1 -- Alternative 1, which has similar-to-existing outflows to Alternative 8 on the right side which has the highest outflow.

The other Alternatives 2 through 7 and 9 fit between those ranges of 1 to 8 based on outflow.

CO-HEARING OFFICER DODUC: So, Miss Daly, just so I understand --

MS. DALY: Yes.

CO-HEARING OFFICER DODUC: -- what is it that you're trying to get from the Engineering Team with respect to this table?

MS. DALY: Well, I would like to know from Bednarski:

Did you engineer Alternative 9?

WITNESS BEDNARSKI: No, we did not.

CO-HEARING OFFICER DODUC: Alternative 9? Okay.

MS. DALY: Yes.

Do you know who did engineer Alternative 9?

WITNESS BEDNARSKI: I -- I do not know. Our CER refers to the California WaterFix as it's, you know, proposed in the Recirculated EIR/EIS with all those features and facilities that are described in that

document.

MS. DALY: Do you know that Alternative 9 is in there in many places?

WITNESS BEDNARSKI: In where? In where?

MS. DALY: In the Recirculated EIR/EIS.

WITNESS BEDNARSKI: I'm not personally aware that it is, but it may be referenced.

MS. DALY: Do you know much about Alternative 9?

WITNESS BEDNARSKI: I do not.

MS. DALY: Do you know that it states in the EIR/EIS that -- Well, let me read it.

Let's see. This is the introduction to the Preferred Alternative under CEQA 3.1.1, Line 17 through 22, if I may:

"Notably, identification of Alternative 4 as the preferred CEQA alternative is tentative only, and is subject to change as DWR and the CEQA responsible agencies, as well as the NEPA Lead Agencies, receive and consider public and agency input on this EIR/EIS. It is therefore possible that the final version of the BDCP may differ from Alternative 4 as described herein, either because Alternative 4 itself was refined, because another alternative was determined to be preferable, or

because the Lead Agencies, in response to input, developed a new alternative with some features from some existing alternatives and other features from other existing alternatives."

So that would lead me to believe -- and I am asking you -- that some of the features of Alternative 9 could possibly be chosen in the final decision.

WITNESS BEDNARSKI: If so directed by DWR, the Engineering Team would incorporate those changes.

MS. DALY: And the reason I'm asking is because the legal water users, they're in a different area of the Delta, and they would be affected differently than the ones we're talking about now, different neighbors, and a different part of the Delta. And it's actually a much larger alternative. It takes 15,000 cfs.

MR. BERLINER: I'm going to object to this oration. If there's a question --

CO-HEARING OFFICER DODUC: Mr. Berliner, your microphone is not on. If it is, I'm not hearing you.

MR. BERLINER: Sorry. I probably did not get close enough.

I'm objecting to this oration. If there's a question, the questioner should ask it.

MR. MIZELL: I'd like to add that it's also speculative and irrelevant as to whether or not some

future time we come back with an Alternative 9 before this Board and what the impacts might be at that time.

We're here for Alternative 4(a) and the scope of our analysis is directed at that alternative and not at Alternative 9.

CO-HEARING OFFICER DODUC: Thank you.

And you've gotten your questions on the record and your rationale for asking those questions. Well done. So I'll ask you to move on.

MS. DALY: Okay. Thank you.

I'm almost done. Thank you.

I'll just check over my notes here, too.

What does it mean to isolate the water supply from existing rivers and sloughs?

WITNESS BEDNARSKI: Are -- Are you referring to a specific portion of a document that we could all look at?

MS. DALY: I'm not sure that I could point you to it, though.

I didn't take good enough notes on that one. That was just one of my last-minute questions.

Let's see. The other one is:

Earlier, there was some questioning going on and discussion or answers about that existing levees are seen -- that it was in your conclusion -- in generally

good condition.

Could you expand on what you mean by that? I know you've answered this already but I'd appreciate it if you'd go through it with me again, please.

WITNESS BEDNARSKI: Yes.

MR. BERLINER: Objection: We had extensive discussion about this earlier.

If there's some new area, I think the questioner's fine, but to repeat what we've discussed at some length already seems a waste of time.

CO-HEARING OFFICER DODUC: Thank you, Mr. Berliner, but I think Mr. Bednarski can answer that very succinctly.

MS. DALY: Thank you.

WITNESS BEDNARSKI: Yes. My statement was written viewing the levees for their intended purpose as of today for isolating, you know, the islands from the surrounding water, that they're stable and suitable for that purpose.

And the subsequent discussion, if they needed to have some upgrades done to them to support our construction equipment, that we would undertake those activities to investigate what those upgrades would be and then implement those upgrades.

MS. DALY: Okay. Thank you very much.

CO-HEARING OFFICER DODUC: Thank you, Miss Daly.

I think we'll need to take a break for the court reporter.

So let's take a 15-minute break and we will resume at -- if I can add, that's around 2:50.

(Recess taken at 2:37 p.m.)

(Proceedings resumed at 2:50 p.m.)

CO-HEARING OFFICER DODUC: (Banging gavel.)

All right. Microphone?

All right. It's 2:50 and we're back in session.

Before we begin, let me do a quick time check.

Mr. Porgans, you're up next. Do you have a time estimate in terms of your cross-examination?

MR. PORGANS: I don't know how long it's going to be. It depends on what kind of answers I get.

CO-HEARING OFFICER DODUC: All right.

Miss Suard, are you here?

MS. SUARD: Yes.

CO-HEARING OFFICER DODUC: And do you have questions for cross-examine?

MS. SUARD: Yes, ma'am. It'll take an hour.

CO-HEARING OFFICER DODUC: Okay. And 42, SolAgra . . . is not here.

And Miss Womack, I think I see you in the audience. You have questions as well?

MS. WOMACK: Yes, of course.

CO-HEARING OFFICER DODUC: Okay. I think, based on that, we're going to dismiss Panel 3. We won't hold them hostage. I don't believe we'll get to them before we break today.

MR. MIZELL: Thank you.

CO-HEARING OFFICER DODUC: All right. With that, Mr. Porgans?

CROSS-EXAMINATION BY

MR. PORGANS: Co-Chairman Doduc and members of the panel, my name is Patrick Porgans. I'm representing Planetary Solutionaries as a de facto protestant.

I didn't have a -- I want to make a comment here. And I'm not an attorney, but I wanted -- I'm taking exception to the objections by the Department of Water Resources on the basis that most people's questions are vague and ambiguous. That's what I've been hearing every time that I've been in these hearings.

So I'm -- If I'm within my right and in accordance with the rules of this proceeding, I am now formally objecting to the information that the proponents of the Project have -- Petitioners have applied heretofore on the basis that the information is seriously

lacking, detailed information, about this Project.

Now, I understand that it's going to take time to get all this information, but this is a moving target. I've been involved in these processes before, and I'm saying now, I will start objecting to everything that you're objecting to.

And I don't mean that personally, because you've got to -- I'm going to proceed with my question. So I want that noted in the record.

CO-HEARING OFFICER DODUC: Thank you. Your objection to their objection is noted.

MR. PORGANS: Thank you.

So basic questions I have here:

If the witnesses would identify themselves in terms of who they're working for here. I'd appreciate that.

WITNESS BEDNARSKI: John Bednarski. My employer is the Metropolitan Water District of Southern California. I'm on assignment with Department of Water Resources in the California WaterFix engineering development.

WITNESS VALLES: And Sergio Valles. I also work for Metropolitan Water District, and I'm also part of the embedded Team with DWR.

WITNESS BUCHHOLZ: I'm Gwendolyn Buchholz. I'm

with CH2M Hill as a consultant to ICF on the preparation of the EIR/EIS.

MR. PORGANS: Okay. Thank you very much for that information.

And you said there was one other person in this group, the person that's going to be back on the 17th of August.

Could you name that person and what that person does.

WITNESS BEDNARSKI: Yes. His name is Prada Pirabarooban. He's a DWR employee.

MR. PORGANS: Oh, good.

Okay. So looking at the solution here now, my first question is:

Did the Engineering Group in any important -- Did you have any input on the change from the BDCP to the California WaterFix as part of this Engineering Group?

WITNESS BEDNARSKI: No.

MR. PORGANS: All right. Now, are you all the people that are on the Engineering Group, or are there others on the Engineering Group?

WITNESS BEDNARSKI: The Engineering Group is made up of a Team. It's a melded Team of both DWR employees and consultants or MWD employees. So at times it was a large Team. Since we've completed conceptual

design, it's now a relatively small Team.

MR. PORGANS: Conceptual design you're talking about is the 10 percent design that you have right now?

WITNESS BEDNARSKI: That's correct.

MR. PORGANS: Thank you.

Now, as Engineers, my question is: Did you factor in the existing conditions of the -- the Flood Control system for the Sacramento Valley and the San Joaquin Valley as it pertains to Project operations and runoff?

Did you look at that?

WITNESS BEDNARSKI: Is there a specific thing that you wondered if we looked at?

MR. PORGANS: Yes.

WITNESS BEDNARSKI: Maybe if you could elaborate.

MR. PORGANS: Specifically, have you looked at the operation of Oroville as awarded historically?

WITNESS BEDNARSKI: Not as part of the Engineering Team.

MR. PORGANS: Okay. The operation of the reservoir would affect the overall system depending upon how the system is operated; would it not?

WITNESS BEDNARSKI: I -- I don't have any opinion on that. It was not part of the engineering

criteria that we were given.

MR. PORGANS: Okay. So we -- Am I to understand you correctly by saying that the operation of Oroville was not included from the Flood Control point of view?

MR. MIZELL: Objection: Misstates the testimony.

CO-HEARING OFFICER DODUC: Could you ask the question again, Mr. Porgans?

MR. PORGANS: Did you factor into the operation of Oroville under Flood Control conditions? Flood operations.

WITNESS BEDNARSKI: I think you'd have to refer that to the Operations Panel. We did not look at the operation of Oroville as part of our engineering activities.

MR. PORGANS: And was there a reason for that?

MR. MIZELL: I'm going to object to relevance of whether or not the Flood Control system is being run in coordination with the operations at Oroville Reservoir as it doesn't pertain to the engineering of the structures proposed to be constructed for the California WaterFix.

CO-HEARING OFFICER DODUC: Mr. Bednarski is free to answer if he does not know.

WITNESS BEDNARSKI: Yeah. We did not examine that, no.

MR. PORGANS: Okay. I've got to phrase this question correctly, and you can help me out, please.

Are you -- Are you familiar with the standard project flood that occurs in Oroville under the U.S. Army Corps of Engineers' Flood Control Manual.

WITNESS BEDNARSKI: No.

MR. PORGANS: Would -- Would it surprise you as Engineers to know that we never reached the standard Project flood at Oroville?

MR. MIZELL: Objection: Assumes facts not in evidence; and relevance.

CO-HEARING OFFICER DODUC: Please rephrase.

MR. PORGANS: If -- Excuse me.

This is another reason why I object to this, because I'm confined. I mean, I can't ask the panel questions.

CO-HEARING OFFICER DODUC: Help me understand where you're going with this line of questioning.

MR. PORGANS: Well, it appears that the -- the Project is heavily influenced by operations. You know, when you have Flood Control facilities that are pushing out maximum flood flows, like 200,000 cubic feet per second or 350,000 cubic feet per second, that water's got

to go somewhere.

So what I'm saying is that the operation of the Project in terms of knowing what the Project is going to be faced with, you have to know the history of the operations of the Project in order to understand how those existed together.

CO-HEARING OFFICER DODUC: So, this is the Engineering Panel. Tie that to an engineering-related question.

How do you expect -- It sounds to me like you have an operational question, so are you trying to determine to what extent the engineering aspect considered those operations?

MR. PORGANS: Yes, I am.

Answer my question. And I think he answered it.

Did you consider those in your analysis?

WITNESS BEDNARSKI: We considered -- In our analysis, we considered various river stage levels in order to aid us in designing the intake structures.

We received information and design criteria from the Fish Facilities Technical Team that we applied to our design of the intakes, and we received some operational criteria as to how DWR wanted the range of facilities to operate. And we applied those and came up

with a Conceptual Engineering Report that reflects that work.

MR. PORGANS: Thank you.

My question, though, comes back down to the -- looking at flood control as part of this particular Project. Yes or no?

WITNESS BEDNARSKI: Yes.

MR. PORGANS: Thank you.

Looking at flood control, my question is that we have to take into consideration all of the factors that contribute to flood control.

Is that correct or not?

WITNESS BEDNARSKI: The only area that we really addressed flood control was in our dealings with some of the Corps criteria that we know that we'll have to develop as we're modifying the levee under the 408 permits that we'll have to take out in the future, and ensuring that the Conceptual Engineering Report and the information that went into the EIR/EIS adequately reflected the extent of the engineering that would need to be done on the levees. That was -- That was the extent of it.

MR. PORGANS: On that note, are you aware that the Flood Control Plan that's presently engaged for the Central Valley Project -- excuse me -- for the Central

Valley Reclamation Board, that they have a plan ongoing now to put levees -- slurry and levees all along the Feather River?

Are you familiar with that?

WITNESS BEDNARSKI: No, I'm not.

MR. PORGANS: Did the group factor in all the historical floods that we've experienced in this particular basin as it pertains to the Fix?

WITNESS BEDNARSKI: As I previously testified, our Conceptual Engineering Report accommodates a 200-year flood event.

MR. PORGANS: And do you know if we've had a 200-year flood as of yet in this particular basin?

WITNESS BEDNARSKI: I do not know.

MR. PORGANS: Do you know if we reached the standard project flood releases at Oroville for the State Board Project?

Do you know that?

WITNESS BEDNARSKI: I do not know.

MR. PORGANS: I'm going to have to -- Maybe I should take this to the Operating people because, as far as I'm concerned, this witness is not answering my questions to the degree that I would expect someone in his capacity to be able to answer. He's an expert. He's an engineer.

So, the -- Can you -- Can you describe to me the existing conveyance system that you use to move water from one point to the other? From north to south.

How do you move the water from Oroville out into the -- out to the pumps? How do you do that?

MR. MIZELL: Objection as to relevance.

We're not here to discuss the existing conveyance system. That was part of the ruling from June 11th.

CO-HEARING OFFICER DODUC: Mr. Porgans, tie -- tie this question in for me with the Proposed Project before the Board.

MR. PORGANS: Well, the Proposed Project, according to the testimony that was made here -- and you correct me if I'm wrong -- you said it would take 13 years for this Project, for the tunnels -- the Tunnel Project; is that correct?

WITNESS BEDNARSKI: 13 years for the construction activities related to the California WaterFix facilities, yes.

MR. PORGANS: And that includes the tunnels?

WITNESS BEDNARSKI: That would include the tunnels.

MR. PORGANS: I'm tying this together because, see, there's a relationship here between constructing new

Delta facilities as opposed to the Delta facilities that we have now.

The Delta facilities that we have now are not an authorized facility. It's just a conveyance system that moves water from Point A to B.

I'll get there.

So my question, then: Is it -- This -- When this construction is taking place -- And, of course, we're only at 10 percent. We're not sure if this is the alternative.

But in light of that, you're going to be pounding away in the Delta for at least 13 years. So, in the interim, if we know anything about historical runoff in this particular basin since 1906, we know that there are periods we have three to four years of more than 21 million acre-feet coming through the system on the north end.

So what I'm saying: If you're constructing a new facility, you have to keep the facility that's in -- presently serving to move water from Point A to B intact.

If that goes down -- What's your contingency plan if something was to occur? Now, this isn't a hypothetical. This is reality.

You're operating the Project, you're putting in the tunnels, and at the same time we're waiting for the

next deluge.

What's the contingency plan if the built levees go down now, while you're constructing? How do you get the water to your -- your customers and MWD?

CO-HEARING OFFICER DODUC: I think part of that is an Operations question.

To the extent that the Engineering Team looking at -- has looked at contingencies during construction phases, perhaps you can answer that part of it.

WITNESS BEDNARSKI: Okay. I can answer that question.

On each of the islands that we'll be constructing, we're planning to elevate the tunnel shafts either with a pad or some other methodology. Right now in the EIR/EIS it's described as a pad.

We'll create an elevated pad that will bring us up above that 200-year flood level so that, during construction, our tunneling works are protected if for some reason there is a breach of one of those levees.

We would also have a number of precautionary measures in place down in Clifton Court as we're working on the levees down there as far as isolating the construction work from potential levee breaches down in that area, and the same up in the north by the intakes.

You know, we'll be taking the proper

precautions as approved by the Corps of Engineers under our 408 Permit to make sure that all of our construction work there complies with their requirements for temporary construction.

MR. PORGANS: And how long would that process take to put -- There's no -- Are we dealing with the slurry levees now?

WITNESS BEDNARSKI: At the intake structures and at the tunnel shafts, yes, we're proposing slurry wall construction.

MR. PORGANS: And how long would that take? Give me an estimate.

WITNESS BEDNARSKI: The construction contractors that we've talked to estimate, for the tunnel shafts, perhaps four to six months to construct one of the -- of the size that we need. Somewhere in that same vicinity or timeframe around the intakes also.

MR. PORGANS: And the slurry levees, how long would that take to complete it?

WITNESS BEDNARSKI: Well, I was referring to the same thing, the slurry cutoff walls at the intakes.

MR. PORGANS: And the rest of the levees that you're going to be putting slurry?

WITNESS BEDNARSKI: I think, overall, we have about a three-year construction window for each one of

the intakes. So about a three-year period of time from when we commence construction. As I showed in the video, all of those activities would take place in about a three-year period of time.

MR. PORGANS: Okay. Thank you.

So, I think the point I'm trying to make here, Co-Chairman, Miss Doduc, is that we have an existing system that's providing conveyance for water that's being moved from the State Water Project considerably south.

And I'm concerned that this Project could jeopardize the State's water supply. And the reason I'm concerned about that is simply because we don't have any way to put the water through the system.

So if we have levee breaks, which we have had historically, and we know from the data that we do have these periods of four to five years of heavy rainfall that exceeds the averages, so what I'm saying --

CO-HEARING OFFICER DODUC: So -- So, let me interrupt here and say that you certainly could make that as part of your case in chief in Part IB of this hearing.

For now, though, I will ask you to limit yourself to specific engineering-related questions to this panel.

MR. PORGANS: Thank you.

Now, we know there's a lot of assumptions in

everything that you do and -- and -- and this particular Project, it appears that we're making a lot of assumptions that we haven't nailed down yet.

Would that be an accurate depiction of where we are?

WITNESS BEDNARSKI: I don't believe so.

MR. PORGANS: Well, then, can you explain to me: We're at 10 percent of the design of the Project; okay? We're at 10 percent.

We're not even sure if we're going to have 4(h) (sic) as the alternative. So how do you -- how -- What do you base that on?

WITNESS BEDNARSKI: For Alternative 4(a), I believe that we have developed enough engineering information to identify footprints of construction, the methodologies of construction, and all of the other information that you would need to prepare an Environmental Impact Report, or EIS, for this Project, for this alternative. All of that has been identified through the 10 percent effort that we have completed to date.

I think that, over the course of -- You know, today, we've talked about a number of other things that will need to be developed as we go into Preliminary Design and Final Design, but those are not going to

substantially change the Project or substantially change any of the impacts that have already been disclosed in the Draft EIR/EIS.

MR. PORGANS: And you're saying that even if we don't go with 4(h) (sic), that's . . .

How does that -- How does that factor in?

WITNESS BEDNARSKI: Well, our CER is developed around Alternative 4(a), so if another alternative is eventually recommended, then we would need to revise the CER to address those components.

MR. PORGANS: As an engineer -- I'm not an engineer so I don't know much about the engineer field.

But, generally speaking, when you're working on Projects of this magnitude, there's a lot of unknown variables here. And you're saying, at 10 percent, you -- you're comfortable.

Excuse me. Let me ask.

You're comfortable with that 10 percent. Is that what you're saying?

WITNESS BEDNARSKI: In my professional judgment, yes, I am. The depth of the -- The level of detailed information that we provided is sufficient for the EIR/EIS process, and also to provide us, you know, a point to go forward with Preliminary and Final Design without significant changes to the program.

MR. PORGANS: Thank you.

There's one last point I'd like to make to Co-Chairman Doduc, and that is that these are mostly consultants that are working for the Department of Water Resources.

CO-HEARING OFFICER DODUC: So, are you now making an objection?

MR. PORGANS: I am making an objection because they have a vested interest in the Project. The vested interest is the water supply.

On that note, did you calculate any -- In engineering terms, by putting in the tunnels, did you ascertain how much water that would -- Or would it increase the Project yield by putting the tunnels up there?

CO-HEARING OFFICER DODUC: I'm not sure I understand that question, Mr. Porgans.

MR. PORGANS: Well, what I'm trying to do is show that, if they put the tunnels up further in the northern part of the Delta, that you will -- you may be able to reduce the amount of carriage water that you have to push out the back end, which we have to do now. And I'll be talking about that during the operations.

So, what I'm saying is, if you put that -- those facilities where he's saying, that's going to

benefit the Metropolitan Water District because what it's going to do --

CO-HEARING OFFICER DODUC: So what is your question to them?

MR. PORGANS: How would -- How would the Metropolitan Water District benefit from this Project as a State Water Project contractor?

CO-HEARING OFFICER DODUC: If you do not know, Mr. Bednarski, you're free to say so.

WITNESS BEDNARSKI: I don't know.

MR. PORGANS: Okay. Now I'm going to conclude this because I'm just wasting time talking to him.

I have to say that, as far as this witness goes, I object; okay? The witness is not familiar enough with the overall issues associated with the -- to the Project, the Flood Control operations.

I don't know how people come up with these kinds of things and not have all the data.

CO-HEARING OFFICER DODUC: Thank you, Mr. Porgans.

We will add your objections to those already on record.

MR. PORGANS: Thank you so much.

I want to make one last point. It's a housekeeping thing. I don't know if I should talk about

it now.

When we were cross-examining Jennifer Pierre, I had given her one of my exhibits, and I mentioned I wanted that introduced into the record.

Now, I need to get a copy of that back because I'm going to use it --

CO-HEARING OFFICER DODUC: And I believe Mr. Mizell is -- has been in contact with Miss Pierre about that document.

MR. MIZELL: I have, and she's having somebody from her staff scan it and send a copy back to us.

Otherwise, we can have the original copy Mr. Porgans gave to her available on, I believe, Thursday or Friday.

MR. PORGANS: I do have one last question.

Do you know how long this so-called Delta Fix has been in the process?

WITNESS BEDNARSKI: No, I don't.

MR. PORGANS: Thank you.

WITNESS BEDNARSKI: Not it's complete history, no, I don't.

MR. PORGANS: Thank you.

Again, I can't get answers.

CO-HEARING OFFICER DODUC: Your objections are noted.

MR. PORGANS: Thank you so much.

CO-HEARING OFFICER DODUC: Thank you, Mr. Porgans.

MR. PORGANS: Thank you for your time and -- Thank you for all -- for standing up there. I don't know how you do it.

CO-HEARING OFFICER DODUC: All right. Miss Suard.

Ah, and she has a flash.

Welcome back, Miss Suard. I've been eagerly awaiting your cross-examination.

MS. SUARD: Okay. I'm glad.

I forgot to put in my contacts so I'll be going back and forth with glasses. I apologize for that.

CROSS-EXAMINATION BY

MS. SUARD: So, I've listened to almost all the testimony, either from home or physically being here, so I'm going to try and not duplicate as much as possible.

But I feel like there's some conflicts between what's been said and some of the written documents that I've reviewed.

So I'm going to just say that my focus is --

Can you hear me okay? I feel like I'm popping keys.

CO-HEARING OFFICER DODUC: Actually, now we

can't.

MS. SUARD: Now you can't.

CO-HEARING OFFICER DODUC: Okay. Go ahead.

MS. SUARD: Okay. So I'm going to focus on: Will the -- It says -- Oh, sorry. Next page.

(Document displayed on screen.)

MS. SUARD: Is there a way to make it just consistently -- There we go.

I'm really focusing on construction. This is about the design and all that, so I'm not going to be asking operational questions.

And my concern is impact to drinking water quality and agricultural water quality in the construction area downstream from the whole construction area, not just the intakes, and kind of the area-wide drinking water aquifer.

So, let me get here. I'm -- This is your qualifications, sir, that -- that showed up that was on -- What is that? DWR -- I can't see that. 12? Is that what that says?

MR. OCHENDUSZKO: It appears to be 17, Exhibit 17.

MS. SUARD: I'm sorry. I've got my miniature of this.

And I understand, sir, that you have had a long

career with Metropolitan Water District; is that right?

WITNESS BEDNARSKI: 25 years.

MS. SUARD: Yup. That's a long time.

And have you -- Have you -- You've handled large projects similar to this? You testified about that, the Inland Feeder Project; correct?

WITNESS BEDNARSKI: That was a $1 billion program, yes.

MS. SUARD: Okay. That's huge.

1 billion?

WITNESS BEDNARSKI: Yes.

MS. SUARD: Okay. And this Project is estimated to be how many billion?

WITNESS BEDNARSKI: Close to 15.

MS. SUARD: Yeah. So this is a big step up, big job; right?

Just to understand how it functions, you're the Design Engineer.

Sometimes in big Projects, there's a Design Engineer and then there's a Construction Team or Engineer.

Or how does it work with Metropolitan Water District? Is Design and Construction the whole Team?

WITNESS BEDNARSKI: We typically break -- At Metropolitan Water District, we typically break the

project into different groups.

We typically assign what we call a Program Manager or Project Manager. They have overall responsibility for budget and schedule in the program.

Then we'll have a Lead on the design portion, so call it a Design Manager, or Managers, depending on how large the program is.

And then once the project moves into the field, we identify a Construction Manager that is responsible for overseeing the contractors in the field.

MS. SUARD: And do all these people work for Metropolitan Water District, or do they have, like, an independent company -- independent enterprise that, you know, handles construction?

WITNESS BEDNARSKI: Are you referring to a specific project or just a theoretical project?

MS. SUARD: This one. This one.

WITNESS BEDNARSKI: This Project.

MS. SUARD: What is it anticipated?

WITNESS BEDNARSKI: Well, this is -- This Project, the California WaterFix is a DWR Project, so it'll be, you know, organized and managed by DWR or people that they assign to manage it, whether they're DWR employees or consultants.

So it's -- it's not an MWD Project, if that was

the misunderstanding. This is -- This is a DWR Project, the California WaterFix.

MS. SUARD: A DWR Project, but you're an Metropolitan Water District Engineer representing DWR.

WITNESS BEDNARSKI: Yes, I am.

MS. SUARD: Okay.

WITNESS BEDNARSKI: Yeah.

MS. SUARD: Okay. Just, that's good now.

In -- In your dealing over the years with different people, did you meet a Mr. Dennis Majors?

WITNESS BEDNARSKI: I know Dennis Majors, yes.

MS. SUARD: Okay. What about -- And he works with Metropolitan Water District?

WITNESS BEDNARSKI: I'm not sure of his current job status, whether he's still an MWD employee or whether he's retired, but he was at one time a MWD employee.

MS. SUARD: Okay. What about Mr. Paul Marshall from DWR? Do you know him?

WITNESS BEDNARSKI: I do not know Mr. Marshall.

MS. SUARD: Okay. I'm going to go to the next slide.

(Document displayed on screen.)

MS. SUARD: Does this look familiar to you? This is from a 1960 Bulletin No. 76, Delta Water Facilities, and it's in color. You can get to it online,

just by putting those words.

Since you've been working with Metropolitan Water District for a long time, you might be familiar with the concept that, when the facilities were built in the 1960s, it was supposed to be only surplus water.

Did -- Are you familiar with that concept?

WITNESS BEDNARSKI: I'm sorry. What -- What are you referring to as supposed to be surplus water?

MS. SUARD: The -- The State Water -- California's water development and State Water Projects and, actually, Central Valley Project. The idea is to take surface water from the north and convey it south.

Does that sound like a reasonable expression of what has been going on in the last hundred years?

WITNESS BEDNARSKI: I'm not familiar --

MR. MIZELL: Object --

WITNESS BEDNARSKI: -- with that.

MR. MIZELL: -- to relevance and the scope of this question.

We're -- We're here to discuss a particular project. Again, these Engineers are here to describe the facilities we're proposing under 4(a) and I believe these questions go to the basis of the existing State Water Project.

And at this point in time, we don't have folks

who are here to justify the existence of the current State Water Project.

CO-HEARING OFFICER DODUC: Miss Suard, I'm assuming that you're laying some foundation for some direct questions to these engineering witnesses.

MS. SUARD: Yes, ma'am. They -- The documentation for WaterFix says that they are only -- only using existing water rights.

But I -- I can move on. You know, they're -- they're saying they're only asking for a change in point of diversion, and they're not asking for new water rights, so I -- But I'm fine with the others. There's a lot to cover here.

So I'm -- I'm just going to go to Errata Sheet DWR-5. And this is a question for, you know, the design.

This is the Delta outflow assumptions. And I don't know if people can read that up there, but it looks like very low outflow assumptions.

Is -- Is this what the Project was designed to accomplish?

WITNESS BEDNARSKI: I'm not familiar with that table or those -- those -- those outflow requirements. That was not part of our engineering effort.

MS. SUARD: But this is DWR's table for the scenarios we should expect.

Okay. You answered it, so that's fine. I wanted --

CO-HEARING OFFICER DODUC: Before you move on too quickly, because I need to understand.

Mr. Bednarski, do you mean to say that these are the Modeling assumptions?

WITNESS BEDNARSKI: Those do look like Modeling assumptions. I don't believe they're a part of the Engineering Team's work.

CO-HEARING OFFICER DODUC: Okay.

MR. MIZELL: And for clarity purposes, DWR-5 and DWR-5 Errata are both Modeling presentations.

CO-HEARING OFFICER DODUC: Okay. Thank you.

Proceed, Miss Suard.

(Document displayed on screen.)

MS. SUARD: The next slide is just a reference, which it's -- it's the minimum amount of flows that were on the Sacramento River before there were ever any projects.

And did -- In -- In the design, did anybody, any of the people in leadership that directed you in doing the redesign, did anybody consider historically what was the minimum flows on the Sacramento River?

MR. MIZELL: Objection.

MS. SUARD: I'm focused on Sacramento River.

MR. MIZELL: I'm going to object to this as being speculative.

She's asking an engineer to speculate what was in the mind of DWR management when they made certain directions to the Engineering Team.

CO-HEARING OFFICER DODUC: And he is free to answer that he does not know.

WITNESS BEDNARSKI: Yeah. I do not know what was in their -- in their minds as to this historical data.

MS. SUARD: Okay. I'll leave it at that.

Well, the next one was regarding pulse flows. I'm going to skip that because that's operations.

(Document displayed on screen.)

MS. SUARD: This one I did want to point out that there's that -- the fact sheets for WaterFix for the process now does refer to Option Number 4, new alternatives, and that may be why some extra questions are coming up. So I wanted to point that out as an example.

Sir, you'd said that you just came onboard on this in 2013; is that right?

WITNESS BEDNARSKI: I believe 2011.

MS. SUARD: Oh, 2011. Okay.

So I'm -- I'm just going to go very quickly

through the history.

The reason why a number of us is -- are asking about this 15,000 cubic-feet-per-second capacity is because we've been seeing the same thing. Projects change over time, but the capacity of the Main Tunnels remains.

And so I'm going to show you some examples of other variations of the same Project under different names but the capacity was always the 15,000 cubic-feet-per-second tunnels.

So the -- Is it your understanding that the capacity of the tunnels as designed are still -- the -- the tunnels after the forebay are still designed as 15,000 cubic-feet-per-second capacity?

WITNESS BEDNARSKI: No, they are not. They're designed as 9,000 cubic-feet-per-second tunnels.

MS. SUARD: Okay. For WaterFix? Or is there -- I'll go on.

Where am I?

So, it has three new intake locations, and then there's the Delta Water Facilities location.

Does that -- The Delta Water Facilities location, is that an extra capacity as well, so it's -- it's 3,000 for each of them and then this fourth facility takes additional water?

WITNESS BEDNARSKI: I'm -- I'm not aware of what the fourth facility would be, though I did sit in on some testimony previously, and I think that was identified as a former DWR site or present property that at one time was thought to be an intake facility but is no longer being considered.

So we're -- We have the three intakes at the three locations that are identified in the CER and that's it.

MS. SUARD: Okay. And so the -- the WaterFix document right here says 10,350 cubic feet per second. That is assumed a combination of something from the Clifton Court Forebay and also in the north?

WITNESS BEDNARSKI: I'm not familiar with that document. It's dated 2007. That was before my time on the Project.

MS. SUARD: Oh, I'm sorry. No.

The State Water Project points of diversion, that is a more current document, and that's from the WaterFix website, and I'll get you the reference.

And the second one is the DWR-1. That is a fourth project or potentially could be that fourth project, so that's that other map. And that was called North Delta Improvement Project, something like that. They changed the name a couple times.

WITNESS BEDNARSKI: Yeah. I'm not the authority on that fourth diversion point they're pointing out. I'm familiar with the three that were under the proposed list that you just showed.

MS. SUARD: Okay. So, I'm -- I'm just going to go on. If you're not the authority on that, I'll go on on that.

So we're back to one of the DWR slides, DWR-1 actually is.

(Document displayed on screen.)

MS. SUARD: And, again, the . . . I'm only interested in the design and construction, so I'm going to ask a lot of physical questions that I did not hear anybody else ask.

And -- But before I go to that, you talked about Chuck Gardner. He's a -- He's one of the program Directors; is that right?

WITNESS BEDNARSKI: That's correct. That's the individual that I report to.

MS. SUARD: Okay. Could we get that slide number two put up, please? And then we'll go back to this.

(Document displayed on screen.)

MS. SUARD: I think it has to go up a bit.

Okay. This is from a Freedom of Information

Act request for public records.

And does this look familiar to you?

WITNESS BEDNARSKI: Yes, it does.

MS. SUARD: Okay. And it's dated October 28th, 2015?

WITNESS BEDNARSKI: That is correct.

MS. SUARD: Could you read it to me, please, just the -- after the "re."

WITNESS BEDNARSKI: (Reading):

"Initial design phase studies complete.

"This memo is to notify the Team of completion of the initial design phase studies. Sufficient preliminary design work and investigations have been completed and it is confirmed that the site is adequate for start of construction activities for the consolidated pumping plants if the California WaterFix is approved."

MS. SUARD: So -- So, earlier, you said it's at 10 percent design. This makes it sound like it's at 100 percent design.

And could you explain the difference, please?

WITNESS BEDNARSKI: I believe that what that is intending as it says (reading):

". . . It is confirmed that the site is adequate for the start of construction activities

for the consolidated pumping plants . . ."

We had been investigating the relocation of the pumps from the intakes down to the south, and this is to signify that we had completed those activities and, yes, we had a 10 percent design. We couldn't -- We can't start construction with a 10 percent design, though.

MS. SUARD: Okay. So, by -- So I can understand 10 percent design.

Is it -- Is it, like, 100 percent design-ready at Clifton Court Forebay but only 10 percent design-ready in the north? Is that correct?

WITNESS BEDNARSKI: We characterize the entire job in total as being 10 percent complete, and I think that that applies from north to south. All the facilities are at a very early stage of design development commensurate with 10 percent complete.

MS. SUARD: Except for the -- It says, the initial design phase studies are complete for that part of the Project, is what it said.

WITNESS BEDNARSKI: Yeah. I'm not sure what Mr. Gardner meant by that specific phrase, but it was to signify to the Team that there is no longer a need to continue on with our conceptual design activities.

MS. SUARD: For that part of the Project.

WITNESS BEDNARSKI: That and really any other

part of the Project at that point in time. That was early fall last year.

MS. SUARD: Okay. Can I have the second letter, please.

(Document displayed on screen.)

MS. SUARD: Is that -- Is that an e-mail from you, sir?

WITNESS BEDNARSKI: Yes.

MS. SUARD: Okay. And it's to Mr. Gordon from DWR and a couple other people in DWR.

WITNESS BEDNARSKI: Yes.

MS. SUARD: Okay. It -- It appears to me -- I don't know if you want to read the whole thing.

Let's see, let's -- Can you read the second paragraph, please.

WITNESS BEDNARSKI: Sure. You want me to read the whole thing?

MS. SUARD: Sure.

WITNESS BEDNARSKI: (Reading):

"Here is my concern. You are showing a May 16, 2016, date to obtain the Corps Permits and GB event is July 1st, 2016.

"If we choose not to award the construction contract until after we have the permit in hand, that would give us a span of five to six weeks to

process all contractor paperwork, insurance, et cetera, approve submittals and get the contractor mobilized and out on the site to commence construction work. I do not think this is a reasonable amount of time to insure the contractors doing meaningful work on the site, as was the original promise to Chuck.

"With this compressed schedule, we may be able to conduct a ceremonial groundbreaking event (contractor mobilizes equipment to the CCF while the submittal process is still underway).

"Perhaps this is the best we can do. At any rate, I'd like to discuss this at our weekly meeting with Joe Barron on Tuesday afternoon."

MS. SUARD: This sounds -- And correct me if I'm wrong, but it sounds like you were planning a groundbreaking event July 2016 for work on the Clifton Court Forebay for WaterFix.

Was that what this is about?

WITNESS BEDNARSKI: That is correct, at that point in time.

MS. SUARD: So where -- Why would you plan for something like that before you'd even come before this Water Board or gotten any of the Permits that you need?

WITNESS BEDNARSKI: I believe that there was an

understanding at DWR that we could commence with this project ahead of the -- this Board process that we're in now. That was subsequently determined to be incorrect, and so we stopped all of those efforts.

MS. SUARD: Who led you to that understanding, please?

WITNESS BEDNARSKI: I believe it was Chuck Gardner gave us the direction to commence that work that was referenced in this e-mail.

MS. SUARD: Thank you.

Can we go back to the other slides?

(Document displayed on screen.)

MS. SUARD: Just to confirm what you had said previously.

The 9,000 cubic feet per second, it was downsized because the fish biology people said -- recommended downsizing to 9,000 cubic feet per second; is that correct?

WITNESS BEDNARSKI: Your question is kind of vague. I'm not sure what we downsized -- are you referring to when you say downsize 9,000.

MS. SUARD: The original design was 15,000 cubic feet per second --

THE WITNESS: (Nodding head.)

MS. SUARD: -- with five 3,000 square --

3,000 cubic feet per second intakes. It's now proposed to be three.

Why was the reason for -- What was the reason for the downsize?

MR. MIZELL: I'd like to object to being vague and ambiguous in terms of what we're comparing this to.

She's not identifying which alternative from the original BDCP document she's referring to. There were many different aspects that were initially analyzed before switching to the Alternative 4(a) Proposed Project.

MS. SUARD: Okay. I was just trying to reiterate something that was already said and it will be in his testimony when the transcripts are available. So I'm just going to not worry about that one.

I do have a question, though, and I had tried to ask it in the last series.

1 cubic feet per second equals 1.98 acre-feet per day estimate; is that right?

WITNESS BEDNARSKI: Yeah. I guess I'll take your word for it without calculating it out myself --

MS. SUARD: Okay.

WITNESS BEDNARSKI: -- but --

MS. SUARD: Okay. That just comes from a conversion chart so --

WITNESS BEDNARSKI: Okay.

MS. SUARD: -- you know.

What it came down to was basically the 9,000 cubic feet per second, if it was operated year-round, would come up to 6.5 million acre-feet per year, and yet the DWR-1 says the average yield is 4.9 million acre-feet.

And I was just curious. Does it take 6.5 acre-feet of diversion to result in 4.9 million acre-feet of delivery?

WITNESS BEDNARSKI: I wouldn't anticipate that there would be any losses through our conveyance system that would equate to that.

We've provided in our design the capability to, on an instantaneous basis, divert up to 9,000 cfs. I do not have knowledge as to whether that would be used continuously 24/7/365 or whether there would be other operational constraints put on the -- on the system. So it could operate less than that, but we were asked to design it with 9,000 cfs capacity.

MS. SUARD: So you were asked to design it with capacity for 6.5 million acre-feet for the WaterFix.

MR. MIZELL: Objection: Misstates his testimony. He spoke in terms of cfs.

MS. SUARD: Okay. That's fine.

So, you had talked about and gave examples. You know that there is a lot of concern in the Delta of -- of levee collapsing, of sinkholes, all these things that could really impact the levees which then impacts our homes and our businesses and our drinking water.

And so this -- You gave these examples, and this was the Project you were involved with? Is this the Inland Feeder Project?

MR. BERLINER: A point of order:

It would be very helpful if Miss Suard would reference the document she's referring to as opposed to just using "this" and "that" to describe it because, otherwise, the record's going to be very unclear as to what's being referred to.

MS. SUARD: Okay. I can -- I can read them to you, but the documents I use, the screen print shows where you can find the document online.

So this -- the shaft, that came from the video that was played on CalEPA, the video when he was testifying. And so I just took a screen print straight from the computer. So that's part of the video.

The other graphic comes from DWR-2 and it's on there.

So I -- That's just a reference. He -- This was an example of a very large project, this

billion-dollar project.

WITNESS BEDNARSKI: (Nodding head.)

MS. SUARD: I -- Did you, in the design, look at and analyze other projects that have happened in the Delta that, you know, definitely had to deal with keeping water back and dealing with different kinds of clay and all that? Two examples are the Empire Tract intake and the Victoria Canal intakes.

Are you familiar with those?

WITNESS BEDNARSKI: Can I clarify your previous slide?

I think there's some confusion on my testimony, those two Projects that are shown in those photos, that one with the shaft and what is presently a pump station at the bottom.

I believe that was the City of Portland on their Combined Storm Overflow Project. I was not involved in that Project.

The photo at the bottom right is the Port of Miami Tunnels that, again, I referenced that in my presentation. I was not involved in that project. I just wanted to make that clear to the Board.

MS. SUARD: Okay. The one on the right, that isn't the Inland Feeder Project?

WITNESS BEDNARSKI: No, that is not.

MS. SUARD: Okay. Okay. Sorry. I did the screen prints from your presentation.

So, again, when you were doing the design of -- of this Project, do you look at the other projects that have happened over the last eight years in the Delta that had to deal with, like, sheet pile and digging and tunneling in the Delta muck?

Did you look at any of those?

WITNESS BEDNARSKI: I believe our Design -- our -- our Design Team or Engineering Team, as it's been called, does that have expertise on it. We have a number of staff on the Team that are from DWR that have extensive experience in the Delta that have input into the program and the Project from time to time.

So I would say, yes, we're -- we're knowledgeable of that, though I am probably personally not of those projects.

MS. SUARD: Okay. Thank you.

Oops. Let me back up.

(Document displayed on screen.)

MS. SUARD: Okay. So this is a photo that came from Contra Costa Water District, their website, and -- when they were talking about the project that they did, and that's a very miniature example of the type of project you're talking about; right?

Does this look . . .

WITNESS BEDNARSKI: I have not seen these photos before, but it would appear that, yes, the tunnel diameter is much smaller.

MS. SUARD: Okay.

(Document displayed on screen.)

MS. SUARD: So this next graphic -- And you can go online to see it, it's deltarevision.com. And you can go to a page that lists all the new smaller intakes and all the projects that have been happening in and around the Delta.

And were -- were the impacts that were actually experienced by people around those projects ever analyzed when you were doing your planning for WaterFix?

WITNESS BEDNARSKI: Again, you know, I have knowledge that we had experienced DWR employees that were on our Team, our Engineering Team, and they're familiar with the Delta and projects that have gone on there. And to some degree, that input has been -- is incorporated into the CER, my testimony and into the Draft EIR/EIS.

But, specifically, have they gone out and looked at these projects? I don't know.

MS. SUARD: I'm just curious: Why didn't you include those in your presentation so that people in the Delta would understand -- know this is something that has

been done in the Delta?

WITNESS BEDNARSKI: I believe I discussed a project by Sacramento Regional Wastewater Agency, 15-foot tunnel bore for one of their large collector sewers that was fairly recent, within the last 10 years. I did discuss that project.

MS. SUARD: Okay. Okay. I'll go to the next one.

You -- You had a graphic, a schematic, which is very helpful to understand, but I sort of want to add a side profile to understand exactly how high, because I like to count the numbers.

(Document displayed on screen.)

MS. SUARD: So, for starters, when -- when the -- You see that -- The -- How high will that wall or the sheet pile be from the Sacramento River at low tide? Is it 20 feet? Is it 30 feet? Do you know?

WITNESS BEDNARSKI: Do you mean how high it will be extending above the water at low tide?

MS. SUARD: Yes.

WITNESS BEDNARSKI: Is that what you're asking?

MS. SUARD: The first little arrow on the left, yes.

WITNESS VALLES: At mean river, that elevation is around 4 feet around the intakes. We would expect

that the sheetpiling would be high enough to provide the 200-year flood level protection.

MS. SUARD: Which would be 36 feet?

WITNESS VALLES: No. That actually would be lower than that. I'm tempted to say it would be about 28 feet.

MS. SUARD: Okay. So, Highway 160 in your -- the video, which -- You know, I really am thankful that you did that video. I thought it was very helpful, the one that you played online. But I would have liked to have had a, you know, on-the-ground visual.

Highway 160, how much higher will it be compared to where it is now?

WITNESS VALLES: Approximately 6 feet.

MS. SUARD: Okay. Just 6 feet.

WITNESS VALLES: Yeah.

MS. SUARD: It'll be set back and 6 feet higher?

WITNESS VALLES: Correct.

MS. SUARD: Okay. The next little arrow pointing towards the water, how deep will these initial catchment basins be?

WITNESS VALLES: Well, the water surface will be the same as what's in the river.

MS. SUARD: It's -- It's not going to be

designed to catch more than that?

WITNESS VALLES: No. It matches the river.

MS. SUARD: Okay. Okay. And the -- the tunnels are made to be gravity flowed; is that right?

WITNESS BEDNARSKI: That's correct.

MS. SUARD: What is the slope? You know, is it one foot to one inch?

WITNESS BEDNARSKI: It -- It's a very minor slope. I think, as we previously testified, it's almost a flat slope with -- with basically no -- no fall at all, just enough to move the water from -- from this location. It would be perhaps to the Intermediate Forebay, so we have a very, very gentle slope on the tunnels. I -- I'd have to look in the drawings and see what it is. I don't recall.

MS. SUARD: So, is that flow -- What is the velocity of -- I can only speak in knots.

What is the flow in -- when you're -- when it's going from that catchment basin to the forebay, basically?

WITNESS VALLES: I think it's about 3.5 feet per second.

MS. SUARD: Okay.

WITNESS BEDNARSKI: And that would vary depending on the amount of water that's being diverted at

each intake.

WITNESS VALLES: That's at maximum 9,000 cfs or 3,000 per -- per intake.

MS. SUARD: I thought it might help to get to your little drawings.

(Document displayed on screen.)

MS. SUARD: That machine that's driving the pile, how -- how tall are those piles? How deep is that?

WITNESS BEDNARSKI: Those are actually slurry walls that we're constructing.

Or which -- which photo are you referring to?

MS. SUARD: The little blue construction --

WITNESS BEDNARSKI: Oh.

MS. SUARD: -- thing, when you're doing the slurry walls.

WITNESS BEDNARSKI: Yeah. These are the slurry walls and we're not driving a pile for that. We're excavating the soil, and as we excavate the soil, we replace it with bentonite solution that basically thickens and makes a watertight seal.

So those could be quite deep. And, as we previously testified, once we get the geotechnical information for each of these sites and we're able to determine where there's an impervious clay layer, we would go down to that layer, and that's how deep those

would be.

MS. SUARD: So, I'm pretty familiar with the areas of the Delta, and I think there's, like, 4 feet down.

WITNESS BEDNARSKI: (Nodding head.)

MS. SUARD: At least -- Yeah, in my area of the Delta, it's 4 feet to that. My part is clay layered.

So do you estimate -- Do you have any estimate yet? I mean, 20 feet? 50 feet? Hundred feet?

WITNESS BEDNARSKI: You know, I hate to do this to the Board but I'm going to have to defer that to our missing panel member. He's our Geotechnical Engineer. He can probably answer that better.

But, in general, we understand that the topmost layer of the ground is probably a peat material, very organic material.

And then as you start going down in depth, you'll start uncovering layers of silts, sands, and clays layered on top of each other. The exact thickness of each of these layers will vary from site to site.

And so we would look to find an impervious layer that's deep enough for us to do our construction of these sedimentation basins, which, Sergio, maybe you can help me with how deep those are.

But we'd need to go down at least that deep.

So we might go past multiple clay layers, like you say, till we find one at a -- at a suitable depth.

MS. SUARD: There's no estimate of how deep?

WITNESS BEDNARSKI: Well, again, it's going to be determined on a site-by-site basis. So until we actually go out there on each of these sites, you know, it would just be speculation at this point.

MS. SUARD: Okay. So how deep is the basin, then?

WITNESS VALLES: There's -- There's drawings in the CER that actually show cross-sections, and it shows you, you know, approximate depth.

I'm tempted to say that, below the water surface elevation, that we're probably going down about 20 feet to the bottom of the sedimentation basin.

MS. SUARD: Okay. Thank you.

(Document displayed on screen.)

MS. SUARD: The next one comes from the -- your exhibits. And, also, it shows the original was a dewatering and then you switched to exactly what you were talking about with the different walls.

And you just -- I believe you just answered, estimate 20 feet, something like that. Okay.

WITNESS VALLES: No. That 20 feet is for the sedimentation basin and that's --

MS. SUARD: Okay.

WITNESS VALLES: -- that's the actual bottom of the soil. The actual slurry walls would go much deeper than that.

MS. SUARD: What does "much" mean?

WITNESS VALLES: Again, as Mr. Bednarski mentioned, we have to get some geotechnical information on that to actually find a clay layer down a deeper level and we'd dewater down to that.

MS. SUARD: How deep does it need to be to -- to accomplish what you want to accomplish?

MR. MIZELL: Objection: Vague.

Which portion of the Project during construction is the questioner referring to?

MS. SUARD: How deep does it need to be to install the -- the sediment catchment base as designed?

WITNESS VALLES: It also depends on the soil conditions. We don't know what those soil conditions are. If it's a highly pervious soil, we may have to go a little bit deeper. If we have to strengthen the soil, it would -- we'd have to go find a level that we feel is appropriate for that.

I can't tell you right now what that level is because we don't have the geotech --

MS. SUARD: Okay.

WITNESS VALLES: -- information.

MS. SUARD: Thank you. I'll just move on.

I am concerned about how far out into the river the structure goes, that initial sheet pile, to protect, you know, all around the construction area.

Do you know how far out that goes and how far the Sacramento River is at each of those points? How wide is it?

WITNESS VALLES: I don't have that off the top of my head. But the -- in terms of where the sheet piles are going to be located relative to the total of the -- of the slope, we're probably looking about 50 to 60 feet from the toe to the slope. That's where the sheetpiling.

MS. SUARD: The 60 -- 50 to 60 feet from the toe out into the middle of the river.

WITNESS VALLES: That's correct.

MS. SUARD: Okay. And if the river is 125 feet --

WITNESS VALLES: It's going to--

MS. SUARD: -- currently --

WITNESS VALLES: I'm sorry.

MS. SUARD: If it's currently 125 feet at -- at, you know, one of your intake locations, that means you're reducing the width of the river by more than 50 percent?

WITNESS VALLES: It's -- The river's way larger than that.

MS. SUARD: Okay.

WITNESS VALLES: I'm tempted to say it's, like, 300 feet or more.

MS. SUARD: Okay. So, I'd -- I'd have to go out and measure that, but I didn't do that specifically.

But a good estimate is, it's designed to take up 50 feet out into the waterway.

WITNESS VALLES: Maximum, yes.

MS. SUARD: Okay. So, I'm -- I'm going to sort of sounds like repeat but it really isn't.

I am concerned about this maximum capacity. I did a simple drawing you're not going to find anywhere else.

(Document displayed on screen.)

MS. SUARD: And this -- Pretend these are two 40-foot tunnels. One's full water. The other one still has capacity.

Is there another project under a different name that could lease that capacity, that you know of?

WITNESS BEDNARSKI: No, there's no other project.

And I might just clarify that our tunnels will always look like the example that you have on the left.

They will always be running full. They will not be running, as that would be, like an open channel type condition. We do not anticipate having that with our tunnels.

MS. SUARD: So the two 40-foot-diameter tunnels that are designed to be 15,000 cubic feet per second, those are going to be full?

MR. MIZELL: Objection: Misstates the testimony. Again, we're not talking about a 15,000 cfs project here.

MS. SUARD: The -- There have been changes to the Project since the Bay-Delta Conservation Plan.

But the lower portion of the Project appears to be two 40-foot tunnels. And in the Bay-Delta Conservation Plan, that -- the -- it said it was 16 -- it was 15,000 cubic feet per second.

MR. MIZELL: The testimony presented here is 9,000 cfs, and that's what the Engineers have testified to.

CO-HEARING OFFICER DODUC: That is correct, Miss Suard. We're talking about 9,000.

MS. SUARD: Okay. Then I'm going to move on.

Let's see. We're going the wrong way. No.

(Document displayed on screen.)

MS. SUARD: Okay. I already asked about how

far out.

(Document displayed on screen.)

MS. SUARD: I felt like -- The graphic in this DWR example, I wasn't sure what the blue waterway changes meant, but I'm just going to move on on that.

I'm going to focus on impacts to drinking water.

When the design was made, were you aware of how many drinking water wells are in very close proximity to the general path of the tunnel?

(Document displayed on screen.)

MS. SUARD: And I have to say I took a screen print from the gamma -- GeoTracker gamma. This is the Water Board's website. And I just kind of drew on roughly the tunnel just so you could see for reference how many drinking water wells are in that area.

Were these taken into consideration in the design?

WITNESS BUCHHOLZ: We were aware, as we prepared Chapter 7 in the Draft EIR/EIS and Recirculated Draft EIS, the presence of wells in the vicinity of the -- of the -- of the different -- of the intakes and of the tunnel -- along the tunnel alignment and along all of the alignments.

We were aware from the DREAMS process, as well

as this database, and also one that was in Yolo County specifically. We looked for ones in Sac County and Contra Costa also, which we didn't -- weren't -- didn't find.

Our biggest problem was that we didn't -- The locations of the wells are one thing. The other deal is, to do the final analysis during Predesign and Final Design, we need to know the characteristics of the wells, the depths, the production rates, the water quality.

So we used a Regional Groundwater Model that was prepared by U.S. Geological Survey to analyze the potential effects of construction and of operations on these wells.

And then we recognized in the EIR -- in the Draft EIR/EIS and Recirculated Draft EIR/EIS that there could be other -- there could be effects, especially in certain areas along the way.

And so, therefore, we established mitigation measures GW-1 and GW-2, that there would be an analysis to identify and monitor these wells that are in close vicinity, close proximity of any construction.

And they would be continued to -- Prior to construction, during design, and then during construction, and in some cases post-construction, they would continue to be monitored.

And there was a series in the Draft EIR/EIS and the Recirculated Draft -- Supplemental Draft EIS that potential responses if we saw elevations or water quality change in those groundwater wells.

MS. SUARD: So, your documentation says a temporary 15-year impact of just 10 drinking water wells.

Do you think it's possible that it could be more than that impacted?

WITNESS BUCHHOLZ: I don't remember the 10 off the top of my head, but I think it would depend on which part of the Project that you're looking at.

WITNESS BEDNARSKI: Are you referring to the Number 10 that's on this slide?

MS. SUARD: Yes.

WITNESS BEDNARSKI: That -- That referred to the diversions that are at the intakes, that those would be temporarily affected. That was not meant to discuss wells that would be along the tunnel alignment.

WITNESS BUCHHOLZ: Those are surface water diversions.

WITNESS BEDNARSKI: Right.

MS. SUARD: Okay. But the Project is more than intakes. It's the tunnels going all the way down, and there's drinking water wells that are impacted all the way down.

So that --

MR. MIZELL: Objection: Assumes facts not in evidence.

There's no evidence before the Board that groundwater wells are going to be impacted yet.

CO-HEARING OFFICER DODUC: I think her question is where that analysis is.

WITNESS BUCHHOLZ: And that's -- What we completed in the Draft EIR/EIS and Supplemental Draft EIS is a regional analysis with the mitigation measures to do that during Predesign and Final Design with monitoring.

MS. SUARD: Then I assume in a -- Well, did you also consider not just the drinking water wells but all the fresh water intakes in the whole area?

This is another one of the good website references that you can go to to look at the water rights associated.

And I don't know if it's very wise, but some people take it directly out of the river for their house and drinking water.

And did you analyze all these in that study that you guys did?

WITNESS BUCHHOLZ: We're familiar -- I'm familiar with this database.

And with respect to water quality, that should

be addressed to the Modeling Panel, and Mr. Bednarski could describe the intakes -- surface water diversions that were at the intakes we filled and could be directly affected.

WITNESS BEDNARSKI: Yes. I think in my testimony and my presentation, we went through the various steps that we would implement for the temporarily affected diversions, the surface diversions, and the same with the permanently impacted diversions. Those are all described in my testimony.

MS. SUARD: Sir, do you think that it's possible that there would be intakes outside the footprint? I mean, there are water intakes outside of the proposed footprints that are going to be impacted by lower water flow.

MR. MIZELL: Objection: Speculative; and outside the scope of his testimony.

And we do have an entire panel that will discuss water level impacts as well as water quality impacts to the remainder of the Delta.

CO-HEARING OFFICER DODUC: Do you have anything to add to that, Mr. Bednarski, or Miss Buchholz?

WITNESS BUCHHOLZ: No. That was going to be my suggestion, is to wait for the Modeling Panel.

MS. SUARD: Okay. I'm going to skip that and

wait for the Modeling Panel.

(Document displayed on screen.)

MS. SUARD: I -- This next just is a reference to water quality for agricultural water, and I guess I'm going to go to the Modeling Panel on that.

You mentioned reference to using DREAMS Report for preparation, at least in part, of the study.

I'd like to point out that, if you compared the DREAMS Report to the other available data on where the wells are, you're going to see that DREAMS Report very inadequately covered drinking water wells in the California Delta, and so you might want to reconsider using that as a reference, because --

WITNESS BUCHHOLZ: We noted that there was a different number of wells in each one of the databases, which is one of the reasons why we need to really get out on the field to do this correctly during design.

MS. SUARD: Thank you.

So, I'm just going to refer to actually two different water rights, and I'm just asking an opinion.

Since the function of the conveyance design is to convey fresh water from the Sacramento River within the North Delta to other areas of the state, in your opinion, would that conveyance result in downstream -- downstream non-compliance of the Water Quality Control

Plan for the Sacramento River and San Joaquin River Basin drinking water policy for the surface waters of the Delta in particular?

MR. MIZELL: I'm going to object as being beyond the scope of direct testimony of this panel.

CO-HEARING OFFICER DODUC: To the extent that you can answer that question?

WITNESS BEDNARSKI: I don't have any knowledge to be able to respond to that question.

MS. SUARD: Okay. Currently, we're in a comment period with the EPA regarding other water quality issues, particularly selenium, in the Delta.

And I'm wondering if this panel has been paying attention or aware of -- And I'm asking since the function of the conveyance design is to divert much of the fresh water from the Sacramento River in the North Delta, I would say that common sense and computer modeling actually estimates, there's an indication salinity will increase substantially in some areas of the Delta.

Will the design criteria qualify under this new EPA ruling?

Well, it hasn't -- hasn't been finalized yet. It's in comment period right now, public comment.

Are you familiar with that? Let's put that it

way.

WITNESS BEDNARSKI: No, I'm not. I'm not familiar with the draft requirement or process it's going through.

MS. SUARD: Okay. So, then, it's safe to say the design did not include this new policy that EPA's coming out with for selenium.

WITNESS BEDNARSKI: Yeah. We're not aware of that on the Engineering Team. You'd have to refer to the Modelers perhaps.

WITNESS BUCHHOLZ: (Nodding head.)

MS. SUARD: Okay. Thank you.

I'm just going to -- I'm going to briefly touch on this whole seismic risk issues.

I just want to point out that there actually were some seismic tests and studies under the Prechant (phonetic) Studies. This refers to maps that are -- and information that is available online, and those studies did check seismic risk. They are from 2003 through 2008.

There's boring locations and the -- There's boring locations and soils reports are available through --

CO-HEARING OFFICER DODUC: Miss Suard, are you testifying or are you asking a question?

MS. SUARD: I'm -- I wanted to build up to ask

a question.

CO-HEARING OFFICER DODUC: Okay. Please.

MS. SUARD: Okay. So there -- there were soils tests that were conducted in -- through the DREAMS Phase I Technical Report.

Have you reviewed those soils tests? They're very specific to seismic risk. Did you use those in your design criteria?

WITNESS BEDNARSKI: Yeah. I hate to do this again. I'd have to refer that to our missing panel member for questioning of Mr. Pirabarooban.

MS. SUARD: Okay. Thank you.

I had brought this up before. I am concerned about increase in arsenic in the Delta area. I've seen an actual increase.

You had testified earlier that 50 percent of the tunnel muck could be reused.

What's happening with the other 50 percent? And why is that not reusable?

WITNESS BEDNARSKI: I -- I don't recall making the statement that -- Oh, I -- I know what you're referring to. You're referring to the dredge material from Clifton Court, which is different than the reusable tunnel material.

Is that -- You're referring to that 50 percent

number? That's the only time that's been discussed was in relation to the North Clifton Court dredging. There's an estimate that 50 percent of that material could be reused somewhere.

MS. SUARD: Okay. Then I did misunderstand your testimony.

WITNESS BEDNARSKI: Okay.

MS. SUARD: How much of the -- the tunnel dredge -- the tunnel material will be reusable?

WITNESS BEDNARSKI: The -- The thought is that a lot of it could be reused in the Delta. However, that is not part of this Project.

And the Project impacts that have been identified in the Draft EIR/EIS and in our Engineering Report just call for us to basically stockpile it on these sites in the areas that we've designated on the drawings and disclosed in the Draft EIR.

And that's -- For our Project, the California WaterFix, that's the completion of the Project as it pertains to the reusable tunnel material.

MS. SUARD: So you're going to just pile it and leave it, and then somebody else can figure out what to do with it. Is that an estimate?

MR. MIZELL: Objection: Misstates the witness' testimony.

(Document displayed on screen.)

MS. SUARD: Okay. I'm -- I'm referring to DWR-207, Page -- I think it's 39, Section 3.0. And I had to blow up the part that refers to soils sampling that has been done.

And we see that there -- there is highlight for arsenic in soils.

Was there any consideration for disturbing soils and how that impacts drinking water wells?

WITNESS BEDNARSKI: I'm sorry. I missed your question.

MS. SUARD: Okay. Sorry.

WITNESS BEDNARSKI: I had to refresh my memory on 207.

MS. SUARD: Okay. It has results of soils tests that have been done; okay?

WITNESS BEDNARSKI: (Nodding head.)

MS. SUARD: And there's certain elements in the soils that are naturally occurring, but they're in higher quantity than one might want in their soil and so they were flagged in your guys' report.

Is that correct?

WITNESS BEDNARSKI: Yeah.

MS. SUARD: I -- I didn't highlight that. Your report does.

MR. MIZELL: For clarity --

WITNESS BEDNARSKI: I'm not --

CO-HEARING OFFICER DODUC: One -- One person, please.

MR. MIZELL: For clarity purposes, if it will help John and the panel answer it, could we bring up DWR-207, Page 139, and look at the context surrounding this table rather than a small excerpt of it?

(Document displayed on screen.)

MS. SUARD: I thought that was a little bit hard for people to read.

So, I -- I want to emphasize the arsenic line. It's highlighted.

MR. MIZELL: Yeah. I just was hoping that the panel would have the opportunity to look at the context of the table, given it's a 728-page document and we're talking about a couple of lines out of one chart.

MS. SUARD: If you scroll it up a little bit, it defines why it's being highlighted.

(Scrolling document.)

MS. SUARD: No. Sorry. The other way.

(Scrolling document.)

MS. SUARD: At the bottom, there's a note. Well, there was on mine. Maybe at the bottom -- all the way to the bottom of the table.

(Scrolling document.)

MS. SUARD: Go to the end of the table.

(Scrolling document.)

MS. SUARD: There you go.

CO-HEARING OFFICER DODUC: Okay. And your question again, Miss Suard?

MS. SUARD: I'm asking if the design considered impacts to drinking water wells from the disturbance of soils that have arsenic in them.

And I don't mean just right at the intakes. I mean the whole length of the tunnel and the 100 or 150-foot on each side where there's digging going on.

Was this a consideration at all?

WITNESS BEDNARSKI: We do not believe that the tunneling activities and then the subsequent lining operation that will come behind the tunneling are going to, you know, disperse any of this material. It would all be collected into the tunnel-boring machine and then brought to the surface as part of our RTM handling process.

MS. SUARD: Okay. We have to go back to mine.

WITNESS BUCHHOLZ: If I may, there's an Appendix 3B. In Section 3B.2.18, we talk about the disposal -- the handling and disposal of the reusable tunnel material to protect both surface waters and

environment in a manner that would not cause the water quality issues.

MS. SUARD: Okay. Thank you.

I -- I -- I just -- I did not read what -- There is a commitment to handle it, but there's no specifics that I saw, of, was it going to be carted off somewhere, or, like you said, just piled until something else is determined.

(Document displayed on screen.)

MS. SUARD: The next slide is -- it is a reference to . . . a website.

Sorry. I can give you all these -- these links. They don't show too well on this.

The Bay-Delta Conservation Plan did not account for impacts from the restoration and from all the construction activities. It was one of the subjects I brought up. I don't see it in this revision.

It's -- It's still an issue, so I just -- I haven't seen it yet, anyway.

And for reference, this is from USGS. You said that you were using USGS studies. And USGS did do a series of studies on arsenic and causes and the fact that it's increasing in the whole Central Valley is an issue that I believe needs to be included.

CO-HEARING OFFICER DODUC: And your question

is?

MS. SUARD: The -- Has the impact from increase in arsenic been considered in the construction phase?

WITNESS BUCHHOLZ: Again, we don't anticipate, as we said in the Draft EIR/EIS and Recirculated Draft EIR/Supplemental Draft EIS, that especially -- Well, we said not since there.

But now since we've had DWR-218, with the use of the slurry walls around all of the construction -- surface construction sites, we don't anticipate changing the direction of groundwater flows and, therefore, not pulling in plumes of arsenic towards existing drinking water wells.

However, during Design, we'll do the monitoring and obtain additional information on groundwater flows, and groundwater quality, and anticipate modeling on a more localized basis.

MS. SUARD: Okay. It was brought up that there are other activities going on in the Delta.

This map in particular is from Department of Conservation, a screen print, and it -- and it shows gas wells in the Delta. These are active gas wells. And you can see there's quite a few in the area where the tunnel construction is supposed to go.

And, in particular, I'm going to go to --

(Document displayed on screen.)

MS. SUARD: No, let's back that up.

(Document displayed on screen.)

MS. SUARD: Okay. So this is a new well permit that was issued at the end of 2015 on Staten Island, and Staten Island is right where your Tunnel Project goes through.

And just a little while ago today, you said that you hadn't planned for dealing with active gas wells or -- you know.

How are you going to deal with gas wells in your pathway -- tunnel pathway?

WITNESS BEDNARSKI: Well, I think there's a -- a couple types of gas wells. There's the active gas wells like you mentioned. We will be quite thorough and diligent on how to best address that if our tunnel alignment directly coincides with the location of one of these. And there will -- There -- We anticipate a number of options as far as possibly even relocating the gas well.

The other types of wells would be ones that have been sealed off and abandoned, ones that are in the records that are in that condition or ones that are not in the records, and we will need to find those in advance of our tunneling.

So I believe, as we get into Preliminary Design, we're going to be very aggressive in this area to identify these gas wells and come up with a suitable means to, you know, address their potential impact on the Project, just as we would be with any of the water wells that we encounter along the way.

That -- Those will all be taken care of during Preliminary and Final Design as we get into later stages of the Project.

MS. SUARD: Okay. And since, you know, we're talking about an area that is California's hub of drinking water, what if you hit one of the wells that is an oil well?

WITNESS BEDNARSKI: I'm not aware of any oil wells. I'm aware of natural gas wells.

MS. SUARD: Here -- Here's an oil well. It's on Twitchell Island and the green line shows the oil that's being pulled out. Let's see.

And if you want to go to Department of Conservation, you can go and see the production of all of these wells, and you can also get the whole well log. It, like, goes down 5,000 feet so you can actually see what kind of soils you're going to deal with before you ever bore anything.

WITNESS BEDNARSKI: Some -- Some logs are good

and some are not so good. It's a kind of a hodgepodge collection of information.

We -- We tried to use that as a research tool and it just didn't provide us a very consistent approach through the Delta as we were looking for additional ways to get that geotechnical information.

(Timer rings.)

WITNESS BEDNARSKI: But you are correct. In some cases, there is good information and, in other cases, there is not.

CO-HEARING OFFICER DODUC: Miss Suard --

MS. SUARD: Yeah.

CO-HEARING OFFICER DODUC: -- you have, like, 22 more slides.

MS. SUARD: I'm not using all the slides. I only have just a very few more that I'm actually using.

CO-HEARING OFFICER DODUC: All right. So another five minutes or so?

MS. SUARD: Thank you. I really appreciate that.

I -- I -- Another thing -- Well, what did we do? Okay.

On Staten Island, there's a Class II oil well, and though that doesn't appear to be right in your pathway, is -- is there going to be consideration if one

of these gets broken? That's -- That's toxins that's going to go right down the Mokelumne.

Are -- Are -- You're going to take special precaution to make sure those kind of wells don't get damaged?

WITNESS BEDNARSKI: Yes. All of those will be closely examined during our Preliminary and Final Design process.

MS. SUARD: Thank you. I'm pretty concerned about the water quality.

So now I'm going to go to the gate we're -- and just talk about gates and -- barriers and gates.

(Document displayed on screen.)

MS. SUARD: And you talked about just one in the design, but I -- I know that, over time, I've -- I've seen multiple descriptions of barriers and gates. And, in fact, DWR -- I'm sorry -- USBR has already proposed -- I'm going to go right past it -- and gone through, I believe, an EIR/EIS process for a barrier or gate at Three Mile Slough.

Is this part of the Project or is this some unrelated project?

WITNESS BUCHHOLZ: When we checked the -- As part of the preparation of the Draft EIR/EIS and the Recirculated Draft EIS, this is no longer a project that

Reclamation is actively putting forward so it's not -- At best, it would be cumulative but it's not part of this Project or even considered a No-Action Alternative.

MS. SUARD: Is it part of any other Project that you know of?

WITNESS BUCHHOLZ: Not that I'm aware of.

MS. SUARD: Okay. Okay. The next slide.

(Document displayed on screen.)

MS. SUARD: Here -- Here is DWR-510 from this Project, and it shows a bunch of gates or barriers in the Delta.

And can you explain to me what that's for? Is that part of this Project?

WITNESS BEDNARSKI: The only gate that is part of this Project is on the Old River there by the San Joaquin where it diverges. Head of Old River Gate as we call it. That's the only one that is part of the California WaterFix. I am not aware of these other potential gate projects.

MS. SUARD: Would you have any idea why DWR is putting this forward, this particular study, then?

MR. MIZELL: Objection: Speculation.

This is Exhibit 510 and is a part of the explanation for, I believe, the water rights or -- Yeah, it's part of the Operations testimony. She'll -- She'll

hear about it in the next panel.

CO-HEARING OFFICER DODUC: So he's free to say he does not know.

WITNESS BEDNARSKI: I do not know.

MS. SUARD: Thank you.

Okay. I'm going to -- Do -- Do you know if there are any subsurface barriers or gates already installed in the Delta anywhere?

WITNESS BEDNARSKI: I'm not personally knowledgeable of that, no.

MS. SUARD: Do you know if there's any tunnel shafts for this Project already installed?

WITNESS BEDNARSKI: For the California WaterFix?

MS. SUARD: Yes.

WITNESS BEDNARSKI: No.

MS. SUARD: No, not to your knowledge?

WITNESS BEDNARSKI: No. I know -- As far as the Project that's described in the Draft EIR/EIS and in our Exhibit 2 -- 212, there are no facilities of any kind that have been installed.

MS. SUARD: Do you know if any contractors have been called to go for bid for California WaterFix facilities?

WITNESS BEDNARSKI: There have been none.

MS. SUARD: Okay. I'm going to skip through . . .

I'm trying to go fast.

(Document displayed on screen.)

MS. SUARD: The emergency fresh water pathway concept that has a bunch of barriers, that was a Metropolitan Water District proposal; right? To your knowledge?

MR. MIZELL: Objection: Relevance.

WITNESS BEDNARSKI: I have no personal knowledge.

MS. SUARD: It's the same location as the barriers -- DWR's barrier . . . evidence submitted.

MR. MIZELL: I don't believe that this represents the same location as the Head of Old River Gate proposed as part of this Project.

MS. SUARD: No. I meant the other ones, but okay.

So, one other thing about . . .

(Document displayed on screen.)

MS. SUARD: This is down in -- It's Suisun Marsh.

Is this part of the Project? It was referred to by -- in the DWR records that then referred to this one.

So is this part of the Project or is this a mitigation project?

WITNESS BUCHHOLZ: This -- If -- I'm trying to decide which project this came from.

There is a Suisun Marsh Restoration -- Habitat Project that is ongoing, and that is considered within the No-Action Alternative for being completed.

The Final EIR/EIS was adopted and Record of Decision Notice of Termination were adopted and BiOps were issued from Fish and Wildlife Service and National Marine Fishery Services, if that's what you're asking.

MS. SUARD: Yeah.

(Timer rings.)

MS. SUARD: That -- It seemed like it referred to this but it didn't seem part of the Project.

WITNESS BUCHHOLZ: It's a No-Action Alternative that's included in every alternative in the document -- environmental document.

MS. SUARD: Okay. Thank you.

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

Next up is Group Number 42, SolAgra.

Not here.

Ms. Womack, Group Number 43.

MS. WOMACK: Sorry. I forgot my glasses.

Thank you so much. Sorry for the delay.

I'm Suzanne Womack and are -- my family farm is Clifton Court L.P. and, of course, is at Clifton Court.

CROSS-EXAMINATION BY

MS. WOMACK: I wanted to begin with DWR-212, Page 164.

(Document displayed on screen.)

MS. WOMACK: At the very top there, the Hydraulic Connection about design, the South Clifton Court Forebay (reading):

"SCCF is designed to be hydraulically dependent on Delta waterways and retain the same operation criteria as the existing CCF. Flow is diverted off of" -- they call it West Canal but, frankly, it's Western Canal -- "through the modified existing intake control structure off of Old River. The outlet from SCCF is the existing outlet . . ."

So on and so forth.

And a little further down, it says the forebay storage -- That's just a few bullet points down.

(Scrolling document.)

MS. WOMACK: Right there (reading):

"SCCF is necessary to enable the existing Banks Pumping Plant to maximize its operation when electrical power rates are lowest and divert water

from the South Delta when required to meet existing flow and water quality standards."

So it would seem to me that we establish here that the South Clifton Court Forebay, as part of your design, is very important. It's an important component.

Let's see. I'm not sure if -- On Page -- DWR-212, Page 59, they talk about the Clifton Court Forebay, and I don't know if I put that in my plans, but that's Page 59 at the bottom, 4.2.3.1.

(Document displayed on screen.)

MS. WOMACK: There we go. Thank you so much.

And it talks about here that (reading):

"The existing diversions into the Clifton Court Forebay are restricted to a peak instantaneous flow of 12,000 cubic feet per second."

Kind of a lot higher than the 10,000 we're talking about all the time. And it goes on to daily maxes and how -- Gosh, I get kind of confused, but I know you can increase it up to a third of the San Joaquin River flow. So at times of the year, you can increase it.

So, again, we're talking a lot of water here at Clifton Court Forebay, which then, I guess, because we talked about it being Delta waterways, the Delta waterways are our levees.

And I wanted to refer one more time -- I'm getting to the question soon --

CO-HEARING OFFICER DODUC: Okay.

MS. WOMACK: -- I promise.

Let's see. On DWR-57, Page 26, under C. Surrounding Levees, you start by saying the (reading):

"Existing levees in the Delta have been in place and stable for decades."

And my first question: Are these DWR's levees?

WITNESS BEDNARSKI: I don't believe so. They're a variety of Reclamation Districts, perhaps Corps -- Corps levees throughout the --

MS. WOMACK: What's a Corps levee?

WITNESS BEDNARSKI: My understanding is, it would be along Sacramento River would be a Corps levee.

MS. WOMACK: So those are maintained by -- by . . .

WITNESS BEDNARSKI: (Shaking head.)

MS. WOMACK: Don't know.

WITNESS BEDNARSKI: I don't know.

MS. WOMACK: Because we're saying "in place and stable for decades."

We have about a mile of levees at Clifton Court that, because our Reclamation District 802 basically was eviscerated by the Clifton Court Forebays, we're the only

people left, so we disbanded Clifton Court 802 in '76.

Anyway, we're the only people that maintain those, and I was wondering: We've had to rerock our levees three times. Is -- Is that what you mean by "stable for decades"?

WITNESS BEDNARSKI: I'm not personally knowledgeable about the levee that you're referring to.

I believe I made a response to a question earlier today that the existing levees, to provide their -- their function as they're intended in the Delta, are stable to do that. And I was not aware of what's going on with your levee that you're referring to now.

MS. WOMACK: In 1999, our levee was leaking. We had to immediately put thousands of tons of rock on it, and it cost $90,000-plus.

CO-HEARING OFFICER DODUC: Ms. Womack.

MS. WOMACK: No. I was just wondering if you were aware of that.

CO-HEARING OFFICER DODUC: He's already said he's not aware --

MS. WOMACK: He's not aware.

CO-HEARING OFFICER DODUC: -- of this particular levee.

MS. WOMACK: Okay. So not that levee. Okay.

And then it -- Further down on the levees, when

you talk about construction, you say (reading):

"Construction may generate potential effects to levees in the Delta that include traffic -- construction traffic . . . increase loads . . . To the extent possible this trucking will be kept off the levees that are not highway-rated."

I guess, how do you intend to build these three new intakes, three additional intakes, if you're not on the levees, if you're not coming in on the levees with your trucks? Or I guess I've heard barges, too, but trucking is -- is . . .

I know when they built our forebay, I was eight years old, and the trucks were constant and they wrecked our hot well. We had to -- We had to redo our levees, we had to redo our house. Our hundred-year-old house was wrecked.

So I'm wondering, how else can you bring in the thousands of tons of -- of material or even just moving it?

CO-HEARING OFFICER DODUC: So, Mr. --

MS. WOMACK: How can you do that?

CO-HEARING OFFICER DODUC: -- Bednarski, let me see if I understand the question here.

The statement is (reading):

"To the extent possible, this trucking will be

kept off the levees that are not highway-rated."

At this point, are you aware of how many are not highway-rated and, for those, how do you propose to keep trucking off those levees that are not highway-rated?

WITNESS BEDNARSKI: I -- I do not have a definitive number of miles of the levees that are not highway-rated.

The ones that you referred to at the intakes on Highway 160, those are highway-rated and so we would anticipate that we'd be able to bring trucks in on those ones.

I believe we would bring the trucks off of the levees as soon as we can and bring them onto access roads that we would construct on the islands in those areas where the trucks are crossing the levees.

As mentioned in the testimony here, we would have a series of investigations that we would commence. And, if necessary, we do improvements to the levees in those areas that would be impacted by the trucks to make sure that there was no deterioration of those levees.

CO-HEARING OFFICER DODUC: So your testimony is not that you will avoid all trucking on levees, but just those levees that are not highway-rated, you will find ways to address that.

WITNESS BEDNARSKI: That is correct.

CO-HEARING OFFICER DODUC: Thank you.

MS. WOMACK: Regarding your -- a way to address, like, if -- if the -- The woman that spoke earlier, her house starts to subside and she notices it and she calls.

I guess, you know, how is she going to be addressed? Are you going to just come out and talk, or are you going to write an e-mail that says, "Sorry"? How are you going to fix something that's happening?

We've been trying for -- Gosh, 25 years we've been writing saying, "Please fix our levees. Please pay us back for what we've fixed," and we've got nothing.

CO-HEARING OFFICER DODUC: All right. Miss --

MS. WOMACK: So I paid for her.

CO-HEARING OFFICER DODUC: Miss Womack, give them a chance to answer, if you can.

MS. WOMACK: Okay. How will that work?

WITNESS BEDNARSKI: Which part of your question are you referring to?

MS. WOMACK: Yeah. I'm sorry.

WITNESS BEDNARSKI: No. That's all right.

MS. WOMACK: It's how -- You say they'll build a system in place where somebody will phone and, you know, somehow that's going to magically help things.

Her levee's still going to -- Her house is still going to be subsiding because of trucks going by, as our house did.

CO-HEARING OFFICER DODUC: Okay. Let me -- Let me interrupt.

Do you have a contingency plan in place -- although you've developed a plan in place -- to monitor to the extent to which some of the subsidence may occur, and how would you then be contacting the communities that will be affected should that were to happen?

WITNESS BEDNARSKI: I anticipate that, as we get into Preliminary and Final Design, we'll be developing a contingency plan to identify all of the structures near our construction areas that could have some potential impact from, in this case, our hauling operations.

Once those are identified, we would -- I would anticipate we would communicate with the residents of those homes or the owners of those homes.

We would set up some sort of Monitoring Program at those homes in the advance of the start of construction, and then we would establish a communication protocol, whether that's a phonecall or some other means of communicating, so that we're able to respond in a -- in a quick manner.

If there's something that's detected, we would send people out to those sites and attempt to ascertain whether what's being observed is a result of our construction activities, and then, if it is, we would need to develop a methodology to mitigate that.

CO-HEARING OFFICER DODUC: And where in your testimony, or in the exhibits, might Miss Womack find that assurance that is provided in writing?

WITNESS BUCHHOLZ: (Searching through document.)

WITNESS BEDNARSKI: Give us a moment.

CO-HEARING OFFICER DODUC: Thank you.

WITNESS BUCHHOLZ: Usually, I'm faster.

The -- The mitigation measure, it's actually under noise, 1B. It's -- But it's noise and vibration in the same mitigation measure.

And it's for all types of the construction, and there would be -- initiate during -- private construction during design, they're going to develop, as Mr. Bednarski said, this whole complaint/response tracking program.

A coordinator will be identified -- this is on Page 23-66 of the Recirculated Draft EIR/Supplemental Draft EIS -- contact, telephone numbers, and different -- There's a beginning of the responses to that. During -- Generally, during design, we usually set up a lot more of

these situations.

We're used to doing this in urban areas especially, and along the levees this will be done during design, the commitment.

CO-HEARING OFFICER DODUC: All right.

MS. WOMACK: Well, that's good to know.

And so there will be money to use? Because we frequently get that there's no money. "Oh, we don't have money."

We were never offered any money to -- to reengineer our house. So that -- that is why I want to make sure that these people do not lose like we did.

WITNESS BUCHHOLZ: Continuing on between Page 2366 clear through 2370.

MS. WOMACK: Okay. Great.

So the levees are -- So the levee -- Let's see. Back to the levees.

So, the levees -- The engineering for the levees around South Clifton Court Forebay, you said there's something for those. Nothing for my levee that you know of, or you don't know my levee. I'm not sure which you said.

WITNESS BEDNARSKI: Well, what I -- what I -- what I know of your levee is that that falls within the existing Project footprint that we've identified in our

drawings in the CER and that, as such, that levee is -- You're talking about the south-most levee of Clifton Court, the existing south-most levee?

MS. WOMACK: Yes.

WITNESS BEDNARSKI: That that levee will be removed as a part of this Project --

MS. WOMACK: Okay.

WITNESS BEDNARSKI: -- and a new levee constructed south of that.

MS. WOMACK: No. I'm talking about the levee between Old River between your south -- between Clifton Court south levee that will be removed. The levee on the river, the original levee.

I think they're called embankments on the . . .

WITNESS BEDNARSKI: Okay.

MS. WOMACK: Oh, you know what? Actually, we can --

WITNESS BEDNARSKI: Without looking at a drawing, I can't respond to that.

MS. WOMACK: Can we do DWR 2-30? That would help a lot.

(Document displayed on screen.)

MS. WOMACK: Okay. So you can see, where it says "Byron Tract," that's on the left, that is my farm. We maintain all of the levee until we get to the Tracy

Fish Facility.

So you can see the -- There's western channels along the forebay and then Old River comes in. So, anyway, pretty much all of Old River.

That's our forebay that we find has been -- you know, that has been impacted severely by 12,000 cubic feet being drawn into the Clifton Court Forebay, and 5,000 cubic feet, more or less, being drawn into the CVP.

So our levee there, I -- I want to make sure that that's included. It should have been included from Day 1. It's impacted daily.

We are constantly dealing with problems with the levee, and I want to make sure that our -- our -- operations -- I'm sorry, not your operations -- but your design includes something to take care of our levee, because when you -- when you pull that much, you're going to be disturbing the levees, when you pull that much cubic feet per second.

WITNESS BEDNARSKI: So, the scope of our activities under the California WaterFix are shown in the panel on the right. And I guess the new levee that we would be constructing is shown generally in that burnt orange that goes down --

MS. WOMACK: Yes.

WITNESS BEDNARSKI: -- along the bottom to the

right --

MS. WOMACK: Yes.

WITNESS BEDNARSKI: -- of that drawing and then up to the north part and then ties into the existing intake to Clifton Court. That is the new levee that --

MS. WOMACK: I'm sorry. Is that a levee or an embankment?

WITNESS BEDNARSKI: Well, it's an embankment.

MS. WOMACK: Okay. Because a levee, to me, is on a river.

Okay. So -- And I'm referring to the river embankment past there that we've had to maintain for the last 55 years against adverse conditions. We've had to rerock it seven times, and this is what you're saying is super. The levee has been stable for decades.

We've had to rerock it seven times since '55 -- actually, since about '70.

CO-HEARING OFFICER DODUC: I'm sorry. Again, your question is?

MS. WOMACK: So I'm wondering, in the engineering, are you -- are you taking care of my levee on Old River?

WITNESS BEDNARSKI: To the best of my knowledge, that levee is not within the Project footprint, so we are not planning to do any work on that

levee as part of the currently described Project.

MS. WOMACK: Okay. So, I'm -- This -- This map is really curious. At most -- I teach second grade and I talk about the keys, and there's no key on this map.

So I don't know what the little -- You have -- You know, it's very clear that the red is embankment, or the orange, and beyond that, there's just, like, this little strip of my land that has a cross-section through on this particular map.

What does that mean?

WITNESS BEDNARSKI: Yes. If you look in Volume 2 of the CER, that crosshatched area is shown as part of the Project footprint, similar to what we have done with the intake structures where we've tried to identify a maximum footprint for the Project, and that -- So the outer bounds of that crosshatched area is identified as being part of the footprint. The burnt orange line is where we will be constructing an embankment --

MS. WOMACK: Oh.

WITNESS BEDNARSKI: -- within the footprint of the Project.

MS. WOMACK: So -- Okay. But you just told me that my levee on Old River is not part of the Project.

So are you just going to leave me my levee? I

mean, I don't understand what fart -- part -- part of the -- excuse me -- part of the footprint means when you just told me that my levee isn't a part of it.

MR. MIZELL: If I may make a suggestion.

I don't believe that the panel is clearly aware of where Miss Womack's levee actually is, and we haven't seen a map of where it lies, and so it's --

MS. WOMACK: It's --

MR. MIZELL: -- it's leading to some confusion of whether it's in or out of the Project.

CO-HEARING OFFICER DODUC: Miss Womack, if you could go over and use the mouse --

MS. WOMACK: Okay.

CO-HEARING OFFICER DODUC: -- that is attached to the computer and point out where your levee is.

MS. WOMACK: So . . .

CO-HEARING OFFICER DODUC: There's the mouse.

MS. WOMACK: I know, but this would be me using it this time.

Okay. That's not doing it.

Okay. So about here (indicating) --

CO-HEARING OFFICER DODUC: Actually, we can't see the mouse.

MS. WOMACK: Oh, yeah. Well, it's like a little -- Oh, maybe it's -- Do you see the little --

CO-HEARING OFFICER DODUC: Okay. There it is.

MS. WOMACK: So that's about where the Tracy --

CO-HEARING OFFICER DODUC: Actually, there's a mic. Miss Womack, there's a mic that you can use.

MS. WOMACK: Oh, awesome.

That's okay. I'm just not very technical.

So here -- All of this (indicating), these are all our fields; right? So right about here (indicating) is where the Tracy Fish Facility, they took -- Let's see, they took a few acres in '55 from Grace Richie, who we bought it from, and they took our water. We had a -- we were able to get water through floodgates, so they took that. But this is basically Old River (indicating).

Now, beyond here is the Delta-Mendota Canal (indicating), so we don't maintain that. But we do maintain from here (indicating) all the way up to here (indicating). This is all ours.

And so we're getting -- You can see where we're getting -- we're having 5,000 cubic feet here (indicating), and then we're having the 12,000 cubic feet here (indicating), which causes, of course, the rivers to run backwards. It's just a big mess.

CO-HEARING OFFICER DODUC: All right. Now, Miss Womack --

MS. WOMACK: Yeah?

CO-HEARING OFFICER DODUC: -- I'm trying to get you focused here.

So now we know where your levee is. Your question to Mr. Bednarski?

MS. WOMACK: And then here (indicating). I just don't know -- This part (indicating) he said is part of the footprint, but he says the levee isn't part of it, so I'm confused.

CO-HEARING OFFICER DODUC: All right. All right. Mr. Bednarski, now that she's pointed that out, explain again what the hashmarks are, what you mean by the footprint, and what you mean by the levee not being part of the footprint.

WITNESS BEDNARSKI: To the -- To the best of my knowledge -- and referring -- I apologize for this, but it's in Volume 2. We have a drawing that shows the approximate line of the footprint of the Project at about the toe of the levee slope.

So, from what I can determine, based on -- on this drawing, is, we are up against the toe of that levee but not, you know, placing our footprint on to that levee. So we would stay some distance back from that as part of your footprint.

And by the footprint, we define that as an area that could be impacted by temporary construction

activities, such as staging areas and contractor work areas and things like that.

So it would be outside of permanent facilities that are being constructed as part of the California WaterFix, but an area that we might need to utilize as part of, you know, like I said, staging construction equipment.

MS. WOMACK: So --

WITNESS BEDNARSKI: So it falls within the footprint of the program and has been identified, you know, in the EIR and all of our GIS databases as areas that would be impacted.

MS. WOMACK: And is -- You said that's temporary impact.

WITNESS BEDNARSKI: That would be my conclusion at this point looking at these drawings, that it would be a -- it would be a possible temporary impact, yes.

MS. WOMACK: And how many farmable acres will be in this temporary impact?

WITNESS BEDNARSKI: I think we've estimated about 75 or 80 acres are in that area.

MS. WOMACK: Are in that area. So I have -- Department of Interior says I have 635 acres. I have 525 farmable acres, and I have loads of levees and roads and canals and ditches, and all kinds of stuff, that is very

abnormal.

So, you don't know how many farmable -- Do you know how many farmable acres?

WITNESS BEDNARSKI: I -- I don't know at this point what would be remaining as farmable acres after the embankments are constructed --

MS. WOMACK: Okay.

WITNESS BEDNARSKI: -- in that little sliver.

MS. WOMACK: Could we go -- Yeah. I call it bowling alley, but people tell me that that's not a good thing to call it.

But going on --

CO-HEARING OFFICER DODUC: Miss Womack.

MS. WOMACK: Yes.

CO-HEARING OFFICER DODUC: My apologies for interrupting, but our AV equipment is scheduled to shut down at 5 o'clock, so if you're moving on to a different topic, may I suggest --

MS. WOMACK: Yeah.

CO-HEARING OFFICER DODUC: -- that we save that for tomorrow.

MS. WOMACK: It's actually not.

CO-HEARING OFFICER DODUC: Or if there's something that you can cover in, say, five minutes, then we'll go ahead and proceed.

MS. WOMACK: Yeah. We can start to -- I'd like to because it's kind of germane.

CO-HEARING OFFICER DODUC: All right. Do that, then.

MS. WOMACK: DWR-2-9 is another look at my property, and it may take more than a day to --

(Document displayed on screen.)

MS. WOMACK: 2-9? Yes.

Okay. So, here -- You know, again, this one has a key, but you have shades of gray. You have three different shades of gray, and I'm not sure what color that shade of gray -- One is temporary dumping and one is permanent dumping or staging. I'm not sure which.

You can -- You know where it is now. That's why I wanted to do this.

Can you tell?

WITNESS BEDNARSKI: I would say that that color coding is consistent what I -- with what I described as a temporary --

MS. WOMACK: That's temporary.

WITNESS BEDNARSKI: -- surface impact.

MS. WOMACK: Because right above it, doesn't it say "permanent"? It's hard to say.

WITNESS BEDNARSKI: It says "permanent subsurface impact" is a gray color.

MS. WOMACK: Which gray color is that? Is that -- See, I have a hard time because it looks like it's the same as the other. There's, like, three shades of gray.

WITNESS BEDNARSKI: Yeah.

MS. WOMACK: So -- So, that looks permanent to me.

Okay. Anyway, but so you think that's a temporary, so I'm not going to lose all my land. I'm going to have maybe 75 acres left. So I will have to figure out my injuries, and ongoing injuries, based on that.

But -- Okay. And we're sure that that's -- So, right below where it says "Byron Tract," that's also a temporary?

WITNESS BEDNARSKI: Well, I guess, you know, now that this has been blown up a bit, it does appear to be a darker gray which says a "permanent subsurface impact."

I am not necessarily aware of why it was determined to be subsurface. I can't answer that at this moment. I'm not aware of what subsurface facilities we'd be constructing there. It's on the other side of the embankment from the Clifton Court.

MS. WOMACK: Yeah. I've been trying since last

October. I've had, oh, gosh, dozens of e-mails and phone calls trying to say, what -- what's going on? I'd really like to find out.

And we can stop here. Maybe I'll know it. Would you find out in the morning?

CO-HEARING OFFICER DODUC: Let's do this. Since we've established now that that is the darker gray, which is permanent subsurface impact, we'll reconvene tomorrow with addressing that issue.

MS. WOMACK: Perfect. Thank you.

CO-HEARING OFFICER DODUC: All right?

Thank you, Miss Womack.

I will note that she'll have additional time on her cross-examine there.

MS. WOMACK: 35 minutes -- Or 34 and a half.

CO-HEARING OFFICER DODUC: Yes.

MS. WOMACK: Thank you so much for your help. I'm really new to us.

CO-HEARING OFFICER DODUC: No, thank you. It's helpful to us, but we need to be more clear.

MS. WOMACK: I appreciate that. Thanks for helping.

CO-HEARING OFFICER DODUC: With that, we'll reconvene at 9 o'clock tomorrow.

(Proceedings adjourned at 4:54 p.m.)

State of California)
)
County of Sacramento)

I, Candace L. Yount, Certified Shorthand Reporter for the State of California, County of Sacramento, do hereby certify:

That I was present at the time of the above proceedings;

That I took down in machine shorthand notes all proceedings had and testimony given;

That I thereafter transcribed said shorthand notes with the aid of a computer;

That the above and foregoing is a full, true, and correct transcription of said shorthand notes, and a full, true and correct transcript of all proceedings had and testimony taken;

That I am not a party to the action or related to a party or counsel;

That I have no financial or other interest in the outcome of the action.

Dated: AUGUST 16, 2016

_____
Candace L. Yount, CSR No. 2737