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01 PUBLIC HEARING
02 STATE WATER RESOURCES CONTROL BOARD
03 DIVISION OF WATER RIGHTS
04 STATE OF CALIFORNIA
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06
07 SUBJECT: AMENDMENT OF CITY OF LOS ANGELES' WATER RIGHT
08 LICENSES FOR DIVERSION OF WATER FROM STREAMS THAT ARE
09 TRIBUTARY TO MONO LAKE
10 ---o0o---

11
12 Held in
13 Resources Building
14 Sacramento, California
15 Thursday, October 21, 1993

16 VOLUME IV
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24 Reported by: Kelsey Davenport Anglin, RPR,
25 CM, CSR No. 8553

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01 SACRAMENTO, CALIFORNIA
02 THURSDAY, OCTOBER 21, 1993, 9:00 A.M.
03 ---o0o---
04 HEARING OFFICER del PIERO: Ladies and Gentlemen,
05 this hearing will come to order. For purposes of
06 introduction for those that might be new here today, my
07 name is Marc del Piero. I'm Vice-Chairman of the State
08 Water Resources Control Board.
09 This is the time and place for the hearing
10 regarding the City of Los Angeles' water rights
11 licenses for the diversions of water from streams that
12 are tributary to Mono Lake.
13 Joining me today, although he just stepped out to
14 go get me a cup, was our Chairman, Mr. John Caffrey,
15 and also joining us today is my good friend and team
16 mate, it seems like, on every water rights hearing in
17 the last two months, Mr. James Stubchaer, sitting to my
18 immediate left.
19 Also assisting us today are some individuals with
20 outstanding credentials, our good Staff counsel for
21 this matter, Mr. Dan Frink. We have two Staff
22 environmental specialists who have spent literally
23 hours working on this issue, Mr. Steven Herrera and Jim
24 Canaday, and last but not least, our Staff engineers,
25 Rich Satkowski and Hugh Smith.

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01 Yesterday when we broke, Mr. Roos-Collins, I
02 believe, was preparing to begin his examination of the
03 witnesses. Is that true?
04 MR. ROOS-COLLINS: Yes, Mr. del Piero.
05 HEARING OFFICER del PIERO: Fine, are you
06 prepared, Sir?
07 MR. ROOS-COLLINS: Yes, I am.
08 HEARING OFFICER del PIERO: Good. Begin. Oh, I
09 need to point out that our Court Reporter's changed.
10 Mrs. Kelsey Anglin is going to be doing that today so
11 that if you would indulge her in the same fashion that
12 you indulged Ms. Book in terms of spelling your name
13 and speaking as succinctly and distinctly as possible,
14 we would appreciate it very much.
15 CROSS-EXAMINATION BY MR. ROOS-COLLINS
16 Q Good morning, Mr. Casaday. I'm Richard
17 Roos-Collins, that's R-o-o-s, hyphen, C-o-l-l-i-n-s,
18 attorney for California Trout.

19 Let's begin with the definition of the
20 alternatives set forth in the Draft Environmental
21 Impact Report. You stated yesterday that the 6383.5
22 foot alternative was environmentally superior compared
23 to the point of reference scenario. Was that your
24 testimony?
25 A BY MR. CASADAY: Yes.

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01 Q Is "environmentally superior" a term of art?
02 A I don't understand that question.
03 Q When you said that the 6383.5 foot alternative was
04 environmentally superior to the point of reference
05 scenario, what did you mean?
06 A CEQA requires the identification of an
07 environmentally superior alternative. It does not give
08 specific guidance in evaluating that.
09 Q Is it your testimony that the tributary fisheries
10 would be superior under 6383.5 foot alternative than
11 the tributary fisheries in the point of reference
12 scenario?
13 A Yes.
14 Q You also testified yesterday that the 6390 foot
15 alternative is environmentally superior by reference to
16 the 1941 conditions. Was that your testimony?
17 A Yes. That's correct.
18 Q Are you saying, then, that the tributary fishery
19 which would exist under the 6390 foot alternative would
20 be superior to the fishery which existed before L.A.
21 began diversions in 1941?
22 A Not necessarily, no. The environmentally superior
23 alternative did not just focus on the fishery. It was
24 a combination of all the physical environmental
25 resources.

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01 Q In 1989, specifically August 22nd, 1989, which is
02 the effective date for the point of reference scenario,
03 in your opinion were the tributary fisheries inferior
04 to the fisheries which existed in 1941 before L.A.
05 began diversions?
06 A I'm sorry. Inferior at the point of reference
07 compared to the pre-diversion?
08 Q Yes.
09 A Yes.
10 Q And are the tributary fisheries inferior today
11 compared to 1941?
12 MR. BIRMINGHAM: I'm going to object on the lack
13 of foundation.
14 HEARING OFFICER del PIERO: I think he's right.
15 Q BY MR. ROOS-COLLINS: Mr. Casaday, on Page 3-D-114
16 of the Draft Environmental Impact Report -- excuse me.
17 3-D-115 in the section entitled Affects of Lake
18 Alternatives on Ability to Restore Pre-41 Fishery
19 Conditions, it's stated, "None of the alternatives can
20 restore and maintain pre-1941 fishery conditions for at
21 least 50 or more years."
22 Is that your opinion?
23 A This section was developed by -- under the
24 direction of Philip Dunn of our staff who will be on
25 the next panel. I don't have any quarrel with that

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01 statement. I believe it's correct.
02 Q Is it your understanding, then, that it will take
03 at least 50 years following the implementation of any
04 of the alternatives in the Draft Environmental Impact
05 Report to reestablish the fisheries which existed
06 before L.A. began diversions?
07 A I believe this statement was made in absence of
08 mitigation. I -- we would have to ask Mr. Dunn what he
09 feels if substantial mitigation work were done through
10 the stored fishery.
11 Q I'll refer the questions, then, on that issue
12 until the next panel.
13 In your opinion, what are the principle causes for
14 the degradation of the fisheries between 1941 and
15 the present?
16 A I'm sorry. I didn't hear. And the?
17 Q Present.
18 A Present. Well, I believe there were several. The
19 loss of riparian vegetation, the loss of undercut bank
20 habitat, the loss of spawning gravels. Again, I
21 believe Philip Dunn could give a more accurate answer,
22 but I think all of those factors change during
23 diversion period.
24 Q I would refer further questions on that issue
25 until Mr. Dunn is before us.

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01 Let me turn to Page S-9 of the Draft Environmental
02 Impact Report. You say there -- or the Draft
03 Environmental Impact Report says in the second
04 paragraph, "Pre-1941 fishery conditions cannot be
05 accurately described." Is that your opinion?
06 A Again, I am in general agreement with that
07 statement. That was a conclusion, again, of Mr. Dunn.
08 I believe there's quite a difference of opinion on that
09 issue, and I'm sure we will have to reconsider it as we
10 help the staff prepare the final EIR. We may very well
11 come to the same conclusion.
12 Q Are you familiar with the authorities which were
13 relied on in assessing pre-1941 fishery conditions in
14 the course of the drafting of this Draft Environmental
15 Impact Report?
16 A I'm only vaguely aware of those authorities
17 myself.
18 MR. FRINK: Mr. Chairman, it appears that we've
19 had a whole string of questions on fishery issues, and
20 the fishery experts who worked in preparing the EIR
21 will be the witnesses presented. I think it would
22 probably be more efficient to save those questions for
23 that time.

24 HEARING OFFICER del PIERO: I'm not going to tell
25 Mr. Roos-Collins how to pursue his line of questioning,

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01 but you do need to be aware, Sir, that you've got 20
02 minutes. That's all you've got, and you might want to
03 use the time as expeditiously as possible.

04 MR. ROOS-COLLINS: I appreciate that direction.

05 HEARING OFFICER del PIERO: Given who's here to be
06 cross-examined.

07 Q BY MR. ROOS-COLLINS: My next questions are for
08 Dr. Hutchinson and Dr. Brown.

09 How was the LAMP model developed by the Jones and
10 Stokes team in the course of the drafting of this Draft
11 Environmental Impact Report?

12 A BY DR. BROWN: Well, the overall development is
13 described in the auxiliary report that documents the
14 land usage but, briefly, this was recognized early on
15 by State Board Staff during the scoping phase of this
16 process that an overall description of the amount of
17 water available, the places that it can be stored, the
18 diversion capacities, needed to be considered. Even
19 though we were primarily looking at the four northern
20 most streams in their diversions, the entire system
21 built to deliver water to Los Angeles needed to be
22 considered.

23 So there was advisory group called the TAG, or
24 Technical Advisory Group, established that included
25 L.A., the State Board, other of the parties, and the

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01 consultant, and over the next two years, the model as
02 was used was developed and tested and reviewed. And
03 approximately a year ago, it was used to generate the
04 conditions associated with these specified lake level
05 target minimums, and the results of that model were
06 used in other resource topic area assessments.

07 Q When you began to develop land, did you ask L.A.
08 DWP whether it had a planning model which could serve
09 the purpose that LAMP now serves?

10 A Initially, right when the EIR process began, L.A.
11 wrote a conceptual description and proposed that they
12 would author a planning model for the entire aqueduct
13 system, thereby implying that they did not, at that
14 time, have one, and they are the ones that for the
15 first 18 months attempted to provide such a monthly
16 planning model for use in the EIR.

17 Q Let me read a paragraph from Auxiliary Report
18 Number 18, beginning on Page One continuing on to Page
19 Two and ask if this conforms to your understanding of
20 the history of development of LAMP.

21 "A technical advisory group was organized by the
22 State Water Resources Control Board Staff to provide
23 guidance and review of model development. L.A. DWP
24 offered to formulate and program the model and provide
25 necessary basic hydrologic data, L.A. aqueduct

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01 capacities and operating constraints and other
02 information needed to produce a successful simulation
03 of the model. L.A. DWP formulated a conceptual plan
04 and schedule in August 1989 and provided the initial
05 version of the model in April 1991. Because the
06 initial version of the aqueduct model was not
07 considered by State Water Resources Control Board to be
08 flexible enough to simulate the various Mono Basin EIR
09 alternatives, State Water Resources Control Board
10 directed its consultant to modify the initial aqueduct
11 model to include more input variables that could be
12 changed by the model user and to develop output summary
13 statistics and graphics for comparing and analyzing
14 results from the model."

15 Is that your opinion?

16 A Yes. That is my opinion.

17 Q Yesterday, Mr. Birmingham referred to a planning
18 model which I believe that is acronym LAASM. When did
19 you first see LAASM?
20 Excuse me, for the Reporter, that's L-A-A-S-M.
21 A LAASM was delivered to the State Board on
22 September 22nd, I believe, or whichever was the last
23 date to deliver testimony for these hearings.
24 Q September 22nd of this year?
25 A That's right.

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01 Q Let me return to my first question about LAMP. At
02 the time that the draft EIR was first being drafted,
03 did L.A. DWP offer to the State Board any operational
04 model for the L.A. aqueduct system?
05 A Well, as was already described in what I have just
06 said and in that paragraph, L.A. did deliver an initial
07 operations model in whatever that date was, April of
08 '91, approximately, 18 months after they had started
09 work on it.
10 Q Dr. Brown, I asked a question which confused you
11 or at least wasn't what I intended to ask. Let me back
12 up and lay the foundation.
13 The Draft Environmental Impact Report describes
14 LAMP as a planning model. Is that your opinion?
15 A Okay. That's -- that is a good word for it,
16 planning.
17 Q Is there such a thing as an operations model that
18 a facility operator would use to actually turn the
19 levers?
20 A Yes, there is. That would be a different sort of
21 model.
22 Q And what term would you use to describe the model
23 used to turn levers at a facility?
24 A I would say that's an operations model.
25 Q At the time that you began the development of the

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01 Draft Environmental Impact Report, did L.A. provide you
02 with an operations model for the L.A. aqueduct system?
03 A No.
04 Q Did you ask for one?
05 A No. Because we needed a planning model for the
06 environmental impact assessment.
07 Q Dr. Hutchinson, did you ask for an operations
08 model at the time that the DEIR was being drafted?
09 A BY MR. HUTCHINSON: At the time, no, but I have
10 had -- dealt with the operations of the Los Angeles
11 aqueduct since 1985 and was pretty familiar with the
12 way they did their planning and operations. And at the
13 time the EIR process started, unless they had developed
14 one in the preceding three years, they did not have
15 one, to my knowledge.
16 Q To your knowledge, how, then, were the levers
17 turned at the dams and other facilities that comprised
18 the L.A. aqueduct system?
19 A In early 1986, as part of my work for Inyo County,
20 I had a meeting with the aqueduct planning and
21 operations people in Los Angeles. This was at the
22 beginning of a very wet year. If you recall, February
23 of 1986 was a very high snowfall and rainfall month,
24 and there was a tremendous snow pack built up in the

25 Sierra. And there was a lot of concern about how the
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01 aqueduct would be managed, the aqueduct system,
02 especially in the Owens Valley would be managed that
03 year.

04 The County's concern was primarily related to how
05 much water would be used for spreading groundwater
06 recharge activities as opposed to spilling or spreading
07 out on the eastern part -- or the central part of the
08 valley floor. At this meeting I attended, it was
09 explained to me that the operations were planned by
10 essentially figuring out what had been done in the past
11 in a similar year.

12 In other words, in 1986, it was going to be
13 approximately 150, 160 percent of average runoff year,
14 so the plan was basically -- the planning process began
15 by looking to see in the past what had happened during
16 150, 160 percent runoff year in terms of storage build
17 ups, spreading, spilling, all those sorts of factors.
18 So it was more of ad hoc planning in terms of what they
19 had done in the past as opposed to anything rigid or
20 based on a computer program.

21 Q Would it be fair to say that you developed LAMP
22 partly from the model provided by L.A. DWP and partly
23 from scratch because no operations model had been
24 provided to the Jones and Stokes team by L.A. DWP?

25 A I would say a planning model and an operations
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01 model have different objectives. So a -- even if a --
02 even if an operations model had existed, it would have
03 only been of limited use. Previous planning models had
04 been completed. I had done a couple other planning
05 models on an annual basis prior to the beginning of
06 this EIR process which, between those models and the
07 one that L.A. had developed as part of this Tag
08 process, those were the basis for the first version of
09 LAMP.

10 Q Dr. Hutchinson, did you first see --

11 A Excuse me, it's Mister. I'm not a doctor.

12 Q My apologies, although you deserve the honor.

13 Mr. Hutchinson, did you first see LAASM on
14 September 22nd, 1993, or thereafter?

15 A Yeah. I think I got it the Monday after or
16 something, when it came in the mail.

17 Q Had you reviewed LAASM subsequent to your receipt
18 of it?

19 A At the time I received it, we weren't sure exactly
20 how it was going to be reviewed or who was going to
21 review it or what it was going to be used for. I have
22 not done anything in any detailed review of LAASM
23 except for the small part on the groundwater pumping
24 component. It was more of just a curiosity thing on
25 how they had done certain things as opposed to a real

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01 rigorous review.

02 Q Mr. Casaday, I have not been part of the
03 discussions that have occurred between L.A. DWP, Jones
04 and Stokes, and the State Water Board, of course, with
05 respect to continued funding for Jones and Stokes
06 work. Let me make sure I understand your testimony

07 yesterday.

08 Did you testify yesterday that at this time no
09 funding is available to review LAASM?

10 A BY MR. CASADAY: Actually, I think Dr. Brown should
11 probably answer that if he knows the answer. I have
12 not -- I should point out that my role as project
13 manager was not to manage the finances of this
14 project. Our principal in charge has done that. He's
15 not testifying. Dr. Brown probably knows if we now
16 have the funding supplement for reviewing LAASM or
17 not. That's been under discussion, I know.

18 A BY DR. BROWN: My only addition to this is that we
19 made a distinction yesterday that the original contract
20 and the funding for Jones and Stokes centers around the
21 Environmental Impact Report. There is a segment that
22 allows us to review comments made on the draft EIR and
23 working with the Staff to produce the final EIR.

24 There is not a -- there never was a separate
25 budget for assisting Staff in reviewing direct

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01 testimony for the water right hearing, and the way
02 LAASM was submitted, it would fall under that category.
03 So we are not directly reviewing LAASM.

04 MR. ROOS-COLLINS: Mr. del Piero, was this my bell
05 or someone else's?

06 HEARING OFFICER del PIERO: That was your bell,
07 Sir.

08 MR. ROOS-COLLINS: I request ten extra minutes on
09 the same grounds stated by Mr. Birmingham yesterday.

10 HEARING OFFICER del PIERO: Granted.

11 Q BY MR. ROOS-COLLINS: Let us assume that funding is
12 available to review LAASM and otherwise to respond to
13 comments about possible deficiencies in LAMP. Are you
14 prepared to improve LAMP?

15 A BY DR. BROWN: We described yesterday that we are
16 recently approved to make some minor adjustments and
17 enhancements to LAMP in response to comments on the EIR
18 primarily having to do with, well, a couple of items
19 that have been identified. Perhaps the major change is
20 actually to allow exports to be made to the Upper Owens
21 River in a specified season or monthly pattern.

22 Right now, the logic exports it, as I stated, as
23 soon as the lake releases have been satisfied for that
24 year within the specified minimum and maximum on the
25 Upper Owens and that does not allow a user to export

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01 water, let's say, in a uniform monthly pattern to the
02 Upper Owens. So we are going to make that particular
03 change, as an example.

04 There were a couple of -- there are a couple of
05 corrections that need to be made, also, on relatively
06 minor things and, yes, we are going to clean the model
07 up in response to comments.

08 Q Let me ask a broader question about your state of
09 mind. Leave aside the particular improvements you have
10 committed to make.

11 Are you willing and receptive to improve LAMP if
12 funding is available to correct whatever deficiencies
13 are demonstrated to you in the course of this hearing?

14 A Yes. We have always intended to have as accurate

15 a depiction of the aqueduct system as possible from the
16 beginning. Whenever ideas or suggestions have been
17 made, we have incorporated them in the past and are
18 certainly -- remain willing to make changes as
19 suggested by any of the parties.

20 Q Yesterday, Mr. Birmingham asked several questions
21 about the model's failure to account for evaporation
22 from downstream reservoirs. Do you recall those
23 questions?

24 A Yes.

25 Q If you are persuaded that that failure undercuts

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01 the utility or reliability of this model and if funding
02 is available, are you willing to account for
03 evaporation?

04 A Yes. That is also one of the identified items
05 under the class of errors. That was just an
06 inadvertent leaving it out.

07 I would just say, though, that this will not
08 change the LAMP results in any significant way. If you
09 look at the total uses and losses that are specified in
10 the Long Valley, Round Valley, and the Owens River
11 Valley, there is approximately 125,000 acre-feet of
12 water that's used each year for designated uses. This
13 is irrigation and environmental and mitigations uses,
14 Indian lands, this sort of thing. So these are sort of
15 controlled uses of the 125,000 acre-feet.

16 There is an additional uncontrolled loss from this
17 system, basically evaporation, all along the corridors,
18 the river corridors, of 125,000 additional. So out of
19 the 250,000 acre-feet a year of water that is lost in
20 that system, we neglected to put in properly this
21 10,000 acre-foot that does evaporate from Timmaha and
22 Haywee.

23 So you can see that the magnitude of what is left
24 out is quite small compared to what is properly in the
25 model at this time.

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01 Q Are you aware of any respects in which the model
02 tends to under estimate the amount of water available
03 for export to L.A.?

04 A No. I think as presently run it's a very accurate
05 estimate of what water is exported to L.A. from Haywee.

06 Q Has L.A. recently received permission from the
07 Department of Water Resources to store more water in
08 downstream reservoirs than LAMP assumes?

09 A Yes. It's my understanding the reason that Haywee
10 Reservoir was not used to its capacity nor has Timmaha
11 been used to its capacity for a long time is earthquake
12 dam safety issues, and apparently those were resolved
13 allowing a greater volume of water to now be stored in
14 Haywee.

15 Just from verbal communications from L.A., I
16 understand that the usable storage in those two
17 reservoirs combined is now 23,000 acre-feet, and this
18 indeed is slightly higher than 20,000 acre-feet of
19 usable storage that LAMP presently simulates. So we
20 are certainly prepared to up the usable storage, that
21 is the difference between the minimum and the maximum,
22 from the currently simulated 20,000 acre-feet to the

23 new allowable 23. In fact, we'll just put it in as a
24 user input since it looks like it's going to vary from
25 time to time.

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01 Q Dr. Brown, in that respect, does LAMP under
02 estimate the amount of water now available to L.A. for
03 export?

04 A No. Because all of these operational facilities,
05 which may store water, may spread water, may use water
06 for irrigation, are a part of the overall system. To
07 determine whether change in one of the features of the
08 aqueduct system will actually affect this particular
09 output from the system at Haywee, you have to rerun a
10 model with that change. Anyone who's looked at LAMP
11 realizes that the aqueduct right now is totally filled
12 to capacity for six out of the twelve months in every
13 year type and, then, as supplies are diminished in
14 lower runoff years, the aqueduct is not able to be
15 filled to capacity in some years in the second half of
16 the water year or their runoff years.

17 So there is not -- there's not an ability for the
18 aqueduct to hold very much more water, nor do I think
19 there is a great error in these periods when the
20 aqueduct is not filled.

21 Q One last question. As you testify today, do you
22 know of a better planning model for evaluating the
23 water supply impacts of the alternatives set forth in
24 the Draft Environmental Impact Report?

25 A The only better model that I'm aware of will be

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01 the improved LAMP model. The particulars that can be
02 corrected or improved will improve this overall model,
03 but I'm not aware of any other better one at this
04 point.

05 Q Mr. Hutchinson, is that your opinion as well?

06 A BY MR. HUTCHINSON: I would agree with him, yes.

07 MR. ROOS-COLLINS: Thank you very much.

08 HEARING OFFICER del PIERO: Thank you very much,
09 Sir.

10 State Lands Commission and the Department of Parks
11 and Recreation.

12 MR. STEVENS: No questions of this panel.

13 HEARING OFFICER del PIERO: No. Thank you very
14 much, Sir.

15 U.S. Forest Service. Mr. Gipsman?

16 MR. GIPSMAN: No questions.

17 HEARING OFFICER del PIERO: Ms. Niebauer, U.S.
18 Fish and Wildlife Service.

19 MS. NIEBAUER: Yes.

20 HEARING OFFICER del PIERO: I can point out for
21 the record, while Ms. Niebauer's coming up to join us,
22 that my good colleague Mary Jane Forster has joined
23 us.

24 Good morning, Ms. Niebauer.

25 CROSS-EXAMINATION BY MS. NIEBAUER

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01 Q Good morning. Erika Niebauer, N-I-E-B-A-U-E-R,
02 representing U.S. Fish and Wildlife Service. I have
03 just a few questions this morning directed to this
04 panel.

05 Mr. Casaday, on Page Eight of your written
06 testimony, you indicate that the proposed project
07 that's evaluated in the DEIR consists of the
08 establishment and maintenance of instream flows and
09 also the establishment and maintenance of water
10 elevation requirements to provide, quote, appropriate
11 protection, end quote, for public trust resources; is
12 that correct?
13 A BY MR. CASADAY: That's correct.
14 Q And on Page Nine in your written testimony, you
15 are discussing the various alternatives, and I direct
16 your attention to Alternative 6377. And you make the
17 statement in there that, "6377 lake level is the
18 interim minimum target lake level intended to protect
19 the lake's public trust resources until action can be
20 taken by the State Water Board."
21 A That's correct.
22 Q Is that correct?
23 A Yes.
24 Q Is this the level that's -- that was established
25 by the preliminary injunction?

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01 A Yes.
02 Q And, in your opinion, is this appropriate
03 protection to protect public resources?
04 A Well, I don't believe that I'm qualified nor
05 charged to answer that, what's an appropriate balancing
06 of the public trust.
07 HEARING OFFICER del PIERO: Are you soliciting
08 opinion or are you soliciting --
09 MS. NIEBAUER: Yes, I'm asking his opinion.
10 That's correct.
11 HEARING OFFICER del PIERO: You're entitled to
12 give your opinion, if you have it.
13 MR. CASADAY: No, I don't.
14 HEARING OFFICER del PIERO: Okay.
15 Q BY MS. NIEBAUER: So you can't give me an opinion as
16 to whether the lake level required to afford
17 appropriate protection for public trust resources would
18 be something more than 6377 lake level; is that
19 correct?
20 A That's correct.
21 Q I'd like to turn your attention to Page 15 of your
22 testimony. On Page 15 you talk about Mono Lake aquatic
23 productivity, and you state that "Brine shrimp
24 productivity is primarily a function of salinity within
25 the surface area which are both dependent on the lake

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01 level." And then you continue to state that, "Under
02 the 6377 foot and 6380 foot alternatives, product
03 activity would remain significantly lower than likely
04 productivity during the pre-diversion period;" is that
05 correct?
06 A Yes.
07 Q And do you have an opinion as to what would happen
08 to brine shrimp productivity at the 6390 level?
09 A I think I should defer to Dr. Unger on that.
10 Q That'd be fine.
11 A BY DR. UNGER: Yes. It was our assessment that
12 productivity would be higher at the 6390 level.

13 Q I'd like to turn your attention to Page 25 of your
14 testimony. In the first paragraph on that page, you
15 state that, "Identification of the environmentally
16 superior alternative, however, is required by CEQA."
17 And in response to Mr. Roos-Collins' cross-examination
18 just recently, you indicated, I believe, that it was
19 the -- it was required by CEQA that an environmentally
20 superior alternative be identified.
21 Can you tell me, do EIR's typically contain more
22 than one environmentally superior alternative?
23 A BY MR. CASADAY: They may.
24 Q Do they typically contain more?
25 A Oh, I guess I'd say no.

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01 Q You state that, "environmentally superior
02 alternatives identify the alternative which would have
03 the least impact on the physical environment, and then
04 you go on to describe what the physical environment is
05 which includes aquatic ecosystems and plant and
06 wildlife communities."
07 Can you tell me or do you have an opinion as to
08 the two environmentally superior alternatives that are
09 found in your report, which environmentally superior
10 alternative would have the least impact on the brine
11 shrimp?
12 A Well, I believe -- well, I'm going to have to look
13 back at our conclusion table for the brine shrimp to
14 answer that.
15 MR. FRINK: I think Dr. Unger might know the
16 answer to that.
17 MS. NIEBAUER: This is directed to the panel.
18 That's fine.
19 DR. UNGER: Could you repeat the question?
20 Q BY MS. NIEBAUER: I could. The question is of both
21 of the environmentally superior alternatives that are
22 found within the DEIR, and recognizing the definition
23 of what is an environmentally superior alternative,
24 which one of those two would have the least impact on
25 the brine shrimp?

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01 A BY DR. UNGER: So you're asking between the 6383.5
02 and the 6390 level which one indicated -- our
03 assessment indicated had the more productivity of brine
04 shrimp?
05 Q Correct.
06 A Yes. The 6390 level.
07 A BY MR. CASADAY: If I could add to that, we get into
08 definitions, there. Impact is an adverse change from
09 the point of reference. We didn't conclude that either
10 of those alternatives would be an adverse change from
11 the point of reference. We did conclude that 6383 foot
12 would be a significant adverse change from the
13 pre-diversion condition.
14 Q Okay.
15 A And that information's in Table 3-E-7.
16 Q Do you have an opinion or do you know, does CEQA
17 require an analysis of both direct and cumulative
18 impacts?
19 A Yes.
20 Q And does CEQA further require mitigation for both

21 direct and cumulative impacts?
22 A CEQA requires that we describe how identified
23 significant impacts for both categories could be
24 carried out, how they -- how impacts could be
25 mitigated. Whether it requires the decision-making

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01 body to mitigate that, I guess I wouldn't consider
02 myself prepared to speak on that at the moment.
03 Q Does the DEIR identify significant cumulative
04 impacts to the brine shrimp?
05 A Yes. For some alternatives.
06 Q Are there significant cumulative impacts to the
07 brine shrimp identified for the 6383.5 alternative?
08 A Yes.
09 Q Are there significant cumulative impacts
10 identified for the 6390 alternative?
11 A No.
12 Q Are the significant cumulative impacts that are
13 identified for the 6383.5 alternative, are they -- do
14 you list mitigation measures for those?
15 A No, we do not. The choice of another alternative,
16 that is, lake level would not be considered a
17 mitigation. It would be considered another
18 alternative. So in that sense, there's no mitigation.
19 Q You state that on Page 20, that the DEIR does not
20 contain a recommended alternative; is that correct?
21 A That's correct.
22 Q Now, at the bottom of Page 20, you do recommend an
23 alternative in your testimony, do you not?
24 A No.
25 Q You do not. Can you explain to me what you are

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01 attempting at the bottom of Page 20 and continuing on
02 to 21 wherein you reference all of the effects that the
03 Board is to consider, and you focus your discussion on
04 the environmentally superior alternative 6383.5?
05 A Yeah. I can explain that. I think two things
06 here. One is I have listed the resource issues that,
07 you know, I have concluded or probably the most
08 important issues, having looked at these issues over
09 the past three years, suggesting to the Board members
10 those, at least in my opinion, are the ones that
11 they'll want to at least look at first.
12 The second thing I've done there is taken the
13 environmentally superior alternative and discussed some
14 of its problems in -- with regard to those resource
15 issues.
16 Q And why did you choose merely to discuss the 6383
17 alternative?
18 A Because we identified it as the environmentally
19 superior alternative.
20 Q Did you not also identify another environmentally
21 superior alternative?
22 A From the pre-diversion condition, yes.
23 Q And yet you chose not to discuss that in this
24 particular section of the written testimony?
25 A That's correct.

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01 Q Have you remembered or reviewed L.A. DWP's Exhibit
02 22, which is John Melak's testimony?

03 A No, I have not. I don't know what -- no, I
04 haven't.
05 Q Has anyone on the panel read that or reviewed it?
06 A BY DR. UNGER: I briefly looked at it, but I haven't
07 really reviewed it.
08 Q Do you know if Mr. Melak or L.A. DWP has provided
09 that type of information in its comments on the DEIR?
10 A That type being preferred -- preferred
11 alternatives?
12 Q Well, the type of information that's contained in
13 his testimony. Has Mr. Melak provided comments on the
14 DEIR?
15 MR. BIRMINGHAM: Excuse me, Mr. del Piero. My
16 name is Birmingham, B-I-R-M-I-N-G-H-A-M. For purposes
17 of the record, opposing counsel is referring to
18 Mr. Melak. I believe she's referring to Dr. John
19 Melak.
20 MS. NIEBAUER: Thank you. That's right. Thank
21 you.
22 Q BY MS. NIEBAUER: Do you know if he has submitted
23 comments on the DEIR?
24 A BY DR. UNGER: No. Not on the entire DEIR. Only on
25 the original draft of the environmental setting, but

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01 not the DEIR.
02 MS. NIEBAUER: That's all I have.
03 HEARING OFFICER del PIERO: Thank you very much.
04 Mr. Haselton, are you here, Sir?
05 MR. HASELTON: I have no questions.
06 HEARING OFFICER del PIERO: Fine. Mr. Silver on
07 behalf of the Sierra Club? Is Mr. Silver here? And is
08 there a Mr. Gleason from Metropolitan Water District?
09 One thing I had forgotten to ask today. Is there
10 anyone here representing United States Environmental
11 Protection Agency or the Great Basin Air Pollution
12 Control District? Is counsel here for the district?
13 When do you anticipate counsel for the district
14 appearing?
15 AUDIENCE MEMBER: Possibly next week he will be
16 here, and he will present something --
17 HEARING OFFICER del PIERO: That's fine. I just
18 don't want to keep asking a question for which there's
19 no answer.
20 Okay. Go ahead. Unless I'm mistaken, that
21 exhausts everyone in terms of -- including Board
22 members.
23 MR. CAFFREY: We're exhausted, but we're not
24 finished.
25 HEARING OFFICER del PIERO: Mr. Frink?

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01 MR. FRINK: I was going to say. I didn't know how
02 warmly it would be received, but I think Staff does
03 have a little of redirect.
04 HEARING OFFICER del PIERO: Yes. You go right
05 ahead.
06 REDIRECT EXAMINATION BY THE STAFF
07 Q BY MR. FRINK: These are questions for Mr. Brown, or
08 Dr. Brown and Mr. Hutchinson. There were some
09 questions raised about revisions in the LAMP model. My
10 understanding is that the LAMP model covers operations

11 for the entire L.A. aqueduct system including both the
12 Mono and Owens Basin. Is that correct?
13 A BY DR. BROWN: Yes, that's correct.
14 Q Okay. Historically, approximately what has been
15 the amount of water delivered through the Los Angeles
16 aqueduct on an annual basis?
17 A Well, the amount delivered, of course, has changed
18 through time as their demands have changed and changed
19 dramatically beginning 1971 when the second barrel of
20 the aqueduct, and so we often use that period from 1971
21 to the present or in the impact report we had data
22 through '89. And during that period, we should look
23 the numbers up, but it was on the order of 475,000
24 acre-feet a year delivered. This is, by reference,
25 could be compared to a completely filled aqueduct for

01 365 days a year which would deliver approximately
02 600,000. So --

03 Q Okay. Of the approximately 475,000 acre-feet per
04 year that has been delivered on an average basis,
05 approximately how much of that on an average basis has
06 come from the Mono Basin?

07 A Well, for the same time period from 1971 to '89,
08 approximately 80,000 acre-feet were exported from the
09 Mono Basin.

10 Q Okay. Now, the errors, margins of errors,
11 whatever, that were mentioned earlier regarding the
12 LAMP model and the accounting for evaporation and other
13 modifications that you may be making, those were based
14 on improving the modeling of the entire aqueduct
15 system; is that correct?

16 A That is right.

17 Q So one shouldn't assume that if there were a 5,000
18 acre-foot error in your modeling of the system that
19 that equates to a 5,000 acre-foot error in your
20 accounting for future water exports from the Mono
21 Basin, should one?

22 A That is right. In fact, if we just wanted to
23 reference the figure that's shown here, the one we've
24 been using of the lake levels, we have what the current
25 version of the LAMP model simulated for the

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01 no-restriction case. The no-restriction case is the
02 closest of the cases that we simulated to the
03 historical operations because we imposed no minimum
04 flows on the Mono tributaries. We imposed no lake
05 level triggers for the elevation of Mono Lake. We
06 imposed no constraints on the Upper Owens flows, and we
07 were attempting to simulate the historical operation.

08 You can see we have written in on top, it's not in
09 the actual figure, but it could be found in other
10 tables, that the LAMP model simulated 85,000 acre-feet
11 as the 50-year average coming out of the Mono Basin
12 compared to the figure I just mentioned of 80,000 for
13 the 7185.

14 MR. FRINK: Okay. Thank you. Other Staff --
15 yeah. Other Staff members have some follow-up
16 questions.

17 HEARING OFFICER del PIERO: Mr. Canaday?

18 Q BY MR. CANADAY: This is direct to Mr. Casaday.

19 You've undertaken, in your years of experience as an
20 environmental scientist, do you have an idea of how
21 many EIR's you've worked on?
22 A BY MR. CASADAY: Do I have an idea?
23 Q A ballpark.
24 A 50.
25 Q Is the EIR that was prepared, the Draft EIR

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01 prepared for Mono Lake, is that a typical type of EIR?
02 A Far from it. This was the largest effort I've
03 ever had to make in my career. I think I'm ready for
04 retirement.
05 HEARING OFFICER del PIERO: Some of us were ready
06 for retirement after we read it.
07 MR. CASADAY: My apologies. I did my best.
08 MR. BIRMINGHAM: Actually, I had a partner who did
09 retire.
10 HEARING OFFICER del PIERO: Esteemed counsel just
11 proved my case. This is truth or consequences, isn't
12 it?
13 Please continue, Mr. Canaday.
14 Q BY MR. CANADAY: Typical projects that are analyzed
15 by CEQA contemplate a project in the future sense. In
16 other words, you have an existing condition, and then
17 the analysis is based on the presumption that a
18 potential project overlays the existing conditions and,
19 therefore, is analyzed.
20 And so that -- getting back to my question of is
21 this typical, in analyzing a project that has a, at
22 least a 50-year footprint and analyzing it is unusual,
23 correct?
24 A BY MR. CASADAY: This would certainly be a project
25 that has some long-term -- much longer-term

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01 implications than some of the other projects I've
02 worked in.
03 Q I'd like to direct questions to either
04 Mr. Hutchins -- Mr. Hutchinson, or Dr. Brown.
05 Could you explain for the record the lake trigger
06 mechanisms that was incorporated into LAMP of how,
07 as -- whatever alternative protective target as you
08 call it, what would happen to typical diversions as you
09 approach that target from above as the lake declines
10 towards that protected target?
11 A BY DR. BROWN: Okay. Depicted on this figure with
12 the little triangles are the named lake levels
13 corresponding to each alternative. These were viewed
14 as a target minimum that was to be protected, and we
15 were looking, then, to using the model as our tool,
16 stimulate late conditions that would prevent the lake
17 from dropping below that protected target level.
18 And the basic mechanism that we chose uses what we
19 call lake trigger levels which are elevations somewhat
20 above that minimum target protected level at which
21 point additional water is required to be released to
22 the lake, and so we call these lake releases.
23 And Mr. Hutchinson programmed the model so that
24 you can specify three of these lake triggers for each
25 case that you're running, and we selected, just for

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01 simplicity, one-foot increments above the protected
02 level. So our first trigger is one foot above. Our
03 second trigger is two feet above, and our third trigger
04 is three feet above the minimum target protected
05 level.

06 At each of those elevations, then, we developed
07 the amount of runoff that would need to be released
08 into the lake to halt the decline of the lake, if
09 that's what was occurring, in a sequence of hydrologic
10 years.

11 We then simulated the 50-year traces of lake
12 levels, looked at the resulting elevation pathway, and
13 determined if we had specified high enough triggers.
14 If the lake was found to be dropping below our target
15 minimum, we increased the amount of water that was
16 required to be released at those triggers until we had
17 achieved our goal which was to have triggers that would
18 allow this minimum protected level indeed to be the
19 minimum reserved level in our simulations.

20 MR. BIRMINGHAM: May the record reflect that the
21 witness referred to Figure 2.1 as the figure on which
22 there are little triangles?

23 MR. CASADAY: May I add a bit to that? Dr. Brown
24 is correct with the exception of the higher lake level
25 alternatives. As you can see on the chart, when you

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01 try to maintain the lake as a very high level, it's
02 difficult to prevent it from sometimes dropping below
03 the target minimum. I think we should acknowledge that
04 as shown on the graph.

05 HEARING OFFICER del PIERO: For the purposes of
06 this discussion, the figure is 2-1. Mr. Canaday,
07 further questions?

08 MR. CANADAY: Yes.

09 Q BY MR. CANADAY: Dr. Brown, we did receive comments
10 to the Draft EIR relative to the LAMP model; is that
11 correct?

12 A BY DR. BROWN: Yes, several parties had comments.

13 Q And in response to that and at the direction of
14 the State Board Staff, you held a meeting in mid
15 September with the commenting -- or some of the
16 commenting parties; is that correct?

17 A Yes, that's right.

18 Q And what was the purpose of that meeting?

19 A The purpose of that meeting, in my view, was to
20 attempt to directly explain to the commentators what it
21 was that they were asking us about. In some cases,
22 wondering what LAMP had done in a particular case, in
23 other cases, pointing out potential errors. And so we
24 were attempting to resolve, indeed, whether there were
25 errors in the model and also explain what the

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01 assumptions or the input conditions that we had
02 specified for each of the alternatives clarifying those
03 for the parties.

04 Q And the result of this meeting was a -- certainly
05 one conference call to clarify what was being proposed,
06 the changes that you were proposing to change in the
07 LAMP model; is that correct?

08 A Yes. We were attempting to reach resolution that

09 some of these changes or -- answer the questions should
10 some of these changes be made for purposes of the
11 hearing.

12 Q And is it your understanding that that work now is
13 to move forward?

14 A Yes. We're now authorized by letter from L.A. DWP
15 to make several of the enhancements that were brought
16 out at that September meeting. In addition, to correct
17 at no additional cost to L.A. a short list of errors
18 that remain in the model.

19 Q And when these corrections and enhancements are
20 made, what time frame do you believe that will be done?

21 A Well, there is a date in the letter that promises
22 November 15th, and we think that that is still possible
23 to have those revisions made. And there is then a
24 one-week review period for L.A. to confirm that the
25 enhancements and corrections are indeed accomplished.

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01 Q Well, while the letter refers to the City of Los
02 Angeles, we also -- you also intend to provide the
03 opportunity -- that one-week opportunity to other
04 parties who have commented; is that correct?

05 A Yes. I believe that's right.

06 Q I'd like to shift a little bit to a question that
07 was presented to you yesterday. You were handed some
08 photographs and -- this is to Dr. Unger -- that
09 typified or described the use of submerged vegetation
10 for habitat, for alkali fly larvae, and I believe you
11 said you hadn't analyzed that.

12 Can you clarify what you meant by that?

13 A BY DR. UNGER: Well, what I said was that I hadn't
14 seen those photographs. Those photographs had been
15 presented to me, and I was asked if I'd seen them. And
16 I said no, I hadn't seen them.

17 We did, in fact, evaluate or discuss the
18 possibility of submerged vegetation, the use of it as
19 substrate for alkali fly larvae and pupae, and
20 concluded that there was not enough information from
21 which to -- with which to include it in our modeling.
22 We acknowledged that there was a possibility that at
23 higher lake levels there might be more submerged
24 vegetation present that would be used but that there
25 was just simply not enough information available to

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01 base a conclusion.

02 Q Thank you.

03 A BY MR. CASADAY: And I could add that, on that basis,
04 we qualified some of our conclusions to the higher lake
05 levels stating that we could not, in fact, draw some of
06 the conclusions without the higher lake levels because
07 of that uncertainty.

08 HEARING OFFICER del PIERO: Thank you.

09 Mr. Canady, one last question?

10 MR. CANADY: One more question.

11 Q BY MR. CANADY: This is for Dr. Brown and
12 Mr. Hutchinson. The, we'll call them errors or errors
13 of omission in the LAMP model, but to clarify where
14 those errors really affect the model.

15 And the first question would be those errors are
16 generally errors or enhancements that occur to volumes

17 of water outside of the Mono Basin?
18 A BY DR. HUTCHINSON: Certainly -- excuse me.
19 Certainly the Timmaha and Haywee evaporation are away
20 from the Mono Basin.
21 Q Then the enhancements or the errors that were made
22 in the model do not affect the analysis of the impacts
23 of the alternatives, water wise, within the Mono Basin,
24 itself. Is that correct?
25 A I'd go a little further than that. I don't think

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01 they'll have any significant effect on the entire
02 analysis.
03 MR. CANADAY: Thank you.
04 HEARING OFFICER del PIERO: Mr. Herrera?
05 MR. HERRERA: Yes, I do. Thank you.
06 Q BY MR. HERRERA: While we're on the subject of the
07 model, Dr. Brown, maybe I missed it earlier, but in the
08 data that you reviewed for the model, what was the
09 highest rate of diversion out of the Mono Basin?
10 A BY DR. BROWN: You're asking what L.A. has
11 historically diverted?
12 Q Yeah. What is the highest rate of that at any one
13 time in cfs?
14 A Oh. Well, of course, the diversions and exports
15 out of the Mono Basin are constrained at all times by
16 the capacity of the Mono Crater's tunnel, and it's a
17 little bit difficult to know exactly what that is. But
18 it's very close to 300 cfs.
19 Q Did that occur very often, or was that just an
20 isolated incidence, or can you give me some frequency
21 idea on that?
22 A Well, we do have historical records on the monthly
23 averages. The 300 cfs or close to full Mono Crater
24 tunnel capacity has occurred frequently in the past. I
25 actually don't know the frequency.

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01 Q Thank you.
02 One other question on the model. You stated
03 earlier that Los Angeles was working on development of
04 the model for the EIR for a period of 18 months. Do
05 you have any speculation or reasoning why, at that time
06 period, that it was shifted to have your staff and
07 consultants there, Doctor -- or, Mr. Hutchinson, to
08 prepare that? What was the reason why the shift from
09 L.A. to JSA?
10 A Well, one of the reasons is that 18 months put
11 that particular task very far behind schedule, and so
12 there was a general decision from your Staff that it
13 simply was not being accomplished in the right
14 schedule.
15 But perhaps more significant was the idea that
16 what looked like was developing within the L.A.'s own
17 effort did not match at least our opinion that the
18 Jones and Stokes staff of what an environmental
19 assessment model needed to do, the objectives of it.
20 And perhaps I can make this a little more clear to
21 everyone.
22 The model that was developed by L.A., once we
23 named the lake level that you were trying to protect,
24 had one and only one answer. Whereas, we were looking

25 for a model that allowed the users, in this case the
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01 State Board Staff and consultants, to develop a series
02 of conditions throughout the aqueduct system
03 corresponding to a lake level. So the general
04 objective of having a number of user specified
05 conditions to go along with the overall operation and
06 hydrology appears lacking, even after the 18 months.
07 A BY DR. HUTCHINSON: If I could add to that, when we
08 received L.A.'s version of the model in April of '91,
09 Chuck Rich of State Board Staff asked us to look at it
10 and comment on it with respect to the objectives of the
11 entire project. And it was pretty clear that the
12 model, while probably pretty decent in term of matching
13 up historical operations, had very little in the way of
14 flexibility to -- in any easy fashion it may be not
15 even possible to really evaluate alternative scenarios
16 of stream flows, lake level management, different
17 operations to potentially mitigate any losses out of
18 the Mono Basin with respect to water supply.

19 LAMP, on the other hand, has enough flexibility
20 that these runs are fairly easy to make once the input
21 data are decided upon.

22 Q Thank you.

23 I have a question regarding -- this may even be to
24 Dr. Brown or Dr. Unger. Why did Jones and Stokes final
25 the alkali fly model rather than Dr. Hurst or

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01 Dr. Kimmer?

02 A BY DR. BROWN: Well, we have perhaps a similar
03 situation. Dr. Hurst was always responsible for the
04 original data. As this process began, there was
05 relatively little quantitative measurement of the
06 alkali fly density or its seasonal development and
07 population, life history, in comparison to the brine
08 shrimp, which has a very extensive data base for Mono
09 Lake.

10 So his responsibility from the beginning always
11 was to develop the data in order to then prepare an
12 assessment model.

13 Dr. Kimmer worked on the conceptual development of
14 the model and delivered an initial version of that
15 assessment model that was based on Dr. Hurst's data,
16 I, again, don't have exact dates, but very late in the
17 process of writing the EIR. And so it was a matter of
18 both time and, again, the model was not quite what we
19 had in mind as an assessment model. It, again,
20 reproduced the observations which were for calendar
21 year 1991, but it was not an easy thing in that initial
22 model to estimate conditions throughout the range of
23 lake levels that we wanted to investigate.

24 So we simply modified these -- the real data plus
25 the initial ideas presented by Dr. Kimmer into a model

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01 that would much more easily simulate conditions
02 throughout the whole range of lake levels that we were
03 investigating, and we did this, then, right at the end
04 of the period when these assessment models were due, in
05 order to write the sections and do the assessment in
06 discussion.

07 Q In the earlier proposals, there was another
08 individual that was to assist, I guess, Dr. Hurst and
09 Dr. Kimmer, and that was Dr. Bradley. And what was his
10 involvement? Did he follow through with that, or what
11 happened there? Can you explain that a little bit?
12 A Dr. Bradley initially proposed working with
13 Dr. Hurst on the alkali fly, and he was going to -- or
14 proposed to develop the population dynamics for
15 describing the numbers that described the population in
16 the lake. But his proposal, as an independent
17 consultant to L.A. or in the EIR team, was not accepted
18 by L.A., so he was not funded and, therefore, did not
19 describe the team.
20 Q Did the lack of his participation hamper your
21 ability to analyze the alkali fly scenario?
22 A Only in the sense that anyone certainly
23 contributes to a team effort, and lacking his input.
24 But I would not be able to say what those contributions
25 might have been.

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01 Q I have one other question regarding -- and this
02 would be either be for Dr. Brown or Dr. Unger -- on Dr.
03 Melak's participation.
04 His information was based on -- and we were
05 looking at scenarios on higher lake levels yesterday.
06 His studies for the past, I guess it was, 10 or 12
07 years was directed at the lower lake levels and -- did
08 I notice in a couple of tables we were looking at you
09 didn't extrapolate the information at the higher lake
10 level; is that correct? Maybe you can expand on that a
11 little bit.
12 A BY DR. UNGER: Yes. The period of Dr. Melak's
13 studies and his group's studies, the lake varied from I
14 think about 6372 to 6381 was the full range of lake
15 levels that occurred during that period. And so --
16 however, he -- the model that they developed was based
17 on information that allowed them to extrapolate to a
18 6390 level in the modeling effort, but they did not
19 simulate any lake levels above that level.
20 MR. HERRERA: I think that concludes my
21 questions. Thank you.
22 HEARING OFFICER del PIERO: Thank you very much.
23 Mr. Satkowski?
24 MR. SATKOWSKI: Thank you very much. I have a few
25 questions.

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01 Q BY MR. SATKOWSKI: The first question is for
02 Mr. Casaday, and it deals with Page 13 of State Water
03 Resources Control Board 23. This is under the title
04 Upper Owens River Vegetation down toward the bottom of
05 the page.
06 Down on the first paragraph in the last sentence,
07 it talks about the river vegetation, and it says, "That
08 restoration of pre-diversion stability could be
09 accomplished under the 6410 foot or higher lake level
10 alternatives or under other alternatives if a better
11 flow change ramping schedule were adopted."
12 What do you mean by "better flow change ramping
13 schedule"?
14 A Well, actually, I'm not sure because probably the

15 word "better" should be taken out of there because I'm
16 not aware that there is a formal ramping schedule,
17 although I might be wrong there.

18 There is a discussion in the EIR that the rate at
19 which export volumes are changed from day-to-day is --
20 can be a problem in terms of causing bank collapse, and
21 it's been somewhat contentious with the Department of
22 Fish and Game recommending slower changes in export
23 rates than the City of Los Angeles has historically
24 practiced.

25 And we looked at that issue and realized that if a
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01 little more scrutiny was given to bank materials and
02 conditions, that a sensible ramping schedule could
03 probably be developed that would minimize the tendency
04 of saturated river banks to collapse when the river
05 stage drops.

06 Q Thank you.

07 My next question is for, I believe,
08 Mr. Hutchinson, and it deals with the LAMP model.

09 Has the LAMP model been calibrated or verified or
10 validated in any manner?

11 A BY DR. HUTCHINSON: If you look at Auxiliary Report
12 Five, which is the documentation of the model, it talks
13 about four objectives, and the fourth one was test the
14 model using a variety of inputs to validate its -- or
15 validate the model itself. That function was primarily
16 carried out by Jones and Stokes. I took the microphone
17 first because I wanted to explain as I developed a
18 model, I did what you might call informal testing.
19 Nothing specific, nothing documented, but it was more
20 to satisfy myself that the thing -- that the model was
21 working correctly, that it responded when certain
22 things happened, that it responded appropriately,
23 basically did the results make sense, and also checked
24 the results of 1970 to 1989 to make sure that that
25 basically matched up with historical data, since we

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01 were really operating second aqueduct operating
02 conditions.

03 Q And you said that this information has not been
04 documented?

05 A I did not document it. It wasn't part of my
06 scope, so I turned it over to Russ to describe some of
07 the other testing that's been done.

08 A BY DR. BROWN: I would only add a little to the --
09 what we've described earlier this morning. Of the
10 cases that we simulated, the one that is closest to
11 what could be used to match historical conditions is
12 the no-restriction case where we imposed only the
13 physical limits of the aqueduct system. And in
14 thinking of what some of the comparison's that could
15 have been made, the ones that were most important to us
16 in preparing this EIR evaluation I would identify as
17 three.

18 The first one that was very important is that the
19 Owens River Valley groundwater pumping be in general
20 conformity to the agreement that is in place between
21 Inyo County and L.A. And the document that describes
22 the numbers that are involved is something called the

23 Green Book, although the agreement is actually an
24 agreement to negotiate each year on an acceptable
25 pumping. So their -- even in this respect, it's

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01 difficult to find a number to match.

02 Nevertheless, there is a minimum pumping that's
03 necessary in the Owens Valley to supply uses of
04 approximately 40,000 acre-feet a year, and in the Green
05 Book there's a discussion that the maximum, among all
06 the well fields combined, should not greatly exceed
07 200,000 acre-feet. So this gives us a range that we
08 should be matching.

09 In addition, there's the general understanding
10 that the historical pumping in this same 1970 to 1989
11 period, which was approximately 110,000 acre-feet, this
12 was probably all of the long-term pumping that would be
13 allowed.

14 So we wanted the LAMP model to replicate these
15 aspects of pumping, fall between 40,000 and 200,000 on
16 any one year with the long-term average of near 110,000
17 acre-feet, and the LAMP model indeed replicates those
18 measures of the historical pumping pattern.

19 In addition, there is figures provided in the
20 auxiliary report that show the correspondence even on a
21 year-to-year basis, the major variable being runoff and
22 how much was available without doing pumping to fill
23 the aqueduct to capacity. So there was significant
24 testing and calibration for that aspect.

25 The second very important feature of the model is

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01 to properly allocate according to the lake level
02 triggers -- or, sorry, properly allocate the available
03 water in the Mono Basin under the no-restriction case
04 giving the historical export in some valley that was
05 close -- sorry, the simulated export that was close to
06 the historical. And again, the match up would be
07 expected to be closest in this last 20-year period, and
08 the model was found to give that proper split within
09 5,000 acre-feet of the long-term average.

10 Again, the model uses a uniform rule over the
11 entire 50-year period that only has the year type and
12 the hydrology to guide it, so it does not have in it
13 the year-to-year decisions that were actually made by
14 Los Angeles in how to operate it.

15 And then the third one that we calibrated or
16 worked with to be sure it was right was reproducing the
17 total exports from the system down at the Haywee
18 Reservoir, and I think I've previously stated that,
19 again, for that 20-year period, the model stimulated
20 for the no-restriction case, again, something within 5
21 or 10,000 acre-feet of the historical values.

22 Q Mr. Hutchinson, you said just a moment ago that
23 the model wasn't formally documented in terms of
24 its calibration and verification. If that's so, why
25 wasn't it formally documented?

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01 A BY DR. HUTCHINSON: Well, again, if you go back to
02 Auxiliary Report Five, that talks about the four
03 objectives, and the fourth one was the testing. And
04 that was not part -- that was never intended to be part

05 of Auxiliary Report Five.

06 Auxiliary Report 18, which Dr. Brown wrote, does
07 have certain identifiable points where you could say,
08 "Yeah, this is how -- this is the calibration and
09 verification types of matches."

10 Would you agree with that?

11 A BY DR. BROWN: So just to finish, we tested the model
12 until we -- for the purposes of the environmental
13 impact assessment, were satisfied that it reproduced
14 the major features of the aqueduct system, as we
15 understood it.

16 Q My last question is, and this is for both of you.
17 In your opinions, do you believe that the model, the
18 LAMP model, works reasonably well?

19 A BY DR. HUTCHINSON: Yeah, I would agree. It works
20 very well for what it's supposed to do, yeah.

21 Q Mr. Brown?

22 A BY MR. BROWN: I certainly agree with that. I think
23 it's quite accurate in many details and certainly
24 adequate for the differentiation among the lake level
25 alternatives, which was the primary purpose of our use

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01 of it for these proceedings.

02 MR. SATKOWSKI: Thank you. Those are all the
03 questions I have.

04 HEARING OFFICER del PIERO: Thank you very much.
05 Mr. Smith?

06 MR. SMITH: No questions.

07 HEARING OFFICER del PIERO: Board members?
08 Mr. Caffrey?

09 MR. CAFFREY: No questions.

10 HEARING OFFICER del PIERO: Mr. Stubchaer has a
11 question.

12 I need to point out just for the audience that,
13 contrary to the way some boards operate, our Board is
14 blessed. Both Mr. Brown and, particularly,
15 Mr. Stubchaer have had extensive professional
16 experience in both hydrologic as well as groundwater
17 modeling. As most people know, Mr. Stubchaer not only
18 served on the State Water Contractors or on the State
19 Water Commission but served for 30 years as a general
20 manager of the Santa Barbara Flood Control Water
21 Conservation District and actually did a lot of the
22 modeling during the course of the Bay Delta discussions
23 that took place last year, much to the surprise of some
24 of our Staff. He was able to master some of the stuff
25 from the Department of Water Resources before some of

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01 our Staff was capable of doing it. So it was an
02 interesting experience for me to discover that we had
03 someone with that degree of technical expertise on the
04 Board itself.

05 Mr. Stubchaer.

06 MR. STUBCHAER: Those are kind remarks,
07 Mr. del Piero, but in all honesty, our Staff acted as
08 the intermediary between the Department and myself in
09 getting me data that I could further analyze. And also
10 I'm not a modler of the Mono Lake or Owens River
11 Basins.

12 Q BY MR. STUBCHAER: But during the discussions

13 yesterday, there was talk about the fact that water was
14 accounted for in Lake Crowley in excess of its
15 capacity, and listening to the discussion and the
16 answers, it's not clear to me that some judge reading
17 the transcript of the proceedings would understand what
18 was going on. I didn't understand why the water was
19 allowed to accumulate in Lake Crowley instead of some
20 other account, and so perhaps you could further amplify
21 why that was done and where the water really belonged.
22 A BY MR. HUTCHINSON: Lake Crowley has inputs from two
23 sources; one is natural runoff, and the other is water
24 that's exported from the Mono Basin and brought into
25 the Owens River Basin.

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01 There's a constraint on Lake Crowley in terms of
02 export or outflow capacity. If inflow -- if the total
03 inflow exceeds the capacity, storage will increase.
04 There is no constraint --
05 Q Why doesn't it spill?
06 A It could.
07 Q And go into some spill account instead of into the
08 lake account?
09 A That was an oversight. That was an oversight.
10 Basically, what happened in the development of the
11 model, it was never intended in my mind that water
12 would be forced out of the Mono Basin during a wet year
13 because that had never happened. In wet years, water
14 was spilled into Mono Lake, and the lake was allowed to
15 rise.
16 Subsequent to or after I gave the model to Jones
17 and Stokes, that was something that was, in essence,
18 added when -- they didn't add it. It was more of an
19 input construction to go ahead and force that water in.
20 So what was happening is water was just going into the
21 Long Valley area, and storage was allowed to build up.
22 Otherwise, it -- correctly, it should have spilled and
23 done something else, but basically as a planning model,
24 all that's really important is that something broke.
25 The storage built up too high; it spilled. In any

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01 case, something is telling you that this operational
02 scenario is not accurate. These input instructions are
03 not reasonable or appropriate.
04 A BY DR. BROWN: And I would just add for understanding
05 this one of reasons that we don't simulate spill from
06 Lake Crowley is that although Lake Crowley has a
07 spillway that could be used, since it was constructed
08 in 1941, Lake Crowley has never spilled. And one of
09 the reasons now that it won't spill is that there is a
10 protected fish in the downstream reach.
11 And so, as I think I mentioned yesterday, we were
12 using this overflow of Lake Crowley as an indicator
13 that we had over constrained, that is, forced too much
14 inflow in or did not allow enough outflow out because
15 we do, in the modeling, specify the Owens
16 minimum/maximum. And this would indicate that in real
17 operations they would have had to do something
18 different than the planning model did.
19 In actual operations, as I mentioned, they would
20 know the water was coming and begin to release at

21 capacity earlier in the year. The model only does so
22 when its in trouble later in the runoff season, and
23 just to finish, when we simulated the case, the no
24 restriction, which is closest to the historical, it was
25 perhaps a little overstated yesterday what this error

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01 was. For the no-restriction case, Lake Crowley filled
02 to greater than 183,000 acre-feet only one time. This
03 was during the sort of flood of record in 1969, and it
04 only filled to a total volume of 195,000. So the model
05 simulated on the closest to historical, it only
06 overshot the available storage by 15,000 for a period
07 of two or three months, and this was with the reservoir
08 constrained to a minimum of 120.

09 So I mentioned that the actual operations would,
10 in a wet year, go dip below that 120, and can you see
11 that if they would have started at a minimum of just
12 100,000, just 20,000 less. in that one year there would
13 have been no overshoot of the model storage in Lake
14 Crowley for the closest to the historical.

15 Q You can probably see, though, that the person
16 reading the results of the model just doesn't fit
17 physical reality, and so it causes the questions.

18 Is that amount of water -- should that amount of
19 water have gone into Mono Lake, then, as opposed to
20 into Crowley?

21 A BY DR. HUTCHINSON: In reality, operations would
22 dictate that you're not going to, in a very wet year,
23 you're not going to put more water into an already
24 overflow situation, so you have more water that would
25 normally go to Mono Lake. That's the historic

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01 practice, but I think, as Russ explained yesterday, the
02 idea was to try and minimize the fluctuations of Mono
03 Lake. Operationally, that doesn't appear to make too
04 much sense in some of these very wet years.

05 Interestingly enough, in the past, that was
06 considered just a loss of water. In the future, if
07 lake level minimums are established, that's not so much
08 a waste anymore because there will be credit, in
09 essence, gained by having the water in Mono Lake over
10 the minimum level, which may defer future releases
11 to --

12 Q That was going to be my next question. The
13 following year you might be able to export more and
14 still save the lake.

15 A That's right. So depending on how much
16 fluctuation is considered reasonable, it's almost like
17 a pseudo reservoir in the future.

18 Q Are you going to address this issue in the
19 revisions you're going to make to the model?

20 A BY DR. BROWN: This is probably the other major point
21 that's unclear of what you could do with the model
22 right now compared to what it needs revising. Right
23 now, we could change these -- the decision or the
24 assumption to export all available water from the Mono
25 Basin which, at the time, since we are trying to

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01 allocate water between in-basin uses and export, seemed
02 like a reasonable decision, especially coupled with

03 resource analysts saying that lake-level fluctuations
04 were not desirable. So we could immediately, or your
05 Staff can immediately look at some rules for the Upper
06 Owens that would leave more of the wet water in the
07 Mono Basin.

08 And we could simulate what that would do, too.
09 That would recharge the Mono Lake elevation or raise
10 it, and the only loss from the storage idea is the
11 extra evaporation that's occurring because you have
12 expanded the lake area. That portion of the water is
13 not recoverable, but those could be simulated.
14 Those -- these are slightly different assumptions for
15 how to run one of the alternatives, and the effects of
16 that on the overall aqueduct operation, including the
17 effects of the available water to Los Angeles at the
18 downstream end at Haywee, could be evaluated with the
19 existing model today.

20 Q Thank you.

21 A BY MR. CASADAY: May I clarify something Dr. Brown
22 just said about lake level fluctuations? He said our
23 resource staff felt they were not desirable. I want to
24 qualify that.

25 We believe that natural fluctuations, of course,
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01 are desirable and some fluctuation is inevitable and
02 also desirable. What we were trying to avoid were
03 extreme fluctuations of the lake level so that a given
04 alternative lake management level would not cause
05 unnecessary harm to some of the resources around the
06 lake. In other words, a moderate lake level would not,
07 during a very wet period, cause the Tufa to be knocked
08 down or washed away at the other end would not drop
09 down and cause predation on gull nesting. So we were,
10 in fact, trying to limit how much fluctuation there was
11 but not eliminate it.

12 HEARING OFFICER del PIERO: Thank you.

13 Ms. Forster? Questions? No.

14 Mr. Canaday, you have two more?

15 MR. CANADAY: Two short questions.

16 Q BY MR. CANADAY: We were -- we received comment to
17 the draft on the LAMP -- this is for Dr. Brown -- some
18 concerns expressed by the Upper Owens River ranchers,
19 the landowners, private landowners of how water would
20 be distributed by the model, the present cases how that
21 water was distributed or forced out of the basin.

22 One of the things that you're undertaking now is
23 to be able to forecast the water years, say April 1st,
24 and then be able to, instead of pulsing water out in
25 the Upper Owens as the model would suggest now, the
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01 enhancement would be then to allow the water to be
02 distributed. Based on comments from the Department of
03 Fish and Game, if you want to distribute that water in
04 equal amounts over the months, that's the enhancement.
05 In other words, we're being responsive to that
06 comment.

07 A BY DR. BROWN: That's right. That's one of the
08 identified items that will be adjusted. So right now,
09 all that you can do is specify a minimum monthly flow
10 and maximum monthly flow, and that is not sufficient to

11 do this spreading out of the export over the year. But
12 we will be adding that feature.

13 Q When you analyzed or used LAMP to analyze the
14 alternatives, we had the flexibility at that time to
15 incorporate any final recommendations from the
16 Department in an analysis; is that correct?

17 MR. BIRMINGHAM: Excuse me, Mr. del Piero. I'm
18 going to object to Mr. Canaday's question on the
19 grounds that it's vague as to which department he's
20 referring to.

21 MR. CANADAY: The Department of Fish and Game.

22 HEARING OFFICER del PIERO: Is that satisfactory?

23 MR. BIRMINGHAM: Yes, thank you.

24 DR. BROWN: Can you clarify? You're asking what
25 capabilities?

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01 Q BY MR. CANADAY: Yesterday there was a question posed
02 to you that -- questioning why we didn't use Fish and
03 Game for recommendations in our analysis of the
04 alternatives and the Draft EIR, and what I'm asking
05 you, we had the flexibility of the models prepared to
06 incorporate those kinds of flow recommendations in an
07 analysis if we chose to do so; is that correct?

08 A BY DR. BROWN: That's right. The type of flows that
09 are being recommended by Fish and Game, which basically
10 involve dividing years into dry-year types, normal-year
11 types, wet-year types, and then for each of those year
12 types, specifying a specific minimum flow, and then
13 adding to that a specified amount of flushing flow,
14 either as a flow cfs or a volume. All of those have
15 always been a part of the LAMP model, and we're simply
16 awaiting recommended numbers to insert into those input
17 locations.

18 MR. CANADAY: Thank you.

19 HEARING OFFICER del PIERO: Thank you very much.

20 That extinguishes the questions we have for the
21 panel. Mr. Frink, unless there's anything else, I'm
22 going to allow these folks to regain their seats, and
23 then we can call the next panel after we've broken for
24 about 15 or 20 minutes.

25 MR. BIRMINGHAM: Excuse me, Mr. del Piero. I was

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01 wondering if we could be afforded an opportunity to
02 ask very limited recross.

03 HEARING OFFICER del PIERO: Certainly, Sir. That
04 opportunity is available at this point. However, it's
05 going to be available only after the break. We're in
06 recess for 15 minutes.

07 (Whereupon a recess was taken.)

08 HEARING OFFICER del PIERO: Okay. Mr. Frink, do
09 you have the next panel?

10 MR. FRINK: I believe Mr. Birmingham wanted to ask
11 some questions on recross.

12 HEARING OFFICER del PIERO: Forgive me,
13 Mr. Birmingham. Please come up and begin.

14 RE-CROSS EXAMINATION BY MR. BIRMINGHAM

15 Q I have some very limited questions on recross
16 examination. First, I'd like to ask, and I don't know
17 if these questions are more appropriately directed at
18 Dr. Unger or another member of the panel, but this

19 morning Ms. Niebauer, on behalf of the Fish and
20 Wildlife Service, asked a number of questions related
21 to brine shrimp and the effect of different lake level
22 alternatives on brine shrimp.
23 Were those questions directed at you, Dr. Unger,
24 as I recall?
25 A BY DR. UNGER: For the most part, I believe so.

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01 Q I'd like to follow up very briefly, if I can.
02 During the last 14 years, a period which the lake has
03 fallen to a level of 6372 feet approximately and has
04 risen to approximately 6381 feet, has there ever been a
05 time when brine shrimp in Mono Lake were not super
06 abundant? Let me state it differently.
07 Isn't it correct that during the last 14 years,
08 brine shrimp have been super abundant in Mono Lake at
09 all lake levels?
10 A Well, I don't know what you mean by "super
11 abundant."
12 Q Has there ever been a time in the last 14 years
13 when brine shrimp in Mono Lake were at or near
14 extinction?
15 A I don't believe so.
16 Q There has never been a time in the last 14 years
17 when the salinity levels in Mono Lake endangered brine
18 shrimp; is that correct?
19 A I don't think I could say for sure because the
20 effects of something like salinity might -- might --
21 they might have effects over a long period of time and
22 in combination with many other factors, so I wouldn't
23 want to say -- make that statement for sure.
24 Q I believe someone on this panel this morning
25 distinguished between the amount of data that are

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01 available on the population of brine shrimp versus the
02 population of alkali flies; is that correct?
03 A BY DR. BROWN: Yes. I made that distinction.
04 Q Isn't it correct that all of the data on brine
05 shrimp that have been collected at Mono Lake over the
06 last 14 years have been collected by or under the
07 direction of Dr. John Melak?
08 A Yes. That's right, and as far as I'm aware, they
09 provided all of that data to our assessment team.
10 Q And then members of this panel would agree that
11 Dr. John Melak is the foremost authority on Artemia
12 monica at Mono Lake; is that correct?
13 A BY DR. UNGER: I'm not sure I would agree with that.
14 He's some -- some of his -- the people working for him,
15 I would say, were Gail Ben, Bob Jellison, people like
16 Lenz.
17 Q Are you aware of any opinion expressed by any of
18 those individuals that during the last 14 years there
19 has ever been a time when Artemia monica were
20 endangered at Mono Lake of extinction?
21 A No, I'm not.
22 Q This morning, in response to a question asked by
23 Board Member Stubchaer, there was reference to an
24 endangered or a protected species below Crowley Lake;
25 is that correct?

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01 A BY DR. BROWN: I made that reference.
02 Q Is it correct that if Crowley Lake spills, it
03 would result in a take of an endangered species
04 protected under the Endangered Species Act?
05 MR. THOMAS: Objection, that calls for a legal
06 conclusion.
07 HEARING OFFICER del PIERO: That's right.
08 Q BY MR. BIRMINGHAM: Is it correct that if Crowley
09 Lake spills there is a potential that the habitat of an
10 endangered species would be adversely affected?
11 A BY DR. BROWN: I didn't make any statement like
12 that. I only meant to imply that it is not foreseen
13 that the spillway, which does exist at Lake Crowley, is
14 never intended to be used, and so simulations of the
15 aqueduct system are reasonable to assume that same
16 feature. Although the spillway exists, it's not
17 intended to be used.
18 Q I understand you didn't say that this morning, but
19 I'm asking you the question now. Isn't it correct that
20 if Crowley Lake spills there is the potential of an
21 adverse effect on the habitat of a species listed as
22 threatened or endangered under the Federal Endangered
23 Species Act?
24 A I think you should ask the next panel.
25 Q Thank you.

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01 Yesterday, Mr. Casaday, Mr. Dodge asked several
02 questions of you concerning riparian vegetation.
03 A BY MR. CASADAY: Yes.
04 Q And you stated that recruitment of riparian
05 vegetation could take decades if conditions were right.
06 Was that your answer to his question?
07 A Essentially, could take decades if conditions in
08 any given year were not right for recruitment.
09 Q Isn't it correct that if conditions are right,
10 natural recruitment of riparian vegetation could take
11 significantly less time than several decades?
12 A That's correct.
13 Q Isn't it also correct that in 1991, the Department
14 of Water and Power, in connection with the restoration
15 activities of Rush and Levining Creeks, decided to
16 restrict grazing along the riparian corridor of Rush
17 and Levining Creeks?
18 A Grazing was restricted. I can't attest to who
19 made the decision.
20 Q Have you or has any member of this panel inspected
21 the recovery of riparian vegetation along Rush and
22 Levining Creeks since that decision was made?
23 A Not formally, although we have been on the ground
24 doing fieldwork and observed conditions since the
25 grazing exclosures were installed.

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01 Q Isn't it correct that the grazing exclosures were
02 installed to test the difference between unusual
03 recovery or to determine how the rate of natural
04 recovery without grazing?
05 PANEL ATTORNEY: Objection. Calls for
06 speculation.
07 HEARING OFFICER del PIERO: It does call for
08 speculation, but I also think that if you rephrase it

09 slightly, you're going to get the answer you're looking
10 for. So go ahead.

11 Q BY MR. BIRMINGHAM: What was the purpose, if you
12 know, of installing the grazing exclosures, which you
13 mentioned in your last answer?

14 A BY MR. CASADAY: I should say that I don't have any
15 firsthand knowledge of that. That was carried out by
16 the restoration technical committee. So to the degree
17 that it was intended as a test, I really can't say -- I
18 would presume that that was a major element of it.

19 Q Is it correct -- or have you been in the Mono
20 Basin in 1993?

21 A Yes, I have.

22 Q Is it correct that many of the grazing exclosures
23 are hidden from view because of the natural recovery
24 riparian vegetation that has taken place along Rush
25 Creek?

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01 A I don't know. I was in the Mono Basin, but not
02 for the purpose of looking at the riparian vegetation.

03 Q Mr. Dodge asked you, Mr. Casaday, about opinions
04 or concerns that are expressed in the Draft
05 Environmental Impact Report concerning bank stability.

06 A Yes.

07 Q And you indicated that the concerns about bank
08 stability that were expressed in the Draft
09 Environmental Impact Report with respect to Rush and
10 Levining Creeks are based entirely on the opinions of
11 Woody Trihey. Do you recall that, that answer?

12 A Yes. I said that the thresholds for channel
13 damage were based on the opinions of Mr. Trihey.

14 Q Are you aware of opinions of other experts who
15 have conducted inspections of banks in the Mono Basin
16 on the subject streams that are different than the
17 opinions expressed by Mr. Trihey?

18 A No, I'm not. We went to Mr. Trihey as the lead on
19 the restoration technical committee.

20 Q Finally, Mr. Dodge asked questions yesterday
21 concerning the state and federal water quality
22 anti-degradation standards. Do you recall those
23 questions?

24 A BY DR. BROWN: Yes. I believe I answered those.

25 Q And I believe that it was your testimony that the

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01 standards were established by determining the
02 concentration of salinity in Mono Lake at the time the
03 applicable regulations were adopted; is that correct?

04 A There are two that we're discussing. Which one
05 are you asking about?

06 Q Well, first let's focus on the state standard.
07 How was that standard adopted?

08 A Well, it's my understanding that the numbers that
09 were used in the basin plan document specifying the
10 water quality of Mono Lake were based on the available
11 measurements that they had at the time, which would
12 have been the early seventies, from Mono Lake.

13 Q And the federal anti-degradation standard of 85
14 grams per liter. That was a number that was fixed
15 because that was the salinity of Mono Lake at the time
16 the federal standard was adopted; is that correct?

17 A Not entirely. That number is only a reference
18 value that was provided by us looking up our projected
19 salinity of Mono Lake for the year that that
20 anti-degradation section was added to the law, and I
21 believe that is 85 grams per liter using our salinity
22 determination or estimation of the lake.
23 Q Now, the federal and state standards generally are
24 applicable to fresh water. Isn't that correct?
25 A Well, there are standards for all sorts of waters.
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01 Q Well, in this context, what we are talking about
02 is saline lake. Isn't it correct that a -- from a
03 biological standpoint, the standard of 85 grams per
04 liter does not have a lot of significance or meaning?
05 PANEL ATTORNEY: Objection. Unintelligible.
06 HEARING OFFICER del PIERO: I'm somewhat torn at
07 this point because I have personal knowledge of exactly
08 the standards that are being discussed.
09 Why don't you try and clarify the question in
10 terms of what that standard is being applied to, at
11 least in terms of your mind, what biological organisms
12 you're attempting to elicit information about.
13 Q BY MR. BIRMINGHAM: Is it correct that if the
14 concentration of salinity in Mono Lake exceeds 85 grams
15 per liter, the lake will remain a productive ecosystem
16 for brine shrimp?
17 MR. ROOS-COLLINS: Objection, ambiguous.
18 HEARING OFFICER del PIERO: I think you can answer
19 that question.
20 DR. BROWN: Okay. The 85 grams per liter which I
21 am not characterizing as a standard, I'm simply saying
22 this is a reference value of what the lake was at at
23 the time the law was added, is within the observed
24 range of salinity under which Dr. Melak and his team
25 have observed what you characterized as super abundant.
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01 And so that lake salinity is within the range of
02 observed values.
03 Q BY MR. BIRMINGHAM: In fact, Mr. Dodge brought out
04 yesterday through his questioning that the salinity
05 levels in Mono Lake have been in excess of this
06 threshold's number for a good part of the time in the
07 last 14 years; isn't that correct?
08 A That is right.
09 Q And that those salinity concentrations have not
10 prevented brine shrimp from reproducing?
11 A That is right, although reproducing is not only
12 the response variable that we might want to determine
13 out of salinity.
14 Q Salinity concentrations in excess of 85 grams or
15 thereabout have not resulted in significant mortality
16 of brine shrimp; isn't that correct?
17 A Well, all we know from the measurements is that
18 there's still lots of them there.
19 Q And there are still lots of brine flies there;
20 isn't that correct? Or alkali flies?
21 A Right. The only significant measurement or
22 coordinated measurements were done in 1991. There is
23 an amazing number of alkali flies.
24 Q And there's an amazing number of other types of

25 invertebrate organisms; isn't that correct?

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01 A Well, there's actually a lack of other
02 invertebrate organisms from the information that I
03 have.

04 Q But that lack of invertebrate organisms is not a
05 result of a salinity in excess of 85 grams per liter;
06 isn't that correct?

07 A I have no idea what causes their lack of being
08 there.

09 MR. BIRMINGHAM: I have no further questions.

10 HEARING OFFICER del PIERO: Thank you very much.

11 I see hands going up, so we're going to do this in
12 an organized fashion. Mr. Thomas?

13 MR. THOMAS: No. We have no questions.

14 HEARING OFFICER del PIERO: Okay. Mr. Dodge?

15 MR. DODGE: I think I have maybe two questions,
16 but whenever I say that, I get into trouble.

17 HEARING OFFICER del PIERO: We'll afford you a
18 little latitude, Mr. Dodge.

19 RE-CROSS EXAMINATION BY MR. DODGE

20 Q Mr. Casaday, looking at Pages 20 to 21 of your
21 prepared testimony. Do you have that, Sir?

22 A BY MR. CASADAY: Yes.

23 Q You're talking there about the environmentally
24 superior alternative, and in the course of that
25 discussion, you discuss the key resources in this

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01 balancing. Do you see that? And then you have a list
02 of eight?

03 A Yes.

04 Q And we talked about it yesterday, the fact that
05 the restoration of duck habitat and duck populations
06 was not a key resource, correct?

07 A Not that I listed here, no.

08 Q Right. Now, my question to you, I only have one
09 question, and that is if the restoration of duck
10 habitat and duck populations were thought to be a key
11 resource, how would that affect the analysis of the
12 environmentally superior alternative?

13 A Well, our conclusion about duck habitat was that
14 it would increase under the 6383 foot alternative, and
15 then it would gradually increase for the higher lake
16 level alternatives reaching pre-diversion levels by the
17 6410. So if the Board, One, were to consider duck
18 habitat as important, it would tend to push the
19 environmentally preferred upward. But it's -- it's
20 difficult to say that it would be one -- one would
21 conclude another alternative would be balancing all
22 these physical impacts would be, therefore, the
23 environmentally preferred alternative. A long way of
24 saying you get more duck habitat definitely at 6390
25 than you do at 6383. After that it's a judgment call.

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01 Q And more still at 6410; isn't that right?

02 A Yes. And by 6410, you've essentially got
03 everything that you're going to get.

04 MR. DODGE: I did it in two questions.

05 HEARING OFFICER del PIERO: I appreciate it,
06 Mr. Dodge. Thank you very much.

07 Mr. Roos-Collins, further questions, Sir?
08 MR. ROOS-COLLINS: I do have further questions.
09 HEARING OFFICER del PIERO: Please.
10 RE CROSS EXAMINATION BY MR. ROOS-COLLINS
11 Q Mr. Casaday, I have several further questions
12 regarding the stability of the channels of the
13 tributaries to Mono Lake and specifically about the
14 conclusion on Page 3-C-23 of the Draft EIR which reads
15 as follows: "These data indicate that all these creeks
16 without overflow channel relief are potentially
17 unstable in the event of fairly frequent flood flows.
18 Parker, Walker, and Levining Creeks are considered
19 especially susceptible, but damaging flows in Rush
20 Creek occur at an average interval of less than 20
21 years."
22 Is that conclusion based entirely on the data and
23 opinions provided to you by Mr. Trihey?
24 A BY MR. CASADAY: No. It's a combination of that
25 information, which was the exclusive data we used for

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01 damage thresholds, that data in combination with the
02 LAMP model outputs about how often those flows would
03 occur. When we gathered the information from
04 Mr. Trihey, he was not aware, and neither was I, of the
05 frequency with which those flows would be exceeded. We
06 subsequently took his thresholds, compared it to the
07 model outputs, and drew these conclusions about
08 frequency of damage.

09 Q The erosions or instability thresholds, then, are
10 based entirely on data provided to you by Mr. Trihey.

11 A Yes. That's correct.

12 Q Subject to the release of the Environmental Impact
13 Report, have you had an occasion to review Mr. Trihey's
14 August 30th, 1993, letter to Mr. Canaday submitting
15 comments on that grant?

16 A No, I haven't. I hope to have by the time our
17 terrestrial resource panel appears.

18 Q At the risk of surprise to you, let me ask you to
19 read for the record certain paragraphs on Pages Four
20 and Five of Mr. Trihey's letter to Mr. Canaday
21 beginning with the paragraph, "Finally, I wish to
22 comment." Mr. Casaday, could you read those paragraphs
23 for the record?

24 A All right. These two paragraphs, three
25 paragraphs, I guess?

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01 MR. FRINK: I would object, Mr. Chairman. We're
02 getting information into the record that the witness
03 has never seen.

04 HEARING OFFICER del PIERO: That's -- I was
05 just -- just about to ask the question.

06 Mr. Roos-Collins, can you explain to me what the
07 purpose of this is?

08 MR. ROOS-COLLINS: Mr. Trihey is the sole basis
09 for the erosion or instability thresholds cited in the
10 Draft Environmental Impact Report.

11 HEARING OFFICER del PIERO: And the source of the
12 information you're attempting to introduce?

13 MR. ROOS-COLLINS: I'm going to ask Mr. Casaday
14 what his opinion is of Mr. Trihey's comment.

15 HEARING OFFICER del PIERO: Did you introduce this
16 as part of your exhibits?
17 MR. ROOS-COLLINS: This is a comment letter which
18 has been previously submitted to the State Board and is
19 included in the record for the Draft Environmental
20 Impact Report.
21 HEARING OFFICER del PIERO: Okay.
22 MR. FRINK: I'll withdraw my objection.
23 HEARING OFFICER del PIERO: Have you seen the
24 correspondence before, Sir?
25 MR. CASADAY: I actually glanced at this, and I

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01 knew that it was in here. But I've not sat here and
02 read it and thought about it.
03 HEARING OFFICER del PIERO: All right. Take one
04 moment. Take two moments. Go through it. Take a look
05 at the three paragraphs. Familiarize yourself with it,
06 and then Mr. Roos-Collins can ask you questions about
07 it.
08 MR. DODGE: Mr. Gatley is going to be in a
09 subsequent panel. Maybe it makes sense to have --
10 HEARING OFFICER del PIERO: Let's keep in mind who
11 the person is who just asked the question.
12 Do you have an opinion?
13 MR. ROOS-COLLINS: Mr. del Piero, my opinion is
14 that this question is properly before Mr. Casaday on
15 that panel. He has been asked a number of questions on
16 erosion and stability.
17 HEARING OFFICER del PIERO: Mr. Casaday, be kind
18 enough to view it.
19 MR. CASADAY: Would you like me to read it aloud?
20 HEARING OFFICER del PIERO: I'd like you to review
21 it. If you wish to have it read aloud, that's
22 obviously your prerogative, but inasmuch as it's
23 already in the comments to the Environmental Impact
24 Report, it's in our record. So that's not necessary.
25 One of the prerequisites for serving on this Board

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01 is being capable of reading in the English language.
02 MR. ROOS-COLLINS: Mr. del Piero, respectfully, I
03 would request that the witness read those paragraphs
04 aloud; otherwise, my question will not be intelligible
05 to the Board members.
06 HEARING OFFICER del PIERO: In all candor,
07 Mr. Roos-Collins, whether or not your question is
08 intelligible to the Board members is a function of the
09 Board members' understanding, not yours. So why don't
10 you go ahead and proceed with your cross-examination.
11 Okay?
12 Have you reviewed that, Sir?
13 MR. CASADAY: I'm trying to listen to what's --
14 HEARING OFFICER del PIERO: Mr. Roos-Collins and I
15 will both be quiet while you review that. You're
16 reviewing that on my time. Okay?
17 MR. CASADAY: All right. I've read them.
18 HEARING OFFICER del PIERO: Please proceed, Sir.
19 Q BY MR. ROOS-COLLINS: Mr. Casaday, having read the
20 paragraphs on Pages Four and Five of Mr. Trihey's
21 August 30th, 1993, comment letter to the Board, has
22 your opinion about the channel stability of the

23 tributaries to Mono Lake as expressed on Page 3-C-23
24 changed in any way?
25 A Well, I would have to admit that uncertainty has

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01 been injected into our conclusions. I would not, at
02 this point, change my conclusions. I believe this
03 statement simply raises additional questions.

04 Mr. Trihey, when asked by myself about channel
05 damage thresholds, was -- at least I made it very clear
06 in my opinion that I was talking about loss of riparian
07 vegetation and not fish habitat. The statement,
08 actually, now says that -- seems to say that he gave
09 those thresholds with respect to refuge habitat and
10 stream bed gravel movement and that, however, these
11 thresholds would not be appropriate to changing the
12 stream's plan form and bed topography, which I think is
13 perhaps a way of saying threats to bank vegetation.

14 I would simply then want to go back to the RTC, or
15 some of the technical people doing the work, and ask
16 them again do they have some threshold estimates for
17 flows that would damage the riparian vegetation. So I
18 don't have any new opinion to express.

19 MR. ROOS-COLLINS: Thank you very much.

20 HEARING OFFICER del PIERO: Thank you very much.

21 Mr. Stevens?

22 MR. STEVENS: Nothing further. Thank you.

23 HEARING OFFICER del PIERO: Thank you.

24 Mr. Gipsman?

25 MR. GIPSMAN: No questions.

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01 HEARING OFFICER del PIERO: Ms. Niebauer?

02 RECROSS EXAMINATION BY MS. NIEBAUER

03 Q I'd like to refocus your attention to
04 Mr. Birmingham's recross. Who was it that answered his
05 questions regarding the extinction issue of the brine
06 shrimp? One of you did.

07 HEARING OFFICER del PIERO: It was -- you'll
08 forgive me, but it was one of these two gentlemen on
09 the left. And I don't recall which one.

10 DR. BROWN: Then it must have been me.

11 Q BY MR. NIEBAUER: Okay. Then these questions are
12 directed towards you.

13 Mr. Birmingham asked questions regarding brine
14 shrimp populations and whether those populations were
15 at or near extinction and whether or not the brine
16 shrimp was ever in danger of extinction in Mono Lake.

17 Do you recall those questions?

18 A BY DR. BROWN: Yes.

19 Q Are you familiar with the definitions of
20 "threatened" or "endangered" species pursuant to the
21 Federal Endangered Species Act?

22 A I am generally familiar, but not in any specifics.

23 Q Are you familiar with the criteria that is

24 required to list a species as an endangered or
25 threatened species pursuant to the Federal Endangered

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01 Species Act?

02 A No.

03 Q Are you an expert in Endangered Species Act
04 applications or interpretations?

05 A No.
06 Q When you gave your answer to or your answers,
07 excuse me, to Mr. Birmingham's questions regarding
08 brine shrimp populations and extinction, did you give
09 those answers in an expert capacity?
10 MR. BIRMINGHAM: Excuse me, Mr. del Piero. To be
11 fair to Ms. Niebauer, I believe it was Dr. Unger who
12 answered these questions. If you go back and look at
13 the record, it was Dr. Unger.
14 HEARING OFFICER del PIERO: Is that true,
15 Dr. Unger?
16 DR. UNGER: I think we both answered the questions
17 at different times.
18 HEARING OFFICER del PIERO: Then, Gentlemen, in
19 order to insure that we've got adequate answers in
20 regards to these questions, I would rely on you to
21 comment when a question is asked that follows up on a
22 previous question so that we are getting answers on
23 that subject matter from the same parties.
24 MS. NIEBAUER: Well, that's my last question and
25 maybe I can ask you to answer that question asked.

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01 Then I'll ask Mr. Unger the same questions, I guess, to
02 make the record complete.
03 Q BY MS. NIEBAUER: The last question I have is did
04 you -- if you did give an answer regarding brine shrimp
05 and extinction in Mono Lake, did you give that answer
06 in an expert capacity?
07 A BY DR. BROWN: I was giving that answer in response
08 generally that the levels of salinity that he was
09 asking about are within the observed range of salinity
10 covered by Dr. Melak's studies. So only as the
11 assessment team leader, those two things correspond,
12 the period of available data with this range of
13 salinity that he was asking about.
14 Q So you were not testifying as an expert of
15 endangered -- Federal Endangered Species Act expert; is
16 that correct?
17 A No.
18 Q Mr. Unger, I'll ask you the same questions. You
19 were present when Mr. Birmingham asked questions
20 regarding brine shrimp populations and extinction in
21 Mono Lake, were you not?
22 A BY MR. UNGER: Yes.
23 Q And are you familiar with the definitions of
24 "threatened" or "endangered" species pursuant to the
25 Federal Endangered Species Act?

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01 A Not the specifics. In a general way.
02 Q And are you familiar with the criteria that is
03 used to list a particular species as a threatened or
04 endangered species pursuant to the Federal Endangered
05 Species Act?
06 A No, not really.
07 Q And are you an expert in Endangered Species Act
08 applications or interpretations?
09 A No.
10 Q Now, when you answered your questions asked by
11 Mr. Birmingham regarding brine shrimp populations and
12 extinction, did you answer those questions in an expert

13 capacity?

14 A I don't think that I actually said at any point
15 that -- if you'll recall when he asked me about the
16 salinities and whether or not such salinities could
17 lead to extinction of the brine shrimp, I said at the
18 time that I didn't know because there could be other
19 factors involved.

20 I just want to make it clear that I don't think
21 that I, at any point, said -- what I did say is that
22 there was no evidence -- there was no extinction
23 occurred under conditions that were present during the
24 period that John Melak made his study.

25 Q Well, I could ask the Reporter to read back the
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01 question, but I do believe that Mr. Birmingham asked
02 the question whether brine shrimp were ever in danger
03 of extinction at Mono Lake.

04 Do you recall that question?

05 A Yes.

06 Q And I recall your answer as being no.

07 A Okay. It could have been.

08 Q So my question to you is when you gave that answer
09 to that question, were you testifying in an expert
10 capacity as a Federal Endangered Species Act expert?

11 A Not as a Federal Endangered Species Act expert,
12 no.

13 MS. NIEBAUER: Thank you. That's all I have.

14 HEARING OFFICER del PIERO: Thank you very much.

15 Mr. Haselton? Mr. Silver? No. Mr. Gleason?

16 No. Staff? Mr. Smith?

17 MR. SMITH: I had one question for Dr. Unger.

18 REDIRECT EXAMINATION BY THE STAFF

19 Q BY MR. SMITH: You admitted in front of God and
20 everybody that you're not an expert under the federal,
21 but you did mention during your testimony that there
22 were some experts.

23 In response to the question about the expertise
24 Dr. Melak, you said that Dr. Jellison and two others
25 are, and you didn't fill out the rest of that

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01 sentence. They are what? They're experts, too?

02 They're --

03 A BY MR. UNGER: They are experts on the biology,
04 ecology of Mono Lake brine shrimp. I don't know that
05 they are experts on the Federal Endangered Species Act
06 or whatever the term was either.

07 MR. SMITH: Thank you.

08 HEARING OFFICER del PIERO: Any other questions by
09 staff? No? Ms. Forster?

10 Q BY MS. FORSTER: I would like a clarification, and I
11 don't know. I guess I'll just continue with the person
12 who's been asking.

13 In the testimony this morning in the issues
14 relating to the brine shrimp and endangered species,
15 I'd like a reinforcement. Was it said that the brine
16 shrimp was a candidate for the National Endangered
17 Species Act?

18 A BY DR. UNGER: I don't believe that was ever
19 discussed this morning.

20 HEARING OFFICER del PIERO: Do you know that to be

21 the case?
22 DR. UNGER: It is a candidate. I believe so,
23 yes.
24 HEARING OFFICER del PIERO: I thought I was going
25 to ask a question, but I don't think so. I think that

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01 concludes this panel. Gentlemen, thank you very much
02 for your kind consideration.
03 Mr. Frink, it is currently quarter to twelve. We
04 have another panel to bring forward. We have 15
05 minutes in which to do it before we would break for
06 lunch. It's my sense that that's probably not the most
07 expeditious thing to do.

08 Anybody have speeches at noontime today? No
09 speeches today. Ladies and Gentlemen, we're going to
10 break. We're going to come back at 1:15. Okay? 1:15,
11 and we will start promptly at 1:15. Thank you very
12 much and Gentlemen on that first panel, let me express
13 my deep appreciation for your attentiveness and
14 participation in the course of the last day. Thank
15 you.

16 (Whereupon the lunch recess was taken.)

17 HEARING OFFICER del PIERO: Ladies and Gentlemen,
18 this hearing will again come to order. One face is the
19 same and the rest have changed. Two faces. Pardon
20 me.

21 Mr. Frink, do you want to begin this?

22 MR. FRINK: Yes, Mr. del Piero. The next
23 witnesses that Staff would like to call are the
24 gentlemen who did the fisheries assessment in the
25 Environmental Impact Report, and the first of those is

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01 Philip Dunn, the second is William Mitchell. I don't
02 believe either one of them have been sworn yet.

03 HEARING OFFICER del PIERO: Good. Gentlemen,
04 would you stand and raise your right hand? Do you
05 promise to tell the truth during the course of these
06 proceedings?

07 (Answering affirmatively.)

08 HEARING OFFICER del PIERO: I believe you
09 Gentlemen are familiar with our procedures after having
10 spent innumerable hours with us during the course of
11 the last few years or so. Didn't you guys work on
12 Mokelumne, too?

13 THE GENTLEMEN: Yuba.

14 MR. FRINK We'll begin with Mr. Dunn.

15 DIRECT EXAMINATION BY MR. FRINK

16 Q Please state your name and place of employment for
17 the record.

18 A BY MR. DUNN: My name is Philip L. Dunn, and I work
19 with Jones and Stokes as an associate principal.

20 Q Did you prepare a document that is titled The
21 Written Testimony of Philip Dunn for the Mono Basin
22 Water Rights Hearing 1993?

23 A Yes, I did.

24 Q And have you seen that that document has been
25 designated as SWRCB 21 for this proceeding?

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01 A Yes.

02 Q Is Attachment A -- excuse me. Your testimony

03 indicates that you served as the team leader for
04 evaluation of fishery issues or the Draft EIR reviewing
05 the City of Los Angeles' water rights in Mono Basin.

06 Could you please briefly summarize your educational
07 and professional qualifications relevant to that area
08 of work?

09 A Yes. I have a Bachelor of Science degree in
10 zoology from UC Davis and a Master of Science degree in
11 fisheries biology from Humboldt State University. I
12 worked with Jones and Stokes Associates for nine years
13 on a variety of water resources, water right, and
14 fishery type projects. I've been involved in numerous
15 IFIM studies and habitat and fish population studies on
16 a wide variety of streams in California.

17 Q Okay. And for the record, an IFIM study is what?

18 A That's Instream Flow Incremental Methodology.

19 Q Is Attachment A to your written testimony a true
20 and accurate summary of your professional education and
21 experience as it relates to the work you did on the
22 Draft EIR?

23 A Yes, it is.

24 Q And what specific section or portions of the Draft
25 EIR did you assist in preparing?

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01 A Under the direction of our project manager, I was
02 the team leader responsible for the fisheries section
03 of the Draft EIR.

04 I also was involved with Appendix O, which was the
05 fisheries technical appendix, and I worked with other
06 staff at Jones and Stokes Associates, primarily Bill
07 Mitchell here, in developing the fisheries portion of
08 the document.

09 I also managed the instream flow incremental
10 methodology study on the Middle Owens River, and that
11 was Auxiliary Report 23. And I coordinated the
12 preparation of Auxiliary Report 10, which was done by
13 Balance Hydrologics, and that was a geomorphic
14 assessment of the Middle Owens River.

15 Q Is SWRCB Exhibit 21 a true and accurate summary of
16 your testimony in this proceeding, Mr. Dunn?

17 A Yes, it is. And I would like to add several very
18 brief statements to that written testimony, if I may.

19 Q Are these by way of clarification?

20 A Yes.

21 Q Additional information you've learned since
22 submitting the testimony?

23 A Right. Right.

24 Q Okay. Please do.

25 A Since preparing my written testimony, I have had

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01 an opportunity to review the comments on the Draft EIR
02 and also to conduct a very cursory analysis, not even
03 analysis, but just more perusal of the testimony from
04 some of the other parties, and so I have an idea of the
05 main themes that they've brought out. And I want to
06 quickly address three major issues that became apparent
07 in my review.

08 First, it's very apparent that there's a large
09 discrepancy between the parties regarding the pre-1941
10 fish population and habitat conditions particularly in

11 Rush and Levining Creeks, and some parties have
12 presented new information on this subject that was not
13 made available to us during EIR preparation.

14 The environmental setting for the fisheries was
15 sent out to several parties for comment at an early
16 stage in the process, and we received either no
17 comments or we received comments that were too late in
18 the process to incorporate into our Draft EIR.
19 Nonetheless, all of this information has now been
20 brought out, and we will review and consider this
21 information as it relates to comments on the Draft EIR
22 as we begin to prepare the Final EIR.

23 The second point is regarding minimum instream
24 flows for the Mono tributary streams. The EIR does not
25 contain required minimum stream flow, but it only

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01 evaluated the effects on fisheries from each of the
02 alternatives. I do believe there is sufficient
03 existing information to establish such flows in the
04 Final EIR, but that has not yet been a charge for Jones
05 and Stokes at this point.

06 I'd also like to point out that the DFG final
07 recommendations for several streams were received at
08 the end of August 1993, and so those recommendations
09 could not be incorporated or reviewed for the Draft
10 EIR. And again, we will review and consider this
11 information as we develop the Final EIR.

12 Third and lastly regarding the effects of high
13 flows on Rush and Levining Creeks, I think the 1993
14 high flows have brought out some new information
15 regarding the effects of high flows on Rush and
16 Levining Creek, channels and habitat restoration, work
17 that's been done there, and I think prior to these high
18 flows in 1993, we could only speculate about what
19 potential effects these high flows would have.

20 And also, it appears that some parties have
21 modified their positions to some degree regarding the
22 effects of the high flows and, certainly, we will again
23 consider this information and any alternative
24 interpretations of existing information that could
25 change our conclusions in the Final EIR.

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01 Q Okay. Are those the only additions you wish to
02 make to your written testimony?

03 A Yes.

04 Q Thank you very much.

05 We'll move on to the second witness, William
06 Mitchell, and then place each of the witnesses -- make
07 each of the witnesses available for cross-examination
08 as a panel.

09 Please state your name and place of employment,
10 Mr. Mitchell.

11 A BY MR. MITCHELL: My name is William T. Mitchell, and
12 I'm an environmental specialist with Jones and Stokes.

13 Q Okay. Did you prepare a document that is titled
14 Written Testimony of William T. Mitchell for the Mono
15 Basin Water Right Hearing 1993?

16 A Yes, I did.

17 Q And is that the document that has been designated
18 as SWRCB Exhibit 22 for this proceeding?

19 A Yes, it is.
20 Q Your written testimony indicates that you also
21 assisted in the fisheries issues analysis for the Draft
22 Environmental Impact Reports.
23 Would you please summarize your education and
24 professional qualifications that are relevant to that
25 area of work?

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01 A Yes. I hold a B.S. degree in biology from San
02 Diego State University and an M.S. degree in fisheries
03 biology from Humboldt State University. I've been
04 employed with Jones and Stokes for the last four years,
05 and during that time, I've been engaged in designing
06 fisheries studies, developing and applying fish habitat
07 and population models, and conducting numerous
08 fisheries impact assessments.

09 Q Okay. Thank you.

10 Is Attachment A to your written testimony a true
11 and accurate summary of your education and experience
12 relating to the work you did on the Draft EIR?

13 A Yes.

14 Q Thank you. What particular portions of the Draft
15 EIR or auxiliary reports did you assist in preparing?

16 A Under the direction of Phil Dunn, I was
17 responsible for carrying out the fisheries impact
18 analyses for the Draft Mono Basin Water Rights EIR,
19 which is Chapter 3-D entitled Fishery Resources and
20 also Appendix O entitled Fisheries Technical Appendix.

21 And I also assisted in preparing an instream flow
22 incremental methodology study for the Middle Owens
23 River, which is reported as Auxiliary Report Number 23.

24 Q Thank you.

25 In summary, do you affirm the SWRCB Exhibit 22 is

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01 a true and accurate statement of your testimony in this
02 proceeding?

03 A Yes.

04 MR. FRINK: Okay. I believe that's all the
05 questions we have, Mr. Hearing Officer.

06 HEARING OFFICER del PIERO: Thank you very much,
07 Mr. Frink.

08 Mr. Birmingham?

09 MR. BIRMINGHAM: Thank you very much.

10 As a procedural matter, Mr. del Piero, I would
11 note for the record that earlier Mr. Frink had asked
12 for the admission of the testimony of several of the
13 witnesses that were on the previous panel, and I
14 wondered if now would be an appropriate time to
15 consider their admission.

16 HEARING OFFICER del PIERO: I'll take that up when
17 all the panels are done.

18 MR. BIRMINGHAM: I will direct the questions that
19 I have on this issue primarily to Mr. Dunn, but in the
20 event that Mr. Dunn or Mr. Mitchell feel that
21 Mr. Mitchell would be better qualified to answer the
22 question, then I would invite a response from either
23 or, in fact, anyone on the panel.

24 HEARING OFFICER del PIERO: And, Gentlemen, you're
25 so directed.

0100

01 CROSS-EXAMINATION BY MR. BIRMINGHAM
02 Q First, with respect to the historic conditions
03 that are described in the Draft Environmental Impact
04 Report, much of the discussion of the historic
05 conditions on Rush and Levining Creeks was based upon
06 the 1990 court testimony of Eldon Vestal; is that
07 correct?
08 A BY MR. DUNN: That was one of the references that we
09 used, one of many.
10 Q Mr. Vestal was a Department of Fish and Game
11 employee that was in the Mono Basin in the late
12 thirties and early forties and in the fifties; is that
13 correct?
14 A I'm not sure if he was there in the late forties
15 and fifties. I know in the thirties he was.
16 Q Much of Mr. Vestal's testimony in the 1990
17 proceedings related to the quality of spawning gravels
18 and the vegetation as a measure of the pre-diversion
19 fishery. Is that right?
20 A Could you repeat that question, please?
21 Q Much of Mr. Vestal's testimony in 1990 related to
22 the quality of spawning gravels and vegetation as a
23 measure of the pre-diversion fishery.
24 A I don't recall whether he was characterizing
25 pre-diversion fishery, although I do recall that he did

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01 have -- there were statements regarding the quality of
02 the gravels and the extent of the gravels.
03 Q And he made statements in his testimony concerning
04 the extent of the riparian vegetation; is that correct?
05 A Yes, I believe so.
06 Q The condition of the pre-diversion fishery, and
07 when I say "pre-diversion," I mean prior to the
08 diversions by L.A. DWP. The condition of the
09 pre-diversion fishery would have been affected by flows
10 in the streams. Is that correct?
11 A That's correct.
12 Q The Draft Environmental Impact Report at Page
13 3-D-3 states that, "Between 1930 and 1940, water was
14 diverted from Levining Creek for irrigation and the
15 generation of hydroelectric power;" is that correct.
16 A Could you please just refer me again to --
17 Q Well, is it correct -- I'll just ask you. Is it
18 correct --
19 MR. DODGE: Mr. Chairman, I would object to this
20 line of questioning on the grounds of irrelevance. We
21 believe, as set out in some depth in our opening
22 statement, that pre-1940 water diversions, whether they
23 be by DWP or by some third party, whether they be legal
24 or illegal, are simply irrelevant under Cal Trout II,
25 and that the fishery that sought to be restored is a

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01 continuous fishery that is not interrupted by
02 irrigation.
03 HEARING OFFICER del PIERO: Mr. Birmingham?
04 MR. BIRMINGHAM: Quite to the contrary,
05 Mr. del Piero. The Court in Cal Trout, II, the Third
06 District Court of Appeal, is very specific concerning
07 the obligations of this Board and the obligations of
08 the Los Angeles Department of Water and Power.

09 It was clearly stated that it was the obligation
10 of this Board to condition the licenses of the City of
11 Los Angeles to immediately restore flows to the four
12 streams from which the Department of Water and Power
13 was diverting water.

14 Further, it is very explicit in Cal Trout, II,
15 that it is the obligation of the Los Angeles Department
16 of Water and Power to restore the pre-diversion
17 fishery, and the conditions that existed in Rush and
18 Levining Creek in 1940 relate specifically to the
19 fishery that would have existed in those streams.

20 Therefore, the evidence concerning historic
21 conditions is relevant to the condition of the fishery
22 which Los Angeles is obligated to restore under what is
23 now the law of this case.

24 HEARING OFFICER del PIERO: I have Cal Trout, II.
25 I figured this issue was going to be coming up.

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01 A question of you, Mr. Birmingham, in regards to
02 this matter. Explain to me the relevance of the
03 diversion as they relate to the pre-diversion
04 fisheries.

05 MR. BIRMINGHAM: Well, Mr. del Piero,
06 hypothetically, if there were stretches of Rush Creek
07 or Levining Creek which in 1940 or '41 contained no
08 water or no flows, then it's likely to conclude that
09 the fishery that existed in that portion of the stream
10 was not a good fishery. Los Angeles Department of
11 Water and Power is not obligated under Cal Trout, II,
12 to restore anything beyond the fisheries that existed
13 in these streams.

14 And again, if there were portions of the stream
15 that were dewatered or that were negatively affected by
16 other pre-L.A. DWP diversion activities, then that
17 information is relevant to L.A. DWP's obligation, what
18 it is we are required to restore under Cal Trout, II.
19 Here I'm talking specifically about the obligation
20 described by the Court in Cal Trout, II.

21 HEARING OFFICER del PIERO: Have a seat, Sir, just
22 for one moment.

23 Yes, Mr. Thomas, do you have a comment in regards
24 to this matter?

25 MR. THOMAS: Mr. Chairman, Mr. del Piero, we don't

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01 want to litigate or go over an issue which, in effect,
02 is a legal issue in this proceeding, and I would
03 encourage the Board to view the issue in terms of the
04 narrow function of the closed setting that we're doing
05 today and not the larger function of judicial
06 determination but some of the lingering baggage from
07 the Cal Trout series.

08 With that, I'll sit down.

09 MR. ROOS-COLLINS: Mr. del Piero, may we be heard
10 on this?

11 HEARING OFFICER del PIERO: Yes, Sir.

12 MR. ROOS-COLLINS: California Trout concurs with
13 Mr. Birmingham that the rights used by predecessors to
14 the City of Los Angeles are relevant with this
15 proceeding. We disagree emphatically with
16 Mr. Birmingham's interpretation of this Board's

17 obligations, but we agree that those rights did affect
18 the fishery and the fishery habitat that existed in
19 1941 and, accordingly, are a proper subject for direct
20 or cross-examination here.

21 HEARING OFFICER del PIERO: I'm going to allow the
22 questioning to be answered. I'm going to point out
23 also, however, that the value of the information that I
24 assume will be forthcoming in response to these
25 questions is going to be weighted upon the specific

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01 time frame in which the witnesses can testify as to
02 specific information as it relates to diversions. In
03 the event that the diversion took place in 1941 or that
04 the witnesses have information as to the diversions
05 that might have taken place in 1941, I'm interested in
06 hearing the specifics of it.

07 However, in regards to the questioning,
08 Mr. Birmingham, I am also particularly interested in
09 finding out with the degree of detail possible from the
10 witnesses exactly the specific time frames in which
11 modifications to the natural stream flows were taking
12 place so that we don't have a situation where
13 representations may be given at some future time that a
14 modification for a 12- or 24-month period of time
15 would, in fact, be construed as the pre-existing
16 condition in those creeks.

17 Do you understand what I just said, Sir?

18 MR. BIRMINGHAM: Yes, I do, Mr. del Piero.

19 HEARING OFFICER del PIERO: Good. So as to the
20 information that will be forthcoming, the weight of
21 that evidence will be evaluated by this Board within
22 those parameters.

23 Now, why don't you proceed with your questioning?

24 MR. BIRMINGHAM: In light of the comments that
25 were just made by the Hearing Officer, I'd like to ask

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01 these Gentlemen a question.

02 Q BY MR. BIRMINGHAM: In their expert capacity, and I
03 would direct it either to Mr. Dunn or to Mr. Mitchell,
04 isn't it correct that the diversions for irrigation
05 that occurred in Rush Creek in 1939 would have affected
06 the condition of the fishery as it existed in 1941 when
07 the Department of Water and Power commenced its
08 diversions?

09 A BY MR. DUNN: Well, I think the diversions you're
10 referring to -- you know, we'd have to look at
11 specifically how much water was being diverted, how
12 much water might have been seeping back into the
13 system. It would depend where on Rush Creek you are
14 and the duration of those flows. It's a complicated
15 matter, and I don't think, you know, we can address
16 that and say specifically what was the -- what were the
17 fishery conditions at a particular point in time.

18 Q In fact, we don't know what the fishery conditions
19 were in 1941; isn't that correct?

20 A Well, I think many parties have presented their
21 interpretations of what fishery conditions were. What
22 we have in this EIR document is based on the available
23 information that we had, and what we tried to do is
24 make a reasonable estimate of what the fishery

25 conditions were, not rely on any one source for

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01 evaluating numerous sources.

02 HEARING OFFICER del PIERO: Mr. Dodge?

03 MR. DODGE: I apologize. I'm not familiar with
04 your rules on the point. I would like to just have a
05 continuing objection to any line of questions relating
06 to pre-40 diversion and not make continuous objections.

07 HEARING OFFICER del PIERO: So noted. The record
08 will so reflect.

09 MR. DODGE: Thank you.

10 Q BY MR. BIRMINGHAM: I've asked you at the beginning
11 of our discussion before Mr. Dodge objected that --
12 isn't it correct that in the 1930s and 1940s, water was
13 diverted from Levining Creek for irrigation and
14 hydroelectric generation?

15 A BY MR. DUNN: Okay. We're off of Rush Creek now and
16 on to Levining?

17 Q My question related to Levining Creek.

18 A To the best of my knowledge, that's true.

19 Q The Draft Environmental Impact Report states that
20 historical sources indicate that the diversions did not
21 dewater Levining Creek, although irrigation diversions
22 significantly reduced late summer flows in drought
23 periods. Specifically, that's on Page 3-D-3 of the
24 Draft Environmental Impact Report; is that correct?

25 A That is correct. That's where we site Trihey and

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01 Associates.

02 Q Now, in reaching that conclusion, did the drafters
03 of the Environmental Impact Report, and I would assume
04 that is you two gentlemen, consider data from the
05 1934-35 period that shows there were zero flows in
06 Levining Creek at the county road?

07 A BY MR. MITCHELL: Well, 1934 and 1935?

08 Q That's correct.

09 A I don't recall having that available to us, if it,
10 indeed, exists.

11 Q Would zero flows in Levining Creek have resulted
12 in a poor fishery in 1934-1935 at the county road?

13 A You know, again, I think it would depend in what
14 location those flows were occurring, and obviously, if
15 there's no flow at a certain section of the creek,
16 there would be no fish populations.

17 Q Is it correct that if there were no or small fish
18 populations in 1934-1935 as a result of no flows in a
19 portion of Levining Creek, that that could have had an
20 effect on the condition of the fishery in Levining
21 Creek in 1941?

22 MR. DODGE: Objection, unintelligible.

23 HEARING OFFICER del PIERO: Mr. Birmingham, can
24 you add a degree of specificity to the question?

25 MR. BIRMINGHAM: I certainly can try.

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01 Q BY MR. BIRMINGHAM: If there was a portion of
02 Levining Creek that had no flows in it in 1934 or '35,
03 and I'm referring specifically to that portion of
04 Levining Creek at the county road crossing, and the
05 fact that that creek had low flows in it or no flows
06 and, therefore, there was a poor fishery, would the

07 existence of that poor fishery in 1934 or 1935 possibly
08 affect the condition of the fishery that existed in
09 that stream in 1941?

10 A BY MR. MITCHELL: Well, again, I think we -- we need
11 to be aware that a single event that occurs in a single
12 year may have an effect on the populations a year or
13 two hence. However, if it is a single event, it
14 probably -- its effects will diminish through time,
15 particularly if in the subsequent years there are
16 better flows. It depends on the magnitude of the
17 habitat that's affected and whether or not those areas
18 are important to the population, but we need to look at
19 the magnitude, duration, and frequency of these events
20 in order to conclusively say whether or not fish
21 populations are going to be significantly affected.

22 HEARING OFFICER del PIERO: Excuse me,
23 Mr. Birmingham. Pardon me for interrupting you.

24 Mr. Mitchell, Mr. Birmingham, are you -- I'm
25 having difficulty with the question. I know a couple

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01 of the Board members are having difficulty with the
02 question, too. Asking about an event taking place in
03 the mid 1930s having impact on a fishery in 1940 or
04 1941 at this point appears to the Hearing Officer to be
05 so speculative as to be beyond answering. Mr. Mitchell
06 is struggling.

07 As I indicated, I had hoped you were going to add
08 a bit more flesh to the bones that we're talking about
09 here. So if it's possible, in terms of getting
10 definitive answers to definitive questions, I'd
11 appreciate it. Frankly, from the standpoint of the
12 record, it would improve the quality of the information
13 the Board has to consider.

14 Q BY MR. BIRMINGHAM: The Draft Environmental Impact
15 Report talks about the effects of irrigation diversions
16 out of Levining Creek in the decade of the thirties.
17 Is that correct?

18 A BY MR. MITCHELL: That's correct.

19 Q And it indicates that there were significant
20 reduction in flows during the period of the thirties in
21 Levining Creek because of irrigation diversions; is
22 that correct?

23 A BY MR. DUNN: Okay. I'm reading from the EIR, and
24 basically, "Between 1930 and 1940, water was diverted
25 from Levining for irrigation and hydroelectric," and

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01 then we cited Trihey and Associates that, "Levining is
02 not dewatered, although irrigation diversions
03 significantly reduced summer flow drought periods."

04 Q Would those historic conditions, those conditions
05 that existed in the thirties, affect the condition of
06 the fishery in 1940 or '41 in Levining Creek?

07 A Again, I think we really have to speculate on
08 that, and without having specific information about
09 specific flows in various portions of Levining Creek,
10 without specific information on the habitat structure
11 that was there, those are all important considerations,
12 and also, as Mr. Mitchell testified to in terms of fish
13 in other portions of the stream and depending on what
14 the flows were in those areas, all of those are

15 important factors. And it's -- you can't just answer
16 that question yes or no with the available information.
17 Q So what you're telling us is that you don't know
18 what the condition of the fishery was in 1941 in
19 Levining Creek because you don't have that specific
20 information; is that correct?
21 A Well, we have some information that has been
22 generated, but to say in any specific year or month or
23 reach what the conditions were, you know, becomes
24 somewhat speculative.
25 Q I'd like to ask some questions, if I may, about

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01 Rush Creek. I'll ask them for the period 1939. Isn't
02 it correct that in 1939 there was significant
03 diversions out of Rush Creek for irrigation?
04 A I can't attest to specifically in 1939, but
05 overall, that's a true statement over that period.
06 Q And, in fact, isn't it correct that during
07 significant periods of time -- let me be a little more
08 specific for purposes of the record. For instance,
09 according to a report by Dr. Scott Stein, a report upon
10 which the preparers of the Draft EIR relied, for the
11 period of 1930 to 1935, the Rush Creek channel at Old
12 Highway 395 was dry 28 out of the 60 months; isn't that
13 correct? That's what Dr. Stein reported in his report
14 on which you relied?
15 A I don't know to the specifics of those numbers of
16 months, but I do recall a report that there were, you
17 know, dry periods at times, yes.
18 Q In 1939, didn't Eldon Vestal estimate that the
19 flow in Rush Creek at Old Highway 395 was one cfs?
20 A I can't recall the specifics of that.
21 Q I'd like to show you a blowup of Figure Six from
22 the direct testimony of Dr. Donald Chapman and Bill
23 Platts, which has been marked as an exhibit, as L.A.
24 DWP Exhibit 1.
25 Q Are you able to see the Figure Six from L.A. DWP

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01 Exhibit 1?
02 A BY MR. MITCHELL: Yes.
03 A BY MR. DUNN: Yes.
04 Q I apologize for the quality of the photo, but it
05 is purportedly a photo taken in 1939 by Eldon Vestal at
06 Highway 395.
07 I would ask you, do the conditions -- are the
08 conditions that are depicted in Figure Six conducive to
09 a good fishery if, in fact, Mr. Vestal was correct that
10 that represents one cfs?
11 A BY MR. MITCHELL: To tell you the truth, I'd be very
12 reluctant to comment on a photograph, assessing fishery
13 conditions based on one photograph, and it would be
14 difficult for anyone to extrapolate from one photo to
15 the rest of the creek.
16 Q Well, let me ask you about this one photograph
17 because it was taken, according to Mr. Vestal, looking
18 upstream from Old Highway 395. And I'd ask you if you
19 can see in the photograph, and I'm pulling in here from
20 the Environmental Impact Report, the, quote, dense
21 stands of cotton woods and willows across the flood
22 plain above Old Highway 395." And that's a quote

23 that's from Page 3-D-5 of the Draft Environmental
24 Impact Report.
25 Do you see the dense stands of cottonwoods in this

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01 photograph?

02 A BY MR. DUNN: Again, we're referencing the Trihey and
03 Associates report in 1991 in regards to the lower two
04 miles, and what you are showing here in this exhibit is
05 a photograph of, you know, maybe 50 yards. And it's
06 also very difficult to tell how much flow is moving
07 through there.

08 In the photo that you have there, there is not
09 extensive riparian area in that particular photo.

10 Q In fact, you might conclude that there is no
11 riparian vegetation in that photo; is that correct?

12 A In the foreground of the photo, which is a very
13 short section, there's no riparian, and in the
14 background, there may or may not be because you just
15 can't see much of the creek except for this one short
16 section.

17 Q At some point during the hearing, we will attempt
18 to get a better copy of this photograph. In fact, I
19 believe it was reproduced by Mr. Trihey in a report.

20 But let me ask you a question, and it's going to
21 be a hypothetical question because, admittedly, it's
22 difficult to interpret this photograph. But
23 hypothetically, I'm going to ask that you assume that
24 there's one cfs of water flowing through this section
25 of Rush Creek in 1939 and that there is no riparian

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01 vegetation in this portion of Rush Creek and that there
02 are no banks in this portion of Rush Creek.

03 Would you conclude that this portion of Rush Creek
04 would support an excellent fishery? That's a
05 hypothetical question.

06 A I might try to answer that. First, let me say
07 that when I look at that one photograph and to say
08 whether that can support a good fishery, a good fishery
09 is not dependent on one specific section of stream.
10 There's a continuum there that produces the effects
11 that would affect the population, and I can look at
12 that photograph and say in the lower half of that
13 photograph it looks like basically no adult brown trout
14 habitat in that particular stretch of stream, although
15 that could be good fry-rearing habitat and possibly
16 spawning habitat. I can't see with that flow in that
17 picture.

18 So again, hypothetically, you're asking me to
19 comment whether it could be a good fishery, and I think
20 a fishery is more than a 50-foot section of stream.

21 Q You said, Mr. Dunn, in response to questions by
22 Mr. Frink at the commencement of your testimony, that
23 you have, since circulation of the Environmental Impact
24 Report, learned that there's a large discrepancy among
25 the parties regarding the pre-1941 habitat conditions

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01 and the fish populations; is that right?

02 A That's correct.

03 Q And you feel that, for the purposes of the Final
04 Environmental Impact Report, it will be necessary to

05 analyze the different information which you now are
06 aware of; is that correct?
07 A Yes.
08 Q Did the Draft Environmental Impact Report consider
09 the effects of grazing on the fishery as it existed in
10 1941?
11 A That was one component that we did look at, yes.
12 Q And is it correct that you concluded that grazing
13 in 1941 had an adverse effect on the fishery on Rush
14 and Levining Creeks?
15 A I don't know if specifically in 1941 and, again,
16 we were utilizing other sources for evaluating the
17 effects of grazing, and certainly grazing occurred and
18 would have some effects on the fishery habitat.
19 Q I'd like to show you a photograph, a blowup of
20 Figure 3 from L.A. DWP Exhibit 1, and it purports to be
21 a photograph taken in February 1947 by Eldon Vestal.
22 And the caption at the bottom says, "Livestock have
23 destroyed bank integrity on the right bank. Hoof
24 sheering has caused a segment of the right bank to
25 sluice into the stream creating a false bank.

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01 Livestock probably caused the disc-shaped rather than
02 box-shaped cross-section."
03 Hypothetically, if there were similar effects of
04 grazing in 1941 as there are depicted in this
05 photograph that was taken in 1947, would that have
06 negatively impacted the fishery?
07 MR. ROOS-COLLINS: Mr. del Piero, I request
08 clarification as whether the caption purports to be
09 Mr. Vestal's words or L.A.'s witness' words.
10 MR. BIRMINGHAM: They are L.A.'s witness' words,
11 Mr. del Piero. I apologize for my confusion.
12 HEARING OFFICER del PIERO: Do you wish to restate
13 your question, Sir?
14 MR. BIRMINGHAM: I didn't know that it was in the
15 form of an objection.
16 HEARING OFFICER del PIERO: No, your question for
17 the witness. Would you restate it?
18 Q BY MR. BIRMINGHAM: The conditions that are depicted
19 in Figure 3, if they -- hypothetically, if they
20 resulted from livestock grazing and if there were
21 similar effects of livestock grazing in 1941, would
22 that have -- would those effects negatively impact the
23 fishery?
24 A BY MR. DUNN: Again, I think we're focusing on a
25 specific photograph that shows a certain area where

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01 there has been some bank sloughing and, again, it would
02 be pure speculation to say that what is depicted in
03 that photograph was occurring along all or a certain
04 section of the creek other than what we're looking at
05 right there.
06 Grazing impacts are recognized in our EIR. It was
07 a contributing factor to the conditions that were
08 there. It was certainly not the sole one, and I think
09 there's testimony and some of the reports that we
10 reviewed that certainly indicate that much of the
11 habitat was not in the condition that is depicted on
12 that photograph.

13 So I think it's -- you know, to say that that's
14 potentially hypothetically that's what occurred
15 throughout the stream system doesn't, to me, make sense
16 where there is evidence that says that's not what was
17 there.

18 Q Perhaps you misunderstood my question because I
19 didn't purport to represent those were the conditions
20 that existed throughout the stream.

21 My question relates specifically to this section
22 of the stream. Would that type of grazing effect
23 negatively impact a fishery?

24 A Again, it would depend on the extent of that
25 grazing activity, but if I look in the middle of that

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01 photo, photograph, and see banks where it has been
02 sloughed off for whatever reason, typically, in a
03 section like that, the habitat is not that good.

04 MR. BIRMINGHAM: I'd request an additional ten
05 minutes, Mr. del Piero?

06 HEARING OFFICER del PIERO: Yes, Sir.

07 Q BY MR. BIRMINGHAM: The Draft Environmental Impact
08 Report concludes that the fishery in Rush Creek was
09 excellent in the 1930s; isn't that correct? That's the
10 conclusion on Page 3-D-8 of the Draft Environmental
11 Impact Report, isn't it?

12 A Yeah. I believe that is correct.

13 Q And isn't it correct that during the period of the
14 thirties, the Department of Fish and Game annually
15 planted fish in Rush Creek?

16 A I'm not sure if it was every year, but I knew -- I
17 know that they frequently planted the creek.

18 Q And Eldon Vestal carried out a Department of Fish
19 and Game study on the fishery in Rush Creek in the late
20 forties and fifties. Isn't that correct?

21 A That's correct.

22 Q And didn't Mr. Vestal conclude that in order to --
23 well, let me ask a foundational question. The study
24 that was performed on Rush Creek -- Rush Creek was
25 selected as the site for that study because it was

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01 considered a typical eastern Sierra stream at that
02 time. Isn't that correct?

03 MR. ROOS-COLLINS: Objection. Calls for
04 speculation.

05 HEARING OFFICER del PIERO: Is there anything in
06 the documentation that says that, or is that your -- is
07 that --

08 MR. BIRMINGHAM: I believe, Mr. del Piero, and
09 I'll get the document, if I -- if I need to, but I
10 believe that the 1954 report by Mr. Vestal, the
11 document cited in the Draft Environmental Impact
12 Report, states that Rush Creek was selected as the
13 study site for two reasons; One, it was accessible by
14 automobile and, Two, it was typical of eastern
15 Sierra streams. Do you recall that?

16 HEARING OFFICER del PIERO: Mr. Birmingham, what
17 you want to do first is ask them if they know what the
18 study is and then ask them if they're familiar with it
19 and then ask them the question to get to the point we
20 need to be at.

21 Q BY MR. BIRMINGHAM: Did you rely on a 1954 study by
22 Eldon Vestal of the conditions of fisheries in Rush
23 Creek in preparing the Environmental Impact Report?
24 A BY MR. MITCHELL: Yes, that report was used.
25 Q And in that report, did Mr. Vestal describe the

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01 results of a study that he conducted in the forties and
02 fifties on the fishery in Rush Creek?

03 A Yes.

04 Q And did Mr. Vestal report in that 1954 report that
05 that study was conducted in Rush Creek because Rush
06 Creek was considered to be typical or representative of
07 an eastern Sierra stream?

08 A I was trying to recall his words, but I do recall
09 that accessibility was important.

10 HEARING OFFICER del PIERO: Excuse me. That's not
11 responsive. Accessibility is not indicative of it
12 being a typical or an atypical --

13 MR. MITCHELL: What I'm saying is I don't recall
14 that particular statement, that it was a typical
15 eastern Sierra stream, but I do remember Eldon Vestal
16 stating that it was accessible. And that was one of
17 the reasons for selecting it.

18 HEARING OFFICER del PIERO: Thank you. Pardon me
19 for interrupting.

20 MR. BIRMINGHAM: Excuse me for wasting the Board's
21 time.

22 Q BY MR. BIRMINGHAM: I'd like to refer you to the
23 first page, actually it's Page 89, and this comes from
24 the record. It's Cal Trout -- it's attached to the
25 testimony of Eldon Vestal which has been submitted as

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01 Cal Trout Exhibit 5.

02 May I approach the witness, Mr. del Piero?

03 HEARING OFFICER del PIERO: Certainly.

04 MR. BIRMINGHAM: I'm handing or showing to
05 Mr. Mitchell and Mr. Dunn the first page of a document
06 that is entitled Creel Returns from Rush Creek Test
07 Stream, Mono County, California, 1947, 1951; is that
08 correct?

09 MR. DUNN: Yes.

10 MR. MITCHELL: Yes.

11 Q BY MR. BIRMINGHAM: And is this the first page from
12 the document on which you relied, the 1954 report of
13 Eldon Vestal, in preparing the Environmental Impact
14 Report?

15 A BY MR. DUNN: This, again, was one document that we
16 used of many.

17 Q So the answer to the question is yes, this is the
18 document, the 1954 report that you referred to in
19 preparing the Environmental Impact Report?

20 A Correct.

21 Q Now, I'm reading from a portion of the first page,
22 and isn't it correct that it says, "The lower portion
23 of Rush Creek was in many ways ideal for use as a test
24 stream. It's location, Figure 1, in Inyo-Mono County
25 vacation land only three miles from U.S. Highway 395

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01 assured both heavy fishing and ready accessibility for
02 planting. The stream was fairly typical of heavily

03 fished trout streams on the east slope of the
04 Sierra-Nevada."

05 Does the document state that?

06 A Yes, it does.

07 Q So apparently the reason this stream was selected
08 was that it was accessible and it was, using
09 Mr. Vestal's term, fairly typical of eastern Sierra
10 streams; is that correct?

11 A Correct.

12 Q Now, didn't Mr. Vestal conclude as a result of
13 this 1954 study or the 1947 to '51 study, which he
14 reported in 1954, that in order to sustain a sports
15 fishery in Rush Creek which was typical of eastern
16 Sierra streams, it was necessary that there be annual
17 planting of fish?

18 A BY MR. MITCHELL: Again, I don't recall whether he
19 said that it was necessary. He did indicate that it
20 was an important part for sustaining the demand that he
21 expected on that creek, but he did not term -- I don't
22 recall him stating that it was a necessary management
23 practice.

24 In fact, what was concluded is that there was a
25 fairly significant wild population also in the creek

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01 which contributed to that fishery.

02 Q What I would ask that you do, and Mr. del Piero,
03 perhaps, so that we don't waste the Board's time, may I
04 defer this question and during the recess afford the
05 witnesses an opportunity to read Mr. Vestal's paper to
06 refresh their recollection?

07 HEARING OFFICER del PIERO: Certainly.

08 MR. BIRMINGHAM: Thank you very much.

09 HEARING OFFICER del PIERO: How many questions do
10 you have?

11 MR. BIRMINGHAM: I have just a few more questions.

12 HEARING OFFICER del PIERO: Fine. One that will
13 be upcoming in a little while.

14 Q BY MR. BIRMINGHAM: Now, let's talk very briefly
15 about the flows that are described in Chapter 3-D of
16 the Draft Environmental Impact Report.

17 Isn't it correct that the -- excuse me. Isn't it
18 correct that the Draft Environmental Impact Report
19 concludes that changes in the fishery resource
20 conditions under the 6383.5 feet alternative would not
21 significantly differ from the impacts on the fishery
22 resource conditions under the 6377 feet alternative?

23 A BY MR. DUNN: This is for which creek?

24 Q Actually, this is for both creeks.

25 A Both Rush and --

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01 Could you repeat the question again?

02 Q Yes. Isn't it correct that the Draft
03 Environmental Impact Report concludes that the changes
04 in the fishery resource conditions under the 6383.5
05 feet alternative would not be significantly different
06 from the impacts of the 6377 feet alternative?

07 A And that's relative to which base case?

08 Q Rush -- well, let me refer you specifically to
09 Page 3-D-75 of the Draft Environmental Impact Report,
10 and I'd ask that you take a moment and review that

11 page.

12 A We've reviewed that page.

13 Q I don't know whether it would be better to wait
14 until the Hearing Officer returns or should we
15 proceed?

16 MR. CAFFREY: That's all right. You can proceed.
17 I've taken over. He'll be back shortly. We won't do
18 too much damage in his absence.

19 Q BY MR. BIRMINGHAM: Isn't it correct that the Draft
20 Environmental Impact Report concludes that the fishery
21 resource conditions under the 6383.5 feet alternative
22 would not be significantly different from the impacts
23 of the 6377 feet alternative?

24 A I would agree with that, yes.

25 MR. THOMAS: Objection. It misstates the -- Page
0126

01 3-D-75 explains the resource conditions not fishery
02 resource --

03 Q BY MR. BIRMINGHAM: Chapter 3-D refers to the fishery
04 resources; isn't that correct?

05 A BY MR. MITCHELL: That's correct.

06 Q That's the subject of Chapter 3-D. So wouldn't
07 you conclude that the Draft Environmental Impact Report
08 concludes that the changes in the fishery resource
09 conditions under the 6385 feet alternative would not be
10 significantly different from the impacts under 6377
11 feet alternative? And you answered that question a
12 moment ago yes; isn't that correct?

13 A BY MR. DUNN: Yeah. I would agree with that. That
14 was based on the information that we had at that time,
15 and it was based on our impact assessment using LAMP.
16 That is correct.

17 Q Well, let's focus for a moment on just the
18 information that you had because that's only fair. In
19 terms of the total habitat, in terms of total fish
20 habitat, and I'm including now fish habitat in the
21 Owens River, the Upper Owens River, isn't it correct
22 that the 6377 feet alternative results in more fish
23 habitat than the 6383.5 feet alternative?

24 A Are you adding the habitats together, then, the
25 habitat values of Rush, Levining, and then Upper Owens?
0127

01 Q I'm asking you doesn't the Draft Environmental
02 Impact Report conclude, based upon the studies that you
03 conducted, when you combine the habitat values of Rush
04 Creek, Levining Creek, and the Upper Owens River, the
05 6377 feet alternative results in more fish habitat than
06 the 6383.5?

07 MR. DODGE: Objection on the grounds of relevance.
08 The Fish and Game Code requires that certain flows be
09 sent down the four tributary streams. It doesn't have
10 any provision for balancing against the Upper Owens
11 River.

12 MR. BIRMINGHAM: Perhaps I can clarify this with a
13 few questions, Mr. del Piero.

14 HEARING OFFICER del PIERO: Why don't you clarify
15 with a discussion now of what you intend to do before
16 you ask the questions? That way we don't muddle up the
17 record if I decide to rule with Mr. Dodge.

18 MR. BIRMINGHAM: The 63 -- Mr. Dodge is correct.

19 The Department of Water and Power is obligated under
20 Fish and Game Code Section 5937 to release sufficient
21 water to maintain in good condition the fishery that
22 exists.

23 HEARING OFFICER del PIERO: Excuse me?

24 MR. BIRMINGHAM: I'm --

25 HEARING OFFICER del PIERO: 5937 of which code are

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01 you referring to?

02 MR. BIRMINGHAM: Fish and Game Code.

03 HEARING OFFICER del PIERO: 5937 of the Fish and
04 Game Code doesn't say that. The Fish and Game Code, as
05 I recall, says it's the fishery that exists or fish
06 that may be planted below it.

07 MR. BIRMINGHAM: That's correct. I was
08 paraphrasing it. It says the fishery that either may
09 be planted or exists below diversion facilities.

10 HEARING OFFICER del PIERO: Okay.

11 MR. BIRMINGHAM: That is different than optimizing
12 fishery conditions, and I believe, Mr. del Piero, that
13 I, through a number of questions, can bring out that
14 the flows that are discussed in the Department of Fish
15 and Game report as analyzed in the Environmental Impact
16 Report were developed, and here I'm quoting from Page
17 3-D-45 of the Draft Environmental Impact Report, were
18 developed --

19 HEARING OFFICER del PIERO: If you'd wait one
20 moment until I can find that.

21 MR. DODGE: I'm sorry, Mr. Chairman. I missed the
22 page reference.

23 HEARING OFFICER del PIERO: 3-D-45, Mr. Dodge.

24 What paragraph are you referring to?

25 MR. BIRMINGHAM: I'm referring to the last

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01 paragraph immediately before the section on the effects
02 of the Mono Basin, and it states, "The Department of
03 Fish and Game recommendations developed to optimize
04 fishery conditions."

05 MR. FRINK: Mr. Chairman.

06 HEARING OFFICER del PIERO: Mr. Frink?

07 MR. FRINK: Mr. Dodge's objection was based on the
08 grounds of relevancy, that what the Board has to
09 determine here is the amount of water needed to protect
10 or enhance or, in this case, restore the pre-existing
11 fishery and that, therefore, the comparison between
12 relative amount of fish habitat between the 6377
13 alternative and the 6385 alternative is irrelevant.
14 That would be the case only if the Board had already
15 made a determination on what alternative is needed to
16 protect or restore the pre-existing fishery.

17 The Board hasn't made that determination yet, so
18 until that's done, I think Mr. Birmingham's question as
19 to which condition would have the overall best or
20 maximum amount of fishery habitat would be relevant.

21 HEARING OFFICER del PIERO: As to the -- as
22 compared between the two alternatives that he's
23 raising? Because he's only comparing two.

24 MR. FRINK: Yeah. Well, he could ask it even to a
25 third alternative.

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01 HEARING OFFICER del PIERO: I understand, but as
02 to the questions he's asking, the comparison is only
03 going to be limited to the two alternatives that he's
04 suggesting.

05 MR. FRINK: Yes.

06 HEARING OFFICER del PIERO: Good. Then based on
07 that understanding, so the Board understands that this
08 is based on only two alternatives and not necessarily
09 the full variety of alternatives that are necessarily
10 reviewed in an EIR, I'll allow your questions,
11 acknowledging your continuing objection.

12 MR. DODGE: No. No. May I be heard on this?

13 HEARING OFFICER del PIERO: Certainly.

14 MR. DODGE: I think that perhaps my position was
15 not understood. I did not make it clear.

16 Mr. Birmingham talked about Section 5937 not
17 calling for, quote, optimization.

18 HEARING OFFICER del PIERO: I understand.

19 MR. DODGE: And I think -- I have no objection to
20 his cross-examining on the grounds of whether the DFG
21 is optimizing versus something else.

22 HEARING OFFICER del PIERO: The standard in 5937
23 is "in good condition," and at this point, it is my
24 understanding that it is within the prerogative of this
25 Board in rendering that decision to determine what "in

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01 good condition" is within the constraints --

02 MR. DODGE: I don't have any quarrel with that.
03 Contrary to what Mr. Frink said, that wasn't the focus
04 of my objection.

05 Mr. Birmingham's question called for a comparison
06 at various lake elevations, 6383.5 and 6377, of total
07 fish habitat that included the Upper Owens River. It
08 was that part of the question to which I objected on
09 the basis of relevance because the Upper Owens River
10 has nothing do with compliance with the Fish and Game
11 Code.

12 HEARING OFFICER del PIERO: Pardon me, Mr. Dodge.
13 I did not understand that.

14 Mr. Birmingham, as to the Upper Owens River, I'm
15 going to rule in favor of Mr. Dodge on that. The
16 relevance of that, at this point, has no bearing on the
17 issue in terms of Mono Lake.

18 MR. BIRMINGHAM: May I address that,
19 Mr. del Piero?

20 HEARING OFFICER del PIERO: Yes.

21 MR. BIRMINGHAM: I would respectfully dissent.
22 Assuming, and we have to assume this at this point,
23 assuming that the optimum, the flows necessary to
24 optimize fishery conditions are in excess of those
25 needed to maintain in good condition fish that are

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01 either planted or exist below the dams, assuming that
02 that excess exists, the creation of fish habitat in the
03 Owens River would be a beneficial use of water diverted
04 out of the river or out of the Mono Basin and,
05 therefore, relates directly to the benefit to the
06 public interest that is derived from diverting water
07 out of the Mono Basin. And it is relevant to the
08 public trust balancing with respect to lake level

09 issues.

10 HEARING OFFICER del PIERO: I understand -- I
11 understand the point that you're raising,
12 Mr. Birmingham. That's not the point that's being
13 addressed here, though. We're mixing apples and
14 oranges. Either we're going to deal with the Fish and
15 Game Section that relates to the amount of water to be
16 released from a reservoir so as to sustain a fishery
17 below the dam site, or we're going to talk about public
18 trust values that may have artificially been enhanced
19 due to diversion of the water out of the Mono Basin
20 into the Upper Owens River.

21 At this point, I've ruled. I appreciate your
22 concern about it, but at this point I've ruled. And
23 that's what it is. So let's proceed.

24 MR. BIRMINGHAM: Let me just ask two more
25 questions then. Actually, it may be even more than

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01 two.

02 Q BY MR. BIRMINGHAM: Is it your understanding that
03 the -- based upon reference to Page 3-D-45, is it your
04 understanding that the Department of Fish and Game
05 recommended flows were developed to optimize fishery
06 conditions?

07 MS. CAHILL: I object. This is asking for his
08 interpretation of Fish and Game intent. I believe the
09 letters that conveyed those stream reports speak for
10 themselves.

11 Q BY MR. BIRMINGHAM: Let me just ask the question this
12 way. Isn't it correct that Page 3-D-45 of the Draft
13 Environmental Impact Report, which is the subject of my
14 cross-examination, states that the Department of Fish
15 and Game recommendations were developed to optimize
16 fishery conditions?

17 A BY MR. DUNN: Yes, that's what it states.

18 Q And isn't it possible that the flows that are
19 necessary to optimize fishery conditions may be in
20 excess of the flows that are required to keep in good
21 condition fish which either are planted or exist below
22 DWP's diversion facilities in Russ and Levining
23 Creeks?

24 MR. ROOS-COLLINS: Objection. Calls for a legal
25 conclusion. He cannot properly ask this witness what's

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01 necessary to comply with the mandate of Section 5937.
02 He can ask this witness about biological conditions.

03 HEARING OFFICER del PIERO: Mrs. Anglin, can you
04 read the question back?

05 THE REPORTER: Sure.

06 (Whereupon the record was read as requested.)

07 HEARING OFFICER del PIERO: The question is is it
08 possible. You can answer yes, or you can answer no.

09 MR. DUNN: Well, you know, we did not get into, in
10 our EIR, keeping fish in good condition and optimum
11 conditions, and we did not try to differentiate between
12 those. And this sentence here in terms of Fish and
13 Game --

14 HEARING OFFICER del PIERO: I'm not referencing
15 the sentence. I'm referencing the question

16 Mr. Birmingham asked. He asked if it was possible. As

17 to whether or not -- I will acknowledge, One, you are
18 not a lawyer. Two, you are not required nor are you
19 expected to give us an interpretation as to what is "in
20 good condition" within the context of the Fish and Game
21 Code. The question is is it possible.

22 MR. DUNN: Let's go back to your original question
23 and just ask the question, and I'll give a simple
24 answer.

25 HEARING OFFICER del PIERO: Mr. Birmingham?

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01 Q BY MR. BIRMINGHAM: Certainly. Let's put it in
02 biological terms.

03 HEARING OFFICER del PIERO: That would help.

04 Q BY MR. BIRMINGHAM: Is it possible that the flows
05 necessary to optimize fishery conditions are different
06 than the flows required to keep in good condition in
07 biological terms fish in a stream?

08 A BY MR. DUNN: I would agree it is possible, yes.

09 Q And you stated a moment ago that the Draft
10 Environmental Impact Report doesn't address -- this is
11 my final question, Mr. del Piero.

12 HEARING OFFICER del PIERO: I was just telling
13 Mr. Stubchaer I'm going to give you a little extra time
14 because of the objections and the time you lost.

15 MR. BIRMINGHAM: Thank you.

16 Q BY MR. BIRMINGHAM: And I believe you said a moment
17 ago that the Draft Environmental Impact Report does not
18 address flows that are necessary to keep in good
19 condition in biological terms fish that exist in Rush
20 or Levining Creeks?

21 A BY MR. MITCHELL: It contains information that could
22 lead to a conclusion, but there is no conclusion in
23 this -- in the Draft EIR.

24 MR. BIRMINGHAM: Thank you. I have no further
25 questions.

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01 HEARING OFFICER del PIERO: Thank you very much.
02 Mr. Thomas?

03 MR. THOMAS: Ms. Cahill will take care of our
04 questioning.

05 MR. BIRMINGHAM: Excuse me, Mr. del Piero. I
06 stated I had no other questions. I do have one pending
07 question concerning Mr. Vestal's report.

08 HEARING OFFICER del PIERO: And we're going to do
09 that on break after we've had the opportunity to
10 reference the exhibit that you asked him to review.

11 CROSS-EXAMINATION BY MS. CAHILL

12 Q Good afternoon. I'm Virginia Cahill representing
13 the Department of Fish and Game.

14 You partially answered my first question which was
15 had you, in fact, reviewed the EIR comments, and you've
16 already indicated that you have. Are there certain
17 conclusions that you already know you will be changing
18 as a result of that review?

19 A BY MR. DUNN: No. I don't -- I haven't looked at all
20 of the information at a level that would warrant me
21 stating right now that we would change any of our
22 conclusions, but we will certainly look at that
23 information and consider it.

24 Q I'd like to look at Table S-1 in the summary

25 section. To the extent that there are tables in the
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01 summary that relate to fisheries, are you responsible
02 for the preparation of those tables?

03 A Yes.

04 Q Okay. If we look at Table S-1, Page Two, this is
05 not directly fishery related, but did you have any
06 input to this table with regard to tributary riparian
07 vegetation?

08 A No.

09 Q Let's go on, then, to Table S-1, Page Five. So
10 you're responsible for the preparation of this table?

11 A Right. On Page Five, Page Six, and Page Seven.

12 Q Okay. On table -- on Page Five, could you explain
13 as briefly as possible how the figures were derived
14 that show the percent change in the brown trout adult
15 habitat?

16 A BY MR. MITCHELL: I'll try to be brief. The main
17 source for the information to do this is what are
18 called habitat discharge relationships that were
19 developed by the Department of Fish and Game, their
20 consultants. We relied on these reports for Rush and
21 Levining Creek and on these relationships.

22 And what the relationships tell is how the amount
23 of habitat changes with a given amount of flow.

24 Q Right. So in other words, you used the peak
25 results on -- the result of the peak IFIM on Rush Creek

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01 and aquatic systems on Levining?

02 A That's correct.

03 Q And then you applied those to monthly flows; is
04 that correct?

05 A Yes. Monthly hydrologic output from the LAMP
06 model.

07 Q Okay. And where would we find that monthly
08 hydrologic output? Which of the reports is it in?

09 A The monthly flows shown as a distribution over the
10 50-year simulation period are part of Chapter 3-A,
11 which covers the hydrology, so the stream flows for
12 each alternative, since they are quite an important
13 element of the EIR, are laid out there in a full series
14 of tables giving you monthly flows for each alternative
15 as a distribution of time.

16 Q Can you specifically identify which table that
17 would be?

18 A Yes. These are a series of tables that begin
19 Table 3-A-10, which is for the point of reference
20 scenario, 3-A-11, which is the no-restriction
21 alternative, and continuing through Table 3-A-17, which
22 is the no-diversion alternative, the highest
23 alternative.

24 Following these tables are a series of graphics
25 that show some of these same characteristics, but the

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01 tables would be the most complete in the summary form.

02 Then the actual month-by-month-by-year so the
03 whole 600-month sequence, which is actually what
04 Mr. Mitchell used, are available in the actual files
05 from the LAMP model.

06 Q So the month-by-month figures aren't actually

07 here. The month-by-month figures you used, but you
08 took those month-by-month figures and then applied the
09 staged discharge or the habitat discharge relationships
10 from the IFIM studies.

11 A That's correct.

12 Q So basically, you are averaging for each month.
13 You're -- if, in a given month, you had a variety of
14 flows and they corresponded to different amounts of
15 habitat, the number you are using is an average over
16 that month?

17 A Well, it's difficult to say because we're using a
18 model output which gives us monthly values, and to the
19 extent that the hydrologic modeling is dependent on
20 those monthly values, we, too, are dependent on the
21 monthly values.

22 Q Yeah. Let me try this again.

23 My understanding of the output of the IFIM studies
24 would be that you would find for a particular discharge
25 a particular amount of weighted usable area. Is that

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01 right?

02 A That's correct.

03 Q And you are taking, my understanding is, a monthly
04 average flow produced by the LAMP model, finding out
05 what the equivalent amount of habitat at that flow is,
06 and then basically assigning it almost for a whole
07 month, in effect?

08 A Yes. The monthly output from the model is used to
09 calculate the monthly habitat value.

10 Q Okay. And that may not, in fact, reflect what
11 actually happened in the stream because the monthly
12 average could be the result of fluctuating daily
13 numbers that would, each of them, correspond to a
14 different amount of habitat?

15 A Well, in reality, under real conditions, those
16 could occur, yes.

17 Q I'd like to go on to another one of the columns
18 here. There's a characterization in Footnote A that,
19 "This is a preliminary DFG recommended maximum flow
20 limit." It's the column that's labeled "Rush Creek
21 percent of years flows exceed 100 cfs," and there's a
22 footnote saying, "Preliminary DFG maximum flow limit."

23 Did you understand at that time that the DFG had
24 recommended 100 cfs as a maximum?

25 A Yes.

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01 Q Okay. And on what was that based?

02 A The 100 cfs maximum flow?

03 Q Yes.

04 A Was based on the threshold that was determined to
05 avoid impacts on the channel such as erosion and
06 channel meandering, if we're talking about Rush Creek.
07 And for Levining --

08 Q Did --

09 A Pardon me?

10 Q Go ahead.

11 A And for Levining Creek, there were also impacts --

12 Q Actually let's do Rush first.

13 A Let's do Rush first. Right. For Rush Creek, the
14 100 cfs was based on the DFG recommendation as a

15 maximum flow limit to prevent channel damage in the
16 lower reaches of Lower Rush Creek.
17 Q Did the DFG report actually state that flows never
18 should go above 100, or did it simply say those flows
19 should be evaluated?
20 A The way it was stated was that it was a maximum
21 flow limit. My understanding of that that this should
22 not be exceeded.
23 A BY MR. DUNN: That was our interpretation of the
24 report.
25 Q Okay.

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01 MR. BROWN: A question, Mr. Chairman.
02 HEARING OFFICER del PIERO: Mr. Brown.
03 MR. BROWN: Is it because of potential of erosion
04 in the channel invert, or because of potential erosion
05 on the channel vertical sides, or both?
06 MR. MITCHELL: I think both. The flows in excess
07 of 100 cfs were related to both bank instability and
08 scouring of the channel.
09 MR. BROWN: Which would cause a loss of habitat?
10 MR. MITCHELL: Potentially, this would.
11 Q BY MS. CAHILL: And do you believe that the
12 Department of Fish and Game has informed you in its
13 comments on the DEIR that it had not intended that 100
14 to be a maximum? Are you aware of those comments?
15 A BY MR. DUNN: I believe that's correct, yes.
16 We're aware of that.
17 Q And I think you said, Mr. Dunn, that one of the
18 areas in which you were perhaps reassessing based on
19 new information had to do with the channel stability
20 and the effects of higher flows on that channel
21 stability; is that correct?
22 A That's correct.
23 Q And you may well change your opinion of whether
24 flows over 100 cfs are damaging in light of actual
25 observed results in the channel in the past year or in

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01 the last few years. Is that right?
02 A BY MR. MITCHELL: We would certainly look at all
03 available information that's been, you know, submitted
04 in this hearing and reevaluate that.
05 Q Let me go on, then, to the column under Levining
06 Creek, percent of flows -- percent of years flows
07 exceed 100 cfs. There is a Footnote B here that says,
08 "This is the maximum flow limit to avoid significant
09 adverse impacts on brown trout population."
10 What was the basis of that footnote and the
11 conclusion that 100 was a maximum flow limit on
12 Levining Creek?
13 A This came from evidence of trout mortality and the
14 displacement of trout under higher flows. There were
15 two flow events, I believe, that were monitored, and it
16 was determined that both had some degree of adverse
17 effect on the fish population; namely, in the form of
18 downstream displacement of trout and actual flushing of
19 the trout out of their -- out of certain stream
20 sections.
21 Q And where were those events recorded?
22 A Those were recorded in the aquatic systems

23 research report provided by the Department of Fish and
24 Game.

25 Q And in at least one of those cases, was a very
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01 high flow either immediately preceded by or immediately
02 followed by a near zero flow?

03 A There was contradictory information in the report
04 that I recall. In the text, it was reported that there
05 was a zero flow, but in a graph figure showing the
06 hydrograph, we did not see that zero flow.

07 Q Let me go back. I think we actually didn't walk
08 all the way through the percent change in brown trout
09 habitat derivation.

10 Once you had your monthly flows, tell us what you
11 did. You got habitat per month.

12 A Habitat --

13 Q Did you include all of the reaches of the stream
14 when you did that?

15 A We included the streams that contributed the most
16 to the habitat. We elected not to use certain habitats
17 because of modeling problems in one case and, in
18 another case, because the particular part of the stream
19 was a single, uniform channel, a return channel in Rush
20 Creek.

21 Q Okay. So in effect, you eliminated the return
22 channel. When you figured out what the weighted usable
23 area was in Rush Creek, you didn't consider the habitat
24 in the return channel?

25 A That's correct.

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01 Q And isn't the return channel, in fact, a
02 significant portion of habitat on Rush Creek?

03 A In terms of weighted usable area, we didn't -- the
04 evidence was that it was not an important habitat.

05 Q Is it used by trout?

06 A The observations -- there have been trout observed
07 there, but I'm speaking directly on the basis of
08 habitat. The physical quality of the habitat.

09 Q The physical quality --

10 A The physical quality based on the weighted usable
11 area measurements that we -- that were in the report.

12 A BY MR. DUNN: I also believe that when we reviewed
13 the report, and Mr. Mitchell might correct me, but as I
14 recall it, the number of transects that were across the
15 habitat, even though it was a uniform habitat, when we
16 were out on the site reviewing it, we did not feel that
17 those transects were very representative of that
18 habitat type. And that was another consideration that
19 we made, that plus the -- based on what we observed out
20 there, the flow -- given the type of channel that was,
21 the flow habitat relationship, it would not change
22 much. And so we had several concerns, I think, with
23 using that segment.

24 Q Okay. Is it possible had you included that
25 segment, though, that you would have gotten different

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01 amounts of habitat for the discharge, for different
02 levels of discharge?

03 A Well, we could speculate. The numbers would
04 change. Which way those numbers would change, I don't

05 know, and I also, again, would have a problem with
06 including those. If the transects were not very
07 representative of the habitat, then you're using some
08 quantitative numbers, but I think we felt that they
09 weren't very accurate.

10 Q Okay. Originally, you said you rejected it
11 because it was a single, uniform channel, and now
12 you're telling me that you rejected it because the
13 transects weren't typical. So if it's a uniform
14 channel, wouldn't that tend to lead to transects that
15 were typical?

16 A You would think that it would but, as I recall,
17 where those transects were located seemed to have very
18 different habitat, micro habitat characteristics in
19 terms of depth and velocity than from the majority of
20 the habitat. And I'm not sure what -- the reason was,
21 but at least on the date when we were out on the site,
22 that's the way it appeared.

23 Q And on Levining also you left out certain
24 segments?

25 A BY MR. MITCHELL: Yes, we did.

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01 Q Once you had those monthly values, then what did
02 you do?

03 A The monthly values for each year were then put --
04 I should say the monthly values for the entire 50-year
05 period for a specific life stage were then presented as
06 a time series indicating the annual variation in
07 habitat that would have occurred under that
08 alternative. And the values that were used to estimate
09 the percent change in habitat between alternatives was
10 based on an average for the entire 50-year period.

11 Q Okay. So those numbers are based on 50-year
12 averages.

13 A The numbers that were used for calculating the
14 difference between alternatives were 50-year averages.

15 Q And do you lose some of the variability in habitat
16 by going to a long-term average? Are you getting
17 further away from what actually is happening day-to-day
18 on the stream?

19 A Well, we use -- I have to clarify here that we
20 used monthly, and we didn't have daily data to work
21 with. And so that -- that's the reason why we used the
22 monthly values for characterizing the habitat for a
23 given alternative.

24 Q Okay. Let's go on. On this same table, on Page
25 Five of Table S-1, the effect on Walker and Parker

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01 Creeks, what flows were put into the model or what
02 flows were considered in looking at Walker and Parker?

03 DR. BROWN: Do you want me to answer that for
04 you?

05 The question is the flows going into this
06 analysis. These are the flows coming out of LAMP.
07 Flows coming out of LAMP are the result of, as I
08 described yesterday, taking a look at the hydrologic
09 record by months, arranging the monthly flows in
10 increasing order, selecting the ten percentile, that
11 is, the lowest 10 percent of the time which is towards
12 the end of -- towards the bottom of the actual stream

13 flow, but giving a little range for fluctuations in
14 measurements and such.

15 So this is the expected minimum monthly flows that
16 have historically occurred in Walker and Parker.

17 The way LAMP is formulated, those are the only
18 flows that are passed through the -- or over the
19 conduit and into the channel, so those are the flows
20 that the fisheries are --

21 Q BY MS. CAHILL: When you're operating LAMP and you
22 are making -- you're deciding which stream will
23 contribute to the lake releases, how do you allocate
24 among the four tributaries?

25 A BY DR. BROWN: The current -- the specification that
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01 we used for these alternatives were that Walker and
02 Parker would not contribute these additional runoff
03 period releases to the lake and that lake releases are
04 made exclusively down Levining and the Rush corridor.

05 Q So Walker and Parker, in effect, would have only
06 the minimums? What would be left in Walker and Parker?

07 A And I did forget one thing. Beginning with the
08 '77 alternative and all higher alternatives, Walker and
09 Parker also have the median June flow. This is highest
10 runoff month, and to provide the type of flow being
11 discussed by many parties for flushing purposes of
12 various sorts, Walker and Parker joined Levining and
13 Rush in having a median June flow, that is a relatively
14 high June flow, the flow that would occur in 50 percent
15 of the years.

16 So this, totaled with 10 percent minimum monthly
17 flows, is what is going down Walker and Parker for the
18 '77 alternative and all higher alternatives.

19 HEARING OFFICER del PIERO: Ms. Cahill, hold on
20 for a second. Pardon me.

21 Q BY MS. CAHILL: It's directed that all of the figures
22 here on the percent change in the brown trout habitat
23 were developed using outputs from the LAMP model when
24 it was being operated without the Fish and Game flows,
25 the Fish and Game required flows?

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01 A BY MR. DUNN: That's correct.

02 DR. BROWN: And -- sorry, I have one last
03 correction. I may be losing my mind, but the
04 no-diversion case then has the full actual historic
05 runoff from all streams going down the corridor, so
06 that would be the exception to the rules that I
07 described. So for that no-diversion alternative, the
08 full actual monthly flows were input to the fisheries
09 evaluation.

10 MS. CAHILL: Thank you.

11 HEARING OFFICER del PIERO: The record will
12 reflect that that was not a definitive statement only.
13 A temporary impression.

14 Q BY MS. CAHILL: All right. If you would turn, then,
15 to Page 6 of 15 on Table S-1. The question I have here
16 is down at the bottom, the very last line,
17 pre-diversion, and in the column significant impacts
18 from water temperature increases and significant
19 impacts from water quality degradation, in each case it
20 says, "Yes."

21 If, as you have done throughout the EIR,
22 pre-diversion -- your cumulative impact and
23 pre-diversion analysis is prior to Los Angeles'
24 diversion and, in this case, Los Angeles' augmentation
25 of the Owens River, pre-diversion would have -- how can

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01 the higher lake level alternatives have a significant
02 cumulative impact from the pre-diversion condition?
03 Shouldn't, in fact, those last two columns under
04 pre-diversion be no?

05 I mean, any -- it's possible that augmentation
06 will reduce what was a natural condition, but lack of
07 augmentation would not change the pre-diversion
08 condition.

09 A BY MR. DUNN: I'm not sure I understand your
10 question, but this is between the no-diversion --

11 HEARING OFFICER del PIERO: Excuse me. I'm not
12 sure I understand it, either. So if you can get a
13 little more specificity, it will help.

14 Q BY MS. CAHILL: All right. This deals with the Upper
15 Owens River where, instead of taking water out of the
16 stream, the impact of Los Angeles' project is to put
17 extra water in the stream. Hot Creek is a natural
18 tributary to the lower portion of the Upper Owens River
19 and has higher temperatures naturally than the upper
20 portions of the stream.

21 To the extent that additional water or cooler
22 water were imported in, it might reduce that natural
23 water temperature level, and I think that's what the
24 effect of this column is. Will more water --

25 HEARING OFFICER del PIERO: Rather than explaining

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01 it to me, you want to ask him the question.

02 Q BY MS. CAHILL: So the question is will the
03 pre-diversion question -- why would you have a yes for
04 pre-diversion --

05 A BY MR. CASADAY: May I answer that? I believe that's
06 a typographical error. If you look at Table 3-D-8 in
07 the chapter itself, I believe you have correctly stated
08 "unknown" rather than "yes" for those two entries. Is
09 that the question?

10 Q That would help. I would think it would be no,
11 but if it's unknown rather than yes, that's more
12 understandable.

13 A BY MR. DUNN: You wondered why I was puzzling over
14 that.

15 HEARING OFFICER del PIERO: That's a typographical
16 error then? Is that the -- is that the answer to the
17 question?

18 MR. DUNN: Yes, that is correct. There's a
19 typographical error on Page 6 of 15 and a summary under
20 pre-diversion where it says, "Significant impacts from
21 water temperature increases," that should be
22 unknown -- it should be unknown all the way across
23 where it says, "Pre-diversion."

24 Q BY MS. CAHILL: If we would turn now into the text to
25 Page 3-D-45, and this is something we may have -- we've

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01 already touched on.

02 The DEIR states that beginning with lake levels at

03 6377 -- the 6377 foot alternative, average monthly
04 flows would exceed DFG's recommended maximum flow of
05 100 cfs. As we've explained before, you are aware now,
06 are you not, that DFG does not recommend a 100
07 maximum?
08 A BY MR. DUNN: Yes, we're aware of that.
09 MS. CAHILL: Mr. del Piero, could we have ten more
10 minutes?
11 HEARING OFFICER del PIERO: Yes, and then we're
12 going to take a break.
13 MS. CAHILL: Would you prefer to take a break now?
14 HEARING OFFICER del PIERO: Yes. As a matter of
15 fact, I would. No offense.
16 We'll be back in ten minutes.
17 (Whereupon a break was taken.)
18 HEARING OFFICER del PIERO: Ladies and Gentlemen,
19 this hearing will again come to order.
20 Q BY MS. CAHILL: When we broke, we were looking at the
21 statement on Page 3-D-45 of the DEIR stating that
22 beginning with the 6377 foot alternative, the average
23 monthly flows would exceed DFG's maximum recommended
24 flow of 100 cfs. I think I had asked and Mr. Dunn had
25 answered that he was now aware that DFG was not

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01 recommending 100 as a maximum.
02 I am wondering whether on the last figure in the
03 summary, Figure S-2, where you show significant impacts
04 and cumulative impacts for the alternatives, if the
05 sort of narrow and then increasing impacts starting
06 down at either 6377 or even 6372-B under fisheries was
07 based entirely on that supposed 100 cfs maximum limit?
08 A BY MR. DUNN: No. It was not based entirely on that.
09 Q Was it based on the 350 cfs limit that Mr. Trihey
10 had provided, or were you even aware that Mr. Trihey,
11 in the vegetation chapter, had indicated that perhaps
12 flows could go up to 350 cfs in Rush Creek without
13 channel damage?
14 A I believe we were aware of that. Let me describe
15 this figure which is a graphic portrayal of what the
16 impact would be, but in some ways I think it really
17 oversimplifies. What the intent was there was to show
18 the effects of the -- all of the -- the effects of a
19 specific alternative on Rush Creek, Levining, Parker,
20 Walker, and the Upper Owens collectively, which is very
21 difficult to do. And the reason that the shaded area
22 there increases with increasing lake levels, I can
23 think of two reasons why; one was the effects on the
24 Upper Owens River where we believed there were impacts
25 associated with higher lake levels, thereby reduced

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01 flows in the upper Owens, and also it was a part --
02 partly because of the high flow impacts which we've
03 been discussing on Rush and Levining Creeks. So
04 there's a couple of reasons for the way that drawing --
05 Q Okay. So if, in fact, we were to look -- if you
06 were to decide in light of new information about
07 channel erosion that the channel could accommodate
08 higher flows than you thought and if we were to look
09 only at the tributary streams and decide what they
10 needed to keep the fish in good condition, is it

11 possible, then, that this figure would be changed also
12 and show impacts -- show that there would not be those
13 impacts at those lower lake levels?
14 A Well, again, this figure is a composite, and it
15 possibly could be revised based on the information, or
16 maybe it's too -- maybe it over simplifies too much.
17 Q Doesn't it, in fact, leave out the fact that at
18 lake levels below 6383.5, you are unable to meet the
19 Fish and Game required flows?
20 A Well, again, the Fish and Game recommended flows
21 as of the August '93 reports? Is that -- those weren't
22 a part of this.
23 Q No. But if they were, in fact, wouldn't you show
24 fisheries impacts up to some point probably between
25 6383.5 and 6390 because at every point below that you

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01 would be unable to meet those flows?
02 A I just really can't commit to an answer on that.
03 I'd have to look at all of the information.
04 Q Let me ask you just a couple of general
05 questions. First you, Mr. Dunn, and then
06 Mr. Mitchell.
07 I assume that you are, as a fisheries biologist,
08 familiar with trout?
09 A Yes.
10 Q Can you tell me, do brown trout use -- adult brown
11 trout use water that's a foot deep?
12 A It's -- you know, again, it depends on the stream
13 and different conditions, but in general, they would
14 prefer, I think, deeper water if it was available.
15 Q Would they use three foot deep water?
16 A Again, I would say yes, they would use three feet
17 greater than they would one, say, one foot deep water.
18 Q And typically, would adult brown trout use water
19 that was four feet deep?
20 A Yes.
21 Q And five feet deep?
22 A Yes.
23 Q What about rainbow trout? Would adult rainbow
24 trout use water that was two feet deep?
25 A Again, these are fairly general. I would say, you

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01 know, it depends on the specific situation, but rainbow
02 trout, I think, generally prefer to use water that's
03 somewhat less deep than brown trout. But they also
04 overlap in the depth distributions that they would use.
05 Q What would be a good range for an adult rainbow
06 trout in terms of depth?
07 A Well, again, it would really vary on the types of
08 streams that you have. You know, they could certainly
09 be found in water that's two feet deep or four foot
10 deep, and it would depend not just on depth but on the
11 velocity, and cover, available food. There's lots of
12 factors involved in that.
13 Q All right. Mr. Mitchell, let me ask you the same
14 questions. If you were to tell me what depths of water
15 are used by adult brown trout, what would be the
16 range?
17 A BY MR. MITCHELL: I would have to answer the same way
18 that Mr. Dunn did in that it would depend on the stream

19 because different streams offer different depths to the
20 fish, and they would use them differently depending on
21 the availability.

22 However, the general range that Mr. Dunn gave was
23 what I would consider suitable depths.

24 Q And so for brown trout that range would be, adult
25 brown?

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01 A I think Mr. Dunn said one -- two to four feet
02 would be acceptable.

03 Q Okay. And rainbow?

04 A Probably the same -- same depths for adults.

05 Q Okay. Let me ask just one last set of questions.
06 On Page 3-D-110, there apparently is the thought that
07 releases at Mono Gate should be reduced below the Fish
08 and Game recommended 100 in some months down 80 to
09 reflect flows in Walker and Parker Creek.

10 If, in fact, you reduce releases at Mono Gate,
11 isn't it true that the flows in Reaches One through
12 Three would be reduced?

13 A Yes. That's correct.

14 Q Would the weighted usable area, the habitat in
15 Reach One, be reduced?

16 A I don't know if the habitat would be reduced. The
17 flows would certainly be reduced.

18 Q Who developed the recommended flushing flow rates
19 in this paragraph?

20 A This is the paragraph on 3-D-110 that says,
21 "Similar to Rush Creek"?

22 Q This is the one that says, "Rush Creek instream
23 flow releases is measured immediately below the
24 diversion, should not exceed 80 cfs," and then at the
25 end it says, "An example channel maintenance and

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01 flushing flow schedule would be -- "

02 A Right. I think this was an example schedule of
03 showing how flushing or channel maintenance flows could
04 be increased over time as the channel stabilized, and
05 this was an example of how recommendations might be
06 made in terms of specific channel maintenance flows
07 rather than being just one flow for several years. We
08 recognize that the conditions in the channels would
09 potentially change.

10 Q Were you actually recommending these flows, or was
11 this, in fact, an example?

12 A No. I believe this was an -- what it says, an
13 example.

14 MS. CAHILL: Thank you. I have no further
15 questions.

16 HEARING OFFICER del PIERO: Thank you very much.
17 Mr. Dodge?

18 CROSS-EXAMINATION BY MR. DODGE

19 Q My questions are for Mr. Dunn, although if
20 Mr. Mitchell feels that he's more knowledgeable or --
21 please proceed to answer.

22 I just have one follow-up question on Ms. Cahill's
23 examination before I do mine, and that is you were
24 talking about Levining Creek and the genesis of the
25 hundred cfs maximum. And as I understood your

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01 testimony, that related to two trout mortality issues
02 where high flows had displaced trout. Is that right?
03 A BY MR. DUNN: That's correct.
04 Q And would one remedy for this sort of a problem be
05 a restoration program which created refuge habitat?
06 A Yes. I think that would be one possible solution.
07 Q As opposed to limiting flows, you could create
08 refuge habitat.
09 A Yes.
10 Q And are you aware that in 1992 the R.T.C., through
11 Mr. Trihey, in fact, did some construction work on
12 Levining Creek?
13 A I'm aware that they did do some construction work,
14 yes.
15 Q And part of that was creation of refuge habitat,
16 wasn't it?
17 A I can't state exactly whether they called it
18 refuge habitat. I do know that they rewatered at least
19 one historical channel, which may fall into that
20 category.
21 Q And creating pools also creates refuge habitat,
22 doesn't it?
23 A Yes, given -- given the proper cover as well.
24 Q Have you gone back since the 1992 work and made an
25 assessment as to whether there's any problem at 100

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01 cfs?
02 A Since the 1992 work? Could you specify what you
03 mean?
04 Q Yes, Sir. Since 1992 work.
05 A The restoration work.
06 Q Yes.
07 A No, I have not.
08 Q Let me ask you to switch to Rush Creek, and can
09 you tell us in terms of fish populations today versus
10 pre-diversion, and I'm speaking about brown trout, what
11 information you can give to the hearing board or --
12 excuse me, the Water Board?
13 A I'm not sure exactly how to answer that.
14 Basically, information we collected we presented here
15 in terms of the conditions on Rush Creek. Are you
16 looking for something more specific?
17 Q No. I'm asking what conclusions you reached in
18 terms of fish populations in Rush Creek before
19 diversions and today?
20 A Well, certainly when you say today, we were
21 looking at August '89. We weren't looking at --
22 Q I'll amend the question, Sir. August of '89
23 versus pre-diversion.
24 A Well, I think Mr. Mitchell and I can both try to
25 answer this. Essentially, there was population work

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01 done on Rush Creek leading up to 1989, which was the
02 basis of what we did here, and the fish population
03 information that was available pre-1941 is certainly
04 not near to the level of specificity and sampling that
05 occurred, nowhere near, occurred in, say, 1989 and
06 several years previous.
07 Again, I think based on the information that we
08 looked at at that time, I would say that certainly the

09 trout -- it seemed to appear that there were more
10 brown -- I'm sorry, larger brown trout in the pre-1941
11 conditions than there are presently, just based on the
12 information that we reviewed.

13 Q How about population numbers?

14 A Well, I'll answer and then let Bill. Frankly, I
15 just don't recall -- in terms of population numbers,
16 there really were no real good estimates of population
17 abundance. There were -- that are comparable. There
18 were more general statements about, you know, the
19 condition of the fishery of you could catch some fish
20 during a certain time period. These were more like
21 indices of the population levels, and they were fairly
22 general as compared to the specific sampling designs we
23 have now.

24 A BY MR. MITCHELL: Yeah. I just would maybe add to
25 that that the -- there were a few population estimates,

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01 I believe, but they were sporadic. And the estimate
02 was developed by unknown means and, therefore, it's
03 very difficult to make a -- or make a comparison, a
04 valid comparison between those numbers and the numbers
05 that are being generated over the last three or four
06 years.

07 Q I understand your point about the difference in
08 the quality of the data pre-1940, but the DEIR Page
09 3-D-8 does talk about 50,000 adults between the dam and
10 Mono Lake.

11 Now, assuming that were a fact, and I understand
12 you have some doubts about that, isn't that many times
13 the number of adults that are in Rush Creek today?

14 A BY MR. DUNN: Well, it does state that this estimate
15 was based on personal observations. It's a very
16 approximate estimation, but certainly if it was
17 precise, which I'm not sure, I don't think it is, but
18 if it was, yes, I would say, concur, that that would be
19 more fish than would be there in 1989.

20 Q My question said many times as many. Isn't that
21 true?

22 A I would agree with that.

23 Q Thank you.

24 Now, I want to recur to one of my favorite topics,
25 and that is Rush Creek below the narrows, which is

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01 depicted here on Figure 1-3. Now, if I read the DEIR
02 correctly, you concluded that at Page 3-D-6 that that
03 was ideal habitat conditions for trout. Do you recall
04 that conclusion?

05 A Right. I think we cited Trihey and Associates in
06 that statement.

07 Q And it's true, isn't it, that there were springs
08 down here pre-1940, substantial springs, correct?

09 A That's correct.

10 Q So that regardless of what irrigation was
11 occurring upstream, there was constant flow down that
12 part of Rush Creek, correct?

13 A BY MR. MITCHELL: Correct. But the flow was in part
14 due to irrigation return flow, as well as natural seeps
15 and springs that entered Rush Creek at that point.

16 Q Can you explain to the Water Board what conditions

17 exactly there were that led to your conclusion about
18 ideal habitat conditions for trout? Describe the
19 conditions in that lower portion of Rush Creek.
20 A Well, this is a conclusion of Trihey and
21 Associates based on the statements that were made.
22 "The springs and the associated high water table in the
23 meadows supported dense stands of cottonwood and
24 meadows covering more than 150 acres."
25 They also cite, "Water temperatures are probably

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01 very stable throughout the year providing cool water
02 temperatures during summer and ice-free habitat during
03 the winter." And these are conclusions on Segment Five
04 as stated by Trihey and Associates.

05 Q And were there also multiple channels in Rush
06 Creek below the narrows?

07 A Yes. Those are also identified as a component of
08 the stream in this area.

09 Q And they had -- these multiple channels carried
10 year-round water. Is that your understanding?

11 A There is a citation to variable flow. I think
12 that refers to the amount of flow in each of the
13 channels. I really -- there are no indications here of
14 year-round flow, but I would assume that, based on the
15 information here, that that was -- that's what is
16 implied.

17 Q And these multiple channels had an abundant pool
18 habitat; is that correct?

19 A Yeah. I think in terms of the habitat that was
20 there that the geomorphic structure was there such that
21 there were pools. There were meanders. The habitat,
22 based on our review of this information, was that it
23 was fairly complex.

24 Q And deeper water?

25 MR. BIRMINGHAM: Objection, vague and ambiguous.

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01 MR. DODGE: You're right. I'll withdraw the
02 question.

03 Q BY MR. DODGE: Is the water deeper than it is today?

04 A BY MR. DUNN: I think certainly there were more pools
05 and, therefore, the water would be deeper in many areas
06 than it is today where pools are lacking or the only
07 pools that are there now have been due to restoration
08 projects.

09 Q In fact, Sir, in the lower portion of Rush Creek,
10 there have been no pools dug as yet; isn't that right?

11 A I think -- I believe that there's a work plan to
12 do some pilot studies. I do not know the status of
13 those -- that work at this time.

14 HEARING OFFICER del PIERO: Excuse me, Mr. Dodge.
15 Was the question dug? There were no pools at this
16 point that had been dug?

17 MR. DODGE: That's correct.

18 Q BY MR. DODGE: Let me ask you to compare the historic
19 conditions below the narrows with what is there today.

20 MR. BIRMINGHAM: Excuse me, Mr. del Piero. I'm
21 going to object on the grounds that the question is
22 going to call for speculation. I think it's evident
23 from the testimony that these gentlemen have not been
24 to the stream and have no personal knowledge of the

25 conditions of the stream as they exist today.

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01 HEARING OFFICER del PIERO: The question -- I
02 understand.

03 Mr. Dodge?

04 MR. DODGE: Well, they have read, apparently,
05 Mr. Trihey's reports dealing with historic and existing
06 conditions.

07 HEARING OFFICER del PIERO: And you're asking?

08 MR. DODGE: And my question is what is their
09 understanding of the habitat today? They weren't there
10 in 1940, either, but they certainly testified about
11 what was there.

12 MR. FRINK: Could you distinguish between 1989 and
13 today? Are you referring to '89, the conditions
14 recorded in the Draft EIR?

15 MR. DODGE: I'm happy to accept an answer on '89
16 or today, either one.

17 HEARING OFFICER del PIERO: Gentlemen, I'm going
18 to allow the questioning, but it's going to go -- their
19 responses are going to go to the weight of the value of
20 the evidence. If their opinions are developed
21 expressly from studies or historic analysis, then
22 that's going to go directly to the value of that.

23 MR. DODGE: Thank you.

24 MR. DUNN: We were out on the stream in 1992
25 and -- so since that time, we had not observed it.

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01 And, in fact, I thought there were some ongoing
02 restoration on Rush Creek this past summer, although I
03 guess I'm incorrect in that. I had not been out
04 there. Neither one of us has been out there since
05 1992.

06 Q BY MR. DODGE: Will you describe the channel in 1989
07 or when you saw it in 1992 of Rush Creek below the
08 narrows?

09 A BY MR. MITCHELL: Well, the channel itself, there's a
10 single channel that was apparent when we were there at
11 higher flows. I couldn't say what the stream would
12 look like. We were there under low-flow conditions.
13 The single channel had variable depths, some pools, and
14 run-riffle type habitat.

15 Riparian -- the riparian vegetation which provides
16 the cover for trout is available in a few areas, but --
17 in fact, there's one area that I recall when there's
18 fairly extensive riparian vegetation in that section,
19 and then downstream, the channel conditions become
20 worse offering fewer pools, and particularly below the
21 county road, there's generally little pool habitat and
22 little cover.

23 Q Would you agree with me that there's a smaller
24 percentage of pool habitat today than was there
25 historically?

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01 A In the lower delta area, I don't think I can
02 answer that question. It appears from the historical
03 information that that is true for Segment Five down to
04 the county road.

05 Q And Segment Five is the narrows down to the county
06 road, correct?

07 A Yes.
08 Q All right. And would you agree with me that that
09 same Segment Five tends to be straighter than was true
10 historically? You mentioned the sinuosity
11 historically.
12 A I think that, yes, there's evidence that the
13 stream now is shorter and has lost the number of side
14 channels that did exist there.
15 Q And would you agree with me that the water tends
16 to be shallower than it did historically?
17 A I don't think I could answer that question with
18 the available information.
19 Q Now, you say that there were multiple channels
20 historically, and there's a single channel today. Now,
21 a logical inference from that, isn't it, that some
22 channel length had been lost?
23 A I think you could infer --
24 Q Have you made any effort to quantify that?
25 A No.

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01 Q Let me ask you to assume hypothetically that it's
02 possible to rewater historic channels that are now dry
03 but that carried water. Assume that.
04 Would that rewatering affect the IFIM analysis?
05 A Could you repeat the question, please?
06 Q Yes. I want you to assume that in Rush Creek
07 below the narrows that, in fact, it's feasible to
08 rewater historic channels and, in fact, that's done.
09 Historic channels are rewatered.
10 How, if at all, would that affect the IFIM
11 analysis?
12 A That would depend on the extent of change. Of
13 course, the more different that the channel is in terms
14 of length, numbers of channels, the more reason there
15 is that -- the more reason there is to conclude that
16 there would be a new set of channel features to
17 characterize and so on. Perhaps the IFIM analysis
18 would have to be either modified to reflect those
19 changes or redone.
20 Q Well, in all probability, it would increase the
21 weighted usable area, wouldn't it?
22 A BY MR. DUNN: Again, I would like to say that, you
23 know, we're somewhat speculating on that. That's a
24 better question for, I think, Department of Fish and
25 Game who placed -- and their consultants who placed the

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01 transects and, you know, would have a better feel for
02 the types of habitats when they were out there doing
03 their study that they modeled and how it might be
04 affected by putting water down side channels.
05 If those side channels were not included within
06 their IFIM study and water is put down into those
07 channels, it could increase fish habitat because you're
08 basically putting water in areas that had no water and
09 had no habitat.
10 Q It could lead to a conclusion that higher flows
11 should go down Rush Creek, couldn't it?
12 A Well, there's many different conclusions. Again,
13 it depends on how much water is going down and the
14 specific habitat discharge relationships in those side

15 channels, which I just don't know how much of those
16 potential side channels Fish and Game looked at in
17 their IFIM.
18 Q I'm asking you hypothetically if you put water in
19 those -- as you put it, side channels, it -- that fact
20 could lead to a conclusion that higher flows down Rush
21 Creek were appropriate. Isn't that correct?
22 MR. BIRMINGHAM: I'm going to object on the
23 grounds that it's vague and ambiguous.
24 HEARING OFFICER del PIERO: I'll overrule the
25 objection, but I'm going to direct you to answer either
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01 yes or no. It's much like that question that was asked
02 earlier, is it possible. Mr. Dodge is asking you could
03 it happen.
04 MR. DUNN: Yes.
05 Q BY MR. DODGE: And one more question along these
06 lines. Looking at Table S-1, Page 5 of 15, under the
07 category "Rush Creek percent change in brown trout
08 adult habitat," let me ask you a similar question.
09 These percentages that are shown under that column, if
10 the now dry historical channels in Lower Rush Creek
11 were rewatered, that potentially could affect those
12 numbers under that -- under that column. Isn't that
13 right?
14 A BY MR. DUNN: That's correct.
15 Q Now, I want to focus particularly, Sir, on Page
16 3-D-44.
17 HEARING OFFICER del PIERO: Mr. Dodge.
18 MR. DODGE: I would ask for an additional 20
19 minutes. I hope not to need it, but --
20 HEARING OFFICER del PIERO: Why don't we give you
21 an additional ten and see how you're going along?
22 MR. DODGE: Thank you.
23 Q BY MR. DODGE: 3-D-44, you say, "Establishing even
24 equivalent conditions that benefitted the pre-1941
25 fishery is impossible in the short-term and possible in

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01 the long-term only if aggressive and substantial
02 habitat restoration programs in concert with major
03 instream flow releases are undertaken."
04 Now, let me ask you initially, what sort of
05 restoration program, if any, did you have in mind?
06 A BY MR. DUNN: Well, I think what we were referring
07 there was to some of the restoration activities that
08 are ongoing, certain elements of those restoration
09 activities.
10 Q Would rewatering historic channels potentially be
11 one aspect of that?
12 A It certainly could be.
13 Q Would you agree with me that the historic channels
14 in the Rush Creek bottom lands will not be rewatered
15 naturally in all probability?
16 MR. BIRMINGHAM: I'm going to object on the
17 grounds that it lacks foundation.
18 HEARING OFFICER del PIERO: Sorry. I didn't hear
19 the justification for the objection.
20 MR. BIRMINGHAM: Lacks foundation.
21 HEARING OFFICER del PIERO: Lacks foundation.
22 Actually, I'm going to rule in Mr. Birmingham's

23 favor on this. I think you'll need to establish some
24 before you go on.
25 Q BY MR. DODGE: Have you made any assessment as to

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01 whether the now dry historic channels in the bottom
02 lands would be rewetted naturally? Have you made any
03 assessment of that?

04 A BY MR. CASADAY: Let me answer that. I have, as part
05 of the riparian vegetation investigation. I don't
06 think Mr. Dunn has separately done so.

07 And our finding was generally that the high flows,
08 and that is flushing flows that have been released down
09 Rush Creek -- are we talking about Rush Creek?

10 Q Yes, Sir.

11 A -- are largely incapable -- are incapable of
12 charging overflow channels with one exception.

13 Q Do you know what exception that is?

14 A That would be one of the channels above Highway
15 395. In the bottom lands, I think the answer is no
16 channel.

17 Q Thank you, Sir.

18 Now, let me ask you to stick on that same page.
19 You talk about 50 or more years needed to accomplish
20 this. Let me ask you a series of questions. If you
21 were going to hypothetically dig pools out there, you
22 could do that in less than 50 years, and it would have
23 an effect in less than 50 years, correct?

24 A BY MR. DUNN: Yes.

25 Q And if you were going to put gravel in, you could
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01 do that pretty quickly, and it would have an effect in
02 a matter of -- a short period of time, correct?

03 A Yes, that's correct.

04 Q And if you were going to restore historic
05 channels, the same would be true, correct?

06 A No, I don't think so.

07 Q You think it would take 50 years to restore
08 historic channels?

09 A You're saying to restore historic channels with
10 the complexity, the meanders, the woody debris, that
11 would take many years, I believe.

12 Q How about putting boulders or logs in as cover
13 objects. That would take only a short period of time,
14 correct?

15 A Well, yeah. They could be placed in there
16 quickly, yes.

17 Q So -- and to the extent we're concerned about
18 restoring riparian vegetation, I take it from prior
19 testimony that that's a gradual process, and if you
20 want to get the large riparian vegetation, that might
21 take potentially 50 years, correct?

22 A I think the riparian would take time, and also, I
23 don't want to get away from the geomorphic structure of
24 the channel. You can put gravel in there. You can put
25 pieces of wood. You can put boulders, but from what I

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01 viewed out there, the channel itself to get back to
02 pre-diversion conditions is going to take a long, long
03 time. And that's why we said 50 or more years.

04 You can certainly enhance and do certain things

05 that would get you closer to that in a shorter amount
06 of time, but the specific channel structure itself, to
07 get that back is what's really the most difficult
08 element in recreating that historic condition.

09 Q So your reference to 50 years focused primarily on
10 the channel structure?

11 A That's correct.

12 Q And can you tell the Hearing Board in any more
13 detail what you mean by "channel structure"?

14 A Well, I think it would just be the hydraulic
15 characteristics and the channel sinuosity, the water
16 depths, velocities, root structure that affects the
17 types of habitats that are there, the large root
18 instructs from certain species. You know, it's all of
19 those factors that would make up, you know, the
20 geomorphic structure of that channel. Also, the slope
21 of that channel would also be critically important in
22 determining the characteristics of the channel.

23 Q But would you agree with me that a restoration
24 program, assuming it was well done, would have some
25 short-term effects in addition to -- would have

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01 short-term effects that wouldn't, you know, play out
02 only after 50 years?

03 A There could be some short-term benefits if it was
04 done properly, yes.

05 Q Let me ask you a couple of questions about the
06 Upper Owens River. Pre-diversion, no Mono Lake water
07 went to the Upper Owens River, correct?

08 A From Mono Basin into the Upper Owens, that's
09 correct.

10 Q Okay. And as to the point of reference, August
11 22, 1989, what assumption did you make as to the amount
12 of water going to the Upper Owens River from the Mono
13 Basin?

14 A BY DR. BROWN: The point of reference? Sorry. I
15 wasn't listening well enough.

16 Q The amount of water going from the Mono Basin to
17 the Upper Owens River at the point of reference, August
18 22, 1989.

19 A Okay. August 22, 1989, was, as we all know, a
20 drought year, and there was actually no water going to
21 the Mono Basin in that particular month. But in
22 reference to the environmental point of reference used
23 in the document, the point of reference includes not
24 only the conditions on that date in history but those
25 conditions and restrictions played out over the

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01 hydrologic record.

02 So, when you look at what would have happened with
03 the lake level injunction and the two temporary stream
04 flow injunctions played out over the 50 years, we find
05 that there was, on average, 73,000 acre-feet of water
06 leaving the Mono Basin.

07 Q So you used, on average, 70,000 acre-feet as the
08 point of reference into the Upper Owens River. Isn't
09 that correct?

10 A That is correct.

11 Q And, in fact, on August 22, 1989, there wasn't any
12 water going from the Mono Basin to the Upper Owens

13 River; isn't that right?

14 A That is right. And as I stated, the point of
15 reference for this Environmental Impact Report includes
16 the 50 years of variable hydrology played out for each
17 of the conditions that represent -- that is represented
18 by an alternative. So there would be periods in any of
19 the alternatives when no water would be leaving the
20 Mono Basin.

21 Q Well, isn't the difference sort of that Judge
22 Finney had enjoined export in June of 1989? He hadn't
23 done that in any of the other 50 years, had he?

24 A Until the lake was above the 6377 elevation.

25 Q Right. Now, if you were to say that, in fact, at
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01 the point of reference, zero water was going from the
02 Mono Basin to the Upper Owens River, how would that
03 affect the calculations set out on Page 6 of Table S-1
04 under the column "average percent change in brown trout
05 adult habitat"?

06 Q Well, it would change it. I would have to
07 speculate in terms of what, but it would change, if it
08 was changing the LAMP results upon which we based, you
09 know, our habitat results.

10 Q Well, would you agree with me that if you assume,
11 for point of reference purposes, that there is zero
12 water leaving the Mono Basin and going into the Upper
13 Owens River, that this minus 21 percent and minus 26
14 percent shown in that column would just disappear?

15 MR. FRINK: Objection. Mr. Chairman, I believe
16 that the question misstates what the EIR assumed to be
17 the point of reference.

18 Mr. Dodge, if you'd look at Page 225 of the Draft
19 EIR, it refers to, as a point of reference for
20 comparison of the environmental impacts and various
21 alternatives, "This EIR used the existing environmental
22 conditions of Mono Lake and the tributary streams which
23 were present before the issuance of the preliminary
24 injunction by the El Dorado County Superior Court on
25 August 22nd, 1989."

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01 So I'm not sure I understand your question, but
02 you seem to be assuming that the point of reference
03 assumed that the preliminary lake level injunction is
04 in effect. And I don't believe that's the case.

05 Q BY MR. DODGE: Do I have an answer to my question?

06 A BY MR. DUNN: I'm sorry. Could you ask it again,
07 please?

08 Q Yeah. Assuming that the point of reference, in
09 fact, consisted of zero exports from the Mono Basin to
10 the Upper Owens River, wouldn't these figures, minus 21
11 and minus 26 on Page 6 of Table S-1, simply disappear?

12 HEARING OFFICER del PIERO: It's a hypothetical.
13 You can answer yes or no.

14 MR. DUNN: Well, if you say they would disappear,
15 I'm not sure I know the answer to that.

16 MR. DODGE: I have one more topic that I wanted to
17 talk about and that is the topic of erosion or
18 potential erosion at high stream levels. If there are
19 other people who are coming along who can talk about
20 that topic, I'll be happy to stop now. I didn't really

21 get answers from Mr. Casaday yesterday, and I'm
22 searching for the right person to talk to.
23 HEARING OFFICER del PIERO: Who's the right
24 person, Mr. Casaday?
25 MR. CASADAY: Are you interested in effects on

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01 fish habitat or on the riparian habitats?
02 MR. DODGE: I'm interested in the extent to which
03 the DEIR addressed corrosive impacts of high flows on
04 stream beds and stream banks and riparian vegetation.
05 MR. CASADAY: Well, I believe I'd be the right
06 person to answer those questions.
07 MR. DODGE: Okay. So --
08 MR. CASADAY: But it didn't work apparently
09 earlier, so --
10 HEARING OFFICER del PIERO: You weren't correct
11 yesterday, so perhaps you've done a lot of reading.
12 Mr. Dodge, I'm going to give you another five
13 minutes --
14 MR. DODGE: I don't wish to retread ground with
15 Mr. Casaday. I thought I obtained his input yesterday
16 on this point.
17 HEARING OFFICER del PIERO: It's his
18 representation there's no one else here who's capable
19 of answering these questions, at least on this panel;
20 is that true?
21 MR. CASADAY: On any panel. On the terrestrial
22 resource panel, which will appear later, I was the team
23 leader and, in fact, directed the investigation of
24 tributary riparian vegetation. So I would be the
25 appropriate person to ask that.

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01 HEARING OFFICER del PIERO: Why don't you reserve
02 those questions until the next panel is embodied?
03 MR. DODGE: Let me see if I can just make sure I
04 can understand this.
05 Q BY MR. DODGE: In terms of potential for interruption
06 with the stream bed and in terms of the potential for
07 erosion of the stream banks and associated riparian
08 vegetation loss, you looked to Mr. Trihey's planning?
09 A BY MR. CASADAY: That's correct.
10 MR. DODGE: Thank you. That's all.
11 MR. BIRMINGHAM: Mr. del Piero? I was wanted to
12 ask that we let the record reflect that Mr. Dodge took
13 longer on cross-examination than I did only because he
14 will live to regret it.
15 HEARING OFFICER del PIERO: So long as I don't
16 live to regret it.
17 MR. DODGE: I don't understand that reference
18 except to the fact that in Judge Finney's courtroom
19 where a number of us have spent much more time than we
20 ever expected we would, Mr. Birmingham has never once
21 given a shorter cross-examination than I have.
22 HEARING OFFICER del PIERO: Well, we may be
23 achieving something here today.
24 MR. DODGE: He is, I assure you, a reformed man.
25 HEARING OFFICER del PIERO: Mr. Birmingham, you

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01 have one question, Sir, that we put off. Before I call
02 the next person for cross-examination, I'd like you to

03 take care of that.
04 MR. BIRMINGHAM: Yes, I do, Mr. del Piero. Thank
05 you.

06 I had asked Mr. Mitchell and Mr. Dunn a question
07 related to the 1954 report that was prepared by Eldon
08 Vestal. And I'd asked the question -- I don't have my
09 notes in front of me, but I believe I asked -- wasn't
10 it correct that Mr. Vestal concluded that to sustain a
11 sport fishery in those stream -- in Rush Creek, it was
12 necessary to annually plant the stream?

13 MR. MITCHELL: Yes. I -- I did reread that, and
14 he did conclude that plantings of catchable trout were
15 important for maintaining high fishing success. Those
16 were his conclusions.

17 MR. BIRMINGHAM: Thank you.

18 HEARING OFFICER del PIERO: Thank you very much.

19 Mr. Roos-Collins. We got to get you a table,
20 Mr. Roos-Collins. It's more difficult for you to get
21 out of the chair than it seems like anybody else.
22 That's what happens when you come in last, you know.

23 MR. ROOS-COLLINS: Mr. del Piero, since we're
24 sharing our secrets from El Dorado Superior Court, let
25 me advise you that Mr. Dodge claims that the

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01 plaintiff's table there belongs to him and that Cal
02 Trout sits at that table courtesy of the Mono Lake
03 committee.

04 HEARING OFFICER del PIERO: Mr. Dodge, how much
05 rent do you charge him?

06 MR. THOMAS: The psychic rent is untold.

07 HEARING OFFICER del PIERO: Why don't you proceed,
08 Sir?

09 MR. ROOS-COLLINS: Thank you.

10 HEARING OFFICER del PIERO: Certainly.

11 CROSS-EXAMINATION BY MR. ROOS-COLLINS

12 Q Mr. Dunn and Mr. Mitchell, my questions will be
13 addressed to both of you. Answers will be welcome from
14 either of you as you choose.

15 The draft EIR on Page S-1 states that, "One of the
16 two objectives for this proceeding is to determine the
17 stream flow necessary to reestablish and maintain
18 fisheries that existed in these streams prior to the
19 city's diversions."

20 As of August 22nd, 1989, were the fisheries in
21 these streams inferior to those that existed before
22 L.A. began diversions in 1941?

23 A BY MR. DUNN: This is in reference to, say, Rush
24 Creek and Levining Creek?

25 Q Yes.

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01 A Again, with the caveat that pre-diversion
02 information is not near to the level of the more recent
03 information, I would -- and the basis -- or all the
04 information that we've looked at, I would say that's
05 generally a true statement for certain reaches of the
06 creek and -- for certain reaches of Levining and Rush
07 Creek, the lower sections of the Creek. Some of the
08 upper sections where the information is not as
09 definitive, I'm not sure.

10 Q Let me ask you to turn to Table S-1, Page 5 of 15,

11 which you've previously discussed with Ms. Cahill. The
12 column meets "pre-diversion fishery condition standards
13 set by court" shows that none of the alternatives and
14 the point of reference scenario as well meet the
15 pre-diversion fishery condition standards. Is that
16 your opinion?

17 A Yes.

18 Q When you use the term "fisheries," what species
19 are included in the term?

20 A Well, I think on Rush and Levining, we're
21 predominantly talking about brown trout.

22 Q Let me refer you to Table 3-D-1 following Page
23 3-D-122, entitled "fish species reported to occur in
24 Mono Basin." Is this an exhaustive list of the fish
25 species reported to occur in the Mono Basin?

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01 A I think, to the best of our knowledge, those are
02 the species that have been reported to occur in the
03 basin.

04 Q Are you familiar with Fish and Game Code Section
05 45?

06 A No, I'm not.

07 A BY MR. MITCHELL: No.

08 Q Are you familiar with any definition in the Fish
09 and Game Code of the word "fish"?

10 A BY MR. DUNN: Again, I'm not an authority on the Fish
11 and Game Code, but I believe that the term "fish" in
12 the Fish and Game code is -- includes other non-fish
13 animals as well.

14 Q Could you give us an example?

15 A I really can't because -- I mean, I think, you
16 know, again, this is a better question for Fish and
17 Game, but I think mollusks and aquatic invertebrates.

18 Q Assuming for the moment that the Fish and Game
19 Code defines "fish" to include mollusks and aquatic
20 invertebrates. Does the Draft Environmental Impact
21 Report address the impacts of alternatives on such
22 mollusks and aquatic invertebrates?

23 A No. No, it does not. And I think the information
24 base that we have, it would be impossible to do so.

25 Q Let's turn back to Page S-9, the second full

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01 paragraph, second sentence which begins, "Pre-1941
02 fishery conditions cannot be accurately described." Is
03 that your opinion?

04 A Yes. I think we feel that -- that that is a true
05 statement. They can't be accurately described in terms
06 of being very precise, but they certainly can be
07 described generally.

08 Q Are you referring in this sentence to fish
09 population?

10 A It states "fishery conditions" which, you know,
11 can be the habitat conditions as well as the fish
12 populations. I think the answer is true in both cases,
13 whether it's fishery conditions or fish populations,
14 that they cannot be accurately described but, very
15 definitely, there's adequate information to generally
16 describe it.

17 Q Are you familiar with the November 2nd, 1990,
18 agreement between the parties in the Mono Lake cases in

19 the El Dorado Superior Court?
20 A I may have read it at one point, but I certainly
21 cannot recall it at this point. I'm not familiar with
22 it.
23 Q Are you aware that the 1990 agreement directs the
24 restoration consultant, Mr. Trihey, to undertake
25 studies to identify and evaluate the conditions which

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01 benefitted the fisheries before L.A. began diversions
02 in 1941?

03 A I knew definitely that there had been an order to
04 do that. I'm not sure exactly which one. That sounds
05 correct.

06 Q Are you familiar with the document by Trihey and
07 Associates entitled "Comparison of Historic and
08 Existing Conditions on Lower Levining Creek, Momo
09 County, California, January 1992," which is Cal Trout
10 Exhibit 9 in this proceeding?

11 A Yes. I think we're familiar with that document,
12 or we used it in preparation of our document.

13 Q Does that document describe fishery habitat
14 conditions which existed before L.A. began diversions
15 in 1941?

16 A Yes. That's correct. I believe so.

17 Q Do you disagree with any of the data or
18 conclusions in that report with respect to those
19 historic conditions?

20 A I don't think we can really answer that. We'd
21 have to go back and thoroughly review that report to
22 answer that question.

23 Q Without intending to belabor the point, let me ask
24 the same question with respect to Trihey and
25 Associates' summary comparison of pre-1941 and

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01 post-1941 conditions affecting fish populations in
02 Lower Rush Creek dated September 1993, Cal Trout
03 Exhibit 15 in this proceeding.

04 A We have not reviewed that document.

05 Q Is it your opinion that riparian vegetation is a
06 habitat condition that affects trout fisheries in the
07 Mono Basin?

08 A Yes.

09 Q Let's turn to Table 3-C-2 in the Draft
10 Environmental Impact Report. Does the table set forth
11 estimates of the acreage of riparian vegetation that
12 existed before L.A. began diversions in 1941?

13 A BY MR. CASADAY: Let me answer that. It does.

14 Q Do you consider the estimates to be reliable?

15 A Yes.

16 Q Do you consider them to be accurate?

17 A Yes.

18 Q Does the Draft Environmental Impact Report contain
19 an estimate of the length of channel loss since L.A.
20 began diversions in 1941 in any of the tributaries?

21 A I don't believe that information appears in the
22 draft.

23 Q Mr. Casaday, do you know whether that information
24 appears in the Trihey and Associates reports to which I
25 just referred?

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01 A Well, my recollection is that it appeared in Dr.
02 Stein's earlier report to us, and I believe the Trihey
03 reports are an expansion on those -- that earlier
04 report. But my recollection is not clear on that.
05 Q Let's return to Table S-1, Page 5, and focus on
06 the column which you have previously discussed both
07 with Ms. Cahill and Mr. Dodge entitled "Percent change
08 in brown trout adult habitat."
09 Does that column assume the channels as they
10 existed at the time the Department of Fish and Game
11 conducted its instream flow incremental methodology
12 studies?
13 A That is correct.
14 Q Let me follow up on the questions which Mr. Dodge
15 asked. If currently dry channels were reoccupied,
16 opened again to the flow of water, could the
17 differences between the alternatives change as a
18 result?
19 A They could, yes.
20 Q One last question about this table. The
21 percentage change is in reference to the point of
22 reference scenario. Is that correct?
23 A That's correct.
24 Q It is not in reference to pre-diversion
25 conditions?

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01 A That is correct.
02 Q You don't know how much fish habitat change would
03 exist by -- in the comparison of any given alternative
04 and pre-diversion conditions, do you?
05 A That's correct.
06 Q Let me ask several further questions with respect
07 to -- as followup to Mr. Dodge's with respect to the
08 period for attainment of the Cal Trout, II, mandate we
09 established in maintaining the fisheries that existed
10 before L.A. began diversions.
11 On Page 3-C-26, in your discussion of Levining
12 Creek, the final paragraph on the page you state,
13 "Since 1989," excuse me. It is stated, "Since 1989,
14 several minor channel modifications and limited
15 revegetation have been implemented to improve fish
16 habitat as part of the interim stream restoration
17 program."
18 Is that your opinion?
19 MR. BIRMINGHAM: Excuse me. May I ask the page
20 reference?
21 MR. ROOS-COLLINS: Page 3-C-26?
22 MR. DODGE: 3-C or 3-D?
23 MR. ROOS-COLLINS: 3-C-26.
24 MR. CASADAY: The question is is this one of our
25 opinions? Yes, at the time we wrote the section, we

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01 used the words "minor channel" and "limited
02 revegetation." I believe that was the case when we
03 wrote the section.
04 Q BY MR. ROOS-COLLINS: Mr. Casaday, I mean no
05 criticism. I understand that this Draft EIR was
06 prepared under time constraints.
07 Let me ask you whether you are familiar with the
08 Trihey and Associates report entitled "Rush and

09 Levining Creeks 1991 Restoration Work dated October
10 25th, 1991," Cal Trout Exhibit CT-14?
11 A BY MR. CASADAY: I haven't personally seen that. One
12 of our botanists working on this project who is also on
13 R.T.C. has, of course, had access to all that
14 information.
15 Q Are you referring to Mr. Messick?
16 A Messick, yes. That's M-E-S-S-I-C-K.
17 Q Mr. Casaday, would you characterize the
18 restoration work accomplished by Mr. Trihey as minor
19 today with respect to Levining Creek?
20 MR. BIRMINGHAM: Objection, lacks foundation.
21 MR. ROOS-COLLINS: I'll withdraw the question.
22 Q BY MR. ROOS-COLLINS: Mr. Dunn and Mr. Mitchell,
23 let's turn to Page 3-D-44, third full paragraph, which
24 begins, "Several factors limit reestablishing pre-1941
25 fishery conditions in the Mono Lake tributary streams."

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01 In your own words, what is the significant factors
02 that limit the reestablishment of the tributary
03 fisheries?
04 A BY MR. DUNN: Well, again, I think it's primarily the
05 geomorphic structure, the channel structure is the
06 primary factor, I think, that limits reestablishing the
07 pre-1941 conditions.
08 Q But you are not familiar with the restoration work
09 done by Mr. Trihey to change the geomorphic structure
10 of Levining Creek?
11 A I think we are familiar with that. We reviewed
12 some of the documents. I'm not sure how many of them
13 that we reviewed, but we are familiar with the efforts
14 there.
15 Q Are you aware that the restoration technical
16 committee has directed Mr. Trihey to develop a
17 feasibility study of alternatives to restore the
18 pre-1941 habitat conditions in Rush Creek?
19 A No. I'm not familiar with that specifically. In
20 general, I thought that was under his charge, mission
21 to accomplish.
22 Q Let's turn to Table S-2, Pages 1 and 2 of 3, where
23 you describe mitigation measures for fisheries. Among
24 other things, this table mentions installing current
25 deflectors, woody debris, and vegetation to stabilize

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01 eroding stream banks and also installing pools,
02 backwaters, and overflow channels to create refuge
03 habitat.
04 Are you recommending that these mitigation
05 measures be undertaken?
06 A Well, I think these are mitigation measures that
07 are available to reduce some of the significant impacts
08 that we've identified.
09 A BY MR. CASADAY: If I might add to that, I think a
10 more general response was that all the mitigation
11 measures in this report are measures available to
12 mitigate significant adverse impacts, and it's not our
13 place to recommend whether the Board adopt them or not.
14 Q Mr. Casaday, I agree with that caution. Let me
15 ask you a more proper question.
16 In the definition of "alternative" set forth in

17 the Draft Environmental Impact Report, does it include
18 any of these mitigation measures?
19 A Are these incorporated into the alternatives? Is
20 that the question?
21 Q That's the question.
22 A No. These would be measures to mitigate impacts
23 that resulted from those formulated alternatives.
24 Q Are you familiar with the condition of the now dry
25 channels in the meadows of Rush Creek?

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01 A I've walked those channels myself.
02 Q If the mouths to those channels were reopened and
03 water reintroduced, would there be fishery benefits?
04 A Well, I looked at them in terms of stimulating the
05 recovery of the riparian system on the flood plain, and
06 I really am not qualified to say whether they would
07 provide fisheries. I believe that should be
08 considered.
09 In fact, I believe the document in the riparian
10 section where it addresses this as a potential measure
11 to restore riparian vegetation points out that if these
12 channels were also to be used for fishery habitat
13 mitigation, it ought to be considered more thoroughly
14 whether this would work and whether fish should be
15 allowed to enter these channels.
16 I don't think Mr. Dunn has probably looked at all
17 those channels on the ground, but he can offer his
18 opinion.
19 A BY MR. DUNN: Well, I think we've, you know, when
20 Mr. Mitchell and I were out there, we walked some of
21 those areas. And, you know, again, it would depend on
22 how much flow you're releasing and if you're just
23 opening up those channels, are you reducing the flows
24 in the main channel of Rush Creek, or are you
25 augmenting flows, and what are the specific habitat

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01 conditions within those channels? There is a lot of
02 variables there that would need to be determined. It
03 certainly would have the potential to improve fish
04 habitat if it was done properly.
05 HEARING OFFICER del PIERO: Mr. Roos-Collins, your
06 time is up.
07 MR. ROOS-COLLINS: Mr. del Piero, I request ten
08 additional minutes.
09 HEARING OFFICER del PIERO: I'll grant your ten
10 minutes, and at the end of that ten minutes, we are
11 going to adjourn until next Wednesday.
12 Ms. Scoonover? Is Mr. Stevens still here?
13 MS. SCOONOVER: He left.
14 HEARING OFFICER del PIERO: I would expect that if
15 you have questions of this panel, you should be
16 prepared for nine o'clock Wednesday morning next.
17 That's when you'll be getting in.
18 Forgive me. I forgot to point out a couple of
19 things. First of all, my good friend John Brown, who's
20 been over in the Bay Area on Water Board business all
21 day long, did come back and, as I indicated yesterday,
22 the Board members were going to try their very best to
23 participate in as much of this as possible. And he
24 drove all the way back from Oakland.

25 Good to see you, John.

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01 Also, Ms. Forster asked for me to extend her
02 apologies to everyone here. She is, in about an hour,
03 going to be walking into a meeting with the Regional
04 Water Quality Control Board in Santa Ana and had to get
05 on an airplane to fly down there, so that's why she's
06 left.

07 Mr. Roos-Collins, you go ahead and take your last
08 ten minutes, and then we will call it a day until next
09 Wednesday.

10 Policy sessions, policy statements, for those of
11 you who are interested or may be passing information
12 on, begin at two o'clock tomorrow, Mr. Canaday?

13 MR. CANADAY: Two o'clock tomorrow.

14 HEARING OFFICER del PIERO: Two to five in this
15 room and then beginning again at seven o'clock until we
16 get done or -- until we get done. Please.

17 Q BY MR. ROOS-COLLINS: Let's discuss briefly the
18 Department of Fish and Game's stream evaluation reports
19 which set forth the results of their instream flow
20 incremental methodology studies.

21 Did Jones and Stokes conduct its own IFIM studies
22 for the tributaries to Mono Lake?

23 A BY MR. DUNN: No, we did not.

24 Q You are relying on the Department of Fish and
25 Game's fish flow studies?

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01 A Yes, we are.

02 Q Do you dispute any data in those flow studies?

03 A I guess I'd have to answer that the way I answered
04 previously. We would have to look specifically through
05 that to make a definitive statement. There might be
06 portions of it, but I'm not -- I can't speak to those
07 right now.

08 I guess just to amplify, those documents have a
09 lot of information in them, extensive information that
10 covered lots of areas in terms of stream ecology and
11 fish populations, and I don't think that we can say
12 that we agree with every word that is in those
13 documents.

14 Generally, you know, I think that they are pretty
15 good documents that we were able to use the results
16 from.

17 Q Understanding that these documents are complex and
18 that you have had very limited opportunity to review
19 them, do you generally concur with the flow habitat
20 pers set forth in them?

21 A I guess I would say generally yes to that. Again,
22 we were relying on those studies, and for us to -- I
23 think they were done pretty well for the most part and
24 give us the type of information that we needed to
25 develop our assessment for this EIR.

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01 Q Let's leave the Mono Basin and proceed downstream
02 to the Owens Basin and focus specifically on the Upper
03 Owens River.

04 Do you have an opinion whether the fishery below
05 East Portal is larger or smaller in population today
06 than in 1941?

07 A I don't think we can answer that. I don't know.
08 I guess the answer is I don't know.
09 MR. ROOS-COLLINS: Thank you very much.
10 HEARING OFFICER del PIERO: Thank you very much.
11 MR. ROOS-COLLINS: Thank you.
12 HEARING OFFICER del PIERO: Before I go any
13 farther, Ms. Soonover, you have no questions at this
14 time?
15 MS. SCOONOVER: That's correct.
16 HEARING OFFICER del PIERO: Okay. Mr. Gipsman?
17 Is he still here? He's not here. Erika Niebauer's
18 gone. I think she's got some questions, so I'm going
19 to do exactly what I said I was going to do. We're
20 going to call it a day here, Ladies and Gentlemen.
21 MR. CASADAY: Should this panel expect to return,
22 then?
23 HEARING OFFICER del PIERO: You should return.
24 You shouldn't just expect it. You should be here, or
25 we aren't going to have a lot to do at nine o'clock on

0200

01 Wednesday morning if you aren't.
02 With that, Ladies and Gentlemen, unless there's
03 anything from Staff? Questions?
04 MR. HERRERA: Please remove all your materials.
05 This room has to be cleaned out this evening.
06 (Whereupon the proceedings were adjourned
07 at 4:36 p.m.)

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REPORTER'S CERTIFICATE

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STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

05 I, KELSEY DAVENPORT ANGLIN, certify that I was the
06 official court reporter for the proceedings named
07 herein; and that as such reporter, I reported, in
08 verbatim shorthand writing, those proceedings, that I
09 thereafter caused my shorthand writing to be reduced to
10 typewriting, and the pages numbered 1 through 200

11 herein constitute a complete, true and correct record
12 of the proceedings:

13

14 PRESIDING OFFICER: Marc del Piero

15 JURISDICTION: State Water Resources Control Board

16 CAUSE: Diversions from Mono Lake

17 DATE OF PROCEEDINGS: October 21, 1993

18

19 IN WITNESS WHEREOF, I have subscribed this
20 certificate at Sacramento, California, on this 24th day
21 of October, 1993.

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Kelsey Davenport Anglin, RPR
CM, CSR No. 8553

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