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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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08 SUBJECT: AMENDMENT OF CITY OF LOS ANGELES' WATER RIGHT
09 LICENSES FOR DIVERSION OF WATER FROM STREAMS THAT ARE
10 TRIBUTARY TO MONO LAKE

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14 Held in
15 Resources Building
16 Sacramento, California
17 Tuesday, December 7, 1993

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19 VOLUME XIX

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23 Reported by: Kelsey Davenport Anglin, RPR,
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SACRAMENTO, CALIFORNIA
TUESDAY, DECEMBER 7, 1993, 8:45, A.M.
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HEARING OFFICER DEL PIERO: Ladies and Gentlemen,
this hearing will come to order.
Ladies and Gentlemen, this is the continuation of
the hearing before the State Water Resources Control
Board in consideration of the amendment of the licenses
held by Los Angeles Department of Water and Power on
the streams tributary to Mono Lake.
My name is Marc Del Piero. I'm the Vice-Chairman
of the State Water Resources Control Board.
Ms. Cahill, when last we left, you were on tap.

14 MS. CAHILL: Yes. Mr. Del Piero, our first
15 witness today will be Darrell Wong, and when we finish
16 with him, we propose a panel on our Rush and Lee Vining
17 Creek studies. That panel will be made up of six
18 experts.

19 DIRECT EXAMINATION BY MS. CAHILL

20 Q Good morning, Mr. Wong.

21 A Good morning.

22 Q Would you please state your name and spell it for
23 the record?

24 A Darrell M. Wong, D-A, double, R-E, double L, last
25 name W-O-N-G.

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01 Q Mr. Wong, I'm handing you DFG Exhibit 1. Are you
02 familiar with that document?

03 A Yes.

04 Q And is that an accurate copy of the testimony you
05 submitted in these proceedings?

06 A Yes, it is.

07 Q And I'm passing you now -- do you have any changes
08 to make in Exhibit 1?

09 A No, I don't.

10 Q I'm passing you now DFG Exhibit 2. Is that an
11 accurate statement of your experience and
12 qualifications?

13 A Yes, it is.

14 Q Would you please briefly summarize your education
15 and experience?

16 A I received a bachelor's degree in biology from
17 California State University Long Beach in 1969. I also
18 received a master of arts degree in biology with
19 emphasis on fisheries and aquatic ecology from the same
20 institution in 1975. My master's thesis involved the
21 life history of the trout population in the White
22 Mountains of Mono County.

23 Q Mr. Wong, let's go briefly over the exhibits that
24 accompanied your testimony. DFG Exhibits 63 through
25 69 -- I'm sorry, 65 through 69, are those photographs?

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01 A Yes, they are.

02 Q And did you submit them to illustrate points in
03 your testimony?

04 A Yes.

05 Q And were they taken in the Mono Basin?

06 A Only DFG 65 was taken -- photos of Rush Creek.

07 The rest of them are from outside the Basin and were
08 used for illustrative purposes.

09 Q And with regard to DFG Exhibits 70 through 72, are
10 those articles that you relied on in preparing your
11 testimony, or at least referred to?

12 A Yes.

13 Q Would you please summarize your testimony for us?

14 A First of all, as far as work experience, I'm an
15 associate fishery biologist with the Department of Fish
16 and Game. I began work in the Mono County and Inyo
17 County areas in 1968. I have been employed permanently
18 there as a fishery biologist since 1975. My management
19 responsibilities include the management of fish,
20 amphibians, reptiles, and invertebrates in the Mono
21 areas.

22 I've also been involved with project review for
23 numerous hydroelectric projects as well as other water
24 development projects in the area. For over 25 years, I
25 have gathered quite an extensive amount of experience
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01 regarding fish populations and fish sampling in the
02 Mono County area and the waters involved.

03 As far as my testimony goes, it actually addresses
04 three main issues: What constitutes instream flows in
05 good condition, because the department is making
06 recommendations based on some information that we've
07 gathered. On -- also, we will be covering Mono Lake
08 ecology, as well as some comments on the Upper Owens
09 River.

10 Regarding instream flow determination of good
11 condition, Department of Fish and Game Code Sections
12 5937 and 5946 require that "sufficient water be passed
13 over, around, or through a dam to keep in good
14 condition any fish that may be planted or exist below
15 the dam." This requires the identification of
16 requisite criteria to keep fish in good condition.

17 Fish -- as we have heard before, but I think it's
18 worth repeating again, fish are defined in the Fish and
19 Game Code in Section 45 includes both wild fish,
20 mullosks, or other crustaceans, invertebrates or
21 amphibians, including any parts, spawn, or ova
22 thereof. So it is a fact that really maintaining good
23 condition, from a biological perspective, requires
24 maintaining good conditions for the entire stream
25 ecosystem.

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01 This fits in very well with the mission statement
02 of the California Department of Fish and Game. which is
03 behind me here for those of you that can read it, but
04 it basically says, "The mission of the Department of
05 Fish and Game is to manage California's diverse fish,
06 wildlife, and plant resources and the habitats upon
07 which they depend for their ecological values and for
08 their use and enjoyment by the public."

09 Q We had not previously submitted that, although
10 it's consistent with the submitted testimony, and I
11 would like now to give it DFG Exhibit No. 154. And we
12 have copies.

13 MR. BIRMINGHAM: May I ask, Mr. Del Piero,
14 Ms. Cahill a question?

15 HEARING OFFICER DEL PIERO: Certainly.

16 MR. BIRMINGHAM: Is this an official document by
17 the Department of Fish and Game?

18 MS. CAHILL: It's my belief that it is.

19 MR. BIRMINGHAM: I've got no objection.

20 HEARING OFFICER DEL PIERO: Thank you. It will be
21 entered then.

22 (DFG Exhibit No. 154 was
23 admitted into evidence.)

24 MR. WONG: And, of course, as an area biologist
25 who's responsible for managing the area for all the

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01 values, ecological as well as enjoyment by the
02 public --

03 HEARING OFFICER DEL PIERO: Mr. Birmingham, did

04 you need another copy?

05 MR. BIRMINGHAM: I'll get one from Mr. Smith at
06 the break. Thank you very much.

07 HEARING OFFICER DEL PIERO: Pardon me, Mr. Wong.
08 Please proceed.

09 MR. WONG: As far as management in the Mono Basin,
10 management of fish, we've got one coming here, brown
11 and rainbow trout have been --

12 HEARING OFFICER DEL PIERO: It appears you've got
13 that one under control.

14 (Laughter.)

15 MR. WONG: As far as management of the Mono Basin,
16 brown and rainbow trout have been the most valuable
17 recreational fish, vertebrate or fin fish that the
18 department has managed before for the last 50 years in
19 the Mono Basin. What you have here is a depiction, a
20 mounted specimen, which is a brown trout about 20
21 inches long. If it were alive, it would probably weigh
22 approximately four pounds, just to get some idea of
23 what a desirable fish might be in Mono Basin. This is
24 not to be entered as an exhibit, by the way.

25 HEARING OFFICER DEL PIERO: That's good, Mr. Wong,
0012 because my five-year old is coming up here later today.
01 I'm going to take that and show it to him and tell him
02 I caught it.

04 (Laughter.)

05 MR. WONG: The question is will he believe you.
06 I've worked with too many anglers for too many years.

07 But this brown trout, as depicted in that photo
08 that I presented, which is Exhibit 66, of a trout which
09 is in very good condition and appears to be
10 disease-free. The one I have in the picture, though,
11 is a live fish, other than this one.

12 But as far as presenting or providing these kinds
13 of fish to the public, we're trying to do it in a
14 natural context, and so our goal is to make fish like
15 this or ones that are desirably -- desirable to the
16 public available to the recreational public as part of
17 the natural ecosystem. That's the -- more or less, the
18 pinch that we have.

19 So the Department of Fish and Game seeks to
20 maintain natural systems of fish and wildlife with
21 self-sustaining populations of trout which are
22 desirable to the public, which means those which are
23 over ten inches in total length.

24 I see in the Mono Basin really an emphasis on wild
25 trout. By "wild trout," I mean self-sustaining

0013 populations. We see no expansion, to speak of, of the
01 catchable trout program, our typical rainbow
02 trout-stocking program in the Mono Basin. That is
03 being stretched to the limit as it is. So flows to
04 maintain fish such as this in good condition would
05 result in self-sustaining, desirably-sized adult
06 populations of fin fish, in this particular case, which
07 are in good condition, well proportioned, such as that
08 specimen behind me, and disease-free.

10 There really should be no artificial limitations
11 from a lack of cover or food or poor water quality or

12 reproductive habitat. Ideally, you have good numbers
13 of different age classes, which results in a good
14 stable population, and habitat should not be
15 artificially limited. So there's a real need with
16 whatever flow regime is in a stream to maintain
17 adequate physical, biological, and chemical parameters
18 which together constitute the ecology of the stream.
19 The whole stream ecosystem.

20 The ecological health of the stream is dependent
21 on aquatic and riparian ecosystems together. We've
22 heard a lot of testimony regarding riparians so far.
23 This requires natural stream processes with
24 well-vegetated banks and a diverse riparian system.

25 There's general agreement among researchers that
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01 there is a linkage between stream ecology and fish
02 populations, and the paper that I presented in my
03 testimony by Hill, Platts and Beschta 1991, which is
04 DFG Exhibit 72, says this very well, and I'll quote a
05 very short section from it.

06 Quote, healthy fish populations are dependent on
07 stream flow regimes that protect the ecological
08 integrity of their habitat. Fish habitats are the
09 consequence of linkage among the stream, flood plane,
10 riparian, and upland zones, and watershed geography."
11 These authors maintain that there are really four
12 different types of flows that will result in this
13 linkage, and those are instream flows, channel
14 maintenance flows, riparian maintenance flows, and
15 valley maintenance flows.

16 Now, the instream flow incremental methodology,
17 which you've already heard so much about, characterizes
18 in-channel trout habitat, for the most, part the way
19 the department is normally using it. However, it's
20 very important that out-of-channel flows be maintained
21 as well to keep the system functioning.

22 Flushing flows are usually determined for
23 in-channel sediment transport, and these are fine for
24 the streams that we're talking about now, but as these
25 streams become restored, things should be re-evaluated

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01 because over-bank flows would be necessary to really
02 maintain them and restore the riparian -- riparian
03 ecosystem.

04 Now, the stream biota, or the animals living in
05 the stream, and other -- and plants as well for that
06 matter, evolved with natural rates of stream flow
07 change. Controlled stream flows should try to mimic,
08 as we've heard so much, the natural hydrograph. That's
09 all we're trying to do here. This is not anything
10 really highly technical. We're just trying to somehow
11 imitate nature.

12 Especially important on ramping, though, would be
13 the recessional flows for aquatic organisms. Hill,
14 Platts and Beschta and others recommend flow changes of
15 less than 10 percent per day to reduce fish stranding,
16 stream bank damage, and to enhance vegetative seeding,
17 and I maintain that these still should be used with a
18 baseline for determining controlled recessional flows.

19 Physical conditions that would result in good

20 condition should result in adequate water depths and
21 velocities, water quality, including temperature,
22 substrates that are suitable in the entire reach all
23 year long for all life stages of aquatic animals. Good
24 water temperatures are necessary for growth and
25 reproduction, substrate with a low embeddedness, depth

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01 is important for cover, feeding, and over-wintering
02 habitat.

03 Good velocities are necessary for fin fish
04 spawning, especially, sediment transport, food
05 transport, and habitat diversity.

06 Good riparian strip is necessary for good water
07 quality, stable banks, shading, and to create a deep
08 and narrow channel. A lot of things that you've
09 already been hearing about so far.

10 So, in summary, then, basically, adequate flows
11 would result in a riparian and aquatic system which is
12 in good condition. This results in a stream system
13 which is in good condition, which also will result in
14 fish being in good condition.

15 Now, the current streams or the streams that we're
16 involved with during the Mono Basin, are, as we heard
17 yesterday for many hours, very degraded, and so it's
18 difficult to quantify these conditions now. That's
19 part of the problem we all have.

20 So I recommend that we re-evaluate in five to ten
21 years once active or passive restoration has occurred
22 in these streams, re-evaluate the instream needs,
23 channel maintenance, and riparian needs as things
24 progress.

25 Regarding the Mono Lake ecology. The Draft

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01 Environmental Impact Report, or the DEIR, basically
02 states that there really is no mitigation for any
03 declines in brine shrimp. There's only one mitigation
04 measure offered for the alkali or brine fly for any
05 possible adverse impacts there. It also states that
06 little is known about the shrimp declines and how that
07 might affect the population survival of that species or
08 the birds that depend upon them.

09 In addition, the brine shrimp is the Federal
10 Category One candidate for listing pursuant to the
11 Endangered Species Act of 1973. All of these
12 considerations would compel someone interested, such as
13 the department, in maintaining these animals, it
14 compels you to be conservative in whatever lake levels
15 are chosen because of the uncertainties involved. The
16 Draft Environmental Impact Report indicates that 6390
17 has the greatest benefit to shrimp and flies and,
18 therefore, for those two species, appears to be a lake
19 level which is at least in the range that should be
20 considered or definitely the lake level that should be
21 strongly considered.

22 However, the Mono Lake ecosystem consists of more
23 than just flies and shrimp, and from the broad-base
24 ecosystem approach that the department has in our
25 mission statement, we must look at the entire ecosystem

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01 not just two species within one. The Draft

02 Environmental Impact Report states that there are
03 species of zooplankton or small animals that live there
04 that were extricated above salinities of 70 grams per
05 liter. The restoration of these public trust values
06 would require the restoration of that functioning
07 ecosystem as it once was.

08 The Draft Environmental Impact Report also states
09 that 53 grams per liter of pre-divergence salinities to
10 70 grams per liter would be required to restore that
11 diversity. The impact report or DEIR states that 6390
12 is equivalent to approximately 79 grams per liter of
13 salinity, so it appears that a level incrementally
14 higher than 6390 would be required to restore that
15 original or even close to the original natural
16 diversity.

17 Regarding the Upper Owens River, the river above
18 the east portal, and basically its natural state, has
19 very good to excellent habitat with a desirable
20 fishery, a very desirable fishery. Below the east
21 portal, due to exported water, the river is degraded
22 but provides still a good recreational fishery, in my
23 opinion.

24 The Department of Fish and Game recommends that
25 natural flows, including tunnel bank, remain in

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01 the Upper Owens River channel, as described in Stream
02 Evaluation Report 93-1, and that augmentations from the
03 Mono Basin are acceptable but only to the extent that
04 they can be maintained without affecting the needs for
05 the Mono Lake tributaries or Mono Lake itself.

06 Due to reduced flows from the east portal, it is
07 my professional opinion that with better land
08 management practices in particular, the Upper Owens
09 River has the potential to come to equilibrium with its
10 new flow regime and could provide good to excellent
11 angling, especially within the time frame that we're
12 looking at for the lake to come to its new
13 equilibrium. Mitigation measures that could be
14 implemented in the Upper Owens River could expedite
15 this process.

16 Also, since my testimony is written, it has come
17 to my attention that there's some new information
18 available to me regarding the potential for restoration
19 of spring flows in the Rush Creek bottom lands.

20 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. I'm
21 going to interpose an objection at this point on the
22 grounds that Mr. Wong is going beyond the scope of his
23 written testimony.

24 HEARING OFFICER DEL PIERO: Ms. Cahill?

25 MS. CAHILL: It is beyond what was contained in
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01 the written testimony. It's information Mr. Wong
02 didn't have at the time he put the written testimony
03 in.

04 MR. BIRMINGHAM: May I confer with Ms. Cahill for
05 just a moment, Mr. Del Piero?

06 HEARING OFFICER DEL PIERO: Sure. Go ahead.

07 (Discussion held off the record.)

08 MR. BIRMINGHAM: I'll withdraw my objection.

09 HEARING OFFICER DEL PIERO: Mr. Wong, proceed.

10 MR. WONG: That leads me to now conclude that my
11 recommendation would be that diversions from Parker and
12 Walker Creek -- I should say the lack of diversion of
13 Parker and Walker Creek, as the City of Los Angeles has
14 offered in their land management plan, would be a
15 desirable situation for Parker Creek and Walker Creek,
16 as well as the spring flows that might be restored in
17 the Rush Creek bottom lands.

18 HEARING OFFICER DEL PIERO: Thank you very much.

19 Q BY MS. CAHILL: Does that conclude your testimony,
20 Mr. Wong?

21 A Yes, it does.

22 MS. CAHILL: Thank you very much.

23 HEARING OFFICER DEL PIERO: Thank you very much,
24 Ms. Cahill.

25 Mr. Wong, you're being called only by the
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01 Department of Fish and Game?

02 MR. WONG: Yes, Sir.

03 HEARING OFFICER DEL PIERO: Mr. Birmingham?

04 MR. BIRMINGHAM: Thank you very much,
05 Mr. Del Piero.

06 Also, at this time, I'd like to introduce for the
07 record Diane Lockareff, who is going to be helping us
08 out. I'm tempted to ask Ms. Lockareff to cross-examine
09 Mr. Wong because I'm confident that she is as prepared
10 as I am and probably could do as good a job.

11 HEARING OFFICER DEL PIERO: I assume this is
12 Ms. Lockareff?

13 MR. BIRMINGHAM: This is Ms. Lockareff right here.
14 She is not a new admittee, but will be in a few days.

15 HEARING OFFICER DEL PIERO: Congratulations, and
16 my sympathies.

17 (Laughter.)

18 CROSS-EXAMINATION BY MR. BIRMINGHAM

19 Q First, I'd like to ask you some questions,
20 Mr. Wong, about that beautiful fish that you've put up
21 on the easel.

22 HEARING OFFICER DEL PIERO: Get that right,
23 Mr. Birmingham. That's my fish.

24 (Laughter.)

25 Q BY MR. BIRMINGHAM: You said that fish was about 20
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01 inches long. Is that correct?

02 A Yes.

03 Q And you said that that fish, when it was alive,
04 probably weighed somewhere in the vicinity of four
05 pounds?

06 A Yes.

07 Q In terms of the fishery that existed in Lee Vining
08 Creek prior to the diversions by the City of Los
09 Angeles, would you have expected to find an abundant
10 number of fish like the fish you put up on the easel in
11 Lee Vining Creek at that time?

12 A I don't personally know what existed in Lee Vining
13 Creek. From what I have heard and from what I know of
14 fish of that size, it would probably be unlikely that
15 you find a fish that large.

16 Q And it would be unlikely that you find a fish that
17 large in the area of Rush Creek below the Grant Lake

18 Reservoir. Isn't that right?

19 A No. That's not right. I don't know what was
20 there at the time, but I've heard -- Rush Creek's quite
21 a larger stream and a fish like that just requires
22 good-size pools, and if there's adequate habitat, fish
23 like that can occur in waters much smaller than that of
24 Rush Creek.

25 Q I, first, would like to ask you about the opinions
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01 that you've expressed concerning Mono Lake
02 productivity, which are Paragraphs 18 and 19 of your
03 testimony. You say that almost nothing is known about
04 how declines in the brine shrimp population might
05 threaten the population's survival or bird populations
06 dependent upon brine shrimp as food. Now, you have
07 heard the testimony of Dr. John Melack; is that
08 correct?

09 A Portions of it.

10 Q And when forming the opinion that you've expressed
11 in Paragraph 18 of your written testimony, did you
12 consider all of the research that has been done by
13 Dr. Melack and his colleagues at Mono Lake over the
14 course of the last 14 years?

15 A Well, what I wrote in my testimony, that was based
16 entirely, as I mentioned, on the Draft Environmental
17 Impact Report information which very clearly states
18 that.

19 Q That was not my question. In forming this
20 opinion, I take from it your answer that you did not
21 consider the research that was conducted by Dr. Melack
22 and his colleagues over the course of the last 14
23 years?

24 A No. When I heard -- when I heard Dr. Melack give
25 his testimony, that was after I had already written my
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01 testimony. That's what I was getting at. So all I had
02 available to me at the time were the statements which I
03 took as factual within the DEIR.

04 MR. DODGE: I object to this line of questioning
05 on the grounds that it assumes that the DEIR did not
06 take into account Dr. Melack's work. I don't know how
07 this --

08 HEARING OFFICER DEL PIERO: Mr. Birmingham, do you
09 have a response to that?

10 MR. BIRMINGHAM: I'm not sure a response is
11 required.

12 HEARING OFFICER DEL PIERO: My inclination is to
13 overrule the objection because, One, I'm not sure the
14 witness had any way of knowing that one way or the
15 other but, Two, that's not the point of the question.
16 Proceed.

17 MR. BIRMINGHAM: Thank you.

18 Q BY MR. BIRMINGHAM: Now, in forming the opinions that
19 you expressed in Paragraph 18 concerning the potential
20 effect that the brine shrimp population decline might
21 have on bird populations dependent upon the brine
22 shrimp as food, did you consider the research that was
23 conducted by Dr. Jehl over the course of the last 14
24 years?

25 A Again, this is -- these are statements that were

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01 made by Jones and Stokes who wrote the Draft
02 Environmental Impact Report. You have to understand
03 that my role here is not to be a research scientist.
04 My role is to take information that's available that I
05 can find to network with other experts and academic or
06 agency people that I know and utilize that information
07 to make management decisions. So the Draft
08 Environmental Impact Report, which looked at all of
09 these things, would be the basis and which is what I
10 use for the basis of my recommendations and my opinions
11 provided in my testimony.

12 Q If an expert ornithologist like Dr. Jehl came to
13 you as a staff biologist for the Department of Fish and
14 Game and said to you that the -- there were -- there
15 was no threat to any bird population at Mono Lake
16 because of a declining population of Artemia Monica,
17 you would consider that, wouldn't you, in forming any
18 policy with respect to Mono Lake?

19 A As a fishery biologist, I wouldn't be really able
20 to integrate what he had said into my basic discipline
21 without consulting some other people in our department.

22 What I did hear was -- that's why I was very
23 clear, the Draft Environmental Impact Report made these
24 statements, and I'm assuming that they are correct.

25 Q I'd like to talk about the fishery aspect of your

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01 testimony, instream flow determination. You apparently
02 have taken a number of courses on IFIM; is that
03 correct, Mr. Wong?

04 A Yes.

05 Q From whom did you take those courses?

06 A A variety -- a variety of agencies, institutions,
07 primarily, the U.S. Fish and Wildlife Service courses.
08 There also have been some in-house courses and as well
09 as one private consultant-provided course.

10 Q The courses that you took from the U.S. Fish and
11 Wildlife Service, were any of those courses taught by
12 Dr. Hardy who testified here?

13 A No.

14 Q You -- you indicate in Paragraph 7, with respect
15 to a good condition, you state that, "The good
16 condition requirement must include the protection and
17 maintenance of physical, biological, and chemical
18 parameters which constitute the ecology of the
19 stream." Is that correct?

20 A Yes.

21 Q If -- and I take it that what you're saying is
22 that in order to protect fish in good condition, you
23 must maintain these parameters in good condition.

24 MR. DODGE: Objection. Unintelligible.

25 HEARING OFFICER DEL PIERO: Sustained. Rephrase

0027

01 the question, Mr. Birmingham.

02 Q BY MR. BIRMINGHAM: Well, let me ask a different
03 question.

04 Mr. Wong, if fish in a stream are in good
05 condition, is it safe to assume, then, that the
06 parameters that you have listed in your testimony are
07 not having a negative impact on fish?

08 A Yes. I would agree with that.
09 Q Now, you would agree with me, wouldn't you, that
10 the fish in Rush Creek are in good condition?
11 MR. ROOS-COLLINS: Objection. Ambiguous. It is
12 unclear whether Mr. Birmingham is referring to the
13 fishery; namely, the population of individual fish as a
14 whole, or to individual fish in isolation.
15 HEARING OFFICER DEL PIERO: Sustained.
16 Q BY MR. BIRMINGHAM: As part of the instream inflow
17 incremental methodology, do you consider condition
18 factors?
19 MR. THOMAS: Objection, ambiguous. "Condition
20 factors" is an overly broad term.
21 HEARING OFFICER DEL PIERO: Mr. Birmingham?
22 MR. BIRMINGHAM: I believe that "condition
23 factors" is a term of art that is used as part of the
24 IFIM. I'll ask the witness that question. I think a
25 better question -- objection might be lack of
0028
01 foundation.
02 HEARING OFFICER DEL PIERO: Well --
03 MR. THOMAS: I'll accept your suggestion.
04 HEARING OFFICER DEL PIERO: Somehow I knew you
05 were going to do that, Mr. Thomas. I'll sustain the
06 objection.
07 Mr. Birmingham, why don't you proceed, okay?
08 Q BY MR. BIRMINGHAM: Mr. Wong, are you familiar with
09 the term "condition factor" as it relates to IFIM?
10 A No.
11 Q Have you reviewed the IFIMs that were prepared
12 for, say, Lee Vining Creek?
13 A No.
14 Q You haven't reviewed the IFIM on Lee Vining Creek?
15 A You have to explain what you mean by "reviewed the
16 IFIM," please.
17 Q Isn't it correct that an IFIM report was prepared
18 by the Department of Fish and Game for Lee Vining
19 Creek?
20 A Well, the report, yes.
21 Q Have you reviewed the report?
22 A I have read the report.
23 Q On page -- do you have a copy of the report in
24 front of you?
25 A No, I don't.
0029
01 I might add, too, that any specific questions
02 regarding those reports should be addressed to the
03 panel that will be coming on later. I am not -- I am
04 not very intricately involved with the preparation of
05 those reports. So rather than waste a lot of time on
06 the record, it would be more appropriate to ask
07 specific questions of the panels that will be coming
08 up.
09 Q I'll do that. Thank you.
10 Let's talk about fish in good condition. And I
11 don't want to raise any objections, so I'm just going
12 to ask you these questions in a very straightforward
13 manner, and I'm going to lay the foundation so we don't
14 have any objections from the very beginning.
15 Is there a distinction between the Department of

16 Fish and Game and the Fish and Game Commission?
17 A Yes.
18 Q Would you please explain to us what is the
19 distinction between the Department of Fish and Game and
20 the Fish and Game Commission?
21 A I am not sure enough about that to really explain
22 it to you. I wouldn't feel comfortable doing that.
23 Q Is it correct that the Fish and Game Commission
24 establishes fishing and hunting regulations for the
25 State of California?

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01 A That's true.
02 Q And is it correct that the Fish and Game
03 Commission periodically reviews hunting and fishing
04 regulations for various parts of the State of
05 California?
06 A That's my understanding.
07 Q And based upon that review, it periodically amends
08 the fishing and hunting regulations for various parts
09 of the State of California?
10 A Yes.
11 Q Has the Fish and Game Commission recently
12 considered amendments to fishing regulations for the
13 Mono Basin?
14 A I believe so.
15 Q And as part of the public review process -- is
16 there a public review process that occurs in connection
17 with the review by the Fish and Game Commission of
18 fishing regulations?
19 A No. The reason why I say that is it's not really
20 a public review. There's an opportunity for public
21 input and public recommendations, but I don't believe
22 they review anything the Commission does.
23 Q In connection with the recent consideration by the
24 Fish and Game Commission of new fishing regulations for
25 the eastern Sierra, was there an opportunity for the

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01 public to comment on the proposed regulations?
02 A I believe there were public hearings held, yes.
03 Q Do you know if the -- the organization California
04 Trout, Incorporated, commented on proposed regulations
05 for Rush, Lee Vining, Walker, and Parker Creeks?
06 A I do not know that for a fact. I don't know that
07 for a fact.
08 MR. BIRMINGHAM: Can I have this marked next in
09 order?
10 HEARING OFFICER DEL PIERO: What do we have here,
11 Mr. Birmingham?
12 MR. BIRMINGHAM: It's a document that I'll
13 identify after I've given a copy of it to opposing
14 counsel.
15 MR. CANADAY: Mr. Birmingham, that will be marked
16 L.A. DWP 90.

17 (L.A. DWP Exhibit No. 90 was
18 marked for identification.)
19 Q BY MR. BIRMINGHAM: Mr. Wong, I'm giving you a
20 document that has been identified as L.A. DWP Exhibit
21 90 and, if I may, I'll give a copy of it to the Hearing
22 Officer.
23 MR. FRINK: He's got one.

24 Q BY MR. BIRMINGHAM: L.A. DWP Exhibit 90 is a summary
25 of recommendations received by the Fish and Game
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01 Commission, December 8, 1991, through November 21,
02 1993. Is that correct, Mr. Wong?
03 MS. CAHILL: Objection.
04 HEARING OFFICER DEL PIERO: Who's objecting?
05 MS. CAHILL: He has no personal knowledge.
06 HEARING OFFICER DEL PIERO: I'm sorry. I can't
07 see --
08 MS. CAHILL: I think we need -- first, before he
09 asks that question, we should establish whether
10 Mr. Wong even recognizes the document. He's asking him
11 to validate a document he may never have seen before.
12 HEARING OFFICER DEL PIERO: I doubt that anybody's
13 seen this. I'm assuming that this is not a document
14 prepared by the Fish and Game Commission. Is that
15 correct, Mr. Birmingham?
16 MR. BIRMINGHAM: No. In fact --
17 HEARING OFFICER DEL PIERO: Is this a summary of
18 the public record of the hearing that took place that's
19 been prepared by L.A. DWP?
20 MR. BIRMINGHAM: I believe, in fact, this is a
21 summary that was prepared by the Fish and Game
22 Commission.
23 HEARING OFFICER DEL PIERO: Oh, this is a document
24 of the Fish and Game Commission?
25 MR. BIRMINGHAM: Yes, I believe so.
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01 MR. THOMAS: Objection. This has not been
02 prepared by the Fish and Game --
03 HEARING OFFICER DEL PIERO: I would have expected
04 at least a seal or a standard letterhead on the cover
05 of it.
06 MR. THOMAS: Right.
07 HEARING OFFICER DEL PIERO: That's why I assumed
08 it was prepared by L.A. DWP.
09 MR. BIRMINGHAM: This is not a document that's
10 prepared by L.A. DWP. We obtained this document from
11 the Department of Fish and Game.
12 MR. THOMAS: This may have been prepared by the --
13 HEARING OFFICER DEL PIERO: Is this a staff
14 summary?
15 MR. THOMAS: Staff summary of the Department of
16 Fish and Game.
17 MR. BIRMINGHAM: Which I established --
18 HEARING OFFICER DEL PIERO: Why don't -- okay.
19 I'm going to sustain her objection, and I want you to
20 ask him whether or not he's ever seen that document
21 before, and then we can proceed that way.
22 Q BY MR. BIRMINGHAM: Have you ever seen this document,
23 Mr. Wong?
24 A No. Not to my recollection.
25 Q I'm going to ask you to assume that -- well, that
0034
01 it is a summary of comments prepared by the Department
02 of Fish and Game, and we'll lay the appropriate --
03 HEARING OFFICER DEL PIERO: Excuse me,
04 Mr. Birmingham. Can I ask a question?
05 Mr. Wong, do you provide staff services to the

06 Fish and Game Commission?
07 MR. WONG: How do you mean "staff services"?
08 HEARING OFFICER DEL PIERO: Do you assist them
09 during the course of their public hearings?
10 MR. WONG: Not really assist. We're only there if
11 called upon for input.
12 HEARING OFFICER DEL PIERO: Have you done work for
13 them in the past specifically in relationship to their
14 policy and responsibilities?
15 MR. WONG: Other than modifying written
16 recommendations from the public and such -- I'm not
17 real clear on if that's what you mean or not. We
18 provide input in that way, also, in terms of
19 recommendations, but nothing directly with the
20 Commission.
21 Q BY MR. BIRMINGHAM: Let me ask you some further
22 questions about this document, L.A. DWP Exhibit 90.
23 I'd ask you to turn to Page 26 of L.A. DWP Exhibit 90,
24 Mr. Wong. And at the bottom of Page 26, there is a --
25 there's a Paragraph 1 that states, "Edmondson -- "

0035

01 excuse me. "Edmondson, Jim, California Trout, July 12,
02 1993," and that appears under a subheading, "Number
03 Number Number New Subsection 98.7 Lee Vining Creek."
04 Do you see the paragraph that I'm talking about?
05 A Yes.
06 Q Now, do you know whether or not California Trout
07 made a recommendation of a zero bag limit artificialed
08 only on Lee Vining Creek from the Lee Vining conduit
09 downstream to Mono Lake, Mono County, California?
10 A I was aware, as far as the Bishop office
11 personnel, that some recommendations had been made, but
12 I had really had no personal involvement with their
13 evaluation or any recommendations regarding them.
14 Q Are you aware of what the Bishop -- did anybody in
15 the Bishop office review the proposal by California
16 Trout?
17 A I would assume so, but I have no personal
18 knowledge in specifics.
19 Q Now, I'd like you to turn to Page 34, and at the
20 top of Page 34, there appears, a heading Subsection
21 153, Rush Creek, Mono County -- Mono County,
22 California, and there's a Summary 1 from California
23 Trout, "Mr. Edmondson recommends a zero bag limit and
24 artificials only for Rush Creek from Grant Lake Dam
25 downstream to Mono Lake."

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01 Are you aware of a recommendation of this kind
02 from California Trout with respect to new regulations
03 for Rush Creek?
04 A Leekewise as for Lee Vining Creek. I was aware
05 that some recommendations were being provided, but I
06 don't know the details.
07 Q And your answers would be the same for Parker and
08 Walker Creeks; is that correct?
09 A Yes.
10 Q There is, in fact, a reference to Walker Creek on
11 Page 40 of this document, L.A. DWP Exhibit 90; is that
12 correct?
13 HEARING OFFICER DEL PIERO: Next to the last

14 paragraph on Page 4.
15 MR. WONG: Yes, I see it now.
16 Q BY MR. BIRMINGHAM: And on Page 31 of L.A. DWP
17 Exhibit 90, there's a similar recommendation for Parker
18 Creek. Is that correct?
19 A Page 41, did you say?
20 HEARING OFFICER DEL PIERO: 31.
21 MR. WONG: 31, I'm sorry.
22 HEARING OFFICER DEL PIERO: Right in the center of
23 the page.
24 MR. WONG: Yes, I see it.
25 HEARING OFFICER DEL PIERO: I'm sorry, Mr. Wong.

0037

01 Were you aware?
02 MR. WONG: I'm sorry, you'll have to repeat the
03 question. I'm sorry.
04 Q BY MR. BIRMINGHAM: Were you aware of that
05 recommendation from Cal-Trout?
06 A Leekewise, as the others, just dimly aware that --
07 I didn't know the details.
08 (L.A. DWP Exhibit No. 91 was
09 marked for identification.)
10 MR. BIRMINGHAM: I guess this would be L.A. DWP 91
11 now.
12 Q BY MR. BIRMINGHAM: I'm handing you a document,
13 Mr. Wong, that has been identified as L.A. DWP Exhibit
14 91, and I will -- I will represent that this is a
15 document, L.A. DWP Exhibit 91, is a document obtained
16 from the State Headquarters for the Department of Fish
17 and Game, and it contains a -- what appears to be a
18 department recommendation concerning the Cal-Trout
19 proposal for a zero bag limit on artificials only for
20 Rush Creek on Grant Lake Dam downstream from Mono Lake.
21 And the document states as part of the analysis,
22 where it states as the recommendation, "Do not accept."
23 And then under analysis it states, "Special
24 restrictions were applied to this stream in 1991. The
25 bag limit is five. The maximum size limit is ten

0038

01 inches, and only artificial lures with barbless hooks
02 maybe used. Mr. Edmondson proposes that the bag limit
03 be reduced to zero. He believes that angler harvest is
04 masking the effectiveness of efforts to restore the
05 trout population following rewatering of the section
06 downstream of the Lee Vining conduit. The department
07 maintains that the trout population is responding well
08 to the special regulations. The population is in good
09 condition and further restrictions are unnecessary at
10 this time."
11 Were you aware of the analysis by the Department
12 of Fish and Game that the population of trout in Rush
13 Creek is in good condition?
14 Q Could you restate that, again, please?
15 A I'm asking you were you aware of the analysis by
16 the Department of Fish and Game that is purportedly
17 reported in L.A. DWP Exhibit 91 that the population of
18 trout in Rush Creek is in good condition?
19 A No. I'm not aware of the analysis.
20 MR. DODGE: Just for the record, I want to hand
21 the text that was being read to the witness.

22 MR. BIRMINGHAM: I'd already given him a copy of
23 the text.

24 MR. WONG: I have a copy. I guess I might ask the
25 question I'm not sure what you mean by "analysis."

0039

01 Q BY MR. BIRMINGHAM: There is an analysis here on L.A.
02 DWP Exhibit 91; is that correct, Mr. Wong?

03 A If you're referring to what's in writing here as
04 being the analysis, then yes, that represents an
05 analysis that somebody did something, yes.

06 Q And if my representation is correct, and I will
07 call a witness later to lay the foundation for this
08 document, that is an analysis prepared by the
09 Department of Fish and Game?

10 A Yes, it is. With their ideas of definitions.

11 Q With -- with -- when you say "their," you mean the
12 Department of Fish and Game definition of "good
13 condition"?

14 A Whoever wrote this particular item, which I don't
15 know who wrote it.

16 Q And if my representation is correct that this is
17 an analysis prepared by the Department of Fish and
18 Game, this was the official analysis of the Department
19 of Fish and Game submitted to the Fish and Game
20 Commission in connection with proposed regulations;
21 isn't that correct?

22 MS. CAHILL: Objection. This is asking him to
23 assume something and then asking if it is true.

24 HEARING OFFICER DEL PIERO: Mr. Birmingham, I'm
25 going to sustain the objection. If you want to ask

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01 that question, you need to lay a foundation.

02 MR. BIRMINGHAM: I believe, Mr. Del Piero, I began
03 my question by asking to assume my representation was
04 correct.

05 HEARING OFFICER DEL PIERO: Then you asked him a
06 very specific question as to whether or not he believed
07 it -- not whether or not he believed it, whether or not
08 that document was, in fact, the official position of
09 the department, and you've not laid the foundation for
10 that question.

11 MR. HERRERA: Excuse me, Mr. Birmingham, your 20
12 minute time is up.

13 MR. BIRMINGHAM: I make an application for an
14 additional 20 minutes.

15 HEARING OFFICER DEL PIERO: Granted.

16 MR. BIRMINGHAM: I'm handing Mr. Canaday a
17 document which I have identified as L.A. DWP Exhibit
18 92, and I'll give Mr. Wong a copy of it.

19 (L.A. DWP Exhibit No. 92 was
20 marked for identification.)

21 Q BY MR. BIRMINGHAM: Again, Mr. Wong, I'll represent
22 to you that L.A. DWP Exhibit 92 is a document that we
23 obtained from the State Headquarters of the Department
24 of Fish and Game. It appears to be similar to L.A. DWP
25 Exhibit 91.

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01 And under the analysis paragraph of L.A. DWP 92,
02 analysis purportedly states that, "The department
03 maintains that the trout population is responding well

04 to the special regulations. The population is in good
05 condition and further restrictions are unnecessary at
06 this time." This appears to be an analysis to support
07 a recommendation that the Fish and Game Commission not
08 accept Cal-Trout's proposed regulation.

09 Were you aware of an analysis by the Department of
10 Fish and Game that the population of trout in Parker
11 Creek is in good condition?

12 A I presume again you're referring to this paragraph
13 as being an analysis.

14 MS. CAHILL: Objection --

15 HEARING OFFICER DEL PIERO: Wait. Wait. Wait.
16 Wait. Wait. Mr. Birmingham, you can clarify your
17 question, then I'll take your objection, Ms. Cahill.

18 MR. BIRMINGHAM: I'm asking about the analysis
19 that is contained under the heading Analysis L.A. DWP
20 exhibit -- L.A. DWP Exhibit 92.

21 HEARING OFFICER DEL PIERO: Mr. Wong, do you
22 understand the question?

23 MR. WONG: I believe I do now.

24 HEARING OFFICER DEL PIERO: Now, Ms. Cahill, do
25 you have an objection?

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01 MS. CAHILL: Could he just repeat the question,
02 please?

03 (Whereupon the record was read as requested.)

04 HEARING OFFICER DEL PIERO: That's it.

05 Now, Mr. Wong, do you understand the question?

06 Ms. Cahill, did you have an objection?

07 MS. CAHILL: I withdraw the objection.

08 MR. WONG: If you're referring to this as being
09 the analysis, then apparently something was done, but I
10 was not -- I didn't have personal knowledge of it being
11 done. But it doesn't surprise me that they did produce
12 this.

13 Q BY MR. BIRMINGHAM: "They" being the Department of
14 Fish and Game?

15 A Meaning staff personnel, apparently, and inland
16 fisheries divisions, who apparently prepared these.

17 Q I'm handing the Staff and am now circulating among
18 opposing counsel a copy of a document that has been
19 marked as DWP Exhibit 93.

20 L.A. DWP exhibit 93, Mr. Wong, appears to be --
21 and, again, I'll represent this is a document that we
22 obtained from the State Headquarters of the Department
23 of Fish and Game. But it contains a paragraph on an
24 analysis of -- supporting a recommendation that the
25 Fish and Game Commission not accept the California

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01 Trout proposed regulation.

02 And at the bottom it says, "The department
03 maintains that the trout population is responding well
04 to the special regulations. The population is in good
05 condition and further restrictions are unnecessary at
06 this time." And again, this is a -- an analysis of a
07 regulation proposed for Walker Creek.

08 Were you aware of the Department of Fish and Game
09 analysis of the fishery -- or the fish population in
10 Walker Creek that concluded the population is in good
11 condition?

12 A I have to answer again, I'm not aware this was
13 actually being done, but apparently someone did do it.

14 Q So, if the fish -- and I'm going to ask you a
15 hypothetical question about Rush Creek. If the fish
16 population is in Rush Creek -- let me restate the
17 question.

18 Hypothetically, if the fish population in Rush
19 Creek is in good condition, can it not be safely
20 assumed that the physical, biological, and chemical
21 parameters which constitute the ecology of Rush Creek
22 are not negatively affecting the fishery in Rush Creek?

23 MR. ROOS-COLLINS: Objection.

24 HEARING OFFICER DEL PIERO: Grounds?

25 MR. ROOS-COLLINS: If Mr. Birmingham is referring
0044

01 to L.A. Exhibits 91 through 93 and their analysis that
02 the fishery in those creeks are in good condition, he
03 has not laid the foundation that those analyses refer
04 to Section 5937. And, therefore, the question is
05 confusing apples and oranges and asking this witness to
06 relate these analyses to his testimony.

07 HEARING OFFICER DEL PIERO: Mr. Birmingham?

08 MR. BIRMINGHAM: I'll stand by the question.

09 HEARING OFFICER DEL PIERO: Well, I'm going to
10 sustain the objection, Mr. Birmingham.

11 Let me suggest to you, Sir, that if you want five
12 additional minutes, I'll grant that five additional
13 minutes, no more than that, but in order for you to lay
14 the foundation. You've taken a rather long time to
15 introduce four short paragraphs related to the
16 recommendations of the department on the stream. So if
17 you need five additional minutes to lay the foundation
18 in order to ask that question, you can have that.

19 MR. BIRMINGHAM: I appreciate that.

20 HEARING OFFICER DEL PIERO: It's taking a very
21 long time to get to your point. I know what your point
22 is, but --

23 MR. BIRMINGHAM: I apologize for taking the time,
24 but I wanted to lay the appropriate foundation so I
25 wouldn't have the objection.

0045

01 Q BY MR. BIRMINGHAM: I'm asking you a biological
02 question, not a legal question, Mr. Wong. Putting
03 aside 5937 of the Fish and Game Code -- you're a
04 fisheries biologist; is that correct?

05 A Yes.

06 Q Now, I'm going to ask you, in your capacity as a
07 fisheries biologist, a biological, hypothetical
08 question. I'm going to ask you to assume that the fish
09 population in Rush Creek is in good condition
10 biologically. If you make that assumption, based upon
11 your earlier response to one of my questions, I take it
12 that it can be safely assumed that the physical,
13 biological, and chemical parameters which constitute
14 the ecology of Rush Creek are not negatively affecting
15 the fish population which is in good condition.

16 MS. CAHILL: Objection. The question's unclear
17 because of the reference to an answer to a previous
18 question. I'm not sure it's at all clear what the
19 meaning of this entire question is.

20 MR. DODGE: I object on the grounds that the term
21 "negatively affect" is ambiguous.

22 HEARING OFFICER DEL PIERO: I'm going to sustain
23 the objections.

24 Mr. Birmingham, you need to break it up, okay?

25 MR. BIRMINGHAM: May I ask Ms. Anglin, who now, I
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01 think, has the ability to do a computer search, and
02 she's frowning, I would like her to search my
03 cross-examination of Mr. Wong for the term "parameters"
04 because I asked Mr. Wong a question about the
05 parameters that are contained in Paragraph 7 of his
06 direct testimony. And after I -- after I ask her to
07 find those questions, I will then ask Mr. Wong this
08 hypothetical question.

09 (Whereupon a short recess was taken.)

10 HEARING OFFICER DEL PIERO: We're back in session,
11 Ladies and Gentlemen.

12 Mr. Birmingham?

13 MR. BIRMINGHAM: Thank you.

14 Q BY MR. BIRMINGHAM: Mr. Wong, during the recess, I
15 had an opportunity to go back and look at the
16 transcript of this morning's proceeding, and I asked
17 you the following question: "Question, Mr. Wong, if
18 fish in a stream are in good condition, is it safe to
19 assume, then, that the parameters that you have listed
20 in your testimony are not having a negative impact on
21 fish?" And your response to my question was, "Yes, I
22 would agree with that."

23 Now, when I asked you that question, the
24 parameters that we were talking about -- and we can go
25 back and get this from the record, if necessary, the

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01 parameters that we were talking about were those listed
02 in Paragraph 7 of your written testimony. Is that
03 correct?

04 A Chemical, physical --

05 Q Physical, biological, and chemical parameters.

06 A Yes.

07 Q And you said that you would agree with me that if
08 fish in a stream are in good condition, it is safe to
09 assume, then, that the parameters that we have listed
10 are not having a negative impact on fish?

11 A That's correct, but maybe some clarification is
12 required. We are speaking very generally here, Sir,
13 and biological systems are very frequently changing.
14 So at any given moment, some of those may not be
15 exactly what you want to see, but overall, things might
16 be all right. So you see the quandary that -- the
17 problem I have with some of your very general
18 questions.

19 Q Let me ask you -- your testimony is very general,
20 so apparently my questions have to be very general.
21 And I don't want to be argumentative, but let me ask
22 you a general, hypothetical, biological question.

23 If, at a given point in time, fish in a stream
24 like Rush Creek are in good condition biologically,
25 then isn't it safe to assume that the parameters -- the
0048

01 physical, biological, and chemical parameters which

02 constitute the ecology of the stream are not having a
03 negative impact on fish?

04 MS. CAHILL: Objection. Ambiguous whether "fish"
05 means individual fish or fish in a larger population
06 sense.

07 HEARING OFFICER DEL PIERO: Rather than have you
08 restate the question, Mr. Birmingham, and having me
09 sustain the objection, can you just specify what you're
10 talking about so we can move on?

11 MR. BIRMINGHAM: Sure. I'll ask two questions.

12 Q BY MR. BIRMINGHAM: First, with respect to that
13 individual fish that you've got up there on the board,
14 if that fish were alive and in a stream and in good
15 condition, would it not be safe to assume that the
16 physical, biological, and chemical parameters which
17 constitute the ecology of the stream are not having a
18 negative impact on that fish?

19 A No.

20 Q Generally, Mr. Wong, if that fish is in good
21 condition, isn't it safe to assume that these physical
22 parameters are not having a negative impact on fish?

23 MS. CAHILL: Asked and answered.

24 MR. ROOS-COLLINS: Asked and answered.

25 MR. DODGE: Same question.

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01 HEARING OFFICER DEL PIERO: Forgive me, I'm
02 sorry.

03 (Whereupon the record was read as requested.)

04 MS. CAHILL: Asked and answered. The most recent
05 question was identical to the one before it.

06 MR. BIRMINGHAM: I disagree.

07 HEARING OFFICER DEL PIERO: Overruled. Answer the
08 question, Mr. Wong.

09 MR. WONG: I think I better have it read again,
10 also.

11 (Whereupon the record was read as requested.)

12 MR. WONG: All these double negatives throw me for
13 a loop sometimes.

14 HEARING OFFICER DEL PIERO: Do you understand the
15 question?

16 MR. WONG: I thought I did the first time.

17 HEARING OFFICER DEL PIERO: If you don't, I'll --

18 MR. WONG: Could you state in it positive sense,
19 Sir?

20 Q BY MR. BIRMINGHAM: Let me ask you just a different
21 question. Let's go back to the question you answered
22 before and make sure that we understood the answer to
23 that question. Now -- and I wrote this down very exact
24 because I don't want there to be any confusion. I
25 don't want there to be any objections because it's

0050

01 ambiguous. I just want to clear up the record.

02 Now, before when I asked you if fish in a stream
03 are in good condition, is it safe to assume, then, that
04 the parameters that you have listed in your testimony
05 are not having a negative impact on fish, you said,
06 "Yes, I would agree with that."

07 Now, let's take it to the specific. If that fish
08 that you've got up there were alive and in a stream,
09 was in good condition biologically, then is it safe to

10 assume that the physical conditions that you've listed
11 in Paragraph 7 of your testimony are not having a
12 negative impact on that fish in general terms, because
13 your testimony's general?

14 MR. THOMAS: Objection. Ambiguous as to point in
15 time. What the questions are doing is he's taking a
16 single point in time and confusing it with a continuum,
17 and the witness can't understand the difference unless
18 we're clear.

19 HEARING OFFICER DEL PIERO: Overruled. Answer the
20 question.

21 MR. WONG: The question's not clear to me in that
22 you said it's in good condition biologically?

23 Q BY MR. BIRMINGHAM: Yes, biologically.

24 A I'm not sure what your definition is. What does
25 that mean?

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01 Q Well, I'm not a fisheries biologist, Mr. Wong, so
02 maybe you can tell me --

03 A It's not easy.

04 Q Well, your written testimony talks about fish in
05 good condition. "Good condition" is a term that you
06 used throughout your written testimony; is that
07 correct?

08 A Yes.

09 Q And now you're telling me you don't know what that
10 means in biological terms?

11 A I'm not sure what your definition is, but it's key
12 to the answer to that question.

13 Q I'm asking a question about your understanding.
14 Now, you have an understanding of what "good condition"
15 means; is that correct?

16 A Yes.

17 Q Now, my question is based on your understanding of
18 good condition because I'm not a fisheries biologist.
19 You are. Okay? And again, I apologize if I'm being
20 argumentative, but if that fish that we're talking
21 about were alive and in Rush Creek and in good
22 condition, then would it be safe to assume that at the
23 point in time you took that fish out of the stream and
24 determined that it was in good condition, wouldn't it
25 be safe to assume that the physical parameters that are

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01 set out in Paragraph 7 of your testimony are not having
02 a negative impact on the fish?

03 A I'm still troubled somewhat by your -- the
04 question being that if you're equating good condition
05 to meaning that that fish is alive and in the stream,
06 then it would, in effect, be the answer to that
07 question.

08 HEARING OFFICER DEL PIERO: Mr. Wong, I want you
09 to assume that the fish at the point in time at which
10 Mr. Birmingham has asked you the question is one moment
11 away from being hooked and removed from the stream.
12 Now answer the question.

13 MR. WONG: So it's just alive in its current
14 state.

15 HEARING OFFICER DEL PIERO: One moment away from
16 being hooked and removed. A single moment in time.

17 MR. WONG: I believe, from what I understand the

18 question to be, the answer is no.
19 Q BY MR. BIRMINGHAM: Now, I'm going to ask you a
20 question about a fish population. If a fish population
21 in Rush Creek is in good condition, and let's just make
22 sure that we're talking about the same term because in
23 your Paragraph 7, you talk about what "good condition"
24 is. And you say, "Good condition includes the instream
25 flows necessary to keep fish in good condition,

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01 including those which will maintain a self-sustaining
02 population of desirably-sized adult vertebrate fish
03 which are in physically condition; i.e.,
04 well-proportioned and disease-free." Is that what you
05 mean by "good condition"?

06 A That's only a part of it.

07 Q Let's just talk about this part of it because
08 that's the only part that we've got in your testimony.

09 MR. DODGE: Objection. You have to read the rest
10 of Paragraph 7. That's really outrageous.

11 HEARING OFFICER DEL PIERO: Let's --

12 Mr. Birmingham, there are other portions -- there are
13 other statements in his testimony. If you wish to
14 focus on that aspect of it, then we'll focus on that
15 aspect of it. But your representation that that's the
16 only part of it is not appropriate.

17 MR. BIRMINGHAM: Okay. I withdraw the
18 representation.

19 Let's focus on that aspect of what "good
20 condition" is. All right? If the fish population in
21 Rush Creek is in good condition; i.e., it is a
22 self-sustaining population of desirably-sized adult
23 vertebrate fish which are in good physical condition
24 and well-proportioned and disease-free, isn't it safe
25 to assume that the physical parameters which constitute

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01 the ecology of the stream listed in Paragraph 7 are not
02 having a negative impact on the fish population?

03 HEARING OFFICER DEL PIERO: He's asking you for an
04 assumption, Mr. Wong.

05 MR. WONG: Again, if you're using the -- if you're
06 wanting me to assume that the fish in Rush Creek are in
07 good condition, I cannot agree with the assumption.
08 But given the assumption --

09 HEARING OFFICER DEL PIERO: Whether you agree with
10 the assumption or not, Mr. Wong, is not the point.
11 He's asking you to answer a question based on that
12 assumption.

13 MR. WONG: The answer is at any given point in
14 time, the answer would be no. Not necessarily.

15 Q BY MR. BIRMINGHAM: Before I started to ask you a
16 question about condition factors. Do you recall
17 that -- never mind. Let me just go to the page.

18 On Page 47 of the Lee Vining Creek Stream
19 Evaluation Report 93-2, Volume One -- you said you'd
20 read this report; is that correct?

21 A I did some time ago. I'm not -- I'm not entirely
22 familiar with the report.

23 Q Do you have a copy of the report in front of you?

24 A No, I do not.

25 Q Let me give you one of my copies, and I'll ask

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01 that you return this to me at the conclusion of the
02 testimony.

03 I'd ask you to turn to Page 47 of the report. On
04 Page 47 of the report in the first full paragraph, it
05 discusses the term "condition factor." Is that
06 correct?

07 A Yes.

08 Q Is that a biological term with which you are
09 familiar?

10 A Yes.

11 Q Page 47 says that, "A condition factor assessed by
12 habitat type indicated that fish in pools, paren, mean
13 K equals 1.07, end paren, were growing well. Only one
14 fish had a condition factor less than 1.0; i.e., 0.9.
15 Trout in runs, paren, mean K equals 1.09, end paren,
16 and riffles, paren, mean K equals 1.124, end paren,
17 also appeared to be growing well but showed greater
18 variability and condition. The high-condition factors
19 calculated from several of the small trout caught in
20 riffles may be an artifact of small errors in
21 measurement of weight or fork length relative to the
22 length and weight of the small fish."

23 First, Condition Factor K. What does that term
24 mean?

25 A In plain and simple terms it just means how fat is

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01 the fish.

02 Q Now, if -- in biological terms, to put aside 5937,
03 you're not a lawyer. You're a biologist. In
04 biological terms, if a condition factor for a single
05 fish is equal to or greater than one, isn't it correct
06 that that fish is in good condition?

07 A It means you have a fat fish. If you've got
08 something -- it means you've got a fish that is
09 well-proportioned. If you're looking at a single fish,
10 that isn't necessarily indicative of the entire
11 population.

12 Q I'm asking you, Mr. Wong, about a single fish.

13 A Very well.

14 Q Put aside the entire fish population. You said it
15 means you've got a fat fish, well-proportioned. Now,
16 does that -- that's included in your definition of good
17 condition, isn't it?

18 A I'm sorry. Would you repeat the question?

19 Q Yes. In response to my question about a single
20 fish with a condition factor equal to or greater than
21 one, I asked you if that fish was in good condition,
22 and you said what it means is you've got a fat fish,
23 well proportioned. Is that right?

24 A What it strictly means is you have a fish with a
25 condition factor which may be greater than one.

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01 Q And that means that the fish is in good condition;
02 isn't that correct?

03 A I would not agree with that, Sir. It depends --
04 see, the problem with all of this is that it's a matter
05 of semantics and what "good condition" means. I think
06 we'll be talking a lot about that in awhile, but right
07 now it means that you have -- when you say "fish in

08 good condition," you have a fish that has a certain
09 condition factor. Its potential could be greater or
10 less than what you see, or it could be the only one in
11 the population like that.

12 Q If -- are condition factors calculated for an
13 entire population of fish?

14 A They're conducted on individual fish.

15 HEARING OFFICER DEL PIERO: Mr. Birmingham?
16 Mr. Wong, if -- help me to understand, okay? If I went
17 out and I caught a brown trout out of Rush Creek with a
18 condition factor of one, describe for me what that
19 trout would look like.

20 MR. WONG: It would appear to be a pleasantly
21 plump fish, in plain terms.

22 HEARING OFFICER DEL PIERO: Would it have -- from
23 a biological standpoint, would it be a healthy fish?

24 MR. WONG: It could be, but also it may not be.
25 These factors are all independent of each other.

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01 HEARING OFFICER DEP PIERO: Tell me -- would you
02 only be able to know whether, from a biological
03 standpoint, it was a healthy fish if you did an
04 analysis, cut it open, and figured out what its innards
05 looked like?

06 MR. WONG: You could tell externally as well.

07 HEARING OFFICER DEL PIERO: Okay. With a
08 condition factor of one -- would a fish that externally
09 was not -- did not appear to be healthy have a
10 condition factor of one? Did you understand the
11 question?

12 MR. WONG: Yes. The reason why I'm hedging is --

13 HEARING OFFICER DEL PIERO: If it has a fungus,
14 okay, would it have a condition factor of one?

15 MR. WONG: It could.

16 HEARING OFFICER DEL PIERO: It could. Okay. I'm
17 sorry, Mr. Birmingham.

18 Q BY MR. BIRMINGHAM: You've stated that fish
19 populations -- or condition factors are not calculated
20 for fish populations?

21 A Generally, that I'm aware of.

22 Q So if I were to ask you if a fish population had a
23 condition factor equal to or greater than one, you
24 wouldn't be able to tell me whether or not that fish
25 population was in good condition?

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01 A I wouldn't. No.

02 Q Now, in your testimony, you said that the
03 Department of Fish and Game manages resources on an
04 ecosystem basis. Is that right, Mr. Wong?

05 A Yes.

06 Q In managing an ecosystem, in your opinion, is it
07 appropriate to focus on a non-native species such as
08 brown trout?

09 A How do you mean "appropriate"? You'll have to
10 define that for me, please.

11 Q Is it a good idea to focus the managing of an
12 ecosystem -- is it a good idea to focus on a non-native
13 species such as brown trout?

14 MR. ROOS-COLLINS: Mr. Del Piero, rather than
15 object, I would just ask that Mr. Birmingham clarify

16 whether he's asking about a good idea in legal terms or
17 biological terms.

18 MR. DODGE: I would object to the question as
19 irrelevant because the legislature has resolved that.

20 HEARING OFFICER DEL PIERO: I'm going to overrule
21 the objection. If you could specify what -- to a
22 greater extent than you have, Mr. Birmingham, then we
23 can move along. Okay?

24 MR. BIRMINGHAM: Biological terms. All of my
25 questions to Mr. Wong have been biological questions.

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01 HEARING OFFICER DEL PIERO: Mr. Wong, do you
02 understand the question?

03 MR. WONG: I would like to have it repeated,
04 please.

05 HEARING OFFICER DEL PIERO: Ms. Anglin, would you
06 read it, please?

07 MR. BIRMINGHAM: It may be easier for me to --

08 Q BY MR. BIRMINGHAM: In biological terms, Mr. Wong,
09 when managing an ecosystem like the Mono Basin, is it a
10 good idea to focus on a non-native species like brown
11 trout?

12 A Again, "good idea" troubles me as much as anything
13 else.

14 MR. BIRMINGHAM: That's fine. Thank you,
15 Mr. Wong.

16 MR. THOMAS: The witness --

17 MR. BIRMINGHAM: If --

18 MR. THOMAS: -- is about to finish his answer.

19 MR. WONG: It's meaningful here that we resolve
20 what that means. I think I know what you want to get
21 at, but you'll have to get there on your own, I'm
22 afraid.

23 MR. BIRMINGHAM: If you don't understand "good
24 condition," Mr. Wong, or "good idea," I have no further
25 questions. Thank you.

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01 HEARING OFFICER DEL PIERO: Thank you very much,
02 Mr. Birmingham. Mr. Dodge?

03 MR. DODGE: No questions.

04 HEARING OFFICER DEL PIERO: Mr. Roos-Collins?

05 CROSS-EXAMINATION BY MR. ROOS-COLLINS

06 Q Good morning, Mr. Wong. I have a few questions
07 for you regarding Paragraph 9 of your written
08 declaration. Do you have that declaration before you?

09 A Yes, I do.

10 Q In the paragraph following the quotation from the
11 article by Drs. Platts and Beschta and Mr. Hill, you
12 state, "It is my opinion that the flow regime
13 parameters described above are necessary to maintain
14 the stream ecosystem and its associated fish
15 populations in good condition."

16 MR. BIRMINGHAM: Excuse me. I'm going to object
17 to the question on the grounds as vague and ambiguous
18 in terms of "good condition."

19 HEARING OFFICER DEL PIERO: Sustained.

20 MR. ROOS-COLLINS: I haven't asked a question. I
21 simply read the testimony.

22 HEARING OFFICER DEL PIERO: Well -- can you read
23 that back?

24 (Whereupon the record was read as requested.)
25 HEARING OFFICER DEL PIERO: I thought that was
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01 eliciting a response in terms of yes or no.
02 MR. BIRMINGHAM: If he was going to go beyond
03 that, the question would have been compound.
04 HEARING OFFICER DEL PIERO: I'm sorry.
05 Mr. Roos-Collins?
06 MR. ROOS-COLLINS: Mr. Del Piero, I simply read a
07 sentence from his testimony. I have not yet asked him
08 to interpret that sentence.
09 HEARING OFFICER DEL PIERO: Your question, the way
10 I interpreted it, was eliciting either an affirmation
11 or denial of the written statement, so why don't you
12 proceed, Sir. Okay?
13 Q BY MR. ROOS-COLLINS: Mr. Wong, is that sentence in
14 Paragraph 9 of your written declaration?
15 A Yes.
16 Q That paragraph then goes on to discuss the IFIM
17 results; is that correct?
18 A Yes.
19 Q Do you have a recommendation for this Board as to
20 the analytical methodology which it could use to
21 determine the channel maintenance flows, riparian
22 maintenance flows, and valley maintenance flows
23 described in the quotation discussed in this paragraph
24 of your written declaration?
25 MR. BIRMINGHAM: I'm going to object on the
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01 grounds that the question is vague and ambiguous. It
02 refers to the written testimony which contains the term
03 "good condition," and the term "good condition" is
04 something that we have not yet defined.
05 HEARING OFFICER DEL PIERO: Mr. Roos-Collins,
06 your response?
07 MR. ROOS-COLLINS: I don't believe the question
08 contained the term "good condition," therefore, the
09 objection seems irrelevant.
10 HEARING OFFICER DEL PIERO: Mr. Thomas, you don't
11 want to offer a better justification for the objection?
12 MR. THOMAS: I was thinking, though, that we're
13 going to have a hard time having a hearing if every
14 time the term "good condition" comes up, we have an
15 objection --
16 MR. ROOS-COLLINS: Mr. Del Piero, let me withdraw
17 the question. I have no desire to complicate this
18 matter by reference to the term "good condition."
19 Q BY MR. ROOS-COLLINS: Mr. Wong, if this Board agrees
20 that flows should be established for channel
21 maintenance, riparian maintenance, and valley
22 maintenance purposes, as described in Paragraph 9 of
23 your written testimony, do you have a recommendation as
24 to the methodology which this Board would use to
25 establish those flows?
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01 A I guess the answer would be yes, those
02 methodologies are contained in the stream reports which
03 the department has provided in its recommendation.
04 MR. ROOS-COLLINS: Thank you. No further
05 questions.

06 HEARING OFFICER DEL PIERO: Thank you very much,
07 Mr. Roos-Collins. Ms. Scoonover?

08 MS. SCOONOVER: Yes, Mr. Del Piero.

09 CROSS-EXAMINATION BY MS. SCOONOVER

10 Q Good morning, Mr. Wong.

11 A Good morning.

12 Q I have a question about the lake ecology section
13 of your testimony. You testified, I believe, that
14 there was a species of zooplankton that was
15 extricated. Do you remember that testimony?

16 A Yes.

17 Q All right. I beg your pardon. Species. More
18 than one species of zooplankton have been extricated.

19 My question is do you believe it's feasible to
20 restore the bio-diversity of the lake?

21 A I do. And the basis for that decision is actually
22 contained in one of the auxiliary reports for the Draft
23 Environmental Impact Report. It's Auxiliary Report
24 Number 12 entitled Functional Relationships Between
25 Artemia Leefe History Characteristics and Salinity, and
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01 this is part of the basis for my conclusion.

02 On Page 21, there's a sentence in the -- there's a
03 discussion in the previous and the following page or
04 two regarding the bio-diversity of Mono Lake. And
05 within this discussion, talking about the species that
06 used to occur there as well as the extrication of some
07 of the species, there's a sentence that says, and I'll
08 quote, "Species diversity of the plankton will most
09 likely increase in a less saline Mono Lake."

10 In addition to that, the Board has received from
11 the LaHatten (phonetic) Regional Water Quality Control
12 Board, as part of their comments on the Draft
13 Environmental Impact Report, a document which is a
14 scientific paper authored by Dean W. Blinn, B-L-I-N-N,
15 which is entitled "The Diatom Community Structure Along
16 Physico-Chemical Gradients in Saline Lakes." The gist
17 of this article or this scientific paper, after the
18 author surveyed and evaluated diatom populations,
19 diatoms meaning uni-cellular or single-celled plants,
20 which are quite diverse and widespread throughout most
21 of North America, that after surveying nearly 50 saline
22 lakes in the North American continent, that there was
23 an inverse correlation between the numbers of species
24 of diatoms present and the salinity. Mono Lake is one
25 of the lakes that is involved in the survey or in this
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01 evaluation.

02 Q Mr. Wong, excuse me. Could that paper have been
03 provided to the Board --

04 A Well, the Board has it, I presume, as part of the
05 comments from the LaHatten (phonetic) Regional Water
06 Quality Board comments. That's how I obtained them was
07 my copy of those comments.

08 Q So it's part of the comments to the EIR?

09 A As far as I know, it is.

10 HEARING OFFICER DEL PIERO: Mr. Birmingham?

11 MR. BIRMINGHAM: I don't think we received any
12 evidence from the regional board.

13 HEARING OFFICER DEL PIERO: Mr. Canaday, do you

14 recall?

15 MR. CANADAY: I don't recall, Mr. Del Piero.

16 MR. WONG: This was attached to my copy of those
17 comments to the Board. If you do not have it, please
18 let me know, and I can make it available or the Board
19 can make it available to you, the LaHatten (phonetic)
20 board.

21 MS. SCOONOVER: I would like a copy of that.

22 HEARING OFFICER DEL PIERO: Mr. Wong, you need to
23 make it available to all parties.

24 MS. SCOONOVER: I'm sorry. I interrupted. Were
25 you finished?

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01 MS. CAHILL: Shall we give that an exhibit number?

02 HEARING OFFICER DEL PIERO: If you wish to give it
03 an exhibit number, Ms. Cahill, that will be fine. I
04 just want to make sure that all parties who are not in
05 receipt of it get a copy of it.

06 MS. CAHILL: That would be 155.

07 HEARING OFFICER DEL PIERO: Fine.

08 MR. SMITH: Point of order. Could we specify the
09 title of that for us for an Exhibit No. 155?

10 MR. WONG: Right now?

11 MR. SMITH: Yes, please.

12 MR. WONG: The author is Dean, D-E-A-N, W. Blinn.
13 B-L-I-N-N. entitled "Diatom," D-I-A-T-O-M, "Community
14 Structure Along Physico-Chemical Gradients and Saline
15 Lakes." It's from the journal "Ecology," 1993.

16 I also, in my literature file, came across another
17 paper entitled "Taxonomy and Distribution of Benthic
18 Diatoms for Mono Lake, California, USA." It's an
19 article authored -- or a paper authored by J. P.
20 Bociolek, B-O-C-I-O-L-E-K, and D. B. Herbst,
21 H-E-R-B-S-T.

22 Basically, what this article does is describe the
23 diatom community of Mono Lake, which amounts to some 30
24 species, and describes two new species of diatoms
25 heretofore not known to science. This was published in

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01 the Transactions of the American Microscopical Society
02 dated 1992.

03 Q BY MS. SCOONOVER: And are those existing diatom
04 communities?

05 A Yes, they are.

06 Q So they wouldn't include the extricated?

07 A That's correct. And the reason why I use this as
08 a basis for my statement is that other researchers
09 apparently have come to the conclusion that decreasing
10 salinities in Mono Lake would allow the return of the
11 species that were extricated which have very good
12 dispersal means. Diatoms, rotifers, the things that
13 are contained in the report, species mentioned, other
14 insects that have been extricated and, therefore, I
15 would come to the conclusion it's feasible to restore
16 those values with a proper lake level.

17 Q And that proper lake level that you recommended in
18 your testimony was some increment above 6390?

19 A That's correct. Based on information provided in
20 the DEIR.

21 MS. SCOONOVER: Thank you. That's all.

22 HEARING OFFICER DEL PIERO: Thank you very much.
23 Mr. Haselton?

24 CROSS-EXAMINATION BY MR. HASELTON
25 Q Good morning, Mr. Wong. My name is Frank

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01 Haselton. I represent John Arcularius, Arcularius
02 Ranch, and the Upper Owens River. I want to -- I'll
03 try and keep my questions grouped in a sense of
04 organization, though I can't promise that won't
05 happen.

06 I want to ask you first about your testimony as it
07 pertains to the Mono Basin, and I have two questions.
08 And I'm starting on -- well, apparently, this is your
09 first page, Paragraph Number 6. And I'm assuming you
10 know this fairly close to memory, so I'm not going to
11 read all of it. But there are terms that you use, for
12 example, in the third sentence of Paragraph 6, you
13 state that, "The Fish and Game goal is to make these
14 fish available to the angling public as part of the
15 natural ecosystem."

16 The following page, Paragraph Number 7, the second
17 to the last sentence states, "Therefore, the good
18 condition requirement must include the protection and
19 maintenance of the physical, biological, and chemical
20 parameters which constitute the ecology of the stream."

21 The following page in Paragraph 10, though, the
22 second to the last sentence, you use the term
23 "naturally functioning streams," and in Paragraph 11,
24 first sentence, you use the term "natural rate of
25 change streams." And the second sentence in Paragraph

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01 11 is, "Ideally the rate of change of controlled stream
02 flows, open parentheses, ramping, close parentheses,
03 should mimic the natural hydrograph." And then within
04 that same paragraph -- excuse me, within -- under
05 Section 11, next paragraph, you go on and agree with --
06 I don't know if you're recommending it, but you agree
07 with that, "A flow reduction of less than 10 percent of
08 the previous day's flow would be highly preferred."

09 And my question to you is controlling the ramping
10 rate where it's reduced less than 10 percent of the
11 previous day's flow, is that consistent with the
12 natural condition of Rush Creek or those other
13 streams? I believe you're referring just to all the
14 tributaries, if I'm not correct.

15 HEARING OFFICER DEL PIERO: Excuse me,
16 Mr. Haselton. I'm sorry, but I didn't understand your
17 question. Okay?

18 MR. HASELTON: Okay. I'll just -- let's say, Rush
19 Creek.

20 Q BY MR. HASELTON: Is a flow -- is a controlled
21 ramping program that limits the flow increase or
22 reduction by 10 percent or less of the previous day's
23 flow, is that consistent with the natural condition of
24 Rush Creek?

25 MR. DODGE: Objection. Ambiguous.

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01 HEARING OFFICER DEL PIERO: I'm going to sustain
02 the objection, Mr. Haselton. Mr. Wong is a biologist.
03 You want to talk about the hydrology of -- alternative

04 hydrologies and flows in the stream. The questions
05 you're asking are not appropriately put to him.

06 MR. HASELTON: Okay. I thought -- I was just
07 following his testimony.

08 HEARING OFFICER DEL PIERO: I understand. But you
09 need to focus on what the nature of his testimony was.
10 Okay?

11 MR. HASELTON: Okay.

12 HEARING OFFICER DEL PIERO: You can ask him in
13 terms of what he's testifying on.

14 Q BY MR. HASELTON: Okay. Then we'll go ahead and move
15 on down to Paragraph Number 17, and it's a couple of
16 pages. I'll go ahead and read the first sentence. The
17 Mono Basin EIR states on Page 3-D-101 that, "Excellent
18 fishery conditions existed in the Mono Basin tributary
19 prior to L.A. DWP diversions."

20 And by having that statement, do you concur with
21 that statement in the EIR?

22 A I have no personal knowledge. As I mentioned
23 before, I assume that the information that was put
24 together for the Draft Environmental Impact Report
25 accurately reflected those conditions, and that's why

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01 it's stated that way. And I based it upon those -- the
02 conclusions of the Jones and Stokes personnel. I have
03 no personal knowledge as to what those fisheries were.

04 Q Okay. Then let's move on to the Upper Owens
05 River, and I'd like to start with the Exhibit DFG
06 No. 2, which I believe is -- is titled Personal
07 Qualifications Statements of Darrell M. Wong. And the
08 second to the last paragraph starts off saying,
09 "Responsibilities include the management of fisheries
10 in over 600 high country lakes with several hundred
11 streams of the Sierras as well as numerous roadside
12 cold-water lakes and reservoirs."

13 Could you just take a moment and explain to me
14 what does "management" mean?

15 A Well, other than just management, management of
16 fisheries?

17 Q What constitutes your responsibilities? You used
18 the word "management," and I'm trying to break that
19 down.

20 A Generally, the fisheries that are managed in it,
21 we manage for in the eastern Sierra, are recreational
22 fisheries. They are fish populations that are being
23 utilized for recreational purposes. So in order to
24 perform that function, we first need to look at the
25 desires of the anglers, and then try to provide

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01 recreational anglers with those types of fish, meaning
02 both species and size, et cetera, which are preferred,
03 as well as doing in it a context of the natural
04 ecosystem.

05 Q Does -- is the Upper Owens River included in your
06 geographical area of management?

07 A Yes, it is.

08 Q The Upper Owens River essentially extends from --
09 would you agree with me, I guess is probably a better
10 way of putting it, that the Upper Owens River extends
11 from Big Springs -- generally speaking, from Big

12 Springs down to Crowley Lake?

13 A Yes.

14 Q And of that portion, approximately half -- and I'm
15 speaking in general terms -- is under private property
16 ownership?

17 A Approximately half. I would agree.

18 Q Are you familiar with the Arcularius Ranch?

19 A I have been there on occasion.

20 Q As vacationing or --

21 A Not as a client. I've been there on business.

22 Q We'll see what we can do.

23 I'm going to refer to, I think, a report that was
24 introduced earlier. It's the -- my cover's falling
25 off, DFG Exhibit No. 62. And that is the Upper Owens

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01 River Stream Evaluation Report 93-1. Do you have a
02 copy of that, by any chance?

03 A No, I do not. Again, the reason for that is that
04 very specific questions regarding the reports
05 themselves should be addressed to the appropriate
06 panel. I only have very general recommendations. As
07 the manager who was responsible for these resources
08 once this whole process is completed, things are
09 settled, then either me or my successor would be
10 responsible for managing the ecosystem and providing
11 for recreational fisheries with those resources that
12 come from this process. And so in that regard, you
13 seem to need a general overview for those kinds of
14 concerns.

15 If I can answer your question in that context -- I
16 don't want to put you off, but if it's anything
17 specific, then it should just be a -- brought up with
18 that particular panel.

19 Q Okay. Well, in fact, that may assist me because
20 maybe we can get to the point a little quicker. Now,
21 are you aware that -- well, let's talk about the
22 Arcularius Ranch. Are you aware that the Arcularius
23 Ranch, as part of their management, implements a
24 catch-and-release program?

25 A Yes.

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01 Q Are similar -- excuse me. Let me back up. Do
02 you, in your professional opinion, believe that such a
03 component of a management program is beneficial to the
04 fishery?

05 A The reason why I'm hesitating is it really depends
06 upon the goals and the public's desires for that
07 fishery. When you say "fishery," I have to assume it's
08 not the fish population necessarily, but the fishery,
09 which means you add the angler and the desirability.

10 Q Thank you for helping me clarify.

11 Let's talk about the fish, fish population,
12 because that's what this report that I will work with
13 the panel with later on speaks to. It speaks to fish
14 population, fish density, as a matter of fact, and it
15 actually compared the fish density, the Arcularius
16 Ranch and other portions of the Upper Owens River.

17 That being said, my question to you, then, is do
18 you believe that a no-kill regulation or component of a
19 management program, overall management program, could

20 that benefit the fish population of an area?
21 A Yes. But I'll to have qualify it by saying that
22 what you're doing by restricting fishing to no-kill is
23 basically removing one of the types of mortality that
24 affects fish populations, their natural mortality.
25 Fish live and grow and die like everything else, but by

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01 reducing the angling portion of that mortality, you do
02 reduce the number of fish that are taken from that
03 population.

04 And by instituting a no-kill, you basically might
05 be reducing that. There is some mortality even
06 involved with a no-kill situation. So you don't have a
07 pristine, untouched population. If you mean by the
08 fact that you may have more fish than you might
09 otherwise, then the answer would be yes.

10 Q I think the rest of my questions are probably more
11 appropriate for the panel that you suggested.

12 I've got one other question. I kind of wanted to
13 assist Mr. Del Piero with his story with his son about
14 your fish up there. I want to know is that a mount or
15 that a replica of a fish that has been released?

16 A Unfortunately, it's not mine. It's on loan, and
17 I'm not sure what its background is. I don't believe
18 it was taken at the Arcularius Ranch property. Sorry.

19 MR. HASELTON: I hope not. Thank you.

20 HEARING OFFICER DEL PIERO: We're going to be on
21 break for ten minutes.

22 (Whereupon a short recess was taken.)

23 HEARING OFFICER DEL PIERO: This hearing will
24 again come to order.

25 Mr. Frink?

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01 MR. FRINK: Yes, Mr. Del Piero. I do have a few
02 questions. Our environmental staff will have some
03 more.

04 CROSS-EXAMINATION BY THE STAFF

05 Q BY MR. FRINK: Mr. Wong, I believe you testified that
06 in making fishery flow recommendations, one of your
07 objectives is to mimic natural conditions; is that
08 correct?

09 A The idea to imitate -- in a natural situation, if
10 that's what you're referring to, the idea would be to
11 imitate natural conditions within natural range of
12 variation. The ecosystems that we deal with are
13 subject to variations in weather and a whole multitude
14 of physical parameters. And the idea is that from an
15 ecosystem approach, that that ecosystem be maintained
16 at some level, and that it be still subject to those
17 type of natural variations which resulted in the
18 animals that are present -- animals and plants that are
19 present in that system.

20 MR. BIRMINGHAM: Excuse me, may I ask the Reporter
21 mark that answer?

22 Q BY MR. FRINK: You would not want to impose large
23 variations that are more excessive than the variations
24 that occur under natural conditions; is that correct?

25 A When you say -- can I ask for clarification? When
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01 you say "impose," a lot of things run through my mind.

02 If you have a totally controlled system, which you
03 normally don't. In other words, what I'm getting at
04 are flood flows, I think. You can have a flushing
05 flow, but that will often be exceeded -- or not often,
06 but could be exceeded naturally due to flows beyond
07 which you have the capacity to control. So that's
08 why -- I don't -- I'm not being reluctant to answer,
09 it's just that there are a lot of variations and a lot
10 of variabilities in the biological world,
11 unfortunately, which make it difficult to answer some
12 of these questions generally.

13 Q Have you reviewed the historic flow records on
14 Rush Creek, Lee Vining Creek, Parker Creek, and Walker
15 Creek?

16 A No, I have not.

17 Q Are you familiar with the flow fluctuations that
18 occur under natural conditions in those creeks?

19 A By "natural conditions," you'll have to define --
20 do you mean unimpaired? I guess the answer in either
21 case is no, but there's a distinction there in terms of
22 what the natural flows are in those creeks.

23 Q So your testimony is that you're unaware of --

24 A No. I'm not unaware of it, but again, you're
25 getting down to factors that were developed by the

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01 consultants --

02 Q I'm not asking about factors that the consultants
03 developed --

04 HEARING OFFICER DEL PIERO: Mr. Frink -- Mr. Wong,
05 in terms of the questions being asked, it's safe for
06 you to assume that the words being used are plain
07 English. In terms of "natural conditions," when
08 Mr. Frink is asking you about flows under natural
09 conditions, that means a system that is unimpaired and
10 has no man-made modifications to it. Now, if you
11 aren't capable of answering that question, then it's
12 okay for you to say you don't know the answer to that
13 question.

14 Alternatively, if you have reviewed what natural
15 runoff is within either Rush Creek or Lee Vining Creek,
16 regardless of what man-made modifications to the system
17 may have existed, you are obliged to answer that
18 question.

19 Mr. Frink, why don't you proceed? And maybe you
20 want to ask the question you asked again to see if we
21 can get an answer.

22 MR. WONG: Thank you for clarifying that, by the
23 way, because there was some confusion there.

24 Q BY MR. FRINK: The question I have is are you aware
25 of the type of fluctuation in the rate of flows that

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01 would occur under natural conditions in Rush Creek and
02 Lee Vining Creek?

03 A Yes. I am aware, but I am not really familiar
04 with those flows. We have Dr. Kondolf, who is --
05 basically, will be the one that will be very familiar
06 with those kinds of fluctuations.

07 Q Okay. On the basis of your general awareness of
08 those fluctuations, would you agree that there is a
09 considerable daily fluctuation in flows in those creeks

10 under natural conditions?

11 A Dale -- I'm sorry. A daily fluctuation?

12 Q That there can be a considerable daily fluctuation
13 in flows in those creeks under natural conditions?

14 A There can be, yes.

15 Q Your testimony recommended a ramping rate of 10
16 percent or less of the previous day's flow. Do you
17 know if the natural rate of flow fluctuation on Rush
18 Creek and Lee Vining Creek exceeds the recommended
19 ramping rate in your testimony?

20 A I have not done an actual analysis of that, but my
21 sense is, again, from many years of experience looking
22 at general hydrographs, that a rate of change, for
23 example, that would take a Rush Creek flow, flushing
24 flow from 300 cubic feet per second to 100 cubic feet
25 per second, excuse me, would take -- at a 10 percent

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01 rate, would take approximately ten days.

02 I have done an analysis from the 300 cubic feet
03 per second down to 100 cubic feet per second at a 5
04 percent increment, and that takes approximately 21
05 days. From my experience in the eastern Sierra and
06 generally the runoff patterns, it seems to me that a
07 period of time of between 10 and 21 days translating to
08 5 to 10 percent would be approximately what we would
09 normally see in a general runoff in terms of
10 recessional rate naturally. So in my estimation, it
11 would approximate the types of rates that I have seen.

12 Now, Dr. Kondolf would be the one who might do a
13 more detailed analysis of those kinds of rates. He
14 does speak of it in his testimony as well.

15 Q If your objective is to mimic natural conditions,
16 wouldn't you want to consult the natural flow records
17 or the historic flow records before you make a
18 recommendation on ramping flows?

19 A Yes, exactly. That 10 percent or 5 to 10 percent
20 is only a baseline approximate. You should consult, as
21 you're suggesting, consult a natural hydrograph or
22 synthesize a hydrograph in the watershed and determine
23 if, in fact, that 5 to 10 percent is within the natural
24 rate.

25 Furthermore, if there are any special

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01 considerations that you might have in terms of
02 erosional bank damage that are special considerations
03 especially during restoration processes, those could be
04 taken into account as well, which would help modify the
05 regime to create the situation that you're trying to
06 achieve.

07 Q Aside from the special considerations such as
08 prevention of erosion, if there were considerably more
09 fluctuation in the rate of flow that is shown under
10 historical conditions, would you agree that a ramping
11 rate in excess of 10 percent may be acceptable?

12 A Yeah. These are not hard and fast rules. I
13 would -- again, fluctuate -- to maintain some,
14 actually, even almost daily measure of variation within
15 flows is not bad. I mean, these natural systems are
16 dependent on variation. Dr. Beschta, I think, is the
17 one to really point that out, and I agree. During snow

18 melt periods, for example, the flows fluctuate during
19 the day because of snow melt. You get snow melt in the
20 morning. By the time it gets to the bottom, you've got
21 flows fluctuating within a daily period. So variation
22 per se is not bad.

23 That 5 to 10 percent is only a, more or less a
24 rough estimate of where you begin to look.

25 Q And the key guide would be to consult the
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01 historical flow records. Would you agree with that?

02 A Yes.

03 MR. FRINK: Thank you.

04 HEARING OFFICER DEL PIERO: Mr. Satkowski?

05 MR. SATKOWSKI: No questions.

06 HEARING OFFICER DEL PIERO: Mr. Smith?

07 MR. SMITH: Thank you, Mr. Del Piero.

08 Q BY MR. SMITH: I have one general question for you.
09 The mike's not working. Okay. I'll try and be as loud
10 as I can.

11 Mr. Wong, I'd like to pose a general question for
12 you. Someone, perhaps the State Board, perhaps Fish
13 and Game, is going to have to do some monitoring
14 short-term of the fishery when we establish -- the
15 Board establishes certain flows and lake levels and
16 whatever.

17 Would you agree in general terms that it would be
18 a good idea to have a zero bag limit and barbless hooks
19 for a period of time so that we can monitor the health
20 of the fish for a period of time and find out which
21 direction the fishery is going? Again, this is -- I'm
22 not asking about good condition or anything else, I'm
23 just asking about that monitoring program. Would you
24 think that would be a wise idea?

25 A Not necessarily, and here are my reasons.

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01 Unfortunately, there's a little bit of explanation to
02 clear the air here.

03 Q Please.

04 A I am not an advocate of only looking at fish
05 populations in terms of measuring your restoration
06 activity success or our restoration activity success or
07 fish that are in good condition. If you look at the
08 holistic approach that we're -- that I'm trying to get
09 across here, you have to look at the whole system,
10 stream system. The fish are only a part of that
11 system. Insects are part of that system. If you --
12 and I'll get around to monitoring here very soon. But
13 the point is what you really are after is monitoring
14 habitat, and the key here is that -- one way of looking
15 at this is if one assumes, and I think it's an
16 assumption that appears to me that Belacort (phonetic)
17 made as well, is that all the water that you have in a
18 natural system will give you good condition. It would
19 be pretty difficult to argue with that.

20 MR. BIRMINGHAM: Can I ask that that be marked?

21 MR. WONG: If all the water in a natural system
22 gives you good condition then, as we've seen, and I
23 have observed, fish populations vary tremendously in
24 terms of numbers, sizes, A factors, et cetera, in a
25 natural situation throughout the eastern Sierra. As a

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01 matter of fact, even within one stream itself, as you
02 look at the stream from top to bottom, those kinds of
03 factors will change that effect fish populations. And
04 if in one stream you have a rather small fish
05 population in terms of numbers of fish which are fairly
06 thin, but that's what they are based upon, the habitat
07 that they're involved with, that they have to put up
08 with, that they have to live in.

09 Another stream system may have large numbers of
10 very large fish based upon the factors that they're
11 in. All of these fish are in good condition because
12 they're in a natural state.

13 One we're looking at also is, getting back to the
14 Hearing Officer's question from about the first day, as
15 I recall. Can 1 cfs keep fish in good condition? The
16 answer is most definitely yes. I know streams which
17 are running at less than a cfs that have fish that are
18 16 and 17 inches long in them, and that is because
19 those fish are dependent upon the habitat that they
20 live in, and that 1 cfs is occurring in a channel which
21 is, at times, three feet deep, has undercut banks, has
22 good stable banks, produces watercress with a lot of
23 food in it, skuds, et cetera. Most definitely those
24 fish are in good condition.

25 If will you translate that 1 cfs, if in your

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01 mind's eye you can do that, to the lower part of Rush
02 Creek as it currently is, and see the conditions you
03 would expect with 1 cubic foot per second running
04 through some of these wide open channels with no
05 riparian vegetation, you would definitely say, "My
06 gosh, no. There's no way they're in good condition."

07 So it's not the flow that would maintain fish
08 entirely in good condition, but it is the combination
09 of factors, the geomorphology, all of the things that
10 you would be seeing the department of representatives
11 who would perform these studies going through. You
12 start with the hydrology, the hydrograph. What is the
13 natural situation? Then you go through physical water
14 temperatures. Food abundance. All these factors.

15 The other way to look at it as well is if you --
16 getting back to the natural state, the fish are in good
17 condition in natural conditions, then that means that
18 there's a certain potential that a stream has. There's
19 a potential that each stream has for fish populations
20 and riparian vegetation, all the factors associated
21 with the stream. Well, the problem that we have as
22 agencies is -- and the court readily recognized in
23 their wisdom, is that, well, it may not take all the
24 water in a stream to keep those conditions there. And
25 so where the Department of Fish and Game is involved is

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01 that based upon our expertise, our knowledge, intricate
02 knowledge of each stream system, the population there
03 plus the anglers' communities and desires, we came up
04 with flows which should maintain those conditions that
05 would keep those ecosystem conditions in such a state
06 that things are healthy, shall we say.

07 The surface water that's left above and beyond

08 that is available for other uses. Now, I hope that's
09 clear to you.

10 Now, getting back to monitoring --

11 MR. FRINK: Mr. Del Piero, excuse me. I
12 appreciate the witness' effort to give us a complete
13 answer, but we do have a limited amount of time. And
14 in the interests of time, I wonder if we could get some
15 direction to be as specific as possible and as brief as
16 possible in the answers.

17 HEARING OFFICER DEL PIERO: There's no grounds for
18 an objection, Mr. Thomas.

19 MR. THOMAS: I think the record should be clear
20 that the witness has been criticized earlier for being
21 non-responsive, and now he's attempting to be
22 responsive and being criticized for taking too much
23 time.

24 HEARING OFFICER DEL PIERO: Mr. Birmingham, do you
25 have a comment?

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01 MR. BIRMINGHAM: I just wanted to interpose an
02 objection.

03 HEARING OFFICER DEL PIERO: There's no objection.
04 The response is completed.

05 Mr. Smith, do you have a next question?

06 MR. SMITH: I simply wanted him to just say yes or
07 no whether zero bag limit, barbless hooks would be
08 helpful in a monitoring program.

09 MR. WONG: Really, no. What we really need to be
10 monitoring is the return of the habitat. If you get
11 the habitat restored, the fish will follow.

12 Q BY MR. HERRERA: Mr. Wong, I've got a few questions
13 that go back to some of the discussions that you had
14 with Mr. Birmingham.

15 First of all, do you know when Parker and Walker
16 Creeks were rewatered?

17 A I can't recall the exact date.

18 Q But you know it was -- not the exact date, but
19 what year? Do you know that?

20 A I can't recall the year, either, I'm afraid.

21 Q But it has been in recent times?

22 A Yes. Right. I'm familiar with that.

23 Q Were the Fish and Game studies that you've
24 indicated, were they conducted after that stream was
25 rewatered?

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01 A Yes. I believe so.

02 Q Were fish planted in those streams?

03 A I believe they were.

04 Q Do you know -- again, I notice that on the
05 exhibits that Mr. Birmingham presented, that they're
06 dated -- from Mr. Edmondson, they're dated 7-12-93. Do
07 you know that if Fish and Game has done any population
08 studies to determine the population of fish in Parker
09 and Walker Creeks in, say, 1993?

10 A I'm not aware of that.

11 Q Lee Vining Creek. Are fish planted in Lee Vining
12 Creek below the Lee Vining Creek conduit?

13 A They are not regularly, to my knowledge. They
14 have been stocked in the past, though.

15 Q Have they been stocked in 1993?

16 A I believe so, because the population was wiped out
17 recently in terms of -- from an icing event, as I
18 recall, or a dewatering event. That's what we were
19 trying to get that population going again.

20 Q Is it the policy of the Department of Fish and
21 Game to plant fish in areas where it will sustain a
22 population in good condition?

23 MR. THOMAS: Objection. This is not a policy
24 decision. We have biologists who can testify as to
25 biological facts. If he knows of the Commission's

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01 policy as to planting, he's agreed to testify to that.
02 It's beyond his scope.

03 HEARING OFFICER DEL PIERO: I'm going to overrule
04 the objection.

05 Do you know the answer to the question?

06 MR. WONG: Could you repeat it, please?

07 HEARING OFFICER DEL PIERO: The question was is it
08 the policy of the Department of Fish and Game to plant
09 fish where a fishery is in good condition?

10 MR. WONG: The reason why I have trouble is that
11 we do stock fish over existing populations with rainbow
12 trout, but if your -- that's the problem --

13 HEARING OFFICER DEL PIERO: I understand.

14 MR. WONG: So the answer, I guess, technically,
15 would be yes, we do that.

16 HEARING OFFICER DEL PIERO: Mr. Herrera?

17 MR. HERRERA: Thank you, Mr. Del Piero.

18 Q BY MR. HERRERA: So routinely, you do, your response
19 is routinely the department doesn't plant fish where
20 there is a fish population in good condition?

21 A Yes.

22 Q Do you know -- on Rush Creek do you know if fish
23 have been planted in Rush Creek below the Lee Vining
24 conduit in the recent times?

25 A Not to my knowledge.

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01 Q Do you have any idea when was -- first of all, let
02 me ask you a question. Do you know if fish had been
03 planted, let's say in the last ten years, in Rush
04 Creek?

05 A Again, not to my knowledge. I don't recall.

06 Q You don't know whether they have or have not?

07 A To my knowledge, they have not.

08 Q Thank you. One other question.

09 Mr. Birmingham presented the analysis --

10 essentially, the analysis was a result of a
11 presentation by Mr. Edmondson of Cal-Trout, and you
12 stated that generally, you were aware of Cal-Trout's
13 concerns regarding zero bag limit and artificial lures
14 on Lee -- below Lee Vining Creek conduit on -- I'm
15 assuming all four of the streams we're discussing here
16 today. Is that true?

17 A I'm sorry. I lost your train --

18 Q You're generally aware of Cal-Trout's concerns
19 regarding zero bag limit and artificial -- the use of
20 artificial lures?

21 A Yes, I am.

22 Q Do you know -- it appeared to me this was
23 somewhat -- you're not aware of the analysis, do you

24 know if there was a similar analysis presented for Lee
25 Vining Creek?

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01 A No.

02 MR. HERRERA: Thank you. That concludes my
03 questions.

04 HEARING OFFICER DEL PIERO: Thank you very much.

05 Mr. Canaday?

06 Q BY MR. CANADAY: Good morning.

07 A Good morning.

08 Q Mr. Wong, I'd like to take you through some of the
09 points you made in your testimony, and I'd like to
10 start with Point 9. In Point Number 9, you talk about,
11 or you quote from an article by Hill, Platts and
12 Beschta in 1991, and it talks about -- in this quote,
13 it talks about the need for multiple in-channels,
14 out-of-channel flows, instream flows, channel
15 maintenance flows, and valley -- well, it talks about
16 instream flows, channel maintenance flows, riparian
17 maintenance flows, and valley maintenance flows. Four
18 different flows.

19 Can they be one in the same in your opinion?

20 A I believe in the context that the authors used,
21 no, because there's an assumption that there is a
22 channel within a flood plane, and from that
23 perspective, you would have to get out of bank with a
24 higher flow to follow that reasoning.

25 Q And so you state that it is -- I'm going to quote
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01 you. "It is my opinion that the flow regime parameters
02 described above are necessary to maintain the stream
03 ecosystem and its associated fish populations in good
04 condition;" is that correct?

05 A Yes.

06 Q Have you looked at the department recommendations
07 to keep fish in good condition for Rush Creek and Lee
08 Vining Creek?

09 MR. BIRMINGHAM: Excuse me. I'm going the object
10 on the grounds that the question is vague whether he's
11 talking about the Department of Fish and Game
12 recommendations or the Department of Water and Power.

13 Q BY MR. CANADAY: The Department of Fish and Game
14 recommendations on Rush and Lee Vining Creek?

15 A Yes, I have.

16 Q Do those recommendations contain flows that are
17 instream flows, channel maintenance flows, riparian
18 maintenance flows, and valley maintenance flows?

19 A The final flows contain what I would term to be
20 instream flows, the IFIM results, basically. There
21 also is a flushing flow component. But again, because
22 of the degraded nature of the streams we're dealing
23 with, it's probably inappropriate to speak of
24 out-of-bank flows because many of these banks have been
25 obliterated, as we heard from Dr. Stine yesterday. So

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01 there has to be more or less a careful manipulation of
02 flows at this time especially, which Dr. Kondolf,
03 excuse me, has taken into account, so that we don't do
04 damage while we are yet coming to terms with these four
05 times of flows that we would ultimately like to see.

06 Q So you anticipate the department making
07 recommendations at some time in the future of
08 additional flow regimes or periods -- different flow
09 recommendations for over-bank riparian maintenance
10 flows?

11 A I would assume that yes, that would seem to be the
12 appropriate thing to do, to re-evaluate as things are
13 restoring, becoming restored, and then re-evaluate as
14 time goes on.

15 Q Do you have a recommendation on what kind of time
16 frame that revisiting should be?

17 A Again, that's very difficult because of -- it
18 hasn't been determined yet as to the amount of active
19 intervention in the restoration process, and so there
20 are some variables there. But we believe, especially
21 with the explosive return of riparian vegetation, that
22 is apparently occurring, that at least another look
23 within a five- to ten-year time frame would be
24 appropriate.

25 Q When this Board establishes an instream flow
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01 condition to be implemented in the license, is it your
02 recommendation that when we look -- the Board consider
03 ramping flows or changes in peak flows to base flows be
04 reduced by not more than 10 percent from the previous
05 day's flow? Is that your recommendation?

06 A Yes. Again, looking at that as a baseline but
07 comparing that to the natural hydrograph and making
08 adjustments if necessary.

09 Q On Point 15, starting at the bottom of the page
10 and carrying over to the next page, you discuss -- and
11 I'm going to quote your testimony, "Due to the apparent
12 lack of vertebrate fish life in South Parker Creek, it
13 represents the only basin tributary which will contain
14 native invertebrates unaffected by introduced
15 vertebrate species and should be maintained in that
16 condition." Therefore, you're suggesting that the
17 department should -- some sort of exclusion program so
18 that we don't get non-native fin fish into that stream?

19 A No. I didn't have that in mind. But there --
20 what we're looking at here is I'm not real certain on
21 where the diversion points are in South Parker. I'm
22 personally not that familiar with it, but based on the
23 information available at the time, for whatever reason,
24 there were not a lot of vertebrate fish in portions of
25 South Parker Creek. That's my understanding. I have

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01 not personally surveyed that stream. So I'm not
02 proposing that they be excluded.

03 Other invertebrate fish, if you will, these
04 insects, do co-exist with other fish populations that
05 indeed provide food for them. My intent there was that
06 from -- because of the -- the unique, if you want to
07 call them that, Capnia or winter stone fly species
08 present, again, looking at our overall approach, that I
09 would not advocate putting fish where they perhaps
10 would not occur naturally.

11 Q Could you spell the genus of the stone fly for
12 court reporter?

13 A Capnia, C-A-P-N-I-A.

14 Q Thank you.

15 Moving on to Point 16, you and I discussed earlier
16 a few minutes ago about what kind of interval we should
17 come back, you would recommend to the Board to come
18 back to re-evaluate flow regimes, and in this testimony
19 you say five to ten years. Would that still be your
20 recommendation?

21 A Based on what I know today, yes.

22 Q Mr. Wong, you would consider yourself, what, a
23 stream fisheries, fresh-water fisheries stream
24 ecologist?

25 A I have dealt with both, but predominantly streams.

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01 Q You wouldn't consider yourself a saline lake
02 limnologist, would you?

03 A No, I would not.

04 Q In your testimony, Point 19, actually Point 20,
05 you discuss or you provide a lake level recommendation
06 to protect the diversity of Mono Lake. Is that
07 correct?

08 A Yes.

09 Q And in your testimony earlier, you referred to
10 Auxiliary Report 12; is that correct?

11 A Yes, I did.

12 Q I'd like to read some excerpts of Auxiliary Report
13 12, but first, I'd like to ask you a question. Is, in
14 your opinion, recognizing that you're not a salt water
15 lake limnologist, but in your opinion as a biologist,
16 is salinity the only thing that is controlling
17 diversity in that lake?

18 A I would -- I would have to guess no.

19 MR. BIRMINGHAM: Excuse me. I'm going to ask the
20 answer be stricken if, in fact, it is a guess.

21 MR. WONG: Well, based on my knowledge of ecology,
22 I would still answer the same.

23 HEARING OFFICER DEL PIERO: That you're guessing?

24 MR. WONG: No, I'm sorry. No. Based on my
25 experience and some knowledge, I would say no, it's

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01 very likely that there are other factors involved.

02 HEARING OFFICER DEL PIERO: Proceed, Mr. Canaday.

03 Q BY MR. CANADAY: You testified that many of the
04 recommendations in your testimony are based on
05 information provided you in the Draft EIR and I assume
06 Auxiliary Report 12 would be that way, also; is that
07 correct?

08 A Yes.

09 Q I'd like to read from Auxiliary Report 12 in the
10 record, if I may, and I'm starting on Page 19, the last
11 paragraph, about the middle of the last paragraph.

12 "Clearly individual development of Artemia," capital
13 A-R-T-E-M-I-A, "Is reduced as salinity is increased
14 between 76 and 168 grams per liter. However, numerous
15 authors conclude that salinity may not been the most
16 important factor governing species abundance.

17 Regardless of salinity rank, and in paren it says, for
18 review see Williams, et al., 1990, other abiotic and
19 biotic factors are important to Artemia production
20 including interactions between physical and chemical
21 factors, and in parentheses including salinity, comma,

22 predation, competition, and food availability."
23 I take you down to the second full paragraph on
24 that -- on Page 20, and I'll read, "Predation and
25 competition on Artemia by other zooplankton are not
0099 factors at higher salinities." And in parentheses,
01 "100 grams per liter, in Mono Lake, due to salinity
02 intolerance of these species. At lower salinities,
03 however, predation and competition by other species may
04 exert a significant influence on the Artemia
05 population."
06 We'll move to Page 21, the last paragraph on that
07 page. "Changing structure of Mono Lake ecosystem could
08 offset the demonstrated physiological and life history
09 advantages gained by Artemia Monica," and that's the
10 species, M-O-N-I-C-A," at lower salinities resulting in
11 reductions in Artemia abundance similar to those
12 observed in the Great Salt Lake. Species diversity of
13 plankton will most likely increase in less saline Mono
14 Lake."
15 Page 22. First paragraph in the middle.
16 "Competition of the rotifers with Artemia could
17 influence Artemia productivity and would depend partly
18 on the degree of seasonal overlap between the two
19 species," and I believe you talked earlier about these
20 two particular species.
21 And then finally I'd like to read in the summary.
22 "In summary, Artemia are able to maintain osmotic
23 homeostasis over a wide range of salinities. Such
24 osmole regulatory abilities have high energetic costs
0100 that uniformly affect Artemia survival, growth, and
01 reproduction. However, other factors such as
02 predation, competition, and food availability must be
03 considered along with the physiological responses when
04 assessing the effects of changing salinity on the
05 productivity of natural populations of Artemia.
06 Predation and competition are likely to be significant
07 factors influencing shrimp productivity at lower
08 salinities. While individual physiological constraints
09 and Artemia interactions with -- " let me reread that.
10 "While -- " let me read the whole sentence again,
11 please.
12 "Predation and competition are likely to be
13 significant factors in influencing shrimp productivity
14 at lower salinities. While individual physiological
15 constraints and Artemia interactions with nutrients and
16 allergy attain prominence at higher salinities."
17 Based on what I read to you from Auxiliary Report
18 12, do you still feel confident in your recommendation
19 of a lake level incrementally higher than 6390 is
20 required to restore these resources?
21 A Yes. And here are the reasons. The way I look at
22 it, although there's lots of data on Mono Lake, 14
23 years' worth, predominantly focused on Artemia and
24 alkali or brine fly populations, one must recognize
0101 that all those studies that we have are of an ecosystem
02 that's in a vastly degraded state from an ecosystem
03 perspective. That is, I did not hear any testimony nor

04 have I read anywhere in the Draft Environmental Impact
05 Report that there were any problems with the Mono Lake
06 ecosystem at pre-diversion levels. Brine flies
07 existed. Shrimp existed. Birds were there in good
08 numbers.

09 So to go back to that, getting back, it's all very
10 much the same thing. To get back to that state of
11 nature or something approximating it, if it's feasible
12 with a public trust resource involved, it is something
13 that should be accomplished.

14 To look at these rotifers and other small animals
15 as being predators on shrimp, for example, and the bad
16 thing, in my view of thinking and the ecological view
17 of thinking, is not correct. It would be like, for
18 example, us studying and managing the savanna
19 grasslands of Africa for only zebras and giraffes, two
20 large animals that happen to be there. There are lions
21 there, and there are cheetahs there. Would we
22 basically eliminate cheetahs and lions from Africa, or
23 would it be the same place?

24 My point is that the Mono Lake ecosystem, in its
25 pre-diversion state, existed in a certain way with a
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01 certain component and a certain biological diversity.
02 You can't say that it's good or bad. The diatom's
03 there. The rotifers. The furry shrimp that are
04 there, they're not good or bad. That's just the way
05 that it is.

06 And by incrementally achieving that by some level,
07 lake level, currently, re-achieving what was once
08 there, is not bad thing, either. So from the
09 ecological standpoint, the restoration, the extra --
10 granted there will be predators. Well, Mono Lake,
11 remember, is, by some accounts, half a million years
12 old, one of the oldest lakes North America. These
13 animals have been living together in this ecosystem for
14 a long, long time. And that's -- there's no problem
15 with that.

16 So I guess -- I guess -- then I had to qualify my
17 answer in that way.

18 MR. BIRMINGHAM: Can I ask that the Reporter mark
19 that place in the transcript?

20 Q BY MR. CANADAY: But you have no data to suggest
21 that, based on what I've read to you here, the lowest
22 level I talked about was 76 grams per liter, and you
23 stated in your testimony that at 6390, it's
24 approximately a salinity of 71 grams per liter, that
25 that's not going restore or provide an opportunity for
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01 the recovery or change in diversity. Is that correct?
02 You have no data to suggest that?

03 A I have no data. That's correct.

04 Q Moving on to Point 21. Again, you talked about
05 bio-diversity, and in your last sentence, "A reduction
06 in the augmented flows may enhance available habitat
07 for or facilitate the recolonization of species with
08 these specific habitat preferences." What species were
09 you thinking about?

10 A That is, again, an ecological -- there are no
11 data. I did check or at least with as many places as I

12 could, there are no data to support that there are any
13 unique species in that reach of stream.

14 My point is that the focus here has been so far
15 and, rightfully so in some respects, on the vertebrate
16 fish species that are present that may not be native to
17 the system. We should not preclude, if we can at all
18 do it, concerns regarding the native species that are
19 there. And I do know that Hot Creek does contain some
20 unique invertebrate species. Whether or not those
21 occur or are part of the Owens River system or extend
22 into it, I don't know.

23 Q Finally, in response, I believe, to Mr. Herrera,
24 you suggested that the State Water Board not use fish
25 numbers as a criteria for measuring fish in good

0104 condition. Is that correct?

02 A Yes. But qualified again, not the only criteria.
03 Fish can be monitored, but in the respect that you're
04 looking for limitations that you maybe have to work
05 on. For example, spawning is one that comes to mind
06 readily. Our spawning gravel is limited to the
07 population. In your restoration activities, do you
08 need to provide some spawning gravel to your spawning
09 habitat? For those kinds of things, yes, the
10 monitoring program I would propose does look at habitat
11 and it does look as fish as well, but not as the only
12 factor to go by.

13 MR. CANADAY: You answered my next question.

14 Thank you. That's all I have.

15 HEARING OFFICER DEL PIERO: Thank you very much.
16 Ms. Cahill?

17 REDIRECT EXAMINATION BY MS. CAHILL

18 Q Mr. Wong, in response to Mr. Herrera, you
19 testified that the department does sometimes plant fish
20 where a natural fish population is in good condition.
21 Is that correct?

22 A Yes.

23 Q Were you referring to the department's catchable
24 trout program?

25 A Yes, I was.

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01 Q For what purpose did the department stop trout in
02 Lee Vining, Parker, and Walker Creeks?

03 A It was not for that purpose. It -- my
04 understanding is that we were trying to reestablish a
05 fishery that had been lost there entirely.

06 Q In other words, in that case --

07 A I shouldn't say -- excuse me. Not entirely, but
08 that had been severely decimated by some action,
09 probably some sort of winter condition.

10 Q Are you aware of any streams in which the
11 department plants brown trout on top of a resident
12 population of brown trout that's in good condition?

13 A None come to mind. None that would meet the
14 criteria of the good condition that I've outlined here.

15 Q And why would you not plant if you already had a
16 resident population in good condition?

17 A Because there may be spawning limitations that
18 would require you to plant, for example, fingerling
19 fish because those are not being reproduced. There was

20 not enough natural reproduction occurring successfully
21 to keep a desirable fishery.

22 Q I think maybe you didn't understand my question.
23 A I'm sorry. Would you repeat it, please?
24 Q It's my understanding that your testimony is that
25 if you had a spawning limitation that, in fact, the
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01 fish were not in good condition?
02 A Correct.
03 Q So, if the fish were in good condition, all
04 aspects of all life stages as you have defined good
05 condition, then would it be necessary to plant any
06 additional fish?
07 A I see. No. If everything appeared to be fine,
08 then you would want to leave it alone.
09 Q As I understand your testimony, you've testified
10 that the ecological health of the stream will determine
11 if fish, both vertebrates and invertebrates, are to be
12 kept in good condition. Which would be a better
13 measure of whether the conditions needed to maintain
14 the fish in good condition are present in a stream, the
15 existing population numbers or the quality of the
16 habitat?
17 A Quality of the habitat.
18 Q Are condition factors a reliable measure of the
19 health of the fish?
20 A No. I don't believe so. Condition factors can
21 change throughout the season. Some species of fish,
22 for example, are just naturally slim and so, therefore,
23 a condition factor for that type of fish would lead one
24 to believe if they looked at that factor it was in poor
25 condition when, in fact, it might be in fine condition
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01 for that species of fish. So one must be very careful
02 with that.
03 Q Could a fish in an aquarium have a high condition
04 factor?
05 A Yes, it could.
06 Q Would you consider the habitat in an aquarium to
07 be the type of habitat that you were advocating?
08 A No.
09 Q You mentioned the fact that it would be possible
10 if all the water were in the stream, it could keep the
11 fish in good condition, but you weren't suggesting,
12 were you, that it would take all the water in the
13 stream?
14 A No.
15 Q Is it possible that a small stream would keep fish
16 in good condition with a small flow?
17 A Yes.
18 Q And is it possible that a channel cut by a large
19 stream could maintain a self-sustaining population with
20 a relatively small flow compared to its natural flows?
21 A large -- a stream created by a large flow from which
22 that flow was diverted, could it maintain a
23 self-sustaining population with a smaller flow?
24 A A self-sustaining population, yes.
25 Q But would you consider that population to be in
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01 good condition if the stream had the potential of

02 maintaining a larger healthy population?

03 A No. Not necessarily.

04 Q I know there was considerable frustration as you
05 were attempting to answer some of Mr. Birmingham's
06 questions with regard to the condition of fish at a
07 given moment in time. If you were to attempt to
08 determine whether a stream had the conditions required
09 to maintain fish in good condition, would you look at a
10 particular point in time?

11 A No. You really couldn't.

12 Q And can you explain why not?

13 A Again, because of the variation. The natural
14 variations that normally occur or the variation
15 occurring through time all through the year.

16 Q Would it be possible that you would have a fish
17 that was healthy in a stream with a flow that might,
18 during a given summer, become lethal and that fish
19 might be healthy at a given point in time in the
20 winter, but it might be in conditions that might and
21 might not cause adverse impacts later in the year?

22 A That's correct. And again, you're -- from a
23 fish's perspective, it is what is that limiting factor,
24 and it -- maybe the limiting factor only occurs for a
25 short period, such as a dewatering event, for example,

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01 which may not even show up on a hydrograph in a mean
02 daily or mean monthly flow data.

03 For the species or for the whole aquatic
04 ecosystem, you could literally lose all the populations
05 that occur there at that time. You need to look at the
06 big picture, if you will, over time.

07 Q With regard to the need to replant in Lee Vining,
08 it certainly was true, then, that at some time in the
09 last two years the fish in Lee Vining Creek were not --
10 the fishery was not in good condition; is that correct?

11 A That's my understanding.

12 Q As you have defined "good condition," do you
13 believe that the fishery in Rush Creek is in good
14 condition at present?

15 A No, it's not.

16 Q And why not?

17 A As we heard, Rush Creek is severely degraded, and
18 although it's coming back, the testimony and the
19 knowledge that I have indicates that it is not yet
20 linked with its natural riparian system. The nutrient
21 cycling that we heard about is not occurring, so over
22 time, what you have is basically a stream that is
23 trying to recover to some extent, but it is not what
24 would be considered to be a natural functioning state.

25 Q And would you give me the same answer on Lee

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01 Vining Creek? Do you believe that at present, Lee
02 Vining Creek has the conditions required to maintain
03 fish in good condition?

04 A No.

05 Q And can you explain that?

06 A Well, there are limiting factors -- in all the
07 creeks, that are the result of the severe degradation
08 that's occurred; namely, winter habitat, pools, and
09 such that are required for survival, winter survival in

10 particular, which is a very tough time for aquatic
11 organisms. So that as well as habitat complexity,
12 there are some temperature problems, as far as high
13 temperatures, higher than we want to see for trout
14 especially at the lower ends of the creeks. Anyway,
15 there are problems.

16 Q I'd like to get back again to the given point of
17 time question. Is it possible that a stream at a given
18 point of time would have juvenile fish that would be
19 healthy, that the stream would not be in good condition
20 because the conditions necessary to allow the growth
21 and development of adult fish are not present?

22 A That's possible.

23 Q In the sense -- I want to go back to my questions
24 about Rush and Lee Vining Creek that you answered just
25 a few questions ago. In the sense, then, in which your

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01 testimony is using the term "good condition," would you
02 agree with -- do you believe that the statement that
03 the fish population in Rush Creek is in good condition
04 is correct or incorrect?

05 A I presume you mean currently?

06 Q Yes.

07 A It is -- you mentioned that they are in good
08 condition?

09 Q No.

10 A The assumption is that they are in good condition?

11 Q No assumption. Let me re-ask the question.

12 In the sense in which are you using "good
13 condition," would you agree that the fish population in
14 Rush Creek is in good condition?

15 A No.

16 Q And in the sense in which you are using "good
17 condition," would you agree that the fish population in
18 Lee Vining Creek is in good condition?

19 A No.

20 Q And is that because your sense of "good condition"
21 includes the health of the entire ecosystem?

22 A Yes.

23 Q Ordinarily, when fishing regulations are being
24 considered, what is the focus of the -- what is the
25 context in which the fish are analyzed?

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01 A In terms of numbers and sizes of vertebrate fish.

02 Q Would it be possible to have an adequate number of
03 fish at a given time in a stream that is not in good
04 condition in the sense in which you used that term?

05 A Yes.

06 Q Even a large number of fish?

07 A Yes.

08 Q And, in fact, in the sense in which you used "good
09 condition," the size of the population would be related
10 in some way to the potential of that particular stream?

11 A Yes.

12 Q And so the mere fact that there might be a
13 self-sustaining population in a given stream would not
14 necessarily indicate that that stream was in good
15 condition?

16 A Right. And that is not the only factor.

17 Q Why is it that the quality or health of the

18 habitat is a more appropriate way to get at this
19 concept than the number of fish?
20 A The fish numbers, especially in the eastern
21 Sierra, fluctuate greatly for a number of reasons, many
22 of which we can't explain, on a year-to-year basis or
23 even within the year, so it is extremely dangerous
24 unless one has a very thorough sampling program and
25 does a very consistent methodical, repeatable type of
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01 survey, to actually come up with quantitative
02 information to result in describing the numbers of fish
03 that might occur within a stream.
04 I've been doing this for years, and I can assure
05 you that even in the most stable environments that we
06 have, fish numbers in the eastern Sierra can fluctuate
07 greatly. Hot Creek, for example, which is one of the
08 most stable stream-fed systems that I'm aware of on the
09 east side, fish numbers, and again these are estimates,
10 can fluctuate over a period of 10 to 15 years from
11 4,000 in nine-tenth's of a mile stretch up to 10,000,
12 even in a system which appears to be very, very
13 stable.
14 So the eastern Sierra streams, basically undergo a
15 wide variation in terms of both temperature and
16 climate, weather, precipitation, and all these do
17 effect the population sizes which makes looking at fish
18 alone extremely difficult in terms of numbers for
19 coming to any final determination as to the population
20 that is really -- the potential population that could
21 really be there.
22 MR. BIRMINGHAM: Would the Reporter please mark
23 that question?
24 Q BY MS. CAHILL: In other words, your recommendations
25 are based on the theory that if you create the habitat,
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01 the fish will follow; is that right?
02 A That's correct.
03 Q Let me go back again to fishing regulations. Is
04 it possible that there could be a situation where there
05 are sufficient fish to allow harvest but the habitat is
06 such that you would not consider the fish to be in good
07 condition?
08 A Yes, that's possible.
09 Q Is it possible that the department of
10 representatives addressing fishing regulations might
11 use the term "good condition" in a different context
12 with a different meaning to simply mean that there were
13 sufficient fish available to allow harvest?
14 A Yes.
15 MS. CAHILL: I think I have no further questions.
16 Thank you.
17 HEARING OFFICER DEL PIERO: Thank you very much.
18 Mr. Birmingham?
19 RE-CROSS EXAMINATION BY MR. BIRMINGHAM
20 Q Mr. Wong, I'm at a loss. Have you ever read
21 George Orwell "1984"?
22 A No.
23 Q Have you ever heard term "doublespeak"?
24 MR. THOMAS: Objection. Argumentative.
25 HEARING OFFICER DEL PIERO: Sustained.

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01 Q BY MR. BIRMINGHAM: In response to a question by
02 Mr. Frink, Mr. Del Piero interrupted you and said, "You
03 can assume that words in our questions have plain
04 meaning." Do you remember Mr. Del Piero telling you
05 that?

06 A Yes.

07 Q I'm going to ask you. Does "good" have a plain
08 meaning?

09 A "Good" has many meanings.

10 Q Does "condition" have a plain meaning?

11 A It also has many meanings.

12 Q So you are here today as a witness on behalf of
13 the Department of Fish and Game. Is that correct?

14 A Yes.

15 Q And you have expressed an opinion that the fish
16 population in Rush Creek is not in good condition?

17 A Using my biological definition.

18 Q And that's a different biological definition than
19 the Department of Fish and Game used when it wrote in
20 L.A. DWP Exhibit 91 that, "Fish in the fish population
21 in Rush Creek is in good condition"?

22 MR. THOMAS: Objection. Calls for speculation.

23 This witness has no idea --

24 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. I
25 wonder if Ms. Cahill is going to be examining the

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01 witness, if Mr. Thomas could refrain from objecting.

02 HEARING OFFICER DEL PIERO: I'm going to sustain
03 the objection because as part of his testimony he said
04 he didn't play a role in developing a recommendation
05 that went to the Fish and Game commission.

06 However, your request is appropriate. In the
07 event that one party is cross-examining, that party
08 ought to be the person who's objecting.

09 Q BY MR. BIRMINGHAM: So when the Department of Fish
10 and Game -- just so we have it clear on the record.
11 When the Department of Fish and Game said that the fish
12 population in Rush Creek is in good condition, said
13 that in July of 1993, you don't know what the basis of
14 the Department of Fish and Game's conclusion was?

15 A That is correct.

16 Q Now, a few minutes ago, you responded to a
17 question by Ms. Cahill by saying if you create habitat,
18 fish will follow. You said, "That's right."

19 A I can't recall the word "create."

20 Q I'll ask the Reporter to go back and see if she
21 can find that question. It was immediately after a
22 question that I asked to be marked, the last question I
23 asked to be marked. Immediately following that was the
24 question I'm referring to.

25 HEARING OFFICER DEL PIERO: Mr. Wong, I want you

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01 to assume that the representation being made by
02 Mr. Birmingham is, in fact, correct and then you can
03 respond based on that assumption. Okay?

04 MR. BIRMINGHAM: I'm not sure we can do this
05 because I was going to then ask the Reporter to read
06 back the question that had been marked and the answer
07 to it.

08 Q BY MR. BIRMINGHAM: Assume that you said, "If habitat
09 is created, fish will follow." Assume you said that.
10 Immediately before that, you said that the numbers of
11 fish in the eastern Sierra streams fluctuate greatly.
12 It depends on a whole number of factors. Do you
13 remember saying that?
14 A Yes.
15 Q So it's correct, then, isn't it, that the number
16 of fish is not necessarily related to a condition of
17 habitat.
18 A No. That's -- I would say that's not correct.
19 The numbers of fish are related to their habitat. But
20 that habitat varies widely, hence fish populations can
21 vary widely.
22 Q And therefore, simply the creation of habitat is
23 not going to result in fish following. Isn't that
24 right?
25 A I'm not sure what you mean by "creation of
0118 habitat" in that context. If you mean the restoration,
01 Sir, or even creation?
02 A I'll -- restoration. The restoration of habitat
03 does not necessarily mean that fish are going to
04 follow?
05 A No. I believe from what I know of fish
06 populations, especially in the eastern Sierra, that if
07 you were to create a set of conditions which were
08 desirable for fish in the broadest sense of the term,
09 that they would follow.
10 Q In response to a question by Mr. Frink, you said
11 that -- actually, let's go back further than that.
12 THE REPORTER: If it would help, I could probably
13 get this fixed over lunch.
14 MR. BIRMINGHAM: I don't want to take the time --
15 well, it's ten minutes to noon now, would it be an
16 appropriate time to break for lunch?
17 MS. CAHILL: I would prefer not to break. I would
18 like to have this cross-examination completed, if
19 there's -- if we could find out how many minutes there
20 are left?
21 MR. HERRERA: 14 minutes.
22 HEARING OFFICER DEL PIERO: Is there some
23 particular reason why you prefer not breaking at ten to
24 12 as opposed to 12?
0119 MS. CAHILL: I would just prefer to get this
01 cross-examination completed in one piece.
02 HEARING OFFICER DEL PIERO: Are you going to be
03 able to guarantee that you're going to be able to have
04 this resolved?
05 THE REPORTER: 80 percent.
06 MR. BIRMINGHAM: There were three questions,
07 Mr. Del Piero, that I have requested --
08 HEARING OFFICER DEL PIERO: I know. I'm aware of
09 that. I made note of those. Do you have other
10 questions to ask besides those or is that going to --
11 MR. BIRMINGHAM: I have other questions.
12 HEARING OFFICER DEL PIERO: Why don't you ask your
13 other questions, okay, and then we'll come back to
14 that? You can't do a search while you're working, can
15

16 you?

17 THE REPORTER: No.

18 HEARING OFFICER DEL PIERO: Go ahead. We are
19 going break at noon. Okay?

20 Q BY MR. BIRMINGHAM: Mr. Wong, you testified in
21 response to a question by Mr. Herrera about
22 monitoring. Do you recall the exchange about
23 monitoring? Excuse me. It was in response to a
24 question by Dr. Smith.

25 A Yes.

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01 Q Were you in the hearing room yesterday?

02 A Yes.

03 Q And did you hear Dr. Stine express an opinion that
04 the restoration activities in 1992 in Lee Vining Creek
05 had been successful?

06 A I actually do not recall that.

07 Q I'm going to ask you to assume that Dr. Stine
08 expressed that opinion, that the restoration
09 activities in 1991 in Lee Vining Creek had been
10 successful.

11 A Very well.

12 Q And I think he said that. In your opinion, as a
13 fisheries biologist, could you determine the success of
14 a restoration program similar to that carried on in Lee
15 Vining Creek in 1991 two years after it was carried
16 out?

17 A It depends upon what your criteria for successful
18 are and what Dr. Stine's were.

19 Q Well, if you want to create habitat that will keep
20 fish in good condition after one year or two years, are
21 you going to have enough information about a
22 restoration program to conclude that the program was
23 successful?

24 A I'm not aware of the exact types of activities
25 that occurred that brought about Dr. Stine's

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01 statement. So it's difficult for me the answer that
02 question.

03 But if you want to speak generally, I think the
04 answer -- well, perhaps -- could you repeat the
05 question because I think I might be able to answer it?

06 Q Well, it's your understanding, isn't it, that in
07 1991, pools were dug in Lee Vining Creek?

08 MR. DODGE: Actually, it was 1992.

09 MR. BIRMINGHAM: I believe it was 1991.

10 MR. WONG: I guess I don't --

11 Q BY MR. BIRMINGHAM: I'm going to ask you to assume
12 that in 1991 pools were dug in Lee Vining Creek

13 MR. DODGE: Objection. Assumes facts not in
14 evidence.

15 HEARING OFFICER DEL PIERO: It's an assumption.
16 It's overruled.

17 Go ahead, Mr. Birmingham, pursue your question.

18 Q BY MR. BIRMINGHAM: I'm going to ask you to assume
19 that in 1991 pools were dug in Lee Vining Creek, and
20 I'm going to ask you to assume in 1991 that banks were
21 armored to create undercut banks, and that in 1991,
22 willows and cottonwoods were planted along the stream
23 to produce recovery of riparian vegetation, and that in

24 1991, spawning gravels were placed in Lee Vining
25 Creek. And the purpose of this program was to restore
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01 the conditions which would keep fish in good condition,
02 as you have used that term in your testimony.
03 After two years, would you be able to analyze the
04 success of that restoration program?
05 A The answer is yes, but again, it depends on what
06 level and what your success criteria are. In other
07 words, if the pools were still there and survive a high
08 flow, for example, in 1993, one could say as a measure
09 of success that you had a successful treatment because
10 they survived the runoff.
11 The same with some of the other factors you
12 mentioned. Spawning gravels, you may be able to detect
13 within a two-year time an increase in spawning, for
14 example, or survival from spawning, because of your
15 activities. So it does vary greatly with what you term
16 to be success and the time frame involved.
17 Q Now, in your testimony, you said that you were not
18 personally familiar with South Parker Creek.
19 A I have been to the site, but I believe I said I
20 have not participated in any actual sampling activities
21 to determine what the fish populations were or were
22 not.
23 Q In response to questions by Mr. Canaday about your
24 recommendations on Mono Lake, you referred to Auxiliary
25 Report 12 and asked a lot of the same questions that I
0123
01 was going ask. But specifically, I'd like to know, you
02 mentioned in your direct testimony that the Artemia
03 Monica is a Candidate One species for listing under the
04 Endangered Species Act.
05 A Yes.
06 Q Do you have any knowledge about the Endangered
07 Species Act?
08 A I have some.
09 Q For instance -- and I'm only asking you your
10 knowledge. Do you have an understanding of what
11 constitutes a take under the Endangered Species Act?
12 MS. CAHILL: Objection to the extent that it does
13 ask for a legal conclusion.
14 HEARING OFFICER DEL PIERO: I'm going to sustain
15 the objection to that extent.
16 Go ahead and answer the question within a
17 biological standpoint from the standpoint of -- in your
18 capacity as an employee of the Department of Fish and
19 Game.
20 THE WITNESS: The actual definition I would not
21 feel comfortable commenting on.
22 Q BY MR. BIRMINGHAM: Let me ask you a biological
23 question, Mr. Wong. I'm going to ask you to assume
24 that you have a species which is a candidate species
25 for a listing under the Endangered Species Act. As a
0124
01 biologist, would you feel comfortable introducing into
02 that species habitat a predator species?
03 A If the predator species was a native in its own
04 right, I would have -- I would have to say yes. I tend
05 to get lost sometimes in between the question and

06 answer, but I'd say yes, I think it would be
07 appropriate or could be appropriate to introduce that
08 species.
09 Q Could be. Would it necessarily be? For instance,
10 if it was going result in the extinction of that
11 candidate species, if the introduction of the predator
12 species was going to result in the extinction of that
13 candidate species, would you -- would you promote the
14 introduction of that predator species into the
15 particular habitat?

16 A I guess the answer to the question is I don't
17 know. It would depend on a whole variety of factors.

18 Q And with respect to the situation at Mono Lake,
19 you don't know enough about the potential listing of
20 the Artemia Monica to express an opinion concerning the
21 introduction of a predator species into that habitat.
22 Isn't that correct?

23 A That's correct. I'm here as a biologist in the
24 biological end of things.

25 Q So if, in fact, the introduction of this predator
0125

01 species that Mr. Canaday referred to in his questions
02 about Auxiliary Report Number 12 is going to be
03 damaging to the Artemia Monica, a candidate species,
04 you may have some reservations about the introduction
05 of that species into Mono Lake; isn't that correct?

06 A No. Not necessarily. It depends on your -- the
07 use of the word "damaging." If it were to return
08 basically the Artemia population back to its
09 non-degraded state, I would not term that to be
10 damaging.

11 MR. BIRMINGHAM: Could I ask that the question be
12 reread, Mr. Del Piero?

13 HEARING OFFICER DEL PIERO: Ms. Anglin?
14 (Whereupon the record was read as requested.)

15 Q BY MR. BIRMINGHAM: And your response to my question
16 was no, not necessarily. The converse of that,
17 Mr. Wong, is you might have some reservations. Isn't
18 that right?

19 A That is the converse of that question. That's
20 correct.

21 Q That's the converse of your answer.

22 A Converse of the answer. I better make sure that I
23 understood your question. You caused me to question if
24 I really understood what you were saying.

25 Q Well, let me ask it again because I want to make
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01 sure we have a clear record. Auxiliary Report Number
02 12 on Pages 19, 20, and 21, talks about the potential
03 of reducing the population of Artemia Monica resulting
04 from the introduction of other zooplankton; is that
05 correct?

06 A I don't believe that's true. There would be no
07 actual introduction of those animals. What you'd be
08 doing is just creating conditions that would allow them
09 to occur -- or become established naturally. There's a
10 distinction there.

11 Q Then let's talk about establishing conditions that
12 would allow them to occur naturally. For instance, on
13 Page 20 of Auxiliary Report Number 12, it says,

14 "Predation and competition on Artemia by other
15 zooplankton are not factors at higher salinities
16 greater than 100 grams per liter in Mono Lake due to
17 salinity intolerance of these species. At lower
18 salinities, however, predation and competition by other
19 species may exert a significant influence on the
20 Artemia population." Is that correct?

21 A That is what that document says.

22 Q I'm going to ask you to assume that what the
23 document says is correct. Now, if Artemia is a
24 candidate species for listing under the Endangered
25 Species Act, would you have any reservations about

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01 creating conditions that would allow zooplankton to
02 establish themselves if that zooplankton, establishment
03 of that zooplankton, would have a significant influence
04 on the Artemia population?

05 A No, I would not. Because one could look at
06 significant influence as being one which would allow
07 those populations to evolve under the conditions that
08 they have been under for thousands of years.

09 HEARING OFFICER DEL PIERO: Mr. Birmingham, it's
10 now five after 12. I don't know how much more time you
11 have left, but it's my inclination at this point to
12 break.

13 MR. HERRERA: He has two minutes.

14 HEARING OFFICER DEL PIERO: I'm assuming you're
15 going to petition for more time.

16 Mrs. Anglin, if you could see if you could ferret
17 out those questions during the course of the lunch
18 hour. 1:30.

19 (Whereupon the lunch recess was taken.)

20 HEARING OFFICER DEL PIERO: Ladies and Gentlemen,
21 this hearing will again come to order.

22 Mr. Birmingham, you have two minutes left on your
23 testimony.

24 MR. BIRMINGHAM: I would make, at this point, an
25 application for an additional ten minutes.

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01 HEARING OFFICER DEL PIERO: It's granted. Okay?
02 And then we're going to try and move this along.

03 Okay?

04 Q BY MR. BIRMINGHAM: Mr. Wong, I have asked over the
05 lunch recess for the Reporter to go back and find a
06 couple of places on the tape. First, I'd like to go
07 back and ask the Reporter to read a question and answer
08 asked of you by Mr. Frink and your response to that,
09 and it was the question that I asked be marked during
10 Mr. Frink's examination of you. The first question
11 that we just discussed.

12 (Whereupon the record was read as requested.)

13 Q BY MR. BIRMINGHAM: You said in response to
14 Mr. Frink's question that you were trying to -- in
15 formulating proposed minimum flows, you were trying to
16 imitate the natural condition. Now, isn't it correct,
17 Mr. Wong, that with respect to the minimum flows
18 proposed by the Department of Fish and Game, that for
19 many months the proposed minimum flows are in excess of
20 what would be there naturally?

21 A I'm afraid I can't answer that because my

22 recollection of the flow regime proposed is rather
23 general and apparently, extremely flexible from the
24 operational standpoint in that, as I recall, mean
25 monthly flows were offered with some minimum and some

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01 maximum from month to month. But as I recall, there
02 was really no flow regime dictating what that might be.

03 Q Again, Mr. Wong, I'm going to give you a copy of
04 Volume One of the Lee Vining Creek Stream Evaluation
05 Report 93-2, and I'm going to ask you to look at Table
06 12 on Page 67 of the report.

07 Now, is it your understanding from your review of
08 the report that Table 12 is a table which shows the
09 monthly stream flows and cfs exceedence data for Lee
10 Vining Creek, Mono County, California, 1973 to 1991?

11 A Yes, that's what I'd say.

12 Q And if we look at the column on the left-hand
13 side, it says, "Percent of time equal or exceeded." Is
14 that correct?

15 A Yes.

16 Q And is it correct, taking as an example 20 percent
17 under that column entitled Percent of Time Equal or
18 Exceeded, and if we go over to the month of -- the
19 month of January, that for the month of January, 80
20 percent of the time, the flows in Lee Vining Creek are
21 equal to or less than 41 cfs?

22 A I wanted to make sure that I'm reading this table
23 correctly.

24 Q Please take your time.

25 MS. CAHILL: Mr. Del Piero, the witness can

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01 answer. I think from looking at the table it would be
02 more efficient to have these questions posed to the
03 panel that developed them.

04 HEARING OFFICER DEL PIERO: Mr. Birmingham?

05 MR. BIRMINGHAM: I will ask these same questions
06 probably of the panel that wrote the report, but
07 Mr. Wong's testimony was that it's the Department of
08 Fish and Game's effort to mimic the natural -- natural
09 condition, and I just want to establish that the
10 proposal in this document proposes minimum flows that
11 exceed what would be in the stream naturally. Is that
12 your understanding, Mr. Wong?

13 MR. WONG: The -- I guess in answer to your
14 question, from what I understand -- I'm not sure I
15 understand the question. The City of Los Angeles'
16 proposed flows do not mimic the natural hydrograph
17 because they do not contain wet-, dry-, or normal-year
18 criteria. Again, looking at fluctuations, it's
19 extremely important that you have those three different
20 year types, three different situations, to mimic the
21 hydrograph overall in terms of wet, dry, and normal
22 years, so that the fish population will get the benefit
23 of the good years along with the bad years. So in that
24 general regard, I think I could answer your question.

25 Q BY MR. BIRMINGHAM: I'm not asking a question about

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01 the Department of Water and Power proposal. What I'm
02 asking you a question about is the -- is the Department
03 of Fish and Game recommendation for Rush Creek. Am I

04 not correct that --

05 MS. CAHILL: Tom. I think this was Lee Vining
06 Creek.

07 MR. BIRMINGHAM: Excuse me. Lee Vining Creek.
08 Thank you very much, Ms. Cahill.

09 Q BY MR. BIRMINGHAM: I'm asking you about the
10 Department of Fish and Game recommendation for Lee
11 Vining Creek.

12 MS. CAHILL: He doesn't have, probably, those
13 recommendations in front of him.

14 Q Do you have the --

15 A No. I don't. I'm not prepared to speak
16 specifically on those particular reports.

17 HEARING OFFICER DEL PIERO: Mr. Birmingham, I
18 think he indicated that earlier.

19 Q I'll address these questions to the panel that
20 prepared --

21 A Thank you very much.

22 Q Now, in response to a question by Mr. Canaday
23 about Mono Lake, you stated that Mono Lake is a vastly
24 degraded ecosystem. Is that correct?

25 A That's my opinion, yes.

0132

01 Q And you based that opinion on numbers of birds?

02 A No, Sir.

03 Q What did you base that opinion on?

04 A When species are extricated from an ecosystem due
05 to acts of man, I'll call it, or artificial means, then
06 I consider that to be a degraded ecosystem.

07 Q But isn't it correct, Mr. Wong, that since the
08 Department of Water and Power began its diversions in
09 1940, the number of California gulls has increased
10 significantly at Mono Lake?

11 A I don't know.

12 Q And that there has been no vast degradation of
13 brine shrimp at Mono Lake?

14 A I when you say "degraded," degraded as to what?
15 That's the problem, we have no pre-diversion
16 information as to brine shrimp or brine fly populations
17 specifically or quantitatively for Mono Lake, so it
18 does make it very difficult to make that distinction.
19 So there's nothing upon which to base that as far as
20 an -- as far as a natural system goes.

21 Q MR. BIRMINGHAM: Could you go to the next
22 question? Actually, it was the very long question that
23 I asked the Reporter to have marked. It was the one in
24 which the terms "create habitat" were used.

25 (Whereupon the record was read as requested.)

0133

01 Q BY MR. BIRMINGHAM: Now, Mr. Wong, do you remember
02 being asked that question about creating habitat by
03 Ms. Cahill?

04 A Yes.

05 Q In response to the prior question, you said that
06 even in the most stable environment, the number of fish
07 can fluctuate greatly. Is that your testimony?

08 A Yes.

09 Q And that's your opinion?

10 A With regard to eastern Sierra trout populations,
11 yes.

12 Q So in terms of identifying a fish population that
13 is in good condition, you can't look at just the number
14 of fish. That's your opinion?

15 A Yes.

16 Q Now, let's say you've got this most stable
17 environment that you described but there are no fish in
18 there. It would be your opinion that you did not have
19 a fish population in good condition; isn't that right?

20 A Are you asking me to assume that we have a body of
21 water that had no fish?

22 Q I'm asking you to assume that you've got what you
23 termed a most stable environment with a very low number
24 of fish.

25 MR. DODGE: Objection. Now he's changed the
0134

01 question. He said "no fish" the first time.

02 HEARING OFFICER DEL PIERO: That's true. I'm
03 going to sustain the objection.

04 Restate the question, Mr. Birmingham.

05 Q BY MR. BIRMINGHAM: All right. I'll state a new
06 question, Mr. Wong.

07 Let's assume that you've got this most stable
08 environment with a low number of fish. Is it your
09 opinion that you would not have a fish population in
10 good condition?

11 A I really can't answer that the way it was stated.

12 HEARING OFFICER DEL PIERO: Why?

13 MR. WONG: Because his assumption -- there's a
14 question I would have to ask, Sir, and that is is
15 this -- is this a natural system, or is it an
16 artificial impacted system?

17 Q BY MR. BIRMINGHAM: Let's talk about a natural
18 system.

19 A Very well.

20 Q A natural system that is the most stable
21 environment -- and I'm using your words. I want to use
22 your words because I don't want to get confused by
23 using my words. The most stable environment. You've
24 got very few fish. In fact, we can make it better. We
25 can say that the fish that you have are low weight. Do

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01 you have a fish in good condition? A fish population
02 in good condition?

03 A Overall speaking, with regard to that single
04 population, I think with the assumption that you have
05 given, I'd say yes.

06 Q So if you look at --

07 A It's possible.

08 Q If you look at habitat and the habitat is in good
09 condition, then you have a fish population in good
10 condition?

11 A No. That's not entirely correct. What I'm
12 getting at is you can't only look at the habitat and
13 you can't only look at the fish populations. You have
14 to look at everything.

15 Q Now, you said that the number of fish in the
16 stream on the eastern Sierra fluctuate depending on a
17 number of factors. Is it correct that some of those
18 factors are unrelated to habitat conditions?

19 A They can be.

20 Q And again, I just want to make sure we understand
21 what you're saying about good condition. So you can't
22 look at habitat and conclude whether or not fish are in
23 good condition; is that correct?
24 A Could you repeat it, please?
25 Q You cannot look at habitat and determine if fish
0136
01 are in good condition.
02 A Not entirely.
03 Q And you can't look at population and determine if
04 fish are in good condition.
05 A Correct. Not entirely.
06 MR. BIRMINGHAM: I have no further questions.
07 HEARING OFFICER DEL PIERO: Thank you very much,
08 Mr. Birmingham.
09 Mr. Dodge?
10 MR. DODGE: Well, I thought I'd try a new tactic
11 this morning and not ask any questions and see if it
12 speeded up. But it didn't --
13 HEARING OFFICER DEL PIERO: A vacuum is an
14 unnatural condition.
15 (Laughter.)
16 RE-CROSS EXAMINATION BY MR. DODGE
17 Q I just have a couple of questions. One is just
18 sort of a follow-up question, Mr. Wong.
19 This term "condition factor" is a new one to me,
20 and that applies to individual fish; is that right?
21 A Yes.
22 Q And tell me exactly what the condition factor is.
23 A It's basically a co-efficient, usually referred to
24 as "KA" which is nothing more than a relationship
25 between the length and weight of a single fish.
0137
01 Q So is it just a fraction?
02 A Yes. It's -- it's usually described as the weight
03 divided by the length cubed, multiplied by some factor,
04 and there's a constant.
05 Q And anything else relating to that fish aside from
06 length and weight is not taken into account?
07 A It's not considered at all.
08 Q Okay. Now, here's the part of your testimony that
09 I want to explore with you. It's in Paragraph 7 of
10 your testimony -- if could you get that out, and I'm
11 interested in the second sentence which reads -- of
12 Paragraph 7. "Fish population should not be limited by
13 lack of cover, comma, food availability, comma, poor
14 water quality, paren, including temperature, end paren,
15 or lack of habitat necessary for reproduction."
16 Do you see that, Sir?
17 A Yes.
18 Q Now, you use the term "limited" in that sentence,
19 and we've also had testimony about limiting factors.
20 Can you explain to the Board in simple terms what a
21 "limiting factor" is?
22 A It is some part of the environment, which would be
23 any part of the environment that we've been talking
24 about, that can affect all or a single life stage of
25 any animal that could somehow result in an effect on
0138
01 that population. An example would be not having any

02 gravel could limit -- or very little spawning gravel
03 could limit the total potential size or the total size
04 of a fish population.

05 Q Now, am I right that -- am I reading Paragraph 7
06 correctly, that lack of cover, food, water quality, and
07 reproductive habitat are potential limiting factors?

08 A Yes, they are. But really, the intent of this
09 sentence, and I said there could be some problems, the
10 implication is that really artificially limiting
11 factors, is what I really in the mind. For example,
12 there have to be limiting factors on populations or
13 else there would be innumerable population sizes.

14 Q That really gets to the point that I wanted to ask
15 you about. I want to take a potential limiting factor
16 through time. Now, let's take lack of cover, for
17 example.

18 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. I'm
19 going to pose an objection. Yesterday, Mr. Dodge
20 expressed an objection on the grounds that my questions
21 were going beyond the scope of a -- of a redirect or a
22 direct that he had performed, and he raised the
23 objection because I was going beyond the scope, I
24 somehow might be able to sandbag him in terms of
25 expanding the questions after he has had an opportunity
0139 to ask additional questions.

02 Now, Mr. Dodge is going well beyond the scope of
03 any questions that were asked of this witness by any
04 attorney or member of the Staff or by the Board, and if
05 I understand Mr. Dodge's objection correctly, I think
06 he's violating the rule that he wishes to impose. If
07 we have an understanding --

08 HEARING OFFICER DEL PIERO: Excuse me,
09 Mr. Birmingham?

10 MR. BIRMINGHAM: Yes.

11 HEARING OFFICER DEL PIERO: As I recall, you
12 correct me if I'm wrong, but I think I overruled that
13 objection.

14 MR. BIRMINGHAM: You did and --

15 HEARING OFFICER DEL PIERO: As I'm inclined to
16 overrule your objection right now.

17 So, Mr. Dodge, why don't you proceed?

18 MR. DODGE: I thought I was going to lose both
19 ends of that fight for a minute there.

20 HEARING OFFICER DEL PIERO: Contrary to some
21 people's opinion, I do remember from one day to the
22 next. Go ahead.

23 Q BY MR. DODGE: I'm interested in taking any given
24 potential limiting factor through time. Let's take
25 lack of cover, which is the first one you listed in
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01 what I've -- now, that, as I understand your testimony,
02 is potential limiting factors -- take Rush Creek,
03 today, correct?

04 A I believe so, yes.

05 Q And tell the Board what you mean by "lack of
06 cover."

07 A Well, it could be variable. Fish utilize cover
08 for various reasons. One is to escape high velocities
09 because it does take energy in fast-moving water --

10 conserve energy and obtain sustenance and energy from
11 the environment if they're in slower-moving water.
12 They also can use cover as an evasion or a means to
13 evade predation, which is always present in one form or
14 another. So if any of these factors are not optimal,
15 then -- or adequate, then there's a potential for them
16 to affect the population's health.

17 Q So there's a potential in Rush Creek that lack of
18 cover could affect one or more life stages of the brown
19 trout, correct?

20 A Yes.

21 Q Now, if one's goal were to -- in the Rush Creek,
22 to restore conditions that benefitted the fishery
23 pre-diversion, then if you were concerned about lack of
24 cover, you'd have to look at the amount of cover that
25 existed pre-diversion, correct?

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01 A Yes, for a baseline.

02 Q For a baseline. And then you could determine that
03 once you had that baseline and looked at today's
04 situation, you could determine whether that particular
05 characteristic that benefitted the fishery had or had
06 not been restored, correct?

07 A Correct.

08 Q Now, are you aware -- this is a comparison over
09 time between now and pre-diversion. Are you aware of
10 any group that's attempting to make that comparison?

11 A I have reviewed -- the only thing I reviewed is a
12 Trihey report, which compares the pre-41 and, I guess,
13 post-diversion periods.

14 Q So -- your understanding is that the planning team
15 is attempting to make that comparison?

16 A That's my understanding. I have seen the report
17 and reviewed it.

18 Q And who are the particular -- if you know, who are
19 the particular people who are trying to make that
20 comparison?

21 A Without looking at the report, I do have it here,
22 but without looking at it, I'm really not certain who
23 the individuals are or the parties involved with that
24 effort.

25 Q But you understand that the Trihey group is trying

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01 to identify factors that limit one or more age groups
02 in the population today that were not limiting
03 pre-diversion. You understand that they're going about
04 that exercise?

05 A Yes.

06 MR. DODGE: That's all I have. Thank you.

07 HEARING OFFICER DEL PIERO: Thank you very much,
08 Mr. Dodge.

09 Mr. Roos-Collins?

10 I promise this time, Mr. Roos-Collins, I'll wait
11 to find out whether or not you have a question mark at
12 the end of the statement. Okay?

13 MR. ROOS-COLLINS: Whether or not I have what?

14 HEARING OFFICER DEL PIERO: Forget it.

15 MR. ROOS-COLLINS: Are you referring to my
16 displacement to the far end of Plaintiff Counsel's
17 tables?

18 HEARING OFFICER DEL PIERO: No. No. I was
19 referring to something earlier this morning. It's not
20 worth repeating.

21 RECROSS EXAMINATION BY MR. ROOS-COLLINS

22 Q Good afternoon, Mr. Wong.

23 Let's focus on Paragraph 7 of your written
24 declaration. Could you read the first sentence for the
25 record?

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01 A "The instream flows necessary to keep fish in good
02 condition include those which will maintain a
03 self-sustaining population of desirably-sized adult
04 vertebrate fish which are in good physical condition;
05 i.e., well-proportioned and disease-free."

06 Q Thank you.

07 Let's parse the term "fish in good condition," as
08 you use it in this written declaration. When you say
09 "fish," what are you referring to?

10 A Well, in this case, I'm talking about
11 desirably-sized adult vertebrate fish.

12 Q Are you referring to individual fish?

13 A The way it's worded here, it's a self-sustaining
14 population of desirably-sized adult vertebrate fish.
15 So that would be referring to individual fish.

16 Q In this declaration, do you use the term "fishery"
17 to mean something different than fish?

18 A Yes, I do. I believe it's in the testimony that a
19 fishery is a fish population which is being utilized
20 for a purpose.

21 Q In this declaration, does the word "fish" refer to
22 a fish population?

23 A Not necessarily, because an individual insect,
24 according to the Code definition, is a fish. It is
25 very confusing, and that's part of the reason we're

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01 having the problems, unfortunately, that we are.

02 Q Mr. Wong, I'm not asking you to interpret Section
03 5937. I'm asking you to explain the words "fish" and
04 "fishery" as you use them in your written declaration.

05 A Right.

06 Q When you use the word "fish," are you referring
07 exclusively to individual fish?

08 A The reason I'm hesitating is fish population. A
09 fish could either be an individual fish or a fish
10 population.

11 Q So as you use the term "fish" in this declaration,
12 the term includes individual fish and fish population?

13 A Yes.

14 Q Now, when you say "fish in good condition," what
15 are the elements of good condition to which you are
16 referring?

17 A I think I might need some clarification.

18 Q Let me withdraw that question.

19 You previously read the first sentence in
20 Paragraph 7 of your declaration. And in discussing the
21 flows necessary to keep fish in good condition, you
22 state, or rather you describe, "a self-sustaining
23 population of desirably-sized adult vertebrate fish
24 which are in good physical condition; i.e., well
25 proportioned and disease free."

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01 A Yes.

02 Q Do those qualities "self-sustaining population,
03 desirable size," and so forth, describe "good
04 condition" as you use that term in this declaration?

05 A The reason I'm hesitating, I'm getting confused
06 between good physical condition versus the Code, the
07 Fish and Game Code definition of good condition,
08 because both are used in this same sentence. I'm
09 sorry. I'm not quite understanding, apparently, which
10 of the two you're referring to. I apologize. I'm
11 not --

12 Q I'm asking you to interpret your sentence.

13 A I know, but -- I guess in a sense which --

14 HEARING OFFICER DEL PIERO: Do you understand the
15 question?

16 MR. WONG: I don't believe I do, Sir, or else I'd
17 be more than happy to --

18 HEARING OFFICER DEL PIERO: Mr. Roos-Collins,
19 please restate it.

20 Q BY MR. ROOS-COLLINS: As you use the term "fish in
21 good condition" in Paragraph 7 of your written
22 declaration, is one quality of such good condition a
23 self-sustaining population?

24 A Yes.

25 Q Is another quality desirable size of adult

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01 vertebrates?

02 A Yes.

03 Q Is is another quality good physical condition?

04 A Yes.

05 Q Are there any other qualities of fish in good
06 condition, as you use that term, in this declaration?

07 A In other words, qualities other than those
08 mentioned in this?

09 Q Other than those we just discussed.

10 A Yes, there are. Yes, there are.

11 Q And what are they?

12 A Well, they're some of the ones that are already in
13 the declaration. That's why I'm so confused. Because
14 there are some mentioned here in terms of "A"
15 structure, other qualities of the populations --

16 HEARING OFFICER DEL PIERO: Mr. Wong, take a
17 moment and try to outline all of them so we'll just get
18 it clear on the record. Okay? And then there won't be
19 any question as to what's in your statement as opposed
20 to what may not have been specifically articulated.

21 MR. WONG: Let me make sure I understand
22 correctly. You're looking for things that may not be
23 in the statement?

24 HEARING OFFICER DEL PIERO: I'm looking for
25 everything in your mind that has bearing on this, okay,

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01 if you can recall it at this point. That's the nature
02 of the question.

03 MR. WONG: Basically --

04 MR. DODGE: Mr. Del Piero, could we have a
05 clarification as to whether it's the individual fish or
06 the fishery to which this question was directed?

07 HEARING OFFICER DEL PIERO: Mr. Roos-Collins?

08 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. I
09 don't think that such a clarification can be made
10 because the witness has said he's used fish in both
11 contexts, and I think that if this testimony is going
12 to have any meaning, we've got to understand this.

13 HEARING OFFICER DEL PIERO: Let's keep in mind,
14 Gentlemen, that this is Mr. Roos-Collins' question.
15 He's afforded the opportunity to ask the question he
16 wants to.

17 Which is it, Mr. Roos-Collins, so Mr. Wong can
18 effectively answer the question with the degree of
19 specificity necessary?

20 Q BY MR. ROOS-COLLINS: Mr. Wong, I am referring to the
21 term "fish in good condition" as you use it in
22 Paragraph 14 of your written declaration where you
23 state, "That an adequate flow regime is necessary to
24 keep riparian and aquatic systems in good condition.
25 This results in a stream in good ecological condition

0148 01 which can then maintain fish life in good condition."

02 When you use the term "fish life in good
03 condition" in Paragraph 14, were you referring to
04 individual fish or to the fish population as a whole?

05 A I'm referring here to fish population as a whole.

06 Q With that understanding; namely, that my question
07 refers to fish population as a whole, what are the
08 qualities of fish in good condition?

09 MR. BIRMINGHAM: I'm going to object on the
10 grounds that the question is ambiguous. It's not clear
11 whether or not we're talking about invertebrate fish or
12 fish as defined by the Fish and Game Code.

13 HEARING OFFICER DEL PIERO: I had hoped we were
14 going to be able to resolve this by getting the
15 clarification that I asked for originally. I think I'm
16 going to overrule that objection, Mr. Birmingham,
17 because in the event that -- in the event that
18 Mr. Roos-Collins wants a response, specifically within
19 the confines of the definition of "fish" under Fish and
20 Game Code, he can ask for it. I'm assuming he's asking
21 for an answer from Mr. Wong in the context of fish as
22 Mr. Wong has indicated he's used it during the course
23 of his written statement.

24 Mr. Wong, proceed with an answer, okay? It's now
25 five minutes, and we still don't have an answer. We've
0149 01 got a bunch of iterations of the question but no
02 answer.

03 MR. WONG: Right. The word "quality" is
04 difficult. The word "quality" is throwing me, Sir,
05 that's the problem. Is there another word that would
06 help me, please? Or if that's it, I will do my best to
07 answer it.

08 Q BY MR. ROOS-COLLINS: Mr. Wong, I will withdraw that
09 question and ask another, and before I do let me
10 preface it with an explanation of my purpose for asking
11 this question.

12 You have been subjected to continuous questioning
13 now for four hours by attorneys for all parties. There
14 is some confusion now as to what you mean when you say
15 "fish in good condition." I am attempting to eliminate

16 that confusion. I am not asking about Section 5937 in
17 the abstract. I am not asking about anything but your
18 meaning when you use the term "fish in good
19 condition."

20 When you use that term and are referring to a fish
21 population, what does that term mean to you?

22 A I'm going to be somewhat repetitive, but I'll
23 bring to mind what I can regarding that. Fish
24 populations as a whole would be self-sustaining, as we
25 mentioned, containing good age classes. There would be

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01 adequate reproduction, natural reproduction for
02 whatever species there may be. An adequate habitat for
03 all life stages involved, meaning both aquatic insects,
04 meaning in the stream as well at riparian vegetation
05 outside the stream that's required by various life
06 stages of aquatic insects which have terrestrial form.

07 There would be abundant or adequate food available
08 for all these types of species, whether it be for
09 predators or whether it be for herbivores that are
10 dependent upon organic input from outside the stream
11 system itself, meaning from the riparian vegetation.
12 There would be adequate energy input, and what I mean
13 by that is energy either in the form of organic debris
14 or sunlight with primary productivity with algae.

15 Basically, an ecosystem that is self-supporting
16 and can provide some measure of, in the case of
17 vertebrate management species of management interest,
18 would provide desirable life stage for that particular
19 species.

20 Q Mr. Wong, your answer addressed fish habitat as
21 well as fish themselves. Is that correct?

22 A Yes.

23 Q Let's leave fish habitat out of it. When you use
24 the term "fish in good condition," do you have any
25 meaning beyond self-sustaining population, desirable

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01 size, and good physical condition?

02 MR. BIRMINGHAM: I'm going to object on the
03 grounds that although I don't think it's intended to be
04 argumentative, it is argumentative. Mr. Roos-Collins
05 asked this witness what he meant by the use of the term
06 in his written testimony. This witness answered it.
07 And if that includes habitat, that's the way this
08 witness intended to use that term. And I think it's
09 argumentative for Mr. Roos-Collins to now ask him to
10 tell us what he meant by excluding that term.

11 HEARING OFFICER DEL PIERO: Mr. Roos-Collins?

12 MR. ROOS-COLLINS: That's a fair objection. I
13 withdraw the question.

14 HEARING OFFICER DEL PIERO: Fine.

15 Q BY MR. ROOS-COLLINS: Mr. Wong, does the term "fish
16 in good condition," as you use it, include habitat?

17 A Yes.

18 Q Let me turn now to several questions put to you by
19 Mr. Birmingham at the close of his recross
20 examination. He said you can't look at habitat to
21 determine good condition, and you answered no not
22 entirely, or words to that effect. And then he asked
23 you you can't look at population to determine good

24 condition, and you answered no not entirely or words to
25 that effect.

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01 Do you recall those two questions and then your
02 answers?

03 A Yes, I do.

04 Q You understand that this Board is intending to
05 establish an amendment to L.A.'s water rights licenses
06 to comply with Section 5937?

07 A Yes.

08 Q You have recommended in Paragraph 16 that
09 re-evaluation of flow regimes would be appropriate in
10 five to ten years. Is that correct?

11 A Yes.

12 Q You have described a monitoring program which
13 would be helpful for assessing the effect of the flow
14 regime?

15 A Only in the most general terms.

16 Q What would you recommend this Board look at in
17 five or ten years to determine whether the fish in Rush
18 and Lee Vining Creeks are in good condition?

19 A Actually, what I would recommend is, and I happen
20 to have a copy here, it's a habitat-typing methodology
21 which has been adopted by the Department of Fish and
22 Game and modification of that is used by the Forest
23 Service. It's a habitat-based monitoring scheme which
24 looks at the physical characteristics of the streams in
25 question including riparian vegetation, pool depth,

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01 size, quality. It literally measures different
02 parameters of the stream.

03 In addition to that, as I think I alluded to
04 earlier, it does contain a fish population monitoring
05 component, but it is not one that is intended to
06 describe the number of fish in each stream. That is
07 being utilized by our department, right now, mostly for
08 anadromous fish habitat monitoring, looking at limiting
09 factors available in these streams and how they might
10 be corrected or enhanced by habitat modifications.

11 A monitoring scheme such as this could be utilized
12 to first develop a baseline for the kinds of
13 quantitative baseline on the type of habitat that's
14 present now. It could then be utilized at intervals in
15 order to determine any progress towards a restoration
16 goal that has been decided upon.

17 The Vestal reports, I believe, regarding Parker
18 and Walker Creeks, make this type of recommendation in
19 terms of monitoring for those two particular creeks,
20 and there are a few more details there. They reference
21 the methodology that I have that the department
22 utilizes, but also others which are similar.

23 MR. ROOS-COLLINS: Mr. Del Piero --

24 MS. CAHILL: Mr. Wong, I think, indicated he had
25 it with him. I don't know how lengthy it is.

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01 MR. WONG: Let me go ahead and read it for the
02 record. This is entitled "California Salmonid Stream
03 Habitat Restoration Manual." It's dated August 1991,
04 and it's been prepared by Gary Flosi, last name
05 F-L-O-S-I, and Forrest, with two R's, L. Reynolds,

06 R-E-Y-N-O-L-D-S.
07 MR. ROOS-COLLINS: Mr. Del Piero, I would request
08 that the --
09 MS. CAHILL: We would be willing to offer that as
10 an exhibit. I think it would be DFG 156?
11 MR. SMITH: That's correct.
12 HEARING OFFICER DEL PIERO: Do you have copies?
13 MS. CAHILL: We don't have, but we will get them.
14 HEARING OFFICER DEL PIERO: Objections?
15 MR. BIRMINGHAM: Is it being admitted?
16 HEARING OFFICER DEL PIERO: Yes.
17 MR. BIRMINGHAM: I would have to review it before
18 I could --
19 HEARING OFFICER DEL PIERO: I will point out that
20 at least two of the Board members have seen that as one
21 of the submittals during the deliberation to the Board
22 on then Draft Decision 1630. I remember it as one of
23 the exhibits.
24 MS. CAHILL: It would be convenient for us to --
25 to offer it as an exhibit by reference if the Board
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01 already has copies.
02 HEARING OFFICER DEL PIERO: Mr. Smith, do you
03 recall that?
04 MR. SMITH: We could do it that way.
05 HEARING OFFICER DEL PIERO: Do you recall the
06 document?
07 MR. SMITH: I don't recall, but I can look real
08 quick.
09 HEARING OFFICER DEL PIERO: I'm almost positive.
10 Can you hold on for one moment? Before we accept it,
11 I'm inclined to accept it by reference, but before I do
12 that, I want to make sure that Mr. Birmingham has a
13 copy and is afforded the opportunity to review it. I
14 also want to make sure that we get a copy for our
15 records in terms of this proceeding, also.
16 MS. CAHILL: We provide two copies when we do it
17 by reference, but it saves us having to copy ten.
18 HEARING OFFICER DEL PIERO: Mr. Dodge, do you want
19 a copy, also?
20 MR. DODGE: Yes, I do.
21 HEARING OFFICER DEL PIERO: What parties don't
22 have copies of this? Everybody? Two for us and --
23 MS. CAHILL: And for those who are present.
24 HEARING OFFICER DEL PIERO: And one for everyone
25 else. Ms. Scoonover would like one.
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01 MS. SCOONOVER: That would be fine. Thank you.
02 MR. WONG: If I could complete my answer totally.
03 This is being revised currently, so within a very short
04 time, there will be a new improved model out, if will
05 you.
06 HEARING OFFICER DEL PIERO: Are they going to be
07 out before the 22nd of December?
08 MR. WONG: I won't attest to that.
09 HEARING OFFICER DEL PIERO: If it's not out before
10 the 22nd of December --
11 MR. WONG: But the only caution I might make is
12 that in the use of this, there are four different
13 levels of specificity used in this particular, which

14 range all the way from just two habitat types, meaning
15 pools and riffles, which are fairly relatively simple
16 to measure, all the way to a very complex habitat
17 description of the stream amounting to some 24
18 different habitat types involving that stream. I would
19 caution the use of this in that the parties involved
20 make sure they use the grossest, if you will, specific
21 level so that it's -- it would be easier or more
22 accurate to reproduce those results.

23 In other words, if you have just the physical
24 measurements, could lead to some inaccuracies in terms
25 of monitoring on a year-to-year basis, but if you stick

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01 with rather large habitat types that are of importance
02 to the parties, the way I understand it, I don't
03 believe we'll ever find out to within 18 habitat types
04 what the pre-diversion conditions were on Lower Rush
05 Creek, for example, but you might come up with a
06 percentage of pools to riffles. So what I'm saying is
07 just use the document, that level, which is really
08 required.

09 HEARING OFFICER DEL PIERO: Thank you, Mr. Wong.

10 Next question, Mr. Roos-Collins?

11 Q BY MR. ROOS-COLLINS: Mr. Wong, bearing in mind
12 Mr. Del Piero's remainder that we are attempting to
13 conclude this hearing by December 22nd, I will conclude
14 with one further question regarding the monitoring that
15 you believe might be advisable to determine the effect
16 of the flow regime adopted by this Board.

17 Would you recommend any monitoring of the
18 characteristics described in Paragraph 7, specifically
19 self-sustaining population, desirable size, and good
20 physical condition of fish?

21 A Yes. That would be helpful, but at this point, I
22 think, seeing as how things are coming back, you're
23 really using that monitoring to try and determine if,
24 in fact, there are any limiting factors that perhaps
25 might be missed in the restoration process. So I would

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01 just use that as a gauge, for example, to make sure
02 there is adequate spawning, that you are getting good
03 year classes, and so on, from your restoration efforts.

04 MR. ROOS-COLLINS: Mr. Wong, thank you very much.

05 No further questions.

06 HEARING OFFICER DEL PIERO: Thank you very much,
07 Mr. Roos-Collins.

08 Ms. Scoonover?

09 MS. SCOONOVER: I have no further questions of
10 this witness.

11 HEARING OFFICER DEL PIERO: Thank you very much.

12 Ms. Leidigh, do you have any questions? I'm
13 sorry. Mr. Haselton, forgive me. You're hiding over
14 there, and I can't see you over the top of the desk.

15 MR. HASELTON: I just have two questions.

16 RECROSS EXAMINATION BY MR. HASELTON

17 Q Mr. Wong, I just need a clarification on Number 21
18 of your testimony, paragraph -- Point 21. You see
19 that?

20 A Yes.

21 Q And it's the second sentence -- last sentence

22 reads, "A reduction in the augmented flows -- " we're
23 speaking about the Upper Owens River. "A reduction in
24 the augmented flows may enhance available habitat for,
25 comma, or facilitate the recolonization of, comma,
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01 species with these specific habitat preferences." Does
02 that statement include brown and rainbow trout, or --
03 A No. I was really, in that case, referring to
04 native aquatic species that might have been adapted to
05 a pre-diversion environment.
06 Q Okay. And please, I don't mean to be repetitive,
07 but Ms. Cahill reminded me of something that I wanted
08 to ask. The statement is that just merely fish
09 population is not the only indicator of fish in good
10 condition. What came to my mind would be the
11 reciprocal. Would you interpret the absence of a fish
12 population as an indicator of a problem?
13 A Well, again, we get to a matter of definition.
14 The fact that a species is not present doesn't
15 necessarily mean that it should be there. I mean, I
16 think -- are you referring to --
17 Q I'm referring to the trout. I'm referring to the
18 habitat, but I was hoping we could presume all of this
19 and basically link to your comment --
20 HEARING OFFICER DEL PIERO: Mr. Haselton, why
21 don't you restate your question?
22 Q BY MR. HASELTON: My question is this, restated, is
23 assuming that the habitat has -- exists, and it exists
24 all -- exists with all the conditions that would be
25 favorable, or would provide for it, maybe the word to
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01 use, for fish populations, the fact that there is an
02 absence of fish, would that indicate a problem?
03 A The reason why I'm hesitating is, there are too
04 many things going through my mind, the fact, what
05 species and things biologists think about, I'm afraid,
06 whether or not they originally were stocked there. I
07 don't mean to slow things up, but it's very -- it makes
08 a difference as far as an answer from my perspective.
09 Can you --
10 Q Well, you know what, Mr. Wong, I'll just go ahead
11 and withdraw my question.
12 A I'm sorry.
13 HEARING OFFICER DEL PIERO: Thank you very much,
14 Mr. Haselton.
15 Mr. Satkowski?
16 MR. SATKOWSKI: Yes, I have a question.
17 RE-CROSS EXAMINATION BY THE STAFF
18 Q This morning, L.A. Department of Water and Power
19 introduced Exhibits L.A. Department of Water and Power
20 91, 92, and 93. Do you recall those exhibits? Those
21 were the ones that responded to the public proposals
22 for angling regulations.
23 A Yes.
24 Q And on those exhibits, there were -- there was an
25 analysis done, and in that analysis, I believe on all
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01 three exhibits, at the end of the paragraph talking
02 about the -- I assume the fishery populations, it says
03 that, "The population is in good condition and further

04 restrictions are unnecessary at this time." I believe
05 when asked earlier you said that you did not know who
06 performed this analysis; is that correct?
07 A Yes.
08 Q Yes. Is it possible that you could find out who
09 performed this analysis and maybe get those analyses
10 for the Board and also maybe find out -- it's not, if
11 stated in the analysis, what this person meant by "good
12 conditions."
13 A It has come to my attention, because we didn't
14 have it earlier, that there has been a statement made
15 by the director of our department. It's in a letter to
16 Mr. Ed Anton (phonetic), or a memo, excuse me, a
17 memorandum to Mr. Ed Anton (phonetic) June 21st, 1993.
18 And it's basically a --
19 MR. BIRMINGHAM: Can we have an opportunity to
20 review the memo before Mr. Wong reads from it?
21 MS. CAHILL: This should be, in fact, already part
22 of the Board's record in this case.
23 HEARING OFFICER DEL PIERO: Can I get a copy,
24 Mr. Satkowski?
25 MR. SATKOWSKI: Pardon?
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01 HEARING OFFICER DEL PIERO: I'd like to see it,
02 too.
03 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. Did I
04 understand Ms. Cahill to say that this was already an
05 exhibit that had been submitted by the Department of
06 Fish and Game?
07 HEARING OFFICER DEL PIERO: I think she said it
08 was already part of the record. Is that true?
09 MS. CAHILL: I would assume it was. I'm perhaps
10 wrong. To a certain extent, the Board incorporated all
11 of its files in this matter. I would assume that
12 letter to Ed Anton (phonetic) from the director --
13 HEARING OFFICER DEL PIERO: Copies went to
14 Mr. Herrera, Mr. Frink, Mr. Canaday. The only person
15 that didn't seem to get a copy was me.
16 MS. CAHILL: I'm now noticing that this particular
17 draft or this particular copy is not signed. I perhaps
18 should go -- with some time should be able to locate
19 the signed copies --
20 HEARING OFFICER DEL PIERO: Mr. Canaday, do you
21 recall this?
22 MR. CANADAY: Yes.
23 HEARING OFFICER DEL PIERO: Is it now a part of
24 our records?
25 MR. CANADAY: I don't recall whether it was signed
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01 or not, but I do recall the memo.
02 MS. CAHILL: I'm just bringing it forward because
03 it is the official position, signed, or at least either
04 by or on behalf of the director.
05 MR. WONG: The general response regarding angling
06 regulations is made by --
07 HEARING OFFICER DEL PIERO: Excuse me, Mr. Wong.
08 Mr. Birmingham, did you have any further comments
09 there? I know you're trying to read it as quickly as
10 you can.
11 MR. BIRMINGHAM: May I ask that Mr. Satkowski's

12 last question be read?

13 MS. CAHILL: Actually, I apologize. I do have the
14 signed copies.

15 HEARING OFFICER DEL PIERO: Everybody take a seat
16 for a second. Mrs. Anglin was asked to read a question
17 back that she now has.

18 (Whereupon the record was read as requested.)

19 HEARING OFFICER DEL PIERO: Now, we've got two
20 copies, one signed, one unsigned. They're quite
21 different, which doesn't surprise me, Boyd Gibbons
22 (phonetic) having been a journalist for most of his
23 life, invariably edits everything submitted to him.
24 Anybody who knows Boyd will appreciate that.

25 I would, inasmuch as -- the question I've got, are
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01 these, in fact, the same documents? Or are these
02 different documents? The reason I point this out is
03 one is addressed to Ed Anton (phonetic), the chief of
04 the Division of Water Rights. One is addressed to
05 interested parties. One is -- one is four pages long
06 including one page of attachments and an addendum with
07 flows. The other one is a two-page letter with an
08 addendum -- Pardon me. Three pages with an addendum.

09 Ms. Cahill, can you tell me?

10 MS. CAHILL: I think they are different
11 documents. One was more widely circulated than the one
12 to Mr. Anton (phonetic). I would assume for our
13 purposes it might be, because they are already in your
14 files, good to rely on the ones to Mr. Anton
15 (phonetic), and there should be one for each stream,
16 Walker, Parker. There's one on South Parker, Rush, and
17 Lee Vining, I believe.

18 HEARING OFFICER DEL PIERO: All dated the 21st of
19 June 1993?

20 MS. CAHILL: So far as I can tell.

21 HEARING OFFICER DEL PIERO: Mr. Canaday, will you
22 confirm that this correspondence is all in my record?
23 Can you confirm it?

24 MR. CANADAY: Yes, we can. We believe that the
25 first letter, the short memo --

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01 MR. HERRERA: The signed memo.

02 MR. CANADAY: The signed memo, was a cover letter
03 to the report that was provided, 91-2.

04 HEARING OFFICER DEL PIERO: Okay.

05 MR. CANADAY: And we believe that the other letter
06 dated June 21st was a follow-up memorandum to Mr. Anton
07 (phonetic) stating the department's position.

08 HEARING OFFICER DEL PIERO: Okay. Now,
09 Mr. Birmingham.

10 MR. BIRMINGHAM: The reason I requested that the
11 question be read back was having reviewed these memos
12 in a very cursory fashion, I don't understand how
13 that's responsive to Mr. Satkowski's questions
14 concerning who prepared the analysis that's contained
15 in L.A. DWP 91, 92, and 93, and whether or not that
16 person can explain that analysis.

17 HEARING OFFICER DEL PIERO: I understand your
18 question.

19 MR. BIRMINGHAM: And therefore, I don't -- I guess

20 I'm objecting to their being offered as part of a
21 response to this question.

22 HEARING OFFICER DEL PIERO: Because the response
23 was nonresponsive?

24 MR. BIRMINGHAM: Because the reference to these
25 memoranda, and the memoranda, are unresponsive to
0166

01 Mr. Satkowski's question.

02 MR. DODGE: Mr. Chairman, Mr. Satkowski's
03 question, as I understood it, related to the Department
04 of Water and Power Exhibit 91, which was a reaction to
05 Mr. Edmondson's proposal there not be any fish taken in
06 various creeks. The documents that are floating around
07 here appear to be on a different subject, and that is
08 the Department of Fish and Game recommendations
09 respecting various creeks.

10 HEARING OFFICER DEL PIERO: I'm going to overrule
11 your objection, Mr. Birmingham. I'm going to allow
12 these to be introduced into the record based on the
13 response given by Mr. Wong. The reason I'm doing that
14 is although the connection between the question asked
15 by Mr. Satkowski and the documents themselves is thin,
16 I recall, during the course of the presentation of
17 witnesses by other parties during this proceeding, I've
18 extended the same opportunity for introduction of
19 documents that resulted from responses to questions
20 that were equally thin.

21 Thank you. Are these being numbered?

22 MS. CAHILL: I didn't know if they needed to be or
23 if they were already part of the record.

24 HEARING OFFICER DEL PIERO: If they're on file --
25 Mr. Satkowski --
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01 MS. CAHILL: For clarity, perhaps I will number
02 them in order.

03 HEARING OFFICER DEL PIERO: Fine. Do we have
04 numbers on these? What are your next two exhibit
05 numbers?

06 MR. SMITH: I think it's --

07 HEARING OFFICER DEL PIERO: Leeke 150 something?

08 MS. CAHILL: 157, 158. 157 will be the next. We
09 better make sure we're all on the same wave length.

10 MR. HERRERA: That's correct, Mr. Del Piero. 157,
11 158.

12 MS. CAHILL: So we can make interested parties
13 159. We can make the letter to Mr. Anton (phonetic) on
14 Rush Creek 160.

15 MR. HERRERA: 157 was the next one.

16 HEARING OFFICER DEL PIERO: They're going to be
17 157 and 158.

18 MS. CAHILL: You have only two, though. That's --

19 HEARING OFFICER DEL PIERO: We got two.

20 MS. CAHILL: There are more.

21 HEARING OFFICER DEL PIERO: Oh, the ones about the
22 other creeks?

23 MS. CAHILL: Yes.

24 HEARING OFFICER DEL PIERO: That are in the record
25 that are all received? Well, they can block -- pardon
0168

01 me?

02 MR. HERRERA: They're in our files.
03 HEARING OFFICER DEL PIERO: Well, the nature of --
04 these two have been presented in response to Mr. Wong's
05 comments. We'll have these identified. If the other
06 ones come up during the course, they can be identified
07 as exhibits, also. If not -- and incorporated by us.
08 So this is -- which one is 157 now, the signed one or
09 the unsigned one?
10 MS. CAHILL: The signed one. There's no reason to
11 go with an unsigned one when we have a signed one.
12 MR. BIRMINGHAM: I'm sorry, Mr. Del Piero. I'm
13 really confused. I have been all day. It's very, very
14 obvious. But I thought these were 158 and 159.
15 HEARING OFFICER DEL PIERO: Help me. Mr. Smith?
16 MR. SMITH: 157 is the signed letter.
17 HEARING OFFICER DEL PIERO: That's what I
18 thought.
19 MR. SMITH: 158 is the --
20 HEARING OFFICER DEL PIERO: Unsigned memo.
21 MR. SMITH: Unsigned memo.
22 MR. BIRMINGHAM: 157 is the signed letter that's
23 addressed to interested parties. And 158 is --
24 MR. SMITH: And the memorandum to Mr. Anton
25 (phonetic) is 158.

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01 MR. BIRMINGHAM: Thank you very much.
02 (DFG Exhibits Nos. 157, 158
03 and 159 were marked for
04 identification.)
05 HEARING OFFICER DEL PIERO: Okay? Okay.
06 Mr. Satkowski, further questions?
07 MR. SATKOWSKI: No.
08 HEARING OFFICER DEL PIERO: Mr. Smith?
09 MR. SMITH: No.
10 HEARING OFFICER DEL PIERO: Mr. Herrera?
11 MR. HERRERA: No.
12 HEARING OFFICER DEL PIERO: Mr. Canaday?
13 MR. CANADAY: Yes.
14 HEARING OFFICER DEL PIERO: Go for it.
15 MR. CANADAY: First to clarify some old business
16 that we had in the morning session, you asked a
17 question of me, Mr. Del Piero, if, in fact, a comment
18 letter by the regional board did, in fact, have
19 attached to it a scientific paper titled Diatom
20 Community Structure Along Physio-Chemical Gradients in
21 Saline Lakes, and I went back to the records and, in
22 fact, it has been, and it is part of our record.
23 HEARING OFFICER DEL PIERO: Thank you very much.
24 Mrs. Forster wants a copy of that to take home with
25 her.

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01 MR. BIRMINGHAM: She hasn't been sleeping well?
02 HEARING OFFICER DEL PIERO: That's exactly the
03 point. We're going to guarantee that she gets a good
04 night's rest.
05 Q BY MR. CANADAY: Mr. Wong, earlier you testified that
06 and made a suggestion that the -- this salmonid
07 restoration manual could possibly be used in this
08 particular process?
09 A Yes.

10 Q Would you again read me the name of that manual,
11 please?

12 A California Salmonid Stream Habitat Restoration
13 Manual.

14 Q And that has a publish date of 1991?

15 A Yes.

16 Q And you've testified that this has been adopted by
17 the department?

18 A It has been utilized by the anadromous fisheries
19 branch and stream restoration -- when you say
20 "adopted," it's one that's literally being utilized.

21 Q Adopted was your word.

22 A Yes. I'm clarifying it. There may or may not be
23 a signed letter somewhere that attests to that.

24 Q And you've read this document?

25 A I have not read the entire document, but I have
0171

01 attended a training session regarding this document and
02 utilized portions of it.

03 Q Do you know if this document was offered to the
04 planning team, the RTC planning team?

05 A No, I don't.

06 Q Are you aware that -- do you know that in that
07 document there may be language that clarifies what good
08 condition is?

09 A Not to my knowledge.

10 Q You were in Lee Vining last Friday; is that
11 correct?

12 A Yes.

13 Q For the testimony of the residents?

14 A Yes.

15 Q And is it your recollection that we heard
16 testimony by two individuals that in Lee Vining Creek,
17 the fish were generally between eight and ten inches?

18 A I do recall that.

19 Q And that their recollection was in Rush Creek, the
20 fish tended to be larger than that, we'll characterize
21 that, just larger than eight to ten inches?

22 A Yes.

23 Q Do you know of any other data, anecdotal or
24 otherwise, that would support a characterization of
25 desirably-sized adult vertebrate fish?

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01 A No. I really -- I'm not aware of any.

02 Q So in your opinion, we're left with this
03 particular anecdotal information to characterize what
04 the historic fishery may have been?

05 A That's correct. There has been some attempt to
06 use Vestal's 1954 paper in that regard, and I would
07 caution very much against utilizing that entirely for a
08 number of reasons. That is, for one thing, that that
09 is a paper which was peer reviewed and has been
10 edited. It may or may not represent Mr. Vestal's
11 actual beliefs at the time.

12 It also contains -- in looking at the type of
13 fishery that was being depicted in that paper,
14 basically, what was happening, as near as I can
15 determine from reading it, people were literally being
16 attracted to that site off of Highway 395 for the
17 catchable trout that were being planted there. So the

18 kinds of anglers that you were basically attracting
19 were, shall we say, perhaps not the most sophisticated
20 anglers that there may have been in the area.

21 And that more or less also is or can be construed
22 from the fact that 43 percent of some of the anglers
23 had zero catch. For a catchable trout program that is
24 not a very high rate of success. Also -- I don't have
25 it handy, and I won't take the Board's time. But also
0173

01 Mr. Vestal remarks in that paper that he's amazed that
02 the brown trout population was able to hold up. So
03 basically you had anglers that weren't necessarily
04 brown trout anglers, so you're not really sure if
05 you're trying to pull out the brown trout, wild trout
06 portion of that population that may have been down
07 there. By only utilizing those kinds of anglers to try
08 to depict that, it could be -- it could easily affect
09 your conclusions.

10 I personally know that brown trout can make it
11 very well in very heavily-fished waters at times just
12 because most catchable trout anglers are not fishing
13 for that kind of fish, which is a more wary type and
14 more difficult to catch. So in terms of using Vestal's
15 paper, I think the information that you have which best
16 describes it would be those that have been compiled in
17 a manual or a report such as the one that Trihey has
18 attempted to put together or is putting together
19 regarding pre-1941 conditions in terms of habitat.

20 Also, you have people who were there and can
21 attest to that, and you have photographs of what that
22 habitat was like. And my personal opinion, or my
23 professional opinion is that that may be the best that
24 you can do to actually try to listen to these people,
25 get corroborating evidence from them and believe them.
0174

01 Q You testified that one element of good physical
02 condition, good condition of a fishery, is, in fact,
03 the physical environment in which that fishery lives;
04 is that correct?

05 A Yes.

06 Q Is it your professional opinion that there would
07 be significant benefits of rewatering the historical
08 channels below Rush Creek Narrows?

09 A Based on the information I've seen and what I've
10 heard, yes.

11 MR. CANADAY: Thank you. That's all I have.

12 HEARING OFFICER DEL PIERO: Thank you very much.

13 I think we have finished with you Mr. Wong.

14 MR. BIRMINGHAM: Excuse me, Mr. Del Piero. I've
15 not done this before, and I don't plan on making it a
16 habit. There have been a couple of issues that have
17 come up in response to questions asked after my last
18 recross, and I was wondering if I could take a few
19 minutes and ask a few extra questions.

20 HEARING OFFICER DEL PIERO: Mr. Dodge?

21 MR. DODGE: I would object to that. We're going
22 to get on a slippery slope if you allow it once.

23 HEARING OFFICER DEL PIERO: I'm afraid I'm going
24 to have to turn that request down.

25 You're excused, Mr. Wong.

0175

01 Ms. Cahill, you have a panel?

02 MS. CAHILL: I do. Do you want to take a break
03 and let them set up?

04 HEARING OFFICER DEL PIERO: Yes.

05 MS. CAHILL: We'll have six people on this panel.
06 The direct will take -- the direct will take a
07 considerable amount of time, but we will actually
08 handle two of the major streams, and it will handle all
09 six of these witnesses.

10 HEARING OFFICER DEL PIERO: Fine. We'll be on
11 break for ten minutes.

12 (Whereupon a short recess was taken.)

13 HEARING OFFICER DEL PIERO: Ladies and Gentlemen,
14 this hearing will again come to order. Nice of you
15 Gentlemen to join us this afternoon.

16 Ms. Cahill, you want to proceed?

17 MS. CAHILL: Yes, I would. First, I would like to
18 note that we have provided today all parties copies of
19 DFG 149. It was a slide that was used by Dr. Stine in
20 his presentation yesterday.

21 And I have now obtained almost sufficient copies
22 of DFG Exhibit -- we have numbered DFG Exhibit 158 an
23 unsigned -- unsigned memo to Ed Anton (phonetic)
24 regarding Rush Creek. Because we have the signed
25 version it seems appropriate to use it instead, and so

0176

01 I will substitute a labeled DFG 158, the signed one, in
02 place of the unsigned one. And we can do that at the
03 next break.

04 This is our panel on the instream flow studies on
05 Rush and Lee Vining Creek. We have a panel of six
06 experts, and I think I will identify them now and then
07 have each identify his own individual testimony as we
08 get to his portion of the presentation.

09 HEARING OFFICER DEL PIERO: None of these
10 Gentlemen, I think, has been sworn.

11 MS. CAHILL: I think it would be wise to swear
12 them.

13 HEARING OFFICER DEL PIERO: Gentlemen, would you
14 please rise and raise right hand? Do you promise to
15 tell the truth during to course of this proceeding?

16 (All say yes.)

17 HEARING OFFICER DEL PIERO: Please be seated.
18 Proceed.

19 DIRECT EXAMINATION BY MS. CAHILL

20 Q To my right is Gary Smith. He is with the
21 Department of Fish and Game.

22 Next is David Christophel of Beak Consultants,
23 Inc. Beak was basically the contractor on the Rush
24 Creek study.

25 Next to him is Dr. Stacy Li who did fieldwork on

0177

01 the Rush Creek study, who is the principal in aquatic
02 systems research, and he was the contractor on the Lee
03 Vining study.

04 Next to him is Thomas R. Payne of Payne and
05 Associates who did the calibration work on the Lee
06 Vining study.

07 To his right is Dr. Matt Kondolf, who has

08 submitted testimony with regard to flushing flows and
09 who was also involved in both of the studies.

10 And last at the end of the table is Peter Vorster,
11 who also was involved in hydrology on the studies.
12 Peter Vorster will be called later by other parties on
13 other matters, and I would request everyone's
14 cooperation today to limiting the questions pretty much
15 to the studies at hand.

16 I'd like to begin by introducing Gary Smith.
17 Gary, would you please state your name for the record?

18 A BY MR. SMITH: Gary P. Smith.

19 Q Mr. Smith, have you examined DFG Exhibit 3?

20 A Yes, I have.

21 Q Is that a copy of the testimony you're submitting
22 in this matter?

23 A Yes, it is.

24 Q Do you have any corrections to make to that
25 testimony?

0178

01 A No, I don't.

02 Q Would you please look at DFG Exhibit 4? Is that a
03 true copy of your qualifications?

04 A I believe it is, yes.

05 Q And could you please summarize your qualifications
06 for us?

07 A I have a Bachelor's and a Master's of Science
08 degree in fisheries management from Humboldt State
09 University. I am an environmental specialist with the
10 Department of Fish and Game. I am currently the
11 department's manager of instream investigations within
12 the Mono Basin and the Upper Owens River.

13 I began my career with the department in 1969. My
14 experience in the eastern Sierra began in 1970. I have
15 active experience in 25 streams in the state. In my
16 former capacity as the department's instream flow
17 coordinator, I was involved in 2 to 300 other
18 investigations at various stages or at various stages
19 throughout most of my career.

20 In -- excuse me. I have been involved in
21 fisheries investigations in the eastern Sierra, as I
22 said, since 1970. I designed, implemented, and
23 conducted the Eastern Sierra Trout Habitat Criteria
24 Investigation, and I'm the Smith of Smith and Acitunal.

25 Q Mr. Smith, were DFG Exhibits 53 through 63 stream

0179

01 evaluation reports that were prepared under your
02 direction?

03 A Yes, they were.

04 Q And is DFG 115 a copy of the publication Smith and
05 Acitunal Habitat Preference Criteria for Brown, Brook,
06 and Rainbow Trout in Eastern Sierra Nevada Streams, was
07 that a publication for which you are an author?

08 A Yes, it is.

09 Q Would you please very briefly summarize your
10 testimony?

11 A All right. I designed, administered, and managed
12 the studies on Mill, Wilson, Parker, Walker, South
13 Parker, Lee Vining, Rush Creeks, and the Upper Owens
14 River for the Department of Fish and Game. It's been
15 the department's policy since 1983 to require the use

16 of IFIM in instream flow assessments where it's
17 appropriate.

18 Beak Consultants was selected jointly in a
19 cooperative study to conduct an investigation on Rush
20 Creek. They began their investigation in 1987.
21 Aquatic Systems Research also was conducted -- excuse
22 me, was selected to conduct instream investigation on
23 Lee Vining Creek. They began their investigation in
24 1990. These two investigations employed the IFIM
25 PHABSIM complex. Studies on Parker, Walker, South

0180

01 Parker, couldn't use the IFIM PHABSIM complex because
02 of the degrading conditions the streams were in. So
03 other names were used to develop stream flow
04 recommendations.

05 The Basco (phonetic) Environmental was selected --
06 when I say "cooperatively," there's a number of parties
07 that have been involved on all of these investigations
08 in selecting the -- in various phases of developing the
09 study -- it's like a contractor and -- following the
10 investigation through to complete the report.

11 Back to where I was, Aquatic Systems -- excuse me,
12 Basco (phonetic) Environmental was selected to conduct
13 investigations on Parker and Walker and South Parker
14 Creeks and the Upper Owens River. From those studies,
15 the department has developed stream flow
16 recommendations, and we've presented them to the
17 Board.

18 For Rush Creek, the stream flow recommendations
19 are included -- are presented on the easel there
20 underneath the fish, and those recommendations are
21 included in DFG Exhibits 52 and 53.

22 In Lee Vining Creek, investigation recommendations
23 are just now being put on the easel, and they are in
24 DFG Exhibit 54, 55.

25
0181

01 you will note that the stream flow recommendations vary
02 by month and by water year type. The Lee Vining
03 recommendation includes a flushing flow. The Rush
04 Creek -- excuse me. The Rush Creek recommendations do
05 not include a flushing flow recommendation. It is --
06 it will be necessary to develop flushing flow
07 recommendations. Dr. Matt Kondolf is here to present
08 testimony on that point.

09 Parker, Walker stream flow recommendations are, in
10 Walker Creek, from April 1 through September, stream
11 flow of 6 cfs. October through March, four and a half
12 cfs with a flushing flow. Parker Creek recommendation,
13 April through September, 9cfs, and October through
14 March, 6 cfs. Again, with a flushing flow
15 recommendation.

16 The Upper Owens River, Darrell Wong covered that
17 earlier, and I will be very brief. That is, the
18 recommendations are in Exhibit DFG 62, 63. The
19 recommendation essentially is all the natural flow
20 that's in the river is needed for -- to make it -- if
21 water is diverted out of the Mono Basin, through the
22 Mono Craters Tunnel into the Upper Owens, it should
23 come out in a stable manner with a maximum flow

24 immediately downstream of the portal in the confluence
25 of the Upper Owens of 200 cfs.

0182

01 MR. DODGE: Could I have a clarification,
02 Mr. Del Piero?

03 HEARING OFFICER DEL PIERO: Yes.

04 MR. DODGE: When Ms. Cahill presented this panel,
05 I understood it to be recommendations on Rush Creek and
06 Lee Vining Creek with the idea that Parker and Walker
07 and the Upper Owens River would be covered later. And
08 I'm just wondering whether my understanding was
09 correct.

10 MS. CAHILL: It is correct that Walker, Parker,
11 and the Upper Owens River will be subsequently dealt
12 with.

13 MR. DODGE: Thank you.

14 Q BY MS. CAHILL: Does that conclude your direct
15 testimony?

16 A BY MR. SMITH: Yes, it does.

17 Q Mr. Smith, were you familiar with the document
18 that we are now providing as DFG Exhibit 158? This is
19 the signed version.

20 A Yes, I am.

21 Q There has been some confusion, I believe, as to
22 whether the recommendations being presented today are
23 the official recommendations of the Department of Fish
24 and Game. Are they?

25 A On which --

0183

01 Q On -- at this time on Rush and Lee Vining Creeks.

02 A Yes. They are the official recommendations of the
03 department.

04 Q And are you familiar with the document, DFG 158?

05 A Yes, I am.

06 Q And that document states that the addendum stream
07 flows, which are those on the graph, are stream flow
08 requirements necessary to keep Rush Creek's brown trout
09 resources in good condition as required under Fish and
10 Game Code Sections 5937 and 5946; is that correct?

11 A That's correct.

12 Q And it's your understanding that that, then, is
13 the department's official recommendation?

14 A Yes.

15 Q Thank you.

16 I would next like to introduce Mr. David
17 Christophel. Mr. Christophel, would you please state
18 your name and spell it for record?

19 A BY MR. CHRISTOPHEL: David B. Christophel,
20 C-H-R-I-S-T-O-P-H-E-L.

21 Q Mr. Christophel, have you had an opportunity to
22 examine DFG Exhibit 5?

23 A Yes, I have.

24 Q And is that a true copy of your testimony?

25 A Yes, it is.

0184

01 Q Do you have any corrections to make to that
02 testimony?

03 A No.

04 Q And have you examined DFG Exhibit 6?

05 A Yes.

06 Q And that's a statement of your qualifications. Is
07 it accurate?
08 A Yes, it is.
09 Q And DFG Exhibits 75 through 86, these are slides
10 that you have provided us to be used today; is that
11 correct?
12 A I -- to tell you the truth, I'm not sure on the
13 numbers, but -- well.
14 Q 75 through 86?
15 A 87.
16 DR. LI: 73.
17 A BY MR. CHRISTOPHEL: 73 through 87.
18 Q 73 through 87, thank you.
19 And DFG Exhibits 52 and 53, those are -- the
20 report that was prepared by Beak Consultants for the
21 Department of Fish and Game; is that correct?
22 A That is correct.
23 MS. CAHILL: Because there's going to be a joint
24 presentation on Rush Creek by Dr. Li and
25 Mr. Christophel, I'd like to do Dr. Li's preliminary
0185
01 materials also now.
02 Q BY MS. CAHILL: Dr. Li, would you please state your
03 name and spell it for record?
04 A BY MR. LI: Stacy K. Li, last name spelled L-I.
05 Q Dr. Li, is DFG Exhibit 7 a copy of your testimony?
06 A Yes, it is.
07 Q And do you have any corrections to make in that?
08 A No, I don't.
09 Q Do you -- would you please compare the exhibit
10 numbers in your testimony with the exhibit numbers on
11 the reports?
12 HEARING OFFICER DEL PIERO: Dr. Li, you're going
13 to need to get the microphone closer.
14 DR. LI: Okay.
15 Q BY MS. CAHILL: Dr. Li, should we, in fact, correct
16 your testimony to show that the two reports by Aquatic
17 Systems Research are DFG Exhibit Nos. 54 and 55?
18 A Yes, we should.
19 Q Dr. Li, is DFG Exhibit 8 a statement your
20 qualifications?
21 A 8. Yes, it is.
22 Q And is it true and correct?
23 A Yes, it is.
24 Q Would you briefly summarize your qualifications
25 for us?
0186
01 A Yes. I received my -- the bulk of my education at
02 the University of California at Davis where I received
03 a bachelors, a B.S. in zoology, an AB in psychology, a
04 masters of arts in psychology, and a Ph.D. in
05 psychology specializing in evolution, ecology, and
06 animal behavior.
07 I -- upon graduation, I taught animal behavior at
08 the University of California at Davis and also two
09 semesters of ecological methods for Sacramento State
10 University.
11 Q And how are you currently employed?
12 A I am the principal of Aquatic Systems Research.
13 In addition, I guess I'm noted for -- I have been

14 a consulting biologist since 1980, have participated in
15 about 60 different stream assessments, 20 to 25 of
16 which used IFIM.

17 Q Mr. Christophel, I've already forgotten whether I
18 asked to you summarize your experience.

19 A BY MR. CHRISTOPHEL: You did not.

20 Q Would you, please?

21 A Yes, I will. I have bachelors and masters degrees
22 from California State University at Sacramento, both of
23 which are in biological sciences with an emphasis on
24 fisheries and wildlife management. I'm presently a
25 senior scientist with Beak Consultants in the

0187

01 Sacramento office.

02 I participated in the Rush Creek field studies and
03 in the preparation of the report, and I've been
04 involved in numerous other instream flow and fisheries
05 investigations in California.

06 Q Thank you.

07 Dr. Li and Mr. Christophel will go back and forth
08 a bit. It's a joint presentation.

09 Would you please begin Mr. Christophel?

10 A As Mr. Smith indicated, Beak was awarded the
11 contract to conduct the instream flow investigation in
12 Rush Creek in 1987. At that time, Dr. Li was with
13 Beak, and he it was project manager. As the project
14 manager, he was responsible for all aspects of the
15 project including the study design, the collection of
16 field data, and the analysis of those data.

17 Dr. Li left Beak in 1989 prior to the completion
18 of the report, hence he did not participate in the
19 development of the instream flow recommendations.

20 What we'd like to do the give a brief summary of
21 our testimony and using slides to aid in that process,
22 Dr. Li will give the initial portion, which constitutes
23 the field studies and the analysis. I will present the
24 portion on flow recommendations.

25 MR. BIRMINGHAM: Mr. Del Piero?

0188

01 HEARING OFFICER DEL PIERO: Yes, Mr. Birmingham.

02 MR. BIRMINGHAM: The copies of the slides which we
03 are about to see, in fact, copies of all the
04 photographs that were submitted by the Department of
05 Fish and Game to Los Angeles Department of Water and
06 Power, were black and white photocopies of photographs,
07 and it's very difficult to discern anything in any of
08 it. And I'm wondering if we could get copies of the
09 slides or photos.

10 The Department of Fish and Game has subsequently
11 provided us with color photocopies of the photographs
12 they're using, and they're much better. And if we
13 could get copies of those, we would appreciate it very
14 much.

15 MS. CAHILL: We can do that.

16 MR. THOMAS: Well, I'm responsible for the budget
17 in this project, and if you would pick specifically
18 something you need to find, we'd be happy to do so, but
19 we are not subject to the great deep pocket that Los
20 Angeles offers to some of the other witnesses, so we
21 pay out of our taxpayers' money. So we would

22 appreciate you limiting your cost to exactly --
23 MR. BIRMINGHAM: If I can explain the problem I
24 have.
25 HEARING OFFICER DEL PIERO: It's difficult to know
0189 what you're looking for.
02 MR. BIRMINGHAM: Sometimes it's very difficult to
03 know without looking at a photocopy. For instance,
04 yesterday, Dr. Stine put a slide up and that slide was
05 difficult to see. And now in reviewing the color
06 photocopy that's been provided to us, we can see a lot
07 more detail. And I have some questions I'd like to ask
08 Dr. Stine about that slide. And I presume I'll have
09 that opportunity when Dr. Stine comes back.
10 I understand Mr. Thomas' budget constraint, but at
11 the same time, when I'm looking at a black and white
12 photocopy of a photograph or a slide, it's very
13 difficult for me to judge whether or not there's
14 something that I should ask about in that photocopy.
15 MS. CAHILL: I --
16 HEARING OFFICER DEL PIERO: Wait. Wait. Wait.
17 Wait. Wait. Wait. Wait. Mr. Thomas?
18 MR. THOMAS: Just ask him whatever he needs.
19 MR. BIRMINGHAM: I need it all.
20 MS. CAHILL: In fact, to accommodate things, Tom,
21 if you have your black and whites, we have one set of
22 color Xeroxes here that we will provide so that you can
23 have them at counsel table and have them for cross,
24 except they're numbered, well, yours are numbered.
25 Liz, you don't have a black and white numbered
0190 set?
01 set?
02 HEARING OFFICER DEL PIERO: We'll do the best we
03 can. Mr. Thomas, you see if you can arrange to get a
04 full set of the copies made.
05 MS. CAHILL: Actually, Tom, they'll be on the
06 screen during the presentation. We will lend you the
07 color copies during your examination.
08 HEARING OFFICER DEL PIERO: Do we have duplication
09 capabilities?
10 MR. SMITH: Not color.
11 HEARING OFFICER DEL PIERO: Mr. Thomas, let me
12 suggest something. If there's a real budgetary
13 problem, Dave Kennedy's got duplication capability,
14 okay?
15 MR. THOMAS: Dave Kennedy has the State Water
16 Project.
17 HEARING OFFICER DEL PIERO: I understand that,
18 okay? If it necessitates me calling the secretary of
19 resources to get a duplicate copy made by the
20 Department of Water Resources, I'll be happy to do
21 that. But I don't think I have to, but I'll do it.
22 MR. THOMAS: We'll do our best.
23 HEARING OFFICER DEL PIERO: Now.
24 Q BY MS. CAHILL: Dr. Li, would you please begin?
25 A BY DR. LI: The Rush Creek instream flow
0191 investigation was conducted in the summer of 1987.
02 Now, instream flow investigations prior to this time,
03 from my perspective, suffered from one weakness, and

04 that weakness was experimental bias. Therefore, when
05 Beak was awarded the Rush Creek instream flow
06 investigation, we decided to control that bias by using
07 a two-stage, stratified, random-sampling, experimental
08 design. That design selected reaches of the stream and
09 habitat types within those reaches to sample.

10 The basis for the sampling was based upon a
11 compilation of habitat types identified numerically,
12 then randomly selected using random number tables. And
13 this greatly facilitated arguments on the stream in
14 terms of which habitat types would be -- would be used
15 for the sampling.

16 With any instream flow investigation, we have a
17 scoping meeting that was conducted in -- let's see.
18 This was conducted in Lee Vining where all the -- all
19 the interested parties listed here on this -- can we
20 have numbers for these slides?

21 Q No. This is -- just read off who it was that
22 participated.

23 Q On this slide is Department of Fish and Game, Los
24 Angeles Department of Water and Power, Beak
25 Consultants, Incorporated, EA Engineering, U.S. Forest

0192

01 Service, U.S. Fish and Wildlife Service, Mono Lake
02 Committee, and Cal Trout. At this meeting, our study
03 design was presented, and we accepted input from these
04 parties.

05 Next slide. This is the study area for the study
06 in 1987 beginning at Mono Gate One and going down to
07 the county road consisting of six separate reaches.

08 Next slide, please. This is a photograph of Mono
09 Gate One. It is the structure by which Rush Creek
10 receives water from Grant Reservoir.

11 Next slide.

12 Q That was DFG 73. And the next slide is DFG 74?

13 A DFG 74 is a slide of the return ditch, Reach One.
14 It's a -- it's an artificial channel that delivers
15 water from Mono Gate One to Rush Creek.

16 Next slide, please.

17 Q Next slide is DFG 75.

18 A This is Reach Two. It is characterized by still
19 having an existing riparian canopy, having relatively
20 steep but stable banks with a moderate grading.

21 Next slide, please.

22 Q DFG 76.

23 A Reach Three extends from Reach Two -- we call
24 Reach Two "The Gorge" because it seemed to be a
25 canyon. And this extends from The Gorge to The

0193

01 Narrows. That is moderate gradient reach that, at this
02 flow in the summer of 1987 with the flow of 19 cfs, had
03 relatively little riparian vegetation.

04 Next slide, please.

05 Q DFG 77.

06 A This is The Narrows. It's that great big notch of
07 rock down at Rush Creek. It's a relatively short reach
08 of something like 300 feet or so, fairly steep,
09 characterized by deep-plunge pools and steep cascades.

10 Next slide, please.

11 Q DFG 78.

12 A This is -- this is Reach Five, what everybody has
13 been calling The Bottom Lands or The Meadows, and as
14 you can see back in 1987, it didn't have much riparian
15 vegetation.

16 Next slide, please.

17 Q DFG 79.

18 A Reach Five is between The Narrows to what's been
19 called The Ford.

20 This is Reach Six. It is our downstream-most
21 reach. It extends from The Ford to the county road
22 and, as you can see, it wasn't much of a stream back
23 then.

24 Next slide. We start our investigation with
25 aquatic habitat delineation. The purposes of the
0194

01 delineation is to define the sampling universe that we
02 use for the stratified sampling procedure. Using
03 habitat mapping, biologists walk along the stream,
04 identify the habitat types, measure its thalweg length,
05 and compile that so that we can determine the
06 habitat-type composition and representation within each
07 reach. Next slide.

08 MR. CANADAY: Mr. Li, can you spell thalweg,
09 please?

10 DR. LI: Thalweg, T-H-A-L-W-E-G.

11 Q BY MS. CAHILL: And you might define it as well.

12 A BY DR. LI: It's the deepest thread along the stream
13 course.

14 MR. HERRERA: Ms. Cahill that's 20 minutes.

15 MS. CAHILL: Mr. Del Piero, I would apply for an
16 additional 20 minutes at this time.

17 HEARING OFFICER DEL PIERO: Granted.

18 DR. LI: Here's the guys on the stream back in '87
19 measuring it with a open-reel tape.

20 Next slide. The guy in the blue cap with the
21 Dodgers hat on was Mr. Christophel.

22 Q BY MS. CAHILL: The last slide was DFG 80 and the
23 next one is DFG 81.

24 A These are the kinds of habitat types that we were
25 identifying during the course of this survey. This is
0195

01 riffle. It's characterized by being relatively shallow
02 with turbulent water surface and generally fairly fast
03 water velocities.

04 Next slide. This is a run. Runs are
05 characterized as being relatively deep habitats with
06 moving water but the water surface elevation is fairly
07 stable and not dropping.

08 Q This is DFG 82.

09 A Next slide, please.

10 Q DFG 83.

11 A This is a picture of a pool. Pools are simply
12 deep aquatic habitats, relatively slow water velocity,
13 relatively tranquil water surfaces, generally
14 controlled by some structure that controls where the
15 water surface is.

16 Next slide, please.

17 Q DFG 84.

18 A This is an example of the infamous Rock Gardens.
19 They're characterized by having large boulder elements,

20 ponding behind those boulder elements in a diverse
21 water flow pattern around those -- around those rocks.
22 Next slide, please. This hydrology is an
23 important element of an IFIM study. There were two
24 components in the Rush Creek study. The first to take
25 measurements to determine whether the stream is gaining

0196

01 or losing stream flow as it flows downstream. So you
02 have an idea of how much you're losing as it traverses
03 and also whether that pattern changed from season to
04 season.

05 The second portion of the hydrology component is
06 an examination of the hydrological record.

07 Now, these elements were developed for the Rush
08 Creek study by Peter Vorster.

09 Next slide. Here's the -- a representation of the
10 hydrological record from 1937 to 1987 expressing mean
11 monthly flows, and you can see that the bulk of the
12 water is -- goes down the stream between May and July
13 and then it recedes to a lower level the remainder of
14 the year.

15 Q This is a color version of Figure 8 in DFG 52.

16 A Next slide, please. Habitat discharge
17 relationships is the core of the Rush Creek study. We
18 randomly selected 51 sampling sites that was measured
19 using 78 transects. The selection of the sampling
20 sites and transects was open to all parties and
21 personnel from Los Angeles Department of Water and
22 Power that represent us participated in that.

23 Next slide please. We collected stream flow at
24 four different stream flow levels; 100 cfs, 60 cfs, 19
25 cfs, and about 13 cfs during the summer.

0197

01 MR. BIRMINGHAM: Excuse me, Dr. Li. Can I ask,
02 who is that good-looking man standing in the middle of
03 the photograph?

04 DR. LI: He's not quite in the middle. He's sort
05 of a rightist, as we know.

06 This is Gary Smith and this is David Christophel
07 standing behind the auto level, and that's Lawrence of
08 Loomis, Stacy Li sitting here doing something.

09 (Laughter.)

10 HEARING OFFICER DEL PIERO: Obviously, you
11 couldn't identify them because of the quality of the
12 photograph; is that it?

13 MS. CAHILL: It's because of the light in the
14 room. This is DFG 87.

15 HEARING OFFICER DEL PIERO: That explains it.

16 MS. CAHILL: And the fish which I didn't even see
17 was DFG --

18 DR. LI: I don't think we've gotten to the fish
19 yet.

20 MR. DODGE: It looks to me like Mr. Birmingham
21 will have greater problems than just having a black and
22 white copy of that one.

23 HEARING OFFICER DEL PIERO: It's because we
24 haven't gotten it dark enough in here yet. If we cover
25 all of watch faces, we probably could get it dark

0198

01 enough.

02 DR. LI: That field data is collected by
03 stringing, essentially, a tape across the streams and
04 measuring depth, velocity at most of the flows, water
05 surface elevation, a measurement called "stage of zero
06 flow," which is a measurement of the downstream
07 hydraulic control.

08 HEARING OFFICER DEL PIERO: Doctor, they told us
09 you could even watch the slides and talk at the same
10 time. This is a test.

11 DR. LI: Yes, it is.

12 Next slide, please. And after the data's
13 collected, the model is calibrated to those measurement
14 flows and weighted usable area stream discharge
15 relationships are --

16 HEARING OFFICER DEL PIERO: Mr. Birmingham? Grab
17 Scott. Make him sit down and let go of the light
18 switch. That's fine.

19 (Laughter.)

20 MR. STEIN: L.A. DWP's expert had the lights on in
21 the front of the room where the slides were and the
22 lights off in the back of the room where they weren't.

23 MR. DODGE: I believe that Dr. Stine has arrived.

24 (Laughter.)

25 HEARING OFFICER DEL PIERO: Really? I hadn't
0199 noticed.

02 (Laughter.)

03 Q BY MS. CAHILL: This is Figure 21 from DFG 52.

04 A BY DR. LI: Anyway, you develop relationships for
05 four life stages of brown trout; spawning, adult,
06 juvenile, and fry.

07 Next slide. Fish resources. We also collected
08 information of fish species and their populational
09 characteristics in 1987.

10 Next slide, please. Here we go again. Gary's
11 playing D.W. Griffith (phonetic) here and photographing
12 us. This is David Christophel applying the electric
13 field to the fish, and that's how you catch fish, you
14 estimate numbers of fish within a confined part of the
15 stream. It's blocked off by nets to preclude movement
16 of fish in or out of these sections, and based upon a
17 removal pattern, fish abundance is estimated.

18 Q This is DFG 85.

19 A Next slide, please. This is a picture of one of
20 the larger fish that was caught in 1987. This fish was
21 about 14 and a half inches long, as I recall.

22 Q DFG 86.

23 A Next slide, please. Effluvial geomorphology was
24 an important component in the Rush Creek study and
25 Dr. Kondolf was responsible for those elements.

0200

01 Next slide, please. Water temperature modeling is
02 an important component, particularly in Rush Creek.

03 Next slide, please. We measured water
04 temperatures at four locations in Rush Creek. Station
05 One is right at Mono Gate One where the water comes out
06 of the lake. Station Two is at Old Highway 395.
07 Station Three is at The Narrows, and Station Four is at
08 The Ford.

09 The -- what you see with this, in brief, is very

10 small fluctuations of daily water temperatures at
11 Station One increasing downstream, and I will point out
12 that in -- at Station Three and at Station Four, water
13 temperatures exceeded 80 degrees with flow of 19
14 second-feet in August. 80 degrees is sort of a
15 rule-of-thumb temperature that is indicating that water
16 temperatures may be too high for trout populations.

17 Q Dr. Li, you may have misspoke and you said August,
18 but I think you pointed at July. Can you clarify that,
19 please?

20 A I misspoke. It is in July. July and August tend
21 to be the highest water temperature times for our
22 region of the country.

23 Q And this is Figure 42 in DFG 52.

24 A Next slide, please. We made assessments of
25 riparian vegetation, and now we're coming to instream
0201

01 flow recommendations. And David will run you through
02 those.

03 A BY MR. CHRISTOPHEL: Dr. Li has just gone through and
04 described the various study components that were part
05 of the instream flow investigation and, to one extent
06 or another, each of those studies was used in the
07 development of the instream flow recommendations.

08 Before I begin, though, I'd like to repeat our
09 objective because I think it's important in the
10 understanding of why we approached this the way that we
11 did. Our objective was to identify a flow regime in
12 Rush Creek that would maintain brown trout habitat
13 that was within the context of the channel as it
14 existed in 1987 and consideration of the flows
15 unimpaired by diversions at Grant Lake.

16 MR. BIRMINGHAM: Could the Reporter mark that,
17 please?

18 MR. CHRISTOPHEL: We approached that objective
19 based on a goal of maintaining the median habitat level
20 of Rush Creek that would occur in the absence of
21 diversions. The median habitat is simply the amount of
22 habitat that is there at least half of the time. It's
23 also the habitat level about which habitat values
24 fluctuate.

25 We also developed the flow recommendations in
0202

01 consideration of hydrologic conditions and, as you've
02 heard, we developed our flows for dry, normal, and wet
03 conditions.

04 We obtained the median habitat values from a
05 habitat duration analysis -- and could I have the first
06 slide? These values for weighted usable area were
07 tabulated then for each brown trout life stage, for
08 each month, and for each hydrologic condition. From
09 those median habitat values, then, we identified the
10 flow level --

11 MR. BIRMINGHAM: Excuse me. I wonder if you could
12 possibly go to the other side of the screen.

13 MR. THOMAS: I would rather block counsel for L.A.
14 than the Board member.

15 MR. BIRMINGHAM: I didn't mean to request --

16 HEARING OFFICER DEL PIERO: We can see just fine.
17 Stay right where you are. All of us can see just

18 fine.

19 MR. CHRISTOPHEL: Okay. Well, I prefer to speak
20 to you, too, but -- we identified the flow levels --

21 HEARING OFFICER DEL PIERO: If you speak into the
22 microphone, we'll be happy. Okay?

23 MR. CHRISTOPHEL: -- the flow levels that were
24 associated with those median values; in other words,
25 those are the flows that would produce those median
0203

01 values in the stream. Those flow levels were obtained
02 from the habitat discharge relationship that Dr. Li had
03 indicated earlier. As an example -- if I could have
04 the next slide, please.

05 MS. FORSTER: If you stand at the corner of the
06 podium, I think we can see.

07 MR. CHRISTOPHEL: For example, in September under
08 dry conditions, the median habitat value was 180,493
09 square feet.

10 Next slide, please. From the habitat discharge
11 relationship, then, that flow or that habitat amount
12 corresponded to a flow of 39.6 cfs. Those flows, then,
13 associated with the median habitat values, were the
14 basis for our flow recommendations -- can we have the
15 next slide, please? -- which are indicated in the
16 white. Those white numbers, then, are the flows
17 associated with the median habitat values for each of
18 those months and under each hydrologic condition.

19 We also considered the results of the other
20 investigations in an effort to adjust those
21 accordingly. One of the considerations that we made
22 was for water temperature and, based on our water
23 temperature modeling, we found that for the flows that
24 that we were recommending based on median habitat
25 values, water temperature would not be a concern hence,
0204

01 water temperature was not used to adjust those flows
02 any further.

03 We also considered the studies on effluvial
04 geomorphology and specifically, the sediment transport
05 model. From that modeling, we found that spawning
06 gravel in Rush Creek, particularly in Reaches Two and
07 Three, became mobile at flows of 60 cfs and greater.
08 Our concern was that if spawning gravel was blocked by
09 Grant Dam, that continued or sustained flows greater
10 than 60 cfs would adversely influence spawning habitat
11 in Rush Creek. What we did to avoid that was to limit
12 our flow recommendations, our monthly flow
13 recommendations, to 60 cfs. And those months where we
14 made those adjustments are indicated in the green.

15 We also made adjustments during the -- excuse me,
16 the spawning period, November and December. Based on
17 the median habitat values that were generated and the
18 flows that corresponded to those, we noticed that under
19 all hydrologic conditions, the flows during December
20 were less than the flows that occurred during
21 November. Our concern was that eggs deposited in the
22 gravel during November may be adversely influenced by
23 flow reductions in the following month, in December.
24 What we did in that situation to avoid that potential
25 problem is to take the average of the two months and

0205

01 apply that average flow level to both months.
02 A final consideration was made during dry
03 hydrologic conditions. During August, October, and
04 March, the flow levels that were associated with those
05 months were considerably different than the flows that
06 occurred in the months preceding and following. To
07 provide a smoother flow transition from month to month,
08 we took the average of the preceding month and the
09 following month and applied that value to the month in
10 question. For example, in March, based on median
11 habitat, the flow that we would recommend would be 52
12 cfs. But, to smooth the transition, we took the
13 average of the 32 cfs in February and 35 cfs in April
14 and used a value of 34 cfs during that month. These
15 flows, then, as adjusted, served as the basis or served
16 as our instream flow recommendations to the Department
17 of Fish and Game, and they are the flows that appeared
18 in our report.
19 Subsequent to that report, and in consideration of
20 the gravel replenishment program that was going on, the
21 California Department of Fish and Game removed the
22 restriction that we had imposed, the 60 cfs cap, and
23 returned the numbers back to what we would have
24 recommended if spawning gravel considerations had not
25 been an issue.

0206

01 May I have the next slide, please? These flows,
02 then, are the final recommendations made by the
03 Department of Fish and Game.
04 And that concludes my testimony.
05 Q BY MS. CAHILL: Those final flows, by the way, are in
06 an addendum that should be in the beginning of
07 everyone's copy of the Rush Creek report. And if they
08 are not, let us know, and we will attach one. Those
09 numbers are also found in the testimony of Gary Smith.
10 Thank you, Mr. Christophel.
11 Dr. Li, would you now basically explain the Lee
12 Vining IFIM study? And I think we can have lights.
13 A BY DR. LI: Aquatic Systems Research was awarded the
14 Lee Vining Creek study in 1990 and not surprisingly, I
15 guess, the thought pattern that was developed in the
16 Rush Creek study was continued and elaborated upon in
17 the Lee Vining Creek study.
18 It also is a two-stage stratified, random-sampling
19 design by reach and by habitat type. The habitat types
20 were defined through improved methods of habitat
21 delineation. There was a component of hydrology that
22 studied the same components as the Rush Creek study in
23 terms of determining the stream gains and losses and
24 examination of the hydrological record. And there are
25 a variety of other complementary studies that were --

0207

01 that were performed.
02 But to cut to the quick with this --
03 Q If you want to take down the fish --
04 MS. FORSTER: Oh, no.
05 MS. CAHILL: I don't want to risk our borrowed
06 fish being hurt.
07 HEARING OFFICER DEL PIERO: Who does the fish

08 belong to?

09 MR. LI: The fish belongs to Ken Rockel
10 (phonetic), Bridgeport Hardware Store up there.

11 HEARING OFFICER DEL PIERO: My nine year old
12 didn't believe you, did he?

13 DR. LI: What he said was he caught one that big,
14 but you didn't.

15 HEARING OFFICER DEL PIERO: He did. It was a
16 salmon, though. He didn't tell you it was out in the
17 middle of Monterey Bay.

18 DR. LI: The flow data for Lee Vining were
19 collected at three separate flows, about 50, about 35,
20 and about 3 cfs. Tom Payne did final calibration of
21 the model to make sure that they were calibrated, and
22 from that we get weighted usable area discharge
23 relationships for life stages of brown trout, spawning,
24 adult, juvenile and fry.

25 I am pointing to a blowup of Figure 16 from DFG
0208

01 54. I'm going to be writing on an easel here, and I
02 want to provide the Board my thought process for
03 developing the flows for Lee Vining Creek.

04 Fish and Game -- there are two target life stages
05 used to develop the instream flow schedule. Adults,
06 and this life stage was under consideration from April
07 through September, and spawning, which occurs between
08 October and March. The period from October to March
09 covers not only the period when the fish are actively
10 spawning, but also takes into consideration the
11 incubation environment of the developing embryos in the
12 gravels.

13 The goal for our study was to mimic the natural
14 hydrograph, so we developed our recommendations bases
15 upon water years, dry, normal.

16 MR. HERRERA: Ms. Cahill, that's 20 minutes.

17 MS. CAHILL: Mr. Del Piero, I would apply for an
18 additional 20 minutes.

19 HEARING OFFICER DEL PIERO: Given the nature of
20 the panel, it's granted. I think that will be the last
21 20 minutes.

22 MR. BIRMINGHAM: Excuse me, Mr. Del Piero, there
23 are a number of witnesses here, and it is a subject
24 which is of importance, and the Department of Water and
25 Power would have no objection if Ms. Cahill got
0209

01 additional time beyond this 20 minutes. There are a
02 number of other witnesses on the panel.

03 HEARING OFFICER DEL PIERO: I understand. I also
04 understand that this is a summary of written
05 testimony.

06 MS. CAHILL: In fact, both Mr. Payne and
07 Mr. Vorster will simply identify their testimony.

08 HEARING OFFICER DEL PIERO: That's fine.

09 DR. LI: So since we're to mimic the natural
10 hydrograph, we recommend 80 percent of the measured
11 weighted usable area in dry years. This 80 percent
12 seems to be reasonable. Dr. Hardy identified that as a
13 reasonable level to recommend.

14 90 percent in -- 90 percent of maximum measured in
15 normal years, and 100 percent in wet years when there

16 is enough water for -- to completely satisfy the fish
17 but also to allow diversions, too.
18 Q BY MS. CAHILL: Dr. Li, would you clarify, too, those
19 are percentages of habitat rather than percentages of
20 flow; is that correct?
21 A That's correct. Now, initially, I thought an 80-
22 90-, and 100-percent schedule would be adequate for the
23 spawning period. But as it turns out, 80 percent of
24 the maximum flow for spawning would only support
25 something like 60 percent of the adult habitat, and

0210

01 since we have to balance for life stages, we increase
02 this to 90 percent, which accounted -- which would
03 support approximately 70 percent of the adult habitat.
04 And I made a similar adjustment for normal years and
05 increased this to 100 percent, which supported
06 approximately 80 percent of the adult habitat in normal
07 years.

08 There were other -- so, if we go through this --
09 if we go through this process in using one of the more
10 easy ones to demonstrate, 100 percent in the wet year,
11 you go to the adults, comes to -- the highest measure
12 comes down to about 95 cfs. And that applies to the
13 wet period for the adults. In addition to these -- the
14 schedule, there are provisions in normal years for a
15 three-day flushing flow of 160 second-feet during the
16 runoff period. And during wet years, there would be a
17 channel maintenance flow of 160 second-feet for 30 days
18 in the wet years. These recommendations are based upon
19 the recommended flow or the natural flow, whichever is
20 less.

21 That ends my testimony for Lee Vining.

22 Q Thank you, Dr. Li.

23 Mr. Payne, would you please state your name and
24 spell it for the record?

25 A BY MR. PAYNE: My name is Thomas R. Payne, P-A-Y-N-E.

0211

01 Q And have you had the opportunity to review DFG
02 Exhibit 15?

03 A Yes, I have.

04 Q And is that a -- would you, please, in that -- is
05 that a copy of the testimony you've submitted?

06 A Yes, it is.

07 Q And could you tell us what number should be
08 inserted as the DFG report numbers?

09 A This was prepared prior to the assignment of these
10 numbers, and in Paragraph Number 3, that should state
11 "Exhibits DFG 54 and DFG 55."

12 Q And with that correction, is this a true and
13 correct copy of your testimony?

14 A Yes, it is.

15 Q And have you reviewed DFG Exhibit 16?

16 A Yes, I have.

17 Q And is that a true and correct statement of your
18 qualifications?

19 A Yes.

20 Q Would you briefly review your qualifications for
21 us?

22 A I have a bachelors and a masters degree in
23 fisheries biology from Humboldt State University. The

24 bulk of my experience since graduation has been at two
25 jobs; one about eight years with the U.S. Fish and
0212
01 Wildlife Service as a fisheries and fish and wildlife
02 biologist, and for the past 11 years, I have been a
03 principal of Thomas R. Payne and Associates, a
04 fisheries consulting firm that specializes in instream
05 flow studies.
06 Q Could you very briefly, just in a sentence or two,
07 tell us what your role was in the Lee Vining Creek
08 study?
09 A Thomas R. Payne and Associates was a subcontractor
10 to Aquatic Systems Research, and we participated in the
11 field data collection for Lee Vining Creek study and
12 performed the hydraulic calibration of the model for
13 the Lee Vining study.
14 Q Thank you.
15 If we could mark Dr. Li's last exhibit before we
16 forget, DFG 163.
17 Mr. Vorster, let me come to you next. Would you
18 please state your name and spell it for the record?
19 A BY MR. VORSTER: My name is Peter Vorster. That's V,
20 as in Victor, O-R-S-T-E-R.
21 Q Mr. Vorster, have you had the opportunity to
22 review DFG Exhibit 13?
23 A Yes, I have.
24 Q Is that an accurate copy of your testimony?
25 A Yes, it is.
0213
01 Q Do you have any corrections to make?
02 A No, I do not.
03 Q And of you reviewed DFG 14?
04 A Yes, I have.
05 Q Is that a statement your qualifications?
06 A At the time I prepared this, it was.
07 Q Do you have corrections to make?
08 A No. Just minor additions since that time.
09 Q Is it basically true and accurate?
10 A Yes, it is.
11 Q Could you briefly summarize your qualifications as
12 they relate to the work you did here, if that makes a
13 difference.
14 A Yes. I've been investigating the hydrology of the
15 Mono Basin since about 1978 and intensively since
16 1979. I did my master's thesis on the water balance of
17 the Mono Basin, and I have been investigating the
18 hydrology continuously since 1979 and have worked on
19 the Rush Creek IFIM study, the Lee Vining Creek IFIM
20 study, and have provided expert witness testimony in
21 all the Mono Lake water rights cases. And I'm also a
22 member of the restoration planning team for Rush and
23 Lee Vining Creek.
24 Q Mr. Vorster, what parts of the Rush and Lee Vining
25 Creek studies did you work on?
0214
01 A I worked on the flow history of the two streams,
02 the water availability investigation as well as the
03 flood analysis for Lee Vining -- the Lee Vining Creek
04 study.
05 Q And are the results of your work accurately

06 reflected in the DFG reports that we've referred to
07 today?
08 A Yes, they are.
09 Q Thank you.
10 Dr. Kondolf, would you please state your name and
11 spell it?
12 A BY DR. KONDOLF: My name is G. Mathias Kondolf,
13 K-O-N-D-O-L-F.
14 Q Dr. Kondolf, have you had the opportunity to
15 review DFG Exhibit 11?
16 A I have.
17 Q And is that a copy of your testimony?
18 A Yes, it is.
19 Q And do you have any corrections to make?
20 A Yes, I do. On Page 9, I have some changes -- I'll
21 begin with the fifth line from the bottom of the
22 sentence, "For the purposes of flushing flows, a wet
23 year is defined as one with runoff whose exceedence
24 frequency is less than 34 percent, comma, a normal year
25 with runoff with exceedence of 34 to 77 percent, comma,
0215
01 and a dry year as one exceedence frequency over 67
02 percent, period."
03 Q And with that correction, is that a true and
04 accurate copy of your testimony?
05 A Yes.
06 Q And would you -- have you had an opportunity to
07 look at DFG Exhibit 12? And is that a copy of your
08 qualifications?
09 A Yes, it is.
10 Q And is it true and accurate?
11 A Yes, it is.
12 Q Have I already asked you to summarize your
13 qualifications?
14 A Not yet.
15 Q Please do.
16 A I have a bachelor's degree in geology from
17 Princeton University, a master's degree in earth
18 sciences from University of California at Santa Cruz,
19 and a Ph.D. in geography and environmental engineering
20 from the Johns Hopkins University. My dissertation
21 research concerned the spawning gravels of salmon and
22 trout.
23 I am presently an assistant professor of
24 environmental planning at University of California
25 Berkeley, where I teach courses in hydrology for
0216
01 planners, environmental geology for planners, natural
02 factors in design, and restoration of rivers and
03 streams. My research concerns environmental river
04 management, and my focus is on management of gravel in
05 river systems including the effects of reservoirs and
06 instream gravel mining. This has included some
07 research into flushing flow requirements on eastern
08 Sierra streams, the Trinity River, and looking at the
09 problem in a general way.
10 I was part of the Rush and Lee Vining Creek study
11 teams. For both those studies I conducted synoptic
12 flow studies along those channels. I also conducted a
13 historical geomorphic analysis of Lower Rush Creek and

14 an evaluation of spawning gravel resources with Scott
15 Stine on Lee Vining Creek.

16 Peter Vorster and I have written several papers
17 about geomorphology and hydrology of streams in the
18 Mono Lake system.

19 Q And, in fact, is DFG 94 a paper that you and Peter
20 Vorster wrote on hydrologic studies for Lee Vining
21 Creek instream flow studies?

22 A Right. I wouldn't call that a paper, but a
23 report.

24 MS. CAHILL: Could I inquire how much time we do
25 have?

0217

01 MR. HERRERA: You have nine minutes.

02 Q BY MS. CAHILL: Dr. Kondolf, would you please
03 summarize your testimony?

04 A Yes. Because the Rush Creek instream flow report
05 did not include flushing flow recommendations, my
06 direct testimony concerns flushing flows for Rush
07 Creek.

08 Flushing flows are controlled high-flow releases
09 from reservoirs prescribed to mimic functions of
10 natural floods. Typically, the objectives can be
11 summarized as sediment maintenance objectives, which
12 usually are to remove fine sediments accumulated in
13 gravel and turning over gravel deposits to maintain a
14 loose texture.

15 The other set of objectives would fall under what
16 I call channel maintenance, and below large reservoirs,
17 this typically includes preventing vegetation
18 encroachment. Here on Rush Creek, I think the channel
19 maintenance objectives would largely be to promote
20 channel narrowing, development of a complex bed
21 topography, and deposition on developing flood planes.
22 So on Rush Creek, the objectives of flushing flows
23 should be to turn over the gravels and inundate shallow
24 flood planes permitting deposition within the riparian
25 vegetation establishing there, thus encouraging

0218

01 building of the flood plane. And by narrowing the
02 channel and focusing some of the power of the stream,
03 the expectation would be a more complex bed topography
04 would develop.

05 I've recommended flushing flows of between 2 and
06 300 cubic feet per second. The duration of those, I
07 have proposed, in wet years should be between 20 and 40
08 days, in normal years between 5 and 15 days, and no
09 flushing flows in dry years. I have defined the years
10 on the basis of exceedence probability of annual flow.
11 So by taking the annual runoff for all years of record,
12 those can be ranked, and then we can identify flows at
13 the 33 percent exceedence level and the 67 percent
14 exceedence level. The top third of the flows then
15 would be considered the wet years. The middle third
16 would be considered the normal. The bottom third would
17 be considered the dry. And, in practice, the April
18 forecast of runoff from the Basin could be used to
19 indicate where the flows fell.

20 And here I'm recommending using the records of
21 actual flow at the dam site, and this includes the

22 effects of regulation by the Southern California Edison
23 projects higher in the basin. It could be argued that
24 natural runoff should be used, unimpaired by Edison,
25 and that probably is how one would interpret the

0219

01 testimony of Dr. Beschta and Hanson, I believe, also.
02 And that's really just a matter of argument.

03 But I've chosen to take the actual flows, since
04 those are the flow conditions that were present in the
05 stream in 1940.

06 Many variables are involved because the Rush Creek
07 system has been so profoundly altered. Historically,
08 Rush Creek occupied multiple channels, and there seems
09 to be general agreement that these should be
10 rewatered. That certainly would be a consideration.

11 And the need for ramping has to be addressed.
12 Ramping is really most important on the recession limb
13 of a high flow. Natural hydrographs commonly have a
14 steep rising limb and a more gradual recession limb.
15 If recession is unnaturally rapid and flows are simply
16 shut off, it's possible to strand fish, and it's also
17 possible to induce bank failure as saturated banks
18 drain and a positive pore pressure is developed.

19 The 10 percent ramping rate suggested by Hill and
20 others, which is a paper DFG 72, and I think also
21 Darrell Wong has suggested this is reasonable. I would
22 regard this as a reasonable guideline for the recession
23 limb. The rising limb could be more rapid.

24 Based on inspection of mean daily flows but not a
25 systematic analysis of these rates of change, this 10

0220

01 percent figure looks quite reasonable.

02 Sufficient uncertainty exists that any flushing
03 flow recommendation is really only a starting point. I
04 would recommend systematic, scientific monitoring be
05 undertaken to evaluate the effectiveness of the
06 flushing flows. And in order to evaluate
07 effectiveness, you have to articulate the objectives,
08 which, again, I would say here would be gravel
09 mobilization and maintenance of gravel quality,
10 inundation of point bars in other incipient flood
11 planes, and the development of a more complex bed
12 topography.

13 I would argue that flushing flows be reconsidered
14 in five or ten years in light of these observed
15 effects.

16 MS. CAHILL: Thank you, Dr. Kondolf. Thank you,
17 Gentlemen.

18 HEARING OFFICER DEL PIERO: Mr. Birmingham?

19 CROSS-EXAMINATION BY MR. BIRMINGHAM

20 Q I'd like to start with some questions about IFIM
21 generally. And this is directed to anybody on the
22 panel with the exception of Mr. Vorster.

23 Is it correct that the basic premise of IFIM is
24 that more habitat means more fish?

25 A BY MR. SMITH: I will take that. That's one of

0221

01 the -- excuse me, yes.

02 Q Now, as I understand the IFIM studies that were
03 conducted being presented by your testimony, and this

04 includes for you, Mr. Smith, the Owens River IFIM, the
05 studies tried to identify criteria that would establish
06 habitat to keep fish in good condition. Is that
07 correct?

08 A I'm sorry. Would you repeat that again?

09 Q Well, the basic purpose of the IFIM was to
10 identify minimum flows to maintain habitat sufficient
11 to keep fish in good condition; is that right?

12 A The purpose of the investigations that we
13 conducted was to identify flow regime which would
14 maintain fish conditions in Rush and Lee Vining Creeks.

15 Q Now, what was the criteria used for the Rush Creek
16 IFIM? Was it 50 percent of the brown trout, adult
17 brown trout habitat?

18 A BY MR. CHRISTOPHEL: No, it was not. It was the
19 median habitat value. Habitat expressed as weighted
20 usable area.

21 Q So it was not 50 percent of the brown trout
22 habitat exceedence?

23 A It was the 50 percent exceedence value, which is
24 the same as the median value was.

25 Q Thank you.

0222

01 And on -- on Lee Vining Creek, as I understand
02 Dr. Li's testimony, it was 80 percent of optimal
03 habitat condition generally; is that correct?

04 A BY DR. LI: For dry years.

05 Excuse me, Mr. Birmingham, the 80 percent of
06 maximum measured weighted usable area for adults in dry
07 years, and that's for the period from April to
08 September.

09 Q And then for wet years it's 100 percent?

10 A 100 percent.

11 Q Normal years, it's 90 percent?

12 A Yes, Sir.

13 Q And then for spawning periods, it's -- for normal
14 years, it's 100 percent of the spawning habitat?

15 A That's correct.

16 Q And 90 percent of --

17 A Maximum in dry years.

18 Q You Gentlemen will have to forgive me because
19 normally I am a little bit better prepared when I
20 cross-examine a panel, particularly a panel like this.
21 But we went here last night until nine o'clock, and it
22 reduced the amount of time I had to prepare. I
23 apologize for that.

24 Now, as I understand your response to my earlier
25 question, Mr. Smith, about the basic premise of IFIM,

0223

01 it was my first question, IFIM is not related to fish
02 numbers, but it's based on physical habitat?

03 A BY MR. SMITH: Correct.

04 Q And it follows basically what Mr. Wong said
05 today. If you create habitat, you're going to protect
06 fish.

07 A If you create habitat, fish should respond
08 accordingly.

09 Q Now, did I understand, Mr. Li, that you stated
10 that -- excuse me, Dr. Li. I beg your pardon. Dr. Li,
11 that the recommendations that you developed for Lee

12 Vining Creek were intended to mimic the natural
13 hydrograph?
14 A In that we varied the recommendation by wetness
15 with water year, yes. That would be runoff.
16 Q Is it correct that the minimum flows that you have
17 recommended for different months are in excess of the
18 flows that are actually present in Lee Vining Creek
19 during those months?
20 A I think we're getting into an apples-and-oranges
21 situation here. May I amplify on it?
22 Q Please do.
23 A If you take all the water years and simply use
24 Table 12, what you're doing is you're not accounting
25 for water availability. But if you stratify those data
0224
01 by wetness of water year, you'll get a difference, and
02 those differences are reflected in -- let me refer you
03 to Figures 65 through 67, Page 164 through 166 of DFG
04 Exhibit 54. These figures have a representation of the
05 flow recommendations compared with the 50 percent
06 exceedence flow by water year.
07 Q Well, let's take a look at Figure 65.
08 A Yes, Sir.
09 Q And focus on the month of October.
10 A Yes, Sir.
11 Q 65 is the dry year recommendation; is that
12 correct?
13 A 65 --
14 Q Figure 65 is a --
15 A Yes. Dry hydrologic conditions.
16 Q Thank you.
17 Now, looking at Figure 65, in October, the
18 recommended stream flow is 25 cfs; is that correct?
19 A That's correct.
20 Q And is it correct that the stream flow in October,
21 the long-term average --
22 A 50 percent. The median.
23 Q 50 percent of the median?
24 A 50 percent exceedence.
25 Q 50 percent exceedence. In other words, 50 percent
0225
01 of the time --
02 A Half the time you're going to have flows greater
03 and half the time you're going to have flows lower.
04 Q So half of the time in Lee Vining Creek during a
05 dry year, the way you've defined a dry year, half the
06 time you're going to have flows that are lower than
07 the proposed minimum number flow?
08 A In which case, we will accept natural flow.
09 Q So your answer to my question was yes?
10 A Yes.
11 Q Let's look at 66. 66 is the graph for normal
12 years; is that correct?
13 A That's correct.
14 Q And the -- again, let's look at the month of
15 October. Now, during normal years in the month of
16 October, half of the time there is going to be less
17 water in the stream than you have proposed as a minimum
18 flow?
19 A That's correct.

20 Q And the same is true for the months of August,
21 September, November, December, January, February, and
22 March. Is that right?
23 A That's correct.
24 Q BY MR. SMITH: Mr. Birmingham, may I add something to
25 Dr. Li's response?

0226

01 Q If it's necessary in order to respond my question,
02 please do.
03 A Thank you. Something should be pointed out here.
04 The stream flow recommendations in the Lee Vining Creek
05 study are the flows included in -- on the -- what's
06 that table -- I'm sorry. I can't see it from here --
07 Table 35 in the report, or the flow, the natural flow,
08 if you will, whichever is less. The natural flow in
09 this case is defined as the flow that reaches L.A.
10 DWP's diversion facility. So, in the cases -- in the
11 months and water year-types that you've inquired about,
12 the actual flow that would be going down Lee Vining
13 Creek is the flow that's demonstrated -- excuse me,
14 that's demonstrated in, we'll say, Figure 65 here by
15 the squared line -- the squared symbols on the figure.
16 It's not actually Fish and Game's recommendations. It
17 would be the natural flow. Again, natural defined as I
18 previously defined it.

19 Q So if I understand what you just said, Mr. Smith,
20 and I look at Table 66, what you're telling me is that
21 during normal years, and during 50 percent of the time
22 during those -- let me restate the question. This is
23 really ambiguous. What I said was really ambiguous.
24 What you're telling me is that for the months of
25 August, September, October, November, December,

0227

01 January, February, and March, 50 percent of the time,
02 all of the water that is in the stream is required to
03 keep fish in good condition.

04 A First off, I believe you were referring to the
05 Figure 66 rather than Table 66.

06 Q Figure 66.

07 A Why just so the record will be clear. And if I --
08 let me restate your question just to make sure I
09 understand it. In the months of August, September,
10 October, November, December, January, February,
11 March -- and did you include April?

12 Q No, I didn't. But you're right, I should have.

13 A And April. What is the question regarding those
14 months?

15 Q 50 percent of the time, all of the water that's in
16 the stream is required -- at least 50 percent of the
17 time, all of the water that is in the stream is
18 required to keep fish in good condition.

19 A Is to maintain the habitat to keep fish in good
20 condition.

21 Q Now, as I understand it, these flows are the
22 actual flows that come into the diversion facilities of
23 DWP; is that correct?

24 A That's correct.

25 Q These are not the natural flows, are they?

0228

01 A Lee Vining Creek is not a natural system at this

02 time.

03 Q So these flows are not the natural flows?

04 A These are -- these are the flows that are impaired
05 by SCD operations.

06 Q So using the common understanding of "natural,"
07 these are not the natural flows?

08 A That's correct.

09 Q Now, this is a question that I might have to
10 direct to Mr. Vorster, and I hate to but, Mr. Vorster,
11 you're free to jump in here if it's necessary to answer
12 the question.

13 Isn't it correct that the natural flows are
14 actually less than the impaired flows that are coming
15 into the DWP diversion facilities during many periods?

16 A BY MR. VORSTER: During the fall and winter months,
17 the effect of the upstream reservoirs operated by SCE
18 is to augment the flow that would occur naturally in
19 the stream. Not all the time, but commonly.

20 Q So your answer to my question is yes?

21 A Yes.

22 Q Thank you.

23 So during -- during the fall and winter months,
24 the natural flow is less than the flow depicted in
25 these charts or these figures, generally?

0229

01 MR. DODGE: Objection. It misstates Mr. Vorster's
02 testimony, as I heard it. I heard him say "winter."

03 MR. BIRMINGHAM: I believe Mr. Vorster said fall
04 and winter. Perhaps we could ask the -- we'll just
05 ask him. Was it fall and winter, Mr. Vorster?

06 MR. VORSTER: I believe I said fall and winter,
07 and I believe you're using the word "natural" now in a
08 very strict sense. We've now heard "natural" used in
09 several different ways, so --

10 Q BY MR. BIRMINGHAM: Let me tell you the way I'm using
11 it so we can make sure that the record's clear.

12 "Natural" means unimpaired by man. Is that a common
13 understanding of the word "natural"?

14 A That's the way we're now using it.

15 Q Is that the way you were interpreting my use of
16 the term "natural" when you answered my question?

17 A Yes.

18 Q Now, was there a draft copy of this report? I
19 think this is Department of Fish and Game 54, is that
20 correct, Ms. Cahill? It is the Lee Vining Creek?

21 MS. CAHILL: Yes. The final is DFG 54.

22 Q BY MR. BIRMINGHAM: The final. Was there a draft
23 report of this circulated?

24 A BY DR. LI: There were several drafts, unfortunately.

0230

25 Q I don't know if all of you were in the room at the

01 time, but I know, Mr. Smith, you were when Dr. Hardy
02 was testifying and Mr. Hanson was testifying. Is
03 that -- were you present then?

04 A I was present through some of their testimony. I
05 am not sure I was here through all of their testimony.

06 Q And you heard Ms. Cahill or Mr. Thomas ask
07 Dr. Hardy and Mr. Hanson whether or not it was correct
08 that they had based their recommendations to the State
09 Water Resources Control Board on a draft version of

10 Department of Fish and Game Exhibit 54?
11 A I believe that question was asked.
12 Q And the question -- well, forget that. Excuse me,
13 Sir. I've forgotten your name. Is it Mr. Payne? Is
14 that right?
15 A BY MR. PAYNE: Mr. Payne.
16 Q Mr. PAYNE, you had submitted some written
17 testimony that was signed in September of 1993 to the
18 State Water Resources Control Board; is that right?
19 A I don't have that in front of me at this point,
20 but I believe that's when I prepared my written
21 testimony, and that is the DFG exhibit.
22 Q And it's DFG Exhibit 15?
23 A As I recall, yes.
24 Q Let's make sure. I want to make sure I've got
25 this correct. DFG Exhibit 15.

0231

01 It was necessary for you to fill in some blanks
02 when you testified about this today; is that right,
03 Mr. Payne?
04 A Yes.
05 Q And that was -- you needed to fill in the final
06 Department of Fish and Game report numbers with respect
07 to DFG 54 and 55; is that right?
08 MS. CAHILL: Objection. That does misstate the
09 testimony. The testimony does not effect the stream
10 evaluation report number, but only the exhibit number
11 for this proceeding.
12 HEARING OFFICER DEL PIERO: Mr. Birmingham?
13 MR. BIRMINGHAM: I'm not suggesting that it
14 effects the evaluation. I'll just ask you in a
15 straightforward fashion.
16 Q BY MR. BIRMINGHAM: When you prepared your testimony,
17 you didn't know what the Department of Fish and Game
18 report number was for DFG 54?
19 MS. CAHILL: Exhibit.
20 Q BY MR. BIRMINGHAM: Exhibit 54?
21 A BY MR. PAYNE: I did not know the exhibit number at
22 that time.
23 Q This report was finalized, DFG 54 was finalized in
24 July and was distributed in August; is that correct,
25 Mr. Smith?

0232

01 A BY MR. SMITH: I would have to look at the
02 department's correspondence on that and confirm those
03 days.
04 Q I'm showing you a document that appears to be an
05 August 12, 1993, memorandum to interested parties.
06 A This is where -- one of the transmittal letters
07 sending the documents to interested parties --
08 Q Excuse me, Mr. Smith. There's no question
09 pending. What I'd like to ask you is looking at the
10 document that I have just handed you, does it refresh
11 your recollection as to when the Department of Fish and
12 Game distributed DFG Exhibit 54 to the parties?
13 A I believe there are two transmittal letters
14 regarding the report.
15 HEARING OFFICER DEL PIERO: Mr. Smith, you're not
16 being responsive to the question.
17 MR. SMITH: I'm trying to be responsive,

18 Mr. Del Piero.

19 HEARING OFFICER DEL PIERO: The question he asked
20 was did seeing that refresh your memory as to when the
21 document was released? Not anything else. Just did it
22 refresh your memory?

23 MR. SMITH: Partially.

24 Q BY MR. BIRMINGHAM: Is it correct that DFG 54 was
25 circulated to the parties in August of 1993, Mr. Smith?
0233

01 A BY MR. SMITH: I believe, and this is where -- why I
02 have said partial. There was also another --

03 Q Mr. Smith, if you don't know, an "I don't know" is
04 perfectly acceptable, and we would prefer to have that
05 rather than your speculating, seriously.

06 A I'm not speculating. I'm trying to explain why I
07 can't answer your question definitely. I believe it
08 was early August, but there was another cover letter to
09 Mr. Anton (phonetic) at the board. And I cannot
10 remember how many people were included on that cc list,
11 and I can't -- and I don't recall if that's the exactly
12 the same day that the interested party letter was
13 prepared.

14 Q Now, with respect to the draft report. Between
15 the time -- let me ask you this. After preparation of
16 the draft report, did you do any additional in-stream
17 study? Now, I'm talking about the draft that -- of the
18 Lee Vining Creek stream evaluation report. After that
19 was prepared --

20 A BY DR. LI: No.

21 Q Dr. Li?

22 A Dr. Li. No.

23 MR. DODGE: Excuse me, Mr. Chairman, I'm sorry to
24 interrupt, Mr. Birmingham. I have an obligation
25 elsewhere, and I would request to be dropped down in
0234

01 the cross-examination order if you get to me tonight.

02 HEARING OFFICER DEL PIERO: I'm not going to get
03 to you tonight. We're going to go another ten minutes
04 and then Mr. Birmingham will start up again tomorrow
05 morning at 8:30. Okay? I assume you weren't going to
06 be done in ten minutes, Mr. Birmingham?

07 MR. BIRMINGHAM: That's a pretty safe assumption.

08 MR. HERRERA: Two and a half minutes remaining in
09 the first 20.

10 MR. BIRMINGHAM: I'll make an application for an
11 additional.

12 HEARING OFFICER DEL PIERO: It's granted, and we
13 will end this at 20 minutes to the hour.

14 MR. BIRMINGHAM: Thank you very much.

15 Q BY MR. BIRMINGHAM: Between the time the draft was
16 circulated -- the draft report was circulated, wasn't
17 it, Dr. Li?

18 A BY DR. LI: that's my understanding.

19 Q Between the time the draft report was circulated
20 and the final report was circulated, did you prepare
21 any additional hydraulic simulations?

22 A I did not do any hydraulic simulations that were
23 included in this final report, but I was playing around
24 with my data.

25 Q Did you change the methodology in which -- the

0235

01 methodology -- the way in which you calculated the
02 weighted usable area?
03 A I'm sorry. I drifted. Can you repeat that?
04 Q Certainly. Between the time the draft report was
05 circulated and the final report was circulated, did you
06 change the methodology by which you calculated the
07 weight usable area?
08 A No.
09 Q Now, when -- is it correct that if I were to
10 compare the --
11 A Oh, I misspoke. Yes, I did.
12 Q How did you change the method -- methodology by
13 which you calculated weighted usable area?
14 A The reason why I got confused was strictly
15 speaking, I did not change the method, but I -- in the
16 initial draft I did the sin of omitting data.
17 Q Can you identify for me, please, the data that are
18 in the final report which are not in the --
19 A The data that is in the final report are all the
20 data that were collected and compiled.
21 Q Which data did you exclude in the draft report?
22 A I omitted Reach Three.
23 Q You are say in the "draft report," Dr. Li, excuse
24 me. I'm sorry. Were you conferring?
25 A Tom, there is a confusion here. Are you referring

0236

01 strictly to -- perhaps it would be better for you to
02 repeat the question so that I'm clear on what you're
03 asking.
04 Q Between the time you circulated the draft and the
05 time you circulated the final report that has now been
06 identified at Department of Fish and Game 54, did you
07 change the methodology by which you calculated weighted
08 usable area?
09 A Strictly speaking, no.
10 Q Now, it's correct, isn't it, that the total
11 system-wide weighted usable area did change?
12 A That's correct.
13 Q And it changed because you included data in the
14 final report that were not included in the draft
15 report?
16 A That's correct.
17 Q And you said that those were what data?
18 A Reach Three.
19 Q So it was weighted usable area data from Reach
20 Three; is that correct?
21 A That's correct.
22 Q I'm going to show you a document, Dr. Li, and I'm
23 going to ask if you've seen this document before. It
24 has not been identified as an exhibit.
25 MS. CAHILL: Could I see it?

0237

01 MR. BIRMINGHAM: I beg your pardon, Ms. Cahill.
02 It's very rude of me. Ms. Cahill's not had an
03 opportunity to see this.
04 Q BY MR. BIRMINGHAM: The document that I'm handing
05 you, Doctor -- we've just cut to the chase. This is a
06 copy of the draft report on -- on Lee Vining Creek
07 stream evaluation report. Isn't that correct?

08 Dr. Li, is it correct that that is a copy of the
09 draft report?
10 A BY DR. LI: Thank you, Mr. Birmingham. It appears to
11 be one of the drafts.
12 Q Thank you.
13 HEARING OFFICER DEL PIERO: Tom. You can start
14 asking all the important questions now.
15 (Laughter.)
16 MR. BIRMINGHAM: Well, let's see if I can do that,
17 Mr. Del Piero.
18 HEARING OFFICER DEL PIERO: Mr. Dodge just left.
19 (Laughter.)
20 MR. BIRMINGHAM: Oh, did he. I thought you were
21 commenting on the importance of the questions I'd asked
22 up to this point.
23 HEARING OFFICER DEL PIERO: No. But he heard on
24 the way out the door.
25 Q BY MR. BIRMINGHAM: Now, Page 152, do you have a copy
0238
01 of the draft report with you?
02 A No.
03 Q Well, let me read along -- read this and you can
04 read along with me to make sure that I read it
05 correctly. This is on Page 152, and states, "Reach Two
06 alone provided weighted usable area stream discharge
07 relationships that were meaningful. Reach Three
08 estimates were unrealistic. Reaches Four through Six
09 did not change significantly with change in discharge."
10 Did I read that accurately, Dr. Li?
11 A BY DR. LI: You read rather well.
12 Q Thank you.
13 So in response to my question, yes, I did read it
14 accurately?
15 A Yes.
16 Q Now, when you wrote this draft report -- you were
17 the author of the draft report Dr. Li?
18 A Yes, I was.
19 Q When you wrote this draft report, was it your
20 opinion that Reach Two alone provided weighted usable
21 area stream discharge relationships that were
22 meaningful?
23 A Do you want the short answer or the long one?
24 Q Can you answer my question yes or no, and then if
25 you feel an explanation is required, please explain
0239
01 it. I don't want to cut you off, but I think my
02 question can be answered yes or no.
03 A Okay. The answer to the question is yes, and
04 these are the reasons why. The strength of the
05 two-stage stratified, random-sampling design allows
06 anybody doing this to take a look at different reaches
07 to see the effect of either habitat-type representation
08 or weighted usable area contribution by reach or by
09 habitat type. If you take a look at the data, it is
10 not that reaches -- it's a bit misleading to say that
11 Reaches Four through Six are not significant. They
12 provide some habitat. It's simply that Reach Two,
13 being the reach with the best habitat, had larger
14 effect upon the total weighted usable area compilation.
15 And it was, therefore, the most significant reach.

16 Q Now, you say here that, "Reach Three estimations
17 were unrealistic." At the time you wrote this, was it
18 your opinion that the Reach Three estimations were
19 unrealistic?
20 A This again is going to be a long -- we're going to
21 have a furry dog here at the end, Tom, but that's
22 true. Do you want to know the reasons why?
23 Q Let me ask -- well, yes. If you would like to
24 explain the reasons why, I really don't want to cut you
25 off.

0240

01 HEARING OFFICER DEL PIERO: When he gets done
02 explaining the reasons why, I'm going to explain the
03 reasons why we're going to be over. Go ahead and
04 answer the question, Dr. Li, and then we're going to
05 call it a day.

06 DR. LI: Reach Three is the steepest reach on Lee
07 Vining Creek and, at the time I wrote that, I was
08 putting greater credence on the amount of entrained air
09 in the -- in the creek at the different flows and,
10 based on that and knowing that very steep reaches are
11 difficult to simulate, I, due to a lack of discipline,
12 removed that data.

13 Upon rethinking that, I felt it was more
14 responsible to provide those data in the final report.
15 But whether you include Reach Three or exclude Reach
16 Three doesn't make any difference.

17 HEARING OFFICER DEL PIERO: Ladies and Gentlemen,
18 it's 20 minutes to five and, as I promised, we're going
19 to be out of here before five o'clock.

20 Any questions before we adjourn until 8:30
21 tomorrow morning? None?

22 MS. CAHILL: Can I just inquire as to one of these
23 witnesses?

24 I would like to inquire if any of the parties are
25 going to have questions for Mr. Payne? It's most

0241

01 inconvenient for him to be here tomorrow.

02 HEARING OFFICER DEL PIERO: Where are you going to
03 be, Mr. Payne? Not that it's a whole lot of our
04 business.

05 MR. PAYNE: I'm a contractor to the department on
06 the Kantera (phonetic) chemical spill recovery
07 assessment, and tomorrow there's a meeting regarding
08 the restoration activities for the Upper Sacramento
09 River.

10 HEARING OFFICER DEL PIERO: Whereabouts?

11 MR. PAYNE: It's in Redding.

12 HEARING OFFICER DEL PIERO: Inconvenient.

13 MR. BIRMINGHAM: I have no questions for
14 Mr. Payne.

15 HEARING OFFICER DEL PIERO: No questions.

16 Mr. Roos-Collins?

17 MR. ROOS-COLLINS: I do have questions for

18 Mr. Payne.

19 HEARING OFFICER DEL PIERO: How many?

20 MR. ROOS-COLLINS: Five to ten minutes.

21 MS. SCOONOVER: I have no questions for Mr. Payne.

22 HEARING OFFICER DEL PIERO: Mr. Dodge is gone.

23 What time is your meeting, Mr. Payne?

24 MR. PAYNE: 8:30.
25 MR. BIRMINGHAM: Mr. Del Piero, would it be
0242 acceptable for Mr. Payne to come back maybe after his
01 meeting and we can take him out of order?
02 HEARING OFFICER DEL PIERO: When's your meeting
03 over, Mr. Payne?
04 MR. PAYNE: There was no specified time, but it
05 would probably last all day, is what I was
06 anticipating.
07 HEARING OFFICER DEL PIERO: How are you getting
08 there?
09 MR. PAYNE: That's undecided. I found out I was
10 going to be here at about 10:30 last night. So I flew
11 down this morning. I do have an employee who is in
12 Redding that I could fly, otherwise I could fly back to
13 Arcada tonight and probably drive over.
14 HEARING OFFICER DEL PIERO: So are you staying
15 here tonight?
16 MR. PAYNE: That depends on the outcome of this
17 discussion.
18 HEARING OFFICER DEL PIERO: My inclination, in all
19 candor, is that I put you on at 8:30 tomorrow and have
20 everybody ask you all the questions and have you out of
21 here probably before nine o'clock. What's the flying
22 time from here to Redding?
23 MR. PAYNE: It's an hour, depending on the
24 scheduling.
0243 HEARING OFFICER DEL PIERO: Is it possible for you
01 to you notify folks that you're going to be an hour and
02 a half late?
03 MR. PAYNE: Yes.
04 HEARING OFFICER DEL PIERO: Why don't you plan on
05 doing that?
06 MR. PAYNE: Okay.
07 HEARING OFFICER DEL PIERO: Okay. And then
08 everyone else -- I don't know if anybody's going to
09 have the opportunity to be in contact with Mr. Dodge
10 this evening.
11 Dr. Stine, are you going to see him tonight?
12 DR. STEIN: I assume I will. Yes.
13 HEARING OFFICER DEL PIERO: Or at least is there a
14 phone machine somewhere --
15 DR. STEIN: I can get in touch with him.
16 HEARING OFFICER DEL PIERO: Will you leave a
17 message for him and let him know if he has questions of
18 Mr. Payne he needs to be prepared to ask those tomorrow
19 morning at 8:30?
20 Mr. Payne, I promise you I'll have you out of
21 here. Okay?
22 Ladies and Gentlemen -- Mr. Canaday.
23 MR. CANADAY: Mr. Del Piero, we need to inform the
24 parties that tomorrow is a shorter day than today. We
0244 are going to recess at three o'clock, Sir.
01 HEARING OFFICER DEL PIERO: What time did we
02 notice it?
03 MR. CANADAY: Three o'clock.
04 HEARING OFFICER DEL PIERO: Then we're recessing,

06 Ladies and Gentlemen, at three o'clock. In fact,
07 Ladies and Gentlemen, I think it's probably safe to
08 assume we aren't going to break for lunch tomorrow.
09 Take maybe a 15-minute break, and then we'll keep
10 going. We're going to try and get as much done as
11 possible, inasmuch as we aren't going to meet again
12 until the following Monday.

13 Mr. Canaday?

14 MR. CANADAY: I don't know whether I should throw
15 the idea out. Ms. Cahill, is Basco (phonetic) going to
16 come and present testimony?

17 MS. CAHILL: It's flexible. If the -- Basco
18 (phonetic) and one of their subs is going to come and
19 Basco did Walker, Parker, and Upper Owens. The sub is
20 ill, and so I was going to do Upper Owens issues
21 probably next week.

22 Rick Sitz (phonetic) of Basco could be here
23 tomorrow to talk about Parker, Walker, which I
24 understand is not a very big issue, and so I could put
25 on Rick Sitz (phonetic) of Basco on just Walker, Parker
0245

01 only, and George Hycee (phonetic) of the department on
02 the fish passage problems tomorrow after we finish with
03 this panel.

04 We would then have one duck panel jointly with the
05 Mono Lake Committee on Monday, and following that
06 panel, we would have one panel on the Upper Owens
07 River, and that would conclude our case.

08 HEARING OFFICER DEL PIERO: Thank you very much.
09 I appreciate particularly your efforts at paneling
10 these witnesses.

11 MS. CAHILL: It is possible that we'll end up with
12 some time tomorrow.

13 HEARING OFFICER DEL PIERO: Why don't you have him
14 here?

15 MR. CANADAY: Mr. Sitz (phonetic) is a Sacramento
16 resident, and we ought to take advantage --

17 MS. CAHILL: What I would do is put Mr. Sitz
18 (phonetic) on tomorrow on Walker, Parker, and then I
19 will bring him back on Upper Owens. And at that time,
20 I believe that Gary Wulff (phonetic) will be with him
21 as well, and if you have any Walker, Parker left-over
22 questions for Mr. Wulff at that time, you could ask
23 him.

24 HEARING OFFICER DEL PIERO: You all have a nice
25 night, Ladies and Gentlemen. We'll see you at 8:30
0246

01 tomorrow morning.

02 (Whereupon the proceedings were adjourned
03 at 4:45 p.m.)

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