

STATE WATER RESOURCES CONTROL BOARD

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VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY

PETITION FOR CHANGE

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HELD AT

PAUL BONDERSON BUILDING  
SACRAMENTO, CALIFORNIA

WEDNESDAY, DECEMBER 6, 2000  
9:00 A.M.

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Reported by:

SANDRA VON HAENEL  
CSR No. 11407



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APPEARANCES

BOARD MEMBERS:

ARTHUR G. BAGGETT, JR., HEARING OFFICER

STAFF MEMBERS:

ERNEST MONA  
THOMAS PELTIER  
MELINDA DORIN

COUNSEL:

DANA DIFFERDING



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REPRESENTATIVES

VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY:

SOMACH, SIMMONS & DUNN  
400 Capitol Mall, Suite 1900  
Sacramento, California 95814  
BY: ANDREW M. HITCHINGS, ESQ.

DEPARTMENT OF FISH AND GAME:

NANCEE MURRAY, ESQ.  
1416 Ninth Street, 12th Floor  
Sacramento, California 95814  
BY: NANCEE MURRAY, ESQ.

SOUTHERN CALIFORNIA WATER COMPANY:

McCORMICK, KIDMAN & BEHRENS  
695 Town Center Drive, Suite 400  
Costa Mesa, California 92626-7187  
BY: ARTHUR G. KIDMAN, ESQ.

APPLE VALLEY RANCHOS WATER COMPANY:

NOSSAMAN, GUTHNER, KNOX & ELLIOTT  
445 South Figueroa Street, 31st Floor  
Los Angeles, California 90071-1602  
BY: ANDREW J. YAMAMOTO, ESQ.

JESS RANCH WATER COMPANY:

MR. GARY LEDFORD, VICE PRESIDENT  
11401 Apple Valley Road  
Apple Valley, California 92308

JOSEPH VAIL:

MR. JOSEPH VAIL  
16993 Abbey Lane  
Victorville, California 92394



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SACRAMENTO, CALIFORNIA

WEDNESDAY, DECEMBER 6, 2000, 9:00 A.M.

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HEARING OFFICER BAGGETT: It's 9:00 o'clock. We have one fog delay. Big surprise here. We build an airport where -- I wasn't around for that debate.

Anyway, let's continue. Mr. Hill is fogged out. He will be here momentarily. So let's finish the second panel, VVWRA -- Victor Valley is faster. We'll finish the second, cross-examination of the second panel.

So where did we leave off? I think it was Mr. Ledford.

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CROSS-EXAMINATION OF SECOND PANEL

BY JESS RANCH WATER COMPANY

BY MR. LEDFORD

MR. LEDFORD: Good morning. My name is Gary Ledford. I'm with the Jess Ranch Water Company.

Mr. Carlson, I believe that you testified that the wastewater discharge to the Mojave River is to replace groundwater pumping; is that correct?

MR. CARLSON: I don't believe I testified that the wastewater discharge is to replace groundwater pumping.

The wastewater discharge originates as groundwater pumpage.



1 MR. LEDFORD: Can you define the word "groundwater"?

2 MR. CARLSON: Well, to me, groundwater is water that  
3 occurs beneath the surface of the -- surface of the ground.

4 MR. LEDFORD: And is it your testimony that all of the  
5 water that goes through the Victor Valley Wastewater  
6 facility is groundwater?

7 MR. CARLSON: To my -- to my knowledge, it is.

8 MR. LEDFORD: Are you familiar with the Morongo Basin  
9 Pipeline?

10 MR. CARLSON: No, I'm not.

11 MR. LEDFORD: Are you familiar with USGS Report  
12 95-4189?

13 MR. CARLSON: I need to have a title. I have read  
14 several USGS reports. This is Greg Lines's report from '95.  
15 Yes. I've read this report.

16 MR. LEDFORD: Are you familiar with the term "main  
17 stem of the Mojave River" as it's defined in that report?

18 MR. CARLSON: Vaguely. I'd have to look up the figure  
19 where it's defined.

20 MR. LEDFORD: Would the -- I don't want to spend the  
21 time to have you look it up. But on your Figure No. 2,  
22 that's this -- this graphic I'm not sure that -- (indicating  
23 overhead projection).

24 When I'm referring to your Figure No. 2, I'm not  
25 certain if this -- is this a part of your testimony, this



1 particular graph?

2 MR. CARLSON: Yes, it is. Where we have an overhead,  
3 we will put it up.

4 MR. LEDFORD: Would the black line be the main stem of  
5 the Mojave River as shown on that graphic?

6 MR. CARLSON: The black line on that figure represents  
7 a profile of the Mojave River bed from the -- from the Lower  
8 Narrows to a point about 13 miles downstream. That  
9 comprises part of the main stem as defined by Greg Lines.

10 MR. LEDFORD: Correct. Would that be the center,  
11 generally the center of the river with that profile?

12 MR. CARLSON: Approximately. That profile was  
13 developed by picking off elevations and locations from the  
14 USGS topographic map.

15 MR. LEDFORD: And looking at the profile, where we  
16 have wells that are located along the profile, are any of  
17 those wells actually located on the main stem of the river?

18 MR. CARLSON: They're located near the river. They  
19 vary in how close they are to the river. We tried to choose  
20 wells that were close to the river, and we also tried to  
21 choose wells that were reasonably shallow.

22 MR. LEDFORD: But none of the wells are actually in  
23 the main stem of the river?

24 MR. CARLSON: Well, to my knowledge, there's none that  
25 are actually in the water, no.



1           MR. LEDFORD: Looking at the first well, which would  
2 be just after the Lower Narrows, to the left and at  
3 elevation approximately 2600. That well elevation appears  
4 to have about a 30-foot level to water; is that correct? Is  
5 that what that shows, from the main stem?

6           MR. CARLSON: This is -- I don't know which well  
7 you're referring to.

8           MR. LEDFORD: The very first well. The very first  
9 well after the Lower Narrows.

10          MR. CARLSON: Okay. This would be --

11          MR. LEDFORD: Which would be at well elevation 2600,  
12 and it appears to be surface elevation of about 2650.

13          MR. CARLSON: Okay. I'm bringing the pointer here  
14 (indicating).

15                 Let's see if we are going to look at the right well  
16 together. Are you referring to this well here (indicating),  
17 or this well (indicating)?

18          MR. LEDFORD: I guess it would be the second well.

19          MR. CARLSON: This well here (indicating)?

20          MR. LEDFORD: Right.

21          MR. CARLSON: Okay.

22          MR. LEDFORD: And would you consider that to be a  
23 pumping depression?

24          MR. CARLSON: Well, I consider it to be an area where  
25 the groundwater level is considerably below the land's





1 surface. It could have been caused by pumping, but I don't  
2 know for a fact that it's a pumping depression. It could  
3 very well be.

4 MR. LEDFORD: We've had a lot of testimony about the  
5 Adelanto wells. That would be the wells that are pumping  
6 water for the golf course.

7 Would you know if those wells are located  
8 approximately in that area?

9 MR. CARLSON: I believe they are. But I don't know  
10 exactly. I have not done that evaluation.

11 MR. LEDFORD: Are you familiar with the term  
12 "floodplain aquifer"?

13 MR. CARLSON: I am.

14 MR. LEDFORD: And are you familiar with the term  
15 "regional aquifer"?

16 MR. CARLSON: I am.

17 MR. LEDFORD: Can you tell me what the term floodplain  
18 aquifer means in relation to the Mojave River basin.

19 MR. CARLSON: Well, as I understand it, the floodplain  
20 aquifer is a zone that is of relatively high permeability,  
21 compared to the regional aquifer that occurs along the  
22 Mojave River.

23 MR. LEDFORD: Are you familiar with the term  
24 "underflow"?

25 MR. CARLSON: I am familiar with the term underflow,



1 yes.

2 MR. LEDFORD: Does the water in the floodplain aquifer  
3 underflow the main stem of the Mojave River?

4 MR. CARLSON: Repeat your question.

5 MR. LEDFORD: Does the water in the floodplain aquifer  
6 underflow the main stem of the Mojave River?

7 MR. CARLSON: Well, the way I would phrase it is  
8 groundwater that is moving in a floodplain aquifer follows  
9 essentially the same direction as the flow of the river.  
10 Basically, it flows downstream, flows downhill.

11 MR. LEDFORD: Are you familiar with the headwaters of  
12 the Mojave River?

13 MR. CARLSON: No.

14 MR. LEDFORD: Do you consider the Mojave River a  
15 flowing river?

16 MR. CARLSON: Well, I know that it flows in some  
17 locations, and in other locations, it doesn't flow.

18 MR. LEDFORD: It flows on the surface in some  
19 locations, but does it not underflow in all locations?

20 MR. CARLSON: Well, to me, that is groundwater that  
21 occurs beneath the surface. That's not, to me, surface  
22 flow.

23 MR. LEDFORD: In the regional aquifer, does the water  
24 flow toward the river? Does it flow toward the river?

25 MR. CARLSON: I believe in some areas it does, and in



1 some areas it does not. I'm not sure I'm familiar with the  
2 entire reach of the Mojave River.

3 MR. LEDFORD: I believe you testified yesterday that  
4 water moves -- moved from stored groundwater to the stream  
5 in the historic past. Could you explain that for us,  
6 please.

7 MR. CARLSON: As I understand it, prior to the advent  
8 of pumping, recharge -- natural groundwater recharge moved  
9 from the recharge areas down to the river. The river acted  
10 as a regional groundwater drain, if you will, a regional  
11 discharge area. And as I understand it, flow was maintained  
12 by natural groundwater discharge throughout much of the  
13 area.

14 I don't know the details of where and how much in the  
15 past, but in general, it was a groundwater-discharge area.

16 MR. LEDFORD: And the reason that it's not a  
17 groundwater-discharge area now?

18 MR. CARLSON: I believe that one reason is that the  
19 groundwater levels have declined due to groundwater  
20 overdraft, and has reversed the direction of the movement  
21 from the stream, what used to be from the aquifer to the  
22 stream. Now it's reversed and goes the other way.

23 MR. LEDFORD: So it is the overdraft in the regional  
24 aquifer that has caused the reverse of water going from the  
25 floodplain aquifer into a regional aquifer if that exists?



1           MR. CARLSON: It was probably a combination of pumping  
2 from both aquifers. I don't know the details of that.

3           MR. LEDFORD: Are you familiar with the groundwater  
4 quality of George Air Force Base?

5           MR. CARLSON: Not specifically, no.

6           MR. LEDFORD: Do you know that there is an aquifer, a  
7 combined aquifer to return wastewater?

8           MR. HITCHINGS: I'm going to object as lack of  
9 foundation and assuming facts not in evidence.

10          H.O. BAGGETT: Yes.

11          MR. LEDFORD: It's a do-you-know question.

12          H.O. BAGGETT: Please lay a little more foundation.

13          MR. LEDFORD: You've testified about the water quality  
14 in this area, have you not?

15          MR. CARLSON: I don't recall testifying about the  
16 groundwater quality in this area. You'd have to point to my  
17 testimony.

18          MR. LEDFORD: Okay. There has been testimony that  
19 over the next 20 years, the discharge flows will double to  
20 18,000 square feet. Was any of your testimony related to  
21 that?

22          MR. CARLSON: My testimony did not relate to that.

23          MR. LEDFORD: Mr. Dodson, you testified that you've  
24 done environmental review on a number of projects, including  
25 the Morango Basin Pipeline; is that correct?





1 MR. DODSON: Yes. And the proper term is "Morongo."

2 MR. LEDFORD: Okay. And you're familiar with the Rock  
3 Springs outlet?

4 MR. DODSON: Yes, I am.

5 MR. LEDFORD: And can you explain to us how the Rock  
6 Springs outlet was to work -- is to work.

7 MR. DODSON: The Rock Springs outlet is a component of  
8 the Morongo Basin Pipeline that discharges State Project  
9 water into the Mojave River.

10 MR. LEDFORD: And do you know what the design capacity  
11 is?

12 MR. DODSON: Not off the top of my head for the Rock  
13 Springs facility itself, no, I do not.

14 MR. LEDFORD: If I said it was more than 40,000  
15 acre-feet a year, would you disagree with that?

16 MR. DODSON: I don't have any basis to agree or  
17 disagree.

18 MR. LEDFORD: Are you aware that the Mojave Water  
19 Agency has placed State Project water into the upper reach  
20 of the main stem of the Mojave River at Rock Springs?

21 MR. DODSON: Yes, I am.

22 MR. LEDFORD: And do you know what quantity of water  
23 they've placed into it?

24 MR. DODSON: No, sir, I do not.

25 MR. LEDFORD: And would you know if that water



1 moves -- is recharged into the floodplain aquifer?

2 MR. DODSON: It is discharged directly into the  
3 Mojave -- the floodplain aquifer, the river channel.

4 MR. LEDFORD: And to your knowledge, does that water  
5 move down gradient in an underflow fashion?

6 MR. DODSON: It flows on the surface for a short  
7 distance and then percolates into the river channel  
8 sediments.

9 MR. LEDFORD: And after it percolates into the river  
10 channel sediments, does it flow down gradient as underflow?

11 MR. DODSON: The answer is: I believe so, but I don't  
12 have any direct knowledge of that.

13 MR. LEDFORD: Would some portion of water that is  
14 placed into the floodplain aquifer at the Rock Springs  
15 outlet be pumped by municipal producers?

16 MR. DODSON: In my opinion, yes.

17 MR. LEDFORD: So would some source of the water be  
18 State Project water that actually ends up in the VVWRA?

19 MR. DODSON: Some portion. The exact amount, I have  
20 no idea. But I assume so.

21 MR. LEDFORD: Is the water in the floodplain aquifer  
22 the same water that's in the regional aquifer?

23 MR. DODSON: I'm not qualified to answer that  
24 question.

25 MR. LEDFORD: Is not the study that was referred to,



1 96 -- 95-489, does that not describe the difference in the  
2 water?

3 MR. DODSON: Yes, it does. And it's 95-4189.

4 MR. LEDFORD: 95-4189. Thank you.

5 And can you tell us in layman's terms what description  
6 it provides?

7 MR. DODSON: No, not off the top of my head.

8 MR. LEDFORD: Okay. You prepared the initial study  
9 for this project; is that correct?

10 MR. DODSON: Yes, sir.

11 MR. LEDFORD: And when did you prepare that initial  
12 study?

13 MR. DODSON: Began preparing it in 1998.

14 MR. LEDFORD: In what month?

15 MR. DODSON: I don't remember right off the top of my  
16 head. I'd have to look at the documents.

17 MR. LEDFORD: And what was your first introduction to  
18 this project from VVWRA?

19 MR. DODSON: Sometime in the middle to latter part of  
20 1998, I met with Mr. Dan Gallagher and Mr. Guy Patterson to  
21 discuss the characteristics of this particular project,  
22 which is the relocation of the discharge.

23 MR. LEDFORD: At any time prior to that, had you had  
24 any discussion with either of those two gentlemen with  
25 relation to relocation of the discharge?



1 MR. DODSON: Not that I can recall.

2 MR. LEDFORD: And during that initial meeting, was  
3 there any discussion in relation to providing water for a  
4 power plant?

5 MR. DODSON: I never participated in or heard any such  
6 discussion.

7 MR. LEDFORD: Now, did you have anything to do with  
8 the design size of the platform?

9 MR. DODSON: No, sir. I just reported the sizes.

10 MR. LEDFORD: And do you know what the -- what the  
11 maximum capacity of an 18-inch pipeline is?

12 MR. DODSON: That's not my field. No, I don't.

13 MR. LEDFORD: But from an environmental standpoint,  
14 sir, would not it be appropriate to do an environmental  
15 background on what the cumulative impacts of the total  
16 design criteria for that pipeline would be?

17 MR. DODSON: No, sir.

18 MR. LEDFORD: I have no further questions.

19 H.O. BAGGETT: Thank you.

20 Mr. Yamamoto.

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CROSS-EXAMINATION OF SECOND PANEL

BY APPLE VALLEY RANCHOS WATER COMPANY

BY MR. YAMAMOTO

MR. YAMAMOTO: Good morning. My name is

Andrew Yamamoto and, as you know, I represent Apple Valley Ranchos Water Company. My first question is for Mr. Dodson.

As I recall, you testified that you were responsible for preparing the initial study for this project. Is that correct?

MR. DODSON: Yes, sir, it is.

MR. YAMAMOTO: You previously testified that the initial study was based on a snapshot of the available information. Do you recall that?

MR. DODSON: I don't think that's the way I characterized it, although that's not far from it. The way I characterized it is that it represents a snapshot in time, at which time you assemble all the information that's available from just several different sources. The notion being is that you are looking at the project and the existing environment as it stands at that particular moment, rather than trying to look at the past or the future in terms of what you are evaluating the physical changes in.

MR. YAMAMOTO: Mr. Dodson, did you also perform a review of the available literature as part of your initial study?



1 MR. DODSON: Yes, I did.

2 MR. YAMAMOTO: Okay. Is it fair to say that your  
3 initial study was based on the best available information  
4 you could find?

5 MR. DODSON: I believe so.

6 MR. YAMAMOTO: Mr. Carlson has previously testified  
7 that the VVWRA project is fully implemented to allow 1,680  
8 acre-feet a year to be diverted from the river, would result  
9 in a decrease in the extent of the river flow by over one  
10 and a half miles. Do you recall that?

11 MR. DODSON: Yes, I do.

12 MR. YAMAMOTO: At the time you prepared the initial  
13 study, did you assume that the decrease in river flow might  
14 be one and a half miles?

15 MR. DODSON: I did not have that data in hand at that  
16 time. I did a mass-balance evaluation instead.

17 MR. YAMAMOTO: And your conclusion from the mass  
18 balance is that there would be no change, based on the data  
19 you had available when you prepared the initial study?

20 MR. DODSON: No, sir, that's not correct.

21 MR. YAMAMOTO: Okay. How many miles did you assume  
22 the river flow would be decreased by the VVWRA project?

23 MR. DODSON: I didn't make that assumption in my  
24 analysis.

25 MR. YAMAMOTO: Did you know?



1 MR. DODSON: No, I did not.

2 MR. YAMAMOTO: Did you know how much surface water  
3 habitat would be lost if the VVWRA project were implemented?

4 MR. DODSON: Now that's a question I can answer. And  
5 the conclusion I reached based on --

6 MR. YAMAMOTO: I'm asking at the time you prepared the  
7 initial study did you know?

8 MR. DODSON: The answer is know in terms of a --

9 MR. YAMAMOTO: Thank you.

10 MR. DODSON: No, that is not my answer.

11 In terms of knowledge, know, k-n-o-w, not n-o.

12 My conclusion was based upon looking at the total  
13 flows through the system and looking at the water demand,  
14 and then, using that data, concluding that I did not think  
15 there would be a reduction in any of the riparian habitat  
16 within the Alto Transition Zone. So that was my conclusion.

17 You asked me do I know that for an absolute fact? No,  
18 but it was the best-analysis conclusion I could reach.

19 MR. YAMAMOTO: Now, you've reviewed the testimony of  
20 Mr. Carlson; correct?

21 MR. DODSON: Yes.

22 MR. YAMAMOTO: Do you now conclude that the VVWRA  
23 project will not reduce the extent of surface flow of the  
24 river?

25 MR. DODSON: No, I do not conclude that.



1           MR. YAMAMOTO: Do you agree with Mr. Carlson that the  
2 decrease in the surface flow of the river will be  
3 approximately one and a half miles?

4           MR. DODSON: I accept his conclusions, yes.

5           MR. YAMAMOTO: Mr. Carlson. Now, previously you've  
6 testified that the decrease in surface flow associated with  
7 a diversion of 1,680 acre-feet from the river to the golf  
8 course or some similar location would reduce the extent of  
9 surface flow of the river by approximately one and a half  
10 miles. Do you recall that?

11          MR. CARLSON: That's correct.

12          MR. YAMAMOTO: Now, how much would the surface flow be  
13 decreased if 3,300 acre-feet were diverted from the river to  
14 some other reclaimed water use?

15          MR. CARLSON: Using the same factor that we developed  
16 on our Exhibit 4E, I believe, of the curve, we concluded  
17 that the rate of seepage from the river was about 1100  
18 acre-feet per year, per mile. So if it were 3300, that  
19 decrease, by that calculation, would be three miles.

20          MR. YAMAMOTO: And is it correct, then, if 6,600  
21 acre-feet were diverted from the river to some other  
22 reclaimed water use, the surface flow in the river would be  
23 decreased by some six miles?

24          MR. CARLSON: I'm not sure that our curve where we --  
25 data would go as high as 6600, but there's no question that





1 decreasing the amount, the surface flow from -- or --  
2 decreasing the amount of discharge would cause a decrease in  
3 the extent of surface flow, if the same factors held, it  
4 would be six miles.

5 MR. YAMAMOTO: And at any rate, it would be  
6 substantially more of a decrease than the decrease  
7 associated with a 3,300 acre-foot diversion?

8 MR. CARLSON: That would be my opinion.

9 MR. YAMAMOTO: And a 9,000 acre-foot diversion would  
10 be an even more extensive reduction in the surface flow;  
11 correct?

12 MR. CARLSON: I believe so.

13 MR. YAMAMOTO: In Paragraph 15 of your written  
14 testimony you say -- and I'll only quote part of it -- the  
15 second sentence, I believe: "I have concluded, however,  
16 that the reduction of groundwater production and the  
17 associated increased groundwater levels along the river  
18 would not be significant enough to result in increased  
19 discharges of groundwater to the river between VVWRA and  
20 Bryman Road."

21 Do you see that?

22 MR. CARLSON: Yes, I do.

23 MR. YAMAMOTO: And do you still follow that  
24 conclusion, or subscribe to that conclusion?

25 MR. CARLSON: Yes, I do.



1           MR. YAMAMOTO: Now, if there is no impact from the  
2 decreased groundwater pumping associated with the project on  
3 the surface flow of the river beyond Bryman Road, would  
4 there be any groundwater flow that would go beyond Bryman  
5 Road?

6           MR. CARLSON: The conclusion that you expressed there  
7 in that statement in Paragraph 15 speaks to the possibility  
8 that we explored that when groundwater pumping were reduced  
9 in the well field that currently supplies water to the golf  
10 course, one possibility is that those groundwater levels  
11 would rise far enough to actually cause a discharge of  
12 groundwater to the river in that location or downstream from  
13 that location.

14           We concluded that though the groundwaters would rise,  
15 they would not rise sufficiently to make water appear in the  
16 river. It would, instead, stay in the groundwater and move  
17 downstream in the groundwater ride, so the ground -- and  
18 then groundwater flow downstream from that location would be  
19 increased. It would not be manifested as surface flow.

20           MR. YAMAMOTO: And that assumes that the groundwater  
21 wells that are currently pumped to water the golf course  
22 would be turned off; correct?

23           MR. CARLSON: I don't think it assumes that they'd be  
24 turned off, but the amount of flow, the amount of discharge  
25 from those would be reduced by an equivalent amount,



1 whatever number we talked about: 400 or 1680 or whatever, as  
2 long as there would be just a simple change of source.

3 MR. YAMAMOTO: And the impact on the groundwater flows  
4 would not affect your conclusion that the extent of surface  
5 water habitat would be decreased by one and a half miles by  
6 the project; is that correct?

7 MR. CARLSON: The increase in groundwater flow at the  
8 surface could, indeed, cause an increase in the extent of  
9 surface flow, so it would be offsetting that decrease in  
10 discharge. However, that conclusion is I don't think -- the  
11 data we have is not strong enough to really support a  
12 conclusion that, indeed, that would happen. It's more  
13 likely that it would stay in the ground and would contribute  
14 to subsurface flow, as opposed to surface flow.

15 MR. YAMAMOTO: And your conclusion is that there is no  
16 data to support a conclusion that the diversion of 1680  
17 acre-feet of flow from the river will not result in a  
18 decrease in the extent of surface flow down the river?

19 MR. CARLSON: Could you repeat the question. There  
20 were too many nos and nots in it for me.

21 MR. YAMAMOTO: I'll simplify it.

22 While you've expressed interest in a hypothetical  
23 possibility that the decrease in groundwater production  
24 might increase the surface flow, you have no factual basis  
25 to conclude that the effects on surface flow would be any



1 different than the 1.5 miles you've calculated?

2 MR. CARLSON: That's correct.

3 MR. YAMAMOTO: Mr. MacLaggan.

4 MR. MACLAGGAN: Yes, sir.

5 MR. YAMAMOTO: I have a few questions.

6 Have you read the stipulated judgment?

7 MR. MACLAGGAN: No, I have not.

8 MR. YAMAMOTO: Are you an expert in water law?

9 MR. MACLAGGAN: No, I am not.

10 MR. YAMAMOTO: Do you know which Centro basin or

11 subarea water producers have overlying water rights?

12 MR. MACLAGGAN: No, I do not.

13 MR. YAMAMOTO: Do you know which Centro basin water

14 producers have appropriative water rights?

15 MR. MACLAGGAN: No, sir.

16 MR. YAMAMOTO: Do you know that Southern California

17 Water Company has appropriative water rights?

18 MR. MACLAGGAN: I'm not aware of that.

19 MR. YAMAMOTO: Do you know that Southern California

20 Water Company has appropriative water rights associated with

21 the Centro subarea?

22 MR. MACLAGGAN: No, sir.

23 MR. YAMAMOTO: You've concluded in your testimony that

24 there are no injuries to legal users of water rights posed

25 by this project; correct?





1 MR. MACLAGGAN: That's correct.

2 MR. YAMAMOTO: Isn't it true that you simply don't  
3 know who the legal users of water rights of -- sorry -- of  
4 water are?

5 MR. MACLAGGAN: That's correct. Would you like me to  
6 explain the basis of the conclusion?

7 MR. YAMAMOTO: No. I just want to understand the  
8 basis that you don't know who the legal users are, if that's  
9 correct.

10 MR. MACLAGGAN: That's correct.

11 MR. YAMAMOTO: If the current discharge of the VVWRA  
12 project goes to meet the needs of central basin water  
13 producers, is that a valuable use of reclaimed water?

14 MR. MACLAGGAN: Could you please repeat the question.

15 MR. YAMAMOTO: Yes. And, actually, I made a mistake.  
16 When I refer to the central basin, I'm referring to the  
17 Centro subarea; okay?

18 And my question is: If the current discharges of the  
19 VVWRA project goes to meet the needs of Centro subarea water  
20 producers, is that a valuable use of the water?

21 MR. MACLAGGAN: You're asking me is the discharge --  
22 if the discharges used downstream serve a beneficial use.

23 You said a valuable use?

24 MR. YAMAMOTO: Correct.

25 MR. MACLAGGAN: It's certainly beneficial, yes, a



1 recognized beneficial use.

2 MR. YAMAMOTO: And would it be beneficial to replace  
3 imported State Water Project water which could be recharged  
4 in the Centro subarea?

5 MR. MACLAGGAN: Repeat the question, please.

6 MR. YAMAMOTO: Okay. Would it be beneficial to  
7 replace the discharges of State Water Project water in the  
8 Centro subarea with VVWRA reclaimed water?

9 MR. MACLAGGAN: I'm not sure I understand your  
10 question.

11 MR. YAMAMOTO: Okay. If you have a use which was  
12 going to use State Water Project water, and you replaced  
13 that State Water Project water with reclaimed water, would  
14 that be a high use of the reclaimed water?

15 MR. MACLAGGAN: It would be a beneficial use of the  
16 reclaimed water.

17 MR. YAMAMOTO: Wouldn't it be a higher value use than  
18 using the water for irrigation?

19 MR. MACLAGGAN: Under whose priority system?

20 MR. YAMAMOTO: Well, under yours. I mean, isn't it  
21 better to recharge a groundwater basin which is being used  
22 for the production of water for all sorts of purposes than  
23 to use it simply for irrigation, which would be one of the  
24 many uses of the recharged water? I mean, yes or no?

25 MR. MACLAGGAN: I wouldn't necessarily say that one



1 has a higher priority over the other, given that they're  
2 both serving a recognized beneficial use.

3 MR. YAMAMOTO: Do you have any basis for concluding  
4 that using the same reclaimed water for irrigation is better  
5 than using that water for recharge?

6 MR. MACLAGGAN: Better in what sense?

7 MR. YAMAMOTO: Well, you indicated that we have a  
8 legislative priority on using reclaimed water for things  
9 like irrigation. But I assume it's even better to use it  
10 for groundwater recharge. Is that incorrect?

11 MR. MACLAGGAN: There is no such policy. I mean, the  
12 purpose of the policy I testified to is to ensure that  
13 nonpotable uses be reserved to the extent practical of  
14 reclaimed water, given that it's an appropriate use of that  
15 source of supply. There is no policy I'm aware of that  
16 suggests that one beneficial use or another is of a higher  
17 priority for that use of reclaimed water.

18 The express policy in Section 13550 is that to the  
19 extent you have recycled water available and meeting the  
20 conditions we discussed and there are nonpotable uses, we  
21 think that water should be used for that purpose.

22 MR. YAMAMOTO: Are you aware of a State policy  
23 favoring the use of water for domestic uses? Is there such  
24 a policy?

25 MR. MACLAGGAN: Perhaps there is. I'm not aware of



1 it.

2 MR. YAMAMOTO: Are you aware of any water policies  
3 other than the one promoting the use of reclaimed water?

4 MR. MACLAGGAN: Yes.

5 MR. YAMAMOTO: Do any of those policies assign a  
6 priority to certain types of uses?

7 MR. MACLAGGAN: I'm familiar with drought allocation  
8 policies that will prioritize water to certain uses based on  
9 the availability of water.

10 MR. YAMAMOTO: And none of the policies you're aware  
11 of give a high priority to allocating water for domestic  
12 uses?

13 MR. MACLAGGAN: Under normal supply conditions?

14 MR. YAMAMOTO: Under any supply condition.

15 MR. MACLAGGAN: Under emergency supply condition,  
16 then, you would prioritize to your uses necessary to  
17 maintain public health and safety first. You would begin  
18 cutting off outdoor uses of water.

19 MR. YAMAMOTO: Which would include domestic uses;  
20 correct?

21 MR. MACLAGGAN: Correct.

22 MR. YAMAMOTO: Thank you.

23 H.O. BAGGETT: Mr. Vail.

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CROSS-EXAMINATION OF SECOND PANEL

BY MR. VAIL

MR. VAIL: I would like to -- my name is Joe Vail. I gave you my card already.

I'd like to ask Mr. MacLaggan -- MacLaggan?

MR. MACLAGGAN: Yes, sir.

MR. VAIL: -- some questions. It's interesting that you would have some questions about the same thing that I have some questions about.

You have stated here in this Paragraph 5 that the stated purposes for these policies is to maximize the re-use of water for all beneficial uses. You say you've lived in Victor Valley for about eleven years?

MR. MACLAGGAN: No, sir. I live in San Diego.

MR. VAIL: Oh, you live in San Diego?

MR. MACLAGGAN: Yes, sir.

MR. VAIL: But you've worked in Victor Valley?

MR. MACLAGGAN: No, sir.

MR. VAIL: Okay. I must have have confused you with Mr. Patterson.

Anyway, you are aware of what's going on with this Victor Valley water system, are you, on the Mojave River, and you've read all these other declarations that these people have made and the reports that Mr. Dodson and Mr. Carlson have made?



1           MR. MACLAGGAN: I've read the testimony by the Victor  
2 Valley Wastewater Authority and its experts, yes.

3           MR. VAIL: So that means you've read the Adjudication?

4           MR. MACLAGGAN: I have not read the Adjudication.

5           MR. VAIL: Is there anything that you can think of  
6 that's different about the Victorville Mojave water --  
7 Mojave River than other rivers in the state of California  
8 that you may be familiar with?

9           MR. MACLAGGAN: Different in what sense?

10          MR. VAIL: Anything different about it.

11          MR. MACLAGGAN: It's a pretty open question.

12          MR. VAIL: Okay. Is there water in it, compared to  
13 other rivers? I mean, are you familiar with rivers in the  
14 Sacramento Delta and all of those up here?

15          MR. HITCHINGS: I'm going to object as to vague and  
16 overbroad. It's basically impossible to answer that  
17 question.

18          H.O. BAGGETT: Right.

19          MR. VAIL: I'll narrow it down.

20                 You've made statements that the code contains numerous  
21 legislative declarations regarding policies of water, and I  
22 presume that these policies of water revolve around the  
23 entire state.

24          MR. MACLAGGAN: Yes, sir.

25          MR. VAIL: And so the rivers throughout the state



1 would be affected by these policies?

2 MR. MACLAGGAN: Yes, sir.

3 MR. VAIL: Okay. And is there a difference between  
4 most of the other rivers in the state of California,  
5 compared to the Mojave River?

6 MR. HITCHINGS: Same objection.

7 MR. VAIL: Narrow it down to rivers on the west side  
8 of the Sierras. Most rivers have tremendous amounts of  
9 water on this side of the Sierras?

10 MR. HITCHINGS: I'm going to object. This assumes  
11 facts not in evidence, it's vague, overbroad, ambiguous. I  
12 think as it's stated it's an incomplete hypothetical.

13 MR. VAIL: Okay. Let's stick with the Mojave River,  
14 then.

15 You're aware that the Mojave River has very little  
16 water flowing in it, just from what Mr. Carlson said, where  
17 it flows about a mile or two past the plant?

18 MR. MACLAGGAN: You're speaking of surface flow?

19 MR. VAIL: That's correct.

20 MR. MACLAGGAN: Being less than, say, the Sacramento  
21 River?

22 MR. VAIL: That's correct.

23 MR. MACLAGGAN: I would agree with that.

24 MR. VAIL: Okay. So thank you for answering my  
25 question in a roundabout way.



1           Now, to maximize the re-use of water and all  
2 beneficial uses, what is the highest possible beneficial use  
3 of water?

4           MR. MACLAGGAN: I'm not aware of prioritization of  
5 beneficial uses.

6           MR. VAIL: Okay. May I give you a hypothetical that  
7 would help you to make or prioritize --

8           H.O. BAGGETT: He's answered he's not aware of the  
9 priority. Well, give him one.

10          MR. VAIL: Okay.

11          If you were out in the desert and all you have is  
12 three bottles of water: one would be the one you've got in  
13 front of you, one would be one that had water taken from the  
14 discharge of the sewage treatment plant, and one would be  
15 filled with water from the State water aqueduct, and you  
16 were out in the desert, and you were dying of thirst, which  
17 bottle would you drink first?

18          MR. MACLAGGAN: The bottled water.

19          MR. VAIL: But they're all three bottled. One just  
20 happens to have this label on it. The others just happen to  
21 say something about State Project water, and it would be  
22 reclaimed water out of the sewage plant.

23          Which bottle would you drink first?

24          MR. MACLAGGAN: The one that I perceived was potable.

25          MR. VAIL: Okay. And then that water was gone. Now





1 you're going to die of thirst a day or two later, which one  
2 would you drink next?

3 MR. MACLAGGAN: One that I perceived to be the cleaner  
4 of the two.

5 MR. VAIL: And which one would that be?

6 MR. MACLAGGAN: State Project water.

7 MR. VAIL: State Project water? Okay. Interesting.

8 I want to possibly come back to a couple of things,  
9 Mr. Carlson.

10 In your statement of who you are, it says that you  
11 have extensive experience in well design and construction.

12 And are you familiar with any of the health codes of  
13 California regarding well building, and drilling a well on  
14 private property for, let's say, for instance, in relation  
15 to a septic tank, how far away from any kind of septic tank  
16 that is required?

17 MR. CARLSON: I'm aware that such standards exist. I  
18 usually look them up.

19 MR. VAIL: And when you look them up, what do you  
20 usually find for that distance? In other words, if you have  
21 a septic tank here, about how far away should you drill from  
22 a septic tank?

23 MR. CARLSON: I can't recall the specific distance.  
24 It might be -- I can't recall the specific distance. Like I  
25 said, I have to look those things up. It tends --



1 MR. VAIL: If I were to --

2 MR. CARLSON: -- to change from county to county.

3 MR. VAIL: If I were to suggest to you it might be a  
4 hundred feet, would that sound reasonable?

5 MR. CARLSON: It might be.

6 MR. VAIL: Okay. In fact, that's what it is in San  
7 Bernardino County.

8 MR. HITCHINGS: I'm going to object. Move to  
9 strike --

10 H.O. BAGGETT: You'll get a chance --

11 MR. HITCHINGS: -- the testimony.

12 H.O. BAGGETT: You'll get a chance to make your  
13 comments later.

14 MR. HITCHINGS: Can I also just interject that it  
15 would be nice if Mr. Carlson can finish his answers, so that  
16 we have a record that we can read. And it's difficult when  
17 the questioner is talking over the witness giving their  
18 answer. So I think that would be helpful so that we can  
19 read this on the record later.

20 I think that admonition would be appropriate.

21 H.O. BAGGETT: Okay. I concur, yes.

22 So you'll let him finish whatever answer he has.

23 MR. VAIL: And the answer that I got from him  
24 concerning the approximate distance being about a hundred  
25 feet, that's acceptable?



1           H.O. BAGGETT: I thought he testified that it  
2 depended, but --

3           MR. VAIL: Yes.

4           If, indeed, a well can be built within a hundred feet  
5 of a septic tank and the water would be taken from that  
6 would be considered good quality water, with that basic kind  
7 of understanding, about how far from the discharge point of  
8 the water treatment plant would the water be taken out of  
9 the river and be considered drinkable?

10          MR. HITCHINGS: I'm going to object as an incomplete  
11 hypothetical. You don't know what the water, the drinking  
12 water standard is here, the quality of the water that's  
13 involved, any of those types of assumptions that would be  
14 part of a complete hypothetical.

15          MR. VAIL: The wastewater treatment plant is under  
16 certain legal requirements to discharge water of a certain  
17 quality. And I would hope that Mr. Carlson, in his  
18 expertise, would know something about that quality.

19          H.O. BAGGETT: I don't know that it goes to his  
20 testimony. He's a hydrogeologist; correct?

21          I don't think so.

22          MR. HITCHINGS: Because this is outside the scope of  
23 what his direct testimony was offered for, as well as he  
24 already stated he was not testifying as to the water  
25 quality.



1           H.O. BAGGETT: Right. I would agree. He was talking  
2 about underflow and the geology. So if you've got questions  
3 about water movement, I think that --

4           MR. VAIL: Okay. In his expertise he would know these  
5 things. And since he presented that as part of his  
6 background, I would think he would know that.

7           H.O. BAGGETT: That wasn't part of his testimony in  
8 that area.

9           MR. VAIL: Okay.

10           One of the things I am interested in that I have never  
11 heard before is how this water gets disconnected. And I'm  
12 not a hydrologist, but in my limited understanding of water,  
13 it usually flows to the lowest point, and water flows to  
14 whatever the lowest level, or that it goes to, how is it  
15 disconnected?

16           MR. CARLSON: The term "disconnected"? I believe we  
17 used the term "decoupled."

18           MR. VAIL: Decoupled. That's correct. Thank you. I  
19 knew it was something. I couldn't recall exactly how you  
20 said it. Decoupled. That's even better.

21           So how does it get decoupled?

22           MR. CARLSON: Well, imagine a river that -- where the  
23 water table is quite deep, and imagine water is put into the  
24 river on the surface. Now, that water that is put into the  
25 river on the surface will flow downstream for some distance,





1 during which time it is leaking to -- leaking down into the  
2 river channel sediments and below, eventually reaching the  
3 water table at some distance below.

4 The term "decouple" would mean that the rate of  
5 leakage of that water, that surface water, is independent of  
6 how deep the water table is. If the water table is a  
7 hundred feet deep, it will leak at the same rate as if the  
8 water were a thousand feet deep. And this is what we mean  
9 by the term "decoupled."

10 MR. VAIL: Okay. So when you're talking about  
11 leakage, you're talking about permeability of the soil, how  
12 fast the water leaks down to the rest of the water table?

13 MR. CARLSON: Well, actually what I'm talking about is  
14 leakage infiltration of water, surface water, into the  
15 ground.

16 MR. VAIL: So, as the water leaks down through this  
17 permeable material, then it becomes recoupled?

18 MR. CARLSON: No. The water moves downward in  
19 unsaturated flow and eventually reaches the water table, at  
20 which time it commingles and joins the groundwater that is  
21 moving in whatever direction it's moving.

22 MR. VAIL: And that recouples it, then?

23 MR. CARLSON: No. It's still a decoupling situation.  
24 Decoupled in what's meant here means that the amount of  
25 leakage from the stream is independent of the groundwater



1 level.

2 MR. VAIL: You stated in Paragraph 13 that 1,080 feet  
3 of water per year -- in other words, there would be no  
4 increase in the consumptive use of water.

5 Do you have any idea about evaporation of water used  
6 on a golf course?

7 MR. CARLSON: Well, I know that you have to, in order  
8 to keep the grass green, you have to apply water, and that  
9 water is consumed by grass, yes.

10 MR. VAIL: And when the water is being put on the  
11 grass, there is also evaporation; is that correct?

12 MR. CARLSON: It's a combined process of  
13 evapotranspiration.

14 MR. VAIL: And do you have any idea what the  
15 percentage of water loss is in that process?

16 MR. CARLSON: I don't understand.

17 MR. VAIL: I have no knowledge of how much the  
18 consumptive use and the percentage of the water applied at  
19 the golf course is, but whatever water is used in that  
20 process that is lost, obviously, will not get back into the  
21 aquifer; is that not correct?

22 MR. CARLSON: That is correct.

23 MR. VAIL: So then to say that there will be no  
24 increase in the consumptive use of water, would not  
25 necessarily be correct, would it?



1           MR. CARLSON: Well, what I mean by no increase in  
2           consumptive use is that the golf course would remain the  
3           same, the same amount of water would be applied to the same  
4           area of the golf course. The only thing that would change  
5           would be the source of the water. So that there would be no  
6           net increase in consumptive use by the golf course itself  
7           by, you know, maintaining green grass at the golf course.

8           MR. VAIL: As the City of Victorville, assuming this  
9           thing goes through, as the City of Victorville expands the  
10          use of this water over the base and irrigates other areas,  
11          will that not increase evaporation of this water also?

12          MR. CARLSON: As long as the area that is irrigated  
13          with reclaimed water replaces -- is applied over the same  
14          area that is currently irrigated from other sources, there  
15          would be no net increase.

16          The only way to have a net increase in consumptive use  
17          would be an increase in the irrigated acreage.

18          MR. VAIL: I have other questions I was going to ask  
19          you, but I'm sure counsel will object. It's on using cheap  
20          water to do more things.

21          A couple of things I want to ask Mr. Dodson about.

22          Incorporated in your testimony is this USGS report  
23          that you were talking about with Mr. Ledford, 4189 or  
24          something like that?

25          MR. DODSON: Yes, sir.



1           MR. VAIL: And this talks about stream flow along the  
2 main stem, on Page 11. It said most of the water entering  
3 the main stem of the Mojave River at the headwaters is lost  
4 by infiltration into the permeable streambed.

5           Now, I'm assuming somewhere along there the water gets  
6 recoupled in that process:

7           "As pointed out in the previous section, annual inflow  
8 from the headwaters averaged about 71,000 acre-feet during  
9 the water year '93 to '94, whereas during this same period,  
10 annual flow averaged about 54,000 acre-feet at the gaging  
11 station near Victorville and about 18,000 acre-feet at  
12 Barstow."

13           Now, this water that goes in here, I presume gets used  
14 in this Mojave River water system somehow through the water  
15 company's pumping this water out of the aquifer. Somehow  
16 this water gets used; is that not correct?

17           MR. DODSON: Water gets used, as far as I know, by a  
18 variety of causes, if you will, evaporation, utilization --

19           MR. VAIL: But let's --

20           MR. DODSON: -- water for irrigation, and by the  
21 phreatophytes and the riparian habitat.

22           MR. VAIL: Okay. Let's just talk about the pumping  
23 and the sewer plant, the treatment plant.

24           So the people who are pumping the water out of the  
25 ground and selling it to the citizens of the Victor Valley





1 area who are connected, these 94,000 people who are  
2 connected to the sewer system, they're receiving their water  
3 somehow from this riverbed, and it goes into the sewage  
4 treatment plant?

5 MR. DODSON: They're receiving it from a common --

6 MR. VAIL: I'm sorry?

7 MR. DODSON: As I understand it, they're receiving it  
8 from a combination of the floodplain aquifer and the  
9 regional aquifer. In other words, those are the two sources  
10 of pumped water that supply water to the communities that  
11 you're referring to.

12 MR. VAIL: And the people, these 94,000 people, pay  
13 for this water, then they use it, and then they flush it,  
14 and it goes to the Victor Valley wastewater treatment plant?

15 MR. DODSON: Among other sources, it goes to the  
16 treatment plant, yes.

17 MR. VAIL: But that's where the 94,000 people are  
18 connected basically?

19 MR. DODSON: They're connected to the system, yes.

20 MR. VAIL: Now, in this process, and as stated before,  
21 on Page 21 it says that: "In addition, beginning in water  
22 year 1994, imported water has also been released from a  
23 turnout in Mojave Water Agency's Morongo Basin Pipeline at  
24 about river mile 4. A total of about 6,600 acre-feet was  
25 released from the turnout in year 1994, all of which



1 percolated into the streambed within 2 miles."

2 Now, I would have to assume from the things that are  
3 said here in this report, as well as the testimony, that  
4 this 6,600 acre-feet of water was intermingled somehow in  
5 all this water and got into the sewage treatment plant, at  
6 least parts of it.

7 MR. HITCHINGS: I'm going to object as to assuming  
8 facts not in evidence. This is testimony. Again, there is  
9 no foundation, there is no indication that this is a  
10 hypothetical that is being presented.

11 H.O. BAGGETT: Could you rephrase it.

12 MR. VAIL: This is a fact in evidence,  
13 6,600 acre-feet. I don't know how you dispute that fact.

14 MR. HITCHINGS: My objection is on the basis that he's  
15 stating what his assumptions are about it, and there's no  
16 question, or he's asking him to state what his assumption --

17 MR. VAIL: Okay.

18 H.O. BAGGETT: A hypothetical that is a question.

19 MR. VAIL: Okay. For the witness --

20 I'll try it this way.

21 H.O. BAGGETT: Okay.

22 MR. VAIL: Can you tell me that none of the 6,600  
23 acre-feet of water got into the sewage system treatment  
24 plant?

25 MR. DODSON: No, I cannot.



1 MR. VAIL: Thank you.

2 H.O. BAGGETT: You've got it.

3 MR. VAIL: This is Lawyer 101 or something. Okay.

4 I had another -- it's one of the reports. I'm sorry  
5 I'm taking so much time here.

6 On Page 6, I believe. It's the same report.

7 Oh, this is USGS Survey 96-4241. On Page 6 of that  
8 report it says: "Estimated consumptive water use during  
9 1995 by riparian vegetation along the Mojave River is given  
10 in table 7. In the Alto subarea, consumptive use was  
11 estimated to be about 5,000 acre-feet upstream from the  
12 Lower Narrows and about 6,000 acre-feet downstream in the  
13 transition zone. In the Centro and Baja subareas,  
14 consumptive use was estimated to be about 3,000."

15 So you add those up, the river itself, all along the  
16 river, this says pulled 14,000 total acre-feet of water  
17 being used throughout those areas as stated herein.

18 Is that fairly correct?

19 MR. DODSON: I used these data, and I believe they're  
20 correct.

21 MR. VAIL: So when we're talking about 6,000 acre-feet  
22 of water being used for riparian needs, that is just in the  
23 area of from the Lower Narrows down to -- I guess it's the  
24 Helendale Fault?

25 MR. DODSON: That's what I understand, yes.



1           MR. VAIL: In your written statement, around the last  
2 page of your written statement, you made a comment about --  
3 well, Paragraph 16. You're, I guess, quoting that report.  
4 It starts at the line: "Bilhorn Report, page 8, further  
5 states that barring major changes in the riparian vegetation  
6 along the Mojave River, the estimated subject use for 1995  
7 should represent a fairly accurate consumptive use during  
8 most years.

9           "The report also explains that annual consumptive use  
10 along the river could be as much as 50 percent higher than  
11 the 1995 estimated following periods of extraordinarily  
12 large runoff. But after several years of drought, annual  
13 consumptive use of riparian phreatophytic vegetation could  
14 be as low as 50 percent below '95."

15           Is that what you believe? You've made that statement  
16 in your report, and it also is what basically the guy says  
17 in his report, quoting it.

18           I presume you believe that to be true; is that  
19 correct?

20           MR. DODSON: I accept these data, yes, as reasonable  
21 estimates.

22           MR. VAIL: If we take out 1600 acre-feet of water or  
23 some other amount of water out of this recharge from the  
24 wastewater treatment plant, and the water stops flowing a  
25 mile and a half short, as Mr. Carlson's report says, isn't





1 it likely that these plants along the river then will start  
2 to be stressed by this lack of water?

3 MR. DODSON: No, sir, I don't think that conclusion is  
4 a result of what you've stated.

5 MR. VAIL: In this USGS report, that's pretty much  
6 what the gentleman writes, is that because of the lack of  
7 water, stress has been caused to these plants and vegetation  
8 at different times. Is that not true, that he says that  
9 lack of water causes stress to these things?

10 MR. DODSON: In a general sense, yes, that is what is  
11 stated.

12 MR. VAIL: And so, if you deprive these plants of the  
13 water or portions of this water, isn't that likely to  
14 produce some form of stress on these plants?

15 MR. DODSON: Given the assumptions you've made, the  
16 answer is yes, but I don't believe they will be deprived of  
17 water.

18 MR. VAIL: And if these plants are stressed and they  
19 start to lose water, lose their ability to survive, isn't it  
20 likely that they may even use less water because they're  
21 stressed or dying out?

22 MR. DODSON: Given the assumptions you've just stated,  
23 again, the answer to your statement is yes, they would.

24 MR. VAIL: So, then there is a potential, although  
25 maybe very remote, there is a potential for adding



1 additional dying, dead trees, timber, whatever types of  
2 vegetation that grows along the Mojave River. There is a  
3 potential, then, by taking water from the recharge that's  
4 going currently in there from the treatment plant, by taking  
5 some of that out, there is a potential for doing some damage  
6 additional to this habitat?

7 MR. DODSON: No. I did not reach that conclusion.  
8 And the reason I didn't is because the net water balance  
9 within that reach of the river, which is between the Lower  
10 Narrows and essentially the Alto Transition Zone, between  
11 the Lower Narrows and the Helendale Fault.

12 MR. VAIL: You're an environmentalist?

13 MR. DODSON: I didn't understand.

14 A point was just made which I would like to add to in  
15 response. At this particular point in time, it's important  
16 to note that based upon personal observations that have been  
17 made over the last essentially eight years, the flows go  
18 past -- at this point in time, the surface flows go well  
19 past the riparian habitat. They extend into an area where  
20 there is no riparian vegetation, with the exception of  
21 occasional saltcedar plants.

22 MR. VAIL: Are they less valuable than some of the  
23 others?

24 MR. DODSON: In fact, they're damaging.

25 MR. VAIL: Compared to the cottonwood or something?



1           MR. DODSON: Significantly so. Cottonwood is a native  
2 plant. Saltcedar is a non-native plant that consumes a  
3 large amount of water and typically doesn't provide very  
4 high-quality habitat for native species.

5           MR. VAIL: And how much water does it take for a  
6 cottonwood tree, do you have any idea?

7           MR. DODSON: Yes, sir. But I would have to refer to  
8 the tables that are contained within the report that we are  
9 discussing to give you that answer. I put those tables up  
10 during my presentation yesterday.

11          MR. VAIL: You don't know how much one particular  
12 cottonwood tree would require?

13          MR. DODSON: Again, those values, how much one  
14 cottonwood tree would use, no. How much an acre of  
15 cottonwood would use, yes, I do.

16          MR. VAIL: How much would an acre use?

17          MR. DODSON: If it was as dense as 71 to 100 percent,  
18 it would use 4 acre-feet per year. If it is one tree on an  
19 acre, it might use .1 acre-feet.

20          MR. VAIL: If you had this cottonwood section you've  
21 talked about using 4 acre-feet, how much water would be the  
22 minimum it would take for those trees to survive?

23          MR. DODSON: Again, you'd have to treat this in the  
24 aggregate, I believe, rather than looking at individual  
25 trees. And for the total riparian habitat that extends



1 between the Lower Narrows and essentially all the way down  
2 to Helendale, the estimated consumption is 6,000 acre-feet  
3 for all of that habitat.

4 MR. VAIL: I know, but what I was asking is if you had  
5 this hypothetical group of cottonwood trees and they're  
6 using 4 acre-feet a year of water, these cottonwood trees,  
7 if you remove part of that water from those cottonwood  
8 trees, at what point would you be stressing those cottonwood  
9 trees to the point where they started to lose their leaves  
10 or turn brown or die or whatever?

11 MR. DODSON: I don't think I know that answer. The  
12 only data you have implied in material that you quoted  
13 earlier is that the trees would survive and then consumptive  
14 use would be reduced by 50 percent. But I do not have a  
15 specific answer to that question.

16 MR. VAIL: If they survive, they can be reduced by 50  
17 percent?

18 MR. DODSON: No. The water consumption rate could be  
19 reduced by 50 percent, and apparently they would still  
20 survive.

21 MR. VAIL: That's why I said if, they might survive.

22 MR. DODSON: And that's, again, based upon this data.  
23 I said I don't have any specific data to answer that  
24 question.

25 MR. VAIL: You have quite a list of credentials that I





1 read through. And I was just curious how you might handle  
2 my hypothetical question to Mr. MacLaggan concerning his  
3 being lost in the desert with his three bottles of water.

4 How would you handle that?

5 MR. HITCHINGS: I'm going to object as to whether  
6 that's at all relevant to this proceeding. I was -- I think  
7 we've all been patient through the first example of that.  
8 If the Board wants to hear it again -- but my objection  
9 stands.

10 MR. VAIL: I have no more questions at this time.

11 H.O. BAGGETT: Okay. Thank you, Mr. Vail.

12 With that we have one more Victor Valley, the first  
13 panel.

14 How long do you think for that questioning?

15 MS. DIFFERDING: Will we have the opportunity to ask  
16 questions?

17 H.O. BAGGETT: You have questions?

18 MS. DIFFERDING: Were you just about to let this panel  
19 go?

20 H.O. BAGGETT: Take a break, yes.

21 MS. DIFFERDING: Oh, take a break.

22 H.O. BAGGETT: Well, do you have any questions?

23 MR. HITCHINGS: I also wanted to know whether staff  
24 would ask questions after any potential redirect and recross  
25 or whether staff would have questions now. There is still



1 the other issue about potential redirect and recross.

2 H.O. BAGGETT: I'll defer to you. It's up to you.

3 Do you want questions now, or wait?

4 MS. DIFFERDING: We might have a few. We don't have  
5 much.

6 MS. MURRAY: Mr. Chairman, it seems to me that the  
7 point of procedure would be that staff would ask their  
8 questions now, and staff would also have a chance after  
9 redirect and recross. To eliminate one of their  
10 opportunities is not procedurally proper.

11 H.O. BAGGETT: Staff's option. Do you want to ask  
12 now? Or you can ask later.

13 MR. PELTIER: I've got a couple I'd like to ask while  
14 we're on the subject.

15 H.O. BAGGETT: Okay.

16 MR. PELTIER: Does somebody else want to go first?

17 ----oOo----

18 CROSS-EXAMINATION OF THE SECOND PANEL

19 BY STATE WATER RESOURCES CONTROL BOARD

20 BY STAFF

21 Mr. Carlson. I'm Tom Peltier of the State Water  
22 Board.

23 I'm looking at your Figure 2 of your testimony.

24 MR. CARLSON: Yes.

25 MR. PELTIER: And I'm trying to understand the



1 situation.

2 Immediately downstream from the treatment plant  
3 discharge you show water levels that are substantially below  
4 the stream level; is that correct?

5 MR. CARLSON: That's what that curve shows, yes.

6 MR. PELTIER: And is that the area that you're talking  
7 is decoupled from the surface water?

8 MR. CARLSON: As depicted on that diagram, that's  
9 true.

10 MR. PELTIER: Do you know if there is surface water in  
11 this area all the time? I was under the impression that  
12 there is a discharge that's ongoing there to the surface  
13 stream from the treatment plant.

14 MR. CARLSON: That's correct.

15 MR. PELTIER: And it's been going on for some number  
16 of years; right?

17 MR. CARLSON: That's correct.

18 MR. PELTIER: Wouldn't you expect this area to be in  
19 sort of more or less equilibrium with respect to the rate of  
20 groundwater recharge from the surface stream there?

21 MR. CARLSON: Well, I assume that it's in a state of  
22 equilibrium. What this chart shows is the rate of leakage  
23 from the river is not sufficiently high to cause the ground  
24 water levels to rise up to the level of the riverbed.

25 MR. PELTIER: Do you have an explanation for that?



1 Even though this goes on for an indefinite period of time --  
2 years -- why the groundwater levels don't rise?

3 MR. CARLSON: As I say, there are several  
4 possibilities. One is that the groundwater levels are  
5 depressed, because of the regional pumping depression, that  
6 something is causing a decrease in groundwater levels.

7 Another possibility is that the permeability of the  
8 streambed itself in this reach is low, low enough to impede  
9 the infiltration of water in this area.

10 Another possibility would be that the permeability of  
11 the aquifer at that location is high enough so that the  
12 water does not build up. The higher the permeability, the  
13 less the water is going to build up. So there is a variety  
14 of possibilities. I don't know the relative effects of each  
15 of those possibilities.

16 MR. PELTIER: Is it also possible that just by virtue  
17 of the location of those monitoring points, that they may  
18 not be actually reflecting the actual water level right  
19 beneath the stream channel in the aquifer?

20 MR. CARLSON: That's a possibility. Well, that's a  
21 possibility, yes.

22 MR. PELTIER: The wells in that area where it shows  
23 that it's decoupled, do you know if they're very narrow or  
24 like within 10 or 20 feet of the river channel?

25 MR. CARLSON: I don't have -- I mean, I have a map





1 that has those locations on it. I don't have it displayed  
2 on the screen right now. We tried to take wells as close as  
3 possible to the river to prepare this chart.

4 MR. PELTIER: These are strictly monitoring wells, or  
5 are they production as well?

6 MR. CARLSON: These are monitoring wells, yes.

7 MR. PELTIER: Will you at some point -- I'm under the  
8 impression you're going to provide the figure that you  
9 showed yesterday that showed where the wells were. And will  
10 you also provide a copy of this that shows what well numbers  
11 relate to these water levels for us?

12 MR. CARLSON: I will do that.

13 MR. PELTIER: Okay.

14 MR. CARLSON: I will do that. The maps are being  
15 produced now, I hope.

16 MR. PELTIER: All right. I have just a couple more  
17 questions. One is: in your study, did you look closely at  
18 the area further upstream? I note this ends right at the  
19 Lower Narrows -- is the upstream reach of this. Did you do  
20 any extensive investigation in the area where most of the  
21 pumping is, upstream from here?

22 MR. CARLSON: No, I did not.

23 MR. PELTIER: The last question I have, I think you  
24 may have already answered, so I'll try to be brief about it.

25 In the downstream area from here, you testified that



1 there is a certain extent of the wetted channel as a result  
2 of the discharge from the treatment plant; is that correct?

3 MR. CARLSON: Based on our correlations, we've made  
4 some forecasts about what -- how many cfs of discharge would  
5 result in how many miles of wetted channel.

6 MR. PELTIER: Would there also, downstream from the  
7 extent of the wetted channel, would there also be an  
8 increase in groundwater levels as a result of the discharge  
9 from the treatment plant?

10 MR. CARLSON: Possibly, if there was sufficient  
11 seepage going on through the riverbed.

12 MR. PELTIER: So when the --

13 MR. CARLSON: I mean, certainly in some areas the  
14 groundwater is essentially full.

15 MR. PELTIER: Okay. When the -- let me use the term  
16 "receding." If the wetted extent of the channel recedes,  
17 would the depth of groundwater in the area where it receded  
18 also be lowered as a result of decreased discharges?

19 MR. CARLSON: I haven't done those calculations. It  
20 would really depend on permeability of the aquifer in that  
21 location. And it would really depend on the amount of  
22 subsurface flow that would be entering that reach and that  
23 all of a sudden does not have surface water, depending on  
24 how much surface water or how much subsurface flow would be  
25 entering that reach.



1           The change in groundwater level is a calculation I  
2 have not done.

3           MR. PELTIER: But in general terms, though, is it  
4 reasonable to assume that the groundwater levels will also  
5 lower as the wetted stream channel recedes?

6           MR. CARLSON: Well, as I said, that's a calculation I  
7 have not done. That's a possibility. It's also a  
8 possibility that they would not change. But there's those  
9 areas where if it's sufficiently -- well, sufficiently low  
10 permeability, it would tend not to decrease.

11          MR. PELTIER: Would over --

12          MR. CARLSON: I just don't know what the effects would  
13 be locally in that reach as far as groundwater.

14          MR. PELTIER: Thank you. That's all.

15                               ---oOo---

16                               CROSS-EXAMINATION OF THE SECOND PANEL  
17 BY STATE OF CALIFORNIA DEPARTMENT OF FISH AND GAME  
18                               BY MS. MURRAY

19          MS. MURRAY: I'm Nancee Murray. I'm from the  
20 Department of Fish and Game.

21           I just have a quick question for Mr. Dodson.

22           You just stated that the water, surface water flow was  
23 actually extending beyond the riparian habitat.

24          MR. DODSON: Based upon my current experience, yes.

25          MS. MURRAY: Do you know how far?



1           MR. DODSON:  You know, I don't know the exact  
2  distances.  What I do know is that there is a small central  
3  channel where the surface flows extend maybe a mile, half  
4  mile to a mile downstream from -- again this is current and  
5  based upon recent visits downstream of the existing riparian  
6  habitat.  Essentially what you do is -- you have surface  
7  flows in a channel that's all sand, again with sporadic  
8  clusters of saltcedar.

9           MS. MURRAY:  And do you know if that habitat has  
10 changed?  Was that saltcedar habitat there historically?

11          MR. DODSON:  I think so.  Well, my good biologist here  
12 wants me to amplify my answer.  Saltcedar is not a native.  
13 They haven't been there forever.

14          Are the plants large, and have they been there for  
15 awhile?  Yes.  How long?  I don't know exactly.

16                               ---oOo---

17                               CROSS-EXAMINATION OF THE SECOND PANEL

18                               BY STATE WATER RESOURCES CONTROL BOARD

19                               BY STAFF

20          MR. MONA:  This is to Mr. Carlson.  I'm Ernie Mona  
21 with the State Board.

22          Mr. Carlson, your Exhibit 4E, Figure 3, just a few  
23 clarifying technical questions.

24          The figure indicates that these data points represent  
25 the great discharges from the treatment plant which were





1 measured. Where exactly were these discharges measured?

2 MR. CARLSON: These were measured, as I understand --  
3 we have these data from the wastewater agency. And as I  
4 understand it, they were measured in a flow that keeps track  
5 of how much discharge there is to the river.

6 MR. MONA: So it's measured right at the discharge  
7 point from the plant to the river?

8 MR. CARLSON: I believe so, yes.

9 MR. MONA: And they're not actual stream-flow  
10 measurements that were taken, then?

11 MR. CARLSON: No. They're how much wastewater was  
12 discharged to the river.

13 MR. MONA: So they really don't reflect what the flow  
14 was at the section of the river located some 5 miles  
15 downstream from the plant. Rather, they really just reflect  
16 what was actually discharged at the plant?

17 MR. CARLSON: That's correct.

18 MR. MONA: I notice that you only plotted five or six  
19 points. Any reason why you've selected these particular  
20 years?

21 MR. CARLSON: Well, what we did is we looked at a  
22 collection of historic air photos that we obtained from the  
23 Mojave Water Agency, and the points we plotted were for  
24 periods in the summer or fall to the extent we could. They  
25 reflected low-flow conditions in the river. Basically, we



1 look for the times when there would be low flow moving --  
2 moving in the river from above the treatment plant.

3 The idea here was to be able to compute how far the  
4 wastewater itself would flow without the addition of  
5 anything from upstream. We attempted to do that.

6 MR. MONA: Okay. I also note that these are calendar  
7 years which would represent, I suppose, January 1st through  
8 December 31st; correct?

9 MR. CARLSON: Yeah. The flow data from the plant that  
10 we have access to was an average. In the early years, it  
11 was an average. I think up until '96 or so, it was just an  
12 average over the entire year. We didn't have month to month  
13 variations. So that's all we had.

14 MR. MONA: Do you know if there's any type of a  
15 hydrologic variance of the flow in the Mojave River, for  
16 example, what year type: normal-year type, dry-year type,  
17 critical-year type?

18 MR. CARLSON: Well, I know that the flow that's in the  
19 Mojave River can be quite large at times. The data point  
20 for 1993, that falls above this curve. I think the easiest  
21 way to explain that is that it reflects the linear effects  
22 of the large flows that occurred in the Mojave River during  
23 that term.

24 MR. MONA: So these data points then reflect the flows  
25 that would have occurred, which did occur during wet



1 water-year types when there was an abundance of water?

2 MR. CARLSON: Well, these are -- basically, they're  
3 the data that -- I think it's a variety of years included in  
4 that database. I think that the data-flow points from 1993,  
5 I speculate that reflects a longer distance of flow,  
6 probably reflecting the previous wet winter that would have  
7 raised groundwater level and caused a longer distance of  
8 surface flow.

9 MR. MONA: Let's move back to your Figure 2. It looks  
10 like this Figure 2 represents calendar year 1998. Is that  
11 correct?

12 MR. CARLSON: It actually represents the water year  
13 1998.

14 MR. MONA: And by water year, you define a period of  
15 what? From when to when?

16 MR. CARLSON: I think it starts in October of '97 is  
17 what water year '98 would be. I think that's what that  
18 means.

19 MR. MONA: And do you know necessarily what type of  
20 water year that was? Was this a wet year, dry year, or --

21 MR. CARLSON: I don't know.

22 MR. MONA: You don't know. But you're not trying to  
23 testify that this Figure 2 represents a typical type of a  
24 river groundwater pattern that exists on there, but just for  
25 this particular type water year?



1           MR. CARLSON: I think the figure represents that  
2 particular year. The average conditions over that year,  
3 that's what that figure represents.

4           MR. MONA: Would you expect this type of a, I guess,  
5 surface water contribution to the river, groundwater  
6 contribution to the river as indicated between mile 6 and 9  
7 to occur during a dry-type water year?

8           MR. CARLSON: It may not. It also may. You know,  
9 there's a good chance that this pattern could change  
10 seasonally. Again, this is an average over a whole year.  
11 Groundwater levels change throughout the year, and it  
12 changes from year to year.

13          MR. MONA: That's all. Thank you.

14          MS. DIFFERDING: I have just one question for you,  
15 Mr. MacLaggan. Is that right?

16          MR. MACLAGGAN: Yes.

17          MS. DIFFERDING: I'd like to ask you the same question  
18 that Mr. Kidman asked Mr. Carlson yesterday, because you  
19 made the same statement that the use of reclaimed water at  
20 SCLA would offset groundwater pumping that currently  
21 supplies the golf course there.

22                 Do you know for certain whether the City of Adelanto  
23 will decrease its pumping by 1,680 acre-feet if and when  
24 this project is fully implemented?

25          MR. MACLAGGAN: No, I don't have any information as to





1 what their plans are at the City of Adelanto, that their  
2 current pumping would be reduced as a result of reclaimed  
3 water use.

4 MS. DIFFERDING: Thank you.

5 H.O. BAGGETT: Any other questions?

6 This panel is dismissed now, and we'll take a recess,  
7 come back to Mr. Kidman for the first VVWRA panel, and then  
8 go to Fish and Game. Take five.

9 (A brief recess was taken.)

10 H.O. BAGGETT: We're back in session, and we'll  
11 continue redirect examination of the second panel of VVWRA.

12 It's all yours, Mr. Hitchings.

13 ---oOo---

14 REDIRECT EXAMINATION OF SECOND PANEL

15 BY VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY

16 BY MR. HITCHINGS

17 MR. HITCHINGS: Thank you, Mr. Chairman. I have a few  
18 questions for each one of the witnesses on the panel, and I  
19 think what I'll do is I'll start with Mr. Carlson.

20 Mr. Carlson, yesterday, during your cross-examination  
21 by Fish and Game, there was a question regarding whether you  
22 had evaluated a certain well, which we've referred to as  
23 Well 3H2, in your creation of Figure 2 or VVWRA Exhibit 4D.

24 Do you recall that line of questioning?

25 MR. CARLSON: Yes, I do.



1           MR. HITCHINGS: And there was a question about why the  
2 data from that well as was shared with you on the sheet was  
3 not included in your analysis or the profile on Figure 2.

4           Do you recall that?

5           MR. CARLSON: Yes, I do.

6           MR. HITCHINGS: Do you have an answer as to why that  
7 data point or that well was not evaluated?

8           MR. CARLSON: Yes. I spoke with the person,  
9 Nate Brown, who did that figure and, in essence, it was a  
10 mistake. He just left the well out.

11          MR. HITCHINGS: Okay. As a result of that, did you  
12 undertake any type of effort to review how that may have  
13 affected it, if you added the data point from that well, to  
14 what was at that point Exhibit 4D, what effect that had on  
15 the data and the profile that you had created?

16          MR. CARLSON: Yes. I asked Nate to review the entire  
17 well database and to add any wells that he had neglected to  
18 put on. We actually had another well pair downstream of the  
19 well that was pointed out by DFG. We added that to a  
20 profile. We have done a new profile.

21          Shall I present that now?

22          MR. HITCHINGS: Well, I guess what I'd like to ask you  
23 is what are the exact well numbers that we're talking about  
24 as far as the well number that's been referred to as Well  
25 No. 3H2, and then the other well that you just discussed,



1 which was another shallow well that was left off the  
2 original cross-section diagram?

3 MR. CARLSON: The well that was left off, the other  
4 well that was left off, was Well 7N4W6F4.

5 MR. HITCHINGS: And that's paired with the shallow  
6 well that was already on the profile that was what number?

7 MR. CARLSON: That was 7N4W6F3.

8 MR. HITCHINGS: I'd like to show you, which you have  
9 obviously seen, is a revised version of the profile, the  
10 revised version of Exhibit 4D. And I've marked this as  
11 VVWRA Exhibit 4F. And I believe there's a transparency that  
12 we can put on to talk about this.

13 If you could, Mr. Carlson, if you could run through  
14 the differences between this version of what was Exhibit 4D  
15 and, as we have termed this Exhibit 4F, which was an update  
16 of that Figure 2 profile.

17 MR. CARLSON: Okay. As we discussed, we've added the  
18 water level at this particular well that was pointed out by  
19 DFG yesterday. We've also determined that we left out this  
20 well here (indicating).

21 There are some additional wells also that we have left  
22 out. I'm afraid I don't recall the well numbers. We are  
23 preparing a new map that essentially has the well numbers  
24 that are included in this figure as well as the well numbers  
25 that were included in Exhibit 4C. We will also, in the next



1 generation of this exhibit, actually post the well names on  
2 this figure so it's a little easier to read.

3 But the important change or the change in the figure  
4 really includes the area from here (indicating) to here  
5 (indicating) and the previous depiction of the profile of  
6 the water table. In that area the water level was below the  
7 land surface because we had not included those shallow  
8 wells.

9 In this depiction, the water level is at or near the  
10 streambed elevation, though up here (indicating), it still  
11 appears to be a little bit below, so a little bit below the  
12 stream level. So it appears in this reach that starts, oh,  
13 about one and a half miles above Bryman Road, all the way  
14 down to the end of our study area, that it still is a losing  
15 stream throughout most of that reach. It may be a  
16 discharging stream here (indicating) that we can't -- we  
17 can't, you know, there's really no wells in there for us to  
18 conclude.

19 In the area above this point (indicating), about one  
20 and a half miles above Bryman Road is an area where the  
21 groundwater level is below the streambed, and it appears to  
22 be decoupled.

23 MR. HITCHINGS: And going back to your statement a few  
24 moments ago regarding the various wells depicted on here and  
25 the map that we discussed yesterday, I think we could all go





1 through each one of these wells and attach a number to them  
2 on this sheet, which -- how many wells would that be?

3 MR. CARLSON: I believe it's a total of 38 wells.

4 MR. HITCHINGS: Or one of the other alternatives is we  
5 could -- it's possible that -- or we can actually plot  
6 exactly where these wells are on the map that we have  
7 submitted as an exhibit, which is Exhibit 4C, so that they  
8 would be identified on that map; is that correct?

9 MR. CARLSON: We could plot on Exhibit 4C all these  
10 wells, yes.

11 MR. HITCHINGS: Well, all the wells are on the map  
12 that you pointed to yesterday but which was not actually our  
13 Exhibit 4C; is that correct?

14 MR. CARLSON: That's correct.

15 MR. HITCHINGS: So the updated map that we can do can  
16 have -- of 4C, I'm talking about -- could have all of the  
17 wells that are reflected on this Exhibit 4F plotted; is that  
18 correct?

19 MR. CARLSON: Yes, that's correct.

20 MR. HITCHINGS: With these new wells?

21 MR. KIDMAN: I would just indicate that we'd be  
22 willing to stipulate to allow another exhibit to be  
23 prepared, hopefully maybe both of these exhibits, to  
24 cross-reference these data points as well so -- and have  
25 that submitted within some reasonable period of time.



1 H.O. BAGGETT: Yes. I was going to suggest it would  
2 be would very helpful on that. I would request that. I  
3 don't know what's a reasonable time.

4 Can you give me a time frame?

5 MR. HITCHINGS: I believe that we can have these  
6 prepared within next -- probably by the end of this week,  
7 and circulate them to the Board and all the parties.

8 H.O. BAGGETT: To all parties. Okay.

9 MR. HITCHINGS: And the only reason I didn't broach  
10 the issue now is that I thought we may bring it up when we  
11 actually offer the exhibits into evidence. But if everyone  
12 is willing to stipulate to it, I think it would be helpful  
13 to the parties and to the Board.

14 H.O. BAGGETT: I can't imagine that there is an  
15 objection. Okay.

16 MR. HITCHINGS: Thank you.

17 Then going back to this Exhibit 4F, with these  
18 additional wells plotted on there, does it change any of  
19 your conclusions that this figure depicts regarding where  
20 the water may be recharging or discharging and where it may  
21 be coupled or decoupled?

22 MR. CARLSON: The area of decoupling that we had  
23 originally identified down here now appears not to be  
24 decoupled. It appears to be very close to the surface in  
25 that location.



1           So, again, throughout this, most of the reach, it  
2           appears to be a losing stream. Surface water is actually  
3           leaking into the aquifer through most of that reach. So  
4           that conclusion really didn't significantly change.

5           MR. HITCHINGS: And then as far as the addition of  
6           these wells to your analysis in preparing this profile, did  
7           the additional data points associated with these new wells  
8           change any of your conclusions that you reached with regard  
9           to Exhibit 4E?

10          MR. CARLSON: Exhibit 4E was the curve that shows the  
11          extent of flow versus cfs. And, no, it didn't change any of  
12          the conclusions regarding Exhibit 4E.

13          MR. HITCHINGS: In some of the questioning from  
14          various other parties that cross-examined, there was a  
15          discussion regarding the characterization of the groundwater  
16          within the Mojave River basin. Do you recall some of those  
17          general questions?

18          MR. CARLSON: I recall some questions along that line,  
19          yes.

20          MR. HITCHINGS: And do you have an opinion regarding  
21          whether the water within the upper Alto Subarea, whether  
22          portions of it -- let me rephrase that.

23                 Whether water that's pumped from wells in the Alto  
24          Subarea is pumped from an aquifer that is not flowing in  
25          known and definite channels?



1           MR. YAMAMOTO:  Objection, your Honor.  I don't know  
2 what cross-examination testimony this is an extension of.

3           H.O. BAGGETT:  Will you rephrase.

4           MR. HITCHINGS:  I believe that someone on cross, and I  
5 cannot recall the party, had asked the question regarding  
6 the characterization of whether the water was pumped from a  
7 regional aquifer or from the alluvial aquifer.

8           MS. MURRAY:  And I submit that the question was  
9 regional aquifer, and alluvial aquifer is a different  
10 question.

11          H.O. BAGGETT:  Well, let him finish rephrasing it  
12 first.

13          MR. HITCHINGS:  Do you have an opinion regarding  
14 whether any of the water that's pumped in the Upper Alto  
15 Subarea is pumped from an alluvial aquifer, versus the  
16 regional aquifer?

17          MR. CARLSON:  I never had specific knowledge of the  
18 location and pumping rate of wells in the Upper Alto area.  
19 However, I understand from reading the reports that  
20 groundwater is pumped from a combination of a regional  
21 aquifer and a floodplain aquifer, but I have no specific  
22 knowledge of the amounts and quantities from each.

23          MR. HITCHINGS:  Okay.  Thank you.

24           And then, in questioning from Apple Valley Ranchos,  
25 there had been some questions regarding the decreases in





1 surface flows that would have been associated with decreases  
2 in discharges from VVWRA's treatment plant where you were  
3 asked to discuss the decreases in surface flows that might  
4 result from this project where 1680 acre-feet is no longer  
5 discharged, or another instance where 3,000 acre-feet is no  
6 longer discharged, or up to another instance where 9,000  
7 acre-feet is no longer discharged.

8 Do you recall that questioning?

9 MR. CARLSON: Yes, I do.

10 MR. HITCHINGS: With regard to this project that's  
11 before this Board for consideration, what is the amount of  
12 -- the maximum amount of decreased discharges that can be  
13 expected from the VVWRA treatment plant?

14 MR. CARLSON: I believe it is 1680 acre-feet per year.

15 MR. HITCHINGS: And based upon the conclusions that  
16 you've stated already, what is your conclusion regarding  
17 what the potential decrease in surface flows are as a result  
18 of decrease in discharges?

19 MR. CARLSON: At 1680 acre-feet per year, I would  
20 forecast a reduction in the extent of surface flow of about  
21 one and a half miles.

22 MR. HITCHINGS: Okay. Thank you.

23 I have now a few questions for Mr. Dodson.

24 During some questioning yesterday by Southern  
25 California Water Company there had been some questions



1 regarding what the amount of water is that's available on  
2 average to support the transition zone in the Alto Subarea.

3 Do you recall that questioning?

4 MR. DODSON: Yes, I do.

5 MR. HITCHINGS: And there had been some discussion  
6 regarding -- is it 2,000 acre-feet that's required as a  
7 consumptive use demand? Is it 6,000 acre-feet -- whatever  
8 the number might be.

9 Do you recall that line of questioning?

10 MR. DODSON: Yes, I do.

11 MR. HITCHINGS: If you could state again what your  
12 testimony is regarding the average annual consumptive use  
13 demand for the riparian habitat within the transition zone,  
14 I'd like you to state that again, please.

15 MR. DODSON: Yes, sir.

16 Using the values that came out of the USGS Report  
17 96-4241, I relied upon a value of 6,000 acre-feet for the  
18 consumption -- consumptive water use, actual direct  
19 consumptive water use for approximately 265 acres of  
20 riparian habitat within the zone you identified as the Alto  
21 Transition Zone between the Lower Narrows and Helendale.

22 MR. HITCHINGS: And is it your opinion that that  
23 consumptive use water demand can be met from both surface  
24 flows as well as from groundwater?

25 MR. DODSON: Yes, sir. And I'd like to amplify that



1 by pointing out that yesterday, for some reason, apparently  
2 Mr. Kidman was a little confused about those data as well.

3 What I did was, again, abstracting data as an analyst  
4 looking at potential impacts, was to say what is the total  
5 water budget for this area based upon the knowledge that we  
6 have. And the water budget is there are storm flows that  
7 pass into the Alto Transition Zone on the order of 39,000  
8 acre-feet per year long-term average. That's 63 years'  
9 worth of average.

10 Combined with that, you have a range of base flow  
11 which, during the period of time I had to evaluate, was a  
12 little over 15,000 acre-feet. It has diminished, but it has  
13 not gone as low as the lowest value that we identified in  
14 the 1992 year, which was -- water year -- which was  
15 4,000-acre-feet.

16 What I did is add in the VVWRA discharge, which is  
17 9,000 acre-feet, and when you total up just the base flow  
18 and the VVWRA flows, you have -- I use two values to say on  
19 average you would have 24,000 acre-feet of water flowing  
20 into the Alto -- or within the Alto transition basin. Alto  
21 Transmission Zone. Excuse me.

22 Then, under the worst case, you would have  
23 approximately 13,000 acre-feet of water that would be  
24 discharged into the Alto Transition Zone. If you have 6,000  
25 acre feet of direct consumptive use, that leaves



1 approximately, again, a range if you subtract either 18,000  
2 acre-feet of flows that are available to carry water through  
3 the basin, or, alternatively if you use the worst case, you  
4 have 7,000 acre feet that's still available to carry water  
5 through the basin when you combine those flows.

6 MR. HITCHINGS: And then there were some questions  
7 this morning from Mr. Ledford regarding the use of or the  
8 production of -- let me rephrase that.

9 That the source of some of the water treated by VVWRA  
10 was State Project water.

11 Do you recall those questions?

12 MR. DODSON: Yes, I do.

13 MR. HITCHINGS: Do you have any specific knowledge as  
14 to whether any of the water that's treated at VVWRA that its  
15 source water is State Water Project water?

16 MR. DODSON: I have no direct knowledge.

17 MR. HITCHINGS: Now, assuming that there would be a  
18 decrease of surface flow of one and a half miles as a result  
19 of decreasing the discharge from VVWRA's treatment plant, up  
20 to 1,680-acre feet, what is your conclusion as to whether  
21 that would have a significant adverse impact on the  
22 downstream riparian habitat?

23 MR. DODSON: Based upon the volumes of water that I've  
24 already referenced that enter into the basin -- into the  
25 transition zone -- pardon me -- and the fact that the water





1 basin is full, and what I'd like to do is just refer simply  
2 to this graph which shows that a large portion of that  
3 transition zone is at a full aquifer.

4           Based upon those data and the fact that it's clear  
5 that through portions of the region, portions of this  
6 transition zone, the riparian habitat is relying upon  
7 groundwater for its survival, it's my opinion that there  
8 will not be a significant adverse impact or loss of riparian  
9 vegetation by the transfer of this flow from direct  
10 discharge to the river to the use -- to be used for  
11 irrigation at SCLA -- Southern California Logistics Airport.  
12 That's my opinion.

13           MR. HITCHINGS: Thank you. And Mr. MacLaggan, I have  
14 a few questions for you.

15           Yesterday you had talked about the purpose and types  
16 of proceedings that are involved under Water Code Section  
17 13550.

18           Do you recall that?

19           MR. MACLAGGAN: Yes, I do.

20           MR. HITCHINGS: And is it your understanding that this  
21 proceeding that we're in today and yesterday whether that's  
22 been a proceeding that is pursuant to a petition that's been  
23 filed under 13550?

24           MR. MACLAGGAN: No, it is not.

25           MR. HITCHINGS: And --



1           MR. MONA: Excuse me. Just for the record. It is my  
2 understanding that this is not a 13550 petition hearing.

3           MR. HITCHINGS: Okay. Thank you. I appreciate that.

4           Basically, 13550, Water Code Section 13550 has been  
5 discussed in this proceeding because it was noticed as a key  
6 hearing issue; isn't that correct?

7           MR. MACLAGGAN: That's correct. Key Hearing Issue  
8 No. 3.

9           MR. HITCHINGS: And in a discussion regarding the  
10 meaning of that statute yesterday, Southern California Water  
11 Company asked you whether you had an opinion regarding the  
12 scope of the term "availability of water" under Water Code  
13 Section 13550. Do you recall that?

14          MR. MACLAGGAN: Yes, I do.

15          MR. HITCHINGS: And to clear up any potential  
16 ambiguity in your answer to that, I want to make sure  
17 whether you had --

18          MR. YAMAMOTO: Objection, Mr. Chairman, to the prior  
19 testimony of the witness. He is neither a water law expert  
20 nor a person who is familiar with the judgment applicable to  
21 this particular basin and does not know which folks  
22 downstream of the VVWRA plant may have well-water rights.

23          MR. HITCHINGS: My question has nothing to do with the  
24 Adjudication and has nothing to do with some broad question  
25 regarding an expert in water law, whatever that means.



1 I am talking about his expertise and his familiarity  
2 with Water Code Section 13550. I don't know, and I don't  
3 know whether Mr. MacLaggan knows what's referred to by the  
4 term "water law." I am talking about a specific statute,  
5 and that's what I'm asking Mr. MacLaggan about.

6 H.O. BAGGETT: Overruled. Continue.

7 MR. HITCHINGS: I'd like to know what your opinion is  
8 of the term -- how the term "availability of water" or  
9 "available water" is used within the statutory scheme of  
10 Water Code Section 13550.

11 MR. MACLAGGAN: Water Code Section 13550 provides that  
12 potable water should not be used for nonpotable uses if  
13 recycled water is available under certain conditions, and  
14 that use of that potable water for those uses, if recycled  
15 water is indeed available and it meets those conditions, is  
16 considered wasteful and unreasonable use.

17 The term "availability," in my opinion, refers back to  
18 the definition of recycled water in the Water Code, which  
19 states, in short, that recycled water means water which is  
20 the result of the treatment of waste, suitable for direct or  
21 controlled beneficial use.

22 And applying that definition to the proposed project,  
23 you have a situation in Victor Valley where the VVWRA  
24 wastewater treatment plant is producing a product consistent  
25 with the definition of recycled water under the Water Code.



1 Therefore, I would conclude that it is, indeed, available.  
2 And if you then apply that to the proposed project and  
3 assess whether or not it's available, meeting the conditions  
4 of Section 13550. As I testified yesterday, each of the set  
5 of conditions has been met, the recycled water is of  
6 adequate quality because it is comparable to the water  
7 that's being used on the golf course and surrounding  
8 irrigation lands today and, therefore, would not cause a  
9 problem to the end user to switch to the new source.

10 It's of a comparable or reasonable cost as required  
11 under the statute. It is actually going to be considerably  
12 less in cost than the current water supply that they use on  
13 the golf course and surrounding area.

14 It will not be detrimental to the public health,  
15 because the Department of Health Services would require that  
16 the dischargers meet all of the wastewater reclamation  
17 criteria which are designed to ensure protection of public  
18 health.

19 And, finally, the recycled water will not affect the  
20 downstream water rights because of the resultant limited  
21 increase in water on the golf course and surrounding lands.  
22 It will be implemented in a fashion that will remove the  
23 water from the river at a rate that is a gradual  
24 implementation rate that is slower than that of the  
25 increased discharge, so that the total volume of water to





1 the watershed as we know it today would be unchanged as a  
2 result of the project.

3 It would not degrade the water -- the water quality of  
4 the basin underlying the golf course and surrounding area,  
5 because there has been studies produced that --

6 MR. KIDMAN: Objection. Now the witness is going well  
7 beyond the scope of the question asked and the scope of the  
8 issues that were raised on cross-examination, and delving  
9 into the area of water quality, which was previously  
10 excluded.

11 MR. HITCHINGS: I'll actually stipulate to just having  
12 the testimony relevant to the conclusions regarding  
13 availability of water, that that be what's on record for  
14 this answer.

15 H.O. BAGGETT: Thank you.

16 MR. HITCHINGS: On the basis that it doesn't open up  
17 all of those other issues on recross.

18 H.O. BAGGETT: All right.

19 MR. HITCHINGS: To just go back to that issue. I want  
20 to confirm that your conclusion is that based upon your  
21 understanding of Water Code Section 13550, that the  
22 potable -- nonpotable water is available for use as  
23 contemplated under this project.

24 MR. MACLAGGAN: That is my opinion, yes.

25 MR. HITCHINGS: Are you aware of any water user within



1 the Alto Subarea or otherwise that has an appropriate  
2 water right to a portion, or any portion, of VVWRA's  
3 discharge flow?

4 MR. MACLAGGAN: No, I am not.

5 MR. HITCHINGS: Are you aware whether Southern  
6 California Water Company has any legal right to utilize or  
7 otherwise rely on the discharge flows discharged from  
8 VVWRA's treatment plant?

9 MR. KIDMAN: Objection. This witness has, under  
10 cross-examination, indicated that he is not an expert in  
11 water law.

12 H.O. BAGGETT: Sustained.

13 Could you rephrase it.

14 MR. HITCHINGS: Well, he was asked on  
15 cross-examination whether he was aware of who had water  
16 rights under the Adjudication. Again, I don't know what the  
17 term -- and I'm not sure whether Mr. MacLaggan knows what  
18 the term of being an expert on water law is. I'm asking him  
19 a specific question regarding whether he has specific  
20 knowledge regarding whether a particular party has any claim  
21 of right to VVWRA's discharge flows.

22 H.O. BAGGETT: As I recall, I sustained the objection.

23 Sustained.

24 MR. HITCHINGS: Are you aware of any statutes in  
25 California that prioritize reasonable and beneficial uses of



1 water when comparing the existing water rights?

2 MR. MACLAGGAN: I'm not aware of any such statutes.

3 MR. HITCHINGS: Okay. That's the end of my redirect.

4 Thank you.

5 H.O. BAGGETT: Ms. Murray, do you have any? Fish and

6 Game have any?

7 ---oOo---

8 RE-CROSS-EXAMINATION OF SECOND PANEL

9 BY STATE OF CALIFORNIA DEPARTMENT OF FISH AND GAME

10 BY MS. MURRAY

11 MS. MURRAY: Mr. Dodson, on redirect you mentioned  
12 that you were an analyst of data that was given to you or  
13 that you obtained from the Lines/Bilhorn report; is that  
14 correct?

15 MR. DODSON: That, among other data, yes.

16 MS. MURRAY: Did you ever ask the person who prepared  
17 or in part prepared the report, Mr. Bilhorn, if the 6,000  
18 acre-feet number that you mentioned was intended to reflect  
19 only evapotranspiration and not the total amount needed for  
20 the riparian area?

21 MR. DODSON: No. I took it as meaning what it says,  
22 the total water consumption use.

23 MS. MURRAY: Thank you. And in your redirect, you  
24 stated your conclusion regarding riparian habitat and how  
25 there would not be, in your opinion, an effect on the



1 riparian habitat.

2 What is your definition of riparian habitat?

3 MR. DODSON: Well, that gets complicated. My  
4 definition of riparian habitat is those plants and plant  
5 communities that rely upon access to a water source other  
6 than a beta zone.

7 MS. MURRAY: Behind you is DFG Exhibit 14, which is a  
8 photograph of 6 miles down the Mojave River. Would you call  
9 that riparian habitat?

10 MR. DODSON: Not all of it, no.

11 MS. MURRAY: Can you identify the trees in the  
12 photograph, what types of trees they are? Is it merely  
13 saltcedar as you see it here?

14 MR. DODSON: Absolutely not. It looks like a  
15 combination of primarily cottonwoods. But it may have some  
16 willows in it, as well, with sage plants -- pardon me --  
17 sage or some sort of desert plants in the foreground.

18 MS. MURRAY: So this is 6 miles downstream, and it has  
19 sage, willow, cottonwood, some saltcedar.

20 And do you call this a riparian habitat?

21 MR. DODSON: I don't see any saltcedar.

22 MS. MURRAY: I'm sorry. I thought you had said that.

23 MR. DODSON: No, I did not.

24 MS. MURRAY: So, and again --

25 MR. DODSON: The central portion -- may I?





1 H.O. BAGGETT: Yes.

2 MS. DIFFERDING: This portion in here (indicating), to  
3 me, is clearly riparian habitat. You have open channel here  
4 which is not being utilized by any vegetation at all. It's  
5 sand. Then you have a peripheral ledge which has a few  
6 riparian trees on it. And then you transition into a desert  
7 habitat.

8 MS. MURRAY: So your answer to the question is?

9 Do you consider this riparian habitat?

10 MR. DODSON: Certainly, the central portion.

11 MS. MURRAY: Okay. Mr. Carlson.

12 And we thank you for going to the work it must have  
13 taken in the last 24 hours to create your revised Exhibit  
14 4F, which changes 4D.

15 And I guess, first of all, with the revision, could  
16 you now indicate -- I asked the question yesterday, and you  
17 indicated earlier -- where do you believe this stream or  
18 river is now coupled and decoupled?

19 MR. CARLSON: Okay.

20 MS. MURRAY: Assuming, again, this whole concept of  
21 coupled and decoupled is relevant.

22 Where do you think it's coupled and decoupled?

23 MR. CARLSON: Okay.

24 H.O. BAGGETT: As opposed to yesterday's testimony,  
25 the changes?



1 MS. MURRAY: Right. Correct. I mean he --

2 MR. CARLSON: The changes.

3 MS. MURRAY: Right. His revised exhibit would, I  
4 think, change his conclusion regarding coupled and  
5 decoupled.

6 H.O. BAGGETT: So this has changes.

7 MR. CARLSON: As I stated earlier under redirect, the  
8 area above -- about one and a half miles above Bryman Road  
9 is essentially the same conclusion as yesterday.

10 Below Bryman Road, the area of what we had depicted as  
11 relatively deep groundwater levels, we now -- based on  
12 including the one well from DFG and the one well we found  
13 ourselves, it looks like the groundwater levels are very  
14 shallow there. So, in that area, I would believe that it's  
15 likely that the groundwater and surface water are coupled  
16 along all of this reach.

17 MS. MURRAY: And what is the line of demarcation that  
18 you make in decoupled and coupled?

19 MR. CARLSON: I don't think there is a line. I  
20 suspect there is variability from spot to spot. I really  
21 would characterize it as a region above one and a half miles  
22 above where Bryman Road and another region below that point,  
23 where the water is shallow in this area (indicating) and  
24 relatively deep up here (indicating).

25 MS. MURRAY: And would you agree that your Exhibit 4F



1 is significantly different than your Exhibit 4D?

2 MR. HITCHINGS: I'm going to object as to what the  
3 term "significantly different" means.

4 MS. MURRAY: Substantially different.

5 MR. HITCHINGS: Same objection. I mean, it's  
6 obviously different.

7 H.O. BAGGETT: Yes.

8 MS. MURRAY: And that's changed your opinion regarding  
9 coupling for a large stretch of the area?

10 MR. CARLSON: Well, actually, it actually sort of  
11 looks better down below Bryman Road, because it looks like  
12 the groundwater levels are higher, meaning that the  
13 vegetation -- I infer anyway that the vegetation has an  
14 easier time living there with the higher groundwater level  
15 than the lower. So that's changed.

16 MS. MURRAY: And then, given the importance that the  
17 water level data from wells 3H1 and 3H2 has had on your  
18 Exhibit 2, and your understanding of the surface  
19 water/groundwater interactions in the Alto Transition Zone,  
20 do you still feel that use of the deeper screen wells, which  
21 you still have in your revised exhibit, elsewhere in  
22 Figure 2, are representative of shallow water table  
23 elevations beneath the active channel?

24 MR. CARLSON: The use of the deeper screen wells here  
25 are not meant to represent a level of what the groundwater



1 table is at the shallow zones. They're put there to  
2 illustrate the difference in groundwater levels between a  
3 shallow zone near the river and deeper aquifers.

4 The areas down here in 13 (indicating), 13H1 and the  
5 other one, the F3 and F4 here, you can see that -- well, you  
6 can't see on this figure because the numbers aren't on  
7 there. But I can tell you that the water levels in the  
8 wells that are screened deeper are substantially below the  
9 water levels screened in the shallow zone, indicating that  
10 there's a downward movement of groundwater from shallow zone  
11 to deep zone and that hydraulic gradient is actually fairly  
12 substantial in that area.

13 MS. MURRAY: And if you had them available, would you  
14 prefer to have available water levels that are from shallow  
15 screen wells, or from the deeper screen wells?

16 MR. CARLSON: I'd prefer to have all the data on the  
17 figure.

18 MS. MURRAY: Okay. No further questions. Thank you.

19 H.O. BAGGETT: Mr. Ledford, do you have any?

20 ---oOo---

21 RE-CROSS-EXAMINATION OF SECOND PANEL

22 BY JESS RANCH WATER COMPANY

23 BY MR. LEDFORD

24 MR. LEDFORD: Mr. Carlson. Based on this new profile,  
25 would you agree with Mr. Dodson that the floodplain aquifer





1 in the reach that is downstream of the VVWRA is currently  
2 full?

3 MR. CARLSON: I would certainly say that in the area  
4 below that, the one and a half miles above Bryman Road, it  
5 appears to be essentially. There appears to be an area of  
6 lower groundwater levels in that reach above. But, again,  
7 as it sets forth, it's almost full.

8 MR. LEDFORD: And that area that you're talking about  
9 that's almost full is approximately 1 mile on the profile  
10 between -- I don't have my glasses on -- looks like between  
11 mile 5 and 6.

12 MR. CARLSON: Well, the area I'm referring to starts  
13 at -- well, what we're using on this figure is mile 6 1/2,  
14 and goes upstream to the Lower Narrows for the most part.  
15 As an example, below the Lower Narrows.

16 MR. LEDFORD: It appears to me that the discharge  
17 point looks full.

18 MR. CARLSON: Up at the Lower Narrows, do you mean?

19 MR. LEDFORD: No, no. At the VVWRA discharge.

20 MR. CARLSON: It's full here (indicating), right at  
21 the immediate location where the discharge starts into the  
22 river, yes.

23 MR. LEDFORD: And there is only one short section  
24 where it appears that it's not completely full, and then the  
25 maximum amount that is not full is maybe 10 feet. Is that



1 what those lines represent?

2 MR. CARLSON: Well, that's the projected difference  
3 between the groundwater levels and the projection of the  
4 streambed, yes.

5 MR. LEDFORD: So it would be almost full even in that  
6 place?

7 MR. CARLSON: Almost full.

8 MR. LEDFORD: And so the testimony is consistent,  
9 Mr. Dodson, then, would you agree with Mr. Carlson's  
10 characterization as well?

11 MR. DODSON: Yes, sir. But I would like to reflect  
12 something as well, and that is if you look at my testimony  
13 on Page -- on Paragraph 15, part of the reason that I, aside  
14 from seeing -- having seen data like this before, is the  
15 statement that's contained in the Lines report -- pardon me  
16 -- the USGS Report 95-4189.

17 And it essentially stated -- and this is what I relied  
18 upon in my analysis -- beginning at about river mile 13, the  
19 water table is at stream level and it remained at stream  
20 level about -- pardon me -- until about river mile 27.  
21 That's a direct quote.

22 And the point here is that this data here is  
23 indicative that that's still the case. This report was  
24 produced in 1995. Five years later, this basin is still  
25 relatively full.



1 MR. LEDFORD: At least in the floodplain aquifer?

2 MR. DODSON: In the floodplain aquifer.

3 And I apologize. I should have said in the floodplain  
4 aquifer within the Alto Transition Zone.

5 MR. LEDFORD: But above the VVWRA plant, it looks like  
6 there is a clear indication that there is a pumping  
7 depression or depression in the aquifer; is that correct?

8 MR. DODSON: I believe you asked that question  
9 yesterday of Mr. Carlson. And what I can tell you is, to my  
10 knowledge, from having discussed this issue with the people  
11 who are involved with the pumping, I understand that that is  
12 reflective of a pumping depression from the wells that are  
13 currently pumping and supporting a variety of uses,  
14 including the irrigation.

15 MR. LEDFORD: And, currently, the amount of irrigation  
16 that is being pumped from that area is only 400 acre-feet;  
17 is that correct?

18 MR. DODSON: I don't have the exact value. I believe  
19 it's 400 acre-feet that's been identified for the golf  
20 course alone.

21 MR. LEDFORD: Well, no, that's -- my focus is on the  
22 golf course. That's the water that we're talking about  
23 transitioning.

24 Then there is another component piece of the water to  
25 transition, and that would be water that would be used for



1 irrigation of George Air Force Base. So I'd like to pose a  
2 hypothetical that if we were to use -- if we were to produce  
3 from that group of wells the water for George Air Force  
4 Base, would that not increase the pumping depression in that  
5 area?

6 MR. DODSON: I can't answer the question, frankly,  
7 because I don't know where the city would get the water from  
8 for any uses at SCLA.

9 MR. LEDFORD: As part of my hypothetical, we would use  
10 the same wells.

11 MR. DODSON: Then restate your question, please.

12 MR. LEDFORD: Currently the City of Adelanto has wells  
13 that they're producing water for the golf course at George  
14 Air Force Base; is that correct?

15 MR. DODSON: Yes. As I understand it, though, the  
16 City of Victorville is actually utilizing those wells and  
17 that water.

18 MR. LEDFORD: Okay. For the purpose of wells, it's  
19 the same wells, regardless of which cities?

20 MR. DODSON: Yes, sir.

21 MR. LEDFORD: For the purpose of a hypothetical, if  
22 the City of Victorville or the City of Adelanto were to  
23 increase their production on those wells to produce 1600  
24 acre-feet of water instead of 400 acre-feet of water, would  
25 that not increase the pumping depression at that location?





1           MR. DODSON: Possibly. But I do not know, because I  
2 don't know the hydrologic characteristics that well.

3           MR. LEDFORD: All right.

4           Then I have one question for Mr. MacLaggan, talking  
5 about available water, available nonpotable water.

6           Essentially what we have here is competing water  
7 producers -- water users that have competing interests. The  
8 testimony thus far has been that the water that is  
9 discharged from the regional authority, once that is  
10 recharged into the floodplain aquifer, it becomes potable  
11 water.

12           Sir, my question to you is: Isn't potable water the  
13 end result -- clean potable water -- a more beneficial use  
14 than nonpotable water to be used on the golf course?

15           MR. MACLAGGAN: Well, I testified under redirect that  
16 I wasn't aware of any statutes that prioritized one  
17 beneficial use over another. And that would be my answer to  
18 your question now.

19           MR. LEDFORD: I probably didn't quite get that  
20 communicated to you correctly, so let me try again.

21           The water -- when the water becomes potable water --  
22 let me just start with your presumption that if it's  
23 nonpotable water that it can be used for any beneficial use.

24           By recharging the water into the water basin, the  
25 water becomes potable water -- the same water. At that



1 point is not that water a more beneficial use as potable  
2 water?

3 MR. MACLAGGAN: No. There is no prioritization of  
4 beneficial uses provided for in the Water Code.

5 MR. LEDFORD: Okay.

6 MR. MACLAGGAN: The fact that it's potable allows it  
7 to be used for human consumption is the difference.

8 MR. LEDFORD: And in your professional opinion, that  
9 is not -- that is not a higher, more beneficial use?

10 MR. MACLAGGAN: No, it's not.

11 MR. LEDFORD: Thank you.

12 H.O. BAGGETT: Mr. Kidman.

13 MR. KIDMAN: Thank you, Mr. Chairman.

14 ---oOo---

15 RE-CROSS-EXAMINATION OF SECOND PANEL

16 BY SOUTHERN CALIFORNIA WATER COMPANY

17 BY MR. KIDMAN

18 MR. KIDMAN: Mr. MacLaggan, you were asked some  
19 questions about the meaning of the word "availability," and  
20 I just want to make sure that I understand what you mean by  
21 availability. And if I'm understanding it right, you mean  
22 by availability that if it's water coming out of a  
23 wastewater plant, it's available?

24 MR. MACLAGGAN: If it's treated to a level suitable --

25 MR. KIDMAN: Just answer --



1 MR. MACLAGGAN: Yes.

2 MR. KIDMAN: -- yes or no.

3 MR. MACLAGGAN: Yes, sir.

4 MR. KIDMAN: That's your -- so in your view, the term  
5 availability doesn't vary with conditions relative to the  
6 supply of water. If water is coming out of the plant, it's  
7 available?

8 MR. MACLAGGAN: Yes.

9 MR. KIDMAN: And, in your view, it doesn't matter what  
10 the uses of that water have been or may be in the future, if  
11 it's coming out of the plant, it's available?

12 MR. MACLAGGAN: Yes.

13 MR. KIDMAN: And so your view of what the word  
14 availability means in this particular Water Code section has  
15 that very narrow meaning?

16 MR. MACLAGGAN: That's correct.

17 MR. KIDMAN: Okay. If we were to assume, now, since  
18 you're an expert on what this Water Code section means, that  
19 the term availability has a more normal meaning that varies  
20 from time to time and circumstances, depending on climate  
21 and what other water sources are available, and also varies  
22 depending upon what the uses may be as a stream, when the  
23 Board decides that the stream is fully appropriated, that,  
24 or whether water is available for appropriation, then with  
25 those circumstances, your view of 1350 [sic] is it doesn't



1 apply. The normal view of availability isn't the way you  
2 think that word is used by the Legislature in 13550?

3 MR. HITCHINGS: I'm going to object as a vague and  
4 ambiguous question. But if Mr. MacLaggan can understand and  
5 answer it, then so be it.

6 H.O. BAGGETT: I guess you don't really object.  
7 If you can answer, Mr. MacLaggan.

8 MR. MACLAGGAN: I was going to make the same point.  
9 I'm not sure I understand the question.

10 MR. KIDMAN: Well, just let me try again.

11 I'd like you to assume that other people might think  
12 that the term availability has -- is a little more plastic,  
13 depending on both the supply and the competing uses. If  
14 that were defined as a normal interpretation of the word  
15 "availability," your interpretation would be more narrow  
16 than that; is that right?

17 MR. MACLAGGAN: I think that's correct.

18 MR. KIDMAN: I think that this opens up another avenue  
19 here that you testified to earlier. You said a couple of  
20 times, you don't really have knowledge of what the water  
21 right priorities are under California statutes and case law,  
22 is that right?

23 MR. HITCHINGS: I'm going to object. I think that  
24 misstates his testimony. I don't think he said that he has  
25 no knowledge of what water rights priorities are under





1 statutes and case law.

2 His answer was much more general than that.

3 H.O. BAGGETT: I would sustain.

4 Can you rephrase.

5 MR. KIDMAN: Okay. Well, without getting into -- what  
6 I did hear you say is that you do have familiarity with the  
7 idea of priorities in water shortage situations.

8 MR. MACLAGGAN: Under emergency conditions, yes.

9 MR. KIDMAN: And I take it from that that you've dealt  
10 with ordinances the local agencies adopt when they have a  
11 shortage of water supply?

12 MR. MACLAGGAN: That's correct.

13 MR. KIDMAN: Okay. And just -- I want to ask you if  
14 your experience is the same as mine. That is, that when  
15 public agencies or water suppliers adopt water supply  
16 shortage ordinances, one of the first things to go, to drop  
17 off the bottom of the list in terms of priority, is golf  
18 courses or irrigation.

19 Is your experience the same as mine?

20 Excuse me. Let me amend that one step further. When  
21 we're talking about potable water.

22 MR. MACLAGGAN: Yes. That's pretty well the case.

23 MR. KIDMAN: And is that not one of the reasons, if  
24 not the main reason, why a golf course owner is willing to  
25 make the investment to obtain recycled water is because, in



1 a shortage, they're one of the first to go?

2 MR. MACLAGGAN: One of the benefits in California of  
3 use of recycled water is higher reliability during a drought  
4 because of the threat to irrigators being cut off in a  
5 drought-curtailement scenario.

6 MR. KIDMAN: So, in terms of determining whether --  
7 going back to availability, it is at least possible that the  
8 competing water uses would have something to do with a  
9 priority of whether or not recycled water is available?

10 MR. MACLAGGAN: Can you restate the question, please.

11 MR. KIDMAN: Well, you said yes to the answer that  
12 because of priorities in water shortage situations, golf  
13 courses tend to drop off first.

14 Now I'm asking you in terms of your interpretation of  
15 availability under 1350, whether or not water use priorities  
16 are part of the equation?

17 MR. MACLAGGAN: I testified previously that they are  
18 not. It's a matter of whether or not there is recycled  
19 water that's being produced as a result of treatment of  
20 waste and it's available for beneficial use.

21 MR. KIDMAN: So your conclusion is that under 1350 --

22 MR. HITCHINGS: 13550.

23 MR. KIDMAN: -- excuse me -- 13550 it doesn't matter  
24 what the circumstances are, water shortage or no, or what  
25 the other uses are or no, for this water is coming out the



1 plant, they get to sell to anybody they want to?

2 MR. MACLAGGAN: That's correct.

3 MR. KIDMAN: Mr. Carlson, we had on redirect quite a  
4 bit of talk about decoupling, again, and I want to ask you a  
5 hypothetical, and I want you to make a couple of  
6 assumptions, because yesterday I believe you said you  
7 weren't thoroughly familiar with the Mojave Adjudication  
8 Judgment.

9 So let's assume that the Mojave Adjudication Judgment  
10 requires a certain amount of water to be transmitted through  
11 the transition zone. Let's assume that the Mojave Judgment  
12 has certain special provisions relative to maintaining what  
13 we call "water bridge" through the transition zone, and  
14 let's assume that the water bridge means that the  
15 groundwater level will be at a sufficient elevation in order  
16 to provide carriage to the surface water so water can get  
17 through.

18 Now, on those assumptions, would it be your conclusion  
19 that where you show that there has been decoupling, that the  
20 water bridge is being maintained?

21 MR. CARLSON: Well, again, I'm not fully aware what  
22 the term "water bridge" means.

23 MR. KIDMAN: I'm going to ask you to assume -- excuse  
24 me. I'm going back over this. I just want you to answer  
25 this question. I don't want anything but an answer to this



1 question:

2 Assume water bridge means keep the groundwater  
3 elevation at a sufficient level to provide carriage of water  
4 through the transition zone.

5 MR. CARLSON: I don't understand what you mean by  
6 "carriage of water through the transition zone."

7 MR. KIDMAN: Okay. Assume that I mean that there is  
8 sufficient support from the groundwater so that the stream  
9 is no longer a losing stream. That would be carriage.

10 MR. CARLSON: Are you -- let me just clarify, to make  
11 sure I understand what you mean by carriage.

12 Are you saying that there must be groundwater levels  
13 high enough to cause groundwater to be discharging into the  
14 stream? Is that what you mean by carriage?

15 MR. KIDMAN: No. No. I believe you -- okay.

16 Yesterday you said there are three different types of  
17 streams in this circumstance: gaining streams, losing  
18 streams, and neutral. So I'm not talking about gaining; I'm  
19 talking about neutral. Not losing.

20 MR. CARLSON: I don't believe I used the term  
21 "neutral" in my testimony.

22 MR. KIDMAN: Let me just --

23 MR. CARLSON: I suppose it would be possible, but --

24 MR. KIDMAN: Let's not get hung up here on  
25 terminology, Mr. Carlson. I'm asking you a pretty simple





1 question.

2           Based upon assumptions that there are requirements to  
3 provide water getting through this transition zone and there  
4 are requirements for maintaining a water bridge. And I'm  
5 asking you: in those sections of the stream profile where  
6 there is decoupling, is there a water bridge being  
7 maintained? And I have defined what I mean by water bridge  
8 for you. Now?

9           MR. CARLSON: I guess what I'm telling you is I don't  
10 understand what you mean by water bridge and carriage of  
11 water. I can tell you what I -- how I understand the water  
12 moves through that zone, and I believe your --

13           MR. KIDMAN: I didn't ask you that question,  
14 Mr. Carlson.

15           MR. CARLSON: Okay.

16           MR. KIDMAN: What I'm asking you is whether, under the  
17 assumptions that I gave you, which were quite clear, whether  
18 or not a water bridge is being maintained through the  
19 transition zone in the areas where there is decoupling.

20           MR. HITCHINGS: I'm going to object. Mr. Kidman is  
21 insisting on an answer to a question that Mr. Carlson has  
22 insisted he doesn't understand based upon the terms used in  
23 it. And it's the same question being stated over and over  
24 again.

25           I understand it's a difficult concept to reduce, but



1 Mr. Carlson has stated he doesn't understand the question.

2 H.O. BAGGETT: Right. I would --

3 MR. HITCHINGS: Unless we want to just have an answer  
4 with the understanding that he doesn't understand the  
5 question. And if that's what he has to do, that's what it  
6 has to be.

7 H.O. BAGGETT: Will you rephrase or define. I mean,  
8 you've got clearly different definitions of words here.  
9 You've got yours; he's got his.

10 MR. KIDMAN: Well, let me approach it from the other  
11 way around.

12 Using the word "support" in the normal term in this  
13 context, in the areas of this stream where you use the word  
14 "decoupling," which is an interesting word, I might add, in  
15 terms of -- where you use the term "decoupling," is the  
16 groundwater supporting the stream flow?

17 MR. CARLSON: There would be stream flow. Where the  
18 stream flow was sufficiently high, the surface water would,  
19 indeed, move across to -- across, down the streambed in  
20 those areas during that transport of surface water in that  
21 decoupling --

22 MR. KIDMAN: I didn't ask that. I asked you: Is it  
23 supporting? Is the groundwater supporting the flow of the  
24 surface stream in the areas where there is decoupling?

25 MR. CARLSON: Well, if what you mean by "support"



1 means that the groundwater is shallow and is at the same  
2 level of the stream, no, it would not be supporting that.

3 MR. KIDMAN: Okay. Now, moving to your new exhibit,  
4 4F, I just have a question, a couple of questions here.

5 There doesn't seem to be any data points between about  
6 mile 6 and mile 9, perhaps one right at Bryman Road. Is  
7 there a reason why we suppose there that the groundwater  
8 elevation is at or above the stream level, even though we  
9 don't have data points?

10 MR. CARLSON: Well, the blue line there is an  
11 interpretation, and as -- I don't know how familiar you are  
12 with geology and the way we draw lines on maps, but when  
13 we're not exactly sure where the line is, we put question  
14 marks on the line. And that's what -- that's what I show  
15 here.

16 MR. KIDMAN: Let me just, before we go along and  
17 yonder --

18 H.O. BAGGETT: That's a pretty straightforward  
19 question, I think.

20 MR. KIDMAN: Right.

21 Is the observation that the stream is running in that  
22 area?

23 MR. CARLSON: This chart does not speak to the  
24 occurrence of surface water in the stream. This chart  
25 depicts groundwater levels as measured in wells that are



1 represented by the triangles. The blue line, the blue  
2 dashed line represents an interpretation that we made that  
3 connects those points where actual data were available.

4 MR. KIDMAN: Okay. Then moving over to the left-hand  
5 side of the chart -- excuse me -- the right-hand side of the  
6 chart. We have a dashed line, and it doesn't connect into  
7 the triangles which appear to be below the stream surface  
8 elevation. Can you just tell me why.

9 MR. CARLSON: In re-preparing this chart last night, I  
10 discussed this with the individual that did that. And  
11 you're referring to these wells down here (indicating)?

12 It's my opinion that the well construction information  
13 on those wells was uncertain enough so that really we  
14 weren't sure that it represented a real shallow groundwater  
15 level. It may represent deeper wells, but we just didn't  
16 feel it was warranted to draw the line that far.

17 MR. KIDMAN: And approximately where is the Helendale  
18 Fault in terms of the numbers across the bottom of the page?

19 MR. CARLSON: I'm not exactly sure, but it's beyond  
20 the area, the study area, perhaps by a couple of miles.

21 MR. KIDMAN: So it may be as much as 15 miles down?

22 MR. CARLSON: I think that's a reasonable estimate.  
23 I'm not exactly sure.

24 MR. KIDMAN: Okay. And then just one last question  
25 relative to this graph. And I'm going to ask you if it





1 would be reasonable to infer on account of the fact that the  
2 groundwater levels are -- I'm not sure were decoupled to the  
3 left-hand of the VVWRA plant.

4 But to the right-hand side, there is a long stretch of  
5 the river where it appears that decoupling does not exist.  
6 Is it reasonable to conclude that the VVWRA plant is  
7 contributing to preventing the area downstream from becoming  
8 a losing stream?

9 MR. CARLSON: Yes. And the recharge of the VVWRA  
10 water does contribute to groundwater recharge in that area  
11 among other sources of recharge.

12 MR. KIDMAN: And is it, therefore, reasonable to  
13 conclude -- I know I said one question. So now I'm getting  
14 two.

15 Does it follow that if the amount of discharge from  
16 VVWRA declines that that will be less true?

17 MR. CARLSON: If the amount of recharge from VVWRA  
18 declines in this area, there would be a possibility that the  
19 groundwater level would decline to the extent that  
20 groundwater level is not -- that the groundwater in the  
21 subsurface is not made up for by other sources of  
22 groundwater recharge.

23 MR. KIDMAN: Mr. Dodson, on redirect, you clarified  
24 that in a worst case, that based upon the lowest base low  
25 and the highest consumptive use of water by riparian



1 vegetation, that there would still be 7,000 acre-feet  
2 annually -- agreed -- of water available through the  
3 transition zone.

4 Let me just ask you: Is that a fair statement of what  
5 you just testified to?

6 MR. DODSON: Yes, sir.

7 MR. KIDMAN: Do you have any opinion at all about how  
8 adequate 7,000 acre-feet of water would be to satisfy the  
9 makeup water obligation or the obligation of the Alto area  
10 to the Centro area under the Mojave Judgment?

11 MR. DODSON: That would be less than is required,  
12 which is the 23,000 acre-feet, including the 2,000 acre-feet  
13 of underflow. And somebody would have to be making that up  
14 for the Centro basin, by my understanding.

15 MR. KIDMAN: So, if I understand it, you've got --  
16 you're talking about -- would you just, please, very briefly  
17 review where the 13,000 came from.

18 MR. DODSON: Yes, sir. Let me also place it in  
19 context, if I may.

20 MR. KIDMAN: Just answer where the 13 feet [sic] came  
21 from.

22 MR. CARLSON: 4,000 acre-feet was the lowest flow that  
23 we had measured, had data available from the Mojave Water  
24 Agency as base flow in 1991 or '2 -- I'd have to look for  
25 the exact year -- and the current outflow from the VVWRA --



1 or discharge, pardon me, from the VVWRA plant is 9,000  
2 acre-feet. So 9,000 and 4,000 is 13,000.

3 MR. KIDMAN: Okay. So, under this worst-case  
4 scenario, where 7,000 acre-feet -- after riparian  
5 consumption, there is only 7,000 left, and that 7,000 is  
6 less than what VVWRA is discharging, which is 9,000, you  
7 have to conclude that any amount of taking water away from  
8 the transition zone by VVWRA is going to reduce the amount  
9 of water available, which you've already said is less; is  
10 that right?

11 MR. DODSON: In terms of surface flow only?

12 MR. KIDMAN: In terms of groundwater that's going  
13 through the transition zone.

14 Really a pretty easy question.

15 MR. DODSON: Okay. Restate it, please.

16 I thought I had already answered it.

17 MR. KIDMAN: Okay. 7,000 -- what I'm asking is this:  
18 You're saying in the worst case there is 7,000. All of that  
19 7,000 is coming from the VVWRA plant under your scenario,  
20 worst-case scenario.

21 MR. DODSON: That is a correct statement.

22 MR. KIDMAN: So if any of that water is going anywhere  
23 else, it's going to make the situation worse in terms of  
24 amount of water in the transition zone?

25 MR. CARLSON: In an absolute sense, yes. In the



1 context of the Adjudication, I don't agree with that  
2 statement.

3 MR. KIDMAN: But you've already said you weren't that  
4 familiar with the Adjudication.

5 MR. CARLSON: No, sir, but I do understand replacement  
6 water.

7 MR. KIDMAN: That's all the questions I have.

8 H.O. BAGGETT: Thank you.

9 Mr. Yamamoto.

10 MR. YAMAMOTO: Yes. I'll be quick.

11 H.O. BAGGETT: Thank you.

12 ----oOo----

13 RE-CROSS-EXAMINATION OF SECOND PANEL

14 BY APPLE VALLEY RANCHOS WATER COMPANY

15 BY MR. YAMAMOTO

16 MR. YAMAMOTO: Mr. Carlson, on redirect, you testified  
17 that if 1,680 acre-feet of VVWRA reclaimed water were  
18 diverted from the river to some golf course or other  
19 project, it would cause a decrease in the extent of surface  
20 flow of the river by 1.5 miles; is that correct?

21 MR. CARLSON: That's correct.

22 MR. YAMAMOTO: Now, actually, the 1.5 miles is a  
23 minimum; is that correct?

24 MR. CARLSON: Minimum related to what?

25 MR. YAMAMOTO: Yesterday you testified that because





1 beyond Bryman Road the seepage would be lower because the  
2 volume is lower -- and I presume because the river itself  
3 will be more narrow as you go down further along the  
4 river -- the distance covered by an acre-foot of water will  
5 be greater at the end of the flow than at the beginning; is  
6 that correct?

7 MR. CARLSON: Well, that may be, but the assumption  
8 that we made in reviewing the air photos -- we were limited  
9 by the database that we have available -- we assumed linear  
10 feet of about 1100 acre-feet per year, per mile, as an  
11 infiltration rate in the river.

12 There are lots of things, lots of factors that are at  
13 work here, but that is the unit value that we used. I can't  
14 really speak to whether it's a minimum or a maximum or what.

15 MR. YAMAMOTO: I thought you previously testified that  
16 while the 1100 acre-feet per mile figure may work at Bryman  
17 Road, you assumed the seepage rate would be lower as you go  
18 further downstream.

19 MR. CARLSON: I don't believe I testified to that. I  
20 believe it was in the context of looking at the line that we  
21 had drawn on Figure 4E, and fitting that line to a straight  
22 line. And I believe people were asking about what the  
23 effects would be above that area where we felt confident  
24 enough to draw a straight line.

25 MR. YAMAMOTO: So your assumption is it's 1.5 miles,



1 but you're not sure?

2 MR. CARLSON: Well, you can never be a hundred percent  
3 sure in predicting the future. But based on a historic  
4 record of what -- how far the river flowed at various  
5 discharge rates, given the data, the air photos that we had,  
6 I believe 1100 acre-feet per year, per mile, is a reasonable  
7 estimate.

8 MR. YAMAMOTO: Right. And your estimate for the 1,680  
9 acre-feet is 1.5 miles; correct?

10 MR. CARLSON: Yes, that's correct.

11 MR. YAMAMOTO: Okay. Mr. Dodson, you've testified on  
12 redirect that you believe the riparian habitat will not be  
13 impacted by the loss of 1,680 acre-feet; is that correct?

14 MR. DODSON: I don't mean to be contentious, but in  
15 this case, what do you mean by "loss"? Do you mean the  
16 reduction --

17 MR. YAMAMOTO: Well --

18 MR. DODSON: -- in the stream channel at the surface?

19 MR. YAMAMOTO: Well, I'm asking: Do you believe that  
20 there will be a reduction in the water available to the  
21 riparian habitat, based on this 1,680-foot project,  
22 acre-foot project?

23 MR. DODSON: In the whole and in the long term, no.

24 MR. YAMAMOTO: Okay. And your assumption that there  
25 will not be this adverse impact is based on the charts



1 prepared by Mr. Carlson, marked as Exhibit 4D, and now 4F,  
2 which showed that the groundwater flow is fairly close to  
3 the streambed. Is that correct?

4 MR. DODSON: No, sir, that's not accurate.

5 Mr. Carlson's data was actually developed long after  
6 we had prepared the initial study. What his data do, in my  
7 opinion, is they confirm the fact that the basin is full --  
8 pardon me -- the transition zone aquifer, floodplain aquifer  
9 is essentially full.

10 MR. YAMAMOTO: Okay. Then I'll ask Mr. Carlson.

11 Exhibits 4D and 4F are limited to the water year 1998;  
12 correct?

13 MR. CARLSON: They represent data from the water year  
14 1998, correct.

15 MR. YAMAMOTO: And they show the level of groundwater  
16 being fairly close to the streambed in many places; is that  
17 correct?

18 MR. CARLSON: Yes, they do.

19 MR. YAMAMOTO: Are you familiar with the term El Niño?

20 MR. CARLSON: Sure.

21 MR. YAMAMOTO: Right. And associated with El Niño  
22 events is a much higher level of rainfall; is that correct?

23 MR. CARLSON: Well, I think it could be, yes.

24 MR. YAMAMOTO: Was the water year 1998 an El Niño  
25 year?



1 MR. CARLSON: I don't recall.

2 MR. YAMAMOTO: Do you recall whether we had  
3 extraordinarily high levels of rain during 1998?

4 MR. CARLSON: I don't know whether 1998, water year  
5 1998, was wet, dry, or indifferent in that area. I don't  
6 know.

7 MR. YAMAMOTO: If 1998 was not a representative year,  
8 that would make it difficult to use Exhibits 4D or 4F to  
9 make conclusions about stream levels and groundwater levels  
10 in general; is that correct?

11 MR. CARLSON: If the water level in the wells changed  
12 significantly, then that would be true. But whether or not  
13 the water levels changed in this area as a response to  
14 increased rainfall and the watershed, I don't know the  
15 answer to that question.

16 MR. YAMAMOTO: But do you know that if there was an  
17 El Niño event in 1998, it would tend to raise the amount of  
18 rainfall and also the level of groundwater?

19 MR. CARLSON: Well, it would tend to raise the level  
20 of groundwater but, of course, in a basin that's already  
21 full, it would just cause a spill, and there would be  
22 essentially less infiltration from the surface water.

23 MR. YAMAMOTO: And if in a normal year there is much  
24 less rainfall than in 1998, the ground level -- sorry -- the  
25 groundwater levels portrayed on Exhibits 4F and 4D might not





1 be representative of a typical year; correct?

2 MR. CARLSON: Well, again, I don't know what a typical  
3 year would be. I mean, I've no doubt that the groundwater  
4 levels in this area are going to change from year to year,  
5 and they're also going to change from season to season.  
6 Now, I haven't looked at the fluctuations of groundwater  
7 levels in any detail.

8 H.O. BAGGETT: Excuse me. I need to break for lunch.

9 MR. YAMAMOTO: I just have one question with possibly  
10 a follow-up.

11 H.O. BAGGETT: We're going to come back to this panel  
12 anyway. Staff hasn't had a chance. So let's recess until  
13 1:00 o'clock.

14 (At 11:55 a.m. the luncheon recess was taken.)

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SACRAMENTO, CALIFORNIA

WEDNESDAY, DECEMBER 6, 2000, AFTERNOON SESSION

---oOo---

H.O. BAGGETT: We're back. Continue, Mr. Yamamoto.  
Where did we leave off?

MR. YAMAMOTO: I think I was continuing my questioning  
of this panel.

Actually, my next question is for Mr. MacLaggan.

Now, you've testified on redirect that you believe  
that there is available reclaimed water for the golf course  
under Section 13550; is that correct?

MR. MACLAGGAN: Yes, that's correct.

MR. YAMAMOTO: Okay. If 100 percent of the VVWRA  
wastewater stream were committed to irrigate some other golf  
course or set of golf courses, would water be available  
under 13550 for this project?

MR. MACLAGGAN: The 13550 analysis is -- provides a  
situation where you're looking at reclaimed water that is  
available for nonpotable use, and that nonpotable use is  
already being served with a potable supply. So if VVWRA had  
effectively marketed all the available reclaimed water to  
another golf course, it would already be serving a  
nonpotable use and there would be no supply available.

MR. YAMAMOTO: Thank you. That's it for me.

H.O. BAGGETT: Mr. Vail.



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RE-CROSS-EXAMINATION OF SECOND PANEL

BY MR. VAIL

MR. VAIL: I think I only have one question -- it might be two -- regarding Mr. Dodson's testimony about the riparian habitat, particularly the picture behind you.

You made some of -- I can't recall exactly -- you said something about right along the stream there's riparian, but on the other side it was like floodplain or something like that.

I can't recall exactly how you said that.

But I want to point to Page 3 of the USGS Report 4241. It says: "Riparian vegetation grows in the Mojave River channel, on the floodplain, and on adjacent elevated slopes and terraces in what has been designated the riparian zone." And they're referring to a Plate 1, which I don't have. I'm sure it's in the book.

"The riparian vegetation may utilize some soil moisture resulting from infiltration of precipitation; but, for the most part, the vegetation depends on groundwater or surface water for survival. The riparian vegetation includes both phreatophytes and hydrophytes."

And it defines what a phreatophyte is and a hydrophyte. And then it goes on to say:

"Along the Mojave River, hydrophytes" -- well, let me read that. I'd better include that in this thing so it



1 doesn't get messed up.

2 "A phreatophyte is a plant that habitually obtains  
3 its water supply from the zone of saturation, either  
4 directly or through the capillary fringe. Hydrophytes, on  
5 the other hand, usually are dependent on surface water for  
6 their survival.'

7 "Along the Mojave River, hydrophytes typically grow  
8 along the edges of the river where there is perennial flow."

9 Now, you incorporated this into your data, so I  
10 presume that that's part of your testimony; is that correct?

11 MR. DODSON: I have used it for reference, and  
12 reference those specific sections that I wanted to use, but  
13 it is an exhibit, and I believe this is accurate.

14 MR. VAIL: Okay. On the next page he says -- on  
15 Page 4: "It has long been recognized that distinctive  
16 associations or communities of native riparian plants grow  
17 in distinctive hydrologic environments or niches in the  
18 riparian zone along the Mojave River. These riparian plant  
19 communities, for the most part, are the basis for collecting  
20 the mapped units that are shown on the vegetation map and  
21 summarized in these tables 1-5. Now the riparian zone  
22 includes areas where riparian plants were growing in 1995.  
23 The riparian zone also includes barren and disturbed areas  
24 that were devoid of riparian plants, but where the return of  
25 the water table or land use to predevelopment conditions





1 could induce future growth of riparian plants. The riparian  
2 zone generally includes the Mojave River channel and  
3 floodplain, some adjacent terraces, and the bases of some  
4 alluvial fans."

5 Now, looking at that photograph that the DFG put up  
6 there, would you say, according to what he says here, that  
7 that picture would include, or would all that area be  
8 included as riparian? Because it looks like floodplain to  
9 me. Would you say it does that?

10 MR. DODSON: No, sir, for two reasons. One, on this  
11 particular photo, this is desert habitat. That is not  
12 riparian habitat. It cannot be construed to be riparian  
13 habitat.

14 But there is another reason, and I think it goes to  
15 the way you've read the document and the question that I  
16 believe that DFG asked. They asked water vegetation --  
17 riparian habitat or community. They didn't say "riparian  
18 zone."

19 If you look at this map, which is Plate 1, and if you  
20 look at this photo here (indicating), you have an area that  
21 is barren. That is shown in here, barren areas, as this  
22 color right in here (indicating). There is a very large  
23 amount of area that is barren, and that, to me, is not  
24 riparian vegetation or habitat. It falls within the  
25 definition of riparian zone that this gentleman put into his



1 document, but it isn't habitat.

2 MR. VAIL: The question you've brought up, now, this  
3 picture --

4 MR. DODSON: I'm sorry?

5 MR. VAIL: You were pointing to your map up there, and  
6 you said this picture was taken in the area up there in the  
7 yellow?

8 MR. DODSON: I did not say that. All I did was point  
9 out that these areas that are shown in this color are  
10 barren.

11 MR. VAIL: Okay. So this particular picture, do you  
12 know where that picture was taken?

13 MR. DODSON: I was told it was taken about six miles  
14 down. I don't have knowledge about where it was actually  
15 taken. You'd have to ask the people from DFG.

16 MR. VAIL: Okay. Six miles down on your map?

17 MR. DODSON: No, sir. I heard six miles down from --

18 MR. VAIL: Could you show me where six miles down is  
19 on your chart you just had there.

20 MR. DODSON: This is the Lower Narrows. Three miles  
21 down is just about here (indicating), about three and a half  
22 miles down from VVWRA. This area right in here generally  
23 would be the area where that picture would have been taken.  
24 That's about six miles.

25 H.O. BAGGETT: Well, I hope that Fish and Game, when



1 we get to the case in chief, I hope they know where it is.

2 I was just curious.

3 With that, this panel is dismissed. And we want to  
4 come back to the first panel.

5 Mr. Kidman?

6 Then we'll do redirect, recross, and then we'll get to  
7 Fish and Game, hopefully before 4:00 today.

8 MR. HITCHINGS: Before 4:00 today? Or 5:00?

9 H.O. BAGGETT: We'll see. I'll make a call as we get  
10 towards the end of the day. I've got something I really  
11 need to do at 4:30. I could ignore it, but we'll see how it  
12 goes.

13 I'm sorry. Mr. Dodson.

14 You have a question for Mr. Dodson -- before you  
15 leave -- from our staff. I apologize. We have a brief  
16 question for you. You're not out of here quite yet.

17 ----oOo----

18 RE-CROSS-EXAMINATION OF THE SECOND PANEL

19 BY STATE WATER RESOURCES CONTROL BOARD

20 BY STAFF

21 MS. DORIN: I just have a brief question for  
22 Mr. Dodson. I'm Melinda Dorin with the State Water Board.

23 You testified this morning that there was  
24 approximately 2700 acres of riparian habitat that was using  
25 the 6,000 acre-feet annually as consumptive use.



1           MR. DODSON: I think I testified to that study both  
2 yesterday and today. That's a summation from Table --  
3 excuse me -- Table 2, Plate 1, and it's 2706.2, I believe,  
4 or 5.2.

5           MS. DORIN: Okay. Can you explain either by landmarks  
6 or some other way where that riparian habitat starts and  
7 where it ends along the river channel?

8           MR. DODSON: I believe so. If you start (indicating)  
9 at the Lower Narrows, you have areas in here where there is  
10 purple, which is areas where surface water and hydrophytes  
11 occur, which would be plants that are living in water,  
12 aquatic plants. It begins here (indicating). It occurs  
13 intermittently down to VVWRA, which is -- VVWRA would be  
14 about here (indicating), this location where you have this  
15 big purple spot, which is the water discharging. And you  
16 have greens in here that represent some riparian habitat.  
17 It continues all the way to approximately here (indicating).  
18 And if you notice, beginning at this lotion (indicating),  
19 you begin to get some pinks, and in here you have hardly  
20 anything else but pinks. That's all saltcedar.

21           MS. DORIN: Let me just ask Mr. Dodson, for the  
22 record, to clarify where "here" is.

23           MR. DODSON: Oh, I apologize.

24           MS. DORIN: How many miles downstream.

25           H.O. BAGGETT: Please.





1           MR. DODSON: That gets -- riparian vegetation appears  
2 to go from the Lower Narrows -- from the Lower Narrows -- I  
3 need to borrow your ruler again. Pardon me. And I  
4 apologize, I didn't have my own. Thank you.

5           Okay. This is not as the river flows, but as we can  
6 measure just on the map itself. That's 5 miles to right  
7 here (indicating). We run out of habitat, most of the  
8 habitat, at about mile 8 to the north. And then mile 8,  
9 going north, you're almost totally in saltcedar as the  
10 vegetation.

11          MS. DORIN: I have one other question.

12          MR. DODSON: Yes, ma'am.

13          MS. DORIN: You also stated that the consumptive use  
14 could be either 50 percent greater or 50 percent less,  
15 depending on the water year.

16          MR. DODSON: That is, again, a reflection of the  
17 direct reference to the '96 report by USGS, where they  
18 indicate that in a very wet year -- and here we're talking  
19 about storm-flow wet year, where you get a lot of  
20 recharge -- the plants might consume 50 percent more. In a  
21 period of dry years -- again, representing storm-flows to  
22 fill up the basins -- you might have as much as a 50 percent  
23 reduction in the activity. Not loss of habitat, but in the  
24 activity of the plants in terms of total water consumption.

25          MS. DORIN: Okay. The follow-up question is: Do you



1 think that the habitat can be sustained for more than a year  
2 at a time? And this is based on your opinion, and not on  
3 the variability of the system. So, they're saying it can be  
4 50 percent less or 50 percent more, but they're not -- I  
5 don't know if they're saying for consecutive years, or if  
6 that's a permanent water loss, that it can always subsist on  
7 50 percent less.

8 MR. DODSON: I didn't interpret it that way. I mean,  
9 somebody else may interpret it that way. The way I  
10 interpret it is that, in a given year, a plant that was  
11 being stressed would use 50 percent less water. I don't  
12 think they came to a conclusion about how long that could  
13 persist. That's not in their document, and I don't have an  
14 answer for that.

15 MS. DORIN: Thank you.

16 H.O. BAGGETT: Do you have anything else? Is that it?

17 Okay. Thank you.

18 Go ahead, Mr. Kidman.

19 MR. KIDMAN: Thank you, Mr. Chairman. As far as  
20 talking about schedules and trying to figure that out, I'd  
21 just like to put a placeholder in that it's 1:20 now, and if  
22 by about 3:30 this afternoon it's evident that we won't get  
23 to Mr. Stetson, I would like to be able to release him to  
24 try to catch an airplane.

25 MR. YAMAMOTO: Mr. Chairman, Mr. Fudacz would also



1 like to go if there is no chance of having him testify this  
2 afternoon.

3 H.O. BAGGETT: Well, we might as well deal with that  
4 procedure now. How long do you estimate?

5 MR. KIDMAN: Well, I think that for my part of this  
6 panel, maybe 45 minutes.

7 H.O. BAGGETT: That's what I thought. So that's 2:15.  
8 Then we've got redirect, recross. I assume there's going to  
9 be some from your standpoint. Fish and Game, I assume  
10 you're going to --

11 MS. MURRAY: It depends on the redirect.

12 H.O. BAGGETT: You will have redirect?

13 MR. HITCHINGS: There probably will be, but I don't  
14 envision it being more than 10 to 15 minutes at the most,  
15 depending upon this next 45 minutes.

16 H.O. BAGGETT: It sounds like it's safe to say we have  
17 got at least two hours to finish up Victor Valley, then.

18 MR. KIDMAN: Yeah, it might be.

19 H.O. BAGGETT: So that's 4:00 o'clock right there.

20 MR. KIDMAN: My guess is that it will be less time in  
21 finishing up this panel than the prior one. That's still  
22 going to be 2:00, 3:00. Then we will -- we will not get  
23 beyond -- I can't imagine we'll get beyond Fish and Game's  
24 testimony this afternoon.

25 MS. MURRAY: Well -- and I'd like to make a request in



1 terms of fairness. That if we were to start and put on our  
2 direct testimony, then we would have a month's break before  
3 cross-examination --

4 H.O. BAGGETT: We would.

5 MS. MURRAY: -- happens. That if we do our direct,  
6 that VVWRA's cross-examination occur today also, however  
7 long that takes. And if not, and we can't guarantee --

8 H.O. BAGGETT: Fish and Game's cross-examination?

9 MS. MURRAY: VVWRA's cross-examination of us.

10 If that can't occur, that we would then go to another  
11 party that has less witnesses that may take less time that  
12 we could get done with them today.

13 H.O. BAGGETT: I would concur, yes.

14 MR. HITCHINGS: Well, my issue with doing that is I  
15 focused on the need to do cross-examination of Fish and Game  
16 today. And based upon the schedule that was given to us  
17 yesterday and the order of parties, I relied on that.

18 As far as the presentation of a direct case in chief,  
19 they're summarizing their testimony. We have written  
20 testimony. Whether they spend their hour today that they  
21 have, or whatever time frame it is, to summarize that  
22 testimony, that really makes no difference whether I'm going  
23 to cross-examine them today, immediately after, or a month  
24 from now.

25 H.O. BAGGETT: Okay. We'll reserve that one until





1 later. But I guess the question was: are we going to get to  
2 the other two parties. Unless somebody sees this thing  
3 moving a lot quicker than I do, we're not going to get to  
4 the other parties. We'll be lucky to start Fish and Game's  
5 today.

6 MR. KIDMAN: Well --

7 H.O. BAGGETT: In other words, if you've got people  
8 that need to --

9 MR. KIDMAN: When we get to 3:30, then we can touch  
10 base. But I'm assuming that if we release the witnesses,  
11 that we are not going to.

12 H.O. BAGGETT: No, you won't be if they want to catch  
13 an earlier flight.

14 Let's continue.

15 MR. KIDMAN: Okay. Thank you.

16 ----oOo----

17 CROSS-EXAMINATION OF FIRST PANEL

18 BY SOUTHERN CALIFORNIA WATER COMPANY

19 BY MR. KIDMAN

20 MR. KIDMAN: I'm Art Kidman, counsel for Southern  
21 California Water Company and City of Barstow. I'd like to  
22 reset the stage since we've kind of had a break from this  
23 panel, and I wonder if in that process we could put up two  
24 exhibits that have previously been displayed. One was an  
25 overhead slide that shows generally a sketch where the



1 project pipeline goes from the plant back up to the golf  
2 course. That's the one.

3 H.O. BAGGETT: What is the number on that exhibit?

4 MR. HILL: This is actually part of our  
5 antidegradation study, which I believe is L, 1L. Let me  
6 check. Just a moment.

7 MR. HITCHINGS: Yes.

8 MR. HILL: That's correct.

9 H.O. BAGGETT: 1L, and it's an illustration within 1L?

10 MR. KIDMAN: Does it have an identification?

11 MR. HILL: It's Figure 1.

12 MR. KIDMAN: Figure 1. And the other one that I'd  
13 like to see, we had it sort of stuck up to the easel  
14 yesterday, a larger version of the -- of a depiction of the  
15 transition zone generally. This is -- I know the figure on  
16 this. This is Exhibit 4C. It's Figure 1 in 4C, or maybe it  
17 is 4C.

18 MR. HITCHINGS: Mr. Carlson is getting that now.

19 MR. KIDMAN: While we're getting that set up, I can  
20 ask a couple of questions of Mr. Gallagher.

21 Why don't we just, for the record again, reintroduce  
22 who the panel is. We have Mr. Gallagher, Mr. Patterson, and  
23 Mr. Hill.

24 Mr. Gallagher, referring to the overhead that's one of  
25 your exhibits, I wonder if you could just very briefly



1 describe the project again, reset the stage. Show us where  
2 the plant is, where the river is, where the pipe is, where  
3 the golf course is.

4 Let me set one other thing. Generally, on all of  
5 these maps, north is at the top, and generally the river  
6 flows toward the north.

7 Is that right, Mr. Gallagher?

8 MR. GALLAGHER: That's correct.

9 MR. KIDMAN: Okay. Then the VVWRA treatment plant is  
10 located here (indicating), adjacent to the Mojave River.

11 MR. CARLSON: This is referring to my Figure 1, was  
12 it, from --

13 MR. GALLAGHER: Yes. It's Figure 1L. From 1L.

14 MR. KIDMAN: Okay.

15 MR. GALLAGHER: From Exhibit 1L.

16 MR. KIDMAN: And you're referring to an area that's  
17 crosshatched at the top?

18 MR. GALLAGHER: Yes. This is our treatment plant here  
19 (indicating).

20 MR. KIDMAN: Thank you.

21 MR. GALLAGHER: Okay. This is the Southern California  
22 Logistics Airport. The pipeline would extend from our  
23 treatment plant southward to a retention pond at this  
24 location. And this is the retention pond that is used as  
25 the source of water for the irrigation of the golf course



1 (indicating). And the nine-hole golf course is located in  
2 this area (indicating).

3 MR. KIDMAN: Okay. And about how long is the  
4 pipeline?

5 MR. GALLAGHER: Oh, it's approximately three to four  
6 miles.

7 MR. KIDMAN: And about how far away from the river  
8 laterally, or to the west, is the retention pond located?

9 MR. GALLAGHER: I believe this is about a mile  
10 distance.

11 MR. KIDMAN: And there is a retention pond that serves  
12 as a terminal reservoir?

13 MR. GALLAGHER: That's correct. That's this pond  
14 right here (indicating).

15 MR. KIDMAN: And I believe there was testimony that  
16 that is a lined pond, that is, it has some kind of an  
17 impermeable --

18 MR. GALLAGHER: If it's not lined now, I think  
19 Mr. Patterson testified that it would be lined for this  
20 project.

21 MR. KIDMAN: Now, at the other end, at the -- of the  
22 pipeline, that is, at the beginning of the project at the  
23 VVWRA plant, is there also some kind of a pond or lake that  
24 serves as a forebay for the pumps to pump from to send the  
25 water up the pipeline?





1           MR. GALLAGHER: We actually have a reclaimed water  
2 pump station that was constructed some years ago that is on  
3 our discharge line immediately before the water enters the  
4 Mojave River.

5           MR. KIDMAN: I see. So the water goes into the  
6 pipeline directly from the plant. It doesn't enter the  
7 river or a pond or something like that before it is pumped  
8 up the pipeline?

9           MR. GALLAGHER: The reclaimed water pump station is  
10 actually on the pipeline before our discharge point to the  
11 Mojave River.

12          MR. KIDMAN: Okay. And then referring to the other  
13 map that shows the transition zone. I just want to confirm  
14 for the record so that someone can read this, that I'm  
15 referring to Figure 1. Or it's marked Figure 1, but it is  
16 actually Exhibit 4C.

17          At the bottom, generally right at the bottom of that  
18 map, is the Lower Narrows. Is that right?

19          MR. GALLAGHER: I believe the Lower Narrows is at this  
20 location (indicating) at the bottom of the map, yes.

21          MR. KIDMAN: And the top of the map is the town of  
22 Helendale?

23          MR. GALLAGHER: Yes.

24          MR. KIDMAN: Okay. And just, again, for orientation  
25 purposes and for the record, somebody reading this



1 testimony, the community of Victorville is located where  
2 relative to the Lower Narrows?

3 MR. GALLAGHER: Okay. Our treatment plant is actually  
4 within the city limits of Victorville. We are on the  
5 northern extremity of the city. But the city of Victorville  
6 extends south from our treatment plant, and it's, generally  
7 speaking, on the west side of the Mojave River.

8 MR. KIDMAN: So to the south and the west, off the  
9 bottom of the map, is the community of Victorville?

10 MR. GALLAGHER: In this area (indicating).

11 MR. KIDMAN: And the other communities that send their  
12 wastewater to this plant are also located upstream, off the  
13 map, to the south, some to the east, some to the west?

14 MR. GALLAGHER: That's correct.

15 MR. KIDMAN: And the community of Barstow is located  
16 where relative to this map?

17 MR. GALLAGHER: It's north, and it would be up above  
18 this (indicating).

19 MR. KIDMAN: About 30 miles, something like that?

20 MR. GALLAGHER: I believe it's about 30 miles from  
21 Victorville to Barstow.

22 MR. KIDMAN: Okay. Thank you.

23 I'm going to ask you: Are you aware that the Mojave  
24 Adjudication Judgment includes special provisions for the  
25 transition zone?



1 MR. GALLAGHER: Yes.

2 MR. KIDMAN: And the transition zone, again, is  
3 generally the area depicted on this exhibit. Is that your  
4 understanding?

5 MR. GALLAGHER: Is what my understanding?

6 MR. KIDMAN: That this Exhibit 4C generally depicts  
7 the transition zone.

8 MR. GALLAGHER: Yes.

9 MR. KIDMAN: Are you aware that there are special  
10 requirements in the Mojave Adjudication regarding  
11 maintenance of a water bridge in the transition zone?

12 MR. GALLAGHER: I think, as I testified before, I'm  
13 not an expert on the Mojave Adjudication. I'd heard the  
14 term "water bridge" used before, but I'm certainly not privy  
15 to what all that was intended to include.

16 MR. KIDMAN: I'm not going to ask you what they are.  
17 I'm just asking: are you aware that there are specialty  
18 provisions relative to a water bridge --

19 MR. GALLAGHER: Uh-huh.

20 MR. KIDMAN: -- in the transition zone?

21 The answer was yes?

22 MR. GALLAGHER: The answer is I nodded, yes.

23 MR. KIDMAN: Okay. Yesterday you provided some  
24 historical background on wastewater projects in the  
25 Victorville area, and indicated that the City of Victorville



1 had some kind of a waste treatment project that started in  
2 the 1960s. Do you know where the effluent water from that  
3 treatment facility was discharged?

4 MR. GALLAGHER: Let me make one quick correction. I'm  
5 not sure when the plant was originally built. I know that  
6 it was in place prior to the 1970s and, to my knowledge,  
7 that plant discharged to percolation ponds located between  
8 our plant and the old part of Victorville along the Mojave  
9 River.

10 MR. KIDMAN: So --

11 MR. GALLAGHER: South of the plant.

12 MR. KIDMAN: So your understanding is that there was  
13 waste discharge as early as 1960 in the area of the  
14 transition zone?

15 MR. GALLAGHER: No. That was actually in the Alto  
16 basin, because that treatment facility was located between  
17 the Lower and the Upper Narrows of the Mojave River.

18 MR. KIDMAN: Okay.

19 MR. GALLAGHER: Technically it was --

20 MR. KIDMAN: So it was somewhere outside the  
21 transition zone?

22 MR. GALLAGHER: Yes.

23 MR. KIDMAN: You have indicated that there was another  
24 plant of 1970s vintage, and I wasn't clear in my notes whose  
25 plant that was. But my question is: where did that plant





1 discharge?

2 MR. GALLAGHER: That was the Air Force plant. The Air  
3 Force also had percolation ponds, and, of course, some of  
4 their reclaimed water was used to irrigate the course prior  
5 to 1981, when they connected to our facility.

6 MR. KIDMAN: Yes. And where were their percolation --  
7 where was their discharge point located?

8 MR. GALLAGHER: Well, they had percolation ponds, and  
9 I believe that treatment plant was in this vicinity  
10 (indicating).

11 MR. KIDMAN: So they were offstream where they were  
12 discharging?

13 MR. GALLAGHER: Yes.

14 MR. KIDMAN: Turning to your written testimony,  
15 Paragraph 9 on Page 4, you indicate that VVWRA receives  
16 wastewater which originates as produced groundwater from the  
17 Alto subbasin and that no State Project water is used for  
18 consumption within the VVWRA service area.

19 MR. GALLAGHER: That's correct.

20 MR. KIDMAN: That's still your testimony?

21 MR. GALLAGHER: Yes.

22 MR. KIDMAN: In Paragraph 14, I need to ask just a  
23 clarification here.

24 You're aware in the Mojave Judgment that the term  
25 "makeup water" or "makeup obligation" is different from the



1 term "replacement water" or "replacement obligation"?

2 MR. GALLAGHER: Yes.

3 MR. KIDMAN: In your testimony on Paragraph 14,  
4 Page 5, you indicate that the VVWRA intends to sell its  
5 reclaimed water to purveyors for use as a credit against  
6 their replacement water obligations.

7 I heard your testimony orally yesterday to say that  
8 the intent was to sell it to cover makeup water obligation,  
9 and I'm just wondering if that was intentionally different,  
10 or did I mishear it, or --

11 MR. GALLAGHER: I think you're correct. I should  
12 probably say makeup obligation, and not replacement water.

13 MR. KIDMAN: So the intention is to sell it for makeup  
14 obligations.

15 MR. GALLAGHER: To satisfy their individual makeup  
16 water obligations, yes.

17 MR. KIDMAN: Okay. On Page 25, Page 9 -- excuse me,  
18 Paragraph 25, Page 9 of your testimony, you claim that  
19 nothing in the terms of the Judgment should be considered as  
20 creating an obligation on the part of VVWRA to continue to  
21 discharge to the Mojave River in perpetuity and/or at any  
22 set rate of flow. However, you also acknowledge in that  
23 paragraph that VVWRA discharge flows were included in the  
24 calculations made to establish the flow requirements between  
25 the subareas and the transition zone.



1            So do you contend, then, that VVWRA can cease  
2    discharging to the Mojave River and not harm anyone  
3    downstream at the point of discharge?

4            MR. GALLAGHER:  Can you define "harm"?

5            MR. KIDMAN:  Well, I just use it in terms of what you  
6    think.

7            Is there going to be harm, in your opinion?

8            MR. GALLAGHER:  Well, there's a difference between a  
9    riparian habitat, which is a public-benefit resource, and  
10   water rights holders, agriculture, or whatever downstream.

11           MR. KIDMAN:  So you think you would harm one and not  
12   the other?

13           MR. GALLAGHER:  We -- we own the water.  The water  
14   that we treat and discharge is ours, it belongs to us.  And  
15   I believe that's fairly clear in California law.  If we were  
16   to stop discharging to the Mojave River, I'm sure there  
17   would be impacts on the riparian habitat.  And what actually  
18   happens to downstream water rights holders would depend on  
19   the terms of the Adjudication.  Because, as I understand the  
20   Adjudication, if there was insufficient water heading north  
21   toward the city of Barstow, then the stipulated parties to  
22   the Adjudication would have to pay for water to be added to  
23   the river to make up the difference.

24           MR. KIDMAN:  So, under your definition of harm, that's  
25   not harm?



1           MR. GALLAGHER: Can you -- okay. I don't really  
2 understand the question.

3           MR. KIDMAN: You said that you thought there might be  
4 harm to the riparian vegetation, but since, in your opinion,  
5 there is no right, water right to the holders downstream,  
6 evidently you're saying that there's no harm to them.

7           MR. GALLAGHER: Well, the mechanism is already in  
8 place to ensure that there is enough water there. The  
9 Mojave Adjudication guarantees that.

10           If insufficient water is measured, then there is water  
11 that has to be added by the water master.

12           MR. KIDMAN: This is not a trick question. But under  
13 the Judgment, if there is not enough water getting into  
14 Centro, somebody in Alto has got to take care of it?

15           MR. GALLAGHER: That's correct.

16           MR. KIDMAN: Is that what you're saying?

17           MR. GALLAGHER: Yes.

18           MR. KIDMAN: So if water that's currently discharged,  
19 and has been for decades discharged, stops being discharged,  
20 you're going to hurt either somebody in the Centro basin  
21 that doesn't get the water that they have been getting or,  
22 if that water is made up by Alto, somebody in Alto is going  
23 to get hurt because they've got to pay more to replace the  
24 water that you don't discharge anymore?

25           MR. GALLAGHER: If "hurt" includes costs, yes.





1           MR. KIDMAN: I just have a question, and I'll phrase  
2 it as something of a hypothetical, but I think you'll be  
3 able to follow it.

4           I'm not saying this witness is an expert.

5           But within the Adjudication, the working assumption  
6 was used that 50 percent of the water produced and used for  
7 M&I -- municipal and industrial -- purposes would be  
8 consumed, and 50 percent would be returned to the system.  
9 That was a working assumption.

10          So if 1 acre-foot of water -- let's say 2, just so we  
11 can keep up with it. No. Let's say 4.

12          If 4 acre-feet of water is produced and goes through a  
13 municipal and industrial use, let's say in the community of  
14 Victorville, 50 percent of that is used, 50 percent of it  
15 goes through the VVWRA system and is returned to the river  
16 at the present time. Follow me through. This is just a  
17 hypothetical. I know that anybody could question  
18 50 percent. Just use it as a working assumption.

19          Now, under this proposal, the 50 percent that was in  
20 use, 2 acre-feet, goes back up the pipeline, goes into a  
21 lined pond, and then goes out for irrigation to the golf  
22 course, and the working assumption in the Judgment also is  
23 that in irrigation 50 percent is used.

24          So what we have then is, under the Judgment, under the  
25 first scenario, current scenario, four is produced, two is



1 used, two is returned. Under this scenario, under the  
2 second scenario as I understand it -- and I'd like you to  
3 confirm: four is produced, two is used the first time, then  
4 there's two left over, goes back up the pipe, and then under  
5 the 50 percent assumption, one is used, leaving one to go  
6 back into the system, where before there was two.

7 Does that all sound right --

8 MR. GALLAGHER: No.

9 MR. KIDMAN: -- to you?

10 MR. GALLAGHER: No, that does not sound right.

11 MR. KIDMAN: Tell me where it's wrong.

12 MR. GALLAGHER: Because if you look at it from a  
13 mass-balance approach, either -- when either potable water  
14 or reclaimed water is used for irrigation on that golf  
15 course, the same amount of water would return to the system.  
16 It doesn't -- it doesn't matter whether you use potable  
17 water or reclaimed water, the same amount returns to the  
18 system.

19 MR. KIDMAN: Right. I understand that. But somewhere  
20 here we have 2 acre-feet that were consumed out of the 4 on  
21 the second use, 1 acre-foot out of the 2 that were left was  
22 consumed. Doesn't that mean that we have only one left,  
23 where before we had two?

24 MR. GALLAGHER: No. Because now we haven't produced  
25 the water from the ground to water the golf course.



1           MR. KIDMAN: Okay. Well, that wasn't part of what I  
2 asked you, so we'll leave that out. Okay.

3           It's possible, yes, that there are other offsetting  
4 uses that don't occur but, under this scenario, more is  
5 being used, because that second consumption, then, was under  
6 the first scenario?

7           MR. GALLAGHER: No.

8           MR. KIDMAN: You testified in your written testimony  
9 at Paragraph 25, Page 10 -- excuse me -- Paragraph 29,  
10 Page 10, that -- you talk about the term "subarea  
11 obligation." Just to make sure, subarea obligation is  
12 related to makeup obligation; is that your understanding?

13          MR. GALLAGHER: Yes.

14          MR. KIDMAN: And there is a subarea obligation of  
15 23,000 acre-feet per year of water to pass through the  
16 transition zone from Alto to Centro. Is that still your  
17 testimony?

18          MR. GALLAGHER: Yes.

19          MR. KIDMAN: And at the current time, part of that 23  
20 is probably made up of discharges from the VVWRA plant; is  
21 that correct?

22          MR. GALLAGHER: Yes.

23          MR. KIDMAN: And what you would like to be able to do  
24 is either have somebody pay you for keeping that water going  
25 there or be able to take the water somewhere else?



1           MR. GALLAGHER: We want to be able to use our effluent  
2 to replace nonpotable uses, or replace potable water that's  
3 being used for nonpotable uses.

4           MR. KIDMAN: Is the discharge of this water to support  
5 the riparian vegetation for potable use?

6           MR. GALLAGHER: Is that potable use?

7           MR. KIDMAN: Yes.

8           MR. GALLAGHER: It serves for groundwater recharge.

9           MR. KIDMAN: What about the -- okay. Groundwater  
10 recharge, is that a potable use?

11           MR. GALLAGHER: I wouldn't drink it out of the river.  
12 But it eventually percolates into the groundwater table and  
13 at some point becomes clean enough that I'm sure someone  
14 downstream is drinking it.

15           MR. KIDMAN: Okay. Because you switched, I switched.  
16 But let's make it clear. I'm asking you: is the use of this  
17 water for riparian vegetation a nonpotable use?

18           MR. GALLAGHER: Oh, yes. I would say it's nonpotable  
19 use.

20           MR. KIDMAN: And is the use of this water for recharge  
21 of the groundwater to maintain a water bridge or to transmit  
22 the water down to the Centro basin, is that a nonpotable  
23 use?

24           MR. GALLAGHER: I think so --

25           MR. KIDMAN: So --





1 MR. GALLAGHER: -- if I understand the question.

2 MR. KIDMAN: So current uses are nonpotable uses?

3 MR. GALLAGHER: Yes.

4 MR. KIDMAN: In Page 31 -- excuse me -- Paragraph 31,  
5 Page 11 of your testimony, you talk about being willing to  
6 dedicate 2,000 acre-feet of water annually for habitat  
7 preservation or habitat purposes. And I believe that there  
8 was also testimony that there was another 2,000 acre-feet  
9 that you'd be willing to sell to the Department of Fish and  
10 Game if they were willing to spend some of their  
11 environmental mitigation fund for that. Is that correct?  
12 There were two chunks of 2,000?

13 MR. GALLAGHER: We offered to give them right of first  
14 refusal to buy it, whether they spent that money for it or  
15 other funds, didn't specify.

16 MR. KIDMAN: Right. It was suggested, though, that  
17 they had the money available --

18 MR. GALLAGHER: Okay.

19 MR. KIDMAN: -- from that source.

20 And we also had some testimony from Mr. Dodson that --  
21 and he was talking about somebody else's study that he said  
22 he believed was true, that the requirement annually for  
23 riparian vegetation is 6,000.

24 So VVWRA is willing to dedicate two, willing to sell  
25 two, and let the other two -- what about -- what happens to



1 them, the 2,000?

2 MR. GALLAGHER: Can you repeat the question. I didn't  
3 follow the end of it.

4 MR. KIDMAN: All right. Well, we have had testimony  
5 that there was a need of 6,000 acre-feet to support the  
6 riparian vegetation. You're willing to dedicate two, you're  
7 willing to sell two. What happens to the other two?

8 MR. GALLAGHER: Well, certainly, I think one of the  
9 premises behind our offer is that we do not accept the  
10 entire responsibility to maintain the riparian habitat. And  
11 I think our agency is willing to contribute to the  
12 maintenance of that riparian habitat, but we do not feel  
13 that we are solely responsible for that maintenance.

14 MR. KIDMAN: I want to confirm that the current  
15 discharges are something like 9700 acre-feet per year.

16 MR. GALLAGHER: Actually, last year, in the water  
17 year, we discharged 9,000. At our growth, we expect it to  
18 be almost 9700 this next year.

19 MR. KIDMAN: Okay. And I also heard projections that  
20 I just scribbled down as 19,400, being -- strike that.

21 Going back to our 50 percent assumption about  
22 consumptive use of M&I, the 9700 would compute back out to  
23 19,400 of production. Is that right?

24 MR. GALLAGHER: That question, I can't answer. I  
25 don't know that.



1           MR. KIDMAN: Well, just under arithmetic, using the 50  
2 percent assumption.

3           MR. GALLAGHER: Oh, if you use a 50 percent, sure.

4           MR. KIDMAN: And I also think there was testimony that  
5 18,000 acre-feet annually is what you project in the future,  
6 2020, I believe it is.

7           MR. GALLAGHER: It was actually 18 million gallons per  
8 day. 18.64, I believe, million gallons per day. I didn't  
9 translate that to acre-feet.

10          MR. KIDMAN: Okay.

11          MR. GALLAGHER: Roughly double of what we discharge  
12 now.

13          MR. KIDMAN: Okay. So you would expect in acre-feet  
14 it would be roughly double?

15          MR. GALLAGHER: Roughly, yes.

16          MR. KIDMAN: And that would convert back out to,  
17 again, double that of original production if you use the --

18          MR. GALLAGHER: If you use the 50 percent, yes.

19          MR. KIDMAN: So if we're going from currently roughly  
20 19,400 of production up to 36,000 of production, almost  
21 doubling it, where is that other water going to come from,  
22 as far as you know?

23          MR. GALLAGHER: Well, my understanding is that's why  
24 the Mojave Water Agency has an entitlement to State Project,  
25 to meet the demands of growth for the area.



1           MR. KIDMAN: And using the word "available" in the  
2 broader sense, if it's not coming from there, from the State  
3 Water Project, where is it going to come from?

4           MR. GALLAGHER: It will probably continue to be  
5 overproduced from the groundwater basin.

6           MR. KIDMAN: Mr. Patterson, in Paragraph 1 on Page 1  
7 of your testimony, you state that you are testifying about  
8 whether the right to pump potable groundwater currently used  
9 to serve the SCLA will remain unexercised or will be sold or  
10 otherwise transferred.

11           In Paragraph 5 on Page 2, you state that currently the  
12 City of Victorville is purchasing potable water from the  
13 City of Adelanto for use on the golf course.

14           Do you know of your own knowledge what Adelanto is  
15 going to do with the additional production capacity they  
16 have available when you offset their demand at the golf  
17 course?

18           MR. PATTERSON: No, I don't.

19           MR. KIDMAN: In Paragraph 7 on Page 3 of your  
20 testimony, you state that you use -- you state that use of  
21 reclaimed water, rather than potable water, for the golf  
22 course will result in a reduction of consumptive use.

23           You heard the hypothetical that I gave to  
24 Mr. Gallagher about using a 50 percent consumption. And if  
25 you take that same water and put it through two uses now,





1 rather than one, before it returns to the system, I'm not  
2 understanding how there is not increased consumption.

3 MR. PATTERSON: I think what I was trying to refer to  
4 here is the -- we were talking about the re-use of the  
5 airport and the water available for the airport. What I was  
6 referring to is if we were able to take the water we're  
7 pumping out of the ground now and not have to pump that for  
8 irrigation purposes, on the overall scheme of the airport,  
9 that would result in less pumping for the airport.

10 MR. KIDMAN: But, again, you don't know what Adelanto  
11 plans to do?

12 MR. PATTERSON: No, I don't.

13 MR. KIDMAN: Mr. Hill, I know you've been looking  
14 forward to this.

15 MR. HILL: Like a trip to my dentist. I was hoping  
16 you'd use up all of your time on these two gentlemen.

17 H.O. BAGGETT: He's still got 35 minutes.

18 MR. HILL: That's a pleasant thought.

19 MR. KIDMAN: In Paragraph 3 on Page 1 of your  
20 testimony you state that VVWRA's proposed reclaimed water  
21 project would increase the cost of complying with the  
22 judgment for the parties to the Mojave Adjudication.

23 MR. HILL: Absolutely.

24 MR. KIDMAN: Is it your contention that increased  
25 costs of complying will not cause harm to the legal rights



1 of the parties to the Judgment?

2 MR. HILL: It's my opinion that in the Adjudication,  
3 the legal right to that recycled water was not established.

4 MR. KIDMAN: Okay. But this project is going to  
5 result in increased costs. And my question is: is it your  
6 opinion that that increased cost is not harm?

7 MR. HILL: I think there is an economic harm. The  
8 question is whether or not I have a legal right to the  
9 reclamation of total-use water.

10 MR. KIDMAN: So you would agree that there is a  
11 harm --

12 MR. HILL: But is it an economic harm.

13 MR. KIDMAN: -- an economic harm, whether or not  
14 that's recoverable or --

15 MR. HILL: Whether or not it's legal?

16 MR. KIDMAN: I'm not asking a legal question.

17 MR. HILL: Okay. Good.

18 MR. KIDMAN: So, based on --

19 MR. HILL: There is --

20 MR. KIDMAN: -- an economic standpoint --

21 I'll ask the questions; you answer them.

22 MR. HILL: Got it.

23 MR. KIDMAN: From an economic standpoint, there's  
24 harm?

25 MR. HILL: Yes.



1           MR. KIDMAN: Are you contending that these users of  
2 water are illegal?

3           MR. HILL: Can you rephrase the question.

4           MR. KIDMAN: Well, are you contending that they are  
5 not legal users? They're going to be economically harmed,  
6 but are they not legal users?

7           MR. HITCHINGS: I'm going to object. That does call  
8 for a legal conclusion.

9           H.O. BAGGETT: Sustained.

10          MR. KIDMAN: Okay.

11          MR. HILL: Phew.

12          MR. KIDMAN: Good.

13                 So, was a portion of your answer to the prior question  
14 where you evaded -- we can strike that too, because you were  
15 talking about, well, they might not have a legal right to it  
16 and so that's not harm.

17          MR. HILL: What was the question?

18          MR. KIDMAN: I'm asking if you have an opinion about  
19 their legal entitlement in answer to the prior question, but  
20 not here?

21          MR. HILL: I'm sorry.

22          MR. KIDMAN: Okay.

23          MR. HILL: I don't understand the question.

24          MR. KIDMAN: I believe when I asked you was there harm  
25 to these water users, your response was economic harm, but



1 you didn't know if there was legal harm.

2 MR. HILL: Correct.

3 MR. KIDMAN: Okay. On Page 2, Paragraph 6, you state  
4 that certain water districts in the Alto Subarea are  
5 conducting a water project for treatment of State Project  
6 water.

7 MR. HILL: Yes.

8 MR. KIDMAN: Do you have any idea how big the  
9 overdraft is in the Mojave River basin?

10 MR. HILL: It's big. I don't have exact numbers with  
11 me, but it's substantial.

12 MR. KIDMAN: And that's on an annual basis it's big?

13 MR. HILL: Yes, sir.

14 MR. KIDMAN: And the cumulative basis is big, too?

15 MR. HILL: Yes, sir.

16 MR. KIDMAN: Is that bigger, or littler, than the  
17 State Water Project entitlement of the Mojave Water Agency?

18 MR. HILL: In my professional opinion, it's larger  
19 than the entitlement capacity.

20 MR. KIDMAN: Are you aware that there was litigation  
21 between the City of Barstow and the City of Hesperia? Under  
22 our Arc Las Flores project, in 1998, it was proposed that a  
23 portion of the Mojave Water Agency's State Water Project  
24 entitlement would be dedicated to the Arc Las Flores project?

25 MR. HITCHINGS: I'm going to object as assuming facts





1 not in evidence, lacking foundation.

2 MR. KIDMAN: I'm asking if he's aware of it or not.

3 H.O. BAGGETT: Just referring to the case.

4 Go ahead with that.

5 MR. KIDMAN: You're not aware of that case?

6 MR. HILL: No, sir.

7 MR. KIDMAN: Thank you. So you are not aware that it  
8 was determined that there wasn't -- let me ask you: As a  
9 result of that litigation, foundationally, the Mojave Water  
10 Agency prepared a master plan for water use in the whole  
11 basin. Have you ever heard of or seen the Mojave Water  
12 Agency master plan?

13 MR. HITCHINGS: I'm going to object again. There are  
14 a number of facts, factual statements being made in these  
15 questions when he's already stated he's not aware of the  
16 litigation. And this does start to border on testimony from  
17 the questioner himself.

18 H.O. BAGGETT: Sustained in part. I think you're  
19 definitely going to get your case in chief.

20 MR. KIDMAN: Are you familiar with the Mojave Water  
21 Agency master plan?

22 MR. HILL: I'm familiar with the Regional Water  
23 Management Plan, not a master plan.

24 MR. KIDMAN: I think you have the correct name.

25 So, do you have any idea that there is surplus State



1 Water Project water available from the entitlement of the  
2 Mojave Water Agency to sell water to this plant that you're  
3 talking about here in --

4 MR. HILL: There is --

5 MR. KIDMAN: -- your testimony?

6 MR. HILL: There is currently unused State Water  
7 Project capacity, yes.

8 MR. KIDMAN: Relative to the overdraft and to that  
9 Regional Water Plan, was there surplus water available?

10 MR. HILL: I don't understand the second question.

11 MR. KIDMAN: You'd indicated you have a familiarity  
12 with this plan.

13 MR. HILL: Yes.

14 MR. KIDMAN: The foundation for this question is that  
15 he has testimony that they have the idea that they're going  
16 to be able to take the water from the State Water Project  
17 and put it into a direct use.

18 H.O. BAGGETT: Yes.

19 MR. KIDMAN: So my question to you is: Based on that  
20 plan, do you believe that there is water available for that  
21 purpose out of the State Water Project water entitlement of  
22 the Mojave Water Agency?

23 MR. HILL: Yes, I do.

24 MR. KIDMAN: And yet you did testify that the  
25 overdraft is bigger, rather than littler, than the State



1 Water Project entitlement?

2 MR. HILL: It is.

3 MR. KIDMAN: In Paragraph 8 on Page 3 of your  
4 testimony, you state that you're well acquainted with the  
5 terms and conditions of the Mojave Adjudication. In  
6 Paragraph 11 on Page 4 of your testimony, you refer to Free  
7 Production Allowance under the Judgment.

8 Are you aware that the Free Production Allowance for  
9 parties in a given subarea can be decreased if the amount of  
10 inflow to the subarea is reduced?

11 MR. HILL: Yes.

12 MR. KIDMAN: And are you aware that the Mojave Water  
13 Agency has already attempted to reduce the Free Production  
14 Allowance in the Centro Subarea because of increased --  
15 let's say, because of decreased inflow to the Centro  
16 Subarea?

17 MR. HILL: In fact, Mojave has already reduced it four  
18 times, and was attempting to do it a fifth time. It's been  
19 reduced 5 percent each of four years.

20 MR. KIDMAN: And do you believe that Mojave Water  
21 Agency will attempt to further decrease the Free Production  
22 Allowance if the amount of VVWRA discharge to the transition  
23 zone is reduced?

24 MR. HILL: Can you repeat that question.

25 MR. KIDMAN: Okay. Yes, I can, because I was reading



1 it.

2 Do you believe that the Mojave Water Agency would  
3 attempt further decrease to the Free Production Allowance in  
4 the Centro area if VVWRA reduces the discharge from its  
5 plants that it's currently making?

6 MR. HILL: I would have to give a qualified answer to  
7 that because --

8 MR. KIDMAN: I asked your belief --

9 MR. HILL: Yeah.

10 MR. KIDMAN: -- so you can qualify it.

11 MR. HILL: Okay. Maybe.

12 MR. KIDMAN: Okay.

13 MR. HILL: Because the calculation is not based upon  
14 the amount of water that the Reclamation Authority puts in  
15 the river, but based on the overall safe yield of the basin.  
16 And since, if the water was diverted to the river, some of  
17 it would be consumptively used, but some of it would become  
18 return flow. So it's difficult to know the overall impact  
19 on Mojave's decision with respect to Free Production  
20 Allowance.

21 MR. KIDMAN: Well, if they did -- let's just make an  
22 assumption on that. Reductions in discharges from VVWRA  
23 results in reduced inflow into Centro, and you've indicated  
24 that reduced inflow into Centro was going to reduce Free  
25 Production Allowance. All correct?





1 MR. HILL: Yes.

2 MR. KIDMAN: So, just we assume that that's going to  
3 happen. In your opinion, is that going to be harm to  
4 producers in the Centro basin?

5 MR. HILL: I can give a qualified no to that. And the  
6 reason is, any water which is diverted to the river must,  
7 under obligation of the Adjudication, be put back in as  
8 additional makeup. So there is actually a net gain in water  
9 supply by the re-use of water.

10 MR. KIDMAN: So if you assume that somebody else makes  
11 it up, there won't be harm. But if nobody did -- which I  
12 didn't ask -- there would be harm?

13 MR. HILL: Okay. Under that set of assumptions.

14 MR. KIDMAN: In Paragraph 13 on Page 4 of your  
15 testimony, you referred to aggregate flow obligation --

16 MR. HILL: Okay.

17 MR. KIDMAN: -- from each subarea to the downstream.

18 I'd like you to tell me what the "aggregate flow  
19 obligation" means.

20 MR. HILL: The Alto Subarea obligation is an  
21 obligation borne by all of the producers within the Alto  
22 Subarea in aggregate, as a group. And, therefore, that was  
23 why I referred to it as an aggregate obligation.

24 MR. KIDMAN: Okay. Not paying attention initially to  
25 who pays or whose the obligation is, I'd like to know what



1 goes into that obligation.

2 Is it true, under your understanding of the Judgment,  
3 which you said you understood, that there is a certain base  
4 flow guaranteed from Alto to Centro?

5 MR. HILL: Yes, there is.

6 MR. KIDMAN: Is it also true that there is a  
7 requirement in the Judgment to not interfere with storm  
8 flows?

9 MR. HILL: By modifications of the Mojave River, yes.

10 MR. KIDMAN: Is it also true that the heart of this  
11 obligation has to do with the maintenance of a water bridge  
12 in the transition zone?

13 MR. HILL: Yes. It's required in the Adjudication by  
14 attention to the transition zone.

15 MR. KIDMAN: All three of those obligations have some  
16 relationship to how much wet water goes into the transition  
17 zone?

18 MR. HILL: Yes.

19 MR. KIDMAN: So, if there's a reduction in the wet  
20 water going into the transition zone, that water is diverted  
21 3 miles up and 1 mile over, is there going to be an impact  
22 on this obligation?

23 MR. HILL: It depends on the location of makeup water,  
24 where the makeup water is replaced to the system. If it's  
25 replaced at the transition zone, no.



1           MR. KIDMAN:  Again, you interject an answer that  
2 wasn't part of the question.

3           I didn't ask you if there was an effect on the  
4 obligation depending on whether or not somebody else makes  
5 up.

6           I asked:  is there an effect on the obligation if the  
7 wet water is not where it used to be?

8           MR. HILL:  Yes.

9           MR. KIDMAN:  So, just to summarize, then, your opinion  
10 is that there's no harm, under the Mojave Judgment, because  
11 somebody else has to pay?

12          MR. HILL:  No, that was not my conclusion.

13          MR. KIDMAN:  Okay.  Tell me why there's no harm.

14          MR. HILL:  Actually, my conclusion at the end of my  
15 testimony was that there were significant economic impacts  
16 to producers in the Alto Subarea, but that in an opinion of  
17 the board of directors, the more important issue was  
18 increasing the quantity of water in the desert, not the cost  
19 of the water.  Because we're in serious overdraft, and our  
20 water rates are lower than most of Southern California.

21          That was the conclusion that I gave in my direct  
22 testimony.

23          MR. KIDMAN:  Okay.  Well, where is the new water  
24 coming from?

25          MR. HILL:  State Water Project water.



1           MR. KIDMAN: But we had testimony from Mr. Gallagher  
2 that that's not part of what's going into the plant now.

3           MR. HILL: That's because there is no water treatment  
4 plant yet on the -- that takes water into the desert.

5           MR. KIDMAN: Based upon the closed system essentially  
6 of the Mojave basin or Mojave area now, what is there in  
7 this project that's going to increase water?

8           MR. HILL: The water is increased, because any water  
9 diverted must, under the obligation of the Adjudication, be  
10 replaced. And the increment which increases water supply is  
11 the return flow from recycled water irrigation.

12          MR. KIDMAN: I see. So what you're saying -- again  
13 not answering the question but giving me a different answer  
14 --

15          MR. HILL: I'm trying to answer.

16          MR. KIDMAN: I know. I'm trying to help you.

17          H.O. BAGGETT: Ask a question.

18          MR. KIDMAN: What you're saying is that there is no  
19 decrease in the water in the system because somebody else  
20 has to buy the water to make up for it?

21          MR. YAMAMOTO: Yes. And I'm probably the largest  
22 payer of that water.

23          MR. KIDMAN: I don't have any other questions.

24          MR. HILL: It wasn't that bad.

25          H.O. BAGGETT: Mr. Vail.





1 MR. VAIL: I have about three or four questions I'd  
2 like to ask of Mr. Gallagher and Mr. Hill.

3 H.O. BAGGETT: Okay.

4 ---oOo---

5 CROSS-EXAMINATION OF FIRST PANEL

6 BY MR. VAIL

7 MR. VAIL: Mr. Hill, I've never met you before this  
8 séance --

9 MR. HILL: Séance?

10 MR. VAIL: -- but I'm one of your customers.

11 MR. HILL: It's a pleasure to meet you, sir.

12 MR. VAIL: I wish I could say that.

13 I look on Page 17 -- or Page 5, Paragraph 17 of this  
14 report, and I find that you're wanting to take an additional  
15 \$4.00 a year out of my pocket to pay for water that you guys  
16 are selling to someone else.

17 My question to you is: how do you consider that fair  
18 and equitable to me? What am I getting in exchange for  
19 that?

20 MR. HILL: You're getting a more reliable water  
21 supply.

22 MR. VAIL: How do you figure it's a more reliable  
23 water supply? You just acknowledged to Kidman's questioning  
24 -- and you fellows don't seem to grasp the loss of water.  
25 He gave you the example of: take four, you lose two, and you



1 have two, and you end up with one left.

2 And how does that give me a reliable water supply when  
3 you've already said, in the aqueduct, if we took all the  
4 supply available --

5 MR. HITCHINGS: I'm going to object. This is a  
6 continuing question with a lot of facts being thrown out  
7 there. I think the question is: How was this more  
8 reliable?

9 H.O. BAGGETT: Yes.

10 MR. VAIL: Okay.

11 So how is this more reliable?

12 Thank you for your help with the question.

13 How is this a more reliable system?

14 MR. HILL: It's more reliable because it adds supply  
15 to an overdrafted basin.

16 MR. VAIL: And how does it add supply?

17 MR. HILL: It adds supply because if you take  
18 1 acre-foot of recycled water out of the river, 1 acre-foot  
19 will have to be put in by the obligation. And the 1 acre  
20 which is taken out, half of that acre returns as water  
21 supply.

22 So for every 1 acre, you've gained a half acre of  
23 water supply.

24 MR. VAIL: This answer you just gave is making the  
25 assumption that that other water is available to be used.



1           Where is that water supply going to come from?

2           MR. HILL:  It's a valid assumption, because that water  
3 supply will come from the State Water Project and, in fact,  
4 is a requirement of the Mojave Adjudication.

5           MR. VAIL:  And then we get back to the same thing that  
6 you just answered for Mr. Kidman, that State Water Project  
7 water, if we were to get every drop of water out of that  
8 that MWA is entitled to, would not be enough to replace what  
9 the system is currently overdrafted to.

10           So how is this going to happen?  I'm curious.  How is  
11 it going to happen?

12           MR. HILL:  That's correct.  And within the  
13 Adjudication, the Mojave Water Agency, as a supplier of  
14 supplemental water, has an obligation to secure additional  
15 entitlement in order to enact the Adjudication.

16           MR. VAIL:  They have --

17           MR. HILL:  That is their responsibility.

18           MR. VAIL:  They have the responsibility and  
19 obligation?

20           MR. HILL:  Yes.

21           MR. VAIL:  Where are they going to find the water if  
22 they have a responsibility and obligation?  Does that mean  
23 that they know where they can get the water?

24           MR. HILL:  I can speculate if you wish.

25           MR. VAIL:  No.  Do they know?



1           MR. HILL: As a person in the water industry, I can  
2 speculate. There will be opportunities, in my professional  
3 opinion, for additional water transfers. Additionally, I  
4 project, within a 20-year time frame, that there will be a  
5 water supply management scenario wherein our High Desert  
6 areas pay the coastal communities to de-salt water, and we  
7 take their State Water Project capacity. That's my opinion.

8           MR. VAIL: That's an opinion, and it's maybe a hopeful  
9 one.

10          H.O. BAGGETT: Do you have a question?

11          MR. VAIL: No.

12          H.O. BAGGETT: Better to ask --

13          MR. VAIL: Do you have a question?

14          H.O. BAGGETT: No.

15          MR. VAIL: Okay. I'll rephrase the question.

16          H.O. BAGGETT: Next one.

17          MR. VAIL: But there's nothing factually known that  
18 they have a ready supply someplace that they can go out, put  
19 their hands on, and bring in?

20          MR. HILL: The reason that Mojave Water Agency, in my  
21 opinion, has not done that evaluation is that they have an  
22 ample supply of entitlement now which is underutilized.

23                 There is not a demand for entitlement, and it's very  
24 expensive to pay for when they're not using it. Every year  
25 they have a substantial amount of entitlement which is





1 unused. More than half of their current entitlement is  
2 completely unused.

3 MR. VAIL: Do you know why?

4 MR. HILL: Because, under the current water dynamics  
5 in the desert, the producers are not paying for imported  
6 water. They're swapping paper water within the basin.

7 MR. VAIL: Is there no money available for MWA to buy  
8 water?

9 MR. HILL: There's no water, because the producers are  
10 not paying --

11 MR. VAIL: No, no. Is there no money available for  
12 the MWA to buy water with?

13 MR. HILL: The Mojave Water Agency is not receiving  
14 money from the producers, because they're buying water  
15 rights within the basin instead of paying for more  
16 expensive, imported water.

17 MR. VAIL: In one of the reports there was a statement  
18 that we got in 1994 that there was 6,600 acre-feet of water  
19 out of the Water Project. Do you agree with that?

20 MR. HILL: I don't understand.

21 MR. VAIL: It was one of your earlier reports. I  
22 can't remember who it was that had that.

23 But that water was put in out of the Rock Springs  
24 turnout?

25 MR. HILL: Okay.



1           MR. VAIL: Up the river. That water went into the  
2 system, became part of the system somehow.

3           And I believe -- maybe this is a question for  
4 Mr. Gallagher. I can't recall exactly how I saw that, but  
5 it seemed like one of the reports said that at no time was  
6 any of the water -- ah, here it is, Page 4 of  
7 Mr. Gallagher's comment:

8           "All the wastewater received, Victor Valley wastewater  
9 would originate as produced groundwater from the Alto  
10 subbasin. Although the California Aqueduct passes through  
11 the Victor Valley, no State Water Project is used for  
12 consumption in the Victor Valley service area."

13           There was 6,600 acre-feet of Project water put into  
14 that area in the Alto basin. And is there any way that  
15 water particles know how to sort themselves out to keep from  
16 getting pumped?

17           MR. GALLAGHER: No.

18           MR. VAIL: And if those particles get pumped, and they  
19 get into somebody's house and get put into the septic  
20 system, is there any way that they can refuse to go to the  
21 sewer plant?

22           MR. GALLAGHER: No.

23           MR. VAIL: So, therefore, it is possible, I guess, for  
24 some of that water to have gone through the wastewater  
25 treatment plant; is that correct?



1           MR. GALLAGHER: I think we've already had testimony to  
2 that fact, yes.

3           MR. VAIL: That is correct. Okay.

4           One other question for Mr. Hill, and then I will  
5 decouple.

6           With your financial plan, I would very much like to do  
7 business with you. I will give you a lot of 50-cent pieces  
8 in exchange for you giving me five dollars for each 50-cent  
9 piece.

10           That's what you're asking all of the people to do; is  
11 that not correct?

12           MR. HITCHINGS: I'm going to move to strike as  
13 argumentative.

14           MR. VAIL: In your --

15           MR. HITCHINGS: He can make that argument later.

16           H.O. BAGGETT: Okay.

17           MR. VAIL: In your statement, in your part here about  
18 each customer has to pay an extra \$4.00 for the use of this  
19 water, in yesterday's commentary concerning the income that  
20 would be generated from the sale of the water, I believe you  
21 said it would come down to about somewhere around 50 cents a  
22 person, that the money would be distributed to these people  
23 through the sewage system rebate program. I can't remember  
24 how it was said. Each person would get about 50 cents from  
25 that, and that's about what the exchange would be.



1           You don't recall that?

2           MR. HILL: I didn't say that.

3           MR. VAIL: One of you did. I don't recall who it was.  
4 I didn't write that down at the time. But that's the end of  
5 my questions.

6           Thank you very much.

7           H.O. BAGGETT: Thank you.

8   ---oOo---

9   CROSS-EXAMINATION OF FIRST PANEL

10    BY STATE WATER RESOURCES CONTROL BOARD

11   BY STAFF

12           MR. MONA: I'm Ernie Mona, and I would like to refer  
13 to Exhibit 1N. I guess that falls under Mr. Gallagher's  
14 testimony.

15           MR. GALLAGHER: Yes.

16           MR. MONA: I'm a little confused with regards to  
17 what's going to happen if -- assuming this Board approves  
18 your petition -- regards to how much water is going to be  
19 actually discharged into the river.

20           This particular table, I assume, shows that assuming  
21 the Board approves the petition, in the year 2001, the VVWRA  
22 is going to be discharging 9967 acre-feet, less 400  
23 acre-feet to SCLA, for a net total of 9567; is that correct?

24           MR. GALLAGHER: 9567? I don't follow that number.

25           MR. MONA: Well, if you subtract 400 acre-feet from --





1 okay -- 800 -- 480 feet from 9967 --

2 MR. GALLAGHER: 9960, yes.

3 MR. MONA: -- would that total discharge into the  
4 river be approximately 9500 acre-feet?

5 MR. GALLAGHER: 9560 acre-feet.

6 MR. MONA: -60 acre-feet?

7 MR. GALLAGHER: Yes.

8 MR. MONA: Now, if VVWRA is going to obligate at least  
9 2,000 acre-feet to Fish and Game, to the river, and assuming  
10 that Fish and Game buys another 2,000 acre-feet, for a total  
11 of 4,000 acre-feet, does that mean that there is going to be  
12 an additional 5500 acre-feet to be discharged into the river  
13 over and above that 400 -- 4,000 acre-feet?

14 MR. GALLAGHER: We don't have any other projects that  
15 we're currently working on that would divert any other flow,  
16 other than the SCLA diversion.

17 And I think -- if I could add to this a little bit.  
18 We testified already that our board is considering a policy  
19 whereby we would sell our effluent, our discharge to the  
20 river to purveyors to use for their makeup obligation.  
21 Certainly, if we are allowed to begin doing that, that would  
22 be a further thing to help guarantee that more and more  
23 water goes to the river.

24 Certainly, if we're generating income, and all we have  
25 to do is discharge it to the river, that helps us meet our



1 obligations to our customers.

2 MR. MONA: So, I guess the bottom line is that someone  
3 would purchase water for the purpose of discharging into the  
4 river, that would add to that total 4,000 acre-feet that may  
5 be permanently allocated, assuming Fish and Game buys the  
6 2,000 plus your 2,000 obligation?

7 MR. GALLAGHER: I think so.

8 MR. MONA: All right. That's all I have.

9 MR. GALLAGHER: Okay.

10 H.O. BAGGETT: Anybody else?

11 MR. PELTIER: I have a question for Mr. Gallagher.

12 Earlier today and also, I believe, yesterday, you  
13 testified that you anticipate flows from the treatment plant  
14 to increase something like double over the next 20 years.

15 MR. GALLAGHER: Yes.

16 MR. PELTIER: Do you anticipate that there will be  
17 additional groundwater withdrawal from the Alto subbasin to  
18 supply part of that?

19 MR. GALLAGHER: I would expect so, yes, unless there  
20 is a water treatment plant built to use State Project water.  
21 Currently, all of our water is produced groundwater, so it's  
22 all coming from the groundwater basin.

23 MR. PELTIER: Even if there is a treatment plant for  
24 the State Water Project water, do you think there could  
25 still be an increase in the amount of groundwater pumping?



1           MR. GALLAGHER: That, I can't answer, because I don't  
2 know how much water the water treatment facility would  
3 produce as compared to what would be produced from  
4 groundwater.

5           MR. PELTIER: I realize you're not a geologist, but I  
6 just have a kind of general question about the way the basin  
7 works up there.

8           The water that is currently being pumped, if there  
9 wasn't pumping going on, would that eventually discharge to  
10 the river under natural circumstances?

11          MR. GALLAGHER: Yes, I believe, historically. And  
12 USGS did a model for the Mojave Water Agency not more than  
13 about a year ago, where what they showed was that,  
14 historically, water entered the groundwater system from the  
15 mountains and from normal precipitation and things like  
16 that. That groundwater then discharged to the Mojave at  
17 various points, and that water formed a lot of the flow, if  
18 you will, of the Mojave River.

19          Now, as groundwater production has occurred over the  
20 years, depressed the groundwater levels in the surrounding  
21 aquifers around the river, and it's curtailed that  
22 groundwater discharge to a large extent.

23          MR. PELTIER: Okay. And the water that would normally  
24 be discharging is now going to the treatment plant?

25          MR. GALLAGHER: From the -- well, a portion of it is.



1 We talked about 50 percent. Some portion of the water  
2 that's produced ends up in our treatment plant.

3 Now, there's still about a third of the population of  
4 the Valley that's still on septic tanks. And I know there  
5 is a credit for septic-tank discharge to groundwater  
6 recharge.

7 MR. PELTIER: Would you say that all the water that is  
8 discharged from the treatment plant flow is groundwater --  
9 is from groundwater that would otherwise have been  
10 discharged to the river channel somewhere upstream from the  
11 treatment plant?

12 MR. GALLAGHER: I think that's fair to say.

13 MR. PELTIER: Okay. Thank you. That's all.

14 H.O. BAGGETT: With that, let's take five minutes,  
15 till 2:30, come back for redirect, recross. And I would  
16 think it's safe to say we'll get Fish and Game's case in  
17 chief, and that's it.

18 MS. MURRAY: And, again, I do object to the unfairness  
19 of having our case in chief be put on and then having a  
20 month go by before we are subject to cross-examination. And  
21 I again urge different ordering to maybe a party that could  
22 have their case in chief and their cross-examination  
23 completed without that huge time differential.

24 H.O. BAGGETT: I'll think about it over the recess.

25 Take five.





1 (A brief recess was taken.)

2 H.O. BAGGETT: Okay. Let's continue. We decided to  
3 do -- we'll do redirect, recross, then we'll just recess,  
4 reconvene January 17th and 18th, I suspect. I know the 17th  
5 is available, and I assume my calendar is clear on the 18th.  
6 Then we will start back up fresh with Fish and Game, and  
7 continue on.

8 I think if we take things out of order at this point,  
9 there potentially is some prejudice to some parties, since  
10 you've relied upon this order from the beginning. And from  
11 my perspective, to bifurcate a party halfway through is just  
12 awkward.

13 We did appreciate the leniency of the parties  
14 yesterday in helping out. But, again, it is awkward, I  
15 think, if we go out of sequence of an order you're used to.  
16 You're used to that procedure. That's how we're going to  
17 deal with the rest of these proceedings.

18 So, with that point, let's get through this. If  
19 you've got flights you can catch earlier and you want to get  
20 out and make a reservation, feel free.

21 With that, Mr. Hitchings, you may continue.

22 MR. HITCHINGS: Thank you, Mr. Chair.

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REDIRECT EXAMINATION OF FIRST PANEL

BY VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY

BY MR. HITCHINGS

MR. HITCHINGS: This is for Mr. Gallagher.

Right before we broke for this recess, Mr. -- is it Peltier?

MR. PELTIER: Peltier.

MR. HITCHINGS: -- Mr. Peltier had asked you a question about your understanding of whether the groundwater that is pumped, used, and then delivered to and treated by VVWRA, whether that ultimately discharged into the river.

Do you recall that --

MR. GALLAGHER: Yes.

MR. HITCHINGS: -- question? And in your answer to that question, do you have any understanding as to whether that groundwater that you were referring to is considered percolating groundwater, versus groundwater that is flowing in a known and definite channel underground?

MR. GALLAGHER: It's percolating groundwater, to my knowledge, mostly from snowmelt and rainfall.

MS. MURRAY: I object. This is going beyond the cross-examination, and it calls for a legal conclusion.

MR. HITCHINGS: I don't think -- I am just asking for his understanding. Mr. Gallagher is a registered professional engineer. He has been in this industry, he



1 knows what waters are being delivered to his treatment  
2 plant, and it's a technical question about his  
3 understanding.

4 H.O. BAGGETT: Would you rephrase the question.

5 MR. HITCHINGS: The question is whether you are aware  
6 or not -- let me start again.

7 Do you understand whether the groundwater that is  
8 pumped, used, and delivered to the VVWRA treatment system is  
9 considered percolating groundwater, or groundwater that's  
10 flowing underground in a known and definite channel?

11 MR. YAMAMOTO: Objection. The testimony required to  
12 define what water --

13 H.O. BAGGETT: I would sustain. We have not gone into  
14 one of our favorite subjects here at the Board, and I don't  
15 see -- that has not been brought into this case so far, and  
16 I would not, I think, interject that.

17 MR. HITCHINGS: Okay. Then we will just leave it at  
18 this, then:

19 In your understanding, is it correct that it is  
20 groundwater that is pumped from underground and delivered to  
21 VVWRA's treatment system?

22 MR. GALLAGHER: Yes.

23 H.O. BAGGETT: That's fair.

24 MR. HITCHINGS: Mr. Gallagher, when Mr. Kidman for  
25 Southern California Water Company was cross-examining you,



1 there had been a hypothetical posed regarding looking at a  
2 block of water and it being 4 acre-feet and, depending upon  
3 the use, whether there would be 2 acre-feet left. And the  
4 hypothetical had a number of assumptions and elements built  
5 in.

6 Do you recall those questions?

7 MR. GALLAGHER: Yes.

8 MR. HITCHINGS: You and I have talked on a number of  
9 occasions, do you recall, about looking at this project from  
10 a mass-balance-type perspective or a water-balance  
11 perspective.

12 Do you remember those conversations?

13 MR. GALLAGHER: Yes.

14 MR. HITCHINGS: What I think will be helpful is: we've  
15 discussed hypothetically using different quantities of water  
16 as a hypothetical how you would look at this from kind of a  
17 water-balance perspective, and I was wondering if you could  
18 go through that exercise, on the overhead, and take us  
19 through how you might view this project from a  
20 water-balance-type perspective.

21 MR. GALLAGHER: Okay. I'd be glad to.

22 To help me in my understanding of this project and  
23 what the impact --

24 MR. HITCHINGS: For the record, maybe we can mark this  
25 as the next exhibit in your testimony. And I think it would





1 be VVWRA Exhibit 1P.

2 MR. GALLAGHER: To understand --

3 MR. KIDMAN: I'm going to object. There was a scope  
4 of the question on cross-examination. Now we're trying to  
5 ask a question based upon that that goes outside of it.  
6 And, in fact, the question that was asked got answered in  
7 terms of, yeah, there is only one left over out of the four.

8 MR. GALLAGHER: I didn't agree to that.

9 MR. KIDMAN: The answer that I got that wasn't to the  
10 question that I asked was we're going to make up for that by  
11 not pumping some other water.

12 I don't believe that this is related to the scope of  
13 direct.

14 MR. HITCHINGS: I obviously disagree with that. We  
15 had had a hypothetical posed regarding what the potential  
16 water level may be, water flows may be in the Mojave River  
17 under certain circumstances, and Mr. Gallagher's testimony  
18 was that there would be -- was that he disagreed with  
19 Mr. Kidman's hypothetical.

20 I think this is instructive, what we're attempting to  
21 do here, to look at what the surface flows may be in the  
22 river in consideration of this project. It's the same  
23 exercise that he was taken through from Mr. Kidman's  
24 cross-examination.

25 MR. KIDMAN: I'll stipulate now on the record that if



1 you add to the hypothetical that if somebody turns off the  
2 pump, would you get a different answer. But that wasn't the  
3 question.

4 The question is -- was: when you take a block of water  
5 and use it twice, do you have more -- more, or less, left  
6 over after the second use than you do when you use it once?

7 MR. HITCHINGS: This is exactly an example of why you  
8 will have more water there.

9 H.O. BAGGETT: I would overrule. I would allow you to  
10 continue. I think that question -- there were some fairly  
11 lengthy questions with lengthy answers.

12 And I would -- proceed.

13 MR. GALLAGHER: Thank you.

14 To understand this, I had to do a mass balance so that  
15 I could understand what water was going in and out of the  
16 system. And for the sake of discussion, I would like to put  
17 some numbers on here to represent flows so that we can work  
18 our way through this.

19 First, I'd like to demonstrate the mass balance using  
20 the potable drinking water groundwater wells that are  
21 currently irrigating the golf course. If we assume that  
22 10,000 acre-feet come out of the Lower Narrows into the  
23 transition zone -- I'm off the map. I'm sorry -- 10,000  
24 acre-feet was coming into the river out of the Lower  
25 Narrows.



1           The production wells that are currently being used to  
2 irrigate the golf course are located in the transition zone  
3 adjacent to the river. And if we assume that 400 acre-feet  
4 are pumped to put on the golf course, the assumption that  
5 we've already talked about with other testimony today is  
6 that about half of that water is lost as transpiration. So  
7 we are going to lose about 200 acre-feet. The other 200  
8 acre-feet go back into the groundwater system, which  
9 eventually reaches the river. Okay?

10           So, if we follow down the river, what we have at this  
11 point is about 9600 acre-feet, because we've removed -- or  
12 produced 400, and at this point we regain 200 acre-feet,  
13 because that's the return flow from the irrigation. So  
14 we're at 9800.

15           Now, if we assume that VVWRA is discharging 9,000  
16 acre-feet to the river, which is our current discharge, the  
17 sum of 9800 and the 9,000, you get 18,800 acre-feet in the  
18 Mojave River downstream of our treatment plant headed north  
19 through the city of Barstow.

20           Now -- and I'll put that back up in a minute so that  
21 we can compare. Now, if we --

22           MR. HITCHINGS: Let me just state for the record.  
23 You've put another overhead up, and this would be, at least  
24 for identification purposes, your next exhibit in line,  
25 which would be 1Q.



1           MR. GALLAGHER: Okay. Again, if we use 10,000  
2 acre-feet, leaving the Lower Narrows headed north, instead,  
3 this time we are going to take 400 acre-feet from VVWRA here  
4 to irrigate the golf course, 200 acre-feet are lost to  
5 transpiration, 200 come back to the groundwater system via  
6 return flow from underneath the golf course. At this point  
7 in the river we have 10,200 acre-feet.

8           Now VVWRA's discharge has been reduced from 9,000 --

9           MR. KIDMAN: Objection.

10          H.O. BAGGETT: Go ahead.

11          MR. KIDMAN: Now we have the beginnings of a  
12 hypothetical that's not part of the VVWRA project.

13          Witness after witness after witness has been asked: do  
14 you know that Adelanto is going to turn off its wells? The  
15 answer has been uniformly, no. A fact not in issue and not  
16 part of this project is now being presented to show that the  
17 project doesn't have the impact that's already been  
18 established.

19          MR. HITCHINGS: This is a hypothetical based upon the  
20 assumption that that would occur. And it's to illustrate  
21 what may occur with that assumption in place. It's another  
22 element of this hypothetical.

23          MR. KIDMAN: It would be relevant if there had been  
24 any testimony that says part of the contract with the golf  
25 course is that they were going to turn off their other





1 pumps. There has not been anything like that to be part of  
2 this project that's been examined.

3 MR. HITCHINGS: If I could add. The key hearing issue  
4 is -- and I believe it's Guy's testimony that speaks to  
5 this: will the right to pump potable groundwater to serve  
6 those places of use remain unexercised, or will the right be  
7 sold or otherwise transferred?

8 His testimony is based upon his knowledge of how those  
9 water rights may be transferred to the SCLA and for the City  
10 of Victorville's use, even though it is Adelanto's contract  
11 with them right now which there is evidence in the record  
12 regarding, there is his statement that it would not be sold  
13 or otherwise transferred.

14 H.O. BAGGETT: I would overrule. Continue this  
15 hypothetical. It has -- this issue was brought up yesterday  
16 by a number of people on cross. Similar hypotheticals were  
17 actually getting distilled to paper, which I think is  
18 useful.

19 Continue.

20 MR. GALLAGHER: Thank you.

21 VVWRA's discharge, which was 9,000 with the previous  
22 scenario, is 8600, because we have diverted 400 acre-feet  
23 for the irrigation at SCLA. Now, when you add the 10,200  
24 and the 8600, once again we have 18,800 acre-feet headed  
25 north to the city of Barstow, the exact same quantity of



1 water that was in the river system or, I should say, the  
2 system in this area as the previous scenario.

3 So there is no difference on a mass-balance basis in  
4 the amount of water available for riparian habitat or the  
5 Mojave River aquifer system with either scenario. That's  
6 why we testified that there was no impact on the environment  
7 from this proposal.

8 H.O. BAGGETT: Just to make it clear. This  
9 hypothetical is based on two assumptions: out-of-basin water  
10 through the State Project and the wells which are now  
11 serving the golf course currently will no longer be drawn  
12 down?

13 MR. GALLAGHER: That's correct.

14 H.O. BAGGETT: That is correct?

15 MR. GALLAGHER: Yes.

16 MS. MURRAY: And I think it's actually correct there  
17 is a third assumption in this hypothetical which is that the  
18 200 -- that 200 acre-feet --

19 MR. GALLAGHER: Correct.

20 MS. MURRAY: -- return.

21 MR. GALLAGHER: And that --

22 H.O. BAGGETT: That's the equation, then?

23 MR. GALLAGHER: Yes. Actually, the equation works out  
24 the same way. If we completely negate the 200, the amount  
25 of water in the river north of our plant is exactly the



1 same.

2 H.O. BAGGETT: Is that a --

3 MR. YAMAMOTO: Sorry. Quick objection.

4 When you say "in the river," you're not saying in the  
5 surface water river, because the testimony has been that  
6 there will be no increase in the surface water based on the  
7 decreased groundwater production; correct?

8 MR. GALLAGHER: Yes.

9 H.O. BAGGETT: You'll get a chance to, under  
10 recross --

11 MR. YAMAMOTO: Sorry.

12 H.O. BAGGETT: But just if you clarify that.

13 MR. GALLAGHER: Yes. The river -- I shouldn't have  
14 said "the river." I mean the system.

15 H.O. BAGGETT: The system. I see. Okay.

16 MR. HITCHINGS: That's all I have on redirect. And  
17 I'm sure this will provide fodder for recross.

18 H.O. BAGGETT: So that's it for redirect.

19 Ms. Murray?

20 ---oOo---

21 RE-CROSS-EXAMINATION OF FIRST PANEL

22 BY STATE OF CALIFORNIA DEPARTMENT OF FISH AND GAME

23 BY MS. MURRAY

24 MS. MURRAY: This will be brief. And, again,  
25 regarding this hypothetical with the three assumptions,



1 would you please turn to your Exhibit 1L, Page 12, the  
2 section marked "Conclusions." This is the CH2M Hill report,  
3 in the second full paragraph. Would you please read that  
4 paragraph out loud: "This is considered..."

5 MR. GALLAGHER: Yes. "This is considered a  
6 conservative analysis because little or no reclaimed water  
7 is likely to reach the groundwater during hot, dry, and  
8 windy months when evapotranspiration is high. It is  
9 unlikely" -- oops -- I'm sorry.

10 "Also, it is unlikely that the golf course will be  
11 overwatered since that makes the turf susceptible to damage  
12 during play."

13 MS. MURRAY: So, in your hypothetical you have a line  
14 from the golf course, indicating 200 would return to the  
15 river. This conclusion in the CH2M Hill report indicates  
16 that that 200 would likely not go back to the river; is that  
17 correct?

18 MR. GALLAGHER: Only during hot, dry, and windy  
19 months.

20 MS. MURRAY: In the desert, how many months of the  
21 year might be hot?

22 MR. GALLAGHER: Depends on the season we've had.

23 MS. MURRAY: Okay. No further questions.

24 ----oOo----

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RECROSS-EXAMINATION OF FIRST PANEL

BY JESS RANCH WATER COMPANY

BY MR. LEDFORD

MR. LEDFORD: I'm sure Mr. Kidman would do this much better, but I'm going to give it a try.

On your hypothetical where you are working with 400 acre-feet, you can do one or two things for me: either add to this one, or maybe create a new exhibit. Is there a way that you would be willing to work through my hypothetical with a similar exhibit, or add to yours?

MR. GALLAGHER: Do you want to keep these --

MR. LEDFORD: Let me explain --

MR. HITCHINGS: These exhibits should stay as they are.

MR. LEDFORD: Could you help him make a new exhibit, and make the base map, and then I'll give you the numbers to put on it.

H.O. BAGGETT: I don't think --

MR. LEDFORD: Let me tell you where I'm headed.

Where I'm headed is the application is -- at least at this juncture -- is for 1,600 acre-feet of water. And we are talking about wells that are producing 400 acre-feet of water.

H.O. BAGGETT: Why don't you just present the hypothetical. You don't need necessarily the numbers. I



1 think we can keep that kind of math in our head. You can  
2 refer to those charts.

3 MR. LEDFORD: We'll try.

4 H.O. BAGGETT: Okay.

5 MR. LEDFORD: There are wells that are in one of  
6 your -- the other one, I think, you put wells on it.

7 H.O. BAGGETT: Are you referring to the first  
8 hypothetical?

9 MR. LEDFORD: The first. Schematically, you have one  
10 well, anyway, the well that produces the 400 acre-feet of  
11 water.

12 Isn't it true that this area here is a well field,  
13 that there's multiple wells in this well field?

14 MR. GALLAGHER: Yes, that's correct.

15 MR. LEDFORD: And isn't it also true that currently  
16 they're producing 400 acre-feet of water for the golf course  
17 only? Currently, they're only producing 400 acre-feet of  
18 water for the golf course?

19 MR. GALLAGHER: From that well field?

20 MR. LEDFORD: No. Adelanto is producing 400 acre-feet  
21 of water to the golf course?

22 MR. GALLAGHER: Oh, yes, that's my understanding.  
23 Yes.

24 MR. LEDFORD: And that the greenbelt and ball fields  
25 and other pieces of this, of this project that you're



1 proposing, currently there is no water being produced for  
2 those projects; is that correct?

3 MR. GALLAGHER: That's correct.

4 MR. LEDFORD: So that would be a new use of water; is  
5 that correct?

6 MR. GALLAGHER: No. Those are previously landscaped  
7 areas that were allowed to go dormant when George Air Force  
8 Base closed.

9 MR. LEDFORD: Let me back up a second. The City of  
10 Adelanto has a Free Production Allowance; is that correct?

11 MR. GALLAGHER: I assume so, yes.

12 MR. LEDFORD: As part of the Adjudication -- whatever  
13 that number is. Do you know of your -- do you personally  
14 know whether or not they have exceeded their Free Production  
15 Allowance?

16 MR. GALLAGHER: I don't know that answer.

17 MR. LEDFORD: Well, let's assume for a moment that  
18 they do exceed their Free Production Allowance, what do they  
19 have to do? If they exceed their Free Production Allowance,  
20 what does the City of Adelanto have to do?

21 MR. GALLAGHER: They have to obtain replacement water  
22 to make up the difference between their FPA and their actual  
23 production.

24 MR. LEDFORD: And where do they buy that water from?

25 MR. GALLAGHER: They can either buy it from other



1 producers in the Alto basin or producers in the Centro basin  
2 or the two of them, or they can pay the Mojave Water Agency  
3 to put State Project water back into the system.

4 MR. LEDFORD: All right. So if they're currently --  
5 my assumption is they are currently using all of their  
6 entitlements now, and in order to provide the water for  
7 SCLA's greenbelt, they would have to run their pumps more in  
8 the same well field, then they would be overproducing their  
9 entitlement, based on that hypothetical.

10 MR. GALLAGHER: If they were over and beyond their  
11 FDA?

12 MR. LEDFORD: Correct.

13 MR. GALLAGHER: Yes.

14 MR. LEDFORD: If you were selling them the  
15 1600 acre-feet of water, then they would not have to buy  
16 replacement water by either retiring a farmer's production  
17 or buying water from the Mojave Water Agency; is that  
18 correct?

19 MR. GALLAGHER: Do you mean if I sold them reclaimed  
20 used for the golf course?

21 MR. LEDFORD: Correct. And the total 1600 acre-feet.

22 MR. GALLAGHER: Yes.

23 MR. LEDFORD: You sold them 1600 acre-feet of water,  
24 that would be -- that would be 1200 acre-feet of new  
25 production that would be offset.





1 MR. GALLAGHER: Is that a question?

2 MR. LEDFORD: Yes. Is that correct?

3 MR. GALLAGHER: 1200 -- I guess I don't understand for  
4 sure exactly what you're asking me to answer.

5 MR. LEDFORD: They're producing 400 acre-feet, and we  
6 are assuming that part of the 400 acre-feet, that that's  
7 part of their FPA.

8 So the second piece of the hypothetical was: in order  
9 to sell SCLA -- to provide SCLA with another 1200 acre-feet  
10 of water to get to 1600 acre-feet, they would have to either  
11 retire production from a farmer or buy water from the Mojave  
12 Water Agency. One of the two. That's the only two  
13 alternatives they have presently; is that correct?

14 MR. GALLAGHER: As far as I know, yes.

15 MR. LEDFORD: And so that is new-produced water. They  
16 are either retiring farmers' production, which takes water  
17 out of production, or they're buying water and putting it in  
18 at Rock Springs or one of the other recharge basins. Fair  
19 enough?

20 MR. GALLAGHER: Okay.

21 MR. LEDFORD: So that is newly produced water,  
22 brand-new water, or retired water. One or the other.

23 MR. PATTERSON: Mr. Ledford, I think the issue would  
24 be --

25 H.O. BAGGETT: Wait. It was on redirect?



1 Can you answer it now?

2 MR. GALLAGHER: Can you repeat the question, please.

3 MR. LEDFORD: Sure.

4 H.O. BAGGETT: I'm not quite sure what the question  
5 was myself.

6 MR. LEDFORD: The 1200 acre-feet -- the difference  
7 between 400 and 1600 -- the 1200 acre-feet of water. In  
8 order for the City of Adelanto or the City of Victorville to  
9 provide that water to SCLA, under the hypothetical that  
10 they're already using all their FPA -- hypothetically  
11 assuming that they are -- they will only have two choices:  
12 retire water from farmers, or buy water from Mojave Water  
13 Agency.

14 And so that is new water. That's water that they have  
15 not produced before.

16 H.O. BAGGETT: Question? Or statement?

17 MR. LEDFORD: Is this correct? Is it new water?

18 MR. GALLAGHER: I guess you have to define "new  
19 water."

20 MR. LEDFORD: Well, if it comes from Mojave Water  
21 Agency, from State Project water, is it new water?

22 MR. GALLAGHER: That's imported water.

23 MR. LEDFORD: All right. Imported water. That's what  
24 I'll term it. Okay.

25 If they retire farmers' water, it's -- or transfer



1 farmers' water to them, it's new water to either one of  
2 those water districts, new water being water they didn't  
3 have before?

4 MR. GALLAGHER: I don't think I would agree with that.  
5 If they retire paper water or they buy paper water, that's  
6 already water that already exists in the groundwater basin,  
7 and it was allocated to somebody.

8 MR. LEDFORD: Right. But it wasn't allocated to them.  
9 In order for them to -- in order for the City of Victorville  
10 or the City of Adelanto to get that water entitlement, they  
11 had to acquire it. They didn't have it before.

12 MR. GALLAGHER: Okay. I would agree with that.

13 MR. LEDFORD: And you would agree that the  
14 Adjudication was based on --

15 MR. HITCHINGS: I'm going to object to --

16 H.O. BAGGETT: Let him complete asking the question.

17 How does this -- could you somehow show me how this is  
18 getting back to the scope of the redirect. I see you're  
19 definitely going someplace, but how does it relate? This is  
20 redirect on a fairly narrow hypothetical that was drawn.

21 MR. LEDFORD: Okay.

22 H.O. BAGGETT: Can you show us how you're getting  
23 there? You'll get a chance to make your case in chief this  
24 January.

25 MR. LEDFORD: I understand.



1           The 1200 acre-feet of water is going to be new  
2 production, it's water that's not being -- is not currently  
3 being produced from that well field for that purpose.

4           MR. GALLAGHER: Is that a question?

5           MR. LEDFORD: Yes.

6           MR. GALLAGHER: Well, again, you're calling it new  
7 water, and if they're buying --

8           MR. LEDFORD: Let me change that. I'm saying it's new  
9 production.

10          MR. GALLAGHER: I don't think I can say yes to that.  
11 I can qualify an answer to that.

12          If they buy paper water from a farmer that previously  
13 was irrigating an alfalfa field and he decides to quit  
14 farming because he's going to sell his water, then it is not  
15 new water. It's simply transferred water.

16          MR. LEDFORD: But the production -- the production of  
17 those two agencies is new production. It's not water that's  
18 currently being produced?

19          MR. GALLAGHER: No. I don't agree with that.

20          MR. LEDFORD: No?

21          MR. GALLAGHER: No.

22          MR. LEDFORD: Okay. Well, let's take the farmers out  
23 of the equation, and let's just say that the production  
24 comes from -- under this hypothetical, the production comes  
25 from the Mojave Water Agency; they have to buy the water





1 from Mojave Water Agency; there is no farmer water  
2 available; increase their FPA. Presently, then, the only  
3 other source of water would be Mojave Water Agency; is that  
4 correct?

5 MR. GALLAGHER: Imported water, yes.

6 MR. LEDFORD: Now, that, at least, is new -- is  
7 imported water into the basin; is that correct?

8 MR. GALLAGHER: Imported water would be new to the  
9 basin.

10 MR. LEDFORD: That imported water has a direct benefit  
11 to the basin; is that correct?

12 MR. GALLAGHER: You mean as far as increasing the  
13 supply of water?

14 MR. LEDFORD: Correct.

15 MR. GALLAGHER: Yes.

16 MR. LEDFORD: Because only half of that each acre-foot  
17 is going to be consumed; is that correct?

18 MR. GALLAGHER: That's under the assumption that we  
19 talked about before.

20 MR. LEDFORD: All right. Okay. So, of this -- of  
21 this 1200 acre-feet of water, 600 acre-feet of that water is  
22 going to be a direct benefit to the basin; is that correct?

23 MR. GALLAGHER: It's going to be a direct -- again,  
24 you're going to have to define for me what you mean by  
25 "benefit."



1           MR. LEDFORD:  It's not going to be consumed.  It's  
2 going to actually go back into the basin.

3           MR. GALLAGHER:  Do you mean it's going to be sewerred,  
4 or is it going to be applied to the ground, or what?

5           MR. LEDFORD:  Well, I believe the Adjudication -- the  
6 concept of the Adjudication was all produced water, all new  
7 water could have 50 percent consumptive use.  Or half of it  
8 would be of benefit to the basin.

9           So this brand-new water that gets put in at Rock  
10 Springs, rather than then gets produced out of this well  
11 field, half of it is going to go back into the basin.

12          MR. GALLAGHER:  Okay.

13          MR. LEDFORD:  If you become a seller of water, you  
14 become a third party selling water that is already in the  
15 basin, that will increase the consumption.  Which is where I  
16 believe Mr. Kidman was coming from.

17          And a better analysis of that is you have said you own  
18 all of the water.  So if you took all 9,000 acre-feet of  
19 water and sold it someplace, then it would not be return  
20 flow to the basin; is that correct?

21          MR. GALLAGHER:  Unless it's used for some other  
22 beneficial use.

23          MR. LEDFORD:  But it would not be direct return flow  
24 to the basin; it would go someplace else?

25          MR. GALLAGHER:  No, I don't think I can answer that,



1 because if it's a beneficial use on a golf course, it again  
2 becomes a return to the basin, because the basin overlies  
3 the groundwater.

4 MR. LEDFORD: All right.

5 MR. GALLAGHER: Or I should say the golf course  
6 overlies the basin.

7 MR. LEDFORD: But at the very least, without knowing  
8 where it's going to go, at the very least 50 percent of that  
9 9,000 acre-feet is not going to go into the Mojave River?

10 MR. GALLAGHER: Under the assumptions that we talked  
11 about with 50 percent, yes.

12 MR. LEDFORD: Now, would it be possible if you -- it  
13 was determined by this Water Board that you owned all of  
14 that water, that you could sell the water to somebody that  
15 had a higher consumptive use, say, a hundred percent  
16 consumptive use, is that a possibility?

17 MR. GALLAGHER: Sure.

18 MR. LEDFORD: So, assume for the moment that the High  
19 Desert Power Project wanted to buy 4,000 acre-feet of water,  
20 could you sell them 4,000 acre-feet?

21 MR. GALLAGHER: I can't. Their permit denies them to  
22 use reclaimed water.

23 MR. HITCHINGS: I'm going to object. This is going  
24 way beyond anything --

25 H.O. BAGGETT: I would sustain that.



1           MR. HITCHINGS:  -- that was in Mr. Kidman's original  
2 hypothetical and this hypothetical.

3           H.O. BAGGETT:  I would agree.  We are getting -- I  
4 would sustain that.

5           Can you -- this was a very narrow redirect.  Can you  
6 -- we're introducing totally new facts to focus it on.

7           MR. LEDFORD:  One other point, and that is that where  
8 the well field is, are you aware -- I believe Mr. Hill's  
9 testimony yesterday was that that well field is in a -- I  
10 want to say a pumping depression; correct?

11          MR. GALLAGHER:  Cone depression, I think is the right  
12 term for that.

13          MR. LEDFORD:  Do you agree that that well field, that  
14 global well field, is in a cone depression?

15          MR. GALLAGHER:  Yes.

16          H.O. BAGGETT:  Mr. Kidman.

17                                 ---oOo---

18                                 RE-CROSS-EXAMINATION OF FIRST PANEL

19                                 BY SOUTHERN CALIFORNIA WATER COMPANY

20                                 BY MR. KIDMAN

21          MR. KIDMAN:  Well, what's wrong with this picture?

22          Mr. Gallagher, since you've now gone into the area of  
23 hydrology and how the system works, and you've been here  
24 through all the testimony -- you didn't go back to  
25 Victorville with Mr. Hill; is that right?  So you've heard





1 all the testimony that's been presented in these  
2 proceedings?

3 MR. GALLAGHER: Yes.

4 MR. KIDMAN: On your little diagram -- did we have  
5 this diagram A or something so we can talk about it?

6 MR. HITCHINGS: This is 1P, I believe.

7 MR. GALLAGHER: This is P, yes.

8 MR. KIDMAN: 1P?

9 MR. HITCHINGS: And then the other one is 1Q.

10 MR. KIDMAN: Okay. On 1P, where you've got the number  
11 10,000 written, is that approximately -- is that intended to  
12 depict where the Lower Narrows is located?

13 MR. GALLAGHER: Yes, that's correct. I think I stated  
14 that.

15 MR. KIDMAN: Okay. And there's a label "VWRA," and  
16 that's where the plant is located?

17 MR. GALLAGHER: That's correct.

18 MR. KIDMAN: Okay. You saw all this testimony about  
19 what the difference between the surface water elevation --  
20 excuse me -- the stream surface elevation and the  
21 groundwater elevation was, did you not? Didn't you see  
22 that?

23 MR. GALLAGHER: Yes.

24 MR. KIDMAN: And generally the conclusion is that  
25 between the Lower Narrows and the plant, this stream is a



1 losing stream?

2 MR. GALLAGHER: Yes.

3 MR. KIDMAN: So what's wrong with this picture is that  
4 that arrow that goes back from the golf course flag to the  
5 stream can't happen.

6 MR. GALLAGHER: It's a constant in both diagrams, and  
7 we can eliminate that if the Hearing Officer would like to  
8 see it that way, because it has no impact on what the final  
9 amount of water is. I mean, final water in both scenarios  
10 is the same.

11 MR. KIDMAN: Why don't we do that. Maybe we can call  
12 that 1R, or something.

13 MR. HITCHINGS: Okay. Why don't we make it Southern  
14 California Water Company whatever their next exhibit is.

15 MR. KIDMAN: No. We haven't started introducing any  
16 exhibits, and this is not my witness.

17 And I didn't start this.

18 MR. HITCHINGS: Whatever you want to call it is fine.  
19 I don't want to call it VVWRA Exhibit 1R. It's not one of  
20 our exhibits.

21 H.O. BAGGETT: I would agree.

22 If you want to use it as an exhibit on recross.

23 MR. KIDMAN: All right. For purposes of trying to  
24 understand the illustration and seeing whether it depicts  
25 reality may be instructive for illustrative purposes, but



1 one element of reality is that 200 of return goes somewhere  
2 else. It doesn't go back to the river.

3 MR. GALLAGHER: Can I ask why you say that.

4 MR. KIDMAN: Because this is a losing stream, and the  
5 groundwater gradient is away from the river. Isn't that the  
6 testimony that we've all heard? And you're now a hydrology  
7 expert.

8 MR. GALLAGHER: I think what we've also heard in  
9 testimony is that the Adjudication assumes that 50 percent  
10 of the water returns to the system. That's all that 200  
11 acre-feet intended to depict.

12 MR. KIDMAN: I'm okay with that. But let's put the  
13 arrow going off somewhere besides going back to the river.  
14 Because it doesn't go back to the river in that area,  
15 because this river is a losing stream.

16 MR. GALLAGHER: I know, but --

17 MR. KIDMAN: The gradient is going the other way.  
18 That's why it's a losing stream --

19 MR. GALLAGHER: Well, if I may --

20 MR. KIDMAN: -- based upon your expert opinion as a  
21 hydrologist --

22 MR. GALLAGHER: Well, and the reason I say that is  
23 because every month on our discharge monitoring reports to  
24 the Regional Board, we also have monitoring wells at our  
25 treatment plant, and we have to report on a monthly basis



1 the direction of groundwater flow.

2 On almost every month, the direction of groundwater  
3 flow is northeast of our plant.

4 MR. KIDMAN: Wonderful. You're discharging 10,000 or  
5 9700 acre-feet of water per year at the plant. And we've  
6 also seen testimony that below the plant, the river is being  
7 maintained. The surface flow of the river is being  
8 maintained below the plant. Okay.

9 So, that's the first objection to this exhibit. It's  
10 not reality, because that 200 doesn't go back to the river.  
11 It is not something that's going to be available for the  
12 surface flow.

13 MR. HITCHINGS: I'm sorry. I'm going to object here  
14 whether -- I don't know if that's a question or a statement  
15 or -- if it is a question, I didn't hear one.

16 H.O. BAGGETT: Yes. I haven't heard the question. I  
17 heard a statement. We should strike it.

18 MR. HITCHINGS: I move to strike.

19 MR. KIDMAN: We'll be striking everything that has  
20 anything --

21 H.O. BAGGETT: As I already ruled on your objection to  
22 this hypothetical.

23 MR. HITCHINGS: I'd like to still get a motion to  
24 strike.

25 MR. KIDMAN: All right.





1           Would you agree that since this is a losing stream,  
2   that it's not likely that this water that returns to the  
3   system is going to get back into the surface flow of the  
4   river very quickly?

5           MR. GALLAGHER:  Can you clarify?  Do you mean the 200  
6   acre-feet that we're pointing to on that arrow?

7           MR. KIDMAN:  Yes.

8           MR. GALLAGHER:  I don't believe that's going to make  
9   its way to the surface flow, no.

10          MR. KIDMAN:  Okay.  And that's the same in both of  
11   your diagrams?

12          MR. GALLAGHER:  It's identical, yes.

13          MR. KIDMAN:  So, at least in both diagrams, we should  
14   be seeing that we're down to 9600 at this point?

15          MR. GALLAGHER:  Pardon?

16          MR. KIDMAN:  We don't have that 200 going back in  
17   there, so that the flow in the stream moving north from the  
18   Narrows goes down from 10,000 to 9600 to -- and then goes  
19   back up to 9800.  It should stay at 9600; isn't that right?

20          MR. GALLAGHER:  That would be correct.

21          MR. KIDMAN:  In both diagrams?

22          MR. GALLAGHER:  Well --

23          MR. KIDMAN:  Let's look at the other diagram now.

24          Now, I would draw this to say that -- put the well  
25   back in there and draw a dotted line to indicate that the



1 well is no longer producing. That was what you were saying  
2 is happening, so --

3 MR. GALLAGHER: Okay.

4 MR. KIDMAN: The well is still there, but you're  
5 assuming that it's no longer producing; is that correct?

6 That's correct?

7 MR. GALLAGHER: Yes.

8 MR. KIDMAN: So -- and you don't have any contract  
9 with the City of Adelanto that says they're going to turn  
10 off that well?

11 MR. GALLAGHER: No, I don't have any contract with the  
12 City of Adelanto.

13 MR. KIDMAN: Excuse me?

14 MR. GALLAGHER: I don't have a contract with the City  
15 of Adelanto.

16 MR. KIDMAN: And there is nothing in your project to  
17 guarantee that that well is going to get turned off?

18 MR. GALLAGHER: No.

19 MR. KIDMAN: And the only way that we can get to the  
20 result that you are proposing that's the same in both is if  
21 that well gets turned off; is that right?

22 MR. GALLAGHER: Yes.

23 MR. KIDMAN: And you don't have any contract that says  
24 that well is going to get turned off. So is there some  
25 other way, other than just assumption, that we know that



1 well is going to get turned off?

2 MR. GALLAGHER: What, if anything, Adelanto does with  
3 that well after this project ends or -- I should say, after  
4 we start reclaiming water, is beyond the scope of our work.

5 MR. KIDMAN: So if Adelanto, in its own supreme  
6 discretion in the exercise of its water rights, decides to  
7 not to turn off that well, then your hypothetical doesn't  
8 show, in fact --

9 MR. GALLAGHER: Yes.

10 MR. KIDMAN: I didn't even finish.

11 MR. GALLAGHER: Okay.

12 MR. KIDMAN: It does not show, in fact, that the flows  
13 are going to be the same after your plant is done?

14 MR. GALLAGHER: Can you repeat the question, please.

15 MR. KIDMAN: Yes, I can.

16 There is nothing in your project plan that guarantees  
17 that your second diagram is going to depict reality?

18 MR. GALLAGHER: The diagram was intended to do a mass  
19 balance on the water. That includes the aspects of this  
20 project, and this project only.

21 MR. KIDMAN: Right. And what aspect of your project  
22 was it that assures that the Adelanto well is going to get  
23 turned off?

24 MR. GALLAGHER: I think I've already testified we  
25 don't have a contract with Adelanto. We --



1 MR. KIDMAN: So that's not part of your project;  
2 right?

3 MR. GALLAGHER: That's correct.

4 MR. KIDMAN: Okay. I am going to ask the question:  
5 If the State Resources Control Board says to Adelanto,  
6 "Turn off your well," as a condition of VVWRA's project,  
7 would that be one way to make sure that the outcome is the  
8 same on both diagrams?

9 MR. GALLAGHER: If the State of California tells them  
10 to shut it off, I don't see what choice they would have.

11 MR. KIDMAN: Are you aware of -- that Adelanto -- at  
12 least as far as you know, is Adelanto entitled to produce  
13 water under the Mojave River Adjudgment?

14 MR. GALLAGHER: We looked the other day in the  
15 Judgment, and they are listed as a stipulated party.

16 MR. KIDMAN: And as far as you know, does the City of  
17 Adelanto have a water right license granted by the State  
18 Water Resources Control Board to produce water from the  
19 Mojave River?

20 MR. GALLAGHER: Well, as far as a license, you're  
21 getting out of my area of expertise.

22 MR. KIDMAN: Do you think they claim an appropriative  
23 right granted by the State Water Resources Control Board?

24 MR. GALLAGHER: My understanding is they have water  
25 rights.





1 MR. KIDMAN: Right. So, in order to get the outcome  
2 to be the same, so there's 1880 or 1800 -- excuse me --  
3 18,800 -- what is that up there?

4 MR. GALLAGHER: Yes.

5 H.O. BAGGETT: Appears to be.

6 MR. KIDMAN: 18,800?

7 MR. GALLAGHER: Yes.

8 MR. KIDMAN: And that was the same on both diagrams?

9 MR. GALLAGHER: Yes.

10 MR. KIDMAN: The only way that can come out the same  
11 is if Adelanto turns off that well voluntarily, or the State  
12 Water Resources Control Board orders them to do it.  
13 Otherwise, your project doesn't have that same impact  
14 between the two hypotheticals?

15 MR. GALLAGHER: Can I qualify my answer?

16 MR. KIDMAN: You can qualify away.

17 MR. GALLAGHER: Okay. Within the scope of this  
18 project, that production from that groundwater well would  
19 cease for the purposes of irrigation of that golf course.

20 If there is some other use that the City of Adelanto  
21 would want to apply that water for, they would have to go  
22 through the CEQA process, just like anybody else, to get  
23 permission to do that project. For a new project, maybe --

24 MR. KIDMAN: For a new project that might be true.  
25 But that's not what we're asking.



1           Do they have an obligation to turn it off under  
2 contract?

3           MR. GALLAGHER: No. I think we've already stated  
4 there is --

5           MR. KIDMAN: They don't have an obligation or  
6 contract -- they don't have an obligation from the State  
7 Water Resources Control Board to turn it off. You don't  
8 know, as part of your project, that they will turn it off?

9           MR. GALLAGHER: No.

10          MR. KIDMAN: So, Mr. Hill is pretty free with other  
11 people's money; you're pretty free with other people's water  
12 rights; is that right?

13          MR. GALLAGHER: No, that's not right.

14          MR. HITCHINGS: I'm going to move to strike that as  
15 argumentative.

16          H.O. BAGGETT: I would sustain the motion to strike.  
17 With that, Mr. Yamamoto.

18          MR. YAMAMOTO: We're good. Thank you, sir.

19          MR. VAIL: I concur.

20          H.O. BAGGETT: With that, okay, I think all the  
21 parties have had a chance. We will continue -- let me ask  
22 the parties a question.

23                 Is 9 o'clock or 10 o'clock better? I know a lot of  
24 you are coming from down south. Does it matter?

25                         (A discussion was held off the record.)



1 H.O. BAGGETT: Ten o'clock is better. Then we will  
2 continue on the 17th, I think, is the date I gave.

3 MS. MURRAY: And are we going to be in this hearing  
4 room?

5 H.O. BAGGETT: We'll be in this hearing room at  
6 10 o'clock on the 17th. Our new hearing rooms won't be done  
7 until March. And tentatively -- we'll get this in writing  
8 and send it out. We will go the next day, which appears --

9 Before we recess, though, I'm trying to get a sense of  
10 timing here.

11 Before we adjourn, we should enter exhibits from  
12 Victor Valley.

13 MR. KIDMAN: No objection.

14 H.O. BAGGETT: Unless there is objection, they're  
15 entered.

16 So I assume Fish and Game is going to take an hour for  
17 case in chief. Is it a fair assumption, two hours at least,  
18 to cross-examine between all the parties?

19 I'm trying to get --

20 MR. HITCHINGS: I estimate for Fish and Game witnesses  
21 about a half an hour to 45 minutes for each witness. Most  
22 likely closer to half an hour. So an hour total. An hour  
23 and 15 minutes.

24 H.O. BAGGETT: It's speculative here, but do you have  
25 a guess?



1 MR. LEDFORD: A guesstimate?

2 H.O. BAGGETT: Yes.

3 MR. LEDFORD: Hour for case in chief.

4 H.O. BAGGETT: Hour for case in chief. Any  
5 cross-examination time?

6 MR. LEDFORD: No.

7 H.O. BAGGETT: I'm just trying to get a handle on if  
8 we can realistically do this in a day. It doesn't look like  
9 it. We've got an hour there, two hours here. Now they're  
10 up to four.

11 MR. YAMAMOTO: Are we talking about cross-examination?

12 H.O. BAGGETT: Cross-examine and case in chief both.

13 MR. KIDMAN: I believe that on case in chief we will  
14 have 15 minutes of opening statement and 20 minutes of  
15 limited testimony. We have one witness, so we will be only  
16 half an hour or so. I'm not planning to cross-examine  
17 anybody else's witnesses unless something comes up.

18 H.O. BAGGETT: So that's four and a half.

19 MR. YAMAMOTO: We would estimate we have about half an  
20 hour for cross-examining the other parties, and then we  
21 would say half an hour for our case in chief. But we don't  
22 know how long the cross-examination will be.

23 MR. HITCHINGS: I would say about 20 minutes.

24 H.O. BAGGETT: For each of the parties?

25 MR. HITCHINGS: I would say 20 minutes to half an hour





1 for Mr. Ledford, Southern California Water Company, and  
2 Apple Valley Ranchos; and probably about an hour total for  
3 Fish and Game's witnesses.

4 H.O. BAGGETT: So about six and a half.  
5 Mr. Vail?

6 MR. VAIL: I won't be able to be here. That's  
7 starting tax time. I'll be in Victorville.

8 H.O. BAGGETT: Well, we can try to do it in a long day  
9 if people come here with that anticipation. Is there any --

10 MS. MURRAY: We are willing to start at 9 o'clock.

11 MR. KIDMAN: Maybe we ought to start at 9:00.

12 H.O. BAGGETT: Start at 9:00, and just go till we're  
13 done. If we go to 5:00 or 6:00 and take a short lunch.

14 So we will plan on continuing with Fish and Game's  
15 case in chief on the 17th at 9:00 a.m. in this room on the  
16 17th of January, and try to go for it till we're done.

17 MS. MURRAY: It may be prudent to reserve the room for  
18 the 18th also in the event that it doesn't go. Notice it  
19 that way, the 18th if necessary.

20 H.O. BAGGETT: Any other comments before we go?  
21 We're done.

22 (At 3:20 p.m. the hearing was adjourned.)

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REPORTER'S CERTIFICATE

STATE OF CALIFORNIA    )  
                                  ) ss.  
COUNTY OF SACRAMENTO    )

I, SANDRA VON HAENEL, certify that I was the official court reporter for the proceedings named herein, and that as such reporter, I reported in verbatim shorthand writing the named proceedings;

That I thereafter caused my shorthand writing to be reduced to typewriting, and the pages numbered 225 through 425, inclusive, constitute a complete, true, and correct record of said proceedings:

IN WITNESS WHEREOF, I have subscribed this certificate at Sacramento, California, on the 4th day of January, 2001.

\_\_\_\_\_  
SANDRA VON HAENEL  
CSR No. 11407



