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WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

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APPEARANCES

BOARD MEMBERS

Ms. Tam Doduc, Chairperson

STAFF

Ms. Barbara Leidigh, Staff Counsel IV

Ms. Jean McCue, Water Resources Control Engineer

Ms. Diane Riddle, Environmental Scientist

ALSO PRESENT

Ms. Amy Aufdemberge, Bureau of Reclamation

Ms. Tina Cannon, Department of Fish and Game

Ms. Cathy Crothers, Department of Water Resources

Mr. Arthur Godwin, Merced Irrigation District

Mr. John Herrick, South Delta Water Agency

Mr. Michael B. Jackson, California Sportfishing Protection Alliance

Ms. Erin Mahaney, State Water Resources Control Board, Staff Counsel

Mr. Paul Ryan Minasian, San Joaquin River Exchange Contractors

Mr. Dante John Nomellini, Central Delta Water Agency

Mr. Ken Petruzzelli, San Joaquin River Group Authority

Mr. Jon Rubin, San Luis and Delta Mendota Water Authority

Mr. Clifford Schulz, State Water Contractors

Mr. Thomas J. Shepharde, San Joaquin County

Ms. Jeanne Zolezzi, Stockton Eastern Water District

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1 PROCEEDINGS

2 CHAIRPERSON DODUC: Good morning. We're ready to
3 resume with the Delta Salinity Draft Cease and Desist
4 Order and Water Quality Response Plan Hearing.

5 I'm Tam Doduc, Chair of the Water Board, hearing
6 officer for today. With me are Counsel Barbara Leidigh
7 and Jean McCue and Diane Riddle from the Division of Water
8 Rights.

9 We will resume where we left off from last week
10 with the cross-examination of the witnesses from CSPA,
11 starting with the Division of Water Rights prosecutorial
12 team.

13 I'm sorry.

14 MS. AUFDEMBERGE: Excuse me. This is Amy
15 Aufdemberge with the Department of Interior. I just have
16 a point of order that may interest the Board.

17 CHAIRPERSON DODUC: All right.

18 MS. AUFDEMBERGE: It looks like there will not be
19 a successful settlement between Bureau of Reclamation and
20 the enforcement team. And that being said, we don't
21 intend to put on any witnesses, but will -- we'd like to
22 take our turn and make an opening statement or something
23 to that effect and reserve any arguments for our closing
24 brief as well.

25 CHAIRPERSON DODUC: All right.

1 Mr. Rubin.

2 MR. RUBIN: Madam Chair, Jon Rubin for San Luis
3 and Delta-Mendota Water Authority and Westlands Water
4 District.

5 I also -- just have a procedural question.
6 Either now or some point during the day today I would hope
7 that the Chair could address scheduling. I know that we
8 do have a date set for tomorrow. As I understand it, that
9 date remains.

10 CHAIRPERSON DODUC: Yes, it does. We are
11 resuming tomorrow.

12 MR. RUBIN: And therefore, it would be very
13 helpful for me to get a -- obtain a sense of the parties
14 that are seeking to present rebuttal. And if it's going
15 to exceed tomorrow, the next available date -- we are
16 potentially going to be calling a witness for rebuttal who
17 would be coming up from the southern part of San Joaquin
18 Valley, and would rather have him not come up if it's not
19 necessary tomorrow and we're extended to another day.

20 CHAIRPERSON DODUC: Mr. Herrick.

21 MR. HERRICK: Thank you, Madam Chair. John
22 Herrick, South Delta Water Agency.

23 The witness that I had that has been delayed, Mr.
24 Salmon, I told him to be here this morning. So I was just
25 assuming that, if we can, when this panel is done with

1 cross-examination, we'll just get him on quickly.

2 CHAIRPERSON DODUC: We'll do so.

3 MR. HERRICK: Thank you very much.

4 CHAIRPERSON DODUC: All right. And for those of
5 you who were here yesterday -- I see some familiar
6 faces -- we are conducting fire drills. So if an alarm
7 comes off, exit the nearest exit. And I think our meeting
8 place is the park.

9 Okay. Hopefully it won't happen today. But you
10 never know.

11 All right. With that, unless there's anything
12 else, please, we'll proceed with the cross-examination.

13 STAFF COUNSEL MAHANEY: Good morning. Erin
14 Mahaney for the Division of Water Rights prosecution
15 teams.

16 I just have a couple brief questions for Mr.
17 Odenweller.

18 CROSS EXAMINATION

19 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE
20 BY MS. ERIN MAHANEY, STAFF COUNSEL, representing the
21 Division of Water Rights:

22 Q On page 2 of your testimony, which is CalSPA Exhibit
23 3, on page 2 you testified that the Board has equated a
24 water quality standard with the method of compliance; is
25 that correct?

1 A That's my belief.

2 Q Have you reviewed the cease and desist orders in this
3 proceeding?

4 A I've reviewed the cease and desist order that was --
5 the draft of which was on the website prior to the
6 hearings, yes.

7 Q Do those cease and desist orders require the agencies
8 to adopt a particular method of achieving compliance with
9 the salinity objectives?

10 A I don't recall the language. I need to look at a copy
11 of it, if we have one.

12 The language that I'm looking at now has the
13 Bureau, in this case, shall ensure that the
14 permanent barriers are installed and operational or
15 equivalent measures are implemented by January 1, 2009.

16 So, no. In this case it does provide for an
17 alternative.

18 STAFF COUNSEL MAHANEY: All right. Thank you.

19 CHAIRPERSON DODUC: Central Delta Water Agency.

20 MR. NOMELLINI: Dante Nomellini, Central Delta
21 Water Agency.

22 This is just a question for the panel.

23 CROSS EXAMINATION

24 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

25 BY MR. DANTE JOHN NOMELLINI, ESQ., representing the

1 Central Delta Water Agency:

2 MR. NOMELELLINI: Would a violation of the .7 EC
3 standard at Brandt Bridge have any adverse impacts on
4 fish?

5 MR. ODENWELLER: I believe there is a potential
6 for an adverse effect to occur. It would depend on the
7 conditions that were in place when the violation occurred
8 and what the cause of the violation was. But it could

9 Q All right. If we assume there was an a outflow in the
10 downstream direction in the San Joaquin River at Brandt
11 Bridge, and the .7 was violated because of an insufficient
12 flow, would that cause an adverse impact to the fish in,
13 let's say, June of any particular year?

14 A A reduction or elimination of downstream direction of
15 flow in June could affect out-migrant salmon. It could
16 also expose resident fishes to the draft of the pumps at
17 the state and federal facilities, or a higher probability
18 of them being drafted to the pumps. So, yes, it could
19 have those kind of effects. Again, it depends on the
20 nature of conditions at the time of the violation.

21 Q All right. And if the violation occurred because of a
22 reverse flow of some type, that would also be damaging to
23 the fish, would it not?

24 A It could be, yes.

25 Q Is there a potential for damage to fish from a

1 violation of the .7 EC in July?

2 A It's less, for the salmonids are basically out of the
3 system -- all migrant salmonids are out of the system at
4 that point. So there's less concern in that regard. And
5 it could have a potential effect on resident fishes and
6 potentially on Delta smelt in that we're in that corner of
7 the Delta.

8 Q Now, would that be true for August and September as
9 well?

10 A I think the concern would become less in August and
11 September, and then start building again in October and
12 November and December.

13 MR. NOMELLINI: Okay. Thank you. That's all I
14 have.

15 CHAIRPERSON DODUC: Thank you.

16 South Delta Water Agency.

17 MR. HERRICK: Thank you, Madam Chairman. John
18 Herrick for the South Delta Water Agency.

19 CROSS EXAMINATION

20 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

21 BY MR. JOHN HERRICK, ESQ., representing the South Delta
22 Water Agency:

23 Q Dr. Lee, and let me start with you.

24 I believe your testimony noted that there were
25 other water quality problems associated with the South

1 Delta; is that correct?

2 A That is correct.

3 Q And those included the dissolved oxygen problem?

4 A Yes. In the Old River channel down near the Tracy
5 Boulevard Bridge.

6 Q And it's correct that there's both a dissolved oxygen
7 standard for the deep water ship channel as well as one
8 through the rest of the channels in the South Delta; is
9 that correct?

10 A Correct.

11 Q And let's assume that the water quality at Vernalis is
12 maintained by -- at this time by releases from New
13 Melones. Is that a fair assumption, during the summer?

14 A That's what I understand.

15 Q And those releases are made pursuant to the interim
16 operations plan for New Melones; is that correct?

17 A I believe so.

18 Q Now, in order to maintain a certain water quality at
19 Brandt Bridge, the standard that's at issue here, there
20 could be additional releases to dilute the water at
21 Vernalis so that by the time it reaches Brandt Bridge it
22 would meet the standard; is that correct?

23 A That would be necessary, yes.

24 Q And would those additional releases or flows, I'll
25 say, would those additional flows assist or -- would those

1 additional flows assist in meeting the dissolved oxygen
2 requirements in the deep water ship channel?

3 A Well, any additional flow, as we've shown in the
4 review, helps to control the DO problem. So to the extent
5 that the water gets through to the channel, then the
6 additional flow is definitely helpful.

7 Q And if that additional flow goes into Old River
8 instead of going down the main stem, could that additional
9 flow also help the dissolved oxygen in those channels?

10 A Potentially. Although the actual flow, say, through
11 Old River at the Tracy Boulevard Bridge may not be related
12 to any significant extent to the additional flows that
13 come in through the head of Old River because the main
14 flow path is not down that route but up through Grant
15 Line.

16 Q Okay. But the additional flow may be a benefit to the
17 dissolved oxygen in some of the channels of Old River or
18 off Old River; would that be correct?

19 A Potentially.

20 Q And I believe your testimony talked about other, I'll
21 say, contaminants or constituents of the water that are of
22 concern in the South Delta; is that correct?

23 A Yes.

24 Q And, again, additional flow which might be used to
25 meet the South Delta salinity standards, would those

1 affect those constituents and contaminants in the South
2 Delta?

3 A Yet be careful what the origin of that flow. If it's
4 New Melones, yes. If it's, you know, from the west side,
5 it may make it worse.

6 Q So depending on how the projects may choose to meet
7 the 0.7 standard would affect those constituents or
8 contaminants; is that correct?

9 A Correct.

10 Q And would you describe how that affects them.

11 A Well, the additional flow could either dilute,
12 depending on its origin, or add to. It would certainly
13 move the position of the impacts. And this is the
14 issue -- because as you control the position of water in
15 there through the barriers, you will in fact control the
16 impact zones in the South Delta. So where you have
17 toxicity or excessive bio-accumulation of mercury or
18 organochlorine pesticides, those are all influenced by how
19 the water moves through the South Delta.

20 Q Besides creating dilution, could it also help flush
21 some of those constituents out of areas where they're
22 accumulating?

23 A If the flow got into those areas, yes.

24 Q Thank you.

25 Dr. Lee, in your preparation for this have you

1 reviewed the various water quality data associated with
2 the measuring stations in the South Delta?

3 A Yes, this was actually done before this. I was
4 reviewing the characteristics of the South Delta for a
5 report that I wrote, oh, a year and a half ago now on
6 South Delta water quality issues. And I did review the
7 data for all of the DWR stations.

8 Q And in your opinion, is there a history of violations
9 of those water quality standards?

10 A Yes.

11 Q And can you put a -- can you sort of describe -- can
12 you describe the scope of those violations?

13 A Well, there's low DO. It's measured there at several
14 of the stations. So we have a recorded record of low DO
15 in the South Delta channels where the DWR is monitoring.

16 Other parameters. I guess salinity -- yeah, EC
17 would be there. But that's the only -- about the only
18 thing they measure that is related to the other
19 parameters.

20 Q Based on the past practices of the projects in meeting
21 the salinity standards and your review of those recorded
22 measurements, do you have an opinion as to whether or not
23 there's a likelihood of future violations of the salinity
24 standards?

25 A Yes.

1 Q And what is that opinion?

2 A I believe that there's a high probability of future
3 violations of the salinity standard at Vernalis and in the
4 South Delta.

5 Q Okay. Could you briefly describe the basis for that
6 conclusion?

7 A Well, with respect to Vernalis, I have reviewed the
8 what's called CDEC data -- this is the DWR database. And
9 I've also contacted the regional board staff to obtain
10 from them their review of the salinity in the San Joaquin
11 as part of their efforts. And they have compiled a list
12 of violations, say, at Vernalis over the years that have
13 occurred in the EC, both for the 1 and the .7 standard.

14 Q And Dr. Lee, you may not be -- you may not feel
15 qualified to comment on this, but I want to ask.

16 Are you familiar enough with the operations of
17 the projects with regard to South Delta flows to have
18 opinion on those operations?

19 A Operations of the projects -- to export projects, I
20 think so.

21 Q Okay. Are you aware of any activities or actions the
22 projects proposed to take that will allow them to meet the
23 0.7 standard at the three interior Delta stations?

24 A I believe that there is a feeling, but certainly not
25 substantiated at this point, that the operable barriers

1 may help to relieve the problems of salinity violations in
2 the South Delta channels.

3 Q And I want to draw a distinction between actions and
4 activities that the projects are currently undertaking and
5 those additional actions that they might take to meet the
6 standard that went into effect on April 1st, 2005. So let
7 me re-ask that question.

8 Are you aware of any additional or new actions
9 that the projects are undertaking which would lead them
10 to -- allow them to meet the new 0.7 standard rather than
11 the actions they've taken in the past when the 1.0
12 standard existed?

13 A I'm not aware of any new ones, no.

14 MR. HERRICK: Thank you. That's all I have.

15 CHAIRPERSON DODUC: Thank you, Mr. Herrick.

16 San Joaquin County.

17 MR. SHEPHARDE: No questions. But I wanted to
18 introduce myself. I'm Thomas J. Shepharde. I'm here in
19 place of Ms. Gillick today. A Mr. Mike McGrew will be
20 here tomorrow in place of Ms. Gillick.

21 CHAIRPERSON DODUC: Thank you very much.

22 Department of Water Resources.

23 MS. CROTHERS: Good morning. My name is Cathy
24 Crothers. I'm staff counsel with the Department of Water
25 Resources.

1 Good morning, Chairman Doduc and Board staff.

2 I have a few questions for Dr. Lee.

3 CROSS EXAMINATION

4 BY MS. CATHY CROTHERS, STAFF COUNSEL, representing the
5 Department of Water Resources:

6 MS. CROTHERS: You've been mentioning some --
7 making some points about the flow and relationships to
8 water quality, is that correct? You're acknowledging that
9 there is a relationship between flows and water quality in
10 the South Delta?

11 DR. LEE: Potentially, yes.

12 Q Are you aware of one of the -- can you -- well, you're
13 also describing some of the project activities related to
14 temporary barriers projects.

15 Are you aware that the temporary barriers project
16 has a major purpose of increasing water levels for South
17 Delta irrigators?

18 A That's what I understand.

19 Q You mentioned that the effects of the temporary
20 barriers project can cause impacts to water quality in the
21 South Delta channels. In what areas of the South Delta
22 channels specifically do you see those problems?

23 A Probably the most noticeable in Old River near the
24 Tracy Boulevard Bridge. That gets to be a -- pretty much
25 a stagnant area, very little flow through there.

1 Q On page 3 of your testimony and also I think in your
2 oral testimony last week, you mentioned that during
3 irrigation the tail water of ag irrigation can concentrate
4 salts up to three times in the discharge; is that correct?

5 A Yes, that's what's been found.

6 Q So in agricultural practices when water is applied to
7 the crops, the crops pick up the water and leave behind
8 some salts; is that correct?

9 A Yes.

10 Q Are those salts like chlorides -- I guess I should be
11 more specific. Do the chlorides -- are they fairly
12 soluble in water?

13 A Yeah, essentially in my review back in '89 when I
14 first got into this, I looked at that issue to see if
15 possibly you had calcium carbonate deposition on the Delta
16 islands as part of irrigation. That looks like it may
17 occur. The chlorides will be soluble.

18 Q So if you -- if a farmer irrigates and applies water
19 to the crops and some of that water is picked up from
20 the -- picked up by the plants and some is retained in the
21 interstitial spaces of the soils, there will be some water
22 that is in excess; is that correct?

23 A There has to be water out of the fields to keep the
24 salinity under control.

25 Q And so that's the tail-water discharge that you spoke

1 of?

2 A Yes.

3 Q So when the ag -- South Delta agricultural farmers,
4 when they discharge water in the areas, say, for instance,
5 of Old River near Tracy Road Bridge, does that water
6 include an increased concentration of salts than was
7 originally applied to the crops?

8 A Yes.

9 Q So is that water then that's discharged from the
10 agricultural diversion in that area that's discharged
11 locally, say, for instance, in Old River, does that then
12 tend to increase the salinity in that channel in that
13 local area?

14 A Yes, it does.

15 Q So if water movement is limited in that area, does
16 that water quality become degraded?

17 A Yes.

18 Q So if there were monitoring stations in that area,
19 will that show an increase in water quality in terms of
20 the EC values?

21 A I believe it does.

22 Q Is there a relationship then to the San Joaquin River
23 flows at that point and those channel water quality
24 values?

25 A There may be. The difficulty there is the actual flow

1 through that Old River -- that section of the Old River
2 channel, because of the barrier at the end of that
3 channel, there's very little flow through there. And so
4 you would tend to build up pollutants of a variety of
5 types from all sources in there.

6 Now, how the San Joaquin River flow -- if you've
7 got the significantly high flows through there, then it
8 may help. But if it's a typical low summer, I -- probably
9 not much going through there.

10 Q So there probably isn't a big relationship to the San
11 Joaquin River water quality and flows at that specific
12 channel related to those increased local degradation?

13 A Well, I think -- now, when you add water quality, you
14 change the character of the question. Because if it's
15 flow, it's one thing. If it's water quality -- if you're
16 coming in at .7 --

17 Q No, excuse me. I should rephrase that. Because,
18 you're right, that was kind of a compound ambiguous
19 question.

20 I just wanted to try to establish and distinguish
21 the local channel water quality and the influences that
22 relate to its degradation with that water quality on the
23 San Joaquin River.

24 A Well, ultimately that water quality is determined by
25 what comes down through Vernalis, how much Sacramento

1 River water gets mixed in there -- and there is some, but
2 not a lot -- and the local discharges. So the Vernalis
3 water is a factor, because there is a -- you know, as I
4 said, .7 coming in is going to set the background for what
5 the farmers have to live with.

6 Q So I guess you would agree that the water quality
7 situation in that area of the channel is fairly complex?

8 A Yes, it's not easily predicted.

9 Q Thank you.

10 You also, Dr. Lee, mentioned that you've looked
11 at the past violations of the -- I'm not sure if you
12 distinguished -- of the DWR and Bureau in terms of their
13 water right permit conditions; is that correct?

14 I want to clarify something. You mentioned
15 violations. Could you explain in a little more specifics
16 this point: You said that there has been a history of
17 violation of the low DO requirement in the San Joaquin
18 River. Can you explain what permit it is that was being
19 violated?

20 A I don't know if there's a permit -- I don't think
21 there is with respect to DWR, USBR with respect to DO,
22 say, in the deep water ship channel that I know of.

23 Q So can I clarify that when you were talking about
24 violations of the DO water quality requirement, that was
25 not a violation of the Department's or the Bureau's

1 permits?

2 A I haven't looked at the details as to whether there's
3 a mother -- what I call a "mother would" statement about
4 protecting water quality in their operations. And there
5 may be, so I'd have to look at the permit.

6 Q Well, Dr. Lee, you say you understand some of the
7 operations of DWR and the Bureau. Are you fairly familiar
8 with the permit requirements of the Department of Water
9 Resources in the Delta?

10 A Not the details of the permit, no.

11 Q So when you were saying that you have seen numerous
12 violations of DWR's permits in the past, what basis were
13 you making that statement?

14 A Did I say "permit"?

15 Q You -- as I heard it -- and maybe this is a good point
16 to clarify. When you were asked the question do you
17 believe there's a history of -- well, maybe -- well, I
18 can't repeat it because I'm not -- unless we had the
19 recorder read it back.

20 But in general I thought you were implying that
21 there were histories of violations under DWR's permits.

22 A I believe I said, and what I should have said if I
23 didn't, is that there's violations of water quality
24 objectives in the South Delta as measured at the DWR, what
25 they call, barrier monitoring stations. The data I have

1 examined, but not relative to what's in the permit.

2 Q Well, then when you use the term "violation," are you
3 using it more in a generic sense and not in terms of
4 permit requirements that are being regulated?

5 A Yeah, I am talking about the -- what I'd call Clean
6 Water Act or State Water Board conditions and -- like at
7 Vernalis, I know that from having read that now.

8 The Clean Water Act, I mean the channels are
9 under the regional board's requirements. They are
10 listed -- 303(d) listed for impaired water bodies, and I'm
11 familiar with that aspect. And any violations of the
12 water quality objectives of the regional board, that's the
13 issue I have been focusing on.

14 Q So you're looking at it from a regional board
15 perspective. And isn't it correct that the regional board
16 controls these water quality requirements through waste
17 discharge requirements that implement the Clean Water Act?

18 A The regional board has a number of options for
19 controlling that. And they're working on learning how to
20 do that, particularly with respect to agricultural
21 discharges.

22 Q So as far as you know then, there are no permit
23 violations being made by DWR and Bureau of Reclamation
24 related to, for example, the DO requirement?

25 A Again, I would have to look at the details of the

1 permit to see if there's not a statement in there, as
2 there is in many, with respect to protecting water
3 quality.

4 Q And your statement about violations by the DWR and
5 Bureau then are not related to our water right permits?

6 A Except at Vernalis.

7 Q Does DWR have a permit requirement to maintain water
8 quality at Vernalis?

9 A I understand that the State Board through 1641 has a
10 established an EC standard at Vernalis.

11 Q But is that a requirement in DWR's permit conditions?

12 A It's in 1641. I don't know if that's in the permit or
13 not.

14 Q Well, 1641 is what implements our -- is the conditions
15 of our permits.

16 A Yeah, I have not read the permit. So you're in to
17 questions -- until I read it, I can't really answer these
18 definitively.

19 Q Have you read D-1641 permit requirements for DWR?

20 A I have read D-1641.

21 Q You mentioned that there have been numerous
22 exceedances of the Vernalis salinity requirement. Can you
23 specifically tell me how many times that Vernalis salinity
24 requirement has been exceeded in the last 10 years, since
25 1995?

1 A No. But I can provide you with a summary developed by
2 the regional board from '86 to 2001.

3 Q Does it break down these exceedances since, for
4 example, '96 to 2001? Do you have any breakdown of these
5 exceedances?

6 A I have the data to do that. But this particular table
7 I have with me does not. It's the overall.

8 Q Would you be surprised to learn that there have been
9 no exceedances of the Vernalis salinity objective since --
10 in the last ten years?

11 A No, I'm familiar with the statements with regard to
12 that situation. I've been following very closely the San
13 Joaquin River Water Quality Management Group activities.
14 And I believe that with respect to the 30-day average in
15 this relatively wet period, there have been no violations.

16 Q So what would be the basis for believing there is a
17 future threat of exceedance cede this Vernalis objective?

18 A Drought. Drought conditions. The exceedances, if you
19 go through the database, are there. If you go to CDEC,
20 you can see it time after time where the 700 is exceeded
21 or even a thousand is exceeded.

22 Q Under what type of hydrology?

23 A These are dry conditions, in the early -- late
24 eighties, early nineties.

25 Q There is that -- oh, excuse me. Sorry.

1 A That's all right. Go ahead.

2 Q That was considered years of critically dry hydrology?

3 A Yes, part of that at least.

4 Q But that was -- specifically to that period, do you
5 have any reason to believe except for severe drought
6 conditions there would be an exceedance of the Vernalis
7 objective?

8 A If you go through the database, it's an Excel
9 spreadsheet, and you look at that, and you'll see that
10 periodically there are exceedances. Now, I have not gone
11 back to understand why those occurred. And some of them
12 are outside of the drought period. And so you'd have to
13 understand better why those occurred. But there appears
14 to be some.

15 Q Has there been any recent analysis on the San Joaquin
16 River flows that may change those conditions that were
17 reflected in the past database?

18 A Well, there's the Cal sims II modeling effort, which
19 attempts to address some of that.

20 Q So that future conditions may be somewhat different
21 than have been seen in the past?

22 A Yeah, to the extent that you can believe Cal sims II
23 is a reliable predictor of water quality.

24 Q You also mentioned there were some -- that the only
25 other violations you've been able to identify besides the

1 DO are related to EC. And that is specifically the topic
2 of this hearing. So I would like to clarify that with a
3 little more detail, if you may. Could you explain that a
4 little better?

5 A As part of my review that I did on the water quality
6 problems in the South Delta, which resulted in the picture
7 of the report that I showed on my slides, there's a
8 50-page report of Delta water quality issues. And so
9 South Delta is one of these. And so I've gone through and
10 looked at the DWR monitoring data spreadsheets for the --
11 what I believe they call the barrier monitoring stations,
12 which I believe are the same thing as the compliance
13 points, or very close at least. And so I have looked
14 there to see what concentrations of DO, in particular, but
15 also some of the other parameters. And EC is one of
16 those.

17 Q So when you were speaking of violations during that
18 review, were -- are you aware, was there a permit
19 requirement of DWR to maintain water quality at a certain
20 EC in the -- in that data that you reviewed during that
21 period?

22 A I have not reviewed the details of the permit to know
23 if that's actually in the permit. There are water quality
24 violations in terms of the Clean Water Act.

25 Q Again, I would kind of try to clarify when you speak

1 of violations in this proceeding, because it's a rather
2 loaded term. We're talking about water right violations.
3 And I'd like you to clarify when you're distinguishing a
4 violation under a Clean Water Act waste discharge
5 requirement, which isn't a -- as you've mentioned before,
6 isn't a requirement under DWR's water rights. And to
7 clarify, if that is what you're speaking about.

8 A To the extent that DWR and the Bureau have to comply
9 with D-1641 -- if you read D-1641, as I have done, and
10 looked specifically at what other water quality
11 requirements set forth in there, that's pretty broad. And
12 so this could readily be a requirement for DWR to comply,
13 not cause Clean Water Act violations. I don't know that,
14 but that's what I believe.

15 MS. CROTHERS: Thank you. I have no other
16 questions.

17 CHAIRPERSON DODUC: The San Joaquin River Group
18 Authority?

19 MR. PETRUZZELLI: Ken Petruzzelli here for the
20 San Joaquin River Group.

21 We have no questions at this time.

22 CHAIRPERSON DODUC: Thank you.

23 Bay Institute?

24 Not seeing anyone.

25 Department of Fish and Game?

1 Not seeing anyone.

2 Contra Costa Water District?

3 Not seeing anyone.

4 I should start these hearings earlier.

5 Merced Irrigation District and San Luis Canal

6 Company.

7 MR. GODWIN: Good morning. Arthur Godwin for

8 Merced Irrigation District.

9 My first questions are for Dr. -- or Mr.

10 Odenweller.

11 CROSS EXAMINATION

12 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

13 BY MR. ARTHUR GODWIN, ESQ., representing the Merced

14 Irrigation District:

15 MR. GODWIN: Mr. Odenweller, you're here today as

16 an expert in fisheries; is that right?

17 MR. ODENWELLER: That's correct.

18 Q On -- let's see, where did that go?

19 Oh, there it is.

20 On page 7 of CalSPA Exhibit 3a, you reference

21 fish kills in the South Delta during the late summer and

22 fall?

23 A Yes.

24 Q Are those fish kills the result of Brandt Bridge EC

25 changing from 1.0 EC to .7 EC?

1 A I don't think we know.

2 Q Okay. Do you know if those fish kills have anything
3 to do with salinity in the South Delta?

4 A Not directly. It's just a concern that I have about
5 the potential for that change, among others.

6 Q Yeah, you mentioned that earlier when you were
7 responding to a question for Mr. Nomellini that salinity
8 has a potential for affecting fish.

9 Have you personally done any studies in the South
10 Delta to look at the effects on fish on changing the EC at
11 Brandt Bridge from 1.0 to .7?

12 A No, I have not. And my testimony should have been to
13 the mechanism by which the salinity change occurred --

14 Q Well, we're just looking at salinity.

15 A -- as opposed to salinity change itself.

16 Q We're just looking at salinity.

17 A Okay.

18 Q Assume --

19 A No, I have not done any studies in the South Delta on
20 that.

21 Q Are you aware of any other studies that have looked at
22 the effect of change in salinity from 1.0 to .7 EC at
23 Brandt Bridge and how that would affect fish in the South
24 Delta?

25 A No, I have not.

1 Q Are you aware of any studies that have looked at the
2 effects of salinity on fish in the South Delta?

3 A Specifically to the South Delta, no.

4 Q Assume for the moment that all conditions are equal,
5 the only difference is that we have a difference in
6 salinity. Flows are the same, same level of pesticides,
7 chlorides, et cetera. The only difference is we have a
8 difference in salinity. What would be the effect on fish?

9 A At this point I don't know.

10 Q Okay.

11 A But --

12 MR. GODWIN: This next question's for Dr. Lee.
13 Earlier when Ms. Crothers was asking you about some
14 violations at Vernalis, you had mentioned that there had
15 been some violations in the early nineties during
16 critically dry periods; is that correct?

17 DR. LEE: Yes.

18 Q Are you aware that since that time the operations on
19 the Merced River have changed so that there are now higher
20 flows in the summertime?

21 A I am not familiar with the details of the Merced River
22 operations.

23 Q Are you aware that since the early nineties operations
24 on the Tuolumne River have changed so that now there are
25 higher flows during the summertime?

1 A Again, it's the same answer.

2 Q And are you aware of changed conditions on the
3 Stanislaus River since that time?

4 A Yes. But the problem is in the early nineties -- and
5 I've read some of the statements by the Bureau in terms of
6 reports to the State Water Board on problems. And there's
7 one particular letter that I saw where in the nineties
8 that there's no way to release any water for dilution
9 because we're out of water on those reservoirs. So I
10 believe that while they may be able to manipulate water to
11 some extent through re-operation, as they're doing, there
12 will be drought conditions -- there could be drought
13 conditions where there's no water to manipulate.

14 Q Right. But those conditions all occurred in the late
15 eighties and early nineties. And as I indicated,
16 operations have changed on all the other rivers upstream
17 of that point. So what happened in the nineties may not
18 occur again; is that correct?

19 MR. JACKSON: I'm going to object to the form of
20 the question as testimony. He's assuming facts that are
21 not in evidence here.

22 CHAIRPERSON DODUC: I agree.

23 Please go on to your next question.

24 MR. GODWIN: No further questions.

25 CHAIRPERSON DODUC: Northern California Water

1 Association.

2 Seeing no one here.

3 San Joaquin River Exchange Contractors Water
4 Authority.

5 MR. MINASIAN: Paul Minasian for the Exchange
6 Contractors.

7 We pass.

8 CHAIRPERSON DODUC: San Luis and Delta-Mendota
9 Water Authority.

10 MR. RUBIN: Good morning. John Rubin for the San
11 Luis and Delta-Mendota Water Authority and Westlands Water
12 District.

13 Brief foundational questions for you, Mr. Lee.

14 CROSS EXAMINATION

15 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

16 BY MR. JON RUBIN, ESQ., representing the San Luis and
17 Delta-Mendota Water Authority and Westlands Water
18 District:

19 MR. RUBIN: First question I have for you, Mr.
20 Lee is: How would you characterize your expertise

21 DR. LEE: Well, I tried to do the -- with respect
22 to experience in this I guess it's Exhibit 2, my expertise
23 goes from -- my undergraduate education was in the area of
24 public health and water quality, environmental quality
25 issues at San Jose State; and a Masters Degree in Public

1 Health, University of North Carolina, where again it was
2 focusing on environmental issues as it relates to
3 protecting public health. At Harvard I got a Ph.D. in
4 Environmental Engineering, focusing on aquatic chemistry.
5 And then for 30 years I taught graduate level
6 environmental engineering, environmental sciences, during
7 which I conducted about, oh, something over \$5 million of
8 research and published 500 papers and reports.

9 Since then, I retired in '89, and I've been a
10 full-time consultant and published another 500 papers and
11 reports on various projects that I've been involved in,
12 where most of my work is on chemicals, their sources,
13 impacts, fate transport issues. So water quality criteria
14 standards, effects on aquatic life.

15 I also have extensive experience in domestic
16 water supply issues. My Masters and Ph.D. dissertations
17 and thesis were on water treatment issues. I've been past
18 Chairman of the Quality Control of Reservoirs for the
19 American Water Works Association, so forth.

20 Q I appreciate your response. I probably should have
21 been a bit more specific.

22 In terms of the testimony that you have offered,
23 which has been marked as CSPA Exhibit 1, your expertise is
24 intended to be focused in what area?

25 A No, I think it's Exhibit 2, is it not?

1 CHAIRPERSON DODUC: It's 1.

2 DR. LEE: The expertise is -- oh, the testimony's
3 Exhibit 1, correct.

4 What I have focused on there is the work that I
5 have been doing since 1989 when I first became involved in
6 Delta water quality issues. I was a distinguished
7 professor in New Jersey at the time and was asked to be a
8 consultant on Delta wetlands. And so I came in and
9 reviewed Delta water quality as it applied to the Delta
10 Wetlands Project in 1989. And I have been following Delta
11 water quality closely since then. Been involved in all
12 the CALFED activities.

13 And over the past couple years I was -- well,
14 since '99 I was heavily involved in the DO problem in the
15 San Joaquin River ship channel. I was coordinating PI for
16 a \$2 million project devoted to the study of that issue.

17 I have published extensively on Delta water
18 quality issues since that time.

19 MR. RUBIN: Do you consider yourself an expert in
20 the effects of salinity on plants?

21 DR. LEE: I have some knowledge of that area.

22 Q Would you consider yourself an expert?

23 A That I understand the general aspects of that, yes.
24 To subtle details, I'm not an expert on that. But I have
25 had projects where I was asked about managing excessive

1 salinity as it relates to possibly using it as irrigation
2 water. This was back in the early eighties, outside of
3 this area.

4 Q You mentioned in response to a previous question of
5 mine, and I think it's also evident from your testimony,
6 CSPA Exhibit 1 and your statement of qualifications, CSPA
7 exhibit 2, that you've prepared a number of reports; is
8 that correct?

9 A Yes.

10 Q Have those reports been peer reviewed?

11 A All of my reports are made available to anyone in
12 interested. For example, my comprehensive report was
13 distributed in all the drafts to over 200 people asking
14 for comments. Anybody I could find who thought -- I
15 thought might be interested or knowledgeable was given the
16 opportunity to comment, and many did.

17 Q I understand that in the scientific community the
18 concept of peer review is in essence a formal process.
19 Have your reports gone through that type of a formal
20 process?

21 A In reports of this type -- see, peer review typically
22 applies to professional papers per se or research
23 proposals. Major reports sometimes are peer reviewed,
24 sometimes they're not --

25 Q And you --

1 A -- in a formal process.

2 Q I'm sorry.

3 The reports that you've prepared have been
4 reports that are not these type of formal papers that
5 you've discussed that go through the formal review
6 process?

7 A The reports that I have provided have received -- or
8 have had the opportunity by anyone I could find to provide
9 a more comprehensive peer review than the normal formal
10 peer review that occurs for papers.

11 Q Okay. Thank you.

12 Can you explain to me the level of your
13 understanding and expertise, if you do have one, in the
14 agricultural practices within the South Delta?

15 A I have some understanding of those.

16 Q Do you have an understanding of the provisions of the
17 1995 Water Quality Control Plan for the Sacramento/San
18 Joaquin Bay Delta?

19 A Specifically I can't say that I do. But I may. But I
20 don't recognize -- I mean I know that the plan exists. I
21 haven't reviewed it recently. And so if you asked me a
22 specific question about it or something in it, maybe.

23 Q Do you have an understanding of the provisions of
24 Decision 1641 issued by the State Water Resources Control
25 Board in 2000? I believe it's Exhibit WRE-5 in this

1 proceeding.

2 A Yes. When I first got involved in this issue of South
3 Delta water quality and -- I took the time to read D-1641,
4 noting particularly the water quality provisions of it.

5 And I actually have extracted those in a separate report.

6 Q Now, turning to your testimony -- written testimony,
7 excuse me, CSPA Exhibit 1. On page 1 you make a statement
8 with regard to unlimited irrigated agriculture. It's in
9 the third paragraph.

10 Is it your belief that the 1995 Water Quality
11 Control Plan for the Sacramento/San Joaquin Bay Delta
12 Estuary is intended to ensure unlimited irrigated
13 agriculture in the South Delta?

14 A I'm not sure if those words -- I mean I -- unless if I
15 look at the plan. It should be. If it's not there, it
16 should be.

17 Q Again, my question was whether you know whether the
18 1995 Water Quality Control Plan provides for unlimited
19 irrigated agriculture?

20 A That those words are specifically in there? I'd have
21 to review the plan.

22 Q Dr. Lee --

23 A Yes.

24 Q -- given your lack of recollection of the terms of the
25 1995 Water Quality Control Plan, what is the basis for

1 your statement on page 1 of CSPA Exhibit 1 that you agree
2 that an EC limit of 0.7 as established by the State Water
3 Resources Control Board as a salinity standard for the
4 South Delta is appropriate to support unlimited irrigated
5 agriculture in the South Delta?

6 A I have been following the development of the EC
7 standards at Vernalis when I first became involved in
8 South Delta water quality issues. And I looked at the
9 standard and I saw that it's a .7 during the irrigation
10 season. And then I saw what was happening in the South
11 Delta and how it operates with respect to irrigation. I
12 reviewed the information I had available then, which goes
13 back to the early seventies, on what is an acceptable EC
14 for growing -- unrestricted growth of crops.

15 And back in '72, the National Academies of
16 Science and Engineering in the Blue Book of Water Quality
17 Criteria and Standards have a table in which .75 EC is
18 listed as the value that should be achieved to protect the
19 growth of any kind of crops. So .7 is not out of line
20 from what's been known since the early seventies.

21 Q Mr. -- excuse me. I've been referring to you as Mr.
22 Lee. I think more appropriate to refer to you as Dr. Lee.

23 A I don't care.

24 Q Dr. Lee, again my question was regarding your
25 statement and the basis for your statement that you agree

1 that 0.7 as established by the Board is appropriate to
2 support unlimited agriculture and the basis for that
3 statement.

4 A The basis is that I reviewed the information that has
5 been presented in various, I'd say, meetings, hearings,
6 the Regional Board, State Board, on the effects of
7 salinity on crops. And this goes back to my work on this
8 topic long before I ever got involved here. And the .7
9 seems to be a reasonable number.

10 Q And, again, the .7 in your mind is based upon a level
11 of salinity that would be able to sustain unlimited
12 irrigated agriculture?

13 A I may have to modify that a little, because what I
14 heard the other day from some of the agricultural
15 interests in the South Delta even at .7 you have some crop
16 damage.

17 Q Right. With your expertise, would you conclude -- or
18 do you still maintain the position that you expressed in
19 CSPA Exhibit 1 that the 0.7 is appropriate to support
20 unlimited irrigated agriculture?

21 A I believe that with the current understanding of
22 salinity effects on crops, an EC of .7 will give you
23 essentially unlimited. And I'm going to have to phrase
24 that a little bit because of the new information that's
25 come available in this hearing.

1 Q Thank you.

2 Dr. Lee, are you aware of the factors that the
3 State Water Resources Control Board identified in Decision
4 1641 that affects salinity concentrations downstream of
5 Vernalis?

6 A Well, I know some of those factors. I don't know -- I
7 have to go back to 1641, that particular section, for the
8 downstream effects. But certainly -- yeah, I have some
9 knowledge of that.

10 Q And the factors that you can recall today are what
11 factors?

12 A Well, such things as dilution water from upstream,
13 such as irrigation return water downstream. Those would
14 be two.

15 Q Thank you.

16 Dr. Lee, are you aware of the statement in --
17 excuse me. Are you aware of the statement by the State
18 Water Resources Control Board in Decision 1641 which
19 provides, quote, "even when salinity objectives are met at
20 Vernalis, the interior Delta objectives are sometimes
21 exceeded," closed quote?

22 A I believe that statement. I believe -- yes, that's
23 true.

24 Q And based on that response, Dr. Lee, do you
25 acknowledge the conclusions of the State Water Resources

1 Control Board regarding the effects of salinity
2 concentrations downstream of Vernalis to include the
3 effects -- excuse me -- the actions in Delta agriculture?

4 A Yes, I -- I discussed that in my testimony.

5 Q Dr. Lee, I believe on page 2 of your testimony, CSPA
6 Exhibit 1, you testify that, quote, "DWR and the USBR
7 should be required to solve the salinity problem in the
8 South Delta," closed quote; is that correct?

9 A Yes.

10 Q If the State Water Resources Control Board accepted
11 your recommendation that DWR and the USBR should be
12 required to solve the salinity problem in the South Delta,
13 is it correct that the State Water Resources Control Board
14 would be placing a burden on DWR and USBR to solve a
15 problem which the State Water Resources Control Board
16 found in D-1641 to be caused in part by in-Delta
17 irrigation?

18 A The in-Delta irrigation problem, as I've --

19 Q Dr. Lee, I apologize for interrupting you. I asked
20 the question I think that required just a "yes" or "no"
21 answer.

22 A Well, ask the question again please so I can
23 understand it.

24 Q Sure.

25 If the State Water Resources Control Board

1 accepted your recommendation that DWR and the USBR should
2 be required to solve the salinity problems in the South
3 Delta, isn't it correct that the State Board -- the State
4 Water Resources Control Board would be placing a burden on
5 DWR and the USBR to solve a problem which the State Water
6 Resources Control Board found in D-1641 to be caused in
7 part by in-Delta agriculture?

8 A Yes, they need to consider the ability to irrigate in
9 the South Delta.

10 Q Thank you.

11 One more question along those lines.

12 Is it your impression that the -- excuse me. Let
13 me rephrase and present another question.

14 Is it your position, Dr. Lee, that Decision 1641
15 reflects a position that the barriers are equivalent to
16 achieving the 0.7 EC standard?

17 A No, D-1641 actually specifically states, as I
18 indicated in my slides as a supplement, that the barriers
19 alone won't solve the problem.

20 Q Dr. Lee, I then don't understand a statement that
21 appears on CSPA Exhibit 1 in the page 1, third paragraph,
22 where you state that it was inappropriate, however, to
23 adopt the provisions in D-1641 that allows the presence of
24 operable barriers in the South Delta to be considered
25 equivalent to achieving the 0.7 standard.

1 What is the basis for your statement there?

2 A When I looked at D-1641 I became confused with respect
3 to my understanding of the statements there where the
4 State Board could allow the operation of the permanent
5 barriers to be equivalent to achieving the salinity
6 standard. And what really set this is on -- well, it's
7 the same part that we referred to earlier about the
8 alternatives when Mr. Odenweller was asked a question
9 about that of the -- 1.0 would be acceptable standard --
10 or acceptable approach if the operable barriers were
11 there. And -- or alternatives.

12 I don't understand that statement at all. It
13 makes no sense.

14 Q Do you understand the purpose of Decision 1641?

15 A I think it's to regulate water quality, yes.

16 Q Would you be surprised to learn that D-1641 was not
17 intended to regulate water quality but was intended to
18 implement the 1995 Water Quality Control Plan?

19 A I'm not sure there's a difference.

20 Q Okay. Dr. Lee, on page 5 of your testimony, which is
21 CSPA Exhibit 1, in the first complete paragraph you state
22 that, quote, "The South Delta water quality problems are
23 caused by the existence and operation of the DWR and USBR
24 export projects," closed quote.

25 Do you see that statement?

1 A Where are you? I know I made the statement, yes. I
2 saw --

3 Q Dr. Lee, I quoted a provision from page 5 of your
4 testimony, CSPA Exhibit 1, which is contained in the first
5 complete paragraph on page 5.

6 Do you see that statement?

7 A Page 5?

8 Q Yes, doctor.

9 A First complete paragraph? "It is likely that..."

10 Q Yes.

11 Dr. Lee, the third line in that paragraph
12 begins --

13 A Oh, okay. Now, I got I. It sorry.

14 Q Dr. Lee, you testified earlier that there are a number
15 of factors that affect salinity. Do you recognize that
16 those factors were identified by the State Board in
17 Decision 1641 as well as factors that you believe exist
18 based on your expertise? With that testimony, would
19 you -- do you still believe that the South Delta water
20 quality problems are caused by the existence and operation
21 of DWR and USBR export projects?

22 A I believe that those two projects have so altered the
23 system that they have caused serious water quality
24 problems and water level problems in the South Delta.

25 Q But, again, you also believe that there are other

1 factors that affect South Delta water quality, correct?

2 A Yes.

3 MR. RUBIN: Thank you, Dr. Lee. I don't believe
4 I have any further questions.

5 I have some questions for you, Mr. Odenweller.

6 Mr. Odenweller, on page 2 of your testimony,
7 which is CSPA Exhibit 3, you state that "The Board has
8 equated water quality standards (EC of 0.7), with a method
9 of compliance (South Delta permanent or operable
10 barriers)," closed quote, correct

11 MR. ODENWELLER: Yes, that's true.

12 Q In that statement, your reference to water quality
13 standards is a reference to the South Delta standards that
14 are at issue in this hearing; is that correct?

15 A That's correct.

16 Q And by that statement do you mean that the State Water
17 Resources Control Board assigns sole responsibility to
18 meeting the South Delta standards to the USBR and DWR?

19 A Sole responsibility to meeting the standard? I don't
20 believe that's the case. But I was specifically referring
21 to the language that set the standards in place and
22 provided for the South Delta permanent barriers to
23 supplant the standard when they were constructed.

24 Q And, again, can you explain to me what you mean by
25 supplant?

1 A Replaced or -- and I can look the language up in 1641
2 if you --

3 Q That's not necessary. Thank you though.

4 Mr. Odenweller, on page 2 of your testimony, CSPA
5 Exhibit 3 -- I'm sorry. I haven't stated correctly.

6 Directing you to page 4 of your testimony, you
7 state that the South Delta has been the subject of a major
8 decline in the pelagic organism guild; is that correct?

9 A Yes.

10 Q What do you mean by guild?

11 A A guild is a grouping of organisms, in this case
12 pelagic fish, and invertebrates that support the pelagic
13 fish. That has declined -- shown a decline, particularly
14 in the South Delta.

15 Q Okay. And --

16 A But primarily in the Delta.

17 Q Excuse me. I apologize.

18 What species have you identified as being part of
19 that guild?

20 A Species that have been identified include striped
21 bass, Delta smelt, long fin smelt, and thread fin shad,
22 along with zooplankton.

23 Q And, Mr. Odenweller, what data do you rely upon to
24 support your statement that the South Delta has been
25 subjected to a major decline in the pelagic organism

1 guild?

2 A Data from that joint CALFED/IEP investigation into the
3 pelagic organism decline that has been going on for the
4 last year.

5 Q And does that data relate to a specific time period?

6 A The last three years essentially. Although the data
7 sets exist for a much longer period. In the case of
8 striped bass they go back to the 1950 -- late 1950s.

9 Q On page 4 and continues to page 5 of your testimony,
10 CSPA Exhibit 3, you state that "Efforts to increase
11 exports by removing the protections of the U.S. Army Corps
12 of Engineers' limitation of 6680 CFS (SWP - three day
13 running average) places the fish and wildlife beneficial
14 uses at further risk," closed quote, correct?

15 A Yes.

16 Q Is the protection you reference the permit issued by
17 the United States Army Corps of Engineers to the
18 Department of Water Resources for operation of the Banks
19 Pumping Plant?

20 A Yes.

21 Q Are aware that the permit issued by the United States
22 Army Corps of Engineers to the Department of Water
23 Resources for operation of the Banks Pumping Plant is
24 intended not to protect fish and wildlife but navigation?

25 A Yes, I understand that. But it incidentally provides

1 protection to the fish and wildlife.

2 Q Are you aware that the permit issued by the United
3 States Army Corps of Engineers to the Department of Water
4 Resources for operation of the Banks Pumping Plant
5 authorizes under certain conditions pumping above 6680
6 CFS?

7 A Yes, specifically when Vernalis flows are above a
8 certain limit.

9 Q Are you aware of the work prepared by Steve Kramer on
10 a model for winter run escapement?

11 A Yes, I am. Up until about a year ago I haven't been
12 involved in that since I left NMFS.

13 Q The winter run model prepared by Steve Kramer was
14 prepared for the State Water Contractors in cooperation
15 with the United States Fish and Wildlife Service, NOAA
16 Fisheries, and California Department of Fish and Game,
17 correct?

18 A That's correct.

19 Q Are you aware of the results of the winter run model
20 prepared by Steve Kramer?

21 A I'm aware of the results up to about last October, a
22 year ago.

23 Q Are you aware that the results of the winter run model
24 prepared by Steve Kramer shows that the CBP and SWP
25 operations in the Delta have a negligible effect on winter

1 run escapement?

2 A I'm not aware of the specific conclusions of the model
3 at this point. But I would, I guess, take issue with the
4 use of the term "negligible" as opposed to a specific
5 impact assessment.

6 Q Are you aware that Steve Kramer through the use of his
7 winter run model concluded that the impacts of the CVP and
8 SWP operations in the Delta have less than a significant
9 effect on winter run escapement?

10 A I'm not specifically aware of that conclusion. But,
11 again, I would question the "less than significant" as
12 opposed to a specific number, a numeric response.

13 Q Are you aware --

14 MR. JACKSON: I'm going to object to this line of
15 questioning in the sense that what counsel is doing is
16 very skillfully putting in evidence from a witness I can't
17 cross examine by asking my witness if he's aware. I don't
18 mind it coming in to show that my witness is aware. I
19 just don't want it coming in for the truth of the matter
20 asserted, because I can't cross examine Mr. Kramer.

21 MR. RUBIN: Madam Chair, I'm questioning the
22 basis for a conclusion in the testimony. And there's
23 information that he said -- excuse me. I asked the
24 witness if he's familiar with some of the work. And I'm
25 asking him additional questions about the results of that

1 work. And if he's not aware, he's not aware.

2 CHAIRPERSON DODUC: Okay. Continue. But don't
3 go beyond that --

4 MR. RUBIN: That was the last question, as it is.
5 But --

6 CHAIRPERSON DODUC: Okay. Thanks.

7 MR. RUBIN: Along those similar lines though, are
8 you aware of the analysis of fall run release recapture
9 experiments by professor Ken Newman?

10 MR. ODENWELLER: I'm aware of Dr. Newman's
11 analysis of the recapture experiments, the data from the
12 recapture experiments

13 Q Are you aware of the results of those experiments?

14 A Yes.

15 Q And are you aware that -- are you aware that the
16 results of the analysis by Professor Ken Newman show no
17 conclusive effects of exports on fall run smolt survival?

18 A I'm aware of the conclusion in general. Again --

19 Q Are you aware of the results of the AFRP Action 8
20 December-through-January experiments?

21 A Not by that -- I may be aware of them, but not by that
22 particular name.

23 Q Do you have any data to support a conclusion that a
24 correlation exists between Delta smelt abundance and
25 CVP/SWP exports?

1 A There is work that is ongoing and was reported at the
2 Pelagic Organism Decline Work Group meeting with the
3 science panel -- review panel Monday and Tuesday most
4 recently that suggests that there is a relationship
5 between Delta smelt abundance and export operations.

6 Q And who prepared that analysis?

7 A That analysis was prepared by Bruce Herbold.

8 Q And that analysis looked at the effect of CVP/SWP
9 exports on Delta smelt abundance?

10 A It specifically looked at the increased pumping in the
11 winter months by the CVP and SWP on the salvage of Delta
12 smelt.

13 Q And, Mr. Odenweller, is there a distinction between
14 salvage and abundance?

15 A Yes.

16 Q Thank you.

17 Mr. Odenweller, are you aware of the summer tow
18 net index for Delta smelt abundance?

19 A Yes, I am.

20 Q Are you aware that the summer tow net index for Delta
21 smelt abundance is an index based on data obtained after
22 most Delta smelt entrainment has occurred in that year
23 that the tow net exists or occurs?

24 A The tow net survey -- the summer tow net survey occurs
25 during a period of time that overlaps. But probably more

1 of the survey is after the Delta smelt are available for
2 entrainment.

3 Q Are you aware of the fall mid-water trawl official
4 index for Delta smelt abundance?

5 A Yes.

6 Q Are you aware of any data showing a correlation
7 between summer tow net index and the subsequent fall
8 mid-water trawl index for Delta smelt abundance?

9 A Again, I'm aware of some work that's been done by Tina
10 Swanson that's in draft form that shows such a correlation
11 for the first time.

12 Q And the work that Ms. Swanson has prepared that you're
13 aware of looks at Delta smelt abundance, not take or
14 entrainment?

15 A It relates the summer tow net survey to the fall
16 mid-water trawl survey specifically and shows the
17 correlation.

18 MR. RUBIN: Thank you.

19 I believe I misspoke earlier. I do have an
20 additional question, I believe it's for Dr. Lee.

21 Dr. Lee, during cross-examination by another
22 party, you were questioned about data that you used to
23 support a conclusion that there is a threatened violation,
24 I believe; is that correct?

25 DR. LEE: Yes.

1 Q And when that question was asked, your response was
2 based on a belief that there's a threatened violation of
3 the permit terms and conditions that are within the
4 permits held by United States Bureau of reclamation and
5 the Department of Water Resources; is that correct?

6 A That there's a violation of the .7 at Vernalis. And
7 that's a D-1641 requirement. As I said, I haven't looked
8 to see if that's in the permit. But I'd be surprised if
9 it's not.

10 CHAIRPERSON DODUC: Mr. Rubin, please get to your
11 point with respect to this line of questioning. We've
12 been through this with Ms. Crothers.

13 MR. RUBIN: I understand. I wanted to just make
14 sure I had the proper foundation to ask some of the
15 questions I have.

16 CHAIRPERSON DODUC: This is an administrative
17 hearing, as my counsel has advised me. You do not need to
18 spend so much time laying foundation. Let's see if we can
19 expedite things and get to the crux of your points please.

20 MR. RUBIN: Sure. Dr. Lee, you indicated that
21 there were data that you relied upon for your conclusion.
22 I was hoping that you could explain to me the specific
23 data that was -- that you used.

24 DR. LEE: As I said --

25 CHAIRPERSON DODUC: I believe he answered that

1 question in response to Ms. Crothers.

2 MR. RUBIN: Okay. If I recall your answer
3 correctly, Dr. Lee, the data that you relied upon was data
4 that was acquired in the 1980s and 1990s; is that correct?

5 DR. LEE: Yes, up through I think 2002.

6 Q Okay. Are you aware of the standard that applied at
7 Vernalis during the 1990s and 1980s?

8 A I know there was a change in there for that standard.

9 Q Do you know what the standard was prior to the 1995
10 Water Quality Control Plan taking affect?

11 A Specifically, no. But I have a feeling it may have
12 been 500 TDS.

13 Q And did you analyze the water quality at Vernalis
14 based upon what you believed the standard was prior to the
15 1995 Water Quality Control Plan taking effect?

16 A I relied on the regional board's review and their
17 tabulation of violations in accord with the standards that
18 they understood were applicable.

19 Q And what document prepared by the Regional Water
20 Quality Control Board did you rely upon?

21 A This is a database.

22 Q And does that database compare what the standard was
23 versus what the water quality was?

24 A The standard focuses on 700 and a thousand and what
25 would -- what have been the violations if the standard had

1 been 700 during the early nineties.

2 Q Are you aware of actions that have been taken since
3 1995 that could improve water quality within the San
4 Joaquin River and/or the South Delta?

5 A Yes.

6 Q And are you aware of specific actions within the San
7 Joaquin Valley that could improve water quality in the San
8 Joaquin River and the South Delta?

9 A Some.

10 Q Are you aware of the Grasslands Bypass Project?

11 A Yes.

12 Q Are you aware of the efforts of the San Joaquin River
13 Water Quality Management Coalition?

14 A I have followed their deliberations over the past I
15 guess almost a year.

16 Q And as those actions have been and are continuing to
17 be implemented, does that affect water quality in the San
18 Joaquin River?

19 A Potentially.

20 MR. RUBIN: Thank you. I have no further
21 questions.

22 CHAIRPERSON DODUC: Thank you.

23 State Water Contractors.

24 MR. SCHULZ: Good morning. Cliff Schulz for the
25 State Water Contractors.

1 This should be fairly short.

2 CROSS EXAMINATION

3 OF THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

4 BY MR. CLIFF SCHULZ, ESQ., representing the State Water
5 Contractors:

6 MR. SCHULZ: Dr. Lee, if I'm reading your
7 testimony right and if I heard the testimony that you gave
8 in response to your counsel's opening questions, you
9 support issuance of the cease and desist order; is that
10 correct?

11 DR. LEE: Yes, I do.

12 Q But I also -- if I read your testimony correctly, that
13 you would not -- that you believe it should be amended
14 from the way it was put out in draft form by the State
15 Board?

16 A Yes. There's some confusing wording in there that I
17 think needs to be taken out.

18 Q Is it your recommendation to the Board that they not
19 include a reference to the barriers?

20 A That is correct.

21 Q So you would take that part of it out?

22 A That the barriers can solve the problem, I would take
23 that out or allow -- be allowed to substitute for the 1.0.
24 They should not be there.

25 Q Okay. But right now the draft order says that -- it

1 requires the Department and the Bureau to have them
2 installed by 2009.

3 Is it your recommendation that that requirement
4 be removed?

5 A I think that's appropriate.

6 Q You think it's appropriate to have it there or
7 appropriate to remove --

8 A I believe it should be in there that they set a
9 definite date to get those barriers in and operating.

10 Q Okay. So you do support construction of the barriers?

11 A Absolutely.

12 Q Okay.

13 MR. SCHULZ: Mr. Odenweller, you just heard that
14 testimony. Does that correctly represent your position?

15 MR. ODENWELLER: I have some concerns -- fishery
16 concerns associated with the permanent barriers and their
17 operation that haven't been addressed at this point.

18 Q But do you support installation of the operable
19 barriers?

20 A Not at this time.

21 Q You do not. Okay.

22 So it would be your recommendation that the cease
23 and desist order not include that language?

24 A My specific recommendation would be that the cease and
25 desist order not substitute the permanent barriers

1 installation for the water quality objective, but that
2 both in this case would remain in the --

3 Q So you would ask to support installation of the
4 barriers by 2009?

5 A Assuming we can --

6 MR. JACKSON: I'm going to object to the question
7 on the grounds that it assumes -- it requires speculation.
8 The barrier project hasn't -- has just issued it's
9 EIR/EIS, and none of us have had an opportunity to look at
10 it.

11 MR. SCHULZ: I'm just looking at his direct
12 testimony. And where on page -- let's see, this is
13 Exhibit 3, page 2, where he says at the bottom under
14 paragraph number 3, "The South Delta permanent barriers
15 prescribed by the Board may in fact exacerbate existing
16 water quality problems in the Delta for example." That's
17 one of the statements.

18 CHAIRPERSON DODUC: I believe the witness can
19 answer, Mr. Schulz' question, but disregarding the 2009
20 date.

21 MR. SCHULZ: Oh, that's the date that's in the
22 proposed order -- in the proposed cease and desist.

23 CHAIRPERSON DODUC: Is it?

24 Please go ahead and answer the question.

25 MR. ODENWELLER: Assuming we could get past the

1 concerns regarding the fishery impacts associated with the
2 permanent barriers, then, yes, I could support the
3 installation of the permanent barriers. But there are
4 some questions regarding their effects on upstream and
5 downstream fish migration and on how they get started and
6 stopped -- the operation of them get started and stopped
7 each year that could result in taking a quantity of water,
8 the do and warm temperature and shoving it through the
9 tidal pumping upstream and the Old River and out in to the
10 San Joaquin River that could have some fishery impacts.
11 And so are the concerns that I -- the nature of the
12 concerns that I have that lead me to be cautious about the
13 support for the project at this point.

14 MR. SCHULZ: Mr. Odenweller, as I heard your
15 testimony, you were -- your concerns with respect to the
16 fishery are related to flows; is that correct? In other
17 words, that -- go ahead and answer that question.

18 MR. ODENWELLER: Not exclusively. But in part
19 they're how the solutions are implemented and what effect
20 they have on the nature of the flows

21 Q But if I understood your testimony, you have not
22 analyzed, assuming that the flows stay the same, that
23 there would be an impact on fish between a .7 and a .8 or
24 a .8 and a .9 or --

25 A Well, thank you for the opportunity. I don't

1 understand how you can in the South Delta achieve a .7
2 versus a 1.0 without changing something else. And so --

3 Q That's what I thought. Your assumption was that you
4 would do that by changing flows, correct?

5 A Yes.

6 Q So if you were able to change it by reducing salinity
7 discharge into the San Joaquin River upstream and could do
8 it without flows --

9 A -- that would have a different --

10 Q -- a different affect.

11 A -- consequence than achieving it with flows, yes.

12 Q Right. So I just wanted to clear up that your
13 assumption was is that the way that you would meet a lower
14 salinity standard was with increased flows?

15 A Well, my -- when I was asked the question, I answered
16 that I didn't know what the effect of a change from .7 to
17 1.0 was and I couldn't come up with an answer. And it was
18 because of the concern about how you achieve that without
19 changing anything else, which was a foundation of the
20 question.

21 Q Okay. And are you familiar with the San Joaquin River
22 Water Quality Improvement Coalition work?

23 A To a degree, yes.

24 Q And is it your understanding that the effort there is
25 to reduce salinity in the San Joaquin River by reducing

1 the salt discharges into the river?

2 A Among other methods, yes, that's one of them.

3 Q Okay. And could that result in lowering the water
4 quality at Vernalis without increasing flows?

5 A You're comfortable with me saying improving the water
6 quality at Vernalis?

7 Q Yes.

8 A Yeah, yeah, it would have that sort of effect.

9 Q Okay. Thank you?

10 A At least I believe it would.

11 MR. SCHULZ: That's the only questions I have.

12 CHAIRPERSON DODUC: Thank you, Mr. Schulz.

13 Stockton East Water District.

14 MS. ZOLEZZI: Good morning. Jeanne Zolezzi for
15 Stockton East Water District.

16 No questions.

17 CHAIRPERSON DODUC: Thank you.

18 The Bureau of Reclamation.

19 MS. AUFDEMBERGE: No questions.

20 CHAIRPERSON DODUC: That completes the list of
21 cross-examination.

22 MR. JACKSON: Thank you. At this point I would
23 like to move CSPA Exhibits 1 through 4 into evidence.

24 CHAIRPERSON DODUC: I see people standing up.

25 Mr. Rubin, Mr. Godwin.

1 MR. GODWIN: Arthur Godwin for Merced Irrigation
2 District.

3 At our last meeting I had objected to Mr.
4 Odenweller testifying as to points 4, 5 and 6. And I
5 would object to that portion of his testimony being
6 admitted into evidence.

7 CHAIRPERSON DODUC: Mr. Rubin.

8 MR. RUBIN: Madam Chair, I support the objection
9 just raised and renew my objection to the testimony
10 presented by Fred Lee, and can go into detail about some
11 of the reasons for my objection.

12 Speaking in terms of the testimony of Mr.
13 Odenweller, CSPA Exhibit 3, I believe that paragraph -- or
14 section 2, which appears on page 2, lacks foundation and
15 is irrelevant. I believe that paragraph 3, which appears
16 on page 2, CSPA Exhibit 3, is irrelevant, contains
17 hearsay, and lacks a basis for the conclusions that are
18 rendered. I believe that paragraph 4 also contains
19 irrelevant testimony, hearsay and lacks the basis for the
20 conclusion. And then section 5, which also appears on
21 CSPA page 4 -- excuse me -- CSPA Exhibit 3, page 4, is
22 irrelevant and lacks the basis for the conclusions that
23 are rendered in that section.

24 Section 6 is equally defective. I believe the
25 testimony in that section is irrelevant.

1 MR. JACKSON: Yes. And --

2 MR. RUBIN: Madam Chair, just one more statement.

3 I think that the testimony that was prepared by
4 Dr. Lee challenges the underlying objectives and is
5 irrelevant for that purpose -- or based on that basis.

6 CHAIRPERSON DODUC: Mr. Jackson, any response?

7 MR. JACKSON: Yes. We've been through this
8 before. And the ruling on Dr. Lee's testimony was that it
9 would come in. I believe you indicated at the time that
10 most of the same objections went to the weight of the
11 evidence rather than its admissibility. The objection
12 that some of the material is hearsay is of course outside
13 the scope of your rules, which allow hearsay. And,
14 consequently, we would move that all of it go into
15 evidence for both witnesses.

16 CHAIRPERSON DODUC: I will accept all exhibits to
17 evidence and will consider the objections in weighing the
18 evidence.

19 Thank you.

20 At this time we will take a break for the court
21 reporter. And we'll resume with a witness from South
22 Delta Water Agency.

23 We'll reconvene at 10:45.

24 (Thereupon a recess was taken.)

25 CHAIRPERSON DODUC: All right. Be warned. I now

1 have my coffee.

2 The court reporter is ready.

3 We'll now resume. Mr. Herrick.

4 MR. HERRICK: Thank you, Madam Chairman. John
5 Herrick for the South Delta Water Agency.

6 We'll now present our last witness, who was
7 unavailable on previous hearing dates. I appreciate the
8 Board's accommodations.

9 The witness is Bill -- or excuse me -- William
10 Salmon, known as Chip.

11 DIRECT EXAMINATION

12 OF THE SOUTH DELTA WATER AGENCY PANEL

13 BY MR. JOHN HERRICK, ESQ., representing the South Delta
14 Water Agency:

15 MR. HERRICK: And, Mr. Salmon, would you please
16 just introduce yourself to the Board.

17 MR. SALMON: Hello, Madam. Chip Salmon.

18 Q And what is your current occupation?

19 A Farming on Union Island, South Delta.

20 Q And are you an employee for Augusta Bixler Farms?

21 A Yes, I'm the manager for Augusta Bixler Farm Services.
22 I've been there for 20 plus years, active manager for the
23 last 5.

24 Q And are you familiar with your testimony set forth in
25 South Delta Agency Exhibit No. 3 and attachments thereto?

1 A Yes, I am.

2 Q And, Mr. Salmon, the basis of this testimony is that
3 South Delta previously asked you and your father to
4 prepare a summary of what you believed were salinity
5 impacts to certain agricultural activities that you
6 perform; is that correct?

7 A That's correct.

8 Q And I believe this was done for the Year 2002; is that
9 correct?

10 A 2002, correct.

11 Q And could you briefly state or summarize the impacts
12 you attribute to salinity to the agricultural crops for
13 Augusta Bixler Farms on Union Island?

14 A Well, effects that we first noticed would develop in
15 the spring when our trees and vines would bush out, so to
16 speak, or leaf out. We'd start noticing extensive leaf
17 burn, all edges of the leaf; experiencing a lot of
18 die-back, total plant loss. And then it would carry on,
19 into the late summer we'd start noticing undersized nuts
20 on the tree, shriveled berries, noticed we would start
21 losing trees. And our beans, they would start to grow
22 fairly nice early on; and then as they were getting poorer
23 water quality, the beans would start to visibly just
24 perish.

25 So we -- and as the summer continues, as the

1 water quality got worse, we started noticing more troubles
2 and more trees defoliating early, vines defoliating and
3 beans dying, a yellowing of our alfalfas. Just a -- and
4 our total production took a tremendous hit economically.

5 Q Mr. Salmon, your testimony then includes decreases in
6 yields and some associated dollar amounts for those
7 decreases with regard to walnuts, grapes and beans; is
8 that correct?

9 A Correct.

10 Q And the testimony also includes attachment B, which is
11 a laboratory analysis report from John Taylor Fertilizers.
12 Are you familiar with that?

13 A Yes, sir.

14 Q And what was the reason why that analysis was
15 performed?

16 A Well, in our young trees that were planted, at that
17 time two years old, they shouldn't have been perishing
18 like they were. They shouldn't have been defoliating. We
19 shouldn't have had the high death loss. So I called in a
20 PCA that has the ability to use certain special labs for
21 doing --

22 Q When you say PCA, would you explain the -- define that
23 for the Board.

24 A He's a pest control advisor for our local -- John
25 Taylor Fertilizer. And he also uses the UC extension

1 service professionals that deal with the -- they have one
2 for pomology, they have one for viticulture, they have one
3 for row crops. So he came out to do core samples of the
4 trees, soil samples to try to find out exactly what was
5 going on and what was causing my death loss in my trees
6 and in my row crops and vines.

7 Q And what was the conclusion from those reports, if you
8 recall?

9 A Salt.

10 Q Mr. Salmon, your testimony also includes an exhibit --
11 excuse me -- an Attachment C. Are you familiar with that
12 attachment?

13 A Yes.

14 Q And that attachment includes water quality monitoring
15 data provided to you from DWR; is that correct?

16 A Correct.

17 Q And that water quality monitoring data shows that in
18 the area from which you divert the water quality was
19 between 700 and 1,000 EC for the time frame of 2002; is
20 that correct?

21 A That is correct. And that directly correlates with
22 the notes that I gave DWR from the samples that I was --
23 that I had taken. I gave it to the field personnel. I
24 don't remember his name. But it has a direct correlation
25 between my information and his information.

1 Q Mr. Salmon, your testimony also includes a brief
2 reference to activities you undertake to try to address
3 the salt issue you believe exists in your water and soils;
4 is that correct?

5 A Correct.

6 Q Could you briefly describe what those activities are?

7 A As far as my drainage?

8 Q Yes.

9 A Or how I have -- what I implement is -- we try to do
10 everything possible to alleviate the problem. I monitor
11 the water at the river prior to irrigation. If I can hold
12 off till the salinity levels aren't quite as high in the
13 water, I would, if I knew it was coming -- going to be
14 cleaner.

15 We'd also -- we also run very many different
16 types of sulfurs or tri-cal materials that we run in the
17 water to try to offset some of the salinity uptake in the
18 plant.

19 We install tile drain under all of our trees, all
20 of our grapes, all of my blue berries. Everything has
21 tile drain put in to help leach winter -- in the winter
22 months when we know the water is good, we flood to try to
23 drive down as much as possible.

24 So we try to do everything possible to give
25 ourselves a fighting chance out there. But it's awful

1 hard to do when other agencies are giving us stuff that's
2 just too overwhelming for a single farm to overcome.

3 MR. HERRICK: Thank you. I think that will
4 conclude direct based on the testimony.

5 CHAIRPERSON DODUC: Thank you.

6 And we'll now start the cross examination with
7 the Division of Water Rights prosecution team.

8 STAFF COUNSEL MAHANEY: Prosecution team has no
9 questions.

10 CHAIRPERSON DODUC: Central Delta?

11 MR. NOMEILLINI: Dante John Nomellini for Central
12 Delta. We have no questions.

13 CHAIRPERSON DODUC: San Joaquin County?

14 MR. SHEPHARDE: Tom Shepharde, San Joaquin
15 County. We have no questions.

16 CHAIRPERSON DODUC: California Sportfishing
17 Protection Alliance?

18 MR. JACKSON: Mike Jackson, CSPA, we have no
19 questions.

20 CHAIRPERSON DODUC: Department of Water
21 Resources?

22 MS. CROTHERS: Hello. My name is Cathy Crothers
23 for the Department of Water Resources.

24 CROSS EXAMINATION

25 OF THE SOUTH DELTA WATER AGENCY PANEL

1 BY MS. CATHY CROTHERS, STAFF COUNSEL, representing the
2 Department of Water Resources:

3 MS. CROTHERS: Mr. Salmon -- excuse me.

4 MR. SALMON: You said it right.

5 Q Is that right, Salmon?

6 A Yes, ma'am. Just like the fish.

7 Q So you're a manager of the ABF Farms; is that correct?

8 A Correct.

9 Q You also state you own and lease other property in the
10 South Delta. Where is this property?

11 A We have property that we farm on -- yeah, that's
12 Attachment A. It's at the -- not far from the Clifton
13 Court Forebay out of Old River.

14 And then also we farm some ground behind the San
15 Joaquin County Jail, which the water comes from the San
16 Joaquin River.

17 MR. HERRICK: Madam Chairman, I'll just clarify.

18 You just described other properties. I believe
19 the question was directed towards where does the property
20 about which this testimony is for.

21 MS. CROTHERS: No, in his testimony he did state
22 that he also is an -- own and lease other property in the
23 South Delta as a farmer.

24 MR. SALMON: And that's -- those descriptions I
25 just gave you accurately depict the locations of the farm

1 ground.

2 MS. CROTHERS: Thank you. Does your testimony
3 only refer to the damage to the crops grown on the ABF
4 Farm?

5 MR. SALMON: At this time it's those -- the other
6 ranches are basically row crop ranches. And the water
7 that I irrigate those out of wasn't as bad at the Old
8 River -- where I take out of Old River. My permanent
9 crops are the ones that were -- are affected the greatest.
10 They also are the most expensive crops that I have

11 Q In your testimony, you state that the crops grown on
12 ABF Farms are the walnuts, grapes, beans, alfalfa,
13 tomatoes and other row crops; is that correct?

14 A Yes ma'am.

15 Q I think you may have just answered this. But on your
16 other property that you own and lease, what are the crops
17 grown on those properties?

18 A Basically asparagus -- asparagus -- at that time it
19 was asparagus, alfalfa and tomatoes.

20 Q So in your testimony you state you suffered damage to
21 105 acres of walnuts and 47 acres of grapes; is that
22 correct?

23 A Along with some beans. Those were -- I was just
24 pulling some examples. All of the acreage of walnuts was
25 affected. But the greatest was on this 100 and -- I think

1 160 acres total.

2 Q In your testimony, you refer to the damage to the 47
3 acres of chardonnay grapes on the top of page 3 of your
4 South Delta Water Exhibit 2. Is this in reference to the
5 Year 2002?

6 A Yes, ma'am.

7 Q In your testimony you have some photos of some grape
8 vines I believe that you claim show salt damage. Is this
9 a photo of those 47 acres of grapes?

10 A Yes, ma'am, it is. It's not what I claim. It's what
11 we know.

12 Q Is this a photo from 2002?

13 A Yes, ma'am.

14 Q And in your testimony you indicate you could not
15 obtain necessary sugar levels for harvest; is that
16 correct?

17 A Correct.

18 Q How do you obtain the sugar levels for these grapes
19 that is necessary?

20 A Well as the -- when they become that distressed and
21 defoliate that early on, there's no further protection for
22 the grape clusters. So what happens is they start
23 breaking down. And there's really -- it's just like you.
24 If your sun screen gives out, you're going to get burned.
25 And that's what happened to my grapes. They shut down,

1 the plant starts going through defoliation, and then my
2 crop is sitting there burning up, shrivels. And the plant
3 has no more -- it doesn't offer any more uptake to the
4 bunches.

5 Q In the report provided in your testimony regarding the
6 grape tissue analysis and chloride toxicity, that report
7 refers to a need to stress the vines to provide the -- I
8 assume the sugar water quality by irrigation deficiency.

9 Is that how you provide the sugar content you desire?

10 A No, I don't -- we don't do any type of water
11 stressing. Most of the guys in Napa, Santa Rosa, probably
12 Lodi. But the Delta region, we don't opt to do any of
13 that deficiency irrigation. Our water table doesn't allow
14 for that.

15 Q So you would say that you were providing -- you're
16 avoiding dry down, as reported in this laboratory report?

17 A Well, I don't actually avoid dry down. We have
18 scheduled irrigations which I adhere to.

19 Q The other concern you've mentioned is the problem of
20 drainage. This report on soil -- chloride toxicity on
21 grapes also mentions you may wish to excavate a few
22 backhoe pits to explore the soil profile to look for
23 layers that may be restricting leaching. Have you done
24 this?

25 A We did do -- we did finish this. And it wasn't

1 exactly to do a -- I had it GPS'd as well, the soil
2 topography done. And we did the backhoe to physically
3 visually inspect what was going on below the root zone and
4 deemed it fine, that sandy -- there was no clay statuses
5 or anything like that. That was -- it was one of the
6 professors that came out that wasn't quite familiar with
7 the area, was just curious if there was anything stopping
8 the transmission of salts downward into the tile drain.
9 So we dug it up, checked it out in the bad areas. And
10 found that there was nothing impeding the penetration of
11 water to the drainage.

12 Q When did you install the tile drains under your
13 grapes?

14 A The tile was there -- it was installed approximately
15 25 years ago, I would imagine. The field was in walnuts
16 previous to grapes.

17 Q How deep are those drains?

18 A Drains are about four and a half to five feet.

19 Q How far down do your grapevine roots go?

20 A They're generally about three feet, this variety.
21 These chardonnays, they're about three feet is what they
22 are. Then they branch out.

23 Q You've also mentioned you apply certain amendments to
24 your soil such as gypsum. What is the purpose of the
25 gypsum?

1 A We apply gyp to alter the soil. We'll also -- to
2 raise and lower the pH to help with leaching, we add
3 sulfur to the ground. And then depending on what our PCA
4 will advise and soil doctors advise what the lab results
5 come from, we use them in conjunction with the petial
6 samples, which is we take leaf samples and correlate those
7 with the soil samples to see -- well, we try to come up
8 with a happy medium of what we need to apply and the
9 amounts.

10 Q So you use -- have a, appears like, a very good
11 knowledge of your farming practices here. So would you
12 say that gypsum is necessary because sodic soils reduce
13 your permeability in the soil?

14 A Can you state that again please.

15 Q Well, I was wondering if the gypsum is necessary to
16 increase permeability of sodic -- what they call sodic
17 soils.

18 A Yes, I'm familiar with that.

19 Q So --

20 A But we do apply it for that reason, that's it's a
21 known -- it's a known aid in. -- if you've got -- if you
22 think you may have a salt problem tying up in your soil,
23 that with the application of gyp, that will help your
24 leaching ability going into the winter. Just like we just
25 finished all of our walnuts and all of grapes this year

1 with two ton of gyp per acre.

2 Q Do you know what the permeability of a specific
3 chloride salt is, salt related to chloride?

4 A No, not at this time I don't, ma'am.

5 Q Do you know what the types of salts are that you apply
6 in the irrigated water to your soils?

7 A Which -- the water that comes from my irrigation
8 water?

9 Q Yeah, which types of salts do you believe are applied
10 to your soils?

11 A I wouldn't have that information available to me right
12 now.

13 Q Are you aware that, you know, there could be salts
14 related to sulfates and chlorides, different types of
15 salts?

16 A As far as I know, yes, ma'am.

17 Q Have you heard that chloride salt is somewhat
18 permeable in water?

19 A Yes, probably have heard that.

20 Q You state that you use, you think, gypsum because the
21 salty water in soil pH will bind the chlorides and prevent
22 their leaching. What's the basis of your statement?

23 A Our past -- our experiences in the Delta.

24 Q But you're really not aware whether it's a chloride
25 salt that you're dealing with?

1 MR. HERRICK: What part of his testimony are you
2 referring to?

3 MS. CROTHERS: Let's see. I have to get it out.
4 He says in his testimony on the page -- my page
5 3 --

6 MR. SALMON: I would imagine it's probably coming
7 from the --

8 MS. CROTHERS: -- and the fourth paragraph -- oh,
9 excuse me. Sorry.

10 MR. SALMON: -- would have been --

11 MS. CROTHERS: -- fourth paragraph --

12 MR. SALMON: I'm sorry.

13 I would imagine that it's coming from the lab and
14 from the PCA or from both or a combination of all three
15 individuals that were involved in this.

16 Q Are you aware that different types of crops have
17 different sensitivities to salts -- irrigation salt water?

18 A Yes, ma'am. I'd be a darn fool if I didn't know that.

19 Q Is it your understanding that beans are more sensitive
20 to salt irrigation water than grapes?

21 A Yes, they are.

22 Q So grapes are really more salt tolerant to the
23 irrigation water quality than beans?

24 Shall I repeat the question?

25 A Sure.

1 Q I'm sorry. I might have made it a little confusing.

2 Would you say that grapes are more tolerant than
3 beans to irrigation water -- to salinity in irrigation
4 water?

5 A I do know they have different tolerances to the
6 salinity levels. That's basically all I know about that.

7 Q Have you read any articles regarding farm management
8 that relate the irrigation water quality and the percent
9 of yield you may expect?

10 A In relation to high levels of salt water?

11 Q Well, what would be a preferred irrigation water
12 quality to obtain the crop yield?

13 A Yes, I have. I know what -- I know when I have a
14 good -- it wasn't my first crop of beans, ma'am. I grew
15 them on several thousands of acres of beans a year. And
16 I've always averaged 25, 30 sacks to the acre with minimal
17 damage until 2002, is when we started seeing severe damage
18 in the beans, dropping my sack yields to below 10, 15. So
19 I know what caused it. I know when it caused it. And I
20 know -- I know what happened to my sack counts, if that's
21 what you're referring to. I didn't have to read anything
22 about it. I could visually see it and I experienced it
23 firsthand.

24 Q Well, I wasn't actually just referring to that at that
25 point. But since you bring up that, when you're talking

1 about the change in the yield from that specific acreage
2 of beans, is that -- when you said you had -- in past
3 years you had more beans per acre, do you mean on that
4 specific 68 acres?

5 A Well, I can't be sure -- I plant them all over. I
6 couldn't tell you exactly when I had beans on that
7 particular piece of ground. But I know I did at some
8 point in time over the last several years.

9 Q Well, I was really referring to that 68 acres, because
10 you just stated since 2000 you've had decreased yield in
11 beans, and your report is related to the 2002 cropping.
12 So I was wondering if you knew the drop in sacks of beans
13 per that 68 acres as compared to, say, from 2002 to 2000?

14 A I would have if I had beans planted in 2000 on that.

15 Q I see. So that's a good reason then why you -- you
16 relate your yield difference as to other fields planted in
17 beans during that year?

18 A Correct. I'm just giving you an overall view of my
19 production in other fields.

20 I no longer plant beans in this 67 acres.

21 Q Have you looked at your soil types in those 68 acres
22 compared to those other fields where you had higher
23 yields?

24 A Yes, ma'am. Every field before we plant goes through
25 the exact same regime where we pull shallow soil samples,

1 deep soil samples, core samples, do a complete soil
2 analysis. We check nitrate levels that -- it gets a --
3 just like when you go get your blood checked at the
4 doctor, they check you for everything. And that's what we
5 check our soil for as well. New nematodes, everything.

6 Q So why in this 68 acres that receives water of
7 probably similar water quality in your other -- well,
8 you've stated you get different water quality. But you
9 only have this 68 acres of beans that you're observing any
10 reduced yield, although the soil types are the same. Is
11 there -- can you -- have you looked at the specific
12 difference in the irrigation water quality as the reason?

13 A Well -- and I see what you're saying. But, okay, I
14 only had 67 acres that were irrigated out of the Old
15 River -- or out of the Grant Line River where this water
16 came from. My other beans that were coming off of other
17 ranches were irrigated with different water, Middle River
18 water.

19 Q And you said -- I think you have noted that you do
20 measure your irrigation water quality; is that correct?

21 A Yes, ma'am, I sure do.

22 Q And how do you -- in what way do you measure, which
23 method do you use to measure your irrigation water
24 quality?

25 A I have an EC meter. Is that what you're asking? And

1 I measure -- I get an EC reading and I convert it to parts
2 per million because that's what we go by.

3 Q Yes, thank you.

4 So you use that in your farming practice?

5 A Yes, ma'am, everyday.

6 Q Well, are you familiar with some of the literature
7 regarding the irrigation water qualities of your crops?

8 A Literature as in Time magazine, People magazine --

9 Q Farming magazines, magazines you would use as a
10 farmer.

11 A I read them. But since most of those don't -- aren't
12 a true depiction of the Delta, which in its own is an
13 isolated type of farm ground that you can find no place
14 else in the world -- a lot of their studies and what they
15 come up with have no bearing on my methods of farming.

16 Q I'd like to look to the part of your testimony where
17 you have submitted water quality data that you obtained
18 from the Department of Water Resources. In your South
19 Delta Water Exhibit 2, Attachment C -- it's a summary of
20 water quality in the Middle River and Grant Line; is that
21 correct?

22 A Pardon me, ma'am. I was trying to get the right
23 papers in front of me. Could you repeat?

24 Q Yes. Well, why don't you do that. It's the
25 Attachment C --

1 A Attachment C is Middle River?

2 Q It's the table which says at the top "Middle River at
3 Undine Road".

4 A Undine road, correct.

5 Q Undine Road, yes.

6 Do you have that?

7 A Yes, ma'am.

8 Q On this graph there's a shaded area. Does this
9 represent the period when the temporary barriers are
10 installed in the South Delta?

11 A Yes, I see the gray period on Middle River on
12 Attachment C. Barriers in place. I see that.

13 Q And is this the period between April 15th to November
14 21st, 2002?

15 A Yes, ma'am.

16 Q So this would be the period when you're finding harm
17 to your crops?

18 A Yes, ma'am.

19 Q Can you tell me from this attachment during this
20 period what's the maximum EC determined during this time?

21 I think you might find this information at the
22 lower chart, the maximum EC.

23 MR. HERRICK: Madam Chair, are we just going
24 to -- I mean I don't want to interfere. But are we going
25 to test him on reading the chart or --

1 MS. CROTHERS: I just wanted to --

2 MR. HERRICK: The chart says what it says.

3 MS. CROTHERS: This is Leading to a question that
4 I wanted to establish in the record.

5 CHAIRPERSON DODUC: Ms. Crothers, please get
6 there. You've already asked three questions that have
7 been lifted straight from this chart. So let's get to
8 your point please.

9 MR. SALMON: I see the maximum, the minimum and
10 the mean here.

11 MS. CROTHERS: Okay. So maybe you could just
12 tell me. What is the mean EC during this period?

13 CHAIRPERSON DODUC: Why don't we just get to your
14 point, Ms. Crothers.

15 MS. CROTHERS: That's the point. That is the
16 point.

17 CHAIRPERSON DODUC: You can read it as well as he
18 does.

19 MS. CROTHERS: No, I can't give testimony here.

20 MR. SALMON: I see a 700 as the mean, I see a 374
21 as the minimum, and I see an 884 as the maximum.

22 MS. CROTHERS: Thank you. So you also in
23 Attachment D show water quality in the South Delta at
24 Daugherty cut above Grant Line Canal

25 MR. SALMON: Yes.

1 Q And this is the period between July to September 2002;
2 is that correct?

3 A Yes ma'am, present being -- it has 7/25/02 to present.

4 Q Well, actually doesn't the information really only go
5 to August 12th, 2002?

6 MR. HERRICK: That's what he's explaining to you.

7 MS. CROTHERS: Oh, yes. Thank you. When you
8 look at these values, are the EC values in the 700s EC

9 MR. SALMON: They are all in the -- on the Grant
10 Line?

11 Q Yes, this is in Grant Line canal.

12 A Yes, they're all generally above 800 and sometimes 900
13 when I was taking my samples, which I go by because I know
14 mine aren't lying to me off of my meter. And when I see
15 it showing me 800, 900, a thousand parts per million, I
16 know I'm going to have some trouble. I may not see it in
17 two or three or four days or weeks, but in several months
18 I see severe damage.

19 And while we're on that point right there, that's
20 just unacceptable amounts, 700, 800. We can't be expected
21 to irrigate our crops with those levels, especially when
22 you want to talk about a fairness of shipping water to the
23 south and to the west at 400 parts per million and yet we
24 have to irrigate with 900 parts per million.

25 Q So --

1 A That's where I get a little agitated.

2 Q Mr. Salmon, do you calibrate your meter?

3 A Yes, ma'am.

4 Q So you're fairly confident it's giving you accurate EC
5 readings?

6 A Yes, ma'am. I have a fluid that I order that has a
7 known EC level. And when I insert it into my machine, it
8 gives me a reading that is supposed to accurately depict
9 the number of the solution, and it generally does.

10 Q Mr. Salmon, you know, on the data provided on Undine
11 Road, if you could look to August 12th -- it's kind of in
12 the middle of all these pages -- August 12th where I see
13 900 EC first registry, can you tell me if there's any
14 other period during this period that registers 900 EC
15 except for August 12th?

16 MR. HERRICK: I don't see August 12th as one of
17 the listed dates there. Am I missing something?

18 MS. CROTHERS: August 12, 2002. It's --

19 MR. HERRICK: Oh, you're on the Grant Line or --

20 MR. SALMON: Oh, you're Grant Line?

21 MS. CROTHERS: Yes, on the Grant Line at --

22 MR. HERRICK: You've got Undine Road.

23 MS. CROTHERS: Oh, I'm sorry. I've got the wrong
24 road. It's that other road. Grant Line data.

25 MR. SALMON: August 12th. I see the August

1 12th -- that's in excess of 900.

2 MS. CROTHERS: Is that just for a portion of the
3 day?

4 MR. SALMON: Of the day? Well, there's times
5 that are right next to it. You can see the time changes

6 Q Or are there other parts of August 12th during that
7 day where the salinity is below 900 EC?

8 A Yes, 898.

9 Q Is there any other time during this 2002 period where
10 salinity is at 900 EC?

11 A From these records, I'm not sure. Do you want me to
12 go through them -- every one of them line by line right at
13 this moment?

14 CHAIRPERSON DODUC: No.

15 MR. SALMON: I think you've done it, ma'am. You
16 probably know the answer.

17 CHAIRPERSON DODUC: And so please get to the
18 point, Ms. Crothers.

19 MS. CROTHERS: Well, my point is I think it's
20 been somewhat of an over-exaggeration as to the EC he's
21 obtaining during that period. And I think these records
22 identify that.

23 CHAIRPERSON DODUC: Thank you very much.

24 MS. CROTHERS: Would you say that walnuts are
25 more salt tolerant than beans?

1 MR. SALMON: Yes

2 MS. CROTHERS: Would you say that walnuts are
3 moderately sensitive to salt in the irrigated water?

4 MR. HERRICK: If you know.

5 MR. SALMON: They're affected by the amount of
6 salt in the water when I irrigate. I can't -- you know,
7 each tree can handle it differently. But as a whole, it
8 is -- they're greatly affected by my water that I'm giving
9 it.

10 MS. CROTHERS: But you compare your 2002 yields
11 of walnuts to the 1999 yield of your 105 acres of walnuts
12 to show damage from irrigation water quality.

13 Do you know if irrigation water quality ever
14 exceeded 1.0 EC in the channels during this period,
15 between 1999 to 2002?

16 MR. SALMON: I wouldn't know that information,
17 ma'am.

18 Q Well, you do meter your water?

19 A I do meter my water.

20 Q In the South Delta Exhibit 2, Attachment B, the lab
21 report from the John Taylor Fertilizer, you state that
22 your walnut trees are suffering from acute chloride
23 toxicity; is that correct?

24 A That's what the laboratory analysis report evaluation
25 from John Taylor Fertilizer states.

1 Q Are these the trees that you refer to in your
2 testimony at the bottom of page 1 that had a virus?

3 A Yeah.

4 Q In the lab report it suggested that you should
5 determine the source of the chloride accumulation. Have
6 you done this?

7 A Can you repeat that again please?

8 Q In the lab report on your walnut trees, it suggests
9 you should determine the source of the chloride
10 accumulation. Have you done this?

11 A Of the salt -- the chloride accumulation, we know
12 where it's accumulated. I kind of knew that before they
13 told me.

14 Q Well, where is it accumulated?

15 A Well, it's accumulated -- now it's accumulated in my
16 trees that are dying. That's why they're dying.

17 Q Is it --

18 A Acute chloride toxicity, it's building up. Every time
19 we continue to irrigate with less than desirable water, it
20 just keeps accumulating and accumulating in our soil.

21 Q Well, are you aware that the soil -- that roots tend
22 to pick up the water and leave the salts behind?

23 A That's pretty simply stated.

24 Q Well, you --

25 A I don't think that that's exactly perfectly the way it

1 works.

2 Q Well, you state you have installed tile drains in the
3 walnut area. Are these drains also -- have they also been
4 there for about 25 years?

5 A Some have and some are a little more recent than that.
6 Some are around 15 years old.

7 Q You also stated that this is to aid the drainage which
8 is inadequate. Even with tile drains, do you still have
9 problems with drainage?

10 A Not usually, no, ma'am. We clean all of our drains.
11 They silt up quite often. We clean our surface drains
12 quite a bit. And then we have sump pumps that drain our
13 tile drainage water.

14 Q So how far down in the soil profile are these drains
15 below your walnuts?

16 A The surface drains or the tile drains?

17 Q The tile drains.

18 A The tile drains are generally five, six feet. We have
19 checks -- we have benched fields. Some are terraced. So
20 sometimes they sit a little more elevated than some other
21 fields, and they could be six feet deep. Some blocks that
22 sit lower could be four and a half feet deep.

23 Q Do you know if you may have a boron problem in the
24 soils?

25 A Delta region boron is a known -- most of -- everybody

1 that pulls a lab will see their levels sightly elevated.

2 We are kind of known for a little bit of a boron hot spot.

3 Q In your testimony you said that the water quality in
4 your area is worse in the summer than in the early part of
5 the season; is that correct?

6 A Correct.

7 Q Are you aware that with the temporary barriers
8 installed that generally water quality in the South Delta
9 channels improves later in the season in many of those
10 channels?

11 A Are you making a statement, ma'am?

12 Q No, I was asking if -- since you do keep track of
13 water quality with your meter, if you've noticed that when
14 the temporary barriers are operating in those South Delta
15 channels, like Grant Line, that water quality may improve
16 later in the season?

17 A It may improve. What I've experienced when I was
18 doing my samples, the barriers were in, and I was getting
19 high EC readings. I have nothing to compare to. I didn't
20 do constant water sampling prior to the barriers being
21 admitted into the river system. So I have nothing to
22 really compare to, say, August 1st when the barrier was
23 in, then go back a couple of years and to see what it was
24 when the barrier wasn't in on August 1st. So I --

25 Q What do you consider a high EC reading?

1 A A high EC reading for which crops, ma'am.

2 Q For grapes.

3 A For grapes? You have to look at it in different
4 levels. You could afford to give your -- like in my
5 situation and there's certain levels, if it's -- if it's
6 June and I need to irrigate to give those grapes a shot of
7 water, and I start checking the river at June 1st and it's
8 running -- giving me levels of 600, 700 parts per million
9 800 parts per million, I'll kind of like to hold off a
10 little bit and see what's going to happen, if it's going
11 to clean up any or what. You know, you just -- I really
12 don't know.

13 So I'll wait. They could sustain, you know, an
14 irrigation like that. It's probably not going to hurt
15 them that much at that time if I can follow up with a
16 good -- a better quality flush. Truthfully I wouldn't
17 like to irrigate with much less than -- or more than 400
18 parts per million. My blueberries are highly susceptible
19 to water in excess of 900. 800, 900 is a pretty drastic
20 blow for them. Same with my trees. I would prefer it to
21 be less than 400. I would -- you know, the less is the
22 better. I mean if you could give me 200 parts per
23 million, I'd thank you very much.

24 Q What's the water -- you mentioned you have property
25 near the San Joaquin river?

1 A Yes, ma'am.

2 Q Do you measure the water quality at that location?

3 A I have recently. This winter when we were planting
4 tomatoes, we used transplants that come from the nursery.
5 And when you plant them, you're giving them an isolated
6 shot of water right at the root zone just before the plug
7 goes into the soil.

8 So if -- we've experimented in the past with 700,
9 800 parts per million. That plant doesn't take off as
10 fast as if you are giving it, say, like we did at the San
11 Joaquin this year at planting time, the water quality was
12 about 50 to 55 parts per million, which is excellent --
13 excellent water quality, they did very nice. And we've
14 experienced in the past using river water with -- that was
15 high in EC reading, and we had yellowing of the leaves,
16 wilting, and just generally a very poor start-off.

17 Q In the South Delta channels -- I don't know if you can
18 answer this question. But historically do you believe
19 water quality at Grant Line Canal or Old River ever was in
20 the range of 50 microSiemens?

21 A I would just be guessing, ma'am, and that wouldn't be
22 fair for me to say. I could just guess and say yes. But
23 I wasn't metering it back -- way back then. I do know if
24 I was using my crops as a guide, my trees, my vines, I
25 would have to -- I would have to -- that would tend to

1 lead me to believe that the water quality was in an
2 adequate level for the survival of my trees and my vines
3 and my berries, just from an optical standpoint.

4 MS. CROTHERS: Thank you. I have no other
5 questions.

6 CHAIRPERSON DODUC: San Joaquin River Group
7 Authority.

8 MR. PETRUZZELLI: Ken Petruzzelli for the San
9 Joaquin River Group?

10 We have no questions at this time.

11 CHAIRPERSON DODUC: Bay Institute?

12 Still not here.

13 California Department of Fish and Game?

14 Not here.

15 Contra Costa Water District?

16 Contra Costa Water District, not here.

17 Merced Irrigation District?

18 MR. GODWIN: Arthur Godwin for Merced Irrigation
19 district.

20 CROSS EXAMINATION

21 OF THE SOUTH DELTA WATER AGENCY PANEL

22 BY MR. ARTHUR GODWIN, ESQ., representing the Merced
23 Irrigation District:

24 MR. GODWIN: Mr. Salmon, when was this testimony
25 prepared?

1 MR. SALMON: I'm not sure, sir. It was before
2 yesterday.

3 Q Okay. At the bottom of page 1 of your testimony you
4 refer to the yield of your walnuts from 1999 to 2002.

5 Do you have records on the yields from previous
6 years?

7 A I'm sure I do. I wasn't advised that I needed to
8 bring any of those. I was just showing -- we did this
9 just to show what happened at this point in time in 2002.

10 Q Okay. Are you aware that there could be other factors
11 that affect the yield of walnuts?

12 A Oh, yes, sir, I do.

13 Q For instance, can weather affect your yield?

14 A Yes, sir, it can.

15 Q Rainfall could affect the yield, for instance, the
16 timing of the rainfall or the amount of rainfall?

17 A Yes, sir.

18 Q Wind or heat can also affect the yield, is that true?

19 A Yes, sir.

20 Q Your fertilizer application could affect your yield?

21 A Usually fertilizer application -- the lack of
22 fertilizer would affect it to the negative in maximizing
23 the amount of your fertilizer input. The reason you're
24 doing it is to get a larger yield.

25 Q Okay.

1 A So, yes.

2 Q All right. Thank you.

3 Let's see, your application of irrigation water,
4 the timing of that, and the amounts can also affect your
5 yield, correct?

6 A Correct. That's why you try to utilize all the high
7 technology that you can, whether you're using neutron
8 probes to let that -- apply that water when the tree needs
9 it. So we use neutron probes and soil tensiometers.

10 Q So the yield on a particular acre of walnuts can vary
11 from year to year then, right?

12 A Correct. And variety also has a say in that.

13 Q Is there any way to identify one particular factor in
14 the change of yield from year to year? For instance,
15 could you look at one year and another year and say,
16 "Darn, if we had put more fertilizer on that year, we
17 would have got a better yield. Or if it hadn't rained
18 right during when the trees were pollinating, we would
19 have got a better yield"?

20 A Right. Well, how I judge some of this yield loss at
21 this time in 2002 would be directly related to a -- what
22 we call a salt burn on the trees. And during -- when they
23 experience that at a certain time, the leaves actually
24 burn off, allowing for too much sunlight to hit the
25 immature nut hole, which will cause it to burn. And then

1 during a wind or whatever you can -- they'll drop right
2 off. But even if they didn't drop off, come harvest time
3 the nut would be ruined, basically baked inside the shell.
4 And we can directly relate the amount of salt burn to the
5 leaves to the loss of the crop.

6 Q What type of salt causes leaf burn?

7 A Pardon me?

8 Q What kind of salt causes leaf burn?

9 A Basically it would have to -- I'd have to concur with
10 what the laboratory analysis report states. I'm not a --
11 don't claim an expertise in the different types of salts.

12 Q You pulled that orchard in 2002; is that correct?

13 A I did what to it, sir?

14 Q You removed the orchard?

15 A Yes, I did.

16 Q And was that orchard replaced?

17 A We are in the process of replacing them.

18 Q With what?

19 A Well, I'm not sure. I have different types of plans
20 that are going on. But we have replanted with walnuts,
21 certain areas switching over to different types of
22 irrigation systems.

23 Q All right. In your testimony you said that you divert
24 water from Middle River and Grant Line Canal?

25 A Correct.

1 Q Looking at Attachment B, the lab report. It's talking
2 about chloride toxicity on your walnuts. The water for
3 that property, where do you divert the water from?

4 A Yes, this would -- the walnuts would be from Grant
5 Line.

6 Q Okay.

7 A I have the ability to send out water at several
8 directions on different parts of the ranch. I can send it
9 far to the east to where I could also draw water from
10 Middle River. And I can also transport water from Middle
11 River over across a dry levee which is known as Wing
12 Levee, that puts it on the other part of my ranch. I have
13 large transporting canal ditches.

14 Q You stated earlier that you regularly test your
15 water -- irrigation water with an EC meter?

16 A Yes, sir.

17 Q Do you ever test your water for chloride
18 concentrations?

19 A No, sir.

20 Q So you're not aware of the chloride concentration in
21 the Middle River or the grant line Canal?

22 A Not at this time I'm not.

23 Q All right. Are you aware of chloride concentrations
24 that are coming down the San Joaquin River?

25 A No, sir.

1 Q Are you aware that there's other water sources
2 entering the Delta area?

3 A Am I aware of other water entering the river system?

4 Q Entering the Delta system, yes, from other sources
5 besides the San Joaquin River.

6 A From other than the San Joaquin, other water, yes. I
7 am aware of other people putting in water. You're talking
8 like treatment facility plants and --

9 Q No, I'm talking about flows from other sources coming
10 into the Delta besides the San Joaquin River.

11 A Oh, yes, yes, other tributaries and what have you.

12 Q Correct.

13 A Yes, Um-hmm.

14 Q And are you aware of the chloride concentrations of
15 those other sources?

16 A No, sir.

17 Q Again looking at Exhibit B, the -- I guess it's the
18 third page of Exhibit B, talking about the impact to your
19 grapes.

20 What's the source of irrigation water for those
21 grapes?

22 A Grapes would have been at that time Middle River.

23 Q Going back to page 1 of your testimony.

24 Do you have any documentation that shows your
25 yield loss on those walnuts from year to year?

1 A Not with me.

2 MR. GODWIN: Thank you. That's all I had.

3 CHAIRPERSON DODUC: Thank you.

4 Northern California Water Association is not
5 here.

6 San Joaquin River Exchange Contractors Water
7 Authority?

8 Don't see anyone.

9 Oh, sorry.

10 MR. MINASIAN: Sorry.

11 CHAIRPERSON DODUC: You moved so quickly.

12 CROSS EXAMINATION

13 BY MR. PAUL MINASIAN, ESQ., representing the San Joaquin
14 River Exchange Contractors Water Authority:

15 MR. MINASIAN: Mr. Salmon, my name is Paul
16 Minasian. I represent the Exchange Contractors.

17 You mentioned that you have soil salinity tests
18 routinely taken on fields. Could you focus on the walnuts
19 that are the subject of your testimony.

20 Do you have soil salinity testing of that field
21 in the period of 1999 to 2002?

22 MR. SALMON: I probably don't retain -- I have so
23 many fields, sir, on -- say, 4,000, 5,000 acres. And most
24 of it is double cropped. I'd have a stack of test results
25 as high as this ceiling for every field. And I really

1 probably don't have those records available

2 Q So your guess is they're not available?

3 A That would be my guess, sir.

4 Q Do you use one laboratory to do that work for you?

5 A Sometimes it's different laboratories. Could use

6 three to four different labs.

7 Q Okay. Do you agree that if we had the soil salinity

8 test -- well, strike that.

9 Do you usually take them in the spring?

10 A Pending on when the crop was going to be planted. If

11 we're going to plant in the spring, I'll usually take all

12 the main samples late fall, so that if I do need to add

13 some amendments, I have ample opportunity time wise to add

14 these amendments to the soil. If we're double cropping,

15 then I will use -- after the first crop is harvested we'll

16 come in and do another soil sample. And then I can

17 actually use the two, because they're taken in enough time

18 where I would probably still have those in my truck

19 someplace, a file cabinet, and we'll compare the two

20 different ones.

21 Q If in fact we could figure out which lab did the soil

22 samples on the walnuts, would you agree that that would be

23 the best evidence of where the chlorides were that were

24 uptaken by the plants?

25 A Yeah, they would tell you what's in the soil. I don't

1 know -- they're not -- they don't have DNA mapping on
2 them, so --

3 Q But they would also tell us what the trend was in the
4 soil EC in 1999, 2000, 2001, 2002, wouldn't they?

5 A It may.

6 Q Okay. Now, let's assume for a moment you had that
7 soil sample and it showed high salt, high chloride levels
8 in the soil in March of 2002 or April 2002. Would there
9 be something you could do with your irrigation or drainage
10 practices that would improve the soil salinity and
11 therefore reduce the chance of leaf burn?

12 A Well, it would be tough when that's why I monitor the
13 water that I'm putting on. It doesn't really do us any
14 good when we're trying to flush with 900 parts per million
15 water. You're not accomplishing anything. That's why
16 going from a .7 to a .1 is -- that's asinine.

17 Q To get to a leaf chloride sample of about 2.5, you
18 have to have a soil salinity of around 7 or 8, don't you?

19 A Are you using the numbers from the report?

20 Q Yes, I was. And I was using them generally.

21 Just let's talk about the theory rather than
22 specific numbers.

23 A In theory.

24 Q Okay. And if you had such a high soil salinity
25 reading, you might think about putting on .7 water to

1 leach the salts below the root zone, might you not?

2 A Correct.

3 Q Okay. And you have a drainage system on your property

4 which is a combination of tile drainage and surface

5 drainage, do you not?

6 A Correct.

7 Q And those have pumps on them, don't they?

8 A Correct.

9 Q And if you put on water to leach the salts you turn on
10 the pumps in order to evacuate the water out of the soil,
11 wouldn't you?

12 A Correct.

13 Q Okay. Do you take your soil salinity tests at various
14 elevations in the soil?

15 A Yes.

16 Q And so one thing about soil salinity tests is we could
17 tell whether the salt was rising up, being pushed up into
18 the root zones or whether it was coming from irrigation
19 water, couldn't we?

20 A Yes, sir.

21 Q Good.

22 Would you for us try to hold on to those readings
23 in the future so that we would be able to have those?

24 A Are you going to help me pay for the storage fee?

25 (Laughter.)

1 MR. MINASIAN: Yeah, thank you. That's a very
2 fair question.

3 No further questions.

4 CHAIRPERSON DODUC: Thank you.

5 San Luis and Delta-Mendota Water Authority.

6 CROSS EXAMINATION

7 OF THE SOUTH DELTA WATER AGENCY PANEL

8 BY MR. JON RUBIN, ESQ., representing the San Luis and
9 Delta-Mendota Water Authority and Westlands Water
10 District:

11 MR. RUBIN: Good morning, Mr. Salmon. My name is
12 Jon Rubin. I represent the San Luis and Delta-Mendota
13 Water Authority and the Westlands Water District. I have
14 a few questions for you today.

15 The first question follows up on a question that
16 was asked before. You were asked when you prepared your
17 testimony. And I believe you're response is "I don't
18 recall." Is that --

19 MR. SALMON: No, sir; no, sir. I said it was
20 before yesterday.

21 Q I'm sorry.

22 Can you provide me with a better time frame? Was
23 it within the last year?

24 Mr. Herrick, I asked the question of the witness.
25 If you have an objection, you could raise that.

1 A Nobody was objecting, sir.

2 MR. HERRICK: If it helps -- and I know that you
3 may object that I'm testifying. But this is -- as we
4 stated before, this was prepared by he and his father.
5 This is prior testimony presented by his father. His
6 father had his heart replaced. We switched him in. He
7 was the one that was helping putting it together. So I
8 don't know when it was either. A couple years ago
9 originally --

10 MR. SALMON: Maybe a year and a half -- I can't
11 give you an exact date. But if it's that important, I
12 guess I could try to locate a calendar and give you an
13 exact date, if that would help.

14 MR. RUBIN: Mr. Salmon, can you provide me with a
15 little bit better understanding of your farming
16 operations. As I understand it, there's more than one
17 location in which you are taking water for irrigation; is
18 that correct?

19 MR. SALMON: Yes, it is.

20 Q And that water is being taken for use by ABF Services;
21 is that correct?

22 A It is used on ABF Farm Service ground property, yes.

23 Q And is it on property that is beyond just the property
24 that's been identified in your testimony?

25 CHAIRPERSON DODUC: Ms. Crothers just went -- has

1 spent some time going through this line of questioning.
2 Where are you going with this? I mean if we can just get
3 to the --

4 MR. RUBIN: I just want to make sure that the
5 record's clear. I don't believe it is right now. I
6 understand that there are several intakes that are being
7 used. But I was trying to understand if that's used just
8 on the property that's the subject of the testimony or if
9 it's all of the property that is owned and farmed by ABF.

10 CHAIRPERSON DODUC: It would be very helpful if
11 you could focus your questions, make them very specific,
12 so that we can help expedite this cross-examination.

13 MR. SALMON: How are you doing?

14 MR. RUBIN: I'll ask the question again. I
15 thought it was fairly specific. The intakes that are
16 available to ABF Farms, are those used just for the
17 property that is the subject of your testimony or is it
18 for all of ABF farm land?

19 MR. SALMON: No, those intakes supply the
20 irrigation water for all the acreage on this ranch.

21 Q And that total acreage on the ranch is what?

22 A I believe -- I'd say this particular ranch, 1264,
23 1280, right in there, give or take.

24 MR. RUBIN: I don't know if it's possible for
25 Board staff to provide on the overhead Attachment A, which

1 is a map. I do have a couple of questions regarding that.

2 It might be helpful.

3 CHAIRPERSON DODUC: We all have it in front of
4 us. So please proceed.

5 MR. RUBIN: Okay. Mr. Salmon, Attachment A to
6 your testimony provides a map; is that correct

7 MR. SALMON: Yes, sir.

8 Q And is the land at issue in your testimony depicted on
9 that map?

10 A Yes, sir.

11 Q And can you explain in detail where that land is
12 located?

13 A Yeah, the -- well, not all of it's on here, sir.
14 There's some that's missing. My grapes.

15 No, they're on there. I see them now, right
16 here. Parcel No. -- this would be -- that's on that
17 Survey No. C-379, No. 6, 1,057.55 acres. The other one
18 would be No. 4, contains 48.20 acres.

19 Q And maybe I'm just having difficulty reading this map.
20 But you said at No. 4. Is that depicted in No. 4 in a
21 circle?

22 A Yes, it's over towards -- you see where it says
23 "Middle River"?

24 Q Yes.

25 A It's right over there. There's a 3 and a 4.

1 Q Okay.

2 A That's where grapes are currently placed.

3 Q And what about the -- I'm sorry. You said that grapes
4 are currently placed there?

5 A That's one -- that's the only one showing grapes at
6 this time. There's quite a few more, but they're not on
7 there.

8 Q I was hoping that you could depict where the acreage
9 is that is noted in your testimony as it existed in 2002.

10 A That would be one right there where I told you the 4.

11 Q Okay.

12 A That would be one location. Another location would be
13 just to the west of it towards the -- you see where that
14 big thing that says "Undine Town Site"?

15 Q Yes.

16 A Top middle where it says No 7?

17 Q There's property located in that region as well?

18 A Well, yeah. That's -- they're referring back to the
19 early 1800s. That's where the old store used to be.

20 There was a -- there's a site in between the
21 grapes and that town site. There's a block of soil there.
22 And then there's another block over here at No. 6, where I
23 first told you the little 6 that's circled.

24 Q Is that the location now that you've been referring to
25 in your testimony?

1 A I've been referring to all three locations.

2 Q Okay. And the source of the water that you've
3 asserted caused damage to the crops in 2002 is from where?

4 A Coming from Grant Line Canal down at the bottom, south
5 bottom.

6 Q Is there a specific location on Grant Line where
7 you're pulling water for these properties, or were --
8 excuse me -- were taking water in 2002 for these
9 properties?

10 A Well, I have a permanent pump -- a permanent pump
11 station.

12 Q In the -- I'm sorry. The permanent pump stations
13 located within Grant Line?

14 A Correct.

15 Q And --

16 A In the river.

17 Q Is there -- can you explain where on Attachment A that
18 permanent pump station's located?

19 A Basically right there.

20 Right on the -- you see where it says Grant Line
21 Canal?

22 Q Yes, sir.

23 A Okay. Basically on the "N" of the canal.

24 Q Great. Thank you.

25 A And then there's another -- do you want the other

1 sites?

2 Q Yes, please.

3 A They're over on Middle River.

4 Q Okay.

5 A Some are missing. There's not -- there's some that

6 are not here.

7 Right in the very bend of where it says "middle"

8 and then you see "river". Right after "middle"?

9 Q So shortly after where the word "middle" appears?

10 A Yes, where it looks like a dog leg, if you're a

11 golfer, that's where one pump would be.

12 Q Is there another location?

13 A Yes, sir. Then there's another pump, that it's off of

14 that -- I'd say I's right around the -- where it says

15 "Union Island 2" and then it has Property Section 22-23 in

16 words?

17 Q Yes, sir.

18 A Right around in the 2-2 section, if that was -- if

19 that map was to continue, there's another pump.

20 Q So if I understand your last statement, if the

21 depiction of Middle River continued towards the bottom of

22 the page where the 2-2 appears --

23 A Correct.

24 Q -- you have a pump station?

25 A Right.

1 Q And in 2002, were you diverting water at all three of
2 these locations?

3 A Yes, sir.

4 Q And do you have data on the EC at these locations
5 during the times you were diverting?

6 A I had -- you mean other than my own or the DWR's?

7 Q Well, I could ask -- I'll ask you again. Do you have
8 personal data collected using your hand-held devise at
9 these three locations?

10 A I did have. I don't have it with me today.

11 Q There was data -- or, excuse me. There is data
12 attached to your testimony which provides EC at two
13 different locations, one is Middle River at Undine Road
14 and one is EC at Daugherty cut above grant line; is that
15 correct?

16 A Correct.

17 Q And those appear in Attachment C to your testimony,
18 correct?

19 A Correct.

20 Q And the EC readings at Undine Road are reflective of
21 the EC at which diversion point that you use?

22 A That would be -- for which one did you say? You
23 talking Middle River?

24 Q Yeah, okay.

25 A That --

1 Q Excuse me. The data that applies to Middle River at
2 Undine road, which diversion point do you believe is
3 reflective of the EC at your diversion point?

4 A That would be the one -- reflect the flows coming from
5 the Middle River right at the -- right where I told you
6 about the dog leg?

7 Q Yes, sir.

8 A Right there.

9 Q And the same question, the data that applies to
10 Daugherty cut above Grant Line Canal is reflected in which
11 diversion point?

12 A That would be down at the Grant Line Canal where the
13 pumping station is set on top of the "N" in the word
14 "canal". But its's not exactly there.

15 Q And based on your farming operations and your use of
16 your hand-held EC meter, can you characterize any
17 differences in EC at the diversion point on Grant Line
18 versus the diversion points on Middle River?

19 A You mean -- are you trying to state that were my
20 readings to my recollection the same as the readings of
21 the ones printed on this paper?

22 Q Let me rephrase my question if you didn't understand.

23 The question that I asked is: Do the EC -- or,
24 excuse me. Does the EC that exists within water at your
25 diversion point on Grant Line differ from the ECs at your

1 diversion points on Middle River?

2 A Oh, yes, they do.

3 Q And --

4 A I'm sorry. I didn't understand you the first time
5 around.

6 Q I'm glad I clarified.

7 And can you characterize the difference -- the
8 extent of difference?

9 A The EC readings at Grant Line Canal were traditionally
10 higher than the readings that I was receiving at Middle
11 River.

12 Q And do you have an explanation of why?

13 A Well, if you'll look -- well, I don't have an exact --
14 I mean I'm not a flow expert. But I know like the Grant
15 Line dead-ends just past me. I do know that the mouth
16 where the water flow is to come into the Grant Line is
17 highly silted and it's very pinched. And we do have
18 trouble getting flow in there. I can say the same thing
19 for Middle River as well, that it is a very small opening
20 in the mouth at the beginning of Middle River.

21 Q Based on your answer, you've indicated that there are
22 characteristics very similar in both Grant Line and Middle
23 River. One characteristic that I didn't understand exists
24 in Middle River that does exist in Grant Line is the Grant
25 Line is a -- I think you stated a deadened; is that

1 correct?

2 A Correct. But we do -- the tide directly affects us.
3 It gives us a good flushing. Like right now I have great
4 water in there. It's good. When it comes in and it goes
5 out, it's just like flushing the toilet, for a simple
6 analogy.

7 Q A few more questions.

8 On page 1 of your testimony, I believe it's South
9 Delta Water Agency Exhibit 2, second -- excuse me -- third
10 paragraph you say that in the last few years you've
11 noticed an increasing and substantial damage to crops; is
12 that correct?

13 A Yes, sir.

14 Q And can you provide me with a better understanding of
15 what you mean "within the last few years"?

16 A Well, I'd say from 2000 -- I reckon 2000 we started
17 noticing some trouble in the young trees. When we would
18 first plant them -- I mean you're obviously very attentive
19 to that baby when it's first planted. Or when you first
20 bring that baby home from the hospital, you're watching it
21 like a hawk. And you're trying to see if it's got
22 jaundice, you're trying to see if it's going to make it.
23 And that's how I treat my trees, the blueberries, the,
24 grapes. You're just watching for any sign of weakness,
25 anything that you could alter quickly. It started

1 probably really watching things in 2000, because that's
2 when I started replanting a lot of walnut orchards,
3 transplanting a lot of missing grapes due to like a
4 tractor blight or some guy hitting it or damage done to a
5 harvester. So that's when I probably really started
6 watching everything very, very close.

7 Q And if I understand then, sometime -- you use --
8 excuse me. Strike that.

9 You used 1999 as the base line to assess damage
10 to your crops in your testimony; is that correct?

11 A Well, in this testimony, I -- I'm sure it goes -- it
12 can go back further than that. We just didn't pull up a
13 whole lot of different information. We just -- that's
14 when we noticed a large amount of acreage that was going
15 to have to be removed, you know, because that's a large
16 chunk of real estate that we were taking out of trees. So
17 that's why '99 -- or 2000 got popped in there -- '99
18 to 2000.

19 Q I'm sorry. Maybe I misunderstanding your testimony.
20 But I thought on page 1 at the last paragraph, South Delta
21 Water Agency Exhibit 2, you are trying to provide
22 information --

23 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: I believe
24 you're -- it's Exhibit 3.

25 MR. RUBIN: I'm sorry, Exhibit 3. I apologize.

1 Your testimony, Exhibit 3 for South Delta Water Agency,
2 the last paragraph on page 1, I was under the impression
3 that you were trying to characterize damage to your crop
4 in 2002 based upon a 1999 base line

5 MR. SALMON: Correct. I -- yes, you're right
6 with what you just said. That's what I was trying to do.
7 I --

8 Q And getting --

9 A -- just missed a date there. I apologize.

10 Q And getting back to your statement in the third
11 paragraph, page 1, South Delta Water Agency Exhibit 3,
12 when you say that in the last few years you've noticed an
13 increasing in substantial damage, what you're speaking of
14 is an increase from 1999 as the base line, so the increase
15 occurred in either 2000, 2001, and ultimately you've
16 characterized in 2002; is that correct?

17 A And then 2002 is when they breathed their last breath.

18 Q Now, turning back to some of the exhibits to your
19 testimony.

20 Attachment C to your testimony, South Delta Water
21 Agency Exhibit 3, appears to reflect a correspondence to
22 you from a staff person at the Department of Water
23 Resources; is that correct?

24 A Yes, sir.

25 Q And it also appears to respond to a request that you

1 made; is that correct?

2 A Yes, sir. It was myself or my father.

3 Q Do you recall the specific request that was made?

4 A No, sir, I don't.

5 Q And if I understand it correctly, Attachment B to your

6 testimony involves reports that were prepared based on

7 samplings that occurred in 2001; is that correct?

8 A Yes, sir.

9 Q And the testimony that you provided on damage relates

10 to damage that occurred in 2002; is that correct?

11 A Yes, I believe so.

12 Q Do you have data to provide on the EC at your

13 diversion points during 2002, the year in which you've

14 asserted that there's been damage due to high levels of

15 EC?

16 A Well, I'd have to check again. I know I gave a copy

17 to DWR at the time when they came out to assess.

18 Q Some questions specific to Attachment B of your

19 testimony, South Delta Water Agency Exhibit 3.

20 It says here that soil samples -- excuse me --

21 tissue samples were collected in August 31st, 2001; is

22 that correct?

23 A I believe that's what it says.

24 Q Do you know how much samples were taken?

25 A No, I -- well -- no, I don't know how many samples

1 they took.

2 Q Do you know the location of the trees from which
3 samples were taken?

4 A Within my field? Is that what you're referring to?

5 Q I'll re-ask the question.

6 Do you know the location of trees from which
7 samples were taken?

8 A I don't know the specific tree. But I know they
9 randomly take some and then they go to an obvious burn
10 zone and take samples from there. And then they try to
11 take samples from what would appear to be a healthy tree
12 for comparison.

13 Q I also want to clarify an answer that you provided to
14 another person that asked you a question on
15 cross-examination.

16 The lands on which you were growing walnuts in
17 2001, did those contain any type of subsurface drainage?

18 A That I was growing walnuts on?

19 Q Yes, sir.

20 A Yes, all of my permanent crops have both tile drainage
21 and surface drainage.

22 Q An those subsurface drainage systems were in place
23 since 1999; is that correct?

24 A Oh, yes, sir.

25 Q And can you explain to me the recommendation that is

1 reflected in Attachment B that some form of subsurface
2 drainage systems may need to be installed to prevent this
3 event from reoccurring in the future?

4 A I think they were making a general statement.
5 Sometimes they send out a pre-blanket answer to a lot of
6 different questions. And if you already have tile drain
7 in, then you can just ignore that section of his
8 evaluation. Because I -- my drainage was already in
9 place. It's been there for 15, 20 years. He may not have
10 known that.

11 Q So is it your belief that the information that appears
12 on Attachment B that we should rely on is simply the fact
13 that the crops were suffering from acute chloride toxicity
14 and the information that provides the level of toxicity?

15 A That kind of went around the horn a few times, my
16 friend. I don't understand exactly what you're trying to
17 fish out of me.

18 Q Well I'm not sure the purpose of your Attachment B and
19 I'm getting -- my question was directed to that. Your
20 last answer to my question indicated that the last
21 sentence you believe should be ignored. I was wondering I
22 guess if there's other portions of Exhibit B that you
23 believe -- excuse me -- Attachment B should be ignored as
24 well?

25 A No, sir. What he's saying is is if you don't have it,

1 you should put it in, basically is what he's saying in a
2 nutshell. I already have it in, so I don't see where
3 that's an issue. I have tile drain. I testified to that
4 fact. And, heck, I can bring you some pictures or take
5 you out there and show it to you. It pumps water. It
6 works great.

7 Q And just a couple more questions.

8 As I understand it, you're here as an expert, and
9 your expertise is in farming operations; is that correct?

10 A I would say that -- I would say that. I graduated
11 from college at California Polytechnic, went in crop
12 science, ag business, concentration farm management.
13 Continued my education with pomology at UC Davis,
14 viticulture at UC Davis in extension services. Been
15 farming there for 20 years with dad, who's been farming
16 for 50, 60 years. A lot of hands-on. I'd say I'm -- I'm
17 not tootin' my own horn, but I'm pretty good at it and I
18 pay special attention to my area that is farming.

19 Q And I appreciate that. This more direct question for
20 you is: Do you consider yourself an expert on the effects
21 of salinity in irrigation water on crops?

22 A Well, since I only deal with my crops, and I've dealt
23 with them for a lot of years now, I'd say that I'm, you
24 know -- in my situation, I know more than most people do
25 about it. I don't -- if you want me to toot my horn and

1 say I'm an expert for that -- I don't go out and then do
2 custom work for other people. I don't go tell people,
3 "You got salt damage in your trees." I only concentrate
4 in my island. I stay on my island.

5 Q Okay. The crops that were being grown at the time
6 you've claimed injury were walnuts, grapes, beans,
7 alfalfa, tomatoes and other row crops, correct?

8 A Correct.

9 MR. HERRICK: Madam Chair, I'm sorry for
10 interrupting. I just want to clarify. The questions
11 about expert are certainly appropriate, but we designated
12 him as not an expert witness, but a percipient witness on
13 crop damage to his stuff. That doesn't mean he's not an
14 expert.

15 Thank you. And sorry.

16 MR. RUBIN: And at what point in the year do you
17 irrigate for walnuts?

18 MR. SALMON: What time in the year?

19 Q Let me rephrase my question. I apologize. There was
20 some ambiguity there.

21 In 2002 when were you irrigating for walnuts?

22 A Usually you'll irrigate four times -- four or five
23 times, whatever I can squeeze in there and get in and work
24 the ground. So I'd say I start in. -- I usually start
25 giving them a shot in -- if February is warm -- Mother

1 Nature kind of dictates when I give the water to them --
2 and my probes. But we try to give them a light one early
3 on, get them woke up. And then once a month after that
4 or -- whatever the probe tells me. I don't just go out
5 there and open up the pipes and flood them. We go on a
6 monitoring system. But it would be, if you want to --
7 roughly say once to twice a month.

8 Q And that begins in February?

9 A About in February we give it the first shot. And then
10 maybe we won't give it in March or April. Like this year,
11 I gave it another one in April, because I had this -- I
12 put some material down that I needed to get set with
13 water.

14 Q And when is your last application?

15 A Would be prior to harvest. We'll usually stop the
16 water -- it depends. Some of my ground is on drip, some
17 of my trees are on drip. But to flood irrigate them, we
18 stop in September, first part of October.

19 Q So if I understand your testimony correctly, it's your
20 best estimate that in 2002 you were irrigating walnuts
21 from February through September?

22 A Maybe not all of those -- some of those varieties were
23 earlier varieties and they would be harvested in
24 September. I would -- I'd say I would have stopped on
25 that variety a month prior to that. And they probably

1 weren't irrigated -- since they were that earlier variety,
2 they probably weren't irrigated till in the middle of
3 April, May. Depending on what the weather was. I can't
4 go back that far. I don't remember.

5 Q And for your grapes that were being grown, when were
6 you irrigating in 2002 for those grapes?

7 A Well, I would -- then again I don't have the calendar,
8 I don't have that information on hand. But I'm going to
9 give you something off the top of my head then. It would
10 have probably been May -- starting in May, another one in
11 June, one probably in July, and there might have been a
12 light one in August.

13 Q And your beans, when were you irrigating for them in
14 2002?

15 A Oh, those -- those get watered every five days. So I
16 can't even remember -- I don't even really recall when
17 I -- I know when -- I harvested those late. Those would
18 have been harvested around October. Water gets shut off
19 on those probably about two weeks prior to harvest. I
20 don't have a date. Those were a double crop. I don't
21 have a date to when I started irrigating.

22 Q Do you start irrigating generally in the winter months
23 or in the spring months?

24 A No, no, that was all summer. That was probably
25 planted after wheat. So probably started irrigating those

1 in June.

2 Q And your alfalfa, that was irrigated when in 2002?

3 A April -- starting in April after the first cutting.

4 April to whenever we could get the last cutting off.

5 Sometimes we can get seven cuttings. And that puts you

6 October.

7 Q And tomatoes, when did you begin then irrigation in

8 2002 on that crop?

9 A Planted in March. Probably all the way till -- I
10 think we harvested those in July.

11 Q And you've indicated that there are also other row
12 crops.

13 A Yes.

14 Q Can you give me an estimate of when those were started
15 to be irrigated and completed?

16 A Asparagus would have been irrigated in about now,
17 start in November -- start in November, December. And
18 another one after harvest is completed, which would be the
19 end of May.

20 Q And if I understand your answer correctly, so at the
21 end of May you terminated the first -- or you completed
22 the first harvest?

23 A For only one harvest. For the asparagus. That's when
24 the season would be finished.

25 Q So you were irrigating during that period up

1 through --

2 A Then we would irrigate again in May, right after
3 harvest was completed.

4 Q And you're irrigating a new crop or is that to --

5 A No, asparagus, you continue to cut it. It's a
6 semi-permanent crop. It can last 12, 15 years.

7 Q And therefore are you irrigating throughout the
8 growing period, or is it just at the beginning?

9 A No, in the beginning when it's dormant and after we
10 cut it with a chopper and get the fern out, then we flood
11 it. And then we work it and let it come. And then we
12 harvest it all season. And then at the end we disk it up
13 and then we flood it again to kind of put it to sleep.

14 Q I believe I only have two more questions.

15 A No problem.

16 Q The first question: Is it correct to assume that you
17 will monitor water within Middle River and Grant Line and
18 use the water -- the diversion point that has the best
19 quality water?

20 A I try. That doesn't always work though. But that's a
21 fair assumption.

22 Q And you've testified earlier today regarding the water
23 quality for the irrigation water that you apply to your
24 crops. The question I have for you -- as I understand it,
25 water quality will change throughout the growing season

1 for any particular crop. And the water quality that
2 you've stated that you're looking for, is that affected I
3 guess by the average water quality or the max versus the
4 min? If you don't understand it --

5 A That was a long question.

6 Q I apologize. Let me try to rephrase it.

7 There's a circumstance where you could have a 0.7
8 EC throughout the growing period, correct?

9 A Yes.

10 Q There's a circumstance where you could have a water
11 quality at one point in the growing season which is .3 and
12 a water quality at a different point in the growing season
13 where it's 1.0, correct?

14 A Um-hmm.

15 Q And are your crops affected by the average EC or by
16 the maximum EC during the growing period, or the minimum?

17 A If I understand you correctly, I think it would be the
18 accumulation effect of all the high EC readings, not
19 just -- I couldn't put my finger on just one in
20 particular. Although I could say that that one in
21 particular high day is going to create a problem for me.

22 Q One last line of questioning. You've indicated that
23 you do test the EC of the water as its applied. Do you
24 test the EC of the water that's discharged from your
25 property?

1 A Yes, sir. I do.

2 Q And what EC is that water generally?

3 A Well, I can just -- I don't have my past records, but
4 I can just give you a sample of what I just did the other
5 day on some blueberries. I checked the water coming in
6 from the Grant Line and it was 80 -- about 80 parts per
7 million. Then I went to my drainage system and checked
8 that water and it was about 90 parts per million.

9 Q And 80 parts per million, do you know what that
10 converts to in terms of EC?

11 A Well, I did, but I don't -- you can do it real easy.
12 It's 640 -- multiplied by 6 -- you take an EC reading and
13 multiply it by 640.

14 MR. RUBIN: I have no further questions. Thank
15 you.

16 MR. SALMON: Thank you.

17 CHAIRPERSON DODUC: Thank you.

18 Mr. Schulz, I don't suppose you want to pass on
19 cross examination?

20 (Laughter.)

21 MR. SCHULZ: Good try.

22 CHAIRPERSON DODUC: Darn.

23 How long do you think you'll need? We might want
24 to break for lunch if --

25 MR. SCHULZ: No more than 15 minutes.

1 CHAIRPERSON DODUC: All right. Let's go ahead
2 and move forth then.

3 Good answer, Mr. Schulz.

4 MR. SCHULZ: Thank you.

5 CROSS EXAMINATION

6 OF THE SOUTH DELTA WATER AGENCY PANEL

7 BY MR. CLIFF SCHULZ, ESQ., representing the State Water
8 Contractors:

9 MR. SCHULZ: Mr. Salmon, I'm Cliff Schulz. I
10 represent the State Water Contractors.

11 MR. SALMON: Good afternoon.

12 Q Good afternoon or -- yeah, it is afternoon.

13 You just -- you answered a question which made me
14 happy because it verified my memory was still with me.
15 And that was the 640 number.

16 So if you're looking at an EC reading, a 1.0
17 reading would be 640 TDS, correct?

18 A Correct.

19 Q Okay, good. Can start with that. Because I
20 believe -- I wanted to make sure everybody understood,
21 because we've been talking until you got here today in EC
22 numbers, and you did a switch on us. And I wanted to make
23 sure everybody understood.

24 You testified earlier that if you went out and
25 took your reading and it was a 6, 7 or 800 TDS that you'd

1 try and hold off and wait. And you then said that 400 was

2 sort of ideal, but you'd happy if somebody gave you 200.

3 A The less, the better. I tell you, I love right now.

4 Q Right. Yeah, it sounds like you're getting about --

5 under .2 EC right now.

6 A Yes.

7 Q Okay. And in those answers when you use the 6, 7 and

8 8, and 4, you were talking in TDS, correct?

9 A Correct.

10 Q Okay. Now, .7 -- the calculation that I did -- and I

11 just would ask you if you agree with it, because I'd like

12 to get it into the record so we make sure that we've got

13 the correlations -- is that .7 EC would be about 448 -- or

14 about 450 TDS?

15 A Four forty-eight, that's correct.

16 Q Okay. And that 1.0 is 640, we established. And .8 is

17 a round 500 and 512?

18 A Correct.

19 Q Okay, Good. So I think with those -- with that

20 background we can move on.

21 I think I now understand why people are asking

22 questions about when this testimony was prepared. And I'd

23 like -- it is fairly important that at least know the

24 year, because there's a statement on page 3 -- by the way,

25 am I correct that there's a page 1 and page 3 and no page

1 2?

2 A No, I have a page 2.

3 MR. SCHULZ: Okay. My page 2 just says SA-3 on
4 it and then is blank. I just wondered whether --

5 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: I think
6 what -- I think, yeah, in the -- there is a difference
7 between the electronic version and the hard copy. And I
8 think we're going to rely upon the hard copy. The
9 electronic version had an extra page 2. And that also
10 goes for another one of South Delta exhibits.

11 So, yeah, that's correct. For the records
12 purposes, please refer to page 3 from the electronic
13 version as page 2.

14 MR. SCHULZ: And page 2 is nothing?

15 MR. HERRICK: There are only two pages of
16 testimony.

17 MR. SCHULZ: There are only two pages of
18 testimony. Good.

19 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: Right.
20 There is no page 3.

21 MR. SCHULZ: Okay. I was hoping I didn't have a
22 large gap in the data I was working with.

23 But, anyway, on page 3 in the third full
24 paragraph it says, "Although I have not calculated the
25 current year's problems, the chardonnay grapes are again

1 stressed and will have a decreased yield. And the young
2 walnut trees I have planted will include the varieties of
3 Tulare and Chandler are suffering from chloride stress."

4 That is not referring to 2005; is that correct?
5 That is referring to whatever year this was written in?

6 MR. SALMON: This was -- I would say that this is
7 approximately a year, a year and a half old. But if you
8 wanted to bring it to a more current time, yes, it still
9 holds true that in 2005 I am still experiencing troubles
10 with the Tulares and the Chandlers and my chardonnay
11 grapes

12 Q And that's --

13 A But this was -- I would say, it was probably a year
14 and a half.

15 Q So this was probably 2003?

16 A Well, my best recollection.

17 Q Okay. But you say you are having the problems in
18 2005?

19 A Well, there are a problem that has accumulated. It's
20 not going to be -- just like just getting out of surgery,
21 you're not going to just bounce back after they fix you
22 right up.

23 Q Because what has been your average water quality in
24 Grant Line this year?

25 A This year, it's been -- average, I haven't totaled it.

1 But I would say that I've been below the 200 parts per
2 million.

3 Q So you've been maybe .3 to .4 EC, is that correct?

4 A Every time that I've checked it it's been okay for me.
5 I've been happy with it. I haven't come up with too many
6 bad ones this year, because we had an exceptional winter
7 last year.

8 Q I certainly agree with that.

9 But nonetheless, you are still experiencing some
10 problems that you attribute to chloride buildup?

11 A Yes, I -- that's my opinion. I've had -- a lot of
12 those trees, I've tried to see if they were going to come
13 out of it by doing different types of severe pruning,
14 pruning them way back, seeing if I can get some new wood
15 growth. Because it's a lot easier to do it that way than
16 it is to give up on seven years of growing that -- and
17 jerking it out and just putting in a new one. You try to
18 do this. And if it doesn't work, I just lost another
19 year. So that's what -- we're seeing it. And sometimes
20 the tree will turn around. Most of the time it doesn't.

21 Q Okay. Now, this is a memory test.

22 A Well, I just had a birthday, so --

23 Q But because you used a base of 79 for your comparison
24 of your yields, and we have some figures that you've
25 provided us on 2002 water quality in Grant Line Canal, I'm

1 going to ask you if you have any recollection of what your
2 water quality in Grant Line Canal was in 1999?

3 A I wouldn't be comfortable giving you an answer to that
4 because I couldn't go to its validity.

5 Q Okay. And so do you have any recollection of whether
6 it was better or worse than 2002 or about the same? Now,
7 just in -- from a qualitative standpoint. I didn't expect
8 you to know the --

9 A Somebody might want to object to that because I'm just
10 speculating.

11 Q Well, I -- and I don't want the -- I really don't care
12 exact numbers, exact TDS. I was just trying to get at
13 a --

14 A I don't know that answer.

15 Q Okay. That's fine. Let's stop with that then.

16 And I think you answered that you've never had a
17 lab analysis done on your irrigation water to ascertain
18 what the make-up of the salts are; is that correct? In
19 other words there can be chlorides salts, there can be --
20 what are some of the other kinds? But there are many --
21 sodium -- no, not sodium. But chloride salts, sulfate
22 salts, et cetera. In other words there's different types
23 of salts in the water?

24 A Correct.

25 Q And not all of them are chloride based.

1 And I believe your answer was you've never had an
2 analysis done to --

3 A Well, I wouldn't say I've never had it. I'm sure
4 we've had it done. I just -- I don't have that
5 information.

6 Q Okay. I'm just -- I'm trying to figure out the basis
7 for your decision that the chloride toxicity problem is a
8 result of San Joaquin irrigation water. Because without
9 knowing what the chloride make-up of those salts are, I
10 just was going to ask you what the basis of your
11 determination was that it was the irrigation water that
12 was causing the problem?

13 A Well, I don't use well water. The only place we get
14 water is from the river.

15 Q Okay. When did you first notice the virus on the
16 walnut trees?

17 A Oh, that particular variety, I can't recall the exact
18 time. Probably started showing up in '97, '95, somewhere
19 in there. I don't have an exact date for you.

20 Q And did it -- was it a -- just continually got worse?

21 A It does run a course that continually -- it
22 continually gets worse every year.

23 Q And is that what killed the trees ultimately or forced
24 you to remove them?

25 A I'd say when we opted to pull the trees out, the black

1 virus was in there. But with the salt problem that it --
2 because we're currently living with some black line still.
3 But it's manageable, now that we know which ones it is.
4 As soon as we see it, we try to remove those trees. But
5 at that time it had spread across that entire block, which
6 sat a little bit lower. And during irrigations I knew we
7 were going to be in big trouble. Because if you introduce
8 that salt -- that high of TDS in the water -- we could see
9 the leaf burn. The tree is already -- was suffering
10 somewhat. And then you add that to it on top of it, and
11 it was just a total disaster. It was two evils.

12 Q Do you sprinkler irrigate your trees?

13 A No, we flood irrigate. I am now -- all of the blocks
14 that I'm putting in now I have the option of drip and
15 sprinkler, as well as flood. So I have three types of
16 irrigation systems to try to combat this problem.

17 Q So you were not -- and so the leaf burn was not coming
18 from water on the leaves?

19 A No, sir. No, it was flood.

20 Q It was flood irrigation?

21 A Um-hmm.

22 Q Okay. And when you say the salinity problems that you
23 were having and when said you had to take the trees out,
24 you're talking about the chloride toxicity?

25 A Yes, sir.

1 MR. SCHULZ: That's all I have.

2 CHAIRPERSON DODUC: Thank you, Mr. Schulz.

3 Stockton East Water District.

4 MS. ZOLEZZI: No questions.

5 CHAIRPERSON DODUC: Bureau of Reclamation.

6 No Bureau.

7 All right. That completes cross examination.

8 Mr. Herrick.

9 MR. HERRICK: Yes, thank you, Madam Chairman.

10 I have no redirect.

11 I would like to offer into evidence South Delta
12 Exhibit 2, which includes Attachments A through J; South
13 Delta 3, which includes Exhibits A through E; South Delta
14 4, which has Exhibits A through B; South Delta 5, which is
15 the testimony of Terry Prichard, which we added the
16 Attachment A of his qualifications; South Delta 6, which
17 has Attachments A -- just Attachment A. I'd like to offer
18 all those into evidence at this time.

19 CHAIRPERSON DODUC: I see Mr. Rubin coming up
20 here.

21 MR. RUBIN: Madam Chair, I would like to
22 specifically object to the attachments to Mr. Salmon's
23 testimony. I believe the objection can be raised, and I
24 raise it with other testimony as well, on Mr. Salmon's
25 testimony, attached to it are Exhibit B and C

1 specifically, which I raise objections to. I don't
2 believe the proper foundation has been laid for that. As
3 Mr. Salmon testified, he could not identify where the
4 samples were taken. And on Exhibit C -- excuse me --
5 Attachment C, I believe that attachment is irrelevant.
6 Mr. Salmon's testimony claims injury in 2000 -- excuse
7 me -- 2001 I believe is where he's referring. I'm sorry.
8 I need to withdraw that objection. I apologize.

9 But it still stands with Attachment A. I don't
10 believe the proper foundation has been laid. It's been
11 offered. I don't think that Mr. Salmon has been able to
12 testify at all --

13 CHAIRPERSON DODUC: Attachment A?

14 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: I think
15 you mean Attachment B, right?

16 MR. RUBIN: Excuse me?

17 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: I think
18 you mean Attachment B, right?

19 MR. RUBIN: Attachment B. Excuse me.

20 I don't believe that Mr. Salmon has established
21 any foundation about that document. I don't think he's
22 explained where those sampling has occurred, which trees.
23 I think for that reason it should be excluded and not
24 admitted into evidence.

25 CHAIRPERSON DODUC: Mr. Herrick, any response?

1 MR. HERRICK: Yes, Madam Chair. I would just say
2 that Mr. Salmon's testimony says that they had obvious
3 visual damage to various crops, that they asked their
4 fertilizer/PCA to help them determine. They presented
5 these reports showing what those people told them the
6 problem was. If somebody wants to dispute what's wrong
7 with his crop, that's fine. But this is stuff that he
8 looked at and relied upon for his -- for various
9 agricultural practices. I don't see any basis for
10 objecting to it being presented as something he developed
11 in the course of his normal farming operations.

12 CHAIRPERSON DODUC: All right. I'll accept all
13 exhibits into the record.

14 MR. GODWIN: One more?

15 CHAIRPERSON DODUC: I accepted all exhibits into
16 the record.

17 MR. GODWIN: Well, yeah, I was getting up as you
18 said that.

19 CHAIRPERSON DODUC: All right.

20 MR. GODWIN: I'd like to object to Attachment I
21 to South Delta Water Agency Exhibit No. 2. This was the
22 impact of San Joaquin River quality on crop yields in the
23 South Delta by Dr. Orlob. Dr. Orlob wasn't present to
24 testify about this. This was an attachment to Alex
25 Hildebrand's testimony. Mr. Hildebrand couldn't testify

1 as to how this document was determined, what the basis was
2 for that, the models used or any of the information
3 contained therein. It's hearsay. And I'd just like to
4 raise that objection for the record.

5 MR. HERRICK: Madam Chair, just for the record --
6 sorry -- briefly.

7 To the contrary, Mr. Hildebrand testified that he
8 helped prepare the document. He used the calculations in
9 there to make his own rough calculation. And, yes, this
10 document was subject to extensive cross-examination and
11 hearings about 15 years ago. So I really don't see any
12 basis for the objection.

13 CHAIRPERSON DODUC: Any other objections?

14 All right. Hearing none, I will accept all
15 exhibits into the record. We'll note objections in
16 weighing the evidence.

17 And with that, we'll need to take a lunch break.

18 Mr. Rubin.

19 MR. RUBIN: Madam Chair, I'm hoping that we can
20 discuss a bit of rebuttal, as I do need to coordinate with
21 a potential witness.

22 CHAIRPERSON DODUC: All right. Ms. Leidigh, do
23 you want to help coordinate that process?

24 STAFF COUNSEL LEIDIGH: Okay. How many people
25 are going to be planning to put on rebuttal?

1 MR. HERRICK: Since I have a microphone in front
2 of me, I will just say South Delta will have a short
3 rebuttal. But we do plan on a rebuttal.

4 STAFF COUNSEL LEIDIGH: Okay. South Delta,
5 Department of the Water Resources.

6 MR. PETRUZZELLI: San Joaquin River Group.

7 STAFF COUNSEL LEIDIGH: San Joaquin.

8 San Luis.

9 Anybody else?

10 Okay. Next question: South Delta, how long do
11 you expect your rebuttal to require?

12 MR. HERRICK: The direct I would think we could
13 accomplish in 30 or 40 minutes, at most.

14 STAFF COUNSEL LEIDIGH: Okay. And then there
15 will be cross.

16 Department of Water Resources, how much time do
17 you expect to need?

18 MS. CROTHERS: I expect our rebuttal would be
19 less than a half an hour for direct.

20 STAFF COUNSEL LEIDIGH: Okay. San Joaquin River
21 Group.

22 MR. PETRUZZELLI: Since Tim O'Laughlin would be
23 doing it, he probably would want a lot of time.

24 (Laughter.)

25 MR. PETRUZZELLI: I know he plans on putting on

1 Mr. Steiner. I'm unsure who else he plans on putting on
2 at this time.

3 STAFF COUNSEL LEIDIGH: So you don't have an
4 estimate of how long the direct would take?

5 MR. PETRUZZELLI: I don't have an estimate.

6 STAFF COUNSEL LEIDIGH: Okay.

7 MR. PETRUZZELLI: But let's -- maybe an hour.

8 STAFF COUNSEL LEIDIGH: Okay. And San Luis.

9 MR. RUBIN: Expect the direct to last no longer
10 than 15 minutes.

11 STAFF COUNSEL LEIDIGH: Fifteen. Okay.

12 CHAIRPERSON DODUC: All right. Given that, as
13 much as I have been loving these hearings and would hate
14 to see it end, given the information regarding rebuttal,
15 we'll extend this hearing in addition to tomorrow also to
16 Monday.

17 And we'll be in this room?

18 We'll check up on the location and get back to
19 you. But it will be -- we will continue this on Monday.

20 MR. RUBIN: And, Madam Chair, is it correct to
21 assume that we'll follow the same order on rebuttal as
22 we've been following on direct?

23 CHAIRPERSON DODUC: Yes. Hearing nothing else,
24 let's take a break. Let's take a long break, until 1:45.

25 (Thereupon a lunch break was taken.)

1 AFTERNOON SESSION

2 CHAIRPERSON DODUC: We'll go back on the record,
3 and we'll resume with the Department of Water Resources.

4 MS. CROTHERS: Good afternoon, Chair Doduc and
5 Board staff. My name is Cathy Crothers, Staff Counsel
6 representing the Department of Water Resources.

7 I would like to present an opening statement.
8 And then after that DWR will have a panel presentation of
9 our DWR witnesses, which we'll have seated up here at the
10 same time so we can present our testimony and
11 cross-examination as a unit.

12 CHAIRPERSON DODUC: Before you begin, Ms.
13 Crothers, just for the record, one of your witnesses has
14 already testified and has been cross examined.

15 MS. CROTHERS: Yes.

16 CHAIRPERSON DODUC: Okay. Were you intending on
17 making any other changes or --

18 MS. CROTHERS: Yes. Maybe at this point I should
19 do some of these housekeeping matters.

20 Yesterday DWR submitted to all the parties and to
21 the Board a request to make a substitution of one of our
22 witnesses. Due to the fact that we weren't anticipating
23 this hearing date, one of our witnesses had already had
24 scheduled a prior commitment many months ago and could not
25 change his schedule. So we would like to substitute Kathy

1 Kelly of our Department for Paul Marshall as a witness
2 presenting DWR testimony exhibit on the South Delta
3 program, DWR-23. And if that is acceptable to the
4 Chairman, then I would make that request now.

5 STAFF COUNSEL LEIDIGH: You have John Marshall
6 down twice on your Notice of Intent to Appear for
7 different subjects. Are both of those to be replaced by
8 Kathy Kelly's testimony?

9 MS. CROTHERS: Paul Marshall was to also present
10 DWR Exhibit 21 regarding the South Delta and general. Mr.
11 Jerry Johns will be covering that testimony in brief. Mr.
12 Johns being, you know, our Deputy Director and overseeing
13 areas of the Department in that area, and also has some
14 background in agriculture in his past experience. So we
15 would request that Mr. Johns present that testimony.

16 CHAIRPERSON DODUC: As part of his 20 minutes?

17 MS. CROTHERS: Yes.

18 CHAIRPERSON DODUC: Are there any objections
19 to -- oh, were there any other changes that you had?

20 MS. CROTHERS: Well, we do have a change in our
21 Exhibit 22, which I would wait until it's time to enter
22 exhibits and then address the changes in Exhibit 22.

23 CHAIRPERSON DODUC: Okay. Any concerns,
24 objections with the substitution of witnesses?

25 Hearing none.

1 MS. CROTHERS: Thank you.

2 Well, I will try to keep this brief. But I would
3 like to make some key points in my opening statement to
4 provide the context within which DWR will be making its
5 presentation.

6 DWR is here before you because of an enforcement
7 action. And we are opposed to that enforcement action,
8 and we believe it's not supported by the facts for three
9 reasons.

10 That the enforcement team has failed to consider
11 the actual permit condition in D-1641 which DWR relies on
12 when implementing the South Delta objectives. We believe
13 that's a key deficiency in the enforcement team's cease
14 and desist order.

15 And the enforcement team has not adequately shown
16 that in the future DWR is likely to not implement its
17 monitoring program as required under D-1641.

18 And also DWR does not believe that there's any
19 evidence to suggest that DWR's operations and as we have
20 been operating will cause any harm to South Delta
21 agriculture, which is being protected by the salinity
22 objective in question here.

23 DWR has relied on its D-1641 conditions that were
24 adopted with D-1641 in 1999. And Mr. Johns' testimony is,
25 therefore, the purpose of explaining some of the history

1 of why that permit condition has been written the way it
2 has. It's a unique permit term. There is no other permit
3 term in our water rights like it. And it's essential that
4 the Board understand what it means. And to put that into
5 context you really do need to understand some of the
6 history behind development of that permit condition in the
7 South Delta.

8 We also will be putting on testimony regarding
9 the Temporary Barriers Program to explain what it is DWR
10 does do to improve water quality conditions in the South
11 Delta to the degree that we can. And this is related to
12 what the permittee -- the permit conditions that we rely
13 on, what permittee's effects are on water quality in the
14 South Delta. And our testimony will go into, that is,
15 provided by Mr. Johns, explaining the extent of the permit
16 conditions and the permittee's impacts in the South Delta
17 as to our operations of the State Water Project.

18 Related to that are the -- is the information
19 that will be presented by Tara Smith related to DWR's
20 modeling of impacts to water quality in the South Delta
21 related to State Water Project operations in the South
22 Delta.

23 In the past the Board has always acknowledged
24 that permit conditions must be related to the impacts of
25 the permittee. And DWR needs to explain to the Board

1 where those impacts are affected -- how those impacts are
2 affected by State Water Project operations. And that also
3 is reflected in why we have a special condition for
4 implementing the South Delta water quality objectives,
5 because the Board during D-1641 has recognized that
6 there's an issue relating the permittee's impacts related
7 to the implementation of the objective. And these are
8 complex issues, and we don't feel it's easily or readily
9 understood by just looking at exceedance values. And the
10 enforcement team has taken that approach, to look at
11 historical exceedances to make a case for a future threat
12 of a violation of our permit conditions. And we want to
13 distinguish for the Board the difference between and
14 exceedance of a water quality objective, which may be
15 demonstrated or shown, as the enforcement team has, versus
16 the actual violation of a permit term, which we feel the
17 Board enforcement team has failed to distinguish. And we
18 would like the Board to understand that the violation of
19 the permit condition has not been addressed as all.

20 There are three parts to our permit term. The
21 first part is whether there's been an exceedance of a
22 water quality objective in the South Delta. The second is
23 whether there was any ability to control the noncompliance
24 by the permittee. And the third is then whether
25 enforcement action is appropriate.

1 The enforcement team has maybe addressed the
2 first and third issue here. Although I'm not sure they're
3 willing to go to the third issue in -- and we have though
4 been addressing the third issue about harm, whether the
5 enforcement is appropriate.

6 So the Board has gone on into considering whether
7 enforcement's appropriate as to harm issues. And the
8 Board's been looking at the potential for exceedance in
9 the future. But the missing part here is whether the
10 exceedance has -- will be or is within the control of the
11 permittee. And in this case, you know, we are speaking of
12 DWR under our SWP permits.

13 We also think that this is an unusual situation
14 in that we're taking an enforcement action in advance of
15 an exceedance. And we believe there's a policy issue here
16 as to the Board's implementing the threats of enforcement,
17 the policy issue being when the Board's going to take an
18 action in advance of a permittee's normal operation. We
19 believe the Board should be very confident that this
20 threat is real and that the facts well support the threat,
21 so that you're not cutting short the permittee's normal
22 operations.

23 It's really making a higher burden of a showing
24 when you're looking at threats of enforcement versus after
25 the violation has occurred or the exceedance has occurred

1 you have the facts in front of you. In this case, you
2 have to somewhat -- I don't want to say speculate, but you
3 have to feel that the facts in front of you really do
4 support the future noncompliance. And we think that
5 burden should be higher in cases such as this. And in
6 fact this is the first, as far as I know, enforcement
7 action that the Department has ever been faced with. And
8 in this case it's actually a threat of enforcement, which
9 we feel is a higher burden here that should be carried by
10 the enforcement team.

11 Another part of our testimony is looking forward
12 towards what some parties here have considered as a -- not
13 a real -- not real in terms of what the Department is
14 speaking of. And the terms I'm talking about is our South
15 Delta operable gates. Some parties have felt that this is
16 never really going to happen, so therefore DWR shouldn't
17 be using that as something in the future to rely on.

18 D-1641 does incorporate the South Delta gates as
19 a future tool to use. It's part of the South Delta
20 implementation program. And we feel it's important for
21 the Board to understand what the South Delta permanent
22 operable gates can do. It also helps to explain why it is
23 that our permanent condition that we have is the way it
24 is; is why do we have this -- this part of the condition
25 where you have to show whether it's within our control?

1 It's because during D-1641, the permanent gates were
2 described as the most feasible reasonable tool to use to
3 control water quality in the Delta DWR currently
4 implements temporary barriers to control water levels.
5 But when we are expected to do both simultaneously, people
6 have looked towards these permanent operable gates as the
7 most reasonable solution. We've had South Delta and
8 Metropolitan Water District of Southern California, the
9 CALFED programs -- many agencies have supported the
10 permanent gates as the reasonable method to control the
11 water quality conditions in the South Delta while we're
12 also addressing water levels.

13 And this goes to the heart of the reason why our
14 permit condition on page 159 of D-1641 is as complicated
15 as it is. And this is the point of our testimony today.
16 And we hope that this comes through to the Board that
17 it's -- it's complicated, but there's reasons behind it.
18 And you must understand that before you can determine
19 whether a cease and desist for a threatened violation is
20 necessary. DWR believes it's not necessary. We don't
21 intend to not comply with our D-1641 permit terms.

22 Enough said of that. That's the point of our
23 testimony, that we will be complying with our permit
24 conditions.

25 The final part of this hearing addresses the

1 Water Quality Response Plan approval by -- the approval
2 that was given by the Division of Water Rights -- Chief of
3 Division of Water Rights. We will have some testimony
4 addressing why we believe her approval should be accepted.

5 With that, I would like to move forward to
6 introduce our panel. I would like all of our witnesses to
7 actually have a seat at this time.

8 CHAIRPERSON DODUC: While they're getting seated,
9 we'll hear from Mr. Herrick.

10 MR. HERRICK: Thank you, Madam Chairman.

11 I'll try to do this as quickly as possible. I
12 understand the rulings up to date on the admissibility of
13 evidence. But I think there's some key things that need
14 to be brought up. And then we can deal with them as we go
15 forward. I apologize if these aren't in order.

16 I would object to portions of Jerry Johns'
17 testimony, which is DWR-18. In that testimony he asks
18 that the objectives be changed, which is not a portion of
19 this hearing.

20 And, secondly, his testimony asks for the time
21 frame for meeting the 0.7 standard be delayed until the
22 barriers are installed, which would be a change to
23 D-1641's specific terms. D-1641 made those water quality
24 objectives effective in April. And they're asking for
25 them to be delayed until the barrier's done. So that's

1 directly outside of this process.

2 Similarly, DWR-20, the testimony of Tara Smith,
3 goes to the effects of DWR's operations on water quality
4 in the Delta. That was decided in D-1641 when the
5 standards were placed on DWR in the Bureau's permit. So
6 this is actually a challenge to their being made
7 responsible for these objectives. So I think that makes
8 it irrelevant and outside this proceeding.

9 Next we have the testimony of Jose Faria. And
10 this testimony deals with actions that DWR undertakes.
11 And although it's very interesting to see the scope of
12 work that DWR's doing, it does not go to whether or not
13 the standards will be met. It does not go to whether
14 there's any damage or not. And it's also submitted in
15 support of the idea that the standards activated, I'll
16 say, through D-1641 should be delayed until the permanent
17 barriers are in.

18 CHAIRPERSON DODUC: Mr. Herrick, what is the
19 number of that?

20 MR. HERRICK: That's DWR-18a, Attachment 1. I'm
21 sorry.

22 Next is the testimony of -- I'm sorry. DWR-18d,
23 Attachment 4. And, again, that's directly specific to
24 changing the Water Quality Control Plan, which is outside
25 of this hearing.

1 Next again is -- well, Mark Holderman's
2 testimony, which is DWR-19, deals with the current effects
3 of the temporary barrier program. And I'm not sure how
4 that is relevant to these proceedings, unless it's an
5 indication that we're going to -- temporary barriers are
6 going to meet the standard. I don't see how that
7 addresses the issues before us, so I think it's
8 irrelevant.

9 Next is DWR-21. And I apologize if I've missed
10 something. But that seems to be a testimony that's not
11 ascribed to any witness. And so I would just object to it
12 on that ground. I assume somebody will take credit for
13 it.

14 Finally is -- not finally, but next is DWR-23,
15 which I believe is Paul Marshall's testimony that Kathy
16 Kelly will be giving. Again, that's a discussion of the
17 permanent barriers. And it's being offered for the
18 purpose of changing D-1641 so that the 0.7 is not enforced
19 until the permanent barriers are in. So I would object to
20 it on those grounds.

21 And then -- I apologize if I'm -- I'll leave it
22 at that. I'm sorry for the length of that.

23 Just, in summary, I believe a good portion of the
24 testimony is offered not just on related things but on
25 topics that deal directly with a request to defer or delay

1 the application of the 0.7 until the permanent barriers
2 are in. And that's certainly not a topic here, because
3 that's already set forth in D-1641, that time frame.

4 Thank you very much.

5 CHAIRPERSON DODUC: Thank you.

6 Ms. Crothers, would you like to address the item
7 regarding Exhibit 21?

8 MS. CROTHERS: Yes. Well, should I just address
9 Item 21 or all of Mr. Herrick's objections? He had a
10 whole laundry list of our testimony which he objected to,
11 which I would categorize as -- our testimony in general is
12 to go to showing whether controlling water quality in the
13 South Delta is within the control of DWR's permits. And
14 that in order for the Board -- Chairman Doduc, for you to
15 decide whether a CDO is appropriate, you should be
16 considering --

17 CHAIRPERSON DODUC: Just let me help you out, Ms.
18 Crothers. I remember the statements you made in your
19 opening statement, and I appreciate your intent. And I
20 would like to hear these testimonies from your witnesses,
21 keeping in mind Mr. Herrick's objections and rule
22 accordingly if that becomes the case.

23 My only concern at this point is Exhibit 21 and
24 its purpose, whether it's attributed to a witness.

25 MS. CROTHERS: Yes, as I said in my introductory

1 statements regarding just the matters here. Mr. Johns --

2 Mr. Jerry Johns will be taking that --

3 CHAIRPERSON DODUC: So Mr. Johns will be

4 referring to Exhibit 21?

5 MS. CROTHERS: He will incorporate it within his

6 20 and will refer to that testimony.

7 CHAIRPERSON DODUC: All right. Thank you. You

8 may proceed.

9 MS. CROTHERS: Also, Chairman Doduc, DWR

10 submitted as part of our witness list several DWR

11 employees that are experts in the areas that are specific

12 to their work. And many of these employees were -- are

13 helpful in preparing our testimony, although it would have

14 been prepared under the supervision of the person who is

15 testifying to it. I would ask that -- if it's

16 permissible, that if there are cross examine questions as

17 to specifics in some of these areas, if DWR might ask some

18 of those other witnesses to also help with answering

19 questions if necessary.

20 CHAIRPERSON DODUC: Seeing, hearing no

21 objections, that's fine.

22 MS. CROTHERS: Well, and also, before we begin

23 then I would like to ask that you swear in some of our

24 witnesses that weren't present at the time you did the

25 swearing in.

1 CHAIRPERSON DODUC: Thank you.

2 All those who did not take the oath before,
3 please stand up. Raise your right hand.

4 Do you promise to tell the truth in this
5 proceeding?

6 PROSPECTIVE WITNESSES: Yes.

7 CHAIRPERSON DODUC: Thank you.

8 MS. CROTHERS: We will begin with Mr. Johns'
9 testimony. This is DWR-18.

10 DIRECT EXAMINATION

11 OF THE DEPARTMENT OF WATER RESOURCES PANEL

12 BY MS. CATHY CROTHERS, STAFF COUNSEL, representing the
13 Department of Water Resources

14 MS. CROTHERS: Mr. Johns, is DWR-1 a statement of
15 your qualifications?

16 MR. JOHNS: Yes.

17 Q Was DWR-1 prepared by you or under your direction?

18 A Yes.

19 Q Is DWR-18 -- was that prepared by you or under your
20 direction?

21 A Yes.

22 Q Were the attachments to DWR-18, 18b, Attachment 2;
23 18c, Attachment 3; 18d, Attachment 1; and 18e, Attachment
24 1 prepared by you or under your direction?

25 A Yes.

1 Q Is DWR-21 -- or was that prepared by you or under your
2 my direction?

3 A Under my direction, yes.

4 Q Would you please summarize the testimony prepared by
5 you or under your direction?

6 A Let me introduce myself. I am Jerry Johns. I'm the
7 Deputy Director of the Department of Water Resources. And
8 the part of the Department that I oversee is the part that
9 deals with water management and planning activities for
10 the state -- for the Department.

11 Actually the Department's been kind of puzzled by
12 these events. We submitted a petition to the Board back
13 in February of this year requesting the Board to extend
14 the date for the implementation of the standards that came
15 into effect in '95. And the next thing we see is a cease
16 and desist order claiming that we're going to threaten to
17 violate the standards.

18 There was no communication with us before that.
19 We understand that the staff has looked at the possibility
20 for exceedances in our water right tables that were set.
21 But it's pretty plain to me listening to the testimony of
22 Department staff that they were just looking at one table,
23 did not read the entire decision that the Board adopted,
24 did not -- was not familiar with the record, didn't even
25 know what permits the Department has in this matter,

1 didn't know who at the Water Board even reviews the
2 reports that we present. It was pretty clear to me it was
3 a pretty myopic evaluation of an exceedance thing -- issue
4 and not an evaluation of the permit terms that we have
5 from the Board.

6 And it dealt with a threatened violation.
7 Something new. I've never -- I think this may be the
8 first time the Board has actually taken an enforcement
9 action related to a threat of a violation. And I think
10 with that, the Board needs to be considering as setting a
11 precedent in this area. I mean certainly everything the
12 Board does needs to be looked back on.

13 And if the Board has a problem or a concern with
14 the Department with meeting standards or complying with
15 submitting reports, call us, talk to us. Let's discuss
16 it. Figure it out. If this had been a complaint that was
17 filed with the Enforcement staff at the Division of Water
18 Rights, that complaint would have been given to the
19 permittee, and he would have had an opportunity to at
20 least discuss it with the Board before any enforcement
21 action was taken. None of that occurred here. None of
22 that.

23 And we're just shocked by that process that the
24 Board has gone through here. It seems to us to be
25 relatively high handed in this regard. --

1 We are a fellow state agency. Many of the people
2 that work at the Department used to work at the Water
3 Board. We intend to comply with our water right permits.
4 If we have a problem or an issue, we should talk about it.
5 We talk to the fishery agencies twice or three times a
6 week on issues much more complicated than this. They too
7 are regulatory agencies, and yet we're able to work out
8 those differences. And in this case that didn't happen.

9 So there's a problem here. And it has affected
10 our working relationships between our staffs, which I
11 think is a real travesty here.

12 So with that said, how did we get here and what's
13 the problem that we're dealing with? And I think -- to be
14 perfectly frank, I think the Department's at fault. Not
15 in the ways you might think, but in ways that -- in terms
16 of how the Department presented its testimony in the 1990s
17 hearing that led to 1641.

18 In that testimony the Department presented -- and
19 was in basically settlement discussions with South Delta
20 came to an agreement with South Delta on what to do next.
21 We talked about temporary barriers as being a good
22 solution. And we were in the process of implementing
23 those temporary barriers and was having some effect. It
24 certainly benefited water levels and we saw some benefits
25 for water quality.

1 And let me talk now a little bit about the
2 difference between -- the testimony's a little cloudy
3 here. We have temporary barriers, which are rock
4 barriers. And mark will talk about how that works in a
5 minute. And we have permanent operable what we now call
6 as gates. They were called permanent operable barriers or
7 permanent barriers. But really, when you think about it,
8 they truly are gates. There are things that operate on
9 the bottom. And Kathy will go into how they actually
10 work. But they're truly gates.

11 And so when we talk about it, we'll talk about
12 them as permanent operable gates and not permanent
13 barriers. So I just want to make -- get that clear.

14 But back to where we were in the nineties. What
15 the Department was focusing on is what it could do to help
16 protect water quality in the South Delta and did not focus
17 unfortunately on what it must do as a water right
18 permittee. And that's a key distinction that I want to
19 make sure we get across here, depending on what the
20 Board -- in those two areas.

21 In past proceedings the Department made it very
22 clear to the Board, since 1976 that I can recall, that the
23 Department can do very, very little to affect water
24 quality in the South Delta. Our pumping doesn't affect
25 it, and we have testimony that will deal with that. But's

1 there's not much we can do there. Basically the fact our
2 water quality of South Delta comes from the San Joaquin
3 River. And we don't have permits in the San Joaquin
4 River. We don't have facilities in the San Joaquin River.
5 And from the Department's point of view, that's the
6 level -- so that needs to be taken into consideration by
7 the Board. And that is kind of the nature of some of the
8 permit terms that have been adopted by the Board
9 historically.

10 In addition, we have some new tools that talk
11 about this. In the past I think we relied on the expert
12 testimony of the Department -- or the Water Board relied
13 on the expert testimony of the Department to come to its
14 conclusions. And I think we have some new tools now that
15 we can show you this in a more quantitative fashion in
16 terms of what we can do with our permits in place to
17 affect water quality in the southern Delta.

18 So there are two main points I want to talk about
19 today. One is to talk about the role of DWR as a
20 permittee and harm.

21 For the first part I want to explain the
22 Department really in this proceeding carries two -- wears
23 two hats. And at the risk of some embarrassment and to
24 help emphasize the importance of this point, I brought
25 some props, and to help maybe make this a little bit

1 lighter proceeding than it classically is.

2 So here are the two hats the Department wears.

3 First of all, the Department's a permittee. We
4 operate the State Water Project. It serves water to
5 two-thirds of the people of the State of California.
6 700,000 acres of land in the state are irrigated by the
7 Department. And we're a permittee and we have obligations
8 as a permittee. We have to meet our water quality permit
9 terms or water right permit terms. And we have to
10 mitigate our impacts. And that's an important part. And
11 the Department takes that role very seriously. We jointly
12 operate our facilities in the Sacramento Valley with the
13 Bureau of Reclamation. And we are fastidious about trying
14 to meet our objectives in a very, very complex estuary.
15 You've got title involvement going on. You've got
16 reservoirs that are three to five days away. It makes it
17 very complex to do these things. But the Department is
18 committed to achieving its permit terms.

19 The second hat deals with the part of the
20 Department that I actually deal with more often, which is
21 the water management and planning aspects of what the
22 Department does. And in this case, what we're dealing
23 with is we develop the California Water Plan, which sets
24 kind of a strategic plan of how to develop water supplies
25 in the state. We have local assistance programs

1 throughout the state that helps local agencies meet
2 challenges with water, either in terms of groundwater
3 quality, surface water quality, water management issues,
4 integrated regional management. We're in the process of
5 basically helping people solve issues in their area. We
6 have stream restoration programs. Basically we fix things
7 under this authority that are related to water.

8 And what happened to the Department before in the
9 1641 hearings is that we presented the Department as a
10 whole, not as its two parts. And I think everything got
11 mushed together there. And what I want to draw the
12 distinction for the Board is is draw the distinction
13 between what the Board or what -- pardon me -- what the
14 Department of Water Resources can do here under our water
15 management arm versus what the Department must do as a
16 permittee. And there's a dig distinction that we need to
17 emphasize.

18 So enough of the silliness. Let's get down --
19 I'll put the hats up here. But I'll point to those later.

20 The other part that I wanted to briefly summarize
21 is the one EC standard. It's been working for five years
22 in the estuary, and we don't think there's harm in
23 continuing that aspect of it. And we'll talk about that
24 later.

25 And the third part would be the idea of physical

1 facilities. These standards that we have currently in
2 place in South Delta are predicated on some sort of
3 physical solution to how we address South Delta. And
4 that's an important part to keep in mind as well.

5 So let's talk about DWR as a permittee. As
6 permittee, I think the Board needs to establish what our
7 responsibilities are. And in the southern Delta the Board
8 has never established that the Department of Water
9 Resources as a permittee has a mitigation responsibility
10 for South Delta water quality. That has never come up as
11 I can recall in these hearings.

12 And we're going to show later that our exports
13 really don't affect water quality in the South Delta. And
14 shutting off our exports don't improve water quality in
15 the South Delta. And Tara Smith will talk about that.

16 And as Cathy mentioned earlier, our mitigation
17 responsibilities here for South Delta water quality need
18 to be evaluated by the Board and discussed carefully. And
19 it's different than our other standards. The western
20 Delta agricultural standards are pretty much based on
21 without project conditions that were developed some many
22 years ago.

23 And on the Sacramento side of the system we
24 coordinate our operations with the Bureau of Reclamation.
25 So a jointly and severally responsibility there is

1 appropriate.

2 But in the San Joaquin side, we don't really have
3 any facilities in the San Joaquin side that affect water
4 quality in the South Delta.

5 Now, the Bureau does. And I don't want to get --
6 have the Board -- I think the Board needs to distinguish
7 between what the Bureau can do here and what the
8 Department can do here as a permittee. And I think the
9 jointly and severally responsibility part of the South
10 Delta standards need to be considered by the Board here,
11 that maybe the Department doesn't have the same liability
12 or joint liability here with the Bureau given the fact
13 that we don't have facilities or the ability to control
14 these conditions as maybe the Bureau might.

15 So really quick I'm going to talk briefly about
16 the fact that Tara's going to explain later that the State
17 Water Project cannot effectively control water quality in
18 South Delta by modifying exports, either with or without
19 the temporary barriers. And Tara's testimony will talk
20 about that.

21 And Mark will talk about what the barriers can do
22 and do now.

23 Cathy mentioned briefly the fact that the
24 Department has relied on the term in 1641 that relates to
25 control. And let me just read this for you or summarize

1 it for you briefly. Basically what it says is before
2 enforcement action is considered if the South Delta
3 standards are exceeded, the Board is to evaluate whether
4 the noncompliance is the result of actions beyond the
5 control of the permittee. Not the Department of Water
6 Resources, but the permittee. And not the permittee with
7 the Bureau, but the permittee itself. So what we need to
8 establish here is what can the Department do in terms of
9 how -- did it cause this problem and what could it do to
10 correct that problem. And, again, that's on page 159 of
11 the decision.

12 And 1641, like I mentioned before, does talk
13 about physical solutions and the importance that that
14 plays in this process. In the Department's petition for
15 reconsideration we noted this to the Board and were about
16 ready to complain about the permit terms that were being
17 placed on the Department in South Delta. But as we read
18 the language, it talks about the ability to control -- to
19 control this issue in the South Delta, we became much more
20 comfortable with the fact. And we rely on that language
21 to address the mitigation responsibilities of the
22 Department.

23 If we're not causing this problem, we as a
24 permittee should not be responsible for fixing it.

25 Now, as the Department of Water Resources with

1 the other hat, I think we are trying to address that
2 problem. And that's how the Department is involved in
3 addressing water quality in South Delta.

4 The C&D hearing that we're involved in right now
5 we feel is counter to the administrative process that was
6 set out in 1641 related to the ability of the Department
7 as a permittee to control water quality in South Delta.
8 And we think that's a major flaw in this whole proceeding.
9 Is that we should -- we should be going through that
10 process after a violation -- or an exceedance occurs,
11 having the Board and the Department sit down and discuss
12 whether or not this violation -- or this exceedance was
13 beyond our control. And then be talking about issues
14 related to enforcement, not before that.

15 Kathy Kelly's going to talk about what our plans
16 are for trying to improve water quality in South Delta,
17 which is very relevant in this proceeding. We've had
18 other people talk about the fact this might be some sort
19 of myth here. But we are very serious about it.

20 The best approach here that we've analyzed --
21 we've analyzed this for now what, 15 or 20 years one way
22 or another -- is these permanent operable gates.

23 And it has taken us longer than we had
24 anticipated in the 1990s hearing on how long it would take
25 to do that. At that time the Department was hoping that

1 we could get that done by 2005. In the CALFED ROD that
2 was signed in the year 2000, that date shifted to 2007.
3 And it should have been no surprise to the Board that the
4 date was going to take longer, because the Board gave
5 advice to Cal EPA to sign the CALFED ROD. And so the
6 Board should have been knowledgeable about the fact it was
7 going to take longer for the gates, so there should have
8 been no surprise there.

9 In addition, by going through the CALFED process
10 it has taken us longer than even 2007. And Kathy can go
11 into the amount of public involvement that we've had, the
12 amount -- the fact that we had to retool this a couple of
13 times based on circumstances and adapt. And it has taken
14 longer.

15 But we have released our draft EIR. It's sitting
16 right here. It's not a trivial document. Full of
17 extremely important and valuable technical information to
18 help us make a decision here on how to move forward.

19 And I'd like to ask the Board to take judicial
20 notice, for lack of a better term, of the fact that we
21 have filed with a clearinghouse our notice of -- our
22 notice of availability of EIR.

23 Now, our current expected date for operating --
24 for getting this operational is 2009.

25 Now, let's shift from DWR as a permittee to what

1 we're doing as a water management agency. And this is
2 important. Jose Faria has talked about this in our
3 Exhibit 18a. And I think it's extremely important for the
4 Board to understand what we're trying to do to help
5 improve water quality on the San Joaquin River and how
6 that will affect and improve water quality in the South
7 Delta.

8 In 1991, an MOU was signed between the Board,
9 DWR, the Bureau, National Resource Conservation Service,
10 Fish and Wildlife Service, USGS, Fish and Game, Food and
11 Agriculture to work on ways to improve water quality in
12 the South Delta has been quite effective. There's been a
13 marked improvement in water quality since 1995. So much
14 so that we've had to retool our entire modeling process in
15 the San Joaquin to take into account that the load flow
16 relationships that we used from the 1980s no longer apply
17 anymore.

18 This is a tremendous success. And nobody talks
19 about it, which I find absolutely amazing. The amount of
20 improvement in water quality in San Joaquin has made a
21 remarkable difference in how the Bureau can operate New
22 Melones to help meet water quality standards.

23 Just since 2000 the Department of Water Resources
24 has funded through various bond acts over \$70 million of
25 activities related to improvement of water quality in the

1 San Joaquin River system related to agriculture drainage.
2 So not a trivial investment that we've put into this
3 process.

4 From that, the loads of salt in the grasslands
5 area, which is a pretty important area in terms of salt
6 load on the San Joaquin, have been reduced by 44 percent.
7 Tremendous decreases in salt load.

8 Also, the Department funds 25 monitoring stations
9 for realtime monitoring on the San Joaquin River at a tune
10 of about a million dollars a year. So we're actively
11 involved in understanding and improving water quality
12 conditions in the South Delta area, probably upstream of
13 the Delta and in the Delta.

14 In addition, the San Joaquin River Management
15 Group has got several proposals in play to further improve
16 water quality in the San Joaquin. So things are going to
17 be different. Things are much different than they were
18 historically and they're going to get better as things go
19 on in the future if we can continue to invest in the kind
20 of actions that need to be taken to improve water quality.

21 Now, let's talk briefly about harm.

22 The current water quality objectives that we're
23 talking about in the Water Quality Control Plan were
24 established over 27 years ago. Science changes. And we
25 should take advantage of that and to that understanding.

1 Until 2000, those water quality standards never appeared
2 in any water right permit related to the South Delta. And
3 there was a reason for that. That's because since 1978
4 and all the proceedings until 2000, nobody could figure
5 out what to do or how to get it done. It wasn't until the
6 1990s hearing that the Department came forward and said,
7 with South Delta, "Here are some activities that we can
8 put in place that can help improve water quality." And
9 the Board took that and ran with it and made that an
10 integral part of developing these water quality standards.
11 And it's predicated on temporary barriers and permanent
12 operable gates. And that's how this is going to get
13 fixed.

14 In addition, in terms of harm, you have testimony
15 in front of you from other proceedings put on by the San
16 Joaquin River Group that 1.0 EC won't cause harm, Dr.
17 Letey talk about the fact that 1.0 EC in South Delta will
18 not cause harm. We have other areas in the San Joaquin
19 River Basin discussed in our Exhibit 18a who use water
20 quality above -- at or above 1.0 EC without harm. The
21 South Delta area in our Exhibit 21 talks about areas
22 planted to beans, and the fact that from 1988 to 1996 the
23 area planted to beans increased even though three of those
24 years in the early nineties had water quality above .7.
25 Yet bean production still increased in the South Delta

1 even though you're above .7, further showing that
2 something higher than 1.7 could be protective.

3 The standard that's currently in place -- or was
4 in place until '95 was in place for five years. We had no
5 standards before that. The standard goes in place in
6 19 -- in 2000 -- between 2000 and 2005 is one. And the
7 Board set that standard to help protect agriculture in
8 2000. And if it works then, why can't it work now while
9 we get the permanent gates in place to help make these --
10 move water quality more effectively around the system.

11 At this time -- one last point. We have talked
12 about soils and plants and that kind of stuff -- and
13 salinity. And it's important to realize that the salinity
14 that accrues in the soils is a function of long-term
15 accrual and it's not instantaneous in terms of impacts.
16 And at -- I think you've heard that from other folks.

17 Now, I know I'm a little bit over. But Mark
18 tells me that I can have ten of his minutes, if that's
19 okay. His testimony will be a little bit shorter.

20 One point -- I believe I'll just bring it up
21 now -- is that in our testimony we referenced facts
22 related to some information we got from the Water Quality
23 Control Plan in 1978 that talked about bean acreages being
24 2,400 acres in the South Delta area. I asked my staff to
25 go back and reevaluate that because it looked kind of not

1 consistent what we've seen lately. And what staff tells
2 me --

3 CHAIRPERSON DODUC: Mr. Johns, please try to wrap
4 up.

5 MR. JOHNS: Okay. You're not going to all me the
6 extra 10 minutes?

7 CHAIRPERSON DODUC: You've got 20 minutes.
8 You're, oh, blinking over.

9 MR. JOHNS: Have you been holding everybody else
10 to 20 minutes? This is the first time I've seen this
11 timer here.

12 CHAIRPERSON DODUC: Yes, we've been holding
13 everyone to 20 minutes.

14 MR. JOHNS: Okay. Let me conclude with this.

15 First of all, DWR is a permittee and we have no
16 mitigation responsibility in South Delta to --

17 CHAIRPERSON DODUC: Got it. Blue hat.

18 MR. JOHNS: Okay. We cannot effectively control
19 South Delta. And we rely on this permit term that's in
20 1641 as a move forward.

21 We're a water management agency, and we can
22 improve these conditions based on water management.

23 CHAIRPERSON DODUC: Green hat. Got it.

24 MR. JOHNS: Okay. Got it. Good. That was a
25 whole important point here.

1 The other thing, as the Water Board you have an
2 enforcement activity. I think that's important to keep
3 that in mind. But when all you have is a regulatory
4 hammer, everything looks like a nail. And South Delta's
5 not a nail. We need better tools, bigger tools, more
6 diverse tools to solve this problem, and that includes
7 physical facilities to make this work better. And the
8 Department's actively pursuing making that happen.

9 CHAIRPERSON DODUC: Thank you.

10 Ms. Crothers, your next witness, please.

11 MS. CROTHERS: Our next witness is Mr. Mark
12 Holderman.

13 Mr. Holderman, Is DWR-10 your statement of
14 qualifications?

15 MR. HOLDERMAN: Yes.

16 Q Was that prepared by you or under your direction?

17 A It was prepared by me.

18 Q Is DWR-19 testimony regarding the temporary
19 barriers -- was that prepared by you?

20 A Yes.

21 Q Would you please summarize your testimony.

22 A Okay. Again, my name is Mark Holderman. I'm a
23 supervising engineer in the Department of Water Resources.
24 I'm also the Project Manager for the South Delta temporary
25 barriers.

1 The purpose of my testimony really is to explain
2 to the Board what the temporary barriers are, how they
3 function and how they can help improve water quality.
4 I'll be using a PowerPoint presentation. And if you'd
5 bring that up. And this presentation's also a part of my
6 testimony and it's been submitted.

7 STAFF COUNSEL LEIDIGH: Is the presentation an
8 exhibit?

9 MR. HOLDERMAN: Yes.

10 (Thereupon an overhead presentation was
11 Presented as follows.)

12 MS. CROTHERS: I might say DWR-19 has attached to
13 it DWR-19 Figure 1 through 13. And they were all
14 submitted as part of the written testimony.

15 STAFF COUNSEL LEIDIGH: I see them now.

16 MS. CROTHERS: Okay. Thank you.

17 MR. HOLDERMAN: Okay. Could I have the next
18 slide please.

19 --o0o--

20 MR. HOLDERMAN: Okay. This is just an outline of
21 what I'm going to be talking about. I don't need to read
22 it to you. You can see that.

23 So you can go to the next slide.

24 --o0o--

25 MR. HOLDERMAN: Okay. A little bit of background

1 on the temporary barriers.

2 The genesis of the temporary barriers was a
3 lawsuit that was filed by South Delta Water Agency in
4 1982, alleging that the Central Valley Project and the
5 State Water Project adversely affected water levels -- or
6 water quantity and water quality in the South Delta.

7 But rather than fight in court over it and all
8 that expense that goes along with it, we all sat down and
9 negotiated in 1986 a set of interim actions to improve
10 conditions in the South Delta. And these were implemented
11 over the next few years.

12 Later, in 1990, the parties agreed to a
13 settlement framework which developed more long-term
14 solutions to the problems in the South Delta regarding
15 water quality and water levels. And this framework
16 included building permanent barriers. Now we call them
17 permanent gates. And as part of that is the temporary
18 barriers. And they were included because they were
19 necessary to test the concept of the permanent gates and
20 also validate the modeling that had been done already and
21 provide input to the design of the permanent gates. So
22 immediately following that in 1990 the Temporary Barriers
23 Program basically began.

24 So since then we've been installing three
25 seasonal flow control rock barriers in the South Delta and

1 one fish control rock barrier in the South Delta. These
2 flow control structures, that we sometimes call
3 agricultural barriers or ag barriers, are designed to help
4 maintain the water levels and improve the circulation in
5 the South Delta water -- in South Delta channels during
6 the irrigation season so that South Delta farmers can
7 adequately divert water.

8 These ag barriers mitigate for the adverse
9 impacts to local water levels caused by the projects.
10 However, keep in mind that low water levels in this area
11 are also influenced by other factors, such as low San
12 Joaquin River inflows; local agricultural channel
13 depletions; tidal variations; barometric pressure; wind
14 velocities and direction; and of course limited channel
15 capacity, which is one of the problems we have on Middle
16 River.

17 The fourth barrier we have is a fish control rock
18 barrier. And that helps improve migration conditions for
19 Chinook salmon that migrate up the San Joaquin River in
20 the spring and the fall. It also helps improve dissolved
21 oxygen in the San Joaquin River that benefit the adult
22 salmon that are migrating up the San Joaquin River.

23 As I already mentioned, these barriers
24 collectively have been installed to test the feasibility
25 of the permanent gates that are currently being proposed

1 by the Department and by Reclamation; and as you've just
2 heard, that we've filed the draft EIR/EIS with the state
3 clearinghouse.

4 The next slide.

5 --o0o--

6 MR. HOLDERMAN: The slide 4 is a map of the --
7 yeah, that's the one. Thank you.

8 --o0o--

9 MR. HOLDERMAN: This is a map of the South Delta
10 area that gives you an idea of how many ag diversions
11 there are in the area. And most of these are above the
12 temporary barriers, so they benefit from the effects that
13 the barriers provide them.

14 We surveyed this in 1999, so it's not perfect
15 right now. In fact, I seem to have missed Mr. Salmon's
16 diversions on the east end of Grant Line.

17 Most of these diversions are turbine pumps. But
18 some of them are siphons, especially down on the west end
19 of Union Island where we have water level and ground level
20 conditions that work well for siphons.

21 Next slide.

22 --o0o--

23 MR. HOLDERMAN: This shows a map of the South
24 Delta. And it shows the temporary barrier sites in red.
25 And the three ag barriers are located on Middle River, Old

1 River, and on Grant Line Canal. And the permanent
2 operable gates, shown in green, is going to be on the west
3 end of Grant Line, not where we currently have the
4 temporary barrier, which is on the east end.

5 Fish barrier you can see there is located at
6 confluence of San Joaquin River and Old River.

7 And now a little bit about the installation
8 history.

9 Go to the next slide please.

10 --o0o--

11 MR. HOLDERMAN: This shows you the history of our
12 installation. You can see we missed 1998. And that was
13 because we had very high flow conditions in the rivers and
14 weren't able to put the barriers in.

15 So DWR's been installing these barriers since
16 1989, and starting with the Middle River barrier. And
17 we've been installing all three of the barriers since
18 1991.

19 We've installed the fall barrier -- fall head of
20 Old River barrier since 1968 at the request of Fish and
21 Game, you know, to help benefit migrating Chinook salmon.
22 And since 1992 we've been installing the spring head of
23 Old River barrier to also benefit those salmon, but to
24 benefit the smolts there migrating down the San Joaquin to
25 the bay.

1 DWR's currently permitted to install these
2 temporary barriers until 19 -- I'm sorry -- 2007. And
3 we're fully committed to continue in the Temporary
4 Barriers Program until such time that permanent operable
5 gates can be installed.

6 So I'll talk to you a little bit about the
7 operations.

8 The barriers are basically rock structures.
9 There's nothing really sexy about them. They're weirs,
10 the construction across the channel with loaders. They
11 have culverts that are placed in the river below the rock
12 barriers. And each year these are installed between April
13 15th and November 15th.

14 The ag barriers are installed and operate pretty
15 much this whole time. But The spring Old River barrier's
16 only operating in April and part of May. Then it's
17 removed for the summer and then not installed again until
18 we install it in the fall about mid-September when we're
19 requested by Fish and Game to do it to benefit dissolved
20 oxygen in the San Joaquin River.

21 We're required to get these barriers completely
22 out of the river by the end of November. And that's in
23 accordance with your operating permits.

24 Next slide.

25 --o0o--

1 MR. HOLDERMAN: The next three slides, slide 7
2 through 10, show the culverts at the temporary barriers
3 and show how they work. And they show how they allow
4 water to fill the upstream reaches of the river on the
5 rising tides and then help maintain those high-water
6 levels when the tide ebbs. Three of the barriers that we
7 have have six 4-foot diameter culverts. But we have a
8 barrier on Old River near the DMC that has nine 4-foot
9 diameter culverts.

10 --o0o--

11 MR. HOLDERMAN: This slide shows the rising or
12 the flood tide. And you can see how it -- the water flows
13 over the barriers and also flows through the culverts with
14 the hydrostatic pressure pushing against those flap gates
15 on the upstream side of the barriers, opening those flap
16 gates and allowing water to flow to the upstream side.

17 Next slide.

18 --o0o--

19 MR. HOLDERMAN: This slide 8 shows the tide just
20 after slack. And it's beginning to recede or ebb. The
21 flap gates then close, and that allows the barriers to
22 hold water levels upstream of the barriers, you know, at a
23 higher level than would ordinarily occur. Whereas on the
24 downstream side of the barrier, the water levels begin to
25 lower as they normally would.

1 Next slide.

2 --o0o--

3 MR. HOLDERMAN: And this slide 9 shows how the
4 conditions would be on the low low tide, where you again
5 maintain those higher water levels on the upstream side
6 and the lower water levels on the downstream side that
7 would normally occur.

8 Next slide.

9 STAFF COUNSEL LEIDIGH: Excuse me, Mr. Holderman.
10 The numbers on the copies in the written
11 testimony don't seem to correspond to the page numbers on
12 the PowerPoint. And so looking at the low tide
13 conditions, I have figure 7 and I think you were showing
14 figure 9.

15 MR. HOLDERMAN: Well, my testimony corresponds to
16 what you're seeing on the screen. But I'm not sure
17 exactly what you're looking at in your testimony. It
18 should be the same thing I have.

19 STAFF COUNSEL LEIDIGH: I'm looking at the
20 written exhibit that was submitted for the hearing.

21 MR. HOLDERMAN: Okay. And the slide 9 should
22 show the low tide conditions, is that what your testimony
23 shows?

24 STAFF COUNSEL LEIDIGH: I have it as figure 7.

25 MS. CROTHERS: On mine it has -- at the bottom --

1 it should say figure 10 for this picture here that we're
2 seeing right now?

3 MR. HOLDERMAN: Yes, this one is figure 10.

4 MS. CROTHERS: Wait a minute.

5 Figure 8. Oh.

6 STAFF COUNSEL LEIDIGH: We have figure 8 for that
7 one. This is what we got.

8 MS. CROTHERS: Oh, I see. Actually I -- Middle
9 River -- Oh.

10 MR. HOLDERMAN: You should have these very same
11 slides I do. So I'm not sure why they'd be numbered
12 differently.

13 MS. CROTHERS: You know what, I also --

14 MR. HOLDERMAN: Are you missing any slides?

15 STAFF COUNSEL LEIDIGH: They're numbered
16 differently.

17 MR. HOLDERMAN: Okay. Well --

18 MS. CROTHERS: It looks like the numbering got

19 wrong. So could we just correct the numbering here?

20 Because this printout I have also -- it says figure 8

21 should be the Old River at Tracy barrier. And so we could
22 just correct that in the record?

23 STAFF COUNSEL LEIDIGH: Yes.

24 MR. SCHULZ: Madam Chairman?

25 We're going to have to figure out what's going on

1 because --

2 MR. HOLDERMAN: Okay. There's one slide --

3 MR. SCHULZ: -- because the ones that the
4 audience have are -- mine are -- figure 7 is the high tide
5 condition, figure 8 is the slack, figure 9 is the --

6 CHAIRPERSON DODUC: Mr. Holderman, if you would
7 refer to the titles of the slides instead of the page or
8 figure number --

9 MR. HOLDERMAN: Yes, I'll do that, because that
10 will clear it up.

11 You're missing the title slide, the very first
12 one, and you're missing a slide that has nothing on it but
13 the temporary barriers project, which is my page 3 and it
14 would be your page -- well, you don't have it.

15 So you're not missing anything of any substance.
16 So I'll just refer to the title.

17 CHAIRPERSON DODUC: Because you're referring to
18 numbers that we don't have, that don't match. I just want
19 to make sure for the record we're looking at the right
20 thing.

21 MR. HOLDERMAN: Right, right. And I was giving
22 the slide numbers for the record, but not knowing that you
23 have something different than --

24 CHAIRPERSON DODUC: Just refer to titles please.

25 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: Can you

1 also submit another hard copy for the record. Because I
2 think the electronic copy that you sent us was probably
3 correct, but the hard copies that you sent us. That's why
4 everyone else has the correct copies. If you'd just send
5 us one more copy, we'll put it in the record.

6 MS. CROTHERS: Well, I think the problem is I
7 think Mr. Holderman is just actually referring to his own
8 version. Everybody else will have the -- that's not
9 right?

10 STAFF ENVIRONMENTAL SCIENTIST RIDDLE: They're
11 saying they have what he has. And I believe that's
12 probably the electronic version. And the hard copy and
13 the electronic version weren't the same.

14 MS. CROTHERS: Okay. We'll straighten that out
15 and get you the second version.

16 MR. HOLDERMAN: Okay. I'll just -- I'll refer to
17 it by title.

18 So what you should see right now is the Old River
19 at Tracy barrier photo.

20 Now, of course these next four slides are all
21 aerial views of the barrier. This slide shows the Old
22 River Tracy barrier. And you can see that we had a boat
23 portage ramp on the left side. The culverts are there in
24 the middle. And of course you can see the rock weir.

25 Next slide please.

1 --o0o--

2 MR. HOLDERMAN: The Grant Line Canal barrier
3 photo shows also boat to portage facility. And the
4 difference here is the weir installation, which is close
5 to the center of the channel, is there all year-round.
6 That's the difference between this one and Old River.

7 And further to the right of those culvert
8 structures is -- you can barely see it -- but there is a
9 flash board structure where you can see a little break in
10 the rock weir. And they have adjustable stop logs there
11 so we can allow continuous flow over it to benefit any
12 salmon that might be migrating through that area.

13 Next Slide please.

14 --o0o--

15 MR. HOLDERMAN: This slide shows the Middle River
16 barrier, although it's very hard to see. There's
17 basically a shadow there. You're looking at it at a time
18 during the tidal cycle where there's water flowing over
19 it. And so it doesn't look like it's there. The
20 abutments on either side where the culverts are located
21 are also there all year-round.

22 Next slide.

23 --o0o--

24 MR. HOLDERMAN: This slide shows the spring head
25 of Old River barrier. And we installed that at the

1 confluence with Middle River -- I'm sorry -- Old River and
2 the San Joaquin River. And the San Joaquin is there at
3 the upper portion or in the background. The difference
4 between this installation and the one we do in the fall is
5 in this one we have a clay weir section, which you can see
6 by that lighter colored area that doesn't have any riprap
7 on it. The reason we put that clay weir there is so that
8 if there's a sudden high flow condition from upstream on
9 the San Joaquin and we need to breach the barrier, then
10 it's easy to breach it in the center because there's just
11 clay there and not a bunch of rock. And also allows us to
12 control that breach so that we don't erode the levee on
13 either side of the barrier. We haven't had to do that so
14 far.

15 Next slide.

16 --oOo--

17 MR. HOLDERMAN: Now, in the fall -- oops. That's
18 okay.

19 In the fall the barrier is rock all the way
20 across. But we do have a notch in the middle that is
21 lower than the rest of the weir. And that's to allow
22 continuous flow over the head of Old River barrier to
23 benefit any adult salmon that might have strayed into the
24 South Delta area and are trying to get across to the San
25 Joaquin river.

1 Okay. Next slide.

2 --o0o--

3 MR. HOLDERMAN: Now, finally, I'll talk a little
4 bit --

5 CHAIRPERSON DODUC: Hold on a second, Mr.
6 Holderman. We don't have that slide.

7 MR. HOLDERMAN: Oh, another one?

8 You don't have a fall barrier?

9 What happened?

10 CHAIRPERSON DODUC: We'll look at the screen.
11 And Ms. Crothers will make sure we'll get a complete copy
12 for the record.

13 MR. HOLDERMAN: They don't have one.

14 I apologize for that. I'm not sure exactly why
15 you're missing some of this stuff.

16 CHAIRPERSON DODUC: Go ahead.

17 MR. HOLDERMAN: Okay. The next -- this slide --
18 Oh, I'm sorry. Go back.

19 CHAIRPERSON DODUC: Was that it?

20 MR. HOLDERMAN: This is good. This one's good, I
21 think.

22 This slide says "Historical Water Quality
23 Measurements".

24 And you don't have that one either.

25 Okay. Never mind. We can just leave the next

1 one up.

2 Go ahead on to the next slide. Just leave that
3 up for now.

4 --o0o--

5 MR. HOLDERMAN: All right. I'll talk a little
6 bit about water quality and how the temporary barriers can
7 affect water quality.

8 Well, we all know that water quality in the South
9 Delta by many factors, such as the incoming quality of the
10 San Joaquin River flows, salt water intrusion from San
11 Francisco Bay, local ag discharge, poor circulation in the
12 South Delta channels, and by the project exports.

13 This slide shows water quality compliance and
14 monitoring sites in the South Delta area. The red dots
15 indicate the sites that we monitor under the Temporary
16 Barriers Program, and we report our measurements in our
17 annual temporary barriers monitoring report.

18 The yellow locations are the monitoring stations
19 that are indicated in D-1641.

20 Next slide.

21 --o0o--

22 MR. HOLDERMAN: I hope you have this one.

23 Good.

24 This is the last one. This slide shows water
25 quality measurements taken from three temporary barriers'

1 monitoring sites in 2003. And 2003 is our -- the last
2 year that we've had a completed temporary monitoring -- or
3 monitoring report done. And we're currently working on
4 2004 right now.

5 These locations are along Old River from the head
6 of Old River barrier site down to the intake channel at
7 the Tracy pumping plant.

8 You can see from this example how water quality
9 generally improves during the summertime when the
10 temporary barriers are installed. There are a number of
11 reasons for that. One reason is the San Joaquin River
12 flows are much higher when held of Old River barrier is
13 operating in April and May. And you can see the reduction
14 in water quality -- I'm sorry -- improvement in water
15 quality but the reduction in EC that occurs in April and
16 May.

17 Those higher flows during the vamp period
18 where -- you know, in April and May is one of the reasons
19 why water quality improves. But also when the head of Old
20 River barrier isn't operating during the summer months,
21 the San Joaquin River flows are usually lower and poorer
22 quality than in April and May. The ag barriers reduced
23 the amount of San Joaquin River flows that enter Old
24 River. And these -- by reducing that amount of San
25 Joaquin River water that flows into the South Delta we

1 reduce the amount of poor water quality that enters.

2 The South Delta barriers during that time also
3 change the circulation dynamics and help improve local
4 conditions because they remove null zones that ordinarily
5 would occur if the temporary barriers weren't there. They
6 don't eliminate all null zones, but they do reduce the
7 number that would occur.

8 The third reason is the barriers hold a greater
9 volume of water in the channels above the barriers for a
10 longer time than would normally be present without the
11 barriers, and therefore higher water volumes providing
12 greater dilution of salt from upstream and from the ag
13 discharge sources.

14 So to summarize, my intent has been to describe
15 the barriers and the purpose of the barriers, explain how
16 they work, and to show that the barriers can improve water
17 levels for the benefit of agriculture and at times improve
18 water quality at some locations in the South Delta.

19 And that concludes my presentation.

20 CHAIRPERSON DODUC: Thank you.

21 Your next witness, Ms. Crothers.

22 MS. CROTHERS: Yes, thank you.

23 Our next witness is Tara Smith.

24 Ms. Smith, is your statement of qualifications

25 DWR-11?

1 MS. SMITH: Yes.

2 Q Was this prepared by you or under your direction?

3 A Yes, it was.

4 Q Are DWR Exhibits 20, 20a, 20b, 20c -- were these
5 exhibits prepared by you or under your direction?

6 A Yes, except for the ag report. That was a report as
7 part of the DWR publication.

8 Q Oh, all right. I'm sorry. That was Exhibit --

9 A -- 20B, I believe.

10 Q Oh, 20b then is an attachment to your --

11 A Yeah, 20b.

12 Q I think 20b is an attachment to your --

13 A The estimation of Delta island diversions was a report
14 that was done in our section. And I reference it as part
15 of Exhibit 20.

16 Q Was that -- you said that was prepared in your
17 Department?

18 A Yeah, it was prepared in our section several years
19 ago.

20 Q And DWR relies upon that report?

21 A Yes.

22 Q And for the work that you did, do you rely on that
23 report?

24 A Yes.

25 Q Could you please summarize your testimony?

1 A Yes. And I have a PowerPoint also.

2 (Thereupon an overhead presentation was
3 Presented as follows.)

4 MS. SMITH: And the PowerPoint was not submitted
5 exactly as testimony. But the figures that are in the
6 PowerPoint are labeled as part of the testimony. And the
7 bullet is -- the bulleted items are on the first page.

8 My name is obviously Tara Smith, and I'm a
9 supervising engineer at the Department of Water Resources.
10 I'm currently the Chief of the Delta Modeling Section, and
11 I've been with that section for 15 years.

12 --o0o--

13 MS. SMITH: I'll be presenting a summary of
14 Exhibit 20. And I've broken it up in three parts. The
15 first is the evaluation of water quality degradation due
16 to in-Delta sources using field data at Vernalis, Brandt
17 Bridge, and Mossdale.

18 Purpose was to determine the effects of in-Delta
19 returns on water quality degradation.

20 The second area is an evaluation of source water
21 at Brandt Bridge, Old River at Tracy, and Middle River at
22 Union Point, using historical DSM-II simulations. I
23 wanted to look at where the sources of water came from.
24 And it was done to gain a better understanding of what is
25 affecting water quality.

1 DSM-II is a mathematical computer model. It's a
2 hydrodynamics, water quality and particle tracking. It
3 was calibrated in 2000 by the Interagency Ecological
4 Program DSM-II Project Work Team. There were some
5 validation plots listed in the back of Exhibit 20.

6 The third area I'll be covering is the evaluation
7 of the effects of SWP pumping on water quality. And that
8 we modified, using the model, historical state water
9 project exports using DSM-II. And obviously the purpose
10 was to look at how SWP affects water quality.

11 There were four simulations. The first two we
12 modified the exports by plus and minus 500 CFS for the
13 entire historic period, 1991 to 2004. And the second two
14 we focused on 2002 and 2003, where we did a total
15 elimination of state water project exports.

16 --o0o--

17 MS. SMITH: So going on to the first part,
18 looking at the -- just looking at actual field data, I'll
19 do a location map.

20 --o0o--

21 MS. SMITH: And not shown here is Mossdale and
22 Brandt Bridge upstream of San Joaquin River at Brandt
23 Bridge.

24 STAFF COUNSEL LEIDIGH: For purposes of the
25 record, can you state where this is in your written

1 testimony.

2 MS. SMITH: Oh, I'm sorry. Yes, this is figure 1
3 in DWR-20. I'm sorry. I Should do that.

4 STAFF COUNSEL LEIDIGH: Thank you.

5 --o0o--

6 MS. SMITH: We used a -- I used the name "The
7 Middle River at Union Point," which was the data
8 collection name. Then that's the location.

9 --o0o--

10 MS. SMITH: Figure 8 in DWR-20 shows plots of
11 what the required Vernalis -- oh, I'm sorry -- is the
12 scatter plot of monthly average Brandt Bridge EC shown on
13 the Y axis, versus -- I'm sorry -- Brandt Bridge EC shown
14 on the Y axis and Vernalis EC shown on the X axis, used
15 field data from 1994 to 2002. And from this analysis a
16 regression was made showing approximately an 8 percent
17 degradation at Brandt Bridge.

18 --o0o--

19 MS. SMITH: Figure 9 shows the required Vernalis
20 EC to ensure target Brandt Bridge EC at different
21 confidence levels. The pink line, a thousand EC; and the
22 blue line, 700 EC. So if you look at a 95 percent
23 confidence for trying to obtain a Brandt Bridge EC of a
24 thousand, you would need an EC of 845 microSiemens per
25 centimeter or .845 millimoles per centimeter.

1 We also evaluated the degradation from Mossdale
2 to Brandt Bridge. And that was a little harder to
3 quantify. The regression from Vernalis to Mossdale
4 resulted in a degradation of about 7 percent, leaving 1
5 percent from Mossdale to Brandt Bridge.

6 Looking at Mossdale to Brandt Bridge, however,
7 the data analysis showed a range of a 4 percent
8 degradation to actually a 1 percent improvement. So this
9 was a little bit harder to quantify.

10 --o0o--

11 MS. SMITH: The second part that I'll go on to is
12 looking at the source water looking at the historical time
13 period. And by understanding the source of water, we hope
14 to better understand how changes in operations affect
15 water quality.

16 --o0o--

17 MS. SMITH: We've already seen some volumetric
18 fingerprinting. But I'll try and briefly explain this.
19 We can explain volumetric fingerprinting as taking a
20 bucket of water. And right now I'm showing DWR-20 from
21 20a, figure 14.8. And by taking that bucket of water you
22 would be able to know what percentage actually came from
23 what source. And you can see two different percentages of
24 water, two different buckets here. And the sources
25 include the Sacramento River; San Joaquin River; Martinez,

1 which is our ocean boundary; east side streams; ag drains;
2 Yolo Bypass.

3 --o0o--

4 MS. SMITH: DWR-20 figure 6 shows a volumetric
5 fingerprint print at Clifton Court Forebay. And this is
6 basically just being shown as an example to illustrate the
7 fingerprinting results. It's a time series. So if you
8 look at this, it's almost like looking at each day's
9 bucket of water.

10 The sources sum up to 100 percent for all
11 sources. We're including all sources here. And if you
12 look, the spring and early summer of 2000 the San Joaquin
13 River contributes a larger percent. That's the black
14 area. And then later the Sacramento contributes more.
15 That's the darker gray area.

16 --o0o--

17 MS. SMITH: So the next figure I'm showing is
18 DWR-20, figure 3, the San Joaquin River at Brandt Bridge
19 30-day running average EC and present water from San
20 Joaquin River and ag returns.

21 Basically this is field data and DSM-II results
22 at Brandt Bridge. They're four graphs with two different
23 types of plots broken into different time periods. The
24 top and third graph show a 30-day running average of field
25 data and the 2005 ag standard.

1 The top graph runs from 1991 through '97 and the
2 third runs from '98 to 2000 -- through 2004.

3 The second and bottom graph show the volumetric
4 fingerprint for the '91 through '97 and '98 to 2004 time
5 period. This volumetric fingerprint only shows the
6 combined San Joaquin River and ag return sources.

7 If you look at the bottom plot, if you look at
8 the horizontal line, it shows that a hundred percent of
9 water arriving at Brandt Bridge is from the San Joaquin
10 River source and ag returns. The second plot is not
11 always a hundred percent. There are like some fingers or
12 little drips down showing about 30 percent, ag an San
13 Joaquin River. And this reflects times when reverse flow
14 and other sources such as the Sacramento River may be
15 occurring at Brandt Bridge.

16 So when the 2005 ag standard is not met within
17 this particular graph, the source of the water is either
18 the San Joaquin River and ag returns or in some cases the
19 reverse flow -- when there's reverse flow.

20 --o0o--

21 MS. SMITH: Figure 4 is a very -- it's of DWR
22 20 -- is very similar to the type of graphs as the
23 previous slide. It's only at Middle River at Union Point.

24 As you can see from the second and bottom graphs,
25 the source water is definitely heavily dependent on the

1 San Joaquin River and ag return sources. And when the
2 percentage is less than 100 percent, the ag and/or Old
3 River at head barrier is installed. So there are other
4 sources that influence.

5 --o0o--

6 MS. SMITH: DWR-20, figure 5, is Old River at
7 Tracy Road. That station's further away from the San
8 Joaquin River. And you can tell that it's the more
9 strongly influenced by the operation of the temporary
10 barriers.

11 When there are no barriers the water quality is
12 primarily a reflection of Vernalis water quality and ag
13 returns.

14 The make-up of the water at the three stations is
15 San Joaquin River and ag return water, unless the barriers
16 are installed, low flow in San Joaquin river or reverse
17 flow at Brandt Bridge.

18 --o0o--

19 MS. SMITH: The final area that I'm going to
20 cover is the evaluation of the effects of State Water
21 Project pumping on water quality.

22 And from this we gained a better understanding of
23 flow and water quality dynamics and had an idea of seeing
24 how much the water quality could be affected or controlled
25 by changing the export rate.

--o0o--

MS. SMITH: DWR-20, figure 12, is a plot at Middle River/Union Point with simulated historical EC and a change in the EC when State Water Project pumping is increased and decreased by 500 CFS from 1991 to 2004.

So obviously in one simulation the State Water Project exports were reduced by 500 CFS and the other was increased by 500 CFS. The Sacramento River flow was also adjusted to keep the same historic net Delta outflow.

Figure 12 shows four plots, two different types of plots over two different time periods. Showing Middle -- I'm only going to be showing Middle River to save a bit of time.

--o0o--

MS. SMITH: The top plot you see monthly average DSM-II historical EC from '91 to '97; the third plot, monthly average DSM-II historical EC from '98 through 2004.

The second and bottom plots show the difference between the modified historic and historic. The black bars show the difference when pumping is increased and the gray bars show difference when pumping is decreased. When the bars are positive there's a degradation in water quality.

So as you can see, if there's an increase or a

1 decrease in pumping, it can result in an improvement or a
2 degradation.

3 I'd also like to note that the scale with those
4 two plots are different. The max difference, which I
5 believe occurs in January '04, shown as about less than 5
6 percent of the ag standard.

7 The majority of the time the difference is
8 negligible.

9 --o0o--

10 MS. SMITH: The next area that we covered is that
11 we drastically cut the State Water Project exports within
12 the model. And figure 14 shows the historic State Water
13 Project and CVP pumping and San Joaquin river inflow in
14 2002. And we focused on two different time periods, 2002
15 and 2003, years when we would not meet the 2005 ag
16 standard if it had been in place and no actions had been
17 taken to try and meet the standard.

18 I'm primarily going to present the 2002.
19 Figure -- as I said, figure 14 shows the flows in the
20 exports. We modified the study by eliminating the State
21 Water Project exports from January 6 to September 9th,
22 2002. The reductions range from 8,000 to a thousand CFS.
23 And we adjusted the Sacramento flow to maintain the same
24 net Delta outflow.

25 --o0o--

1 MS. SMITH: This is -- consider this a fairly
2 significant figure. It shows the EC results from both the
3 historic and the no-State-Water-Project pumping at the
4 three stations.

5 MS. CROTHERS: Excuse me, Tara. Can you identify
6 this please.

7 MS. SMITH: I'm sorry.

8 Figure 15 -- DWR figure 15.

9 Note the model and the observed data have slight
10 different values. And this was taken into consideration
11 when we were trying to make the analysis. We looked at
12 both the observed and the model data.

13 For Brandt Bridge, the top graph, and Middle
14 River, the middle graph, water quality is not
15 significantly affected. In fact, you can't really see the
16 difference between the solid line, the historic results,
17 and the dotted line where the State Water Project exports
18 were eliminated. The differences are consistent with the
19 magnitude of the plus-minus CFS simulations.

20 And at Old River at Tracy you see no real effect
21 until about May, where it degrades slightly and then it
22 improves.

23 So with the no-State- Water-Project exports, the
24 2005 ag standard would still be exceeded at all stations.

25 For the 2003 State water project export

1 elimination simulation water quality at Old River at Tracy
2 degraded. We didn't see the improvement. This showed
3 that there's not a simple relationship between State Water
4 Project exports and water quality. This showed that at
5 times water quality could be affected by cutting State
6 Water Project pumping at Tracy but couldn't be controlled.

7 --o0o--

8 MS. SMITH: Next I'll move on to DWR Exhibit 20c.
9 In this particularly exhibit we inserted particles above
10 the cross channel to show the movement of Sacramento River
11 water into the South Delta. We had two historical time
12 periods: We injected on September 1st, 2002 -- and that
13 will be shown on the left -- and June 25th, 2003, and
14 followed them for 90 days. What you'll see is that you'll
15 see the particles move down through the cross channel and
16 down through the Delta and both simulations will show
17 normally, fresher Sac water not making it to Brandt Bridge
18 and Middle River.

19 --o0o--

20 MS. SMITH: Did it work? Is it coming?

21 Do you want to try it?

22 If you could click twice in the black area of
23 that.

24 All right. Well, I'll go on.

25 Okay. Again, we followed the particles for 90

1 days the move through the cross channel and down through
2 the Delta. Both simulations show normally fresher Sac
3 water not making it to Brandt Bridge in Middle River.

4 The left animation would show some Sac water
5 getting to Old River at Tracy. The right animation water
6 doesn't make it to Tracy. This demonstrates again that
7 the water quality at these three locations it's not
8 strongly influenced by the Sacramento, and the water
9 quality is dependent more on the San Joaquin River flows.

10 And I can try and check it. I actually checked
11 it beforehand and it was working. So I'm not sure what's
12 wrong with it.

13 Try 20c.

14 There you go.

15 MR. NOMEILLINI: How is that going to end up in
16 our record?

17 STAFF COUNSEL LEIDIGH: I understand that it was
18 provided to people electronically. It should be on disks
19 that you got. But it's not in the hard copies.

20 MS. CROTHERS: It is -- one of the -- even in the
21 E-mail it is an electronic version that people can view on
22 their computers.

23 MR. NOMEILLINI: What happens when we find the
24 Court that doesn't accept an electronic record?

25 CHAIRPERSON DODUC: Does that complete your

1 witness testimony?

2 MS. SMITH: Yes.

3 MS. CROTHERS: Yes, we'll go on to our next
4 witness.

5 MR. NOMELLINI: I think we better figure out some
6 way to put this in the record in some narrative fashion or
7 some variable.

8 CHAIRPERSON DODUC: I believe it's in the record
9 as a disk as electronic file that was sent to all the
10 parties. And of course now we've had a witness testimony
11 referring to it.

12 MR. NOMELLINI: Okay.

13 CHAIRPERSON DODUC: With that, this might be a
14 good time for a break for the court reporter before we
15 resume.

16 Let's take a ten-minute break and resume at 3:30.

17 MS. CROTHERS: Thank you.

18 (Thereupon a recess was taken.)

19 CHAIRPERSON DODUC: Ms. Crothers, we're ready to
20 resume.

21 Everyone please take your seat.

22 Ms. Crothers, if you would gather your witnesses
23 together.

24 MS. CROTHERS: We need our computer tech
25 actually.

1 Oh, there he is. We're ready go again.

2 I'd like to introduce Kathy Kelly. She'll be
3 speaking on South Delta Exhibit 23.

4 Ms. Kelly, is DWR Exhibit 25 a statement of your
5 qualifications

6 MS. KELLY: Yes, it is.

7 Q Was this prepared by you or under your direction?

8 A It was prepared by me.

9 Q Is DWR-23, was that prepared under your direction?

10 A It was written by Paul Marshall. I reviewed it twice.
11 So it was prepared under my direction.

12 Q Would you please summarize the testimony in DWR-23?

13 A Yes. I have a PowerPoint also that will be coming up
14 right now.

15 (Thereupon an overhead presentation was

16 Presented as follows.)

17 MS. KELLY: My presentation will describe the
18 permanent operable gates and their operation. And then
19 it -- and it will illustrate how the gates are designed to
20 improve water quality through circulation.

21 And then I'll also give a status report on the
22 South Delta Improvement Program, describe what it is,
23 where we are, and what the decision process is proposed to
24 be or planned to be.

25 --o0o--

1 MS. KELLY: This is a picture of the
2 bottom-hinged gates that we are proposing for SDIP. We're
3 proposing four of these gates -- or, excuse me -- a series
4 of gates at four locations. And what they will be is
5 they'll be operated tidally. So as the tide is up high,
6 coming in and -- let's see if this works here.

7 Here we go.

8 The tide will come --

9 STAFF COUNSEL LEIDIGH: Could you refer to --

10 MS. KELLY: Yes. This is figure number 1 for --
11 do I need to also give the exhibit number or --

12 STAFF COUNSEL LEIDIGH: It would be helpful.
13 Exhibit 23, figure 1.

14 MS. KELLY: Okay. This is Exhibit 23, figure
15 number 1.

16 And as the tide starts to decrease and recede,
17 the gate is all the way up. And it ends up capturing the
18 flow on the upstream side, which induces a circulation
19 pattern through the South Delta. And we'll show you that
20 in just a minute.

21 I have an artist's rendering of the gate.

22 --oOo--

23 MS. KELLY: This is the gate on Old River at
24 Tracy. We have a boat lock that's proposed.

25 This sketch shows the gates in the upright

1 position, so they will be holding back the water on the
2 upstream side, which for this illustration is on the
3 right.

4 --o0o--

5 MS. KELLY: The next series of figures, figures 3
6 through 5, will show how the gates are designed to
7 function. First we'll go to the natural situation in the
8 South Delta we have no impedances to the flow.

9 So when we have the San Joaquin River flow coming
10 down the San Joaquin, it will split at the head of Old
11 River. So some water will be diverted, and it will move
12 downstream on the San Joaquin and the head of Old River.

13 As it moves further down it will be diverted in
14 to Middle River where there's a split, and then Grant Line
15 Canal and Old River.

16 So we have a flow pattern under conditions where
17 we have no tidal influence that would look something like
18 this. But when tides are coming in, it affects the
19 situation.

20 --o0o--

21 MS. KELLY: And we're proposing our gates to
22 tidally pump fresher water from the west into the South
23 Delta. Let me see what we have here.

24 So here we have the tidal flows --

25 MS. CROTHERS: Excuse me. Could you please

1 identify the figure.

2 MS. KELLY: Sorry. Figure 4.

3 We have the tidal flows that are moving in the
4 channels with the gates. And the gates would be operated
5 in such a way that on Old River and on Middle River we
6 would have the water come in from the downstream side, so
7 it would be water that's being brought in from the
8 Sacramento side from the west into the South Delta. And
9 it would move down these channels and come back around and
10 be pushed through Grant Line Canal.

11 Grant Line Canal gate would be operated at a
12 slightly lower level than the other two gates. And so you
13 have a hydraulic situation here where the circulation is
14 induced through the South Delta channels. And so we keep
15 moving the water through. So not only are we moving the
16 water through where we could have null zones and salinity
17 buildup in the channels. But we're also bringing the
18 Sacramento River water into the South Delta and improving
19 water quality through the operation of these gates.

20 There are times -- and this is sort of the
21 standard operation for the gates. There are times when
22 that's not going to work, because we'll have different
23 situations. There are four flows on the San Joaquin and
24 four diversion needs in the South Delta. And we may end
25 up with, say, a stagnant area or an area where we're not

1 getting flow on Old River near Tracy, for example. That's
2 one of our spots of concern.

3 --o0o--

4 MS. KELLY: And so we would operate the gate in a
5 different manner that would allow -- oh, excuse me -- that
6 would reduce the amount of San Joaquin River flow that is
7 coming into the South Delta and move the water down
8 through the Tracy -- excuse me -- old River by operating
9 the Tracy gate differently. This is to --

10 STAFF COUNSEL LEIDIGH: Can you identify --

11 MS. CROTHERS: Yeah, figure 5.

12 MS. KELLY: So without going back, it's just --
13 this is to illustrate that we have operational flexibility
14 with these operable gates to respond to different
15 conditions within the South Delta as they arise.

16 --o0o--

17 MS. KELLY: Our modeling shows with our -- it's
18 called a DSM-II, or Delta Simulation Model -- this is
19 figure number 6 -- shows that under our current conditions
20 where we use our operation of Clifton Court Forebay and we
21 have temporary barriers in place by -- and we're looking
22 at the thousand -- the one -- it's a thousand EC
23 standard -- under our existing conditions we would not
24 meet -- we would exceed that standard of 386 times in
25 Middle River and 181 times in Old River. This is out of

1 about 5,840 days. So we're looking at a 16-year
2 simulation period.

3 But the absolute numbers aren't that important.
4 But we do want to show that with our permanent gates, our
5 modeling is showing that we would not exceed the thousand
6 EC at Middle River or Old River.

7 --o0o--

8 MS. KELLY: The figure number 7 shows -- and I'm
9 just going to click through this quickly -- shows the
10 average annual improvement in percent EC change that will
11 result from -- or that is calculated to result from the
12 proposed four barrier -- four gate configuration. And
13 it's quite significant here. We have an improvement on
14 Old River of 16 to 18 percent average annual. For Grant
15 Line it's less. It's 6 to 8 percent. And I'll explain
16 that in a minute. And for Middle River we have a large
17 improvement of 26 to 28 percent.

18 Now, the reason we show that range is that the
19 smaller number is the one that's calculated for our
20 current export limit. The slightly larger -- greater
21 improvement is the one that's calculated when we are
22 simulating operating at the higher limit. So this may be
23 counterintuitive. But what we're saying is that with
24 these gates we can bring in the fresher Sacramento River
25 water in to South Delta or the west side water in to South

1 Delta. It's better than the San Joaquin water. And we
2 can move that through the South Delta. And by increasing
3 our export limit and pumping some more, we bring more of
4 that water in to the South Delta. And that's where you
5 see that slightly better improvement.

6 For the Grant Line Canal, the reason that the EC
7 change is not as large as the other two is that, if you
8 recall our operation, we had fresh water -- or water being
9 brought in from Middle River and on Old River and coming
10 through and out Grant Line. Well, when it's coming out
11 it's mixing with the San Joaquin River water. And so we
12 have -- where we will have a lot of Sacramento River water
13 in Middle River and Old River, in Grant Line you have a
14 combination. And so you don't see as large an improvement
15 as you do on Old River and on Middle River.

16 The next two graphs I'd like to click through
17 quickly because they are complicated. And so I'm going to
18 simplify them as much as I can.

19 --o0o--

20 MS. KELLY: This is showing the EC improvement in
21 Middle River at Mowery Bridge for the 16-year simulated
22 period. EC improvement, we're showing an improvement on
23 the positive side of the axis. And this particular plot
24 you will see we go from zero, where there's no change, up
25 to 800 on the improvement side. So this is a positive

1 improvement even though the EC value would actually drop.

2 And you can see that there's quite a bit of
3 activity here. And we show quite a sustained improvement
4 at this location. And it -- you know, it ranges from --
5 we are looking at about an average of, you know, 150 to
6 200 microSiemens per centimeter. This is figure number 8.

7 --o0o--

8 MS. KELLY: For figure number 9, this is the EC
9 improvement at Old River at Tracy. And the scale is
10 slightly different here. We have 0 to 600. You can see
11 there's overall an improvement, and it ranges around 100
12 EC on average there. So we have an improvement there.
13 You can see quite a bit of activity in this one and in the
14 previous slide.

15 --o0o--

16 MS. KELLY: Now, our next figure, figure 10 --
17 no. Excuse me.

18 There we go. Figure 10 shows not nearly as much
19 activity. And I want to point out to you that we're
20 looking at a different scale now, 0 to 200 microSiemens.
21 This is for the San Joaquin River at Brandt Bridge. And
22 we have a minimal amount of activity here for changes
23 related to the gates.

24 Now, the South Delta Improvement Program is not
25 designed to improve water quality at Brandt Bridge. But

1 we did want to show the relative effect of the proposed
2 project.

3 --o0o--

4 MS. KELLY: Now, going to figure 11, this is --
5 I'll just talk a little bit about the South Delta
6 Improvement Program overall. There are three objectives
7 for the program. The first is to reduce the strain of the
8 San Joaquin salmon from San Joaquin into the South Delta
9 via Old River. And the second is to maintain adequate
10 water levels and through improved circulation at water
11 quality for the South Delta farmers. And then the third
12 is to increase water deliveries and delivery reliability
13 for the SWP and CVP water users and provide opportunities
14 to convey water for fish and wildlife purposes by
15 increasing the maximum permitted level of diversion into
16 Clifton Court Forebay to 8500 CFS.

17 --o0o--

18 MS. KELLY: Figure 12 shows the decision process
19 that we are undergoing. As you know, we've released the
20 draft EIR/EIS last Friday. And it has a 90-day review
21 period. It will close February 7th.

22 We have divided the project into two components.
23 One is the physical structural component, the gates. That
24 is our preferred component for the physical structural
25 component are the four gates plus dredging and diversion

1 modifications -- about 24 agricultural diversion
2 modifications in the South Delta.

3 The second component is the operational
4 component. That's increasing our export limit. That
5 decision will be -- the process to make that decision will
6 happen after we issue the record of decision on the draft
7 EIR -- on the final EIR/EIS.

8 So we have recommended that we have gates at four
9 locations. And we're looking for a decision on that at
10 the end of this first stage.

11 Then the second stage will start where we will
12 address the information that's presented in the EIR/EIS.
13 We'll bring in information on the decline of the fish in
14 the Delta. And we will have a public discussion and
15 debate about what action should be taken, if any at all,
16 on Stage 2.

17 Now, this will allow us to begin our construction
18 of the gates. And it will allow us to get those in place
19 without it getting mired too heavily in the debate of
20 increasing the export limit. And if this goes according
21 to our plan, we would expect to have the gates in place by
22 the spring of 2009.

23 --o0o--

24 MS. KELLY: I'll skip figure number 3. And you
25 can explore that at your leisure.

1 --o0o--

2 MS. KELLY: Figure 14 shows the structural
3 physical component. It shows the locations of the
4 agricultural gates. It shows the location of the fish
5 gate. And it shows some of the dredging that we would
6 need to do to help improve the circulation in the South
7 Delta. And it shows areas where we would be doing spot
8 dredging and site-specific work on agricultural diversions
9 in the area. So that it would allow us more flexibility
10 for operating the gates.

11 --o0o--

12 MS. KELLY: This is the operational component.
13 We have three operational scenarios analyzed in the
14 document. They provide a range of export increases. This
15 slide shows that with the no action under our current
16 situation we estimate that on average we could export
17 about 5.9 million acre/feet. That includes an assumption
18 about transfers. And we have about I think it's 250,000
19 acre/feet of transfers shown in the green. That is based
20 upon the assumption that every year 600,000 acre/feet of
21 transfers will be sought, which is not the real case as we
22 all know. But it was something that we could use in order
23 to help gauge the potential that we have and the increased
24 potential from the proposed operation for 8500.

25 --o0o--

1 MS. KELLY: So we have a range of export
2 increases here on figure 16 that show the transfer
3 potential of about 100,000 acre/feet, in the purple, for
4 each one of the alternatives. And then you see a
5 significant difference between the amount of water that
6 could be provided to the SWP, in blue, and to the CVP, in
7 gold.

8 MS. CROTHERS: I just want to correct. That was
9 figure 15.

10 MS. KELLY: Thank you.

11 --o0o--

12 MS. KELLY: Figure 16 shows the changes in
13 salinity for the CVP and the SWP exports.

14 For the Central Valley Project we see an average
15 annual improvement of 11 to 10 percent for the CVP. For
16 the SWP we show a slight degradation of 1 to 2 percent.
17 And this difference is due to the fact that the permanent
18 operable gate on Old River is very effective at keeping
19 the San Joaquin River water from coming into Tracy. And
20 so Tracy is also getting the benefit of bringing the
21 water -- the Sacramento River water into this area.

22 The Clifton Court Forebay already gets that
23 benefit. And so we see a slight degradation because we
24 are moving more water across the Delta and into the South
25 Delta. So it's very slight.

1 But the basic reason for the difference is that
2 they're starting out at two different places for water
3 quality, a CVP having less water quality -- or not as good
4 a water quality as SWP.

5 --o0o--

6 MS. KELLY: Figure 17 shows the costs associated
7 with the SDIP. And it's a total of about \$110 million.

8 --o0o--

9 MS. KELLY: And this is our schedule that shows
10 how we will do a parallel process, we hope, in the
11 construction of the gates and deciding whether or not to
12 increase the export and how to do that.

13 Thank you.

14 CHAIRPERSON DODUC: Thank you.

15 Ms. Crothers.

16 MS. CROTHERS: Yes. We are ready to go to our
17 last witness. Mr. John Leahigh will be speaking regarding
18 the second hearing issue regarding the water quality
19 response plan approval of the condition one in that plan.

20 Mr. Leahigh, is DWR-5 a summary of your
21 qualifications?

22 MR. LEAHIGH: Yes, it is

23 Q Did you prepare that testimony -- that summary?

24 A Yes.

25 Q Is DWR-24 -- was that prepared under your supervision

1 or did you prepare that?

2 A I prepared that myself.

3 Q Could you please summarize DWR-24?

4 A Okay. Yeah, once again, My name is John Leahigh. I
5 am currently serving as the Chief of the Operations
6 Planning Branch for the State Water Project Operations
7 Control Office. So I wear one of the blue hats that Jerry
8 was referring to earlier for the Department. I do not
9 have any PowerPoints.

10 I'm here primarily to address, as Cathy noted, to
11 address the second topic of this hearing, the
12 reconsideration of the conditional approval of the Water
13 Quality Response Plan and how it ties in with the adoption
14 of the cease and desist order.

15 First I will briefly go into some of the
16 background regarding topic 2. As mandated by Decision
17 1641, DWR and the Bureau of Reclamation in consultation
18 with South Delta Water Agency and Contra Costa Water
19 District developed a Water Quality Response Plan to
20 protect these senior water rights holders in the event
21 that the State Water Project or the Central Valley Project
22 engaged in joint point of diversion.

23 The latest version of this plan was submitted to
24 the State Water Resources Control Board on April 25th of
25 this year. Part of the plan requires that water quality

1 standards in the southern Delta interior stations be met
2 for JPOD to be deemed acceptable. This plan was
3 conditionally approved on July 1st of this year.

4 Shortly thereafter four parties petitioned the
5 Board to reconsider the approval based primarily on
6 condition 1 of the approval, which allows joint point in
7 the event that the projects are meeting 1.0 EC in the
8 southern Delta interior stations up until January 1st,
9 2009.

10 On September 22nd the Board issued an order which
11 provisionally granted approval of the Water Quality
12 Response Plan, excluding condition 1.

13 Now, if you're following along in the written
14 testimony, I'm going to -- in my summary I'm going to jump
15 around a bit. So I'm on bullet 2, which is the effects if
16 condition 1 is included in the approval of the Water
17 Quality Response Plan.

18 The Department feels that the approval of the
19 response plan as written, including condition 1, provides
20 adequate water quality protection and will not harm other
21 legal users of water.

22 Condition 1 does not change the objective that
23 has existed since Decision 1641 was adopted. And the
24 Department does not believe that other legal users of
25 water, including Fish and Wildlife, have been injured by

1 the 1.0 EC objective.

2 Bullet 2 of my testimony affects if condition 1
3 is excluded in the approval of the Water Quality Response
4 Plan.

5 Condition 1 -- if condition 1 is removed from the
6 response plan, other beneficial users of water could be
7 adversely impacted. Not only does the response plan
8 establish necessary conditions to allow DWR and the USBR
9 to use joint point of diversion, but it also applies to
10 water transfers for project contractors and other third
11 party water transfers.

12 One of the conditions of the plan is that
13 southern Delta water quality standards are being met when
14 joint point of diversion is occurring. These transfers
15 are extremely important in supplementing water supplies
16 for agricultural, municipal and industrial water needs
17 south of the Delta in years when the project applies are
18 limited by hydrology.

19 In addition, the environmental water account
20 relies more heavily on the use of north of Delta purchases
21 transferred through the Delta in these drier year types.

22 The ability of the environmental water account to
23 acquire these assets is key to its effectiveness in
24 protecting Delta fishery.

25 As discussed during previous testimony, it is

1 likely that the .7 EC objective will be exceeded under
2 average to dry years until the permanent gates are
3 installed. This means that in drier years when the need
4 for the supplemental supply south of the Delta is
5 greatest, the projects could be prohibited from conveying
6 this critical alternative supply.

7 Therefore, the recognition of the delay -- of a
8 need for a delay in the implementation of the .7 EC
9 objective to match the current schedule for installation
10 of permanent gates as included in condition 1 of the
11 approval letter is essential to avoid significant harm to
12 other beneficial users of water.

13 Now, returning to bullet 1. In previous
14 testimony the Department has argued that adoption of the
15 draft CDO is unnecessary. The CDO imposes requirements
16 that are already part of the term and conditions of
17 Decision 1641. In addition, the draft CDO includes
18 language that emphasizes the need to track the current
19 schedule for installation of the permanent gates. If the
20 Department's view prevails and the Board does not adopt
21 the CDO, then the Department would support modifying the
22 water quality response plan or its approval to add
23 language similar to that in the draft CDO requiring status
24 reports on the detailed schedule including completion
25 dates for key events leading to the completion of the

1 permanent gates by January 1st, 2009.

2 Therefore, is the CDO is not adopted, the process
3 for closely monitoring the status of the installation
4 schedule will still be captured.

5 I'm now to bullet 4, the final bullet.

6 If the CDO is adopted the Department believes
7 that the July 1st approval of the Water Quality Response
8 Plan needs no modification and should stand as written,
9 including condition 1.

10 The Department believes the approval provides
11 adequate water quality protection for other Delta water
12 users. Condition 1 is consistent with DWR's February
13 14th, 2005, petition to extend the effective date of the
14 1.0 EC standard until permanent gates are installed. As
15 referenced in previous testimony, this would be consistent
16 with the State Water Resources Control Board's past plans
17 and analysis that linked implementation of .7 EC objective
18 to the installation of permanent gates.

19 And I thank you. And that concludes my
20 testimony.

21 CHAIRPERSON DODUC: Thank you.

22 Ms. Crothers.

23 MS. CROTHERS: That concludes DWR's direct
24 testimony. And we would be prepared to take cross exam
25 questions at this time.

1 CHAIRPERSON DODUC: Okay. We'll start with the
2 prosecutorial team, Division of Water Rights.

3 STAFF COUNSEL MAHANEY: A quick question, Madam
4 Doduc -- Chair Doduc. With your permission, the
5 prosecution team has a CD with some slides that are
6 excerpts. They're screen captures of the PDF files of
7 exhibits that we hope will expedite cross exam, to avoid
8 shuffling through -- having witnesses shuffle through some
9 papers. Again, these are not new exhibits. They are
10 screen captures of portions of the PDF files. And the
11 only addition is we have in some pages added the exhibit
12 number and the page number.

13 CHAIRPERSON DODUC: All right. Proceed please.

14 CROSS EXAMINATION

15 OF THE DEPARTMENT OF WATER RESOURCES PANEL

16 BY MS. ERIN MAHANEY, STAFF COUNSEL, representing the
17 Division of Water Rights:

18 STAFF COUNSEL MAHANEY: Good afternoon. Erin
19 Mahaney for the Division of Water Rights prosecution team.

20 And I'd like to start off by asking Mr. Johns a
21 few questions.

22 Are you familiar with the permit terms in D-1641
23 that require the Department to report violations of the
24 water quality objectives

25 MR. JOHNS: Yes.

1 Q Are you familiar with the draft cease and desist order
2 262.31-17 that was issued to the Department and that is
3 the subject of this hearing?

4 A Generally, Yes.

5 Q On page 3 of your testimony, you testified that D-1641
6 states, and I quote, "If permittee exceeds the objectives
7 at Station C6, 8 or P12, permittee shall prepare a report
8 for the Executive Director;" is that correct?

9 A Yes.

10 Q On page 4 of your testimony you testified that this
11 condition gives the Department the right to submit such a
12 report; is that correct?

13 A Yes.

14 Q Do you agree that the use of the term "shall" means
15 that the condition is mandatory?

16 A Yes.

17 Q Does D-1641 impose a mandatory duty on the Department
18 to prepare a report for the Board if the water quality
19 objectives are exceeded?

20 A Yes.

21 Q Would you bring up slide 1 please.

22 On page 2 of your testimony, Exhibit -- DWR
23 Exhibit 18, referring to this permit condition on page 159
24 of D-1641, you state that a report informing the Board of
25 an exceedance would discuss three elements. And those are

1 identified in subparagraphs A through C of paragraph 1 of
2 your testimony on that page.

3 Does the permit condition on page 159 -- this is
4 condition 6 -- specifically require the report to discuss
5 those three elements you have identified?

6 A Not in the language there, no.

7 Q Does that permit condition specify any information
8 that is required to be included in the report to the
9 Board?

10 A Since it's related to an enforcement action, we would
11 probably go back to the Water Code sections that deal with
12 enforcement actions and take language from there in terms
13 of preparing the report to make sure we'd address those
14 considerations that the Board would take into
15 consideration -- that the Board would think about in terms
16 of taking enforcement action, try to address those in our
17 report.

18 Q Are you familiar with the Water Code sections
19 governing cease and desist orders?

20 A I'm talking about the Water Code sections regarding
21 trespass.

22 Q Are you familiar with Water Code Section 1831?

23 A Not very much. I am pretty -- I am generally familiar
24 with the Water Code sections that deal with trespass, and
25 we would try to address those issues in our report,

1 because that would be the nature of the concerns, was a
2 trespass -- had a trespass occurred.

3 Q If the Department anticipates that the water quality
4 objectives will be exceeded but no exceedance has yet
5 occurred, does D-1641 impose any obligation on the
6 Department to report that exceeded -- the anticipated
7 exceedance?

8 A Say that one more time.

9 Q Okay. If you think -- if you anticipate an exceedance
10 of the water quality objectives, an anticipated
11 exceedance, is there any obligation in D-1641 in your
12 opinion that requires the Department to report that
13 anticipated exceedance?

14 A I'm looking at the language here. I don't see --

15 Q I didn't say it was in this page.

16 You can actually turn off that slide. Thank you.

17 A As I recall, there is something in 1641 about trying
18 to give the Board an idea if there is going to be a
19 problem with the water quality -- compliance with the
20 water quality standards in another section of the order,
21 as I recall. And we have interpreted that to be something
22 imminent.

23 Q Would you bring up slide 2 please.

24 I brought up on the screen Water Right 5 --
25 Exhibit 5a, which is D-1641, page 149, term 11, paragraph

1 D.

2 In your opinion does this term require the
3 Department to immediately notify the Board of any
4 anticipated or actual violations of the water quality
5 objectives?

6 A By its plain language, yes.

7 Q In your opinion what does "immediate" mean?

8 A It would be if we anticipated something -- immediate
9 where? Immediate --

10 Q Paragraph D.

11 A As soon as we became aware of the violation we would
12 immediately notify the Board.

13 Q Can you give a time frame for that?

14 A No.

15 Q You've testified that -- you can turn off that slide.

16 Thank you.

17 You've testified that D-1641 establishes a
18 process under which the Board will withhold enforcement
19 until it considers whether the exceedance was beyond the
20 Department's control; is that correct?

21 A That's correct.

22 Q Is it your position that the Board cannot take an
23 enforcement action until the Department submits a report
24 of violation?

25 A No. The Board can do probably anything it wants.

1 What we're looking for here is for the Board to follow
2 through its commitments in its water right permits and its
3 water right decisions.

4 Q So is it your position that the Board may take an
5 enforcement action without such a report?

6 A The Board may. But I think they're in violation of
7 their own water right decision if they do.

8 Q I'm sorry. That's a little confusing to me. You say
9 they may but they would violate it.

10 A Well, the Board can do what it wants to do. It's
11 subject to judicial review if does things that are
12 arbitrary and capricious. Here we have a water right
13 permit term that specifically says what the process will
14 be for considering a noncompliance, and the Board is not
15 following it.

16 Q Would you bring up slide one again please.

17 This is from Water Right Exhibit 5a, page 159,
18 term 6. In the last paragraph where it says, "If
19 permittee exceeds the objectives at certain stations,
20 permittee shall prepare a report," does that paragraph
21 mention anything about threatened or anticipated
22 violations?

23 A It says if the Board -- if the Department exceeds --
24 if the permittee exceeds the objectives. So it would be
25 when the objective -- after the objective has been

1 exceeded.

2 Q Does it say anything about threatened or anticipated
3 violations?

4 A No, it doesn't say anything about that.

5 Q On page 4 of your testimony you state that the
6 obligation to meet the objective is conditioned on a
7 showing that the exceedance was within the control of the
8 Department of Water Resources; is that correct?

9 A Yes.

10 Q In your opinion, does D-1641 require the Department to
11 meet the .7 EC objective identified in Table 2 from April
12 through August beginning in 2005?

13 A Require the Department to meet it? I think it
14 requires the Department to take actions under its control
15 to try to obtain it, yes.

16 Q Does -- actually I will refer you to Table 2, Water
17 Right Exhibit 5b, I believe. And I do not have a slide
18 for that one.

19 If you'll look at Water Right Exhibit 5b,
20 footnote 5. Do you have that in front of you?

21 A No. What are we looking at?

22 Q Water Right 5b, which is Table 2, footnote 5.

23 Now, you just stated that the obligation to meet
24 the objective was -- and forgive me if I mischaracterize
25 your testimony here -- but was conditioned on factors

1 within the Department's control?

2 A When read in context with the rest of the decision,
3 yes. You can't go to a table in this decision and pick
4 out what the -- when a violation occurs. You've got to
5 read the whole order -- the whole decision in its context.
6 What the enforcement team is doing here is taking a table
7 out of context of the rest of the decision. It's just not
8 appropriate.

9 Q Do you agree then that Table 2 imposes a requirement
10 for the Department to meet a certain objective at certain
11 times?

12 A Table 2 does not. The Water Right decision does.

13 Q Table 2 -- is Table 2 a part of the Water Right
14 decision?

15 A It's one part of the Water Right decision, yes.

16 Q All right. Does D-1641 identify any exceptions to the
17 requirement that the Department must meet the .7 EC
18 objective that we just discussed that's now in effect from
19 April through August?

20 A Yes.

21 Q What are those exceptions?

22 A When it's not under the Department's control.

23 Q Will you -- okay. Bring up slide 1 again please.

24 Actually -- I'm sorry. That was not what I was
25 looking for.

1 Let us go to Water Right Exhibit 5a, page 161.
2 About halfway down the page it says, "In addition,
3 permittee shall ensure the water quality objectives for
4 agricultural beneficial uses as specified." And do you
5 see that paragraph?

6 A I'm looking at it, yes. Wait, hold on a second.

7 Yeah, this -- on page 161?

8 Q Right.

9 A This is in the New Melones permits.

10 Q Oh, sorry. Wrong page there.

11 159.

12 Actually that was the right slide. Sorry about
13 that.

14 A Okay. So where are we now?

15 Q We are at term 6, page 159.

16 A Term 6. Oh, okay.

17 Q The first sentence beginning "This permit is
18 conditioned..."

19 Does that portion of the paragraph have any
20 reference to control?

21 A No, but the rest of that term does, yes.

22 You guys can't read part of the term out of
23 context. That's what makes the problem here.

24 Q Well, I think there is a dispute on that.

25 A Yes, there is. There's a big dispute on that.

1 Q Do the water quality objectives imposed through D-1641
2 state that they only apply to the extent that water
3 quality conditions are due to controllable factors?

4 A Say it one more time.

5 Q Do the water quality objectives imposed through D-1641
6 state that they only apply to the extent that water
7 quality conditions are due to controllable factors?

8 A I think when you read condition 6 in its total, it
9 talks about that the Water Board will review whether to
10 take enforcement action based on our ability to control
11 the conditions. So, yes, I think it does condition it.

12 Q To your knowledge, has there been any exceedance of a
13 water quality objective imposed in the Department's
14 permits by D-1641?

15 A I think so, yes. An exceedance, yes.

16 Q In your opinion was that exceedance subject to the
17 reporting requirements of D-1641?

18 A Yes. And we have filed the report on that.

19 Q When did the Department file that report?

20 A Was it the 2003 report we filed?

21 Q A year is fine.

22 A Oh, it was this year. I mean it was in 2005. This is
23 when we became aware of the exceedance.

24 Q And when did the exceedance occur?

25 A In 2003, as I believe.

1 Q So you filed a report in 2005 for an exceedance that
2 occurred in 2003?

3 A Once we became aware of the noncompliance, we prepared
4 the report.

5 Q Do you consider this report to be timely?

6 A In terms of once we became aware of the violation,
7 yes -- or, pardon me -- the exceedance, yes.

8 Q Has the Department implemented a process to insure
9 that exceedances are timely reported in the future?

10 A Oh, yes, we have, yes.

11 Q What is that process?

12 A Well, we'll -- we can -- well, a couple things that
13 will be going on here. One is that the reporting
14 aspects -- we're a little behind on the reporting aspects
15 for normal stuff. We have some rebuttal testimony that
16 we'll present regarding that.

17 In addition, we've talked to staff about getting
18 these standards -- these locations put up with continuous
19 monitoring quarters that were not in place in 2003. And
20 we can probably have other folks who can answer that.

21 John, do want to go ahead -- more information on
22 that.

23 MR. LEAHIGH: Well, yeah. I mean the actions
24 that have been taken to rectify that delay of reporting is
25 that we now have all four of the South Delta stationed

1 telemetered, which we did not up until this summer. So
2 those are now telemetered. They are -- all four of the
3 stations can now be read realtime on CDEC. We are also
4 reporting on a daily basis the 30-day running averages at
5 all four of the compliance stations. So this is all --
6 this is what we have done to rectify the situation that
7 occurred as far as the 2003 exceedance.

8 STAFF COUNSEL MAHANEY: Okay. And just to
9 clarify, this is now publicly available on CDEC?

10 MR. LEAHIGH: Yes, it is.

11 MR. JOHNS: I wonder if we might also -- we're
12 talking about a report that we've filed that all the
13 parties have. But I'm not sure it's been presented and
14 identified as an exhibit in this proceeding.

15 STAFF COUNSEL MAHANEY: That's your counsel's --
16 and, frankly, that's not an issue I need to get into on
17 cross-examination.

18 MR. JOHNS: Then why are we talking about it
19 then?

20 STAFF COUNSEL MAHANEY: I'm talking about the
21 introduction of evidence.

22 CHAIRPERSON DODUC: Please continue with your
23 questioning.

24 STAFF COUNSEL MAHANEY: Did you've just -- so
25 you've just testified then an actual violation of the one

1 has occurred, correct?

2 MR. JOHNS: No, what I'm testify to is that an
3 exceedance of the one has occurred. A violation is
4 something that's going to be determined later on

5 Q If there's an exceedance of the 1 EC standard, is it
6 likely that there'd be a threat of violation in the more
7 restrictive .7 EC in the future?

8 A You say an exceedance?

9 Q Well, that's your language. I would call it a
10 violation. But let's not quibble about that.

11 A I will call it an exceedance.

12 Depending on how the Bureau operates New Melones,
13 that may not be the case.

14 Q Is it possible that conditions that contributed to the
15 previous exceedance in 2003 could be repeated before the
16 permanent barriers can be constructed?

17 A Is it possible?

18 Q Yes.

19 A Not probable, but possible. Almost anything is
20 possible in this world.

21 Q Do you know of any modeling showing that the .7 EC
22 objective will not be exceeded in the future?

23 A The modeling would have to assume certain conditions
24 to take place in the future. And like I testified, we're
25 looking at improving water quality on the San Joaquin

1 River, we're talking to the Bureau about how they operate
2 in the Melones Reservoir. All those are different things
3 that may be taking place in the future. And it would be
4 very difficult to model until we get those assumptions in
5 place.

6 Q Does the Department intend to install the permanent
7 barriers?

8 A We intend to go through the permitting process to --
9 and we'd like to install the permanent barriers, yes.

10 Q Can you guaranty that the Department will meet the .7
11 EC objective between now and when the permanent barriers
12 are built?

13 A Like I said, you can not guaranty anything. You
14 cannot guaranty public safety.

15 Q You have testified that the finding of a threat of
16 violation is inappropriate because it does not allow the
17 Department latitude to implement the salinity objective;
18 is that correct?

19 A Say that one more time.

20 Q You have testified in your written testimony that the
21 finding of a threat of violation is inappropriate because
22 it does not allow the Department latitude to implement the
23 salinity objective. That is on pages 2 and 3 of your
24 testimony.

25 A Can you show me the exact location here?

1 Q It is bottom of page 2, paragraph 2 down there, that's
2 numbered paragraph 2, that actually wraps around to the
3 top of page 3. Quote, "The finding of a threat of
4 violation is inappropriate," and then it goes on to say,
5 "because it does not allow latitude to the permittees to
6 implement the objective."

7 I'm just curious what you meant by that statement
8 about precluding -- how the cease and desist order
9 precludes the Department from having latitude to implement
10 the objective.

11 A Well, what you're projecting on the threat of
12 violation is that future conditions are going to occur.
13 And we think there are actions that can be taken to help
14 mitigate that. And by taking this action on a threat of
15 violation, you preclude us from -- you assume things will
16 take place in the future that may not take place in the
17 future.

18 Q Can you explain to me how that removes any options
19 from the Department? I think I'm still not quite clear
20 what "latitude" means.

21 I'm not trying to box you in. I'm just trying to
22 understand your statement.

23 A Well, we may be able to work with parties to help
24 reduce the possibility of a violation. And by you -- by
25 the Water Board taking action about a threat of a

1 violation, the violation may not occur because we may be
2 able to take action that would preclude that from
3 happening. But you have already taken enforcement against
4 us for something that might occur that we might be able to
5 work with parties that it won't occur. So why take the
6 enforcement action until it's actually occurred? You're
7 prejudging --

8 Q Is it your position then that the cease and desist
9 order precludes the Department from taking certain actions
10 that it would otherwise take if there was no enforcement
11 action?

12 A The cease and desist order doesn't preclude the
13 Board -- from taking it, but assumes that things will not
14 take place, and we think that's inappropriate.

15 Q You've also testified that a threatened violation
16 should not be based on the Department's own statements but
17 actual hydrologic conditions; is that correct?

18 A That's possible. I can't remember the exact
19 statement. But if you're reading it --

20 Q It's on page 12 of your testimony.

21 A Okay. That's good enough for me.

22 Q I'm curious about your testimony that the prosecution
23 or the Division should not rely on the Department's own
24 statements. Is there any reason that those statements
25 would be unreliable?

1 A No. But they were presented with the idea of trying
2 to convince the Board of the wisdom of extending the date
3 of implementation of the -- continuing the implementation
4 of the 1.0 standard. That doesn't mean we're going to
5 violate the standards. It just means we're trying to
6 present evidence that would indicate why that would be
7 prudent.

8 Q In your opinion, when would actual hydrologic
9 conditions provide a basis for finding a threatened
10 violation or exceedance?

11 A Historical conditions?

12 Q Well, I believe your testimony referred to actual
13 hydrologic conditions. Again, that was on page 12 of your
14 testimony.

15 What actual hydrologic conditions are you
16 referring to?

17 A Can you show me where on 12 you're talking about.

18 Q At the top of page 12, the second sentence from the
19 top at the end -- carries on, "but should be based on
20 actual present hydrologic conditions."

21 Do you recall what you meant?

22 A Is that we should be looking at the conditions as they
23 occur to determine if enforcement is appropriate.

24 Q Of a threatened violation or a threatened --

25 A No, I'm talking about --

1 Q How do you look at conditions as they occur to
2 determine if there is a threat? Is my question.

3 A You're looking at -- you appear to be focusing on
4 trying to figure out if a threat of a violation is
5 appropriate to have the Board take action on.

6 Q Right. Well, this is a proceeding involving a
7 threatened violation.

8 A And I'm looking at the idea that our water right
9 permit talks about a process where a violation has already
10 occurred, and then we determine if that was outside of the
11 Department's control. And I was talking about that
12 process here.

13 And in terms of a threatened violation, I've got
14 lots of ideas on how the Board should be handling
15 threatened violation and who they ought to be taking
16 threatened violations against. And this is not a case
17 that I would be using that tool in the Board's toolbox
18 for.

19 Q All right. Thank you.

20 Is construction of the barriers within the
21 Department's control?

22 A The Department of Water Resources as a water
23 management and planning agency, we are moving forward with
24 implementing those activities.

25 Q And what is the time schedule now for those?

1 A As Kathy testified, we're looking at finishing our
2 environmental documentation and a comment period by
3 February 7th, and getting an EIR certified some time in
4 the summer or spring of this year, August or so -- summer,
5 and then completing construction and implementation in
6 2009.

7 Q Does this time schedule differ from the time schedule
8 of December 31st, 2008? Or how does it differ, that was
9 contained in your change of petition?

10 A It reflects some delays that have taken place for us
11 to retool our decision making process to account for the
12 pelagic fish decline and the stage of that action.

13 Q Can you guaranty that the permanent barriers will be
14 constructed by this new date?

15 A You cannot guaranty anything. The Department
16 cannot --

17 Q Is it possible or probable?

18 A It is our best estimation at this time that we can
19 make those dates. But Delta stuff is complicated. As
20 this proceeding tells you, it's hard to predict --

21 Q All right. Thank you.

22 A -- how long things are going to take.

23 Q In your opinion are the permanent barriers the most
24 practical means to meet the .7 EC objective?

25 A It's the most effective means to improve water quality

1 in the South Delta. There may be other things that are
2 needed to meet the .7 objective. But this is the best way
3 for the Department to move forward to help with
4 circulation patterns in South Delta move us towards that
5 objective.

6 Q On page 10 of your testimony you state that D-1641,
7 quote, "allows permittees latitude in the method for
8 implementation, and this method may not be determined
9 until actual conditions are known," end quote.

10 What method for implementation are you referring
11 to there?

12 A Talking principally about the permanent operable
13 gates.

14 Q And what do you mean "until actual conditions are
15 known"?

16 A I'm not sure. I'll have to go back and look at it.

17 Q It's page 10.

18 A So where are we?

19 Q If you look at the paragraph -- or the heading 2 under
20 that paragraph.

21 A Okay.

22 Q About midway down -- or actually 1, 2, 3 -- 5
23 sentences from the bottom of that paragraph. It says,
24 "the D-1641 permit condition implementing the objective."

25 A Okay. So what was your question again?

1 Q What did you mean "until actual conditions are known"?

2 A As we install the permanent operable gates we may find
3 that other activities may be necessary to help us key the
4 objectives. And we won't know that until we get some
5 operational experience. We've learned a lot from the
6 temporary barrier program. I suspect we'll learn a lot
7 from the permanent operable gates program as those are
8 installed.

9 Q Okay. Thank you.

10 D-1641 refers to the implementation of equivalent
11 measures as an alternative to the permanent barriers. Has
12 the Department considered equivalent measures?

13 A We've looked at other alternatives to achieving the
14 water -- improving water quality in South Delta, yes.

15 Q Has the Department developed an operations plan that
16 would include equivalent measures?

17 A We've evaluated various alternatives as we've done
18 SDIP analyses, things like reducing exports or putting
19 in -- pumps. And the permanent operable gates is the most
20 effective solution for this problem or this issue.

21 Q You've testified that the Department has limited
22 methods to control water quality in the South Delta; is
23 that correct?

24 A The Department as the permittee, yes.

25 Q Is meeting the .7 objective entirely outside the

1 Department's control?

2 A As Tara Smith has indicated, there's very little we
3 can do as a permittee to improve water quality in South
4 Delta that are -- related to our water right permits.

5 Q In other words is it your position that the Department
6 then has limited control to meet the water quality
7 objectives in its permits?

8 A Yeah, very limited, yes, as a permittee.

9 Q Is the Bureau in a better position in your opinion to
10 take actions to control water quality in the southern
11 Delta?

12 A They at least have facilities on the San Joaquin side
13 that they could use potentially to assist in this matter.

14 Q Has the Department entered into an operating agreement
15 with the Bureau for coordinated operations of the State
16 Water Project and the Central Valley Project?

17 A For the Sacramento side of our permits, yes.

18 Q Does the agreement require coordination between the
19 Department and the Bureau to meet Delta standards?

20 A On the Sacramento side of our permits, yes.

21 Q And does the Department actually coordinate
22 operations?

23 A Yes.

24 Q Are the limitations for controlling water quality to
25 which you've alluded due to factors beyond both the

1 Department's and the Bureau's joint control under the
2 agreement?

3 A I can only testify to what's beyond the Department's
4 control.

5 Q In your opinion has the Bureau honored its side of the
6 agreement?

7 A I'm not sure I have an opinion on that.

8 Q In your opinion, is it within the Department's control
9 to inform the Board of potential violations of the .7 EC
10 objective?

11 A Say it one more time.

12 Q Is it within the Department's control to inform the
13 Board of potential violations of the .7 objective?

14 A Well, certainly. We can do that, yes.

15 Q Is it within the Department's control to inform the
16 Board of actual violations of the .7 EC objective?

17 A Back up to the first question again. I'm sorry. I
18 may have misspoke earlier.

19 Q Is it within the Department's control to inform the
20 Board of potential violations of the .7 EC objective?

21 A Potential -- I'm not sure we can predict water quality
22 in the South Delta very effectively. So I'm not sure the
23 potential.

24 The second question I think is a better one for
25 us.

1 So I'm not sure about the first one, because I'm
2 sure we can predict water quality in the South Delta very
3 effectively.

4 Q Okay. Just to clarify your answer to the other
5 question. Is it within the Department's control to inform
6 the Board of actual violations?

7 A Actual exceedances, yes.

8 Q Is it within the Department's control to provide the
9 Board with periodic status reports on the barriers
10 construction?

11 A We can do that, yes.

12 Q Is it within the Department's control to provide the
13 Board with notice of EC data losses that continue for more
14 than seven days at stations C6 and P12?

15 A We can do that, yes.

16 Q Is it within the Department's control to submit to the
17 Board the annual report required by D-1641, term 11,
18 paragraph C on page 149?

19 A We can also do that, yes.

20 Q Is it within the Department's control to make the
21 monitoring requirements required by that paragraph
22 available on the Internet?

23 A Likely. I'm not sure there's any -- John, do you have
24 any -- seeing any problems with us doing that?

25 MR. LEAHIGH: Which report is this?

1 MR. JOHNS: Say that again.

2 STAFF COUNSEL MAHANEY: This is the annual --
3 this is the reporting requirements under term 11,
4 paragraph C on page 149 of D-1641.

5 MR. LEAHIGH: That's the annual monitoring
6 requirements?

7 STAFF COUNSEL MAHANEY: Yes.

8 MR. LEAHIGH: That's not done under my shop.

9 STAFF COUNSEL MAHANEY: Does anyone know here if
10 they could post those on the Internet?

11 MR. JOHNS: Well, let me look at the exact
12 requirements. It's 11?

13 STAFF COUNSEL MAHANEY: To make it easier, you
14 could bring up slide 2.

15 If you look at paragraph C.

16 That doesn't look like slide 2.

17 Paragraph C, slide 2. Thank you.

18 It says that "licensee/permittee shall make
19 available to the Board and other interested parties the
20 results of the above monitoring as soon as practicable.
21 Timely posting of this information on the Internet will
22 satisfy this requirement."

23 STAFF COUNSEL LEIDIGH: For the record, can you
24 say what this is?

25 STAFF COUNSEL MAHANEY: This is Water Right -- or

1 WR-5a, page 149, term 11, paragraph C.

2 I'm just asking if it's within your control to do
3 that.

4 MR. JOHNS: We can do that, yes.

5 STAFF COUNSEL MAHANEY: All right. Thank you.

6 Mr. Leahigh.

7 MR. LEAHIGH: Yes.

8 Q I'm looking at your exhibit, which is DWR-24 page 2,
9 paragraph 3. In the middle of the paragraph there is a
10 statement that says -- the sentence begins "As discussed
11 during the previous testimony..."

12 Will you complete that sentence for me please.

13 A "As discussed during the previous testimony, on the
14 adoption of the CDO it is likely that the .7 EC objective
15 will be exceeded under certain conditions until the
16 installation of the permanent gates".

17 Q Thank you.

18 And that is your testimony?

19 A Yes.

20 STAFF COUNSEL MAHANEY: Ms. Smith.

21 MS. SMITH: Yes.

22 STAFF COUNSEL MAHANEY: Would you bring up slide
23 3 please.

24 This is DWR Exhibit 20 on page 17. This is an
25 excerpt from that page. If you look at the chart that

1 has -- well, the top chart -- the EC.

2 MS. SMITH: Yes.

3 Q This is the third chart from the top on page 17. This
4 is an excerpt of that.

5 The chart indicates a 30-day moving average EC
6 value of over 1,000 microSiemens per centimeter in the
7 early part of 2002 at the Tracy Road Bridge compliance
8 location.

9 Is that data accurate?

10 A I'm actually thinking that that spike up there is
11 inaccurate. But we didn't check with the field people and
12 we kept it in.

13 Q Is there any other data in your testimony that you
14 have questions about?

15 A That was actually the only thing that I noticed.

16 Q And is the 2003 violation also -- I'm sorry --
17 exceedance also visible on this chart?

18 A Yes.

19 STAFF COUNSEL MAHANEY: Thank you.

20 Ms. Kelly, I understand you have adopted DWR
21 Exhibit 23 as your own?

22 MS. KELLY: Yes.

23 Q You describe model runs for EC values with both
24 temporary and permanent barriers in place; is that
25 correct?

1 A Yes.

2 Q Would you bring up slide 4 please.

3 This is an excerpt from page 2 of your testimony.

4 Looking at that first paragraph there, is it your position

5 that the modeling of the 16-year period shows that EC

6 values would exceed the 1,000 EC 386 days and at the Old

7 River compliance location would exceed the 1,000 EC 181

8 days?

9 A Yes, out of the 5,400 and some odd days.

10 Q What 16-year period did you use in that model?

11 A Oh boy.

12 Tara's helping me out.

13 It's 1975 to 1991.

14 Q Moving to figure 6 of your testimony.

15 If you'll bring up slide 5 please.

16 In your testimony is it your position then that

17 the Department's modeling shows an exceedance of 1,000 EC

18 with installation of temporary barriers?

19 A Yes.

20 Q Did the modeling with permanent barriers in place show

21 an exceedance of 1,000 EC?

22 A No.

23 Q Did the modeling of existing conditions with temporary

24 barriers installed show an exceedance of 700 EC during the

25 period of April through August?

1 A Are you asking me to deduce from the fact that --

2 Q Well, you did model this, correct?

3 A I did not do these modeling runs. We have the
4 modeling run results, but I don't have those results in
5 front of me.

6 Q Okay. Is it your position that the permanent barriers
7 are a practical and effective means of meeting the 1.0 EC
8 objective?

9 A Yes.

10 Q Is it a practical and effective means of meeting the
11 .7 EC objective?

12 A Yes.

13 Q In your opinion is the salinity level in the southern
14 Delta likely to exceed the 1.0 EC objective at times until
15 the permanent barriers are constructed?

16 A Yes.

17 Q In your opinion is the salinity level in the southern
18 Delta likely --

19 A Excuse me. Would you repeat the last question.

20 Q Sure.

21 In your opinion is the salinity level in the
22 southern Delta likely to exceed the 1.0 EC objective at
23 times until the permanent barriers are constructed?

24 A Oh, the 1.0? I think it would be dependent upon
25 the --

1 STAFF COUNSEL MAHANEY: I'd like the record to
2 show that this witness is receiving assistance from Mr.
3 Johns.

4 MS. KELLY: Not yet, I'm not.

5 MS. CROTHERS: Excuse me. Could I clarify that,
6 you know, DWR did make this presentation as a panel. And
7 it may be more fruitful to allow different DWR witnesses
8 to provide some input. Because, frankly, you know, these
9 are complicated matters and we have a large department
10 devoted to these matters and it's a collaborated effort,
11 you know. So sometimes the knowledge is within us that we
12 need to share. So --

13 CHAIRPERSON DODUC: I appreciate that, Ms.
14 Crothers.

15 STAFF COUNSEL MAHANEY: I would actually be happy
16 if we could at least find out if Ms. Kelly could answer
17 the question. And otherwise I'd happy if someone else on
18 the panel could.

19 CHAIRPERSON DODUC: All right.

20 MS. KELLY: All right. Well, let me elaborate a
21 little bit. Now that I'm in Planning, I'm removed from
22 the realtime operations. I am familiar with the realtime
23 operations. It's dependent upon the hydrologic conditions
24 that we have in the Delta, at how likely it would be that
25 we would have exceedances above the thousand limit. So

1 that's about as much as I would want to say at this time.

2 STAFF COUNSEL MAHANEY: All right. Thank you.

3 And I'll ask you a similar question, with the
4 same understanding. If you're unable to answer, let me
5 know and I'll open it up to the panel.

6 Is the salinity level in the southern Delta, in
7 your opinion, likely to exceed the .7 EC objectives until
8 the permanent barriers are constructed?

9 MS. KELLY: You can defer to the panel on that.

10 MR. JOHNS: That's the same question you asked
11 me. And I think it really depends on what happens with
12 what the year. This last year, for example, that
13 objective was met quite nicely.

14 It depends on what happens with salt loads
15 upstream and how the Bureau operates New Melones, and a
16 bunch of other factors that are very difficult for us to
17 predict what's in the future.

18 STAFF COUNSEL MAHANEY: Okay. Thank you.

19 I have no more questions.

20 CHAIRPERSON DODUC: Central Delta Water Agency.

21 MR. NOMEILLINI: Members of the panel, I'm Dante
22 John Nomellini. I'm counsel for the Central Delta Water
23 Agency.

24 And, Jerry, I know you know me.

25 MR. JOHNS: You look vaguely familiar, yes.

1 CROSS EXAMINATION

2 OF THE DEPARTMENT OF WATER RESOURCES PANEL

3 BY MR. DANTE JOHN NOMELLINI, ESQ., representing the
4 Central Delta Water Agency:5 MR. NOMELLINI: All right. I'd like to start
6 with you, Jerry. You indicated in your testimony that DWR
7 has limited methods to control water quality in the
8 southern Delta?

9 MR. JOHNS: DWR as a permittee, yes.

10 Q Pardon me?

11 A As a permittee, yes.

12 Q How does your permit limit your capability and your
13 methods to control water quality in the southern Delta?14 A The permit covers our operations on the Feather River
15 in Oroville and our operations at Banks. So we as a
16 permittee can modify those operations as best we can to
17 try to improve water quality in South Delta. But, as Tara
18 has explained, that has very limited effect, if any.19 Q Is it your contention that your permit keeps the
20 Department of Water Resources from operating the State
21 Water Project to meet water quality --

22 A The permit does not.

23 Q -- in the South Delta?

24 A I'm talking about what the permit covers. The permit
25 covers those facilities that we operate. And those

1 facilities are the subject of our permit.

2 So I'm saying with those facilities we have very
3 limited ability to affect water quality in the South
4 Delta.

5 Q So you're saying your permit does not cover your
6 operation in San Luis?

7 A It does cover San Luis, yes.

8 Q It's not just Feather River?

9 A That's true.

10 Q Okay.

11 A I'm not sure how our operations in San Luis affect
12 water quality in South Delta. But I bet we'll get to that
13 in a minute.

14 Q Let's talk about that a little bit. We'll get to
15 that.

16 Your testimony indicates a very limited ability
17 of the State Water Project to control salinity in the
18 southern Delta. And you've explained it's based on this
19 permit limitation.

20 A It's based on the facilities that the permit covers.

21 Q Okay. Let's put that aside and let's talk about your
22 facilities and your ability to control water quality in
23 the southern Delta.

24 Would you agree that if the Department of Water
25 Resources in operation of the State Water Project wanted

1 to control salinity in southern Delta, that it has the
2 necessary facilities and capabilities to do that? Aside
3 from the permits.

4 A My issue would be: Do we have the responsibility to
5 do that because of a problem that we have caused?

6 Q Okay.

7 A So it goes not to just, can you fix it? But, do you
8 have an obligation to -- do you have a mitigation
9 responsibility to fix it?

10 Q Okay. If you'd allow me to conduct the questioning
11 and you the answering, we can separate -- I'd like to
12 separate what is possible physically with the State Water
13 Project and then I want to get into the legal
14 responsibilities that you're trying to address there.

15 A Okay. All right.

16 Q Let's just stay with the physical.

17 Would you agree that the State Water Project
18 physically has the capability to control salinity in the
19 southern Delta?

20 A I'm not sure. We could drop water by helicopters, I
21 guess.

22 Q Well, how about dropping water out of San Luis through
23 a wasteway or down to the Mendota Pool through
24 arrangements with the Bureau to get water into the San
25 Joaquin River, or to exchange water with people who are on

1 the river that can drop water down in the San Joaquin?

2 MR. RUBIN: Madam Chair, I object to the
3 question. I think it is outside the scope of the issue
4 before the Board. The question obviously before the Board
5 is whether there's a threatened violation of the permit
6 terms and conditions and whether the cease and desist
7 order properly -- if it were issued as drafted, properly
8 would enforce the terms of the permit terms and
9 conditions. And I think the questions that are being
10 asked now are beyond that scope.

11 CHAIRPERSON DODUC: Your response.

12 MR. NOMEILLINI: Sure.

13 The testimony submitted by the Department of
14 Water Resources, in particular Mr. Johns, was that the
15 Department has limited methods to control water quality in
16 the southern Delta. I'm cross examining on that very
17 specific point.

18 It is relevant in the broader sense to the cease
19 and desist order. And, that is, the appeal has been made
20 by the Department of Water Resources that because they
21 have these limited controls, they should somehow be
22 treated differently in the enforcement proceeding.

23 And I think I can show that they not only have
24 the physical capability of controlling salinity in the
25 southern Delta, but also have legal responsibility as

1 well. But I have to pursue my course of --

2 CHAIRPERSON DODUC: Thank you, sir.

3 MR. RUBIN: Madam Chair, as I understand the
4 testimony that was presented -- and the representatives
5 from Department of Water Resources can correct me if I'm
6 wrong -- but the information on the effect of operations
7 of the State Water Project was intended, again as I
8 understand it, to illustrate the point that operations of
9 the State Water Project, particularly exports, do not have
10 a large effect, if any effect, on the exceedance of the
11 South Delta objectives. It doesn't go to the issue that
12 Mr. Nomellini is asking.

13 CHAIRPERSON DODUC: Mr. Herrick.

14 MR. HERRICK: Thank you, Madam Chair. John
15 Herrick, South Delta Water Agency.

16 To the contrary. Besides saying that the State
17 Water Project didn't affect the -- Mr. Johns said that
18 it's not therefore their responsibility. This question
19 deals exactly and directly with what the direct testimony
20 was.

21 Earlier on in the proceedings, I'll note that
22 there was an objection made to something outside the scope
23 of the direct, and the ruling from Chair was it's very
24 broad on cross-examination, it's not limited to the direct
25 anyway.

1 Thank you.

2 CHAIRPERSON DODUC: Please continue. The witness
3 will answer the question.

4 MR. JOHNS: I'd appreciate the question, John.

5 MR. NOMELLINI: Yeah. Would you agree that the
6 State Water Project has the physical capability of
7 addressing water quality in the southern Delta?

8 MR. JOHNS: As a permittee we have very limited
9 capabilities.

10 Q Yeah, I understand that. But I'm just talking about
11 the physical capability. And I think you said no, and
12 then I followed up with what about -- you gave an example
13 about dropping water out of an airplane or a helicopter.
14 I gather that was being facetious and I accept it as that.

15 But then I asked you whether or not water could
16 be released from San Luis through the canal system to the
17 Mendota Pool and thereby into the San Joaquin River to
18 dilute salt, or to provide exchange water with those who
19 might be on the river to release water to the river that
20 could come down and dilute salts.

21 A The only time that I've evaluated that -- I'm going
22 back now to some experience in the eighties when --
23 working with the Water Board on drainage reduction issues.
24 We did look at how added water quality in a dry year could
25 improve water quality. And what we found was that it

1 actually made it worse in the year we were looking at.
2 Because what we did is we mobilized salts that normally
3 would have been taken up by ag practices and became
4 carriage water and the salt load to the river actually
5 increased.

6 So that's the only specific instance that I have
7 knowledge of of where we've analyzed that in detail.

8 Q All right. I didn't ask whether you analyzed. I
9 asked whether you had the physical capability with the
10 State Water Project to do something like that.

11 A I'm not sure, because I haven't evaluated that.

12 Q Do you agree you have control over a portion of San
13 Luis?

14 A We operate San Luis Reservoir, yes.

15 Q Do you agree you have the right to use aqueducts that
16 would bring water to the Mendota pool?

17 A There would probably be a need for a change in place
18 of use if that was to happen.

19 Q Do you have the capability of negotiating the use of a
20 facility to get water to the San Joaquin River?

21 A I'd have to look at that and see.

22 Q You have a right-of-way department?

23 A Yes.

24 Q You have potentials for funding?

25 A From what source?

1 Q Water contractor payments to the State Water Project.

2 Do you --

3 A I don't think I'd be able to use water contractor
4 money for that. It wouldn't be related to what project --
5 a water project related impact.

6 I might be able to get bond money or some
7 public -- some public money to help with something like
8 this. But I'm not sure I can use contractor money for
9 that.

10 Q Well, if you wanted to get it done subject to
11 financing --

12 A As a water management agency -- water management
13 planning agency, I think there are -- there are various
14 tools that would be available to us to improve water
15 quality in the San Joaquin River. And we've taken
16 those -- a lot of those actions in cooperation with a lot
17 of other land owners and interest groups along the San
18 Joaquin.

19 Q Okay. And let's focus in on those. What are those
20 examples?

21 A As a water management agency part?

22 We have a lot of flexibility as a water
23 management agency. We can -- we buy water for the
24 environmental water count. We are currently working with
25 people to reduce salinity loads along the San Joaquin

1 River system that Jose's exhibit talked about.

2 There are Lots of opportunities to do things
3 with -- if we get the financing from other sources to get
4 it done, yes.

5 Q So you would say DWR as a water management agency does
6 have methods to control water quality in the southern
7 Delta?

8 A As a water management agency, yes. That's the arm
9 that we're working on the permanent operable gates with,
10 yes.

11 Q Okay. And you've added in your testimony today a
12 condition that says it's limited methods as a water permit
13 holder?

14 A Yes.

15 Q Okay. Calling your attention to page 1 of DWR-18,
16 which is your testimony. Look at four lines up from the
17 bottom.

18 A Okay.

19 Q That testimony is incorrect, isn't it?

20 A No, I think our methods are limited. There's only so
21 much we can do with improving water quality, regardless
22 which hat we're wearing.

23 Q If you had -- as a water planning body, not as a
24 permittee, you had the task to meet the water quality
25 standards in the southern Delta, could you do it?

1 A We'd need the cooperation of a whole lot of other
2 parties to accomplish that.

3 Q And --

4 A And I think that's kind of where we'd like to go with
5 this.

6 Q And you're used to doing that, aren't you?

7 A Yeah, that's part of my job, yes.

8 Q Okay. So you have the capability of doing it?

9 A Yeah, if we could get the cooperation of all those
10 parties, yes.

11 Q Are you willing to do it?

12 A We're in the process of trying to do that now.

13 Q So you do have the methods, the tools --

14 A But it's still limited.

15 Q Pardon me?

16 A It's still limited. I think the testimony still
17 stands. We have just limited capability what we can do
18 without -- because we can do so much, but we have to get
19 the cooperation of other parties to make -- to do what
20 you're asking for.

21 Q Okay. If you were required as a permittee to meet the
22 water quality standards in the southern Delta you would
23 have to do those things that you've talked about, wouldn't
24 you?

25 A Once we went to court.

1 Q Oh, you wouldn't follow the Board decision until there
2 was a court order?

3 A We would probably object to that because we don't
4 think we have a mitigation obligation to do that.

5 Q Okay.

6 A But the Department would like to improve water quality
7 conditions in the South Delta wearing the water management
8 hat.

9 Q Yeah. Let's talk about your hats.

10 You've got one hat as a project operator,
11 permittee. You've got a hat as a planning agency.

12 Do you have a hat as a protector of the public
13 trust for the State of California, being a state public
14 agency?

15 A I think we have an obligation to help protect public
16 trust resources. But I'm not sure we're a public trust
17 agency. I think that's Fish and Game.

18 Q You agree that the State Board could impose a public
19 trust obligation on the State Water Project as a condition
20 of granting the water rights permit, do you not?

21 A Yes. Related to our project impacts, yes.

22 Q Unrelated to your project impact. A public trust
23 responsibility can be imposed -- or do you agree that a
24 public trust responsibility can be imposed on the State
25 Water Project as a condition of the State Board granting a

1 permit?

2 MS. CROTHERS: You know, I --

3 MR. RUBIN: Madam Chair --

4 CHAIRPERSON DODUC: Hold on. One at a time.

5 Let's hear from Ms. Crothers first.

6 MS. CROTHERS: I'm sorry. Mr. Nomellini, I think
7 you're really getting in to heavy legal issues.

8 CHAIRPERSON DODUC: Ms. Crothers, do you have an
9 objection for me?

10 MS. CROTHERS: Oh, yes. I'm sorry. I forgot.

11 Chairman Doduc, I think Mr. Nomellini's question
12 is a legal question. Mr. Johns knows a lot about water
13 rights, but he isn't an attorney. And I think the detail
14 he's requiring -- Mr. Nomellini's asking is really beyond
15 the scope of Mr. John's expertise.

16 CHAIRPERSON DODUC: Mr. Rubin.

17 MR. RUBIN: Madam Chair, I would object as well.

18 I understand that the rules in this
19 administrative proceeding are more liberal than the rules
20 that are before a court. But the notice for this hearing
21 specifically directed cross-examination of a rebuttal --
22 excuse me. I misstate. I do think that these questions
23 are outside of the scope of the testimony that's been
24 provided. And I think that the question that was just
25 asked is irrelevant.

1 CHAIRPERSON DODUC: I would disagree. Mr. Johns
2 opened the door with his two hats and his two functions of
3 DWR.

4 Perhaps Mr. Nomellini could rephrase the
5 question.

6 MR. NOMELLINI: I'd like to argue the objections,
7 if I may, because I think, as Mr. Schulz pointed out, the
8 scope of cross-examination --

9 CHAIRPERSON DODUC: Sir, I agreed with you --

10 MR. NOMELLINI: Okay.

11 CHAIRPERSON DODUC: -- that Mr. Johns opened the
12 door to your question --

13 MR. NOMELLINI: Thank you.

14 CHAIRPERSON DODUC: -- with his two hats.

15 MR. NOMELLINI: I won't argue myself out of a
16 favorable ruling. Maybe I misheard it.

17 (Laughter.)

18 MR. NOMELLINI: And I'm not asking you for a legal
19 conclusion. I know you're not a lawyer, but you have your
20 opinion as to whether or not the State Board can impose as
21 a condition on the State Water Resources -- I mean State
22 Water Project permits a condition to fulfill public trust
23 obligations regardless of whether the project caused the
24 need for that public trust responsibility.

25 CHAIRPERSON DODUC: Now I'm confused, because I

1 don't know what your question is.

2 MR. NOMELLINI: If he agrees that the Board has
3 the authority to impose a public trust responsibility as a
4 condition of a permit granted to the State Water Project
5 regardless of whether the State Water Project caused the
6 problem that's being addressed by the public trust
7 allocation.

8 MR. JOHNS: In my experience when I've dealt with
9 public trust issues before in Mono Lake and other places
10 working at the Board, all the ones I can think of that was
11 used was directly related to an impact caused by that
12 water right holder. And the public trust authority that
13 the Board has gave it the opportunity to put that permit
14 term in place. So they didn't have to have reserve
15 jurisdiction in the case of Mono Lake. They used the
16 public trust authority to do that.

17 But the ones I'm familiar with, they were all
18 directly related to the impacts caused by that water right
19 holder. And the public trust authority was used to
20 have -- to allow the Board to implement that standard.

21 Q Does the state -- I accept your answer that you're --

22 A Thank you.

23 Q Does the State Water Project do anything for the
24 Bureau of Reclamation that aggravates the salinity
25 degradation in the San Joaquin River?

1 A Does the Department do anything that aggregates? I
2 don't think so.

3 Q All right. Do you at any time use state facilities to
4 move water that will be delivered to the federal project
5 service areas on the west side of the valley?

6 A No, we don't -- we don't use those facilities. We
7 allow the Bureau to use our facilities --

8 Q You --

9 A -- under the Bureau's water right permits. But not
10 under the Department' water right permit.

11 Q All right. You allow them to use your facilities?

12 A We let -- the Board actually allows them to use our
13 facilities.

14 Q Does it require in any way the consent of State of
15 California acting through the Department of Water
16 Resources for the Bureau to utilize those facilities?

17 A Once the Board approves of joint point of diversion,
18 then the Bureau uses their permits to at times access our
19 facilities.

20 Q And the Bureau used State water Project facilities
21 without the consent of the State Water Project?

22 A John.

23 MR. LEAHIGH: No, they need our consent to use
24 our facilities.

25 MR. NOMEILLINI: Pardon me?

1 MR. LEAHIGH: They do need our consent to use our
2 facilities, yes.

3 MR. NOMEILLINI: Do you agree with that?

4 MR. JOHNS: Yes. If John said it, it's always
5 true.

6 Q Then you do contribute to the problems of the San
7 Joaquin River in terms of water quality to the extent that
8 water delivered to the west side of the San Joaquin Valley
9 service areas of the Bureau cause degradation of the
10 river?

11 MR. RUBIN: Madam Chair, I object. I think that
12 the question assumes facts that are not in evidence. It
13 also misstates -- potentially misstates the witness's
14 testimony.

15 CHAIRPERSON DODUC: I disagree. I think Mr.
16 Nomellini set up the stage quite nicely leading to that
17 question.

18 MR. RUBIN: Madam Chair, I don't believe anything
19 that the witness has testified related to the effect of
20 use of water on the west side of the San Joaquin to water
21 quality within the San Joaquin River.

22 CHAIRPERSON DODUC: Mr. Herrick.

23 MR. HERRICK: I'm sorry, Madam Chair. John
24 Herrick, South Delta Water.

25 I'll just briefly say that I believe D-1641's in

1 the record. And in that record the Board finds that the
2 operation of the CVP causes high drainage -- high salinity
3 drainage to go into the San Joaquin River. So it's not a
4 fact not in evidence. It's a fact in evidence.

5 CHAIRPERSON DODUC: Mr. Johns, please, answer the
6 question.

7 MR. JOHNS: Okay. One more time.

8 MR. NOMEILLINI: All right. Go back. We were
9 focusing in on your position that the public trust
10 responsibility allocated to the Department of Water
11 Resources on a permit should be related to an impact
12 caused by the project.

13 MR. JOHNS: By that permittee, yes.

14 Q By the permittee.

15 And we were pursuing actions by the Department
16 that could contribute to the problem of salinity
17 degradation in the San Joaquin River. And we went through
18 the process of whether or not DWR was required to consent
19 to let the Bureau use your facilities under joint points
20 to deliver water down there.

21 Do you recall that?

22 A Yes.

23 And I asked you whether or not you would agree
24 that by not refusing the consent -- and this is probably a
25 rephrasing of the question, but I can't remember the exact

1 way I gave it to you before. But by the Department of
2 Water Resources not refusing the consent to the Bureau, to
3 take water -- additional water down in to those service
4 areas on the west side of the valley, is that not
5 contributing to the degradation of the San Joaquin River?

6 A I don't know that. All I know is that when the Bureau
7 operates under its permits to use our facilities, that is
8 controlled by the Water Board. And if the Water Board has
9 a problem with the Bureau operating under its permits to
10 deliver water, they can address that under the Bureau's
11 permits.

12 Q Let's put a hypothetical in there. Let's say
13 hypothetically that water applied to the agricultural
14 areas on the west side of the San Joaquin River that drain
15 into the river add salts that cause a degradation in
16 quality in the river.

17 With that hypothetical, if the Department of
18 Water Resources granted its consent to the Bureau of
19 Reclamation to use the State Water Project facilities to
20 deliver water to that exact situation that I gave you in
21 the hypothetical, wouldn't you agree that there was a
22 cause and effect between the State Water Project operation
23 and the degradation?

24 A No, because the State Water Project's not operating
25 that. The Bureau's operating that using --

1 Q You gave your consent.

2 A We don't typically track what the Bureau does with the
3 water that they deliver under our permits -- I mean under
4 their permits. We make sure that they pay in for power,
5 and there are scheduling issues involved. But we do not
6 track where it goes. If the Board's concerned about that
7 in joint points of use, there's a process in place for the
8 Board to consider that. But that's a Bureau issue, not a
9 Department issue.

10 Q You just -- you wash your hands of it?

11 CHAIRPERSON DODUC: Enough. Please move on to
12 your next line of questioning.

13 MR. NOMELLINI: So you would take the position,
14 would you not, that you have no public trust
15 responsibility as the Department of Water Resources to see
16 that that degradation did not occur from your granting
17 of --

18 MR. JOHNS: What's the public trust resource -- I
19 don't see the public trust issue here

20 CHAIRPERSON DODUC: All right, gentlemen.

21 Mr. Nomellini, move on to your next line of
22 questioning.

23 MR. NOMELLINI: Now, is it your position that
24 the Department of Water Resources in operation of the
25 State Water Project does not have an obligation to provide

1 salinity control for the Sacramento/San Joaquin Delta?

2 MR. JOHNS: In the Delta as a whole?

3 Q Delta as a whole.

4 A As conditioned in our permits, we have obligations to
5 meet water quality standards in the Delta.

6 Q Regardless of whether or not you're mitigating a
7 condition caused by the State Water Project?

8 A No, I don't think that's true. The South Delta's very
9 unique. South Delta standards have that clause that talks
10 about to the extent it's under our control. And that to
11 me looks at mitigation responsibilities. So Board --
12 Okay.

13 Q Go ahead. Excuse me if I interrupted you.

14 A Well, I was just going to say that the Board has made
15 findings regarding mitigation responsibilities in the
16 western Delta for the Department and the Bureau to meet in
17 terms of ocean -- seawater intrusion. But in the South
18 Delta, that issue as I recall has never really been
19 factually determined by the Board.

20 Q So it's your position that salinity control in the
21 Delta is restricted to ocean salinity and not to salinity
22 introduced by way of the San Joaquin River?

23 A Say it one more time.

24 Q Is it your position for the Department of Water
25 Resources that the obligation for salinity control imposed

1 by the Delta Protection Act is limited to ocean salinity
2 intrusion and does not apply to salinity from the San
3 Joaquin River?

4 A I think we should do what we can do in terms of -- on
5 the San Joaquin side -- on the Sacramento side, I agree,
6 we should -- we work with the Bureau to meet those
7 standards because of ocean salinity issues involved. On
8 the San Joaquin side it becomes much more difficult
9 because we're not contributing to that water quality
10 problem.

11 Q All right. During the time of D-1641, you were
12 employed by the State Water Resources Control Board, were
13 you not?

14 A Correct.

15 Q And in your role for the State Water Resources Control
16 Board you played a part in the very subject that we're
17 dealing with here where you --

18 A Not directly. At the time I was supervising the part
19 of the Division of Water Rights that did not include the
20 Bay Delta section.

21 Q Are you familiar with the term "backstopping"?

22 A Baseball or --

23 Q Water.

24 A You'd have to give it to me in context.

25 Q All right. In D-1641 on page 19 -- I'm going to hand

1 this to you, so -- well, maybe you've got one there --
2 there's a footnote 26. Why don't I give you a chance to
3 read that first.

4 MR. MINASIAN: Madam Chair, could we have it read
5 allowed? Some of us don't carry this with us everyday as
6 the Bible.

7 (Laughter.)

8 MR. JOHNS: I'm disappointed.

9 CHAIRPERSON DODUC: Mr. Nomellini, would you
10 please help us out by reading it.

11 MR. NOME LLINI: I would be very happy to read it
12 for Mr. Minasian's benefit.

13 CHAIRPERSON DODUC: Whom I thought would have it
14 memorized by now.

15 (Laughter.)

16 MR. NOME LLINI: All right. I'll read it for the
17 benefit of the group.

18 Footnote 26 says: "The DWR and the USBR have
19 committed themselves to provide backup during the term of
20 the SJRA" -- San Joaquin River Agreement, I think -- "for
21 any responsibility that otherwise would be placed on the
22 San Joaquin Basin water right holders as a result of an
23 allocation of responsibility in the Bay Delta water rights
24 hearing." And there's a citation to the record.

25 "By doing this the DWR and the USBR have made it

1 possible for the State Water Resources Control Board to
2 approve San Joaquin River Agreement without needing to
3 look to the non-signing water right holders in the San
4 Joaquin Basin for the water that would not be provided
5 under the San Joaquin River Agreement to meet objectives
6 other than the post flow objectives from April 15th
7 through May 15th."

8 MR. JOHNS: My recollection is this related to
9 Delta outflow issues.

10 Let's go back and see what the footnote --

11 Q Let's step back a minute.

12 You agree that D-1641 imposed on the State Water
13 Project permits a condition that water quality be met at
14 Brandt Bridge, do you not?

15 A D-1641 set a water quality --

16 Q Brandt Bridge, you understand --

17 A Yeah, yeah, okay.

18 Q -- that that's an obligation for the State Water
19 Project under D-1641 to meet the water quality standard?

20 A It's an obligation for us to meet it to the extent
21 that we have control I think, yes.

22 Q You've added your -- but I mean you agree there's an
23 obligation?

24 A It's in our water right permit. The water right
25 permit speaks for itself.

1 Q All right. Brandt Bridge is included --

2 A Yes.

3 Q -- to whatever extent.

4 The other two interior Delta stations are also
5 included?

6 A Yes.

7 Q But Vernalis is not as an obligation of the State
8 Water Project except perhaps as to an interpretation of a
9 backup responsibility?

10 A That wouldn't be the way I would interpret this
11 provision. This provision I think is solely related to
12 Delta outflow issues that could have been imposed upon the
13 San Joaquin River Group. And the Department and Bureau
14 said they would meet the Delta outflow requirements that
15 it would otherwise be. But I think that's what this is
16 referring to.

17 Q All right. Is it your testimony that Department of
18 Water Resources did not agree to backstop the Bureau of
19 Reclamation in meeting water quality requirements at
20 Vernalis?

21 A That's correct. We -- I don't think we agreed to that
22 at all.

23 Q Now, when you say "we" --

24 A -- we, the Department.

25 Q Okay. Does the Department of Water Resources -- going

1 back a minute. We talked about the joint point of
2 diversion and the Bureau utilizing the state facilities.

3 Are there other actions that utilize the State
4 water project facilities to move water into the federal
5 service areas on the west side of the San Joaquin Valley
6 other than the joint points of diversion?

7 A I can't think of any offhand.

8 Q How about water transfers? Are there any water
9 transfers that take place that utilize State Water Project
10 facilities that result in more water going to the west
11 side of the San Joaquin Valley?

12 A Lately -- you know, I don't know --

13 Q I didn't put "lately" in my question.

14 A Okay. I hear that.

15 I tell you, I can't recall. I think -- some of
16 the transfers that occurred during dry years were actually
17 pumped at the federal facilities that went to Westlands,
18 for example. I just don't know.

19 Q All right. Is it required -- is the consent of the
20 State Water Project or DWR required for transfers to
21 utilize the State Water Project facilities?

22 A Yes.

23 Q Now, there's testimony -- and I think it was yours --
24 that you've had tremendous success in improving water
25 quality in the San Joaquin River -- DWR improving water

1 quality in San Joaquin River. And I presume through your
2 other hat?

3 A Yes.

4 Q The planning hat.

5 And that includes funding drainage projects of
6 some type?

7 A Yes.

8 Q Is that the only way that you've been -- Department of
9 Water Resources has been involved in improving the
10 quality --

11 A I might ask Jose to come up and answer that.

12 Jose, are you still here?

13 Jose Faria is an employee in our San Joaquin
14 River District and is very actively involved in our San
15 Joaquin River Drainage Program.

16 MS. CROTHERS: Excuse me one minute.

17 I would like to ask Chairman Doduc to -- I'm not
18 sure if Jose was hear when the swearing in -- were you
19 sworn in, Jose, by the Chairman?

20 MR. FARIA: Yes.

21 MS. CROTHERS: Okay. Thank you.

22 MR. FARIA: Would you repeat the question,
23 please.

24 CHAIRPERSON DODUC: Would you actually identify
25 yourself for the court reporter.

1 MR. FARIA: Jose Faria. I'm the agricultural
2 drainage coordinator for DWR. Supervising engineer.

3 MR. NOMELLINI: Are you aware of actions taken by
4 the Department of Water Resources to help improve the
5 water quality in the San Joaquin River?

6 MR. FARIA: Yes.

7 MR. NOMELLINI: Could you tell me what those are.

8 MR. FARIA: For example, I can mention the parts
9 of the grasslands bypass project that has resulted in
10 significant improvements. In particular, what is called
11 the San Joaquin Water Quality Improvement Project, which
12 involved the purchase of about 4,000 acres of land within
13 the -- near the water district area. And this -- it was
14 funded by Prop 13, which the Department manages the
15 grants, \$17 1/2 million. And the grasslands area,
16 specifically Panocha, is using this area to apply their
17 subsurface drainage water to minimize their discharges
18 into the San Joaquin River. And I show in my exhibit the
19 reductions that have been achieved as this project -- this
20 project is developed.

21 MR. NOMELLINI: Is there more that can be done?

22 MR. FARIA: There is more that can be done. But
23 it takes a significant amount of money. As I mentioned,
24 this project alone cost \$17 1/2 million. And they
25 constantly -- they need more money to improve the area by

1 putting more tile drains. And it requires a substantial
2 investment of funds, yes. And also controlling the --
3 reducing the amount of irrigation that is applied on all
4 of the farmers that require -- they're using grants to
5 switch to sprinkler systems to be more efficient, and so
6 on.

7 MR. NOMELLINI: I think somebody testified that
8 DWR's participation in a group, San Joaquin River Group,
9 that's kind of led by -- I want to say Tim O'Laughlin.
10 Whoever can respond to that --

11 MR. JOHNS: Yeah, I think that -- I think I
12 mentioned --

13 MR. NOMELLINI: Was that you, Jerry?

14 MR. JOHNS: Yes.

15 Q All right. And that was a reference as a positive
16 step to improve the water quality in the San Joaquin; is
17 that correct?

18 A They're working -- Jose can probably give more details
19 on this. But they're working on the other things that can
20 be done to help improve water quality on the San Joaquin
21 River system.

22 Q And isn't it true that that group -- and somebody
23 asked the question here -- that that group asked that the
24 TMDL for salinity and boron on the San Joaquin River be
25 deferred?

1 CHAIRPERSON DODUC: Mr. Nomellini, let's stick
2 with the subject at hand here.

3 What is the point of your line of questioning?

4 MR. NOMELLINI: Well, I want to show through
5 cross-examination that that function is not a positive
6 thing with regard to improving water quality in the river,
7 or they wouldn't have asked that the TMDL be postponed --

8 MR. JOHNS: Dan, I don't think you can assume
9 that. I think part of their problem is that they feel
10 that they're taking actions without the cloud of
11 regulatory control to improve the conditions on the San
12 Joaquin. And the TMDL simply is inappropriate because
13 they can make this better -- cooperatively better than the
14 Board can force it through regulatory means. That's I
15 think their objective.

16 MR. GODWIN: For the record, can Mr. Nomellini
17 distinguish between the San Joaquin River Group Authority
18 and the group that Mr. Johns was talking about, the San
19 Joaquin River Water Quality Management Improvement
20 Program.

21 MR. NOMELLINI: He can if you give me the name of
22 the group.

23 CHAIRPERSON DODUC: Gentlemen.

24 Mr. Nomellini --

25 MR. NOMELLINI: I will do that.

1 CHAIRPERSON DODUC: -- Mr. Johns has already
2 attempted to answer your question. So please move on to
3 your next line of questioning.

4 MR. NOMELLINI: I apologize for not knowing the
5 name of the group.

6 CHAIRPERSON DODUC: Your apologize is accepted.

7 MR. NOMELLINI: It would be clearer if I knew.

8 Now, Mr. Johns, in your testimony, are -- is the
9 Department of Water Resources advocating that the water
10 quality standards on the San Joaquin River be relaxed

11 MR. JOHNS: In this proceeding --

12 CHAIRPERSON DODUC: Let's be very careful there.

13 MR. JOHNS: Yeah, this is going to be tough to
14 do.

15 What we're asking in this proceeding is that we
16 don't see harm in continuing the water quality standards
17 that have existed for the last five years.

18 Q All right. Would you agree that reducing flow in the
19 San Joaquin River could have an adverse impact on fish?

20 A The best data on fish indicates that high flows are
21 what's driving, say, salmon populations. And reduction of
22 really high flows I think have been shown it could have an
23 impact. Moderate flows, I think the data's still out on
24 that.

25 Q All right. What About low flows in terms of impact on

1 dissolved oxygen in the ship channel?

2 A I'm not sure I can testify to that very intelligently.

3 Q No impact on fish?

4 A Well, I think one of the things we try to do with the
5 barrier program is to help improve flows down the San
6 Joaquin River to help with the dissolved oxygen. We've
7 been doing that since the mid-sixties or so or '68 or
8 something like that.

9 So we see that we can -- there are things that we
10 can do as a department particularly -- this is now the
11 water management part -- to help improve water quality at
12 Stockton for DO. And we've been doing that.

13 Q If the water quality at Brandt Bridge exceeds .7, is
14 that beneficial or detrimental to the State Water Project?

15 A I'm not sure.

16 Q Does the quality of water of the San Joaquin River
17 have any impact on the quality of the water exported by
18 the State Water Project?

19 A At some times of the year that can happen. In the
20 summertime, as Tara shows, most of the water quality gets
21 taken.

22 Q We're going to talk to Tara about --

23 A Yeah, Okay.

24 By the Bureau's operations. So It would depend I
25 think on the hydraulics and Tara's fingerprinting stuff.

1 Q Well, is it your testimony that it does have an
2 adverse impact on the water quality that's exported by the
3 State Water Project during a portion of the year?

4 A I think I'd rather have Tara respond to that.

5 MR. NOMELLINI: Tara.

6 MS. SMITH: Could you repeat the question.

7 MR. NOMELLINI: If the water quality in the San
8 Joaquin River at Brandt Bridge exceeds .7, is that
9 beneficial or detrimental to the State Water Project?

10 MS. SMITH: Because, you know, moving around to
11 the State Water Project there's also the water quality
12 standard at Rock Slough, and there may be additional
13 releases that would help that. So it's kind of hard to
14 say if it would be detrimental or beneficial.

15 Did that make sense?

16 MR. NOMELLINI: Yeah. Would you agree that there
17 are times when a degradation of water quality in the San
18 Joaquin River results in a degradation of water quality of
19 the water exported by the State Water Project.

20 MS. SMITH: There is a potential for that.

21 MR. NOMELLINI: And in fact you're -- maybe we
22 can switch over to you just for a minute here.

23 MS. SMITH: Okay.

24 MR. NOMELLINI: Your exhibits -- in terms of
25 fingerprinting you show that water quality in Middle River

1 at Union Point is to a great extent reflecting the
2 fingerprint of the San Joaquin River, is that --

3 MS. SMITH: Yes.

4 Q -- is that correct?

5 A Um-hmm.

6 Q Do you know what figure that is, just off the top of
7 your --

8 A It looks like figure 4; is that correct?

9 Q Figure 4?

10 I was thinking of the one that had kind of a big
11 black --

12 A Oh, that was Clifton Court Forebay.

13 Q Oh, okay. Let's go to that one.

14 A Okay.

15 Q It looks like a black cloud.

16 A That would be figure 6.

17 Q Okay. Figure 6.

18 Doesn't that show that a lot of the water at
19 Clifton Court Forebay is San Joaquin River water during
20 some parts of the year?

21 A Yes, it does.

22 Q So a degradation in the quality of the San Joaquin
23 River would degrade at least this portion of the water at
24 the export pumps, would it not?

25 A You know, it's interesting, after Mr. Zuckerman had

1 showed that, we went back and did analysis of
2 fingerprinting in San Joaquin EC. And when you get these
3 higher -- these larger dark places here is when the
4 quality is much better on the San Joaquin River. And so
5 when you're having the smaller amount of the San Joaquin
6 flow, that's when the quality is a little worse. But when
7 you're having that higher one, the quality's actually
8 better.

9 Q Okay. Being specific then with regard to the Brandt
10 Bridge requirement of .7. If that exceeded, in other a
11 worse water quality, will that result in worse quality at
12 the State Water Project export pumps at any time?

13 A Well, it depends, because the State Water Project
14 pumps there may be actions taken for the Sacramento in
15 order to meet the Rock Slough standard, and in which case
16 it wouldn't degrade. And then -- but if it was meeting
17 the standards, there might be the potential of it. You
18 know, it just really depends on the situation.

19 Q So there is a possibility?

20 A Yeah.

21 Q All right. In terms of percentage of the time, do you
22 have any opinion as to how much time?

23 A No.

24 Q So it depends on the circumstances?

25 A Yes.

1 Q Are there any circumstances where the State Water
2 Project is bettered by having poor quality water in the
3 San Joaquin River?

4 A I really can't think of anything right now.

5 MR. NOMELLINI: Anybody on the panel think of
6 that circumstance?

7 MR. JOHNS: I can't think of one no. Does
8 anybody else?

9 MR. NOMELLINI: All right. Staying with you,
10 Tara, if I could.

11 Q Your figure 17 shows a comparison of no State Water
12 Project pumping versus historical simulation?

13 A Yes.

14 Q What kind of -- what were the pumping rates that you
15 were using in the historical simulation?

16 A That's shown on page 27 -- or, I'm sorry -- figure 16.

17 Q Okay. So do the pumping rates go up to that 6680? I
18 guess they do, huh?

19 A It's almost 8,000.

20 Q Okay. And this figure 16 shows the pumping rates for
21 the SWP and CVP?

22 A That's correct.

23 Q All right. And your comparison in figure 17 is only
24 with regard to historical versus SWP no pumping?

25 A That's correct.

1 Q Is there any reason why you didn't test what would
2 happen with no pumping by SWP or CVP?

3 A We were -- I was just looking at the effects of what
4 would happen with SWP.

5 Q You show in figure 17 for Old River at Tracy Road
6 Bridge a line that follows fairly closely I guess the
7 historical. Is that what that shows?

8 A Yes.

9 Q Are there times when the no State Water Project
10 pumping in this simulation results in better water quality
11 at Brandt Bridge?

12 A Well, for this particular simulation we only
13 concentrated on that period.

14 Q Are there times though when no State Water Project
15 pumping improves water quality at Brandt Bridge?

16 A I believe I showed that in the -- at Brandt Bridge,
17 no. I'm sorry.

18 Q How about under the circumstance that you noted in
19 your conclusions with regard to when reverse flows were
20 being created?

21 A Well, for these two we only concentrated on those two
22 years. We -- I mean later on we ran some, and I can look
23 that up. But for this testimony we only did these years.

24 Q Okay. In the situation where the head of Old River
25 barrier is not in place and pumping of the water by the

1 water project is creating a reverse flow in the San
2 Joaquin River, is it possible under that circumstance to
3 degrade water quality at Brandt Bridge by reason of the
4 pumping?

5 A Well, I think it probably -- because when you're
6 getting reverse flow, you're getting a combination of the
7 San Joaquin and Sacramento water. And the San Joaquin
8 River would also have to be low. I mean, you know, you're
9 talking about the exports and everything. But the San
10 Joaquin would also have to be low. And it would be
11 dependent on the quality in the San Joaquin also on what
12 the quality would be there. That would be my thought.

13 Q So the answer's yes --

14 A I guess.

15 Q -- under that limited circumstance?

16 A Yeah.

17 MR. JOHNS: I might also add, we can I think at
18 times improve water quality at Brandt Bridge if we pump
19 really, really hard.

20 MR. NOMEILLINI: Well, if you pump very hard, this
21 is showing the State Water Project of course can control
22 salinity in the South Delta even at Brandt Bridge if
23 you --

24 MR. JOHNS: Well, the problem is --

25 MR. NOMEILLINI: -- had the right circumstance

1 where you would pump very hard and bring Sacramento River
2 water up through there in sufficient quantity, is --

3 MR. JOHNS: You sort -- in the nineties you see
4 that. And one of the reasons you don't see that anymore
5 is the fish agencies have concerns when we pump really,
6 really hard. So we might not be able to do that much very
7 effectively anymore.

8 MR. NOMELLINI: But you have the physical
9 capability of doing it?

10 MR. JOHNS: Not if we're going to operate as we
11 do with the cooperation of the fishery agencies.

12 MR. NOMELLINI: All right. Let me just check my
13 notes in terms of any other questions that I want to hit.

14 Tara, you outlined factors affecting water
15 quality in the San Joaquin River that you analyzed.

16 MS. SMITH: Um-hmm.

17 Q Is there any reason why you didn't look at how much
18 assimilative capacity of the river has been taken away by
19 diversions by the Bureau at Friant?

20 A Yeah, It was just beyond what I looked at.

21 Q You just --

22 A I just didn't --

23 Q -- didn't list that as a factor.

24 Well, you would agree that is a factor to be
25 considered with regard to salinity in the San Joaquin

1 River?

2 A Yeah, I just -- I limited it to the Delta. That's
3 what I limited my testimony to.

4 MR. JOHNS: It might be a more appropriate
5 question for the Bureau if they were here. But --

6 MR. NOMESELLINI: If they would testify, we'd ask
7 them the question.

8 And I guess the answer would be similar with
9 regard to the impact of deliveries to the west side of the
10 San Joaquin Valley without a drain?

11 MS. SMITH: Um-hmm.

12 MR. NOMESELLINI: You just -- those were factors
13 not within the scope of your concern?

14 MS. SMITH: -- this particular study, that's
15 correct.

16 MR. NOMESELLINI: Okay. That's all I have. Thank
17 you very much.

18 CHAIRPERSON DODUC: Thank you.

19 I think at this time we're all tired. And if Mr.
20 Herrick wouldn't mind coming back tomorrow, we will
21 adjourn and reconvene at 9 o'clock tomorrow across the
22 hall in the Byron Sher Auditorium.

23 I see lots of people standing up.

24 Mr. Schulz.

25 MR. SCHULZ: I spoke to you at the break about

1 the fact that I have to be in Stockton tomorrow morning.
2 I'm sort of -- I can just guaranty I'll be back after the
3 lunch break. And I'm assuming the DWR will still be on
4 the stand at that point. But I hope so, because I really
5 would like a chance to cross them. But I can't miss
6 tomorrow morning in Stockton.

7 CHAIRPERSON DODUC: All right. Mr. Schulz in the
8 afternoon.

9 MR. RUBIN: The schedule for Monday, are we going
10 to begin at 9 o'clock on Monday? Is that the intent?

11 CHAIRPERSON DODUC: Let's see how far we get done
12 tomorrow. We may need to begin at -- I don't know -- 5
13 a.m. on Monday if necessary.

14 (Laughter.)

15 CHAIRPERSON DODUC: Anything else?

16 Thank you, everyone. See you tomorrow.

17 (Thereupon the State Water Resources
18 Control Board Delta Salinity hearing
19 recessed at 5:30 p.m.)

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1 CERTIFICATE OF REPORTER

2 I, JAMES F. PETERS, a Certified Shorthand
3 Reporter of the State of California, and Registered
4 Professional Reporter, do hereby certify:

5 That I am a disinterested person herein; that the
6 foregoing California State Water Resources Control Board,
7 Division of Water Rights public hearing was reported in
8 shorthand by me, James F. Peters, a Certified Shorthand
9 Reporter of the State of California, and thereafter
10 transcribed into typewriting.

11 I further certify that I am not of counsel or
12 attorney for any of the parties to said hearing nor in any
13 way interested in the outcome of said hearing.

14 IN WITNESS WHEREOF, I have hereunto set my hand
15 this 2nd day of December, 2005.

16

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22

23 JAMES F. PETERS, CSR, RPR

24 Certified Shorthand Reporter

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