

STATE WATER RESOURCES CONTROL BOARD

PUBLIC HEARING ON AMENDED JOINT PETITION OF THE
IMPERIAL IRRIGATION DISTRICT AND THE SAN DIEGO COUNTY WATER
AUTHORITY FOR APPROVAL OF A LONG-TERM TRANSFER OF CONSERVED
WATER PURSUANT TO AN AGREEMENT BETWEEN IID AND SDCWA, AND
APPROVAL OF CHANGES IN POINT OF DIVERSION, PLACE OF USE AND
PURPOSE OF USE UNDER PERMIT NO. 7643 (APPLICATION 7482).

TUESDAY, APRIL 23, 2002
10:00 A.M.

CAL EPA BUILDING
SIERRA HEARING ROOM
SACRAMENTO, CALIFORNIA

REPORTED BY:

ESTHER F. SCHWARTZ
CSR 1564

CAPITOL REPORTERS (916) 923-5447

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

APPEARANCES

STATE WATER RESOURCES CONTROL BOARD:

ARTHUR G. BAGGETT, JR., CHAIR

STAFF:

TOM PELTIER
ANDREW FECKO

COUNSEL:

DANA DIFFERDING

---oOo---

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

REPRESENTATIVES

FOR IMPERIAL IRRIGATION DISTRICT:

ALLEN MATKINS LECK GAMBLE & MALLORY
501 West Broadway, 9th Floor
San Diego, California 92101-3577
BY: DAVID L. OSIAS, ESQ.
and
MARK HATTAM, ESQ.

FOR SAN DIEGO COUNTY WATER AUTHORITY:

HATCH AND PARENT
21 East Carillo Street
Santa Barbara, California 93102-0720
BY: SCOTT SLATER, ESQ.
and
STEPHANIE HASTINGS, ESQ.

FOR COACHELLA VALLEY WATER DISTRICT:

BOLD, POLISNER, MADDOW, NELSON & JUDSON
500 Ygnacio Valley Road, Suite 325
Walnut Creek, California 94596
BY: ROBERT MADDOW, ESQ. - SPECIAL COUNSEL

REDWINE AND SHERRILL
1950 Market Street
Riverside, California 92501
BY: GERALD SHOAF, ESQ.
and
STEVEN B. ABBOTT, ESQ.

FOR METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA:

ELLISON, SCHNEIDER & HARRIS
2015 H Street
Sacramento, California 95814-3109
BY: ANNE SCHNEIDER, ESQ.
and
ROBERT E. DONLAN, ESQ.

FOR WILLIAM DU BOIS:

WILLIAM DU BOIS
3939 Walnut Avenue, #144
Carmichael, California 95608

1 REPRESENTATIVES (CONT.)

2 FOR CALIFORNIA FARM BUREAU FEDERATION:

3 HENRY E. RODEGERDTS, ESQ.
4 2300 River Plaza Drive
5 Sacramento, California 95833

6 FOR LARRY GILBERT:

7 LARRY GILBERT
8 945 East Worthington Road
9 Imperial, California 92251

10 FOR COUNTY OF IMPERIAL:

11 ANTONIO ROSSMANN, ESQ.
12 380 Hayes Street
13 San Francisco, California 94102

14 FOR DEFENDERS OF WILDLIFE:

15 BRENDAN FLETCHER
16 926 J Street, Suite 522
17 Sacramento, California 95814
18 and
19 KIMBERLEY W. DELFINO

20 FOR COLORADO RIVER INDIAN TRIBES:

21 OFFICE OF THE ATTORNEY GENERAL
22 ROUTE 1, Box 23-B
23 Parker, Arizona 85344
24 BY: ERIC SHEPARD, ESQ.
25 and
LOLA RAINEY, ESQ.

FOR SALTON SEA AUTHORITY:

TOM KIRK
78-401 Highway 111, Suite T
La Quinta, California 92253

FOR NATIONAL WILDLIFE FEDERATION:

KEVIN DOYLE
3500 Fifth Avenue, Suite 101
San Diego, California 92103

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

REPRESENTATIVES (CONT.)

FOR NATIONAL AUDUBON SOCIETY - CALIFORNIA:

LAW OFFICES OF WILLIAM YATES
8002 California Avenue
Fair Oaks, California 95628
BY: WILLIAM YATES, ESQ.
and
KEITH G. WAGNER, ESQ.

FOR PLANNING AND CONSERVATION LEAGUE:

KAREN DOUGLAS
926 J Street, Suite 612
Sacramento, California 95814

----oOo----

1	INDEX	
2		PAGE
3	RESUMPTION OF HEARING:	66
4	AFTERNOON SESSION:	132
5	POLICY STATEMENTS	
6	JEFFREY KIGHTLINGER	71
7	GERALD SHOAF	74
8	IMPERIAL IRRIGATION DISTRICT:	
9	OPENING STATEMENT:	
10	BY MR. OSIAS	85
11	JESSE SILVA:	
12	DIRECT EXAMINATION	
13	BY MR. OSIAS	167
14	WOLDEZION MESGHINNA:	
15	DIRECT EXAMINATION	
16	BY MR. OSIAS	187
17	CROSS-EXAMINATION OF PANEL OF TWO:	
18	BY MR. SLATER	213
19	BY MR. SHEPARD	215
20	BY MR. FLETCHER	217
21	BY MR. ROSSMANN	226
22	BY MR. DU BOIS	229
23	BY MR. GILBERT	235
24	BY THE BOARD	245
25	BY STAFF	259
	REDIRECT EXAMINATION:	
	BY MR. OSIAS	260
	SAN DIEGO COUNTY WATER AUTHORITY:	
	OPENING STATEMENT:	
	BY MR. SLATER	97

1	INDEX	
2		PAGE
3	STEVE MACAULAY:	
	DIRECT EXAMINATION	
4	BY MR. SLATER	107
	DENNIS UNDERWOOD:	
5	DIRECT EXAMINATION	
	BY MR. SLATER	118
6	TOM LEVY:	
	DIRECT EXAMINATION	
7	BY MR. SLATER	134
	CROSS-EXAMINATION OF ABOVE PANEL OF FOUR:	
8	BY MR. OSIAS	144
	BY MR. ROSSMANN	145
9	BY MR. FLETCHER	157
	BY THE BOARD	161

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

---oOo---

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

SACRAMENTO, CALIFORNIA

TUESDAY, APRIL 23, 2002, 10:00 A.M.

---oOo---

CHAIRMAN BAGGETT: Good morning. This is the time and place for Phase I of the hearing regarding the petition of Imperial Irrigation District and San Diego County Water Authority for a long-term transfer of conserved water. The petition seeks approval of changes in the authorized place of use, point of diversion and purpose of use of water diverted from the Colorado River under Permit No. 7643. If the petition is approved, IID would be authorized to transfer 200,000 acre-feet to San Diego County Water Authority and 100,000 acre-feet per year to Coachella Valley Water District and Metropolitan Water District of Southern California.

I'm Art Baggett, Chairman of the State Water Resources Board. To my right is Board Member Richard Katz. And we are assisted by Staff Counsel Dana Differding, Andy Fecko, Environmental Scientist, and Tom Peltier, Senior Engineering Geologist in this hearing.

This hearing is being held in accordance with the Notice of Hearing dated February 2nd, 2002, and my subsequent letters ruling on procedural matters.

This hearing will be conducted in two phases. We will complete Phase I of the hearing before commencing Phase II.

1 Phase II will begin on April 30th at the earliest. The
2 purpose of Phase I of this hearing is to receive evidence on
3 the following key issues:

4 Is the amount of water that is proposed to be
5 transferred water that will be conserved in accordance with
6 Water Code Section 1011?

7 Second, would the proposed transfer result in
8 substantial injury to any legal user of water?

9 Third, should the State Water Board make any
10 traditional findings or reach any additional conclusions, as
11 requested by the petitioners? The findings and conclusions
12 that the petitioners have requested the State Water
13 Resources Control Board to make are set forth in full in the
14 revised hearing notice. In summary, the proposed findings
15 and conclusions are:

16 A, with the exception of any findings regarding
17 standing, the Board's order will not be precedential.

18 B, any Board concerns regarding IID's reasonable and
19 beneficial water use are satisfied.

20 C, absent substantial change in IID's irrigation
21 practices or technological advances, the Board does not
22 anticipate the need to reassess the reasonable and
23 beneficial use of water by IID before the year 2024.

24 D, pursuant to Water Code Section 1011, 1012 and 1013,
25 IID's water rights will be unaffected by the transfer.

1 E, the amount of water conserved and transferred will
2 retain the same priority as if it were diverted and used by
3 IID.

4 Next, the transfer is in furtherance of earlier Board
5 decisions regarding IID's reasonable and beneficial use of
6 water.

7 Finally, that IID shall submit an annual report on the
8 conservation of water pursuant to its petition. The report
9 will satisfy the reporting obligations under Decision 1600
10 and Water Right Order 88-20. The amount of water conserved
11 and transferred will be verified by reporting that IID's
12 diversions at Imperial Dam, less return flows, have been
13 reduced below 3.1 million acre-feet by an amount equal to
14 the amount of water transferred and by reporting the amount
15 of reduced deliveries to participating farmers in the amount
16 of conserved water created by projects developed by IID.

17 The purpose of Phase II of this hearing will be to
18 receive evidence on the issue whether the petitioned changes
19 would unreasonably affect fish, wildlife or other instream
20 beneficial uses of water.

21 A court reporter is present to prepare the transcript
22 of the proceeding. And Esther would appreciate it if you
23 could state your name clearly when you first appear. Anyone
24 who would like a copy of the transcript must make separate
25 arrangements with the Court Reporter. If you could speak

1 clearly at all times, that would assist the Court Reporter,
2 and use the microphone.

3 At this time I will ask Dana Differding to introduce
4 the staff exhibits.

5 MS. DIFFERDING: The staff exhibits that we are
6 offering into evidence by reference are listed in the
7 revised hearing notice, and unless anyone would like me to
8 read them, I won't list them now.

9 CHAIRMAN BAGGETT: Is there any objection?

10 If there is no objection, they will be entered into the
11 record for evidence.

12 I think before we go with the policy statements in
13 order of the proceeding, a couple comments I would like to
14 make to digress from the script here. I think as we stated
15 yesterday when we flew down to Holtville and had some policy
16 statements, and I guess informally begin this long
17 proceeding, and I think it was evidenced in a wide range of
18 environmental, economic and policy issues raised by this
19 transfer probably unprecedented in terms of complexity and
20 significance of an issue this Board has taken up in the
21 past.

22 It is going to be a hearing that is going to last, we
23 anticipate, at least 20 days. We have other days reserved.
24 The goal is to get this done by June 10th, and I will do
25 whatever it takes to get it done by June 10th, if that means

1 eight to eight hearing days, we will do eight to eight
2 hearing days and add days to the hearing. We realize there
3 is timeliness to make a decision and that is what we are
4 going to need to make the decision in accordance with time
5 frames.

6 We are all going to be working -- as I think any of you
7 have been involved in long proceedings before this Board
8 realize you all get to know each other pretty well after a
9 while, and I just hope that as prior hearings that I have
10 been involved with that we can keep that congenial
11 atmosphere and try to respect each other's opinions and
12 comments and also brevity. If you stated -- I can't over
13 emphasize, if it is in the record, we've got four boxes now
14 of evidence. There is no use to read the testimony.
15 Summarize it and get on to cross-examination and recross,
16 redirect so we can get down to the issues and try to get the
17 information we all need to make a good decision.

18 With that, before we begin the evidentiary presentation
19 we will hear policy statements in addition to the ones we
20 heard yesterday from anybody who was unable to attend the
21 Holtville session. I think we've got two cards.

22 Is there anyone else?

23 I have two blue cards for policy statements. We did
24 receive a policy statement by fax, at least one. The
25 Director of Fish and Game, I understand, faxed a policy

1 statement in this morning, which I haven't had an
2 opportunity to see myself. Literally just arrived as we
3 were starting. We will make copies of that available also.
4 The Board will also accept written policy statements as
5 indicated. If you have any written policy statement, maybe
6 you could please give them to staff. We will make sure they
7 are posted on the website along with all the other
8 information on this hearing.

9 As the hearing progresses we will try to keep the
10 website updated so that you can read various exhibits and
11 letters which are coming in. Policy statements are not
12 evidence, but they will be part of the administrative record
13 and will be considered by the Board in making its decision.
14 The policy statements are subject to the limitations listed
15 in the hearing notice. Persons making policy statements
16 should not attempt to present factual evidence either orally
17 or by introducing written exhibits. We have asked for a
18 ten-minute limit on policy statements.

19 With that I have two cards.

20 Jeff Kightlinger.

21 MR. KIGHTLINGER: Good morning, Mr. Chairman, Mr.
22 Katz. I am general counsel. My name is Jeff Kightlinger,
23 General Counsel for the Metropolitan Water District of
24 Southern California. We have submitted a written policy
25 statement. I have given copies to your staff, and I have

1 also put approximately 50 copies in the back of the room.
2 We can also submit that electronically so you can post that
3 on your website.

4 CHAIRMAN BAGGETT: That would be appreciated. Any
5 electronics would help.

6 MR. KIGHTLINGER: Metropolitan is only submitting a
7 policy statement for reasons that you are aware of, I am
8 sure. We basically have a fundamental disagreement between
9 Imperial Irrigation District and the San Diego County Water
10 Authority, the petitioners, on the fundamental role and
11 jurisdiction over the State Water Board over the federal
12 water rights that comprise the Colorado River and the use
13 and distribution of the Colorado River water.

14 However, we have submitted and completed a protest
15 dismissal agreement with the parties and the petitioners to
16 dismiss our protest. The reasons why we feel comfortable in
17 dismissing our protest to help move this program forward as
18 our basic Colorado River policy. It is essential that
19 California reduce its water supply and its overreliance on
20 Colorado River water. To do so California has prepared the
21 Colorado River Water Use Plan. We are a major supporter of
22 that and a proponent of completing that plan, to bring down
23 California's use of Colorado River water.

24 Part of that policy is completed and contained in the
25 Quantification Settlement Agreement that the major parties,

1 the Colorado River water use agencies, have completed.
2 That is IID, Coachella and Metropolitan. As part of that,
3 we are moving forward with our Interim Surplus Guidelines.
4 These guidelines allow the parties -- these guidelines allow
5 the federal agencies to provide more liberal surplus water
6 to California over the next 15 years. We need this water.
7 We particularly need it with Metropolitan. To keep this
8 water flowing, we have agreed that all parties will dismiss
9 their protest and move forward on implementing the various
10 projects and components of the Colorado River Use Water
11 Plan.

12 The fundamental purpose of the Protest Dismissal
13 Agreement is that we waive our jurisdictional issues. We
14 step aside in this proceeding, that there be no precedent in
15 this matter. We have asked for and IID and San Diego have
16 asked that we should not have a precedential finding. The
17 basic reason for this is because the Colorado River is a
18 very unique situation in California. We have this interplay
19 between federal and state law regarding all parties and all
20 roles on the Colorado River. We have asked, therefore, that
21 there not be any precedential hearing, and we urge the State
22 Board to take that under consideration and act upon that
23 matter when they deem it is appropriate.

24 One of the drawbacks to not being a party to this
25 proceeding, is we will not be presenting any evidence as we

1 go forward. We have concerns about the programs that are
2 moving forward particularly in the discussions on roles of
3 fallowing and other areas. But we are going to make
4 available our vice president on Colorado River water
5 affairs, Dennis Underwood. He is going to be testifying on
6 behalf of San Diego as part of this petition.

7 The rest of the information is contained in our policy
8 statement, so unless there is any questions I will leave it
9 at that.

10 CHAIRMAN BAGGETT: I have no questions at this time.

11 MR. KIGHTLINGER: Thank you.

12 CHAIRMAN BAGGETT: Gerald Shoaf, General Counsel of
13 Coachella Valley.

14 MR. SHOAF: Good morning, Mr. Chairman, members of
15 staff. My name is Jerry Shoaf. I am General Counsel for
16 Coachella Valley Water District.

17 I would like to first thank you for this opportunity to
18 make a policy statement on behalf of Coachella and
19 specifically for allowing me to do so this morning. I want
20 to take this opportunity to explain the reason for the
21 change in position from one of opposition to the petition to
22 one of support by Coachella. And I can do that by use of
23 four points.

24 The first is that Coachella has a right to the water
25 proposed to be transferred to the extent it is not needed

1 within the IID. The second is that Coachella, however,
2 recognizes the importance of the proposed transfer to San
3 Diego and to Southern California and the entire state. The
4 third is that the Quantification Settlement Agreement takes
5 care of Coachella's water needs in a way that the transfer
6 will not cause any harm to Coachella. And fourth, even
7 though Coachella believes that federal rather than state law
8 governs potential transfers of Colorado River water,
9 Coachella has withdrawn its opposition to the proposed
10 transfer based on the conditions set out in the Protest
11 Dismissal Agreement that we joined with Met, San Diego and
12 IID.

13 The two primary points in that dismissal agreement are,
14 as you mentioned at the outset, that the Board's approval,
15 if given, would not serve as precedent in any other
16 potential transaction involving Colorado River water, and
17 secondly that the Board's approval, if given, would be
18 co-extensive with the life of the QSA, Quantification
19 Settlement Agreement.

20 The support for these four points in very brief terms,
21 and the written policy statement that I submitted goes into
22 a little bit more detail, but in summary on the first point,
23 both Congress and the United States Supreme Court have
24 stated that federal law preempts state law regarding
25 Colorado River matters. The case of California versus

1 United States has sometimes been cited to the contrary and,
2 in general, it holds that state law governs use of federal
3 -- governs federal water rights within a state. But that
4 case specifically excludes the Colorado River because the
5 Boulder Canyon Project Dam.

6 The only way to get a right to use of Colorado River
7 water is through Section 5 contract, Section 5 of the
8 Boulder Canyon Project Act. Each of the California agencies
9 has such a contract, and IID's contract only allows it use
10 of Colorado River water within its service area and only for
11 beneficial use.

12 Under the Seven Party Agreement among the California
13 agencies it establishes priorities for use of Colorado River
14 water within California. And that agreement was
15 incorporated by the Secretary in each of the contracts. To
16 the extent that Palo Verde Irrigation District Yuma Project
17 and IID do not use water, do not need water, it is made
18 available first for Coachella and then if Coachella doesn't
19 use it for MWD's use. There is no authority in any of the
20 contracts for transfer of water. And it is our position
21 that state law can't change that.

22 Nevertheless, because this proposed transfer is so
23 critical to California water future and because the
24 Quantification Settlement Agreement will allow the transfer
25 to take place without taking water away from Coachella, if

1 the QSA goes forward, Coachella will not claim the water so
2 that it can flow through to Met and on to San Diego. If
3 Coachella is protected under the conditions of the Protest
4 Dismissal Agreement, the precedential value.

5 On the assumption that Coachella's interest will be so
6 protected, Coachella joins with IID, with San Diego and with
7 Met in urging this Board approve the proposed transfer.

8 Thank you again for letting me speak.

9 CHAIRMAN BAGGETT: Thank you.

10 Now we move into the evidentiary portion of the
11 hearing. Before hearing cases in chief from the parties we
12 will hear opening statements from any parties who have not
13 submitted direct testimony and who do not intend to present
14 a case in chief. Parties will present their case in chief
15 as applicable and conduct cross-examination in the following
16 order: First Imperial Irrigation District, followed by San
17 Diego County Water Authority, Colorado River Indian Tribes,
18 Defenders of Wildlife, which we have noted is for
19 cross-examination and rebuttal only, the Sierra Club of
20 California for cross-examination and rebuttal only, County
21 of Imperial, California Farm Bureau Federation, Mr. William
22 Du Bois and Mr. Larry Gilbert.

23 The beginning of each case in chief party may make an
24 opening statement briefly summarizing the party's positions
25 and what the party's evidence is intended to establish.

1 After the opening statement we will hear testimony from the
2 parties witnesses. Before testifying, witnesses should
3 identify their written testimony as their own and affirm
4 that is true and correct. Witnesses should summarize the
5 key points in the written testimony and should not read
6 their written testimony into the record.

7 Direct testimony will be followed by cross-examination
8 by the other parties, Board staff and myself and my
9 colleague. The redirect testimony and recross-examination
10 limited to the scope of the redirect testimony will be
11 permitted. After all cases in chief are completed, parties
12 may present rebuttal evidence.

13 As you know and I stated earlier, we have many days of
14 hearing ahead of us and a lot of testimony to hear. I again
15 encourage the parties to be efficient in presenting their
16 case and in conducting cross-examination. I may not allow
17 repetitive testimony or cross-examination except where I
18 approve a variation, we will follow the procedures set forth
19 in the Board's regulations and the hearing notice.
20 Accordingly, we will strictly enforce time limits on the
21 parties' presentations. All opening statements will be
22 limited to 20 minutes for each party with the exceptions,
23 witnesses will have a maximum of 20 minutes to summarize
24 their direct testimony, not to exceed a total of two hours
25 for all witnesses presented by each party. Set forth in the

1 letter of April 18th to the parties I granted an additional
2 30 minutes to Mr. Jesse Silva and Dr. Mesghinna, and an
3 addition additional 20 minutes to Dr. Eckhart and Ms. Laura
4 Harnish and an additional 10 minutes in Phase II to Dr.
5 Rodney Smith and an additional 10 minutes to Dr. Timothy
6 Krantz.

7 Cross-examination will be limited to one hour per
8 witness or panel of witnesses. I may allow more than two
9 hours for a party's case in chief or more time upon showing
10 of cause. An opportunity will be provided to submit written
11 closing briefs, and we will set those schedules at the close
12 of the hearing.

13 At this time I would like to invite the appearances by
14 the parties who will be participating in Phase I of this
15 hearing. Will those making appearances, please state your
16 name, address and whom you represent so the Court Reporter
17 can enter this information on the record.

18 First, Imperial Irrigation District.

19 MR. OSIAS: Thank you, sir.

20 David Osias and Mark Hattam of the law firm Allen,
21 Matkins, Leck, Gamble & Mallory, 501 West Broadway, Suite
22 900, San Diego, California 92101.

23 CHAIRMAN BAGGETT: Thank you.

24 San Diego County Water Authority.

25 MR. SLATER: Scott Slater and Stephanie Hastings of the

1 law firm Hatch and Parent on behalf of the San Diego County
2 Water Authority.

3 CHAIRMAN BAGGETT: Colorado River Indian Tribes.

4 MR. SHEPARD: Eric Shepard of the Colorado River Indian
5 Tribes from the Office of the Attorney General and Gary
6 Hensen and Leland Gardner.

7 MS. RAINEY: Lola Rainey from the Office of the
8 Attorney General for the Colorado River Indian Tribes.

9 CHAIRMAN BAGGETT: Thank you.
10 Defenders of Wildlife.

11 MR. FLETCHER: Brendan Fletcher, Defenders of
12 Wildlife. My business address is 926 J Street, Suite 522,
13 Sacramento, 95814.

14 CHAIRMAN BAGGETT: Sierra Club California.
15 County of Imperial.

16 MR. ROSSMANN: Good morning, sir.

17 Antonio Rossmann, Law Offices of Antonio Rossmann,
18 380 Hayes Street, San Francisco, representing the County of
19 Imperial.

20 CHAIRMAN BAGGETT: California Farm Bureau Federation.

21 MR. RODEGERDTS: Henry E. Rodegerdts, 2300 River Plaza
22 Drive, Sacramento.

23 CHAIRMAN BAGGETT: Thank you.

24 Mr. William Du Bois.

25 MR. DU BOIS: William I. Du Boise, 3939 Walnut Avenue,

1 No. 145, Carmichael, California.

2 CHAIRMAN BAGGETT: Mr. Larry Gilbert.

3 MR. GILBERT: Larry Gilbert. Reside at 945 East
4 Worthington Road, Imperial, California 92251.

5 CHAIRMAN BAGGETT: Thank you.

6 I will now administer the oath.

7 Will all those who may testify in Phase I of the
8 hearing, please stand and raise your right hand.

9 (Oath administered by Chairman Baggett.)

10 CHAIRMAN BAGGETT: Before we begin, are there any
11 procedural issues to be addressed? I know we have a letter
12 from Mr. Rossmann.

13 MR. ROSSMANN: Yes, sir. We had requested in light of
14 your Honor's ruling last week, last Thursday, that Mr.
15 Spickard be allowed to testify in Phase II. And I have been
16 advised by Mr. Osias that the Imperial Irrigation District
17 has no objection to that request. I think his testimony
18 will closely parallel that of Imperial's witness, Dr. Jones,
19 who is also scheduled for Phase II.

20 CHAIRMAN BAGGETT: There is no objections?

21 MR. SLATER: No objection.

22 CHAIRMAN BAGGETT: If there is no objections, fine.

23 MR. ROSSMANN: Thank you, sir.

24 CHAIRMAN BAGGETT: Are there any other --

25 MR. OSIAS: Let me just make a comment. Dr. Jones is

1 actually Dr. Smith.

2 CHAIRMAN BAGGETT: Okay.

3 MR. ROSSMANN: It is good to get our mistakes out of
4 the way early.

5 MR. SLATER: Mr. Chair, we have a procedural request.
6 Two of our witnesses have been subpoenaed to be here, a
7 third witness, Steve Macaulay, is not a San Diego witness
8 directly. He is employed by the Department of Water
9 Resources. They are nonSan Diego, per se. We would like an
10 opportunity to begin our joint case with a presentation by
11 these three witnesses and then proceed into the IID case.
12 We would reserve all the remaining San Diego witnesses until
13 Imperial is done.

14 CHAIRMAN BAGGETT: You're proposing to bring them?

15 MR. SLATER: We would propose to start with Steve
16 Macaulay and then present a panel of Levy and Underwood and
17 then turn it over to IID.

18 CHAIRMAN BAGGETT: Before IID presents a case in chief
19 or before any other witnesses?

20 MR. SLATER: That's correct.

21 CHAIRMAN BAGGETT: You intend to do your opening
22 statement prior to the witnesses, so we can put it in some
23 context?

24 MR. SLATER: We would be pleased to do that. After IID
25 proceeds with their opening, we would proceed with ours.

1 CHAIRMAN BAGGETT: You will reserve your witnesses
2 until after San Diego?

3 MR. OSIAS: Yes, that is acceptable to us. I think we
4 want to cooperate with the parties to go back to whatever
5 they are doing.

6 CHAIRMAN BAGGETT: Any comments from any of the other
7 parties?

8 MR. ROSSMANN: Your Honor, let me make a comment. I
9 don't want to start with an objection. But it would be
10 helpful perhaps -- I wonder if it would be agreeable to Mr.
11 Slater to have them begin right after lunch with that panel
12 so that they could still be done today. But I did not focus
13 in my preparation on the San Diego witnesses, assuming that
14 the Imperial witnesses would take the greater part of the
15 morning and not the day.

16 MR. SLATER: I think Mr. Macaulay is with us today. I
17 think the other witnesses are willing to accommodate us into
18 tomorrow.

19 MR. ROSSMANN: No problem with Mr. Macaulay. It would
20 be the other two witnesses that it would be helpful if they
21 could come this afternoon.

22 CHAIRMAN BAGGETT: Any objection to that? I mean, that
23 sounds reasonable.

24 MR. OSIAS: We will do whatever.

25 CHAIRMAN BAGGETT: We should be able to do 10:30. We

1 take a slightly late lunch, we might be able to get through
2 most of your direct. We just won't do cross-examination.
3 We will move from whatever witnesses we get from IID.
4 Sounds like after lunch, it would be nice to finish up, at
5 least, your witnesses' testimony. And then we can go to San
6 Diego and come back to the cross-examination of IID's.

7 It just makes it hard to follow when you start breaking
8 up cases and witnesses, and these issues are complex enough
9 without adding another dimension of complexity and
10 confusion.

11 So, we will do that. We will go through as much of
12 IID's hearing, take lunch, and see where we are. But we
13 will make a commitment to get Mr. Macaulay in this afternoon
14 and try to get all your witnesses today, the three that you
15 are concerned about.

16 MR. SLATER: Today or tomorrow, Mr. Chair.

17 CHAIRMAN BAGGETT: Thank you.

18 Now any other issues, procedural issues?

19 If not, we will now hear the opening statements from
20 the parties who will not be presenting a case in chief. The
21 only two I have noted are Defenders of Wildlife and Sierra
22 Club of California.

23 MR. FLETCHER: I would like to reserve my opening
24 statement for Phase II. I have no opening statement for
25 Phase I.

1 CHAIRMAN BAGGETT: That is fine.

2 Sierra Club isn't present. So with that, we will
3 start with testimony from Imperial Irrigation District.

4 MR. OSIAS: I would like to give an opening statement.

5 CHAIRMAN BAGGETT: Please.

6 MR. OSIAS: Thank you.

7 I want to start also with thanking the Board and its
8 staff for working so hard to both schedule this hearing and
9 to focus on the necessary timeliness of it, as you have
10 already commented on.

11 In this opening statement I would like to address five
12 topics as a summary of our case in chief and the evidence
13 we'll proffer. Those topics are: Why are we here and what
14 are we requesting? Second, what is the IID's water right
15 and use? Third, why do we believe and what does the
16 evidence show with respect to the reasonableness of that
17 use? Four, the evidence with respect to the fact that there
18 is no injury to other legal users of water. And finally,
19 what are the benefits to your approval and to the QSA,
20 Quantification Settlement Agreement, implementation?

21 With your permission and consistent with the request
22 you just heard, I would like to save a brief opening
23 statement for Phase II that deals only with the topic of
24 unreasonable impacts, so they can be heard in context.

25 CHAIRMAN BAGGETT: That is fine.

1 MR. OSIAS: Starting then, why are we here and what do
2 we request?

3 We are here for really two reasons. The first is we
4 are returning in the continuing jurisdiction of this Board
5 that arose by virtue of Decision 1600 in Order 84-12 from
6 1984 and Order 88-20 in 1988. We are here looking both
7 backwards and forwards. IID has complied with order 88-20,
8 which mandated that it enter into a conservation and
9 transfer agreement for 100,000 acre-feet of water per year.
10 As you know, that deal was struck in 1988 with the
11 Metropolitan Water District. It ramped up over time after
12 environmental review. It is now fully implemented.

13 Also in 1988, in '88-20, this Board reserved
14 jurisdiction for the purpose of continuing to review further
15 conservation opportunities in Imperial and to determine
16 ultimately when or if further transfers may be necessary in
17 connection with the evaluation of Imperial's reasonable and
18 beneficial use. Imperial Irrigation District has
19 proactively sought out an urban partner to pay for further
20 conservation to improve its efficiency so as to create water
21 for others in anticipation and ahead of schedule with
22 respect to the concerns addressed in Decision 1600 and
23 88-20, and essentially, to use the colloquial, to get that
24 monkey off their back.

25 When I say we are looking back, Imperial Irrigation

1 District has both those decisions and the fact that other
2 water service entities in California had an inadequate
3 supply. Looking over your shoulder is not a pleasant way to
4 operate an irrigation district. I am reminded of the
5 statement either by Al Capone or Dillinger with respect to
6 why does he rob banks. His response was "because that is
7 where they keep the money."

8 Why do people look at Imperial Irrigation District for
9 water? The answer is because they have a lot of it and a
10 large water right. It is to protect that water right, to
11 preserve agriculture in Imperial Valley that we are here
12 today. The second reason we are here is because by virtue
13 of California law, notwithstanding our disagreement which
14 has been settled with Coachella and Metropolitan, pursuant
15 to Article 10, Section 2 and Water Code 100 and 109 and 110
16 and Water Code 1012 and 1013 and specifically Water Code
17 Sections 1700 and 1735 to 1737. Imperial has a petition for
18 change which requires this Board to approval or not and to
19 make certain findings and finally to implement the QSA. And
20 as you noted at the beginning of this hearing, additional
21 findings have been requested.

22 The Protest Dismissal Agreement that you have already
23 mentioned, that policy statements have mentioned, sets the
24 framework for this hearing to go forward without the
25 objections of Coachella and Metropolitan. That is a

1 significant accomplishment and is part and parcel of the
2 Quantification Settlement Agreement which is now also part
3 of the petition for change with respect to a hundred
4 thousand acre-feet of water that may go to Coachella or
5 Metropolitan.

6 Moving on to the evidence with respect to IID's water
7 rights. If I might briefly just put up a chart that is in
8 the record.

9 Starting in 1885, the pioneers in Imperial Valley took
10 actions to appropriate up to 7,000,000 acre-feet from the
11 Colorado River. They complied with state law at that time
12 by posting and recording notices. By 1924, over 400,000
13 acres in the Imperial Valley were already under irrigation.
14 In 1931 the Seven Party Agreement was entered between
15 Imperial, other users of Colorado River water and potential
16 users of Colorado River water.

17 In that agreement, as this Board knows from prior
18 hearings, Imperial obtained priority three, priority six and
19 priority seven. The urban potential users were junior in
20 priority to the agricultural interests. In the Seven Party
21 Agreement Imperial agreed to no longer seek 7,000,000
22 acre-feet, but to limit its diversion right to that in
23 priority three, six and seven.

24 In 1932 Imperial signed a permanent service contract
25 with the Secretary of the Interior. In 1934 it signed an

1 agreement with Coachella in which Coachella agreed to have a
2 junior right to Imperial. In 1933 to 1936 Imperial filed
3 application with the California Water Commission for
4 propriative rights and permits which attached the terms of
5 the Seven Party Agreement. And in 1950 permit was granted,
6 permits, plural, were granted, which incorporated the terms
7 of the Seven Party Agreement.

8 As you noted, we are here with respect to a change in
9 Permit No. 7643.

10 IID has extensively used Colorado River water
11 throughout its history. In the chart I put up you can see
12 the magnitude of that use varying from as low as 1.6 million
13 back in the depression to as high as 3.4 million in the '50s
14 and significant variation throughout. Nearly 500,000 acres
15 are in production in Imperial Valley. A \$1,000,000,000
16 agricultural-based economy has developed and farming is the
17 critical industry in that area.

18 This hearing will focus in part on whether Imperial
19 uses its water reasonably so that water can be freed up by
20 conservation to transfer. Imperial is a mammoth irrigation
21 district. It has year-round growing seasons and it is
22 intensively farmed. The water that is diverted averages in
23 recent history 3,000,000 acre-feet a year. It diverts that
24 water from the Colorado River through the 82 mile All
25 American Canal. It delivers through 1,675 miles of canals,

1 1,169 of which have already been lined. Two hundred of the
2 1,169 were lined pursuant to the 1988 agreement with
3 Metropolitan. The balance were lined at the expense of
4 Imperial.

5 Approximately 5,600 farmer headgates receive
6 water. There are ten regulating reservoirs. There are
7 1,400 miles of drain ditches to remove irrigation water and
8 over 33,000 miles of tidal drains to take salt away from the
9 root zones in the Imperial Valley. Virtually all of this
10 water movement from the river through the entire drainage
11 system is by gravity. In order to assess the reasonableness
12 of this use, Natural Resources Consulting Engineers were
13 hired to assess the efficiency both on a quantitative basis
14 and a comparative basis of the Imperial Irrigation
15 District.

16 Dr. Mesghinna is here to testify. His report has been
17 submitted. His opinion, Imperial is reasonably using its
18 water and is not wasteful. He used a ten-year data period
19 from 1988 to 1997 as his source data. He did a three-year
20 study and those are his results. In quantification terms
21 on-farm efficiency in Imperial is already at an 83 percent
22 level, one of the highest in the west. As a comparison,
23 the Department of Water Resources of California projects
24 that 2020 farms in California should get to 73 percent
25 efficiency. Imperial is significantly ahead of that

1 statewide objective.

2 As regards distribution efficiency, 89 percent of the
3 water diverted from the Colorado River reaches the farmers'
4 headgates. Despite this efficiency, water use varies
5 dramatically as you can see from the graphic. In the early
6 to mid '90s the Bureau of Reclamation commissioned a study
7 which relied on a five-year period, 1992 to 1997, where you
8 can see a sharp increase in use, and concluded, based on
9 insufficient data and false assumptions, that that increase
10 in use after the conservation agreement with Met was
11 evidence of waste.

12 Dr. Mesghinna has evaluated that, as has Dr. Smith.
13 The reports confirm that that is an incorrect conclusion.
14 In 1992 the white fly infestation caused that reduction in
15 use. Dr. Smith evaluated the factors that caused the
16 changes in this use, developed a statistical model that
17 accurately predicts those factors which influence changes in
18 use. Those are rainfall, salinity which varies in the
19 Colorado River, cropping patterns, what is being grown,
20 economic conditions in crop markets and the white
21 fly.

22 There is no evidence to support that those changes in
23 use are a result of inefficiencies in the district. Dr.
24 Smith also studied, along with Jim Merchant, and submitted
25 reports with respect to the costs of conservation and the

1 ability of the Imperial to self-fund them. This was an
2 issue back in Decision 1600 days as well as 88-20.

3 Dr. Smith used the cost of conservation, used published
4 reports on farm budgets and found that if Imperial were to
5 conserve 200,000 acre-feet, not 300-, if it were to conserve
6 200,000 acre-feet, half of it by system improvements, half
7 of it on-farm, it would need to pay for that by increasing
8 the water rate by \$15 an acre-foot, nearly doubling that
9 rate, and as a result 15 to 30 percent of the irrigated
10 acreage in Imperial would fall out of production.

11 That would be a significant detrimental impact in
12 Imperial Valley, a county that already has the highest
13 unemployment rate and the lowest per capita income in the
14 state. There is no basis to impose without outside funding
15 additional conservation on Imperial.

16 Let me turn now to the issue of whether there is a
17 substantial injury to any legal user of water. Of course,
18 as we have heard and we are pleased to report, junior right
19 holders, Coachella and Metropolitan, not only consent but
20 they are agree that if the Quantification Settlement
21 Agreement goes through, they will be benefited from the
22 transfers both to San Diego and acquisitions by Coachella
23 and Met. Thus, no injuries to those junior legal users of
24 water.

25 It is important to point out also that the facts, which

1 are undisputed in the record, show that there is no return
2 flow from Imperial to the Colorado River. So traditional
3 notions of injury by cutting off return flow are not present
4 here.

5 No party has put in evidence that they have the right
6 to compel Imperial to order any quantity of water from Lake
7 Mead to reach Imperial. The only party that has that right
8 is Imperial. There is no right held by the Salton Sea, for
9 example, to order water. Furthermore, Imperial holds the
10 exclusive right to capture and reuse drain water. Dr.
11 Mesghinna, in addition to assessing the reasonable use of
12 Imperial, also looked to see if other water right holders
13 south of Parker Dam would have their supply of water
14 interfered with by the change in point of diversion to
15 Parker Dam for 200,000 acre-feet. And his opinion, which is
16 substantiated in his report, is no. The minor reduction in
17 Colorado River flow would not at any time in the period of
18 study, which included one of the lowest flow years in
19 Colorado River history, even including that year, no water
20 right holder south of Parker Dam would not be able to obtain
21 their full water right supply as a result of this transfer.

22 What are we trying to accomplish? I have prepared one
23 other graphic. This is a picture of what Imperial
24 Irrigation District is being asked to do under the
25 Quantification Settlement Agreement and has agreed to do.

1 The yellow which you can see at the top is the already
2 existing 1988 conservation, roughly 110,000 acre-feet. The
3 first important accomplishment under the QSA and as part of
4 the deal with San Diego is for Imperial to have a cap at
5 3.1.

6 You can see even in recent years, despite the earlier
7 draft, the use has fluctuated. It will no longer be allowed
8 to go above 3.1 after this deal. A significant benefit to
9 junior right holders. Second, any conservation activity
10 will be deducted from that 3.1 in terms of a diversion. So
11 starting presumably in year 2003, IID would reduce its
12 diversion from the river by the 88 agreement amount, that is
13 a 110,000, plus the first increment to go to San Diego.
14 That is the green chart. And you can see the green to San
15 Diego steps down at 20,000 acre-feet a year. It steps up
16 from San Diego's perspective. It steps down in diversions
17 from Imperial's perspective.

18 You'll see the orange. That is the All American Canal.
19 That is not here as part of this process because there is
20 special federal legislation that dictates how that water is
21 developed, how it is paid for and who gets it. But it is
22 part of QSA, and that arrangement is -- more into the QSA
23 you can see it is anticipated that that approximately 70,000
24 acre-feet comes in about 2006.

25 I should mention that one of the other benefits besides

1 the 3.1 with respect to the 88 agreement is an extension in
2 its term under the QSA. It will now last as long as the
3 QSA.

4 Below the orange is the purple or blue. That is the
5 acquisition by Coachella. It grows by 5,000 acre-foot
6 steps, commencing in 2007 to a total of a hundred. You will
7 see it steps up in approximately year 2047. That is because
8 after the first 45 years it can be reduced to only 50,000
9 from a hundred.

10 IID will reduce its diversions from the Colorado River
11 in accordance with the deductions illustrated on this
12 chart. To put in context, you read some findings that have
13 been requested that are in PDA, Protest Dismissal
14 Agreement. One of the reasons that we asked this Board to
15 express an anticipation of not needing to reassess
16 reasonable use for a time period is you can see it takes 20
17 years to finish this development project. And we are asking
18 for your acknowledgement of that in that finding.

19 Finally, in the few seconds I have left, the benefits
20 of the QSA have been widely broadcast in other settings.
21 Let me just briefly mention them here. We have testimony on
22 them for Imperial, of course, it is increased efficiency
23 paid by others. That activity is an economic stimulus that
24 arises from the conservation activity, construction and
25 operation and jobs. It is the preservation of farming

1 activity. It is the protection of Imperial's remaining
2 water supply, and it is the peaceful co-existence of other
3 Colorado River right holders.

4 For the others, San Diego gets increased reliability
5 and supply and independent supply. Coachella gets increased
6 reliability from the cap and a newly acquired supply of
7 water. And Met gets the extension of the '88 agreement, the
8 All American Canal water, surplus criteria that you heard,
9 reduced supply obligations, and senior sharing.

10 I thank you for your attention, and we look forward to
11 presenting our case in chief.

12 CHAIRMAN BAGGETT: Thank you.

13 MEMBER KATZ: It was Willy Sutton and not John
14 Dillinger.

15 MR. OSIAS: Those are the two I knew, and I got it
16 wrong.

17 MEMBER KATZ: I don't want to cast doubt on the rest of
18 your research by pointing that out, but it was Willy Sutton.

19 MR. OSIAS: In my career I will be a bank robber and I
20 will know that.

21 MEMBER KATZ: As you say, the implications.

22 MR. OSIAS: It wasn't Dr. Jones.

23 CHAIRMAN BAGGETT: Mr. Osias, we have a few other
24 questions.

25 MS. DIFFERDING. You were referring to the colors on

1 this chart. Did you have a color copy of this as an
2 exhibit?

3 MR. OSIAS: No, I will submit one.

4 MS. DIFFERDING: Will you please make sure that the
5 other parties get copies as well?

6 MR. OSIAS: Yes, yes.

7 MS. DIFFERDING: Otherwise your statement and the
8 transcript isn't going to make much sense, if you are
9 referring to colors and don't have this.

10 MR. OSIAS: A, I will do that. And B, for the record,
11 all the data that is graphically illustrated here is in
12 table form, but not picture form in the record already.

13 CHAIRMAN BAGGETT: That will be useful.

14 MR. OSIAS: We will have both hard copies and
15 electronic versions available by the end of today, probably.

16 MS. DIFFERDING: Thank you.

17 CHAIRMAN BAGGETT: Anything else?

18 MR. SLATER: Good morning, Mr. Chairman, Board Member
19 Katz. Scott Slater on behalf of the San Diego County Water
20 Authority. I, too, would like to reserve a few minutes at
21 the opening of Phase II to address the issues of impacts to
22 the environment.

23 I think I would like to start with why we are here, and
24 I think that the short summary is that this is a
25 continuation of long quest by the San Diego County Water

1 Authority to obtain a reliable water supply. Our case is a
2 case really of benefits. Benefits to San Diego, to be sure.
3 Benefits to Imperial. Benefits to Coachella, to
4 Metropolitan, indeed the entire state of California.

5 The San Diego County Water Authority was initially
6 created in 1943 by virtue of special legislation. It was
7 authorized to go out and acquire water and water rights for
8 the benefit of distributing it to its customers. The
9 Authority service territory is approximately 1,400 square
10 miles. There are 23 member agencies within its boundaries,
11 which are retail agencies. Those agencies in turn retail
12 water to a \$117,000,000,000 economy; that is, San Diego
13 County. Indeed, 96 percent of the 2.8 million people that
14 live in San Diego County receive water or are within the
15 boundaries of the San Diego County Water Authority.

16 Our case will present testimony from the Authority's
17 General Manager, Maureen Stapleton. And she'll describe at
18 the quest and the importance of San Diego pursuing a
19 reliable water supply for the county to sustain its existing
20 economy and its existing population base. She'll testify
21 that this water supply is crucial for that purpose.

22 We will also hear from the Authority's Water Resources
23 Manager, Mr. Weinberg. And he will testify that San Diego
24 has been a leader in demand management, that it has
25 implemented a variety of programs. He will testify that San

1 Diego has been a leader in the industry in developing
2 conservation-based demand management programs and best
3 management practices. He will further testify that San
4 Diego, which is a signatory to the urban purveyors best
5 management practices memorandum, has, in fact, implemented
6 each of the measures called for in the memorandum at a time
7 when many agencies have not implemented some or all.

8 Unlike other urban counties, San Diego has some
9 differences. To be contrasted with, say, Los Angeles,
10 Sacramento, Santa Clara County and San Francisco, there are
11 differences that are evident when you begin to examine the
12 reliability and diversity in their water supplies. San
13 Francisco has Hetch Hetchy. Sacramento has the American,
14 Sacramento Rivers and in addition to that groundwater. Los
15 Angeles, obviously, has Owens Valley and groundwater. Santa
16 Clara has the Central Valley Project, the State Water
17 Project and local groundwater.

18 San Diego does not have these advantages. It is
19 subject to limitations in terms of local hydrology and
20 geology, and it has been forced through circumstance to
21 historically rely on the Metropolitan Water District to
22 achieve its water supply needs. With a single or dominant
23 source, which in some years has matched 95 percent of its
24 overarcng water supply portfolio, there is a lack of
25 diversity. With this lack of diversity in water supply,

1 there has come as a consequence a lack of reliability.

2 In the early 1990s, for example, the Authority was hit
3 with serious shortages and was forced to reduce its
4 deliveries to its customers by 30 percent and was faced with
5 as much as a 50 percent reduction to its retail providers.
6 Ms. Stapleton will testify that it was a concern for this
7 lack of reliability that led the San Diego County Water
8 Authority to the Imperial Irrigation District. When
9 Imperial mentioned that it was interested in pursuing a
10 partnership to engage in conservation and for an urban
11 partner to fund improvements and thereby capture or receive
12 the benefit of the savings, San Diego thought that that was
13 a good idea.

14 It sat down with Imperial, and through arm's length and
15 voluntary negotiations agreed to do the right thing. It
16 agreed to work with a partner and fund more expensive
17 on-farm conservation measures which were designed to protect
18 the interest of Imperial County as well as benefit the San
19 Diego County Water Authority. The evidence will show that
20 the Authority has been a good strong partner and has been
21 willing to accommodate reasonable changes and variations in
22 methods of conservation that would be pursued by Imperial.

23 In exchange, under the deal Imperial agrees to make
24 200,000 acre-feet of water available to San Diego County. A
25 deal was inked in April of 1998. Soon thereafter, the

1 parties jointly filed a petition with the State Board asking
2 for an approval. Over the next few days, and perhaps weeks
3 now, you are going to be hearing testimony from witnesses
4 that they have been engaged in virtually nonstop
5 negotiations since that time, and under circumstances that
6 have been contentious as they are complex.

7 Our pathway to you today has not been an easy one, and
8 I think as the Chairman alluded to in his opening remarks,
9 that may be because water is difficult and we have -- water
10 situations are difficult and negotiations are often
11 complex. In this case we have all the garden variety issues
12 of environment, urban use and agriculture. But layered on
13 top of that we have the fact the Colorado River is not
14 California's own. We share that resource with other
15 states. We share it with an administrator of the federal
16 government. We have concerns with Mexico. That layers of
17 complexity associated with the Colorado River are like none
18 other.

19 San Diego realizes that it is not an island, it cannot
20 operate in isolation. San Diego has participated in the
21 Colorado River Board. It is a member agency of the
22 Metropolitan Water District, and it is a part of the great
23 State of California.

24 You will hear evidence and testimony from Steve
25 Macaulay. He was the chief director of the California

1 Department of Water Resources. Steve has experience in
2 water transfers in his capacity, present capacity as well as
3 his prior position with the State Water Contractors. He
4 will testify that it has been state policy and practice for
5 the state to pursue and facilitate water transfers. It is
6 an essential component of California's ability to meet its
7 future water supply needs. His testimony will indicate some
8 import points.

9 First, that as an ag to urban transfer that San
10 Diego/IID deal is critical to the success of the
11 California-Colorado River Plan. That the Colorado River
12 Plan is endorsed by the Department of Water Resources. That
13 the California Legislature thought so much of this program
14 that they were willing to invest \$235,000,000 to support and
15 implement the QSA in 1998. That a failure to successfully
16 implement the California-Colorado River Plan will leave
17 Southern California, and particularly the Metropolitan Water
18 District, with no option but to return to the Bay-Delta to
19 meet its unmet demand.

20 The evidence will show that the Metropolitan Water
21 District and the Coachella Valley Water District both
22 support the QSA. You will hear from a joint panel of Mr.
23 Underwood and Tom Levy, those two gentlemen are frequent
24 adversaries, but I want to emphasize joint. They are going
25 to be here and testify to you because they agree on several

1 important things.

2 They agree that their districts have invested heavily
3 in the success of the California-Colorado River Plan, that
4 they have spent months, indeed years, negotiating and trying
5 to implement its terms, that their districts are already
6 using the water supply that the QSA and the Colorado River
7 Plan are designed to preserve and protect. That given the
8 looming deadline provided by the Interim Surplus Guidelines
9 that we must succeed this year and by 12/31/02. That a
10 shortage on the Colorado River for Metropolitan will
11 obligate Metropolitan to look north because it has no
12 alternative. And finally, that Metropolitan and Coachella,
13 as you heard in the policy statements today, are supportive
14 of the IID/San Diego transfer moving forward in the context
15 of the QSA.

16 The State Board has identified four key issues, and I
17 would like to briefly comment on responses to those.

18 On the first one, which is will the water be conserved
19 in the context of Water Code Section 1011? I want to call
20 attention to the chart that Mr. Osias referenced, in
21 particular the green. That is the water supply that is
22 going to be made available to San Diego. This is not an
23 instance or situation where the Board needs to be worried
24 about paper water. Through the QSA, through the QSA, IID is
25 agreeing to forebear and reduce its diversion below the

1 3.1.

2 As a result, this Board and others will be able to
3 count the wet molecules that are generated and made
4 available for transfer. So long as IID commits to forebear
5 and reduce its diversions below the 3.1, the actual method
6 of conservation is a matter of interest and of importance to
7 those people within Imperial County in terms of how they
8 make the water available. It may have environmental
9 impacts, but for purposes of Water Code Section 1011 there
10 will be real wet water for transfer.

11 With regard to issue number two and whether there is an
12 injury to a legal user of water, we note that on the basis
13 of the facts you have before you, the Protest Dismissal
14 Agreement, which will be ultimately made part of this
15 record, and the consent of Coachella and Metropolitan, there
16 is no basis to find an injury to a legal user of
17 water. There may be novel theories related to indirect
18 uses, but this Board in a consistent line of precedent has
19 ruled that a legal user of water does not include indirect
20 uses.

21 Call your attention to Water Rights Decision
22 95-9, 96-3, and there are others. Indeed, the Board has
23 rejected these claims for good reason. Virtually every
24 western state is in accord. To the extent that there are
25 concerns regarding distant or indirect impacts, that process

1 being evaluated in the context of environmental review
2 process or in the context of the political process. If
3 people are unhappy with the decisions made, for example, if
4 Orange County doesn't like the deal that Metropolitan cut,
5 it has the opportunity to prevail upon Metropolitan. So
6 too, constituents of Imperial have a political remedy.

7 With regard to issue three, and that is whether the
8 State Board should make the findings identified, we believe
9 that based upon the forgoing and the evidence of benefits,
10 that, indeed, the benefits to the State of California and to
11 the parties as a whole provide persuasive support for
12 adopting the findings.

13 With regard to the fourth and final issue identified by
14 the Board, and that is are there unreasonable impacts to
15 fish and wildlife or public trust resources caused by the
16 transfer, we say that given the enormous benefits to all of
17 California associated with this transfer and given the
18 potential mitigation measures that will be discussed
19 thoroughly in Phase II, and the prudent alternatives that
20 may be available to this Board and to Imperial to implement,
21 there will be an adequate record for this Board to conclude
22 that the impacts are not unreasonable.

23 In closing, again I want to point out that the
24 imposition of surplus guidelines criteria requires us to
25 make a decision to move this project forward by the end of

1 this year. We thank the Board for agreeing to put such a
2 great effort into this hearing process, to set aside so many
3 hearing days, and we thank you for the opportunity to prove
4 our case and to convince you that it is a good thing for
5 California for us to move forward.

6 Thank you.

7 CHAIRMAN BAGGETT: Thank you.

8 At this point, Mr. Slater, I guess there is no
9 objection --

10 Mr. Rossmann, you wanted to wait until after lunch on
11 two of the witness. With Mr. Macaulay is that --

12 MR. ROSSMANN: That is true, your Honor. In fact, I
13 think Mr. Osias made a suggestion that all three of them can
14 give their direct testimony before lunch as long as we would
15 have the opportunity to have them still available after
16 lunch.

17 CHAIRMAN BAGGETT: I think that would be fine. I can
18 see this afternoon can take a while with cross and recross.

19 Agreeable, Mr. Slater?

20 MR. SLATER: Yes.

21 Thank you. Appreciate that.

22 CHAIRMAN BAGGETT: Put three of them on as a panel or
23 however you would like.

24 MR. SLATER: We would like to start Mr. Macaulay
25 first.

1 CHAIRMAN BAGGETT: We will do the three before lunch,
2 take a break and do cross.

3 MR. ROSSMANN: Thank you, sir.

4 ---oOo---

5 DIRECT EXAMINATION OF SAN DIEGO COUNTY WATER AUTHORITY

6 BY MR. SLATER

7 MR. SLATER: Good morning. Could you please state and
8 spell your name?

9 MR. MACAULAY: Chairman Baggett, Board Member Katz, my
10 name is Steve Macaulay, M-a-c-a-u-l-a-y.

11 MR. SLATER: Mr. Macaulay, I believe you have in front
12 of you what appears to be a document labeled San Diego
13 Exhibit No. 5.

14 MR. MACAULAY: That is correct.

15 MR. SLATER: Does it look familiar to you?

16 MR. MACAULAY: Yes.

17 MR. SLATER: Can you identify it, please?

18 MR. MACAULAY: Yes. This is San Diego County Water
19 Authority's Exhibit 5 which constitutes my written
20 testimony, including my recent resume as Attachment A, I
21 believe.

22 MR. SLATER: Have you reviewed it recently?

23 MR. MACAULAY: Yes, I have.

24 MR. SLATER: Is there anything that you would like to
25 change before we move into a summary of its contents?

1 MR. MACAULAY: No.

2 MR. SLATER: It is otherwise accurate and true?

3 MR. MACAULAY: Yes.

4 MR. SLATER: Can you summarize for the Board very
5 quickly your educational background and professional
6 experience?

7 MR. MACAULAY: Yes. I have a career of about 30 years
8 in water resources management in California. My written
9 testimony goes through that issue in some length. I have
10 Bachelor's and Master's degrees in engineering. I am a
11 registered civil engineer in the state of California.
12 Relevant to this hearing I have expertise in the areas of
13 water transfers and water resources management.

14 MR. SLATER: Can you briefly describe your primary
15 responsibilities presently with DWR?

16 MR. MACAULAY: As Chief Deputy Director, I am the Chief
17 of the department of management staff and in effect the
18 chief operating officer for the 3,000 member California
19 Department of Water Resources.

20 MR. SLATER: Can you explain briefly again, what your
21 present role and responsibility is with regard to the CALFED
22 process?

23 MR. MACAULAY: I'm the Department's chief liaison with
24 the CALFED process. I was one of the state negotiators on
25 the state side for CALFED. I've been integrally involved in

1 the process all along.

2 MR. SLATER: How about with regard to the Department's,
3 Department of Water Resources, State Water Project?

4 MR. MACAULAY: Historically have been involved directly
5 in the aspects of the State Water Project including water
6 supply and power contracts, variety of issues regarding
7 operations, and water resources related, full range of water
8 resources linked to the State Water Project.

9 MR. SLATER: Does that also include water transfers?

10 MR. MACAULAY: Yes, it does.

11 MR. SLATER: Can you explain what your background and
12 experience is specifically with water transfers?

13 MR. MACAULAY: Actually, my background with regard to
14 water transfer goes far beyond the State Water Project. I
15 managed the Governor's Drought Water Banks in 1991 and 1992,
16 the first large scale market banks transfers we have seen in
17 California on an interim basis. I have worked on permanent
18 water transfers indirectly as general manager of the State
19 Water Project for five years, from '94 to 1999. I worked on
20 water transfers since my return -- on a policy standpoint
21 since my return to the Department in 1999.

22 MR. SLATER: Can you summarize generally how water
23 transfers play a role in the future of California's water
24 supply, meeting California's future water supplies needs?

25 MR. MACAULAY: Yes. As reflected in both CALFED and

1 Bay-Delta program and the California Water Plan Update,
2 which we do every five years, water transfers is one of a
3 half a dozen components in California's present and future
4 water supplies. Those also include, certainly,
5 conservation, reclamation, development of more conventional
6 reservoirs, canals, that sort of thing. But it is one of a
7 suite of measures that is part of our present and part of
8 our future meeting California's water demands.

9 MR. SLATER: Has DWR pursued and supported water
10 specific water transfers in the past?

11 MR. MACAULAY: Yes, we have.

12 MR. SLATER: Can you explain?

13 MR. MACAULAY: We are required by California Water Code
14 and I believe in legislation authored by then Assemblyman
15 Katz, to promote water transfers in California. And we have
16 done that certainly less than affirmatively in the mid 1980s
17 and certainly in the last decade far more than we have in
18 the past. In fact, about a year ago we fired a member of
19 this Board staff to head up our water transfers. We are
20 aggressive advocates of transfers as laid out in our written
21 policies.

22 MR. SLATER: What are some of the benefits associated
23 with water transfers for California and for DWR?

24 MR. MACAULAY: Water transfers provide the benefit of
25 being able, through market-based, voluntary transactions,

1 help firm up the water supply reliability of various buying
2 water and also provide money and whatever benefits that the
3 parties may negotiate in the selling regions. Again, they
4 are voluntary and by their nature avoid for the most part
5 construction of existing infrastructure, which in itself may
6 lead to environmental issues which we have a long history
7 of here in California. It is more efficient use of existing
8 developed supplies.

9 MR. SLATER: Can you briefly describe what is the
10 California Water Plan?

11 MR. MACAULAY: Yes. The California Water Plan is
12 updated every five years, basically looking at the balance
13 of supplies and demands in California, not only looking at
14 current supplies and demands but a range of future demands
15 in every region of the state. As part of that plan, we make
16 specific recommendations in the areas of conservation,
17 reclamation, development of existing infrastructure,
18 transfers and the like, and how the future demands could be
19 met. It is a policy framework for dealing with the mismatch
20 of supply and in California.

21 MR. SLATER: Does the California Water Plan include an
22 element for the Colorado River?

23 MR. MACAULAY: Yes, it does.

24 MR. SLATER: Can you briefly describe the program?

25 MR. MACAULAY: Yes. The current California Water Plan

1 Update which goes back to 1998, although this feature I will
2 describe will be included in the next update coming out next
3 year, assumes that the Colorado River Water Plan, 4.4 Plan,
4 will be implemented, including, I guess, the three elements
5 of the plan which are lining of canals, development of
6 additional groundwater facilities and market-based voluntary
7 transfers.

8 MR. SLATER: In your opinion, does the plan provide a
9 comprehensive water supply or reliability/management tool?

10 MR. MACAULAY: Yes, I believe it does.

11 MR. SLATER: Why is that?

12 MR. MACAULAY: Again, it considers the full range of
13 options. And those options were not developed in the
14 abstract. We have a very aggressive program of soliciting
15 outside input, whether it is stakeholders or a very broad
16 advisory committee representing a broad range of interests
17 in California. So we have the best advice we believe
18 possible.

19 We hold a series of public workshops and meetings
20 throughout the state to solicit comments and advice from
21 just general citizens.

22 MR. SLATER: Now, is the IID/San Diego transfer a key
23 element of that program?

24 MR. MACAULAY: Yes, it is.

25 MR. SLATER: I think, Mr. Macaulay, on your left there

1 there is a document which is marked San Diego Exhibit 15.

2 MR. MACAULAY: Yes.

3 MR. SLATER: Can you describe what that document is.

4 MR. MACAULAY: This is the current draft of the
5 Colorado River Water Use Plan for California.

6 MR. SLATER: Is this the plan to which you were
7 referring?

8 MR. MACAULAY: Yes, it is.

9 MR. SLATER: In your opinion, how does the proposed
10 transfer assist California in ultimately reducing or
11 constraining its Colorado River usage to 4.4 million
12 acre-feet?

13 MR. MACAULAY: I mentioned earlier the three elements
14 of the plan: lining of canals, development of additional
15 groundwater resources, groundwater banking programs and
16 transfers. Each one of those elements is essential in
17 helping to reduce current demands by assuming approximately
18 5.2 million acre-feet down to the 4.4 million acre-feet as
19 set forth in the 1931 agreement and elsewhere, the subject
20 of the plan.

21 MR. SLATER: Besides incorporating the Colorado River
22 Plan in the California Water Plan, is there any way that the
23 Legislature or State of California has expressly supported
24 the Colorado River Plan?

25 MR. MACAULAY: Yes. As is set forth in my written

1 testimony, in 1998 the Legislature approved a general fund
2 appropriation of \$235,000,000 which was slated to be used
3 for two of the three elements I mentioned, the lining of
4 canals and the development of additional groundwater storage
5 programs in Southern California.

6 MR. SLATER: Can you briefly describe the impact of the
7 Interim Surplus Guidelines on California's efforts to put
8 forward and implement its plan?

9 MR. MACAULAY: The Interim Surplus Guidelines act as a
10 forcing function. They say, in effect, that the
11 Quantification Settlement Agreement needs to be signed, the
12 elements need to go forward by the end of this year or the
13 beginning, I believe, January 1, 2003. The Secretary of
14 Interior is required to go back to the preexisting, then
15 preexisting, rules on the river, which means that
16 California, given storage conditions on the river this year,
17 could be held to no more than 4.4 million acre-feet
18 beginning in 2003, resulting in a very significant drop of
19 800,000 acre-feet in almost overnight in the amount of water
20 that California can take from the river.

21 If the QSA is not signed by the end of this year, and
22 precedent to that is approval by this Board, I believe, of
23 the proposed transfer.

24 MR. SLATER: Also in the table in front of you there is
25 another blue document. I believe it is marked San Diego

1 Exhibit 16. Can you take a look at that?

2 And what does that appear to be?

3 MR. MACAULAY: I believe these are the Colorado River
4 Interim Surplus Guidelines.

5 MR. SLATER: Those are the guidelines to which you were
6 referring, correct?

7 MR. MACAULAY: Correct. This copy I have in front of
8 me, which is Exhibit 16, refers to federal register notice
9 dated January 25th, 2001.

10 MR. SLATER: Can you explain from the California
11 perspective why it is important to the Colorado River
12 aqueduct to remain full at this time?

13 MR. MACAULAY: Yes. As I indicated earlier, I am
14 directly involved in the CALFED Bay-Delta program. One of
15 the assumptions in the CALFED Bay-Delta program, in fact, an
16 assumption laid out in the CALFED Record of Decision dated
17 August 2000 was a full Colorado River aqueduct. California
18 is plumbed throughout the state. The infrastructure is very
19 strongly intertwined. An instant reduction in water from any
20 one source will naturally cause increased pressures on these
21 sources. The source of great concern to our Department
22 certainly is the Delta, the Sacramento-San Joaquin Delta.
23 An instant reduction in water from the Colorado River
24 aqueduct without the implementation of other programs will
25 immediately put more pressure on the Delta, more deliveries

1 from the State Water Project.

2 Certainly in a -- during conditions under which we have
3 fairly dry conditions of both delivery and storage on the
4 State Water Project this year.

5 MR. SLATER: In your view, is the Department of Water
6 Resources supportive of the conservation and transfer
7 programs described in the Colorado River Plan?

8 MR. MACAULAY: Yes, we are.

9 MR. SLATER: Based upon your experience and
10 implementation -- is the implementation of the proposed
11 transfer essential for Southern California to meet its
12 existing and future water supply requirements?

13 MR. MACAULAY: Yes, it is.

14 MR. SLATER: Would a failure to implement the plan
15 result in potentially adverse and catastrophic consequences
16 for California and the CALFED process?

17 MR. MACAULAY: I believe it does because it upsets the
18 balance that is inherent in CALFED and because it
19 instantaneously under the circumstances I laid out, if the
20 QSA isn't signed by the end of this year, if this transfer
21 doesn't get through in a timely manner, immediately increase
22 the demand on the system by more than the system may be able
23 to deliver next year or in the near future, if I might add.

24 MR. SLATER: In your expert opinion should this Board
25 -- sorry. In your expert opinion is it in the public

1 interest for this Board to approve the proposed IID/San
2 Diego transfer?

3 MR. MACAULAY: In my opinion, the answer is yes.

4 MR. SLATER: I have no further questions. Offer him
5 for cross.

6 CHAIRMAN BAGGETT: You want to do your other two
7 witnesses, the direct now?

8 MR. SLATER: Unfortunately, we lack Mr. Levy who is on
9 an airplane trying to get here. We could proceed with Mr.
10 Underwood.

11 CHAIRMAN BAGGETT: That was what we agreed with
12 Mr. Rossmann so he'd have a chance over lunch to become
13 familiar -- we are going out of our way to accommodate him.

14 MR. SLATER: I am happy to make Mr. Underwood
15 available. We were to do it as a panel, but we are happy to
16 do it seriatim.

17 MR. OSIAS: I had one or two questions. Could I get
18 those out of the way since we are on the same side?

19 CHAIRMAN BAGGETT: I would wait. No, no.

20 MR. OSIAS: That is fine.

21 MEMBER KATZ: This is only the first hour and a half.

22 CHAIRMAN BAGGETT: No. I would do that or take an
23 early break for lunch. I would rather keep going. We've
24 got Richard here so we don't want to take an early break.
25 He wants to stay here until five straight through.

1 MR. SLATER: Mr. Chairman, we expect Mr. Levy to be
2 here at 12, 12:30. We are happy to go with Mr. Underwood.
3 Why don't we proceed with Mr. Underwood and hopefully Tom
4 will join us.

5 CHAIRMAN BAGGETT: He is your third witness?

6 MR. SLATER: It is going to be Dennis, anyway. Let's
7 do Dennis.

8 Can you please state your name and spell it for the
9 record?

10 MR. UNDERWOOD: My name is Dennis B. Underwood. Last
11 name spelled U-n-d-e-r-w-o-o-d.

12 MR. SLATER: Can you state your professional title and
13 position.

14 MR. UNDERWOOD: I am vice president for the
15 Metropolitan Water District, Southern California.

16 MR. SLATER: What are your primary professional
17 responsibilities?

18 MR. UNDERWOOD: I have executive management
19 responsibilities for Colorado River resources for
20 Metropolitan.

21 MR. SLATER: Can you describe your educational and
22 professional background and qualification as they relate to
23 the subject matter of this hearing?

24 MR. UNDERWOOD: Over 30 years. When you get to my age
25 now, you used to want to inflate your years. Now you're

1 trying to hold them down. I have over 30 years in water
2 resources management, development. I am a civil engineer by
3 formal training. I started my career with the Department of
4 Water Resources and have conducted water management
5 development studies for almost all of Southern California,
6 including Imperial, Palo Verde, Coachella, all of the
7 coastal area. I was involved in the water development of
8 water quality plans. I also have served as the executive
9 director and the executive secretary for the Colorado River
10 Board, state agency responsible for Colorado River resources
11 for California. I have always served as the presidential
12 appointment as the Commissioner of Bureau of Reclamation,
13 who carries out the Secretary's responsibilities relative to
14 the Colorado River.

15 I have also conducted a consultant business, advising
16 business and government on water matters, and I have also
17 served as a consultant in the United Nations.

18 MR. SLATER: I think in front of you -- you have a blue
19 cover and a document which is labelled Exhibit 4 and 4A.

20 MR. UNDERWOOD: Yes.

21 MR. SLATER: What is that please?

22 MR. UNDERWOOD: It is my written statement.

23 MR. SLATER: Have you had an opportunity to review its
24 contents?

25 MR. UNDERWOOD: Yes, I have.

1 MR. SLATER: Would you like to make any corrections at
2 this time?

3 MR. UNDERWOOD: No.

4 MR. SLATER: Is it otherwise true and accurate?

5 MR. UNDERWOOD: Yes.

6 MR. SLATER: Can you briefly identify and describe the
7 location of the Metropolitan Water District and the water
8 supplies that it relies upon?

9 MR. UNDERWOOD: Sure. I am not going to refer to the
10 colors, though.

11 MR. OSIAS: Magenta.

12 CHAIRMAN BAGGETT: Is this chart an exhibit? If so,
13 can you tell us what exhibit number it is?

14 MR. SLATER: It is for demonstrative only.

15 Stephanie, do we have copies?

16 We have colored copies, and we will mark it.

17 MR. UNDERWOOD: The easiest way to explain
18 Metropolitan's service area is the coastal plain extending
19 from Ventura to the San Diego boundary with Mexico. It has
20 a population roughly of 17,000,000 people. Metropolitan's
21 principal water supplies are the State Water Project and
22 Colorado River supply. It also, in cooperation with its
23 member agencies, has developed conservation programs, local
24 water projects, recycling projects, groundwater recovery
25 projects. So there are other supplies that we have

1 developed in cooperation with the agencies. Basically we
2 serve over 50 percent of the water supply needs for that
3 service area.

4 Our main focus, water, water reliability, water
5 affordability, water quality, not only from a public health
6 but also only for grading of utility of the water, meaning
7 you get greater readings, opportunities for the protection
8 of groundwater basin.

9 MR. SLATER: Can you briefly describe what is the
10 Quantification Settlement Agreement?

11 MR. UNDERWOOD: The Quantification Settlement Agreement
12 is -- the easiest way to explain it, I guess, is that it is
13 a key component to the California Plan. In other words, it
14 serves as the basis, a lion's share basis, of reducing as
15 roughly the 800,000 acre-feet that California needs to
16 reduce to meet its basic -- to meet its needs within its
17 basic apportionment.

18 It has some rather key components that you've heard
19 some discussion that include water transfers. The surplus
20 guidelines not only have a soft landing, surplus guidelines
21 also allow California to continue to use anticipated
22 surplus water, providing a soft landing as we implement
23 transfers, but it also needed to help start the storage and
24 conjunctive use programs that also are needed because the
25 transfers alone would not provide a full adequate supply.

1 MR. SLATER: I am going to show you a document which
2 has been previously filed with the Board, identified as IID
3 Exhibit 22.

4 Can you tell us what that is?

5 MR. UNDERWOOD: Yes. This is the proposed
6 Quantification Settlement Agreement.

7 MR. SLATER: Is it the most recent draft that you are
8 aware of?

9 MR. UNDERWOOD: Yes, it is.

10 MR. SLATER: Is Metropolitan a proposed signatory for
11 the Quantification Settlement Agreement?

12 MR. UNDERWOOD: Yes, Metropolitan is.

13 MR. SLATER: Has the QSA itself been signed?

14 MR. UNDERWOOD: No, it hasn't.

15 MR. SLATER: Explain why not.

16 MR. UNDERWOOD: There is a number of legal documents
17 besides the QSA, and those are decision documents. And
18 until such time that we have completed the necessary
19 environmental reviews, we cannot sign those.

20 MR. SLATER: Can you please describe what
21 Metropolitan's role has been in negotiating the key terms
22 which ultimately lead to the preparation of the QSA?

23 MR. UNDERWOOD: Along with the other parties
24 Metropolitan was an architect on both the key terms and the
25 Quantification Settlement Agreement itself. We played a

1 role, obviously, in reaching agreement with all of the
2 agencies to come to water budgets and also for water
3 transfers that are key parts of the QSA, along with Interim
4 Surplus Guidelines, and there is another provision, the
5 payback program.

6 MR. SLATER: Can you summarize the actions that
7 Metropolitan has already undertaken in support of
8 implementation of the QSA?

9 MR. UNDERWOOD: Repeat.

10 MR. SLATER: Has Metropolitan taken actions and is it
11 going to take actions to implement the QSA and the Colorado
12 River Water Use Plan?

13 MR. UNDERWOOD: Correct. Part of the quantification
14 settlement is a number of conditions preceding that have to
15 be done in addition to the environmental reviews. And we
16 have moved -- we have moved forward on those conditions
17 precedent. In addition to that, we have been moving, which
18 you are aware of, on terms of the lining of the All American
19 and Coachella Canal, the Met One program that was made
20 reference before. The Met One IID Program, conservation
21 program.

22 In addition to that, we have been moving forward with
23 our storage and conjunctive use programs. The
24 quantification settlement also provides for additional
25 transfers outside of the QSA so long as it doesn't

1 materially affect the other agencies. That is why we have
2 initiated a program with the Palo Verde Irrigation District
3 which also provides for transfer. We've also been doing
4 some substantial amount of demand management work.

5 MR. SLATER: Is Metropolitan supportive of the
6 voluntary conservation measures and transfers that are
7 proposed by the QSA?

8 MR. UNDERWOOD: Yes.

9 MR. SLATER: What types of conservation measures are
10 supported by Metropolitan in the implementation of the QSA?

11 MR. UNDERWOOD: This goes for on-farm and system
12 improvements? In addition to that, in both the QSA, in
13 terms of definition of conserved water, includes provisions
14 for fallowing, and that is also included in the
15 environmental work that is being done on the transfer. It
16 is included with the scope.

17 MR. SLATER: By the way, is Metropolitan engaged in its
18 own demand management effort?

19 MR. UNDERWOOD: Yes, we are, and this has been an
20 ongoing effort. It is pretty remarkable when you look at
21 the last ten years, Metropolitan's service area population
22 has increased by about 5,000,000, and we are using less
23 water than we did ten years ago.

24 MR. SLATER: Could you briefly describe Metropolitan's
25 efforts to pursue cooperative or voluntary water

1 conservation and transfer agreements?

2 MR. MACAULAY: I'm sorry?

3 MR. SLATER: Such as the '88 agreement?

4 MR. UNDERWOOD: Yes. Let me just highlight a few. The
5 mention of the 1988 agreement where we are already
6 conserving 110,000 acre-feet. This is the program with
7 Imperial Irrigation District. We also are doing the
8 Coachella Canal lining and also the All American Canal. If
9 you combine those, it is about 94,000 acre-feet.

10 We have done -- like I mentioned previously, there is a
11 program that we have had with the Palo Verde Irrigation
12 District, proposed program, for land management, crop
13 rotation and water supply. We did a test program in 1992 to
14 see if such a program was feasible, and there was about
15 186,000 acre-feet conserved during that time, involving
16 about 20,000 acres of lands. And in addition to that, we
17 have the new program with the Palo Verde Irrigation
18 District. In addition to that, we have acquired the San
19 Diego Gas & Electric properties in the Palo Verde Valley
20 which were potentially up for sale. Those lands were
21 originally going to be used for water source for a nuclear
22 power plant. We purchased those lands so they can remain in
23 the program with the Palo Verde Irrigation District.

24 MR. SLATER: And can you briefly describe some of the
25 investments that Metropolitan is pursuing with regard to

1 storage of Colorado River water?

2 MR. UNDERWOOD: Yes. This goes back again with some
3 time. 1984 we entered into an agreement of Coachella Valley
4 Water District and also the Desert Water Agency for the
5 advanced delivery of waters, State Water Project waters. We
6 exchanged Colorado River water for state water and have been
7 delivered up to a total of 600,000 acre-feet. I think we
8 still presently have 200,000 acre-feet in storage in the
9 Upper Coachella Valley.

10 We also entered into agreement with the Central Arizona
11 Water Conservation District, where we are storing water in
12 Arizona. We have roughly about 81,000 acre-feet stored in
13 Arizona. We also have what has been referred to as
14 off-storage projects along the aqueduct, and that includes
15 Hayfield, Chuckwalla, Cadiz, with the goal looking at these
16 storage projects of providing a yield up to 300,000
17 acre-feet a year with an overall storage of 3,000,000
18 acre-feet.

19 We also have two other storages that we are looking at,
20 further storage potentially in Arizona and also in the Lower
21 Coachella Valley. The advantages of the last two programs
22 are that they are not off the aqueducts. So if we had a
23 shortage of state water and we had to bring all of the full
24 aqueduct's supply into the Metropolitan service area, but
25 there was surplus waters available on Colorado River system,

1 you would have an opportunity to make use of those supplies
2 and to put them in storage in either Arizona or Lower
3 Coachella.

4 MR. SLATER: Can you briefly summarize the level of
5 financial investments that Metropolitan has made in reducing
6 its reliance on imported water?

7 MR. UNDERWOOD: Going back to the point we made in
8 terms of demand management, we have invested, meaning
9 Southern California has invested, over \$1.2 billion in water
10 conservation fixtures, primarily into the low flush toilets,
11 showerheads and more efficient clothes washers. We have
12 also invested investments of over \$200,000,000 in local
13 water recycling. We have also executed 22 agreements to
14 provide financial assistance to projects that recover
15 contaminated groundwater, bringing contaminated groundwater
16 back into the supply system. We also have 53 agreements to
17 provide financial assistance to recycle water with contracts
18 yielding over 233,000 acre-feet water per year.

19 We have also have developed local groundwater storage
20 programs which currently have in excess of 200,000 acre-feet
21 within our service area. We have also signed some
22 agreements with San Bernardino Valley Municipal Water
23 district and some other outside entities that provide up to
24 storage of or drier supply of up to 90,000 acre-feet a
25 year. And I think importantly is the Diamond Valley Lake

1 which is an 800,000 acre-foot storage. Basically doubled
2 the amount of storage space in Southern California which
3 gives a lot of operational flexibility to Southern
4 California, and that again is over a \$2,000,000,000
5 investment. And we are also making into the inland feeder,
6 which is another in excess of a billion dollar investment.

7 We invested multi-billion dollars to help reduce our
8 demands for imported water, increase our reliability and
9 also improve water quality.

10 MR. SLATER: Mr. Underwood, in the approximate five and
11 half minutes we have left, can you briefly describe briefly
12 -- did you hear Mr. Macaulay discuss the Interim Surplus
13 Guidelines?

14 MR. UNDERWOOD: Yes.

15 MR. SLATER: Are you familiar with them?

16 MR. UNDERWOOD: Yes, I am.

17 MR. SLATER: Can you briefly describe what they are
18 about and what they mean for this process?

19 MR. UNDERWOOD: The Interim Surplus Guidelines
20 basically allow California to have surplus water under the
21 conditions of the river, I think that there was made
22 reference to earlier, that surplus water would not be
23 available these years because the other states use has
24 increased, the reservoirs are no longer as full. So the
25 Interim Surplus Guidelines provide California with the use

1 of surplus water or soft landing for 15 years. Because, as
2 was mentioned, these transfer projects cannot be put in
3 place overnight. It will take a number of years.

4 We have 15 years, basically, of a soft landing, the
5 access to surplus water. But that doesn't come without
6 conditions. The other states and the Secretary were very
7 concerned that California have a real plan, not just a paper
8 plan, to reduce its use. Part of that is then performance.
9 Performance was based on benchmarks. Those benchmarks are
10 every three years, starting 2003 and going at three year
11 increments, and they are basically the same as the schedule
12 for the transfers. So we have a performance that we have to
13 meet those benchmarks or potentially the surplus guidelines
14 will be suspended.

15 In addition to that, they were concerned about were
16 they binding. One is you have performance, but they don't
17 want to make sure that -- not wait for those 15 years, and
18 how can you stop making the transfers, et cetera. They were
19 concerned that a document where executed, and that is why
20 you look at the QSA as the December 31st in 2002 was the
21 time frame for that, that document to be executed so that
22 surplus guidelines could stay in place.

23 MR. SLATER: Mr. Underwood, I want to --

24 MR. UNDERWOOD: You have to excuse me, I'm suffering
25 from the flu, so I'm having a very dry mouth about right

1 now.

2 MR. SLATER: You are doing great, Dennis.

3 MR. UNDERWOOD: Thanks.

4 MR. SLATER: I would like to ask you a couple questions
5 that I would like you to answer based upon your experience
6 as a water professional, the 30 years that you mentioned
7 and your experience in this case, your knowledge of the
8 facts and circumstances in this case.

9 If California does not meet the specific benchmarks set
10 forth what is likely to happen?

11 MR. UNDERWOOD: The simple answer is the surplus won't
12 be available.

13 MR. SLATER: In your experience and with your knowledge
14 of the facts and circumstances that are present in this case
15 is the implementation of the QSA critical to the water
16 supply future of California?

17 MR. UNDERWOOD: Yes. I think the California Plan, the
18 reductions, the QSA are critical. One of the biggest
19 challenges, from my point of view, in my career one of the
20 biggest challenges facing California, based upon water
21 history.

22 MR. SLATER: Based upon all those years of experience
23 and your present knowledge of the facts and circumstances in
24 this case, is the IID/San Diego transfer a key component of
25 the QSA and the California Water Use Plan?

1 MR. UNDERWOOD: Yes.

2 MR. SLATER: Based upon your experience and your
3 knowledge of the facts and circumstances in this case, is it
4 urgent and critical to the success of the QSA that IID/San
5 Diego transfer move forward?

6 MR. UNDERWOOD: Yes.

7 MR. SLATER: I have no further questions.

8 CHAIRMAN BAGGETT: Thank you.

9 I think at this point we will break for lunch, come
10 back and start at 1:00 promptly.

11 Mr. Levy will be here?

12 MR. SLATER: He was on the plane at 9:30.

13 CHAIRMAN BAGGETT: If we can start with the final
14 witness, then I would like to begin the cross-examination in
15 order of all three witnesses. I know I certainly have a
16 number of questions on these two and I am sure I will by the
17 time we get to Mr. Levy.

18 MR. SLATER: Thank you.

19 CHAIRMAN BAGGETT: We are in recess until 1:00.

20 (Luncheon break taken.)

21 ----oOo----

22

23

24

25

1 AFTERNOON SESSION

2 ---oOo---

3 CHAIRMAN BAGGETT: Back on the record and back with
4 San Diego.

5 MR. SLATER: Mr. Chair, a couple of housekeeping items
6 that follow on the last two witnesses, while Mr. Levy is in
7 a taxi and due to arrive here any second.

8 We had two documents that were referred to and we want
9 to mark for identification. The first, for clarification,
10 there was a demonstrative exhibit that was behind Mr.
11 Macaulay as he was testifying. It is actually an excerpt
12 from an existing exhibit that is presently on file, that is
13 IID Exhibit 45. We propose to mark the exhibit for
14 demonstrative purposes only as Exhibit 45A, and we have
15 color copies available.

16 The second is the existing demonstrative exhibit which
17 is behind the table and we have color copies. We propose to
18 mark that for demonstrative purposes only, San Diego Exhibit
19 44.

20 CHAIRMAN BAGGETT: For the record, oral record, this is
21 the California major water projects?

22 MR. SLATER: No. This document, or the poster board,
23 entitled Southern California Primary Water Sources and
24 Distribution.

25 CHAIRMAN BAGGETT: He is in transit?

1 MR. SLATER: We have two lawyers downstairs trying to
2 grab him as soon as he exits from the cab.

3 CHAIRMAN BAGGETT: It clearly is my preference to
4 allow Mr. Levy to testify, and then we have the panel of the
5 three witnesses, since they all are addressing similar
6 issues, and I think the questions and cross-examination will
7 probably go to any or all or whoever feels most comfortable
8 answering it. In my experience when there are similar
9 topics, it makes for quicker and more productive
10 cross-examination.

11 MR. SLATER: We appreciate the Board and the parties
12 accommodating our request, and we apologize for raising it
13 for the first time with the Board this morning.

14 MR. OSIAS: While we have a moment and waiting, the
15 exhibit that I had used in my opening this morning, we have
16 marked.

17 CHAIRMAN BAGGETT: Come up to the mike.

18 MR. OSIAS: We used this dead time for this purpose
19 that might be more efficient. I put up this morning the IID
20 proposed transfer acquisition diversion ramp which was the
21 illustration of numbers that are in evidence. I've handed
22 Exhibit 1A to staff and we have given an electronic version
23 to staff and we have color photocopies for parties.

24 CHAIRMAN BAGGETT: I wouldn't mind one if you have
25 one.

1 Thank you.

2 MR. OSIAS: We have handed some out and if others need
3 them they are available here at counsel's table.

4 Thank you.

5 CHAIRMAN BAGGET: We might as well take a quick
6 recess, do any business among yourselves and wait for Mr.
7 Levy.

8 (Break taken.)

9 CHAIRMAN BAGGETT: Back on the record.

10 MR. SLATER: Would you please state your name and spell
11 it for the record?

12 MR. LEVY: Tom Levy, L-e-v-y.

13 MR. SLATER: Mr. Levy, were you subpoenaed to appear at
14 this hearing?

15 MR. LEVY: Yes, I was.

16 MR. SLATER: In front of you I think there is a blue
17 document which I believe is San Diego Exhibit 3. Can you
18 take a look at that, please?

19 MR. LEVY: Yes.

20 MR. SLATER: What is that document? Can you describe
21 it?

22 MR. LEVY: This is a copy of my testimony that I have
23 submitted for the record.

24 MR. SLATER: Have you had an opportunity to review that
25 testimony?

1 MR. LEVY: Yes, I have.

2 MR. SLATER: Are there any changes you would like to
3 make in the testimony?

4 MR. LEVY: There is one change in the document. I
5 indicated that we have had issued the environmental
6 documents on the Coachella Valley Water Management Plan, and
7 we have not. We are slightly behind schedule on that.

8 MR. SLATER: Other than that change, is there any other
9 change that you would like to make?

10 MR. LEVY: No.

11 MR. SLATER: Is the testimony otherwise true and
12 correct?

13 MR. LEVY: Yes.

14 MR. SLATER: What is your professional title and
15 position?

16 MR. LEVY: I am the General Manager, Chief Engineer of
17 the Coachella Valley Water District.

18 MR. SLATER: Can you briefly describe your educational
19 and professional background and qualifications as they
20 relate to the subject matter of this hearing?

21 MR. LEVY: I have a Bachelor of Science in engineering
22 from UCLA. I have a Master of Science in civil engineering
23 from University of Southern California, and I have a Master
24 of Science in environmental engineering from Loyola of Los
25 Angeles.

1 MR. SLATER: Can you briefly describe -- Strike that.

2 Can you briefly identify the location of the Coachella
3 Valley Water District and briefly describe the functions of
4 the district.

5 MR. LEVY: Yes. The Coachella Valley Water District
6 serves approximately a thousand square miles in the
7 Coachella Valley, which most people think of as the Palm
8 Springs area, going down about halfway on either side of the
9 Salton Sea. We don't serve Palm Springs directly other than
10 some of our flood control facilities surrounding it.

11 We provide flood control, domestic water at the retail
12 level to about 80,000 customers. Sanitation to about 70,000
13 retail customers. We operate six wastewater plants. We
14 reclaim water from three of them and use for golf course and
15 green belt irrigation. We operate an irrigation system. We
16 bring water from the Colorado River, picking it up at the
17 All American Canal and what we call the Coachella branch,
18 which is about 122 miles long, deliver it to our farmers and
19 import on an average year for delivery about 300,000
20 thousand acre-feet of water.

21 We operate a drainage system which picks up tile drain
22 water and delivers that ultimately to the Salton Sea. We
23 are a state water contractor and through an exchange
24 agreement import that water to the Coachella Valley. Our
25 exchange agreement is with Metropolitan, and we give them

1 water from the State Water Project at San Bernardino and
2 then receive a like amount of water at White Water just
3 above Palm Springs, and recharge that.

4 I think I have covered the major functions of the
5 district.

6 MR. SLATER: Mr. Levy, behind you is a document that
7 has been identified for demonstrative purposes only as San
8 Diego Exhibit 44.

9 Could you please point out the Coachella Valley service
10 territory?

11 MR. LEVY: Yes. It's the red service area in here. It
12 would appear to me that it should come down a little farther
13 in here, a little farther along the sides of the Salton Sea.

14 MR. SLATER: Can you briefly describe the Seven Party
15 Agreement and how it has been implemented?

16 MR. LEVY: Yes. The Seven Party Agreement was an
17 agreement reached among the California-Colorado River
18 agencies in 1931 and was the result of significant
19 negotiations between the parties, those parties being City
20 of Los Angeles and Metropolitan Water Division, acting off
21 and on as the same agency in there, City and County of San
22 Diego, Coachella Valley Water District, Imperial Irrigation
23 District and Palo Verde Irrigation District. There was --
24 included in there water for the Yuma Project Reservation
25 District, but they were not active participants in the

1 negotiations.

2 What the Seven Party Agreement did was divide up
3 California's entitlement to Colorado River water. It is set
4 up such that Palo Verde Irrigation District has a right to
5 irrigate 104,500 acres of land in the Palo Verde Valley.
6 Next is the Yuma Project Reservation Division, which has a
7 right to irrigate lands that are within the reservation
8 division of the Yuma Project, not to exceed 25,000 acres.
9 And then for Imperial and Coachella Valleys a right to
10 irrigate the lands within their service area, and then the
11 right to irrigate lands on the Palo Verde Mesa, not to
12 exceed 16,000 acres.

13 There is no quantified amount of water included in
14 there other than the total. So none of the agencies that I
15 just listed have a specific quantity of water. They have a
16 right to use subject to reasonable beneficial use
17 requirements in there, the first 3.85 million acre-feet of
18 water on the Colorado River water on California. The next
19 priority is for Metropolitan Water District of 550,000
20 acre-feet. The sum of the 3.85 and the 550- total the
21 amount of water that California is allowed under the
22 California Limitation Act and under the Arizona v.
23 California Supreme Court decision of 4.4 million acre-feet.

24 The Seven Party Agreement also includes a sixth
25 priority which is 500,000 acre-feet to Metropolitan and

1 112,000 -- no, 550,000, I believe, for Palo Verde -- for
2 Metropolitan and 112,000 in change for the City and County
3 of San Diego. That amount of water was assigned to
4 Metropolitan when the San Diego County Water Authority
5 joined Metropolitan in the '40s.

6 You then have -- and each of these have a number on
7 them. So you then have priority six water which is for
8 Imperial and Coachella Valleys and for the Palo Verde Mesa,
9 the same lands that were described earlier, and that totals
10 300,000 acre-feet. And then you have priority seven which
11 is all remaining water for California ag agencies.

12 MR. SLATER: Mr. Levy, I'm going to show you a document
13 which has previously been filed as Imperial Exhibit 26.

14 Can you review the document, please?

15 MR. LEVY: Yes.

16 MR. SLATER: Do you recognize it?

17 MR. LEVY: Yes.

18 MR. SLATER: Can you tell us what it is?

19 MR. LEVY: It is a copy of the Seven Party Agreement of
20 August 18, 1931.

21 MR. SLATER: Mr. Levy, in your opinion, based upon the
22 Seven Party Agreement that you just described, what is the
23 need for quantification of agricultural priorities?

24 MR. LEVY: The problem or the need exists because none
25 of the agencies have -- none of the agricultural agencies

1 had a quantified right. And, therefore, there was continual
2 disagreement relative to reasonable and beneficial use by
3 various parties. And because the California agricultural
4 agencies were or did at times use more than the 3.85 allowed
5 them under the first three priorities, and so there was
6 concern that when California was limited to 4.4 million
7 acre-feet that we would then have problems among the
8 agencies of how this water should be allocated.

9 It also created an impediment to transfers between the
10 agricultural agencies and the urban agencies. Metropolitan,
11 because, without a quantified amount, water could flow -- if
12 you attempted to move water to the urban areas, it was water
13 that potentially could come from one of the other lower
14 priority agencies in the agricultural entitlement.

15 MR. SCOTT: Mr. Levy, in your opinion, does the
16 quantification settlement as an embodiment of key terms
17 solve this problem?

18 MR. LEVY: Yes, it does.

19 MR. SLATER: Mr. Levy, can you, along with
20 quantification benefits that you've described, can you
21 describe some of the other benefits to Coachella from
22 implementing the QSA?

23 MR. LEVY: Coachella benefits from the QSA through
24 receiving a fixed amount of water to meet our needs. We are
25 currently in overdraft. And under the Seven Party Agreement

1 and another agreement which is the Agreement of Compromise
2 that was signed in 1934 between IID and Coachella, IID has a
3 priority to use water over Coachella subject to the water
4 being put to reasonable and beneficial use in their service
5 area.

6 So there was a risk in there on Coachella, and by
7 reaching agreement through the key terms in the QSA we were
8 are able to get a firm supply of water and get enough water
9 through the various elements of it to allow us to solve the
10 overdraft in the Coachella Valley.

11 MR. SLATER: Mr. Levy, you are familiar with the
12 California-Colorado River Plan, correct?

13 MR. LEVY: Yes.

14 MR. SLATER: In your mind is the QSA consistent with
15 the California-Colorado River Plan?

16 MR. LEVY: Yes.

17 MR. SLATER: Based upon your experience and in light of
18 the present circumstances, is the QSA in the proposed
19 actions under the QSA essential to the implementation of the
20 Colorado River Plan for California?

21 MR. LEVY: Yes.

22 MR. SLATER: Has Coachella executed the Protest
23 Dismissal Agreement?

24 MR. LEVY: Yes.

25 MR. SLATER: I believe you have in front of you IID

1 Exhibit 22. Can you take a look at that, please?

2 MR. LEVY: Okay.

3 MR. SLATER: Can you tell us what that is?

4 MR. LEVY: That is the -- 22 or 23?

5 MR. SLATER: Twenty-two.

6 MR. LEVY: Twenty-two is the Quantification Settlement
7 Agreement.

8 MR. SLATER: Sorry, what is 23?

9 MR. LEVY: Twenty-three is the Protest Dismissal
10 Agreement.

11 MR. SLATER: Is that a true and correct copy of what
12 you executed?

13 MR. LEVY: It appears to be. It was executed by our
14 attorney on behalf of the district.

15 MR. SLATER: Based upon your execution of that Protest
16 Dismissal Agreement and in light of the QSA program moving
17 forward, does Coachella have any objection to this transfer,
18 the San Diego/IID transfer proceeding?

19 MR. LEVY: No.

20 MR. SLATER: Based upon your decades of experience in
21 water management and your knowledge of all the facts and
22 circumstances that exist in this case, do you have any
23 opinion as to whether implementation of the QSA is critical
24 to the water supply future of California?

25 MR. LEVY: I believe limitation of the QSA is critical

1 to the water supply of California. The QSA provides in
2 there for the continuance of the Interim Surplus Guidelines,
3 surplus water provision for 15 years which is critical to
4 ensuring that the Met aqueduct is full and that water flows
5 to coastal Southern California. If it does not, it will
6 have impacts on the state because Metropolitan will have to
7 turn to the north and attempt to bring water in from there.
8 It is critical for the Coachella Valley in terms of solving
9 our overdraft.

10 MR. SLATER: Mr. Levy, based upon your decades of
11 experience in water management and your position as the
12 general manager of Coachella, your direct participation in
13 the development of the key terms and your knowledge of the
14 specific facts and circumstances in this case, is it
15 critical that the State Board approve the San Diego/IID
16 transfer in order to implement the QSA?

17 MR. LEVY: Yes. It is a condition precedent to the
18 execution of the QSA.

19 MR. SLATER: With that, no further questions.

20 Thank you.

21 CHAIRMAN BAGGETT: I think what we will do is we'll
22 have the panel of the last three witnesses all come up at
23 once, and we will begin the cross-examination.

24 With that, I guess we will go down in order.

25 Does Imperial Irrigation District have any questions of

1 any of this panel?

2 MR. OSIAS: Yes.

3 ---oOo---

4 CROSS-EXAMINATION OF SAN DIEGO COUNTY WATER AUTHORITY PANEL

5 BY IMPERIAL IRRIGATION DISTRICT

6 BY MR. OSIAS

7 MR. OSIAS: Thank you, distinguished panel. Let me
8 direct my first question, if I might, to Mr. Macaulay.

9 You had testified about the pressure that would be put
10 on the State Water Project and Bay-Delta if the QSA
11 provisions are not implemented. Could you describe what
12 risk there is to the Bay-Delta environment in the absence of
13 the Colorado River transfers that you discussed?

14 MR. MACAULAY: Well, I am not an expert on fish. I am
15 very knowledgeable about the conflict between fish and water
16 diversions in the Delta. It is a large driving force for
17 CALFED. And certainly with the existing conveyance
18 facilities in the Delta, the existing status of populations
19 have several listed endangered species.

20 Right now it's very difficult to get an additional drop
21 of water, let alone an additional 600,000 acre-feet out of
22 the Delta on a reliable basis.

23 MR. OSIAS: If an additional 600- was moved from the
24 Delta, which species would be at risk? Do you know?

25 MR. MACAULAY: First of all, I don't think that much

1 water could be moved in addition to current water on a
2 reliable basis. Certainly in a wet year, perhaps. The
3 species at risk right now I think are a matter of record in
4 some preceding, I am sure. It is winter-run chinook salmon,
5 Delta smelt.

6 MR. OSIAS: Mr. Underwood, you have Exhibit 22
7 available? That would be the QSA draft. If you would turn
8 to Page 11, Paragraph 6, at the top of that page, 2.1 in
9 parenthesis. Isn't it correct that the terms of the
10 transfer between IID and San Diego are set by the 1998
11 transfer agreement and are not changed by the QSA?

12 MR. UNDERWOOD: Correct.

13 MR. OSIAS: Isn't it also true that the transfer
14 agreement mentions fallowing as an on-farm conservation to
15 us?

16 MR. UNDERWOOD: As framed now.

17 MR. OSIAS: I have nothing further.

18 CHAIRMAN BAGGETT: The Colorado River Tribes.

19 MR. SHEPARD: We have no questions.

20 CHAIRMAN BAGGETT: County of Imperial.

21 ----oOo----

22 CROSS-EXAMINATION OF SAN DIEGO COUNTY WATER AUTHORITY PANEL

23 BY COUNTY OF IMPERIAL

24 BY MR. ROSSMANN

25 MR. ROSSMANN: Mr. Macaulay, first question is to you,

1 sir. Could you refer to San Diego Exhibit 15, the Colorado
2 River Plan of State of California.

3 MR. MACAULAY: Yes, I have it in front of me.

4 MR. ROSSMANN: Does that plan require the entering into
5 of the QSA?

6 MR. MACAULAY: I don't have direct knowledge of that.
7 I know the QSA is an agreement that is yet to be signed that
8 is associated with that and certainly contemplated by that.
9 Whether it is actually required by the 4.4 Plan, I don't
10 have detailed knowledge.

11 MR. ROSSMANN: Let me ask you this: I had a moment to
12 examine that after you mentioned it in your testimony. I
13 did not see any reference to the QSA in that Exhibit 15.
14 Did I miss something or am I correct in assuming that the
15 QSA is not referenced in there at all?

16 MR. MACAULAY: I don't know how to answer your
17 question. I don't know whether you missed anything or not,
18 nor am I familiar with the details.

19 MR. ROSSMANN: Let me then ask you to look at San Diego
20 16, which is the Interim Surplus Guidelines that you
21 discussed in your testimony, and I think what you are
22 referring to is Paragraph 5B on Page 21.

23 MR. MACAULAY: You will bear with me. I am familiar
24 with a different version or a different printing of this.

25 MR. ROSSMANN: Right. I think I was looking at the

1 same one that you have in front of you. It is at the top of
2 Page 21.

3 MR. MACAULAY: Yes.

4 MR. ROSSMANN: I am going to paraphrase -- maybe you
5 should just read the reference to the QSA there because I
6 don't have a copy of that in front of me about anticipating
7 execution.

8 MR. MACAULAY: Certainly. This is at Page 21 of 22 on
9 San Diego San Diego County Water Authority Exhibit 16.
10 Reads at the top of the page:

11 It is expected that the California-Colorado
12 River contractors will execute the
13 Quantification Settlement Agreement (and its
14 related documents) among... (Reading.)

15 And it lists the parties. Do you want me to proceed
16 further?

17 MR. ROSSMANN: No, that's the crucial phrase. Is it
18 your understanding that that condition in the Secretary's
19 guidelines require the execution of the QSA as presently
20 drafted, or do the parties have discretion to modify that
21 QSA before they execute it?

22 MR. MACAULAY: Reading the paragraph in its entirety, I
23 don't see anything that requires the parties to sign the
24 QSA. It talks about the consequences of not executing the
25 Quantification Settlement Agreement, which is in capital

1 letters. I assume they mean -- I don't know what to
2 assume.

3 MR. ROSSMANN: Maybe my question would be better
4 directed to those who participated in that. You stated that
5 it was in the public interest to approve this transfer.
6 Based on your experience in water resources management and
7 the history of California, do you also believe it would be
8 in the public interest to eliminate, if possible,
9 third-party impacts of this transfer?

10 MR. SLATER: Objection. Vague and ambiguous. Please
11 identify the third party impacts.

12 CHAIRMAN BAGGETT: Sustained.

13 Can you clarify?

14 MR. ROSSMANN: Mr. Macaulay, what is your understanding
15 of the term "third-party impacts" as that's used in water
16 transfer lexicon?

17 MR. MACAULAY: Recognizing that it is dealt in my mind
18 specifically in law, it is used in common practice to refer
19 to a wide variety of potential impacts to parties not part
20 of the direct transaction, whether it is environmental or
21 otherwise.

22 MR. ROSSMANN: Using that definition and embracing
23 environmental values and also economic impacts in the County
24 of Imperial, would you believe it to be in the public
25 interest to eliminate to the greatest degree possible the

1 third-party impacts of this proposed transfer?

2 MR. MACAULAY: I think I can say with some confidence
3 that it makes good business sense and good public interest
4 sense to minimize third-party impacts in any transfer. But
5 I would also comment that it is a case-by-case
6 determination. I've never known two transfers to be the
7 same.

8 MR. ROSSMANN: If impacts cannot be eliminated, it
9 would also be on a case-by-case basis in the public interest
10 to mitigate them to the greatest degree possible?

11 MR. MACAULAY: I would say, you used the word
12 "minimize," not trying to be coy with words, but my sense of
13 the word "mitigation" applies to CEQA environmental impacts.

14 MR. ROSSMANN: I was using it in the generic, but I
15 think your answer conveys the same message.

16 Mr. Underwood, you testified that if California doesn't
17 make peace with the Secretary, the state is going to lose
18 880,000 acre-feet per year from the Colorado River; is that
19 correct?

20 MR. UNDERWOOD: Correct.

21 MR. ROSSMANN: What will the impact of that be on
22 Metropolitan Water District in terms of annual acre-feet?

23 MR. UNDERWOOD: The reduction potentially for
24 Metropolitan, assuming no other actions occurred, is the
25 loss of potentially 700,000 acre-feet. We already have the

1 Met One/IID program, so that would reduce it really to,
2 like, 600,000. If no other actions were taken and it was
3 strictly looking at the priorities.

4 MR. ROSSMANN: In these series of questions that is, in
5 fact, the assumption that I ask you to make.

6 What would the impact of that approximately 600,000
7 acre-foot loss be on the San Diego County Water Authority in
8 annual terms?

9 MR. UNDERWOOD: You would have to look at overall Met's
10 demands. Roughly we'll say it is at 2,000,000 acre-feet.
11 And now you are down potentially, assume that you have no
12 other offsets and you are losing 600-, almost losing a
13 third. So if you were equivalently cutting people back,
14 everybody would lose almost a third of their water supply.
15 600,000 acre-feet translate roughly to supply for 5,000,000
16 people.

17 MR. ROSSMANN: In the event of this loss to
18 Metropolitan, San Diego would be cut back in the same
19 proportion as Met's other customers?

20 MR. UNDERWOOD: You probably have -- for me to answer
21 you probably need an attorney relative to because it does
22 deal with some issues that I am not as familiar with. I do
23 have some general understandings of preferential rights, et
24 cetera, but I think it would be best to ask some other
25 party.

1 MR. ROSSMANN: On the subject of preferential rights,
2 are you aware that San Diego has legally challenged those
3 preferential rights?

4 MR. UNDERWOOD: Correct.

5 MR. ROSSMANN: Are you aware that San Francisco Supreme
6 Court recently rejected that challenge?

7 MR. UNDERWOOD: Correct.

8 MR. ROSSMANN: Sir, let me ask you to turn to IID
9 Exhibit 22, which is the QSA. And first turn to Page 3 of
10 that exhibit.

11 MR. UNDERWOOD: Okay.

12 MR. ROSSMANN: Am I correct in my understanding that
13 this agreement recognizes temporary land fallowing, but not
14 permanent land fallowing as a source of conserved water?

15 MR. UNDERWOOD: Correct.

16 MR. SLATER: Objection.

17 MR. ROSSMANN: We will see if I can get another one in
18 before he objects.

19 MR. UNDERWOOD: I'm going to be slower on the draw.

20 MR. ROSSMANN: Can we look at Page 8, sir, Subparagraph
21 56. This paragraph --

22 Why don't you read that paragraph into the record so
23 that I am not mischaracterizing it.

24 MR. UNDERWOOD: Temporary land fallowing, the
25 creation of conserved from the retirement of

1 land for crop reduction activities for a
2 period starting no earlier than the effective
3 date and ending on or prior to the termination
4 date. (Reading.)

5 MR. ROSSMANN: Am I correct that the effective date and
6 the termination date are 75 years apart in this agreement?

7 MR. SLATER: Objection. The document speaks for
8 itself.

9 CHAIRMAN BAGGETT: I would overrule.
10 Answer it.

11 MR. UNDERWOOD: Ask the question again.

12 MR. ROSSMANN: The effective date and termination date
13 are 75 years apart?

14 MR. UNDERWOOD: Let me just take a look back.

15 MR. ROSSMANN: Yes, sir.

16 MR. UNDERWOOD: It's been a while.

17 MR. ROSSMANN: I think if you look right below that,
18 sir, just to help you, termination is defined one paragraph
19 below.

20 MR. UNDERWOOD: Correct.

21 MR. ROSSMANN: Now, did you actually participate in the
22 negotiation of this document yourself?

23 MR. UNDERWOOD: I did.

24 MR. ROSSMANN: Do you have an understanding of why
25 temporary land fallowing was defined to embrace a period of

1 up to 75 years?

2 MR. SLATER: Objection. The document speaks for
3 itself.

4 MR. ROSSMANN: It doesn't speak for itself. I'm asking
5 if he has a -- based on his personal experience or knowledge
6 why temporary land fallowing was --

7 CHAIRMAN BAGGETT: I would overrule.

8 Please answer.

9 MR. ROSSMANN: To include a period of up to 75 years.

10 CHAIRMAN BAGGETT: Overruled.

11 MR. UNDERWOOD: My understanding, it gave additional
12 flexibility in terms of a means for conservation. Without
13 looking at any particular time frame, it gave additional
14 flexibility to do that.

15 MR. ROSSMANN: Do you know why the agreement does not
16 just expressly recognize as conserved water permanent
17 fallowing?

18 MR. UNDERWOOD: This again is my opinion. I think it
19 has to do with state law, where they recognize temporary
20 fallowing, not necessarily permanent fallowing. That is
21 just my recollection of state law.

22 MR. ROSSMANN: Yes, sir.

23 Let me ask that more specifically. This definition was
24 selected to ensure compliance with state law?

25 MR. UNDERWOOD: I believe so.

1 MR. ROSSMANN: Let me turn to the Palo Verde Irrigation
2 District Metropolitan proposed program to which you
3 referred. Does that program require that the Palo Verde
4 District adopt an overall following program before
5 individual farmers enter into contracts?

6 MR. UNDERWOOD: There is two agreements with the Palo
7 Verde. One is a program agreement with the district. The
8 other are direct agreements with the farmers. So one is
9 for program administration, the other is for actual
10 execution with the individual farmers.

11 MR. ROSSMANN: My understanding is that before the
12 farmers can execute, the overall program has to be adopted
13 first; is that correct?

14 MR. UNDERWOOD: Correct. It has to be approved by both
15 districts.

16 MR. ROSSMANN: By both Metropolitan and Palo Verde.
17 Does the Palo Verde program reimburse the district for the
18 cost of administering the program?

19 MR. UNDERWOOD: Correct.

20 MR. ROSSMANN: Does it also provide compensation for
21 social services that may be occasioned by the transfer?

22 MR. UNDERWOOD: We are looking at what we call the
23 Community Improvement Program, where there is funds
24 dedicated to improve the -- for community improvement to
25 offset social economic impacts.

1 MR. ROSSMANN: Thank you, sir.

2 Would you agree with Mr. Levy that the critical
3 achievement of the QSA is to finish the work left undone in
4 1931, to actually quantify each Colorado River user's
5 share?

6 MR. UNDERWOOD: Given the condition -- I think I want
7 to preface this a little bit because there are different
8 ways you could have done all of this. You have to recognize
9 that the Secretary of the Interior said he was not going to
10 approve any transfers unless there was quantification. He
11 was not going to provide surplus water unless there was a
12 California Plan.

13 That led us to the quantifications. You could have
14 other types of agreements, potentially, but you still had
15 that problem that Levy pointed out, the problem of allowing
16 waters to flow to parties without having objections. So you
17 need to help -- it's sort of frustrating, to help to
18 accomplish those transfers. The quantification became very
19 beneficial.

20 MR. ROSSMANN: Yes, sir.

21 That quantification agreement has not yet been
22 executed?

23 MR. UNDERWOOD: Correct.

24 MR. ROSSMANN: As I understand your earlier testimony,
25 it is undergoing environmental review?

1 MR. UNDERWOOD: Correct.

2 MR. ROSSMANN: Is your understanding that the parties
3 will be free to modify that agreement between execution
4 based upon input they receive during the environmental
5 review?

6 MR. UNDERWOOD: Correct. If it is agreeable to all
7 parties.

8 MR. ROSSMANN: Mr. Levy, I have just a few series of
9 questions for you.

10 You testified that the QSA helps your district solve
11 its overdraft problem. Could you elaborate on how that
12 solution comes about?

13 MR. LEVY: The solution to our overdraft comes about
14 through a variety of methods. We receive through a whole
15 series of transfers that are written up in the key terms and
16 reflected in the Quantification Settlement Agreement, which
17 provides a water supply of 456,000 acre-feet to the
18 Coachella Valley, plus an additional 50,000 acre-feet for
19 use in the area that is outside of our improvement district
20 number one, which is the Colorado River service area of the
21 Coachella Valley Water District.

22 So it provides a water supply to us and then, through a
23 water management plan that includes conservation, water
24 recycling, water recharge and in lieu recharge to provide
25 water to the users in the valley, we're able to solve our

1 overdraft.

2 MR. ROSSMANN: Does that include, sir, the use of
3 Colorado River water to recharge the Coachella Basin?

4 MR. LEVY: Yes, it does.

5 MR. ROSSMANN: Sir, are you familiar with the comments
6 by the Environmental Protection Agency on the QSA and EIR
7 that were issued on April 16?

8 MR. LEVY: Not in detail.

9 MR. ROSSMANN: Have you seen a copy of those
10 comments?

11 MR. LEVY: I believe I saw a copy of them, but I am not
12 sure that I read them.

13 MR. ROSSMANN: Are you aware independently of those
14 comments that the use of Colorado River water to recharge
15 overdrafted Coachella Basins is a serious matter to EPA?

16 MR. LEVY: No, I am not.

17 MR. ROSSMANN: Thank you very much, your Honor. No
18 further questions.

19 CHAIRMAN BAGGETT: Defenders of Wildlife. Sierra Club
20 is still not here.

21 ----oOo----

22 CROSS-EXAMINATION OF SAN DIEGO COUNTY WATER AUTHORITY PANEL

23 BY DEFENDERS OF WILDLIFE

24 BY MR. FLETCHER

25 MR. FLETCHER: Afternoon. I have a few short questions

1 for Mr. Underwood.

2 In your testimony you stated that the IID/San Diego
3 County Water Authority transfer agreement was a portion of
4 the Quantification Settlement Agreement, was incorporated in
5 it. I believe you just testified, but I will ask again: Is
6 an important purpose of the QSA to quantify the entitlements
7 of the Colorado River water, of the parties of the Colorado
8 River water?

9 MR. UNDERWOOD: It helps facilitate transfers, yes.

10 MR. FLETCHER: I believe you testified a moment ago
11 that it would be possible, based on environmental comments
12 or other third-party impact comments, comments of any sort,
13 to modify the QSA after the environmental analysis comment
14 period closes.

15 Would it be possible for the QSA parties to enter into
16 a QSA that accomplishes the purpose of quantifying the
17 entitlements of the parties to Colorado River water that
18 includes the IID/San Diego transfer implemented in a manner
19 different from that in the current proposal?

20 MR. SLATER: Objection. Calls for speculation.

21 CHAIRMAN BAGGETT: Rephrase.

22 MR. FLETCHER: Take a moment.

23 Do the parties have the freedom or the ability to
24 modify the Quantification Settlement Agreement in a way that
25 accomplishes that agreement's main purpose in a manner that

1 includes a transfer implemented differently from that in the
2 current proposal?

3 MR. UNDERWOOD: Couple things. One is that the QSA
4 took many hours, a lot of give and take, so if you are
5 materially changing things it probably would be extremely
6 difficult. If it is something that the parties consent to,
7 then that is a different matter.

8 MR. FLETCHER: Thanks.

9 You also stated in previous testimony that the interim
10 surplus criteria includes benchmarks for reducing
11 California's Colorado River water use. I believe that the
12 ISC are San Diego Exhibit 16 and directly under Paragraph 5B
13 of that exhibit on Page 21 --

14 MR. UNDERWOOD: Okay.

15 MR. FLETCHER: I believe the ISC set out the benchmarks
16 there.

17 MR. UNDERWOOD: Correct.

18 MR. FLETCHER: Could you read me the year and amount of
19 the first benchmark?

20 MR. UNDERWOOD: The 2003 is -- this is referring to the
21 reduction in agriculture use. Would be 3,000,710 on 40,000
22 acre-feet; 2006 is 3,640,000 thousand acre-feet.

23 MR. FLETCHER: Those two are fine. For the first
24 benchmark, if the Colorado River Plan and various elements
25 of that plan, apart from the transfer, are implemented

1 according to schedule, is it your understanding that
2 California will meet the benchmark set forth there, apart
3 from the effect of the IID/San Diego transfer?

4 MR. UNDERWOOD: Yes.

5 MR. FLETCHER: As to the second benchmark, again, the
6 same question. If all of the elements of the Colorado River
7 Plan are implemented, apart from the transfer, is it your
8 understanding that the California will meet the second
9 benchmark in the absence of the IID/San Diego water
10 transfer?

11 MR. UNDERWOOD: I think then it is in doubt.

12 MR. FLETCHER: No more questions.

13 Thank you.

14 CHAIRMAN BAGGETT: Thank you.

15 California Farm Bureau.

16 MR. RODEGERDTS: No questions.

17 CHAIRMAN BAGGETT: Mr. Du Bois.

18 MR. DU BOIS: No questions.

19 CHAIRMAN BAGGETT: Mr. Gilbert.

20 MR. DU BOIS: He left the room.

21 CHAIRMAN BAGGETT: I assume he has no questions.

22 I have a couple.

23 ----oOo--

24 //

25 //

1 CROSS-EXAMINATION OF SAN DIEGO COUNTY WATER AUTHORITY PANEL

2 BY THE BOARD

3 CHAIRMAN BAGGETT: Goes back to the QSA. Mr.
4 Underwood, under the agreement what types of conservation
5 programs have you contemplated or were contemplated when
6 that was developed? What types of conservation programs
7 were contemplated under the QSA?

8 MR. UNDERWOOD: Couple. One, the canal linings. The
9 Met One, which was a canal lining in regulatory or system
10 improvements. That has to do with Met One. The San
11 Diego/IID transfer was on-farm system improvements were
12 being -- were contemplated.

13 CHAIRMAN BAGGETT: I guess a follow-up is: Was
14 fallowing considered or looked at as part of the
15 conservation?

16 MR. UNDERWOOD: That has -- as part of the other
17 programs, one of the things that the QSA provided for was
18 other types of programs. So when we say looking at
19 fallowing programs, I'm going to make reference to Palo
20 Verde Irrigation District program. We call that land
21 management or crop rotation and water supply, primarily
22 because there is no change in water rights. There is no
23 change in land ownership. There is no permanent retirement
24 of land.

25 If you put into that context of lands, crop fallowing,

1 yes, that was one that was contemplated. When we're
2 looking at the impact, when we're looking at trying to
3 comply with the Salton Sea efforts, we try to put in some
4 benchmarks or sideboards on mitigation. In other words, if
5 you did on-farm system improvements, you would have a
6 certain impact to the Sea.

7 We have worked with the Fish and Game and Fish and
8 Wildlife Service to find what would that mitigation be.
9 That still has an impact on the Sea. At the same time we
10 said, okay, let's look at minimum impacts on the Sea. When
11 you look at minimum impacts on the Sea, that brings up
12 fallowing because it has limited -- potentially it has no or
13 limited impacts on the Sea. It has other impacts, but
14 minimal or no impacts on the Sea.

15 CHAIRMAN BAGGETT: I guess the follow-up with the Palo
16 Verde, its management program or however you phrased it. Is
17 that program, is it working? Is it a successful program?
18 Does it accomplish the conservation goals?

19 MR. UNDERWOOD: It has not been implemented. We did a
20 test program, and the test program showed that, yes, clearly
21 demonstrated you could conserve water. We did a two-year
22 test program, and it saved 186,000 acre-feet. We are now --
23 again, it is one of the departmental requirements. We have
24 drafted the documents, but we are completing our
25 environmental review or impact report right now. That will

1 be released probably in May. Again, we can't make the
2 decision. That decision can't be made until after the
3 environmental work is done. But we have agreed to program
4 principles, and those have been translated into agreements
5 which will then be discussed with the farmers and the
6 district.

7 CHAIRMAN BAGGETT: Couple questions on the Interim
8 Surplus Guidelines. One of the things in my reading some of
9 the exhibits, if IID -- I forget what you called this.

10 MR. OSIAS: 1A.

11 CHAIRMAN BAGGETT: 1A, it would help to have that.

12 MR. UNDERWOOD: Should I tell you I'm color blind?

13 CHAIRMAN BAGGETT: Just down at the bottom is a series
14 of dates. Say you go to '07, five years out, and you go up
15 to a little over 2.8 million acre-feet, what impact -- you
16 get to that point in time, you've tried conservation, land
17 management programs, canal lining, all the programs you've
18 been discussing, and you find that that number remains flat.
19 It doesn't continue to step down or step up depending on if
20 you are the giver or the taker. Say the program bottoms out
21 there with the programs you tried. For whatever reason they
22 aren't working in the field.

23 One impact -- I guess, one, can a substitution be made
24 under the Interim Surplus Guidelines in the QSA? What
25 mechanism or is there a mechanism to change lands at that

1 point to allow for a change of --

2 MR. UNDERWOOD: I've not studied this diagram, but I
3 think I can answer your program.

4 CHAIRMAN BAGGETT: If it goes flat, the programs are
5 not working.

6 MR. UNDERWOOD: If something didn't materialize.

7 CHAIRMAN BAGGETT: It is not happening, the programs
8 were miscalculated. Conditions, you are in a drought,
9 whatever conditions change.

10 MR. UNDERWOOD: If you look at the surplus guidelines,
11 it does not necessarily say program per program. That is
12 why we are -- that is one of the reasons we want to do a
13 Palo Verde Irrigation District Program as soon as possible,
14 because that is a flexible supply, and it can be potentially
15 substituted. If we have a delay in a year or for some
16 reason something didn't materialize, it keeps us on the
17 benchmarks until we can keep other things in place.

18 The key becomes is that they want to see that we are
19 meeting those needs. And while they are concerned that the
20 programs are identified, because they know then that they
21 can confirm them, as long as we are making those benchmarks
22 is what is key.

23 CHAIRMAN BAGGETT: I guess they being the other states
24 or Secretary?

25 MR. UNDERWOOD: That is correct, that and the

1 Secretary. You have to remember that we have to do annual
2 reports to the Secretary on our progress. The other pieces
3 to demonstrate the concern of other states is that's why we
4 entered into agreements, surplus guidelines agreement with
5 Arizona and one is Nevada. Even the other states didn't
6 necessarily think that the Secretary would live up to --
7 they were concerned the Secretary may not live up to the
8 criteria itself. That is just a fact of life.

9 CHAIRMAN BAGGETT: So there is -- in sum there is some
10 flexibility built in to change programs as long as you are
11 making an effort.

12 MR. UNDERWOOD: For some reason something else and we
13 could not -- even if the Palo Verde did not work, we would
14 have to do something else or we would have, in the case of
15 Metropolitan, we would have to be looking at other supplies
16 to potentially -- say, if we could not get any additional
17 Colorado River water, we would want to meet our needs and
18 live within what we are talking about doing, then we would
19 have to reduce or go get water elsewhere.

20 CHAIRMAN BAGGETT: Any questions, staff?

21 Want to do --

22 Mr. Slater, you are up.

23 MR. SLATER: We will waive redirect. We are done.

24 CHAIRMAN BAGGETT: Thank you very much. It is a quick
25 flight, quick flight back, I guess.

1 DIRECT EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

2 BY MR. OSIAS

3 MR. OSIAS: Mr. Silva, have you brought your written
4 testimony with you to the witness stand?

5 MR. J. SILVA: Yes, I have it with me.

6 MR. OSIAS: That is Exhibit 1.

7 MR. J. SILVA: Exhibit 1, yes.

8 MR. OSIAS: Imperial Irrigation District Exhibit 1.

9 You recognize that document?

10 MR. J. SILVA: Yes, I do.

11 MR. OSIAS: Is that your signature at the end?

12 MR. J. SILVA: Yes, it is.

13 MR. OSIAS: You reviewed that before signing?

14 MR. J. SILVA: Yes, I have.

15 MR. OSIAS: You signed it under the penalty of perjury?

16 MR. J. SILVA: Yes.

17 MR. OSIAS: Do you certify that is your testimony?

18 MR. J. SILVA: Yes, I do.

19 MR. OSIAS: Are there any corrections?

20 MR. J. SILVA: Yes. On Page 14, Line 23, in reference

21 to the IID and MWD agreement. It says 1998; it should be

22 1988. Other than that, there are no other corrections.

23 MR. OSIAS: Thank you.

24 Please describe for us if you would your title and work
25 history.

1 MR. J. SILVA: My title is General Manager of the
2 Imperial Irrigation District. I've had that title for about
3 three years. The prior three years to that I was a Deputy
4 General Manager. The previous 23 years, 24 years, I was in
5 water department and I held various positions. About nine
6 years as a manager of the water department, about two years
7 as the assistant manager of the water department. Before
8 that time, in 1981 when I received my professional
9 engineer's certificate from the state of California, I was a
10 chief civil engineer for the District. Before that time for
11 about nine years I held various positions in engineering,
12 including drainage engineer, civil engineer. I started on
13 the survey crew as well.

14 MR. OSIAS: Your educational background, real briefly.

15 MR. J. SILVA: Briefly, I attended a local junior
16 college, got an AS degree in civil engineering, and I went
17 to UCLA as well.

18 MR. OSIAS: You mentioned you had professional
19 engineering degree?

20 MR. J. SILVA: Yes, from the State of California, civil
21 engineer, Professional Civil Engineer in the state of
22 California.

23 MR. OSIAS: Can you briefly describe how the Imperial
24 Irrigation District is managed in terms of its structure?

25 MR. J. SILVA: Yes. Imperial Irrigation District is

1 governed, first of all, by a five member Board of
2 Directors. They are elected at large from the voters that
3 reside in the water service area. Then the Board of
4 Directors hires -- has three staff, myself, the general
5 counsel and internal auditor. I have the rest of the staff,
6 about 1,100 people that operates the District. We basically
7 have two functions. One is to serve water to the Imperial
8 County, all of the water that is used in Imperial County,
9 Imperial Valley. We also provide power to that same service
10 area, and it goes up into the Riverside County and serves a
11 portion of Riverside County, including the cities of Indio,
12 Coachella, portions of La Quinta and portions of Palm Desert
13 and Indian Wells in that area as well.

14 MR. OSIAS: You serve power to those areas, but not
15 water?

16 MR. J. SILVA: Not water, no.

17 MR. OSIAS: Tell me, who holds the water rights in
18 Imperial County.

19 MR. J. SILVA: The Imperial Irrigation District holds
20 the water rights in trust for the water users in the
21 Imperial Valley, and that, of course, that right is vested
22 in the Board of Directors.

23 MR. OSIAS: Thank you.

24 We have a picture, it is IID Exhibit 2 and Exhibit B to
25 2. I think you will find it right behind you, if you could

1 put that up for one minute. Walk us through how water gets
2 from the Colorado River to --

3 I assume it is okay as long as he speaks up.

4 CHAIRMAN BAGGETT: Yes.

5 MR. OSIAS: If you would describe how does water get
6 from Lake Mead to a farmer and then that process.

7 MR. J. SILVA: First of all, to locate Imperial
8 Irrigation District, we are located right up against the
9 border with Mexico, as you can see here. We get our water
10 from the Colorado River. And so we have to order our water,
11 for instance, every Wednesday by noon we have to put an
12 order to the Bureau of Reclamation for our water orders for
13 each day for the following seven days beginning midnight on
14 Sunday.

15 We have to anticipate the water orders from our users
16 because our water users can order water. For instance,
17 today they can order water till noon to get it tomorrow. So
18 we have anticipated the water use and we have made
19 corrections. We can make corrections up until three days
20 before we get it because that is the last point where there
21 is storage on Parker Dam.

22 The water comes from Lake Mead, goes down through
23 Davis Dam. Parker Dam is the last place where we can make a
24 change. And then it comes down to Imperial Dam where it is
25 diverted into the All American Canal. At the Imperial Dam

1 we have staff there that does the diversion works, and that
2 water is diverted into the All American Canal. We divert
3 the water for IID, for Coachella, for Mexico. A portion of
4 the water for Mexico, as well as the water that goes across
5 the Colorado River into Arizona to the Yuma area as well.

6 MR. OSIAS: Let me stop you right there. Is there any
7 storage in Imperial Dam?

8 MR. J. SILVA: There is no storage. It is strictly a
9 diversion dam. There is a little bit of storage off-site at
10 Senator Wash Dam, but that has been diminished because of
11 earthquake activities there, and it is not safe. So we are
12 even limited there to about half of the capacity that it has
13 been. It is very small capacity as well.

14 Again, the water then comes down -- and by the way, it
15 starts up here at elevation about 1,182 feet above sea
16 level. It is all gravity flow. When it reaches Imperial Dam
17 it is about 180 feet above sea level. It goes across the
18 desert about 50 miles in the All American Canal from
19 Imperial Dam to the first diversion where we have East
20 Highline Canal. At that point it is about 45 feet above sea
21 level.

22 MR. OSIAS: Could you go back one and just point out
23 where the Coachella branch is? We heard about that.

24 MR. J. SILVA: The first diversion is at our drop one,
25 the first place we have a structure, and that is where the

1 Coachella Canal goes. You heard Mr. Levy's testimony, it
2 goes to the Coachella Valley. We have drops one, two,
3 three, four and five where we also use that water to create
4 electricity through those plants.

5 At the first diversion at East Highline Canal we can
6 also generate electricity as well. After that point the All
7 American Canal about another 35 miles. From there all the
8 water is diverted to our system. You heard Mr. Osias talk
9 about we have another 1,700 miles of canals. They get
10 smaller and smaller as the system goes towards the end of
11 the -- to the northern part, to the Salton Sea. Again, the
12 elevation begins at 45 above sea level. Where it ends up at
13 the Salton Sea it is about a minus 227 feet, in other words
14 below sea level.

15 All of the system that we have is gravity except for a
16 few areas where we irrigate on the perimeter of the valley
17 that are pumped, but the great majority is gravity flow
18 system.

19 If I may talk a little bit about the water orders, I
20 said the farmers can order water today for tomorrow. We do
21 not guarantee that they can get the water tomorrow because
22 we want to make sure when we order the water we order less
23 than the anticipated need so that we don't have any excess
24 that would end up -- because we have no storage, it would
25 end up in the Salton Sea and would be classified as unneeded

1 and wasteful.

2 MR. OSIAS: At least it used to be.

3 MR. J. SILVA: It used to be.

4 MR. OSIAS: How do you actually aggregate, then, farmer
5 orders and manage the water through the District's canals?

6 MR. J. SILVA: We have three offices located throughout
7 the valley where we receive the orders from the farmers.
8 Those orders, again, are received up through noon every
9 day. They are aggregated by those three offices. They are
10 submitted to an office in Imperial, which is the office
11 where we have our -- what I would like to call our
12 wholesalers. Those are the people that take care of
13 ordering the water on a gross sense, bringing it into the
14 valley. They also operate the main canal system, and they
15 also then divert it into the various laterals.

16 Again, those orders are brought into the headquarters
17 or water control office. Those people there, it's a matter
18 of then matching the demand to the existing resource because
19 we've already got the water; it's coming down the system
20 somewhere. So we know what we have as far as supply. And
21 then we get the orders and the orders normally should exceed
22 what we have. So what they have to do then is allocate back
23 to those three offices an amount that they can utilize to
24 fill those orders that they've gotten from farmers.

25 So they do that interchange, the orders -- the amount

1 of water they can utilize goes back to division offices.
2 They then take that amount that they've been given by the
3 main office and distribute it to the water users, and they
4 do that on a priority basis. For instance, If there is a
5 vegetable crop versus a wheat crop, for instance, unless the
6 wheat crop is going to be ready to harvest. Anyway, there
7 is all kinds of formulas that they use, very complicated, to
8 give the water to the farmers because they don't have
9 enough. That occurs every day.

10 The water control office people then get back the final
11 number from those three division offices. They then begin
12 to dispatch the water to the main canal system. The next
13 morning the people in those three division offices utilize
14 the distribution people, the people that actually turn the
15 water into the farmers. They have their -- each of them
16 have a lineup sheet. We have 52 of those people in the
17 morning, beginning at about 5:30 in the morning, with their
18 run sheets, it says exactly where the water is going to. So
19 about 5:30 in the morning they begin turning in the water.
20 At first the wholesalers turn it into the main canals and
21 then into the laterals. And the distributors, the zanjeros,
22 turn it into each individual farmer.

23 We have about 250 people in the water department
24 associated just with that distribution of the water to that
25 level.

1 MR. OSIAS: If you would describe very briefly for us
2 what has the farming community accomplished in Imperial with
3 this water?

4 MR. J. SILVA: The water that is brought into the
5 valley, 98 percent of it is utilized for agriculture. The
6 other 2 percent is used for industrial and municipal.
7 Again, all of the water that is used in the valley is
8 brought in through the All American Canal. There is no
9 other water source utilized in the valley. Ninety-eight
10 percent of the water that is distributed to the farms
11 produces an annual value in crops of about \$1,000,000,000.
12 We have, I believe, an exhibit that shows you from the
13 County of Imperial, the agricultural department, showing the
14 details of how that is broken down.

15 MR. OSIAS: How important is agriculture to employment
16 and income level in the valley?

17 MR. J. SILVA: Again, all of the water that is brought
18 in is used for agriculture. Agriculture is really the
19 biggest and the only industry in the valley. There is very
20 little industry. So the water really is a lifeblood of the
21 Imperial Valley. Without the water we really would have
22 nothing else.

23 MR. OSIAS: Who is the biggest employer in Imperial
24 Valley?

25 MR. J. SILVA: The biggest employer is not IID. I

1 think we are the third largest employer. County of Imperial
2 is actually the highest.

3 MR. OSIAS: If you would grab the next chart that is,
4 again, closest to the rail.

5 CHAIRMAN BAGGETT: Is that last diagram an exhibit?

6 MR. OSIAS: Yes. That is Exhibit B to Exhibit 2. The
7 next one is Exhibit 11.

8 CHAIRMAN BAGGETT: Thank you.

9 MR. OSIAS: Sorry.

10 Could you briefly describe, A, what this depicts and,
11 B, your knowledge of why it shows what it does?

12 MR. J. SILVA: This is a chart showing million
13 acre-feet of water use of the Colorado River for IID. And
14 on the X axis is time and these are years from 1914 to about
15 2000. So this chart depicts the water that IID has used.
16 You can see the variability during the depression in 1930.
17 Well, not only the depression, but there was a shortage of
18 water in the river before the dams were put in. We didn't
19 have enough water to serve all our needs.

20 But you can see there has been a gradual rise. The
21 highest diversion about 3.4 million acre-feet occurred about
22 1953 or so. I remember specifically 1983, for instance.
23 This dip here, there was a government program that was
24 called the Payment in Kind. That reduced our water use
25 dramatically. There were some other issues there that

1 brought our use down. You can see in 1992 we had a white
2 fly infestation; that made a big difference in our water
3 use.

4 Again, this shows that there is variability to the
5 water use that is based on all kinds of factors. Crops, of
6 course, use all the water, but the farmers plant the crops
7 based upon, not just because they like to farm, they want to
8 make some money. They want to plant something that will
9 make them the money. Sometimes that crop doesn't use the
10 same amount of water as another crop. We have had, even
11 though we are a desert, we do get some rains sometimes that
12 flood our area. That prevents irrigation, and so the water
13 use is curtailed. There is a lot of variability in our
14 water use.

15 MR. OSIAS: How about salinity, how does that affect
16 water use?

17 MR. J. SILVA: Salinity in the valley is a problem just
18 like any other irrigated area in the world. The Imperial
19 Valley is actually a delta, part of the delta of the
20 Colorado River. It's the salt that was brought in over eons
21 from the Colorado River. It is about -- more than 80
22 percent of it is clay or dominated by clay. It has a lot of
23 salts in it from when it first came in.

24 The water that we get has about, right now, 750 parts
25 per million. So we are bringing in salts. Salts exist in

1 the soil. We need to apply extra water when we irrigate to
2 continue to leach those salts down through the roots system
3 and away from the root zone so that we can continue to have
4 good yields in our field. We have done that over time.
5 Back in the '20s, when we first started irrigating, that is
6 when immediately within a few years there was a problem with
7 salinity. Farmers began to install tile drainage systems so
8 that they could continue to farm. That is what caused more
9 so the land that couldn't be farmed at first to be brought
10 back into production. We continue to do that to this date.

11 MR. OSIAS: Mr. Silva, you were around in the 1980s at
12 the District?

13 MR. J. SILVA: Yes, I was.

14 MR. OSIAS: You are familiar with Decision 1600 and
15 Order 88-20?

16 MR. J. SILVA: Yes, I am.

17 MR. OSIAS: And the proceedings that led up to those?

18 MR. J. SILVA: Yes.

19 MR. OSIAS: Did you actually attend those hearings?

20 MR. J. SILVA: I didn't attend the '84, but the '88 I
21 was in attendance, and as a matter of fact I testified there
22 as well.

23 MR. OSIAS: Could you tell us the District's response
24 to the orders that were issued?

25 MR. J. SILVA: The first order back in '83 or '84,

1 that's what really kind of reminds me of an anthill that's
2 been kicked and all the ants running around and trying to do
3 something. That is basically what happened. Because we --
4 in 1985, for instance, we prepared our first water
5 conservation plan and we had enough in 1986. We began to
6 look at planning for how much water we could conserve, how
7 we would do it, what the cost would be. So that we would be
8 able to fulfill the order, basically, that was given by the
9 State Water Resources, your Board.

10 MR. OSIAS: You were around for the 1988 deal?

11 MR. J. SILVA: Yes, I was.

12 MR. OSIAS: Could you describe that briefly?

13 MR. J. SILVA: That was, again, as a result of Order
14 88-20 which said that after we made our presentation to the
15 Board, that this Board said, "Well, we understand that you
16 can conserve water, and we understand that it is too
17 expensive for you to do it, so you should go out and find an
18 urban partner that can bear those higher costs that you can
19 afford and conserve some water."

20 So we did an agreement with Metropolitan Water
21 District. The agreement was executed in 1988, but there was
22 a disagreement from our next priority water user. So
23 actually two of the Colorado River water users. So we had
24 an approval agreement in 1989. After that is when we
25 actually started implementing. That was to conserve roughly

1 106,000 acre-feet through the efficiency and improvement
2 type of programs.

3 MR. OSIAS: How much of that water is saved on-farm
4 versus by system changes?

5 MR. J. SILVA: I don't know the exact amount, but the
6 great majority is on-system.

7 MR. OSIAS: Did you participate in the IID/San Diego
8 proposed transfer negotiations?

9 MR. J. SILVA: I participated in some of those
10 negotiations.

11 MR. OSIAS: QSA as well?

12 MR. J. SILVA: Not so much the QSA, but just briefly,
13 yes.

14 MR. OSIAS: If we can put the picture up of Exhibit 1A,
15 we have it electronically now.

16 Do you recognize this picture, Mr. Silva?

17 MR. J. SILVA: Yes, I do.

18 MR. OSIAS: Could you maybe describe for us the -- I
19 will refer to the colors now that we have it in the record
20 -- the different segments of the ramp down for diversions
21 and how that will work?

22 MR. J. SILVA: I will use the microphone.

23 Again, this is a chart showing the amount of water on
24 the left-hand side, vertically, and time down at the bottom,
25 left to right. Again, based on our agreement,

1 Quantification Settlement Agreement, we planned to maximize
2 our use at 3.18 million acre-feet.

3 So we have been conserving approximately 106,000
4 acre-feet. I think it has been referred to as 110-, but we
5 never actually quite reached that much. The average is
6 probably 106,000 acre-feet. And you can see that we've
7 already been doing that, showing yellow at the very
8 left-hand upper corner. As we proceed and begin to
9 implement the San Diego County Water Authority agreement,
10 that will be added onto the bottom in that green. For
11 instance, in the year 2003 it will begin with 20,000
12 acre-feet. The next year it would be another 20,000
13 acre-feet, and so on. The year --

14 Beginning in the year 2006 we will begin to also do the
15 All American Canal lining. That is when the canal is
16 supposed to be finished, so we can start conserving the
17 water. In the year 2007 we begin to conserve water that
18 will be going to Coachella first -- excuse me, MWD first and
19 then to Coachella on later years. To the point where by the
20 year 2027 our diversions are going to be down to just over
21 2.6 million acre-feet.

22 MR. OSIAS: You heard Chairman Baggett inquire about
23 how that water was contemplated to be saved. Could you go
24 through these components again and describe what IID
25 expected to do and expects to do to create that water.

1 MR. J. SILVA: Again, the first portion, the yellow
2 portion, has already been done, and we are continuing to
3 maintain those programs. Most of that is system water.
4 There is some on-farm water, but the majority of that is
5 on-system.

6 The next portion, the San Diego County Water Authority
7 agreement, that was contemplated to be a mix of on-farm and
8 system. The numbers, about 130 -- minimum 130 on-farm and
9 70 on-system. That could change a little bit, but those are
10 the numbers that were anticipated. Again, those are all
11 efficiency improvement-type of projects.

12 The next one, the All American Canal, of course, is
13 concrete lining. That water is being lost to seepage now.
14 So that would be recovered and we would not -- really, we
15 don't see that water now, so that would not affect us.

16 The last portion of the purple or whatever that color
17 is, I'm kind of color blind, but that bluish or purple, that
18 is the last hundred thousand acre-feet that we agreed to
19 conserve for Coachella and Metropolitan. That was also
20 anticipated to be system improvements and/or on-farm
21 efficiency improvements as well.

22 MR. OSIAS: Did Imperial anticipate following to create
23 any of this water?

24 MR. J. SILVA: No, we did not. As a matter of fact,
25 the following is expressly forbidden in the agreement with

1 San Diego County Water Authority, which is that green
2 200,000 acre-feet.

3 MR. OSIAS: You will see in the assumption column, it
4 says Imperial/San Diego primary stabilized quantity,
5 200,000.

6 What is your understanding of actually what the rights
7 of the parties are to that volume?

8 MR. J. SILVA: I'm sorry?

9 MR. OSIAS: Does it have to be 200,000?

10 MR. J. SILVA: No, no. Again, it could be as low as
11 130,000, depending on, well, circumstance. In other words,
12 we don't have to go all the way to 200,000 acre-feet. There
13 is a minimum required of 130,000?

14 MR. OSIAS: When does that decision get made?

15 MR. J. SILVA: That decision gets made after the
16 environmental documentation is finalized and approved. We
17 have 120 days after that to make a decision on, for
18 instance, farmers have to sign up to conserve that water to
19 get that minimum 130,000 acre-feet. If that does not
20 happen, the deal does not go through.

21 MR. OSIAS: Briefly, could you tell me how -- actually,
22 let me just use the colors.

23 Does the water for the IID/San Diego component and the
24 water for the IID/Coachella component have the same price?

25 MR. J. SILVA: Oh, no. The first portion, San Diego

1 portion, has a price that was negotiated based upon the cost
2 of Metropolitan water. I'm not sure where it is now. It is
3 in the range of just under \$250 per acre-foot. At the
4 present time it escalates based upon what Metropolitan's
5 water rate does as well.

6 The purple portion or that bottom portion, that was not
7 a negotiated price. That was a settlement price. We agreed
8 to provide that water at a lower price, \$50 for acre-foot
9 for the first 50,000 and 125 for the other 150,000. Again,
10 that was because we settled other issues and so that was a
11 completely different agreement.

12 MR. OSIAS: How will the on-farm program work for
13 creating conserved water as you know it today?

14 MR. J. SILVA: Well, again we intend for that to be a
15 program that improves efficiency on the farm. We have had
16 all kinds of discussion about that. We have had two Board
17 committees, actually study groups they were called, working
18 on since it was called the Allen Kuhn. We had one of our
19 directors here, they were working on that with some farmers,
20 and we had a Cox Mendal group working on it with some
21 farmers. We had a water conservation advisory board working
22 on that.

23 We've had a lot of discussion, but really we have not
24 finalized a specific program. The only thing that our board
25 has actually agreed upon or passed as a board was the fact

1 that a resolution saying that we want this water to be
2 measurable, we want to make sure it is fair, we want to make
3 sure that various criteria, but there really wasn't anything
4 passed specifically. So we are a long ways from doing
5 that. Again, we don't have to do it the until -- the Board
6 needs to hear from the environmental report, what are the
7 comments on the report, so the Board can get an idea how to
8 structure that agreement, not the agreement, but the plan to
9 conserve the water. So we are not quite ready to make that
10 decision yet.

11 MR. OSIAS: Lastly, although in this phase we won't be
12 discussing the Salton Sea with respect to environmental
13 attributes, can you tell us how the Salton Sea has otherwise
14 effected the district with respect to tailwater?

15 MR. J. SILVA: Again, the reason the State Board was
16 down in Imperial Valley in 1983 was Salton Sea. I was in
17 engineering and drainage in 1976 and '77. We had some
18 storms that were unusual and the Sea raised up a couple feet
19 in those two years, and we had land that was being flooded.
20 So we had farmers complaining about that we had too much
21 water going to the Sea.

22 We had a group that was farmers to help us to look at
23 what could we do to minimize the effects of that drainage
24 going to the Sea. That is what we started doing. It was
25 called a 13 point program to conserve water, to minimize the

1 effects of the water going to the Sea. At that point in
2 time we started a tailwater assessment program that looked
3 at checking tailwater that was coming off of farmers'
4 fields, and we said an arbitrary limit of 15 percent.

5 If the farmer was flowing more than 15 percent of his
6 order that he was taking in at any one time, he would get --
7 first check he would get a ticket, it was called. It was
8 famous pink tickets, 'cause a pink ticket at the headgate.
9 So farmers just hated to see those. They had then a certain
10 time limit that we would come back and check it the second
11 time. If we came back the second and it was still exceeding
12 the 15 percent -- excuse me, then they would get the red
13 ticket. First one was just a blue one. The second one was
14 a red ticket. Then that meant that we would assess a
15 penalty of three times the cost of that water that they
16 applied on that field. Of course, that was a very
17 contentious issue for all of us, and we were at odds with
18 our farmers. But it did instill in us the fact that
19 tailwater was bad for us, and that was the reason why,
20 because the Salton Sea was rising in elevation. We had a
21 problem. We had been sued by landowners not only around our
22 farming area but in other communities, Bombay Beach and on
23 the west side, West Shores.

24 We paid out over \$20,000,000 in settlements for
25 lawsuits. We've had to construct dikes, purchase property,

1 spend just a lot of effort on the Salton Sea. We still have
2 right now, for instance, have a fund of about \$17,000,000
3 that we are purchasing property as it comes up for sale that
4 is in the areas below the minus 225 contour where we expect
5 that the Salton Sea could come up to.

6 MR. OSIAS: So a rising sea has been an economic
7 problem for the District?

8 MR. J. SILVA: It's been a big problem since 1976, '77,
9 as I remember, yes.

10 MR. OSIAS: Is the District still maintaining dikes to
11 protect farmland?

12 MR. J. SILVA: Yes, yes, we are. As a matter of fact,
13 some farmers built their own dikes. We've since taken them
14 over and had to borrow money to buy that property and
15 upgrade the dikes because they weren't built very well to
16 begin with. So, yes, we are doing that now.

17 MR. OSIAS: Why does the IID have the right to drain
18 water to the Salton Sea?

19 MR. J. SILVA: The Salton Sea area was declared a sump
20 for agricultural drainage by presidential order 1924.
21 President Coolidge did that, and they designated those
22 areas, those lands that would be utilized for that
23 reservoir.

24 MR. OSIAS: Let me turn now to Dr. Mesghinna for a
25 moment to provide us some more detail on IID water use.

1 Dr. Mesghinna, do you have IID Exhibit 2 in front of
2 you?
3 DR. MESGHINNA: Yes, I have.
4 MR. OSIAS: What is Exhibit 2?
5 DR. MESGHINNA: Exhibit 2 is assessment of water use in
6 IID.
7 MR. OSIAS: And your testimony.
8 DR. MESGHINNA: Yes.
9 MR. OSIAS: Is that your signature at the end of your
10 testimony?
11 DR. MESGHINNA: Yes.
12 MR. OSIAS: Did you sign it under the penalty of
13 perjury?
14 DR. MESGHINNA: Yes.
15 MR. OSIAS: Does it accurately reflect your testimony
16 today?
17 DR. MESGHINNA: Yes.
18 MR. OSIAS: Do you have any corrections you wish to
19 make?
20 DR. MESGHINNA: I have one minor correction to make on
21 Page 10, and that is on A.
22 MR. OSIAS: What line?
23 DR. MESGHINNA The second sentence where it stays "we
24 also measure," Line No. 7, I like to insert after "also"
25 "utilize."

1 MR. OSIAS: Utilize?

2 DR. MESGHINNA: Yes, we have utilized measure, we did
3 not really measure. We utilized the measured data.

4 MR. OSIAS: Other than that correction this is your
5 testimony?

6 DR. MESGHINNA: Yes.

7 MR. OSIAS: We offer that into evidence.

8 Tell us, if you would, your educational background. We
9 have a lengthy resume for you. I don't want you to go
10 through all of it.

11 CHAIRMAN BAGGETT: Thank you.

12 MR. OSIAS: Be very brief if you could and just give us
13 your educational background.

14 DR. MESGHINNA: I have a B.S. degree in -- I received
15 my B.S. degree in 1972 from Cornell University in Ithica,
16 New York. And I also received my Master's degree in civil
17 engineering again from Cornell University. And after
18 working for a few years I continued for my Ph.D. at Utah
19 State University in Utah. And I received my Ph.D. at the
20 end of 1978, completed my education at the end of 1978.

21 MR. OSIAS: Your specialty is?

22 DR. MESGHINNA: My specialty is in water resources,
23 irrigation and drainage.

24 MR. OSIAS: Thank you.

25 From your resume we can see that you have been an

1 expert witness numerous times; is that right?

2 DR. MESGHINNA: Yes.

3 MR. OSIAS: Could you just give us a sample of who your
4 clients have been?

5 DR. MESGHINNA: Our clients have been primarily the
6 U.S. Department of Justice, U.S. Department of Interior,
7 BIA.

8 MR. OSIAS: BIA is?

9 DR. MESGHINNA: Bureau of Indian affairs. But the
10 primary testimony that I have done is with the U.S.
11 Department of Justice.

12 MR. OSIAS: Besides being an expert witness, you have
13 also been, what, an engineer who's done projects?

14 DR. MESGHINNA: Oh, yeah. We have done a lot of
15 projects related to water resources primarily in the Western
16 United States, and we have various clients. Our majors
17 clients are primarily, as I said before, the U.S. Department
18 of Justice, the Department of Interior, including the Bureau
19 of Indian Affairs and Bureau of Reclamation and other
20 agencies.

21 We also work for many, many Indian tribes in the
22 Western United States, more than 30 Indian tribes. And as a
23 portion of our work is international work, we have done some
24 work in water resources in Southern Africa, in Namibia. But
25 a larger portion of our international work deals in

1 Northeast Africa, a country called Eritrea. Our work there
2 is primarily also in water resources.

3 MR. OSIAS: Thank you.

4 Your company's name is?

5 DR. MESGHINNA: Company's name is Natural Resources,
6 Consulting Engineers, Incorporated; in short NRCE.

7 MR. OSIAS: You are the president.

8 DR. MESGHINNA: I am actually the founder of NRCE. I
9 founded NRCE in 1989 in Berkeley, California. Since then we
10 have expanded our offices in Fort Collins, Colorado. And as
11 a matter, Eritrea is our international office. And quite
12 recently we have opened an office in Albuquerque, New
13 Mexico. I am the president and the principal engineer.

14 MR. OSIAS: Please tell us what NRCE was hired to do
15 for Imperial Irrigation District.

16 DR. MESGHINNA: We were actually first hired to do a
17 reconnaissance level on the water conservation history of
18 IID. And later, after we completed that work, we continued
19 on the assessment of water use and also determined whether
20 IID's water uses are reasonable and beneficial. And within
21 that study also we have conducted whether the transfer of
22 conserved water, 400,000 acre-feet from IID to San Diego,
23 would substantially injure river water users below Lake
24 Havasu.

25 MR. OSIAS: With respect to the water use study, can

1 you tell us how long that took, how many resources you
2 dedicated to that effort?

3 DR. MESGHINNA: It took approximately three years, and
4 we have used about 13,000 professional man hours.

5 MR. OSIAS: How many?

6 DR. MESGHINNA: 13,000 professional man hours.

7 MR. OSIAS: And tell us how you approached the
8 assignment of studying IID's water use, what methodology did
9 you use for the study.

10 DR. MESGHINNA: In any water use you study, in my
11 experience as in the testimony earlier that I have been
12 doing in the studies and designs that we have been doing in
13 irrigation and drainage domestically and internationally, I
14 think the most important things in irrigated agriculture is
15 to understand the environment. Meaning that what are the
16 natural resources available for agriculture in the area
17 where we are working in. Number one is the soils. Are
18 there -- how are the soils? Are the lands arid? What are
19 the characteristics of the soil in terms of water capacity,
20 in terms of intake in soil.

21 The second part is, you know, the water supply. Is
22 there water supply available and what is the quality? The
23 third is, of course, the climate. Is the climate adaptable
24 for crops, and what kind of crops can you grow.

25 This is the first thing that we looked into and

1 reviewed. After that then we reviewed data from IID and
2 other agencies, like Bureau of Reclamation and so
3 forth. And after that we went and reviewed data and
4 information from scientific studies that have been done,
5 especially during the last ten, 15 years in IID, mainly on
6 the soils of IID. And certainly we also looked into or
7 reviewed the other irrigation districts in the area.

8 And, finally, just to confirm what we have studied and
9 what we have learned from others on IID, we conducted a
10 field study in 2000 to evaluate the irrigation water use and
11 especially the leaching processes of salts.

12 MR. OSIAS: And did you ultimately try to determine the
13 efficiency of IID?

14 DR. MESGHINNA: Yes.

15 MR. OSIAS: What does efficiency mean?

16 DR. MESGHINNA: Efficiency, when we say efficiency, as
17 you know, there are many fine definitions of efficiency.
18 The efficiencies that we have studied in here is the on-farm
19 irrigation efficiency Districtwide, as opposed to a specific
20 field. This is Districtwide.

21 The second efficiency that we have studied is the
22 distribution and conveyance system efficiency for the river
23 system efficiency. There are also other efficiencies that
24 we are studying.

25 MR. OSIAS: What is the definition of an on-farm

1 efficiency?

2 DR. MESGHINNA: The on-farm efficiency international,
3 in short, what it means is really the ratio of the amount of
4 water beneficially used to the amount of water supplied to
5 the field or to the fields. In other words, the amount of
6 water that is used by the crops, to grow the crops, to
7 produce the crops, to the amount of water that has been
8 delivered to the fields for those crops. In short that is
9 what it means.

10 MR. OSIAS: What affects the amount of water that a
11 crop needs in Imperial? What influences that?

12 DR. MESGHINNA: The primary influence of water that --
13 you mean the production of crops?

14 MR. OSIAS: The question is: What primarily influences
15 how much water is needed for the production of crops?

16 DR. MESGHINNA: The primary factors that influence crop
17 water use is really climate. And climate -- when I say
18 climate I mean the maximum-minimum temperature and the most
19 important thing is solar radiation followed by
20 maximum-minimum temperature?

21 MR. OSIAS: Did you say solar radiation?

22 DR. MESGHINNA: Yes. Solar radiation is extremely
23 important.

24 MR. OSIAS: Is that sunshine?

25 DR. MESGHINNA: Yes.

1 MR. OSIAS: Sorry, I didn't know that was solar
2 radiation.

3 DR. MESGHINNA: Followed by solar radiation and
4 temperature, the wind. Wind is very, very important. The
5 policy is relative humidity. Those are the main factors
6 that influence evapotranspiration of the crop. When I say
7 evapotranspiration, I mean the transpiration of the photo
8 through photosynthesis that comes out from the crop and is
9 evaporation from the soil where you apply the water.

10 MR. OSIAS: In addition to evapotranspiration does crop
11 production require additional water?

12 DR. MESGHINNA: Yes. That is where I was going to come
13 to.

14 Second part and most important thing is because of the
15 quality of water that comes from the Colorado River, you
16 need to leach the salts that comes in from that water. Let
17 me a little bit discuss this so that I don't forget it later
18 on.

19 MR. OSIAS: Would you like to discuss leaching? Go
20 ahead.

21 DR. MESGHINNA: However you want it, but I just want a
22 little bit of this in here because when I said before that
23 the beneficial use or amount of water needed for crop
24 production, what I meant is I meant the evapotranspiration
25 as I pointed out before in testimony. And the second part

1 is the leaching. There are also some minor uses like, for
2 example, water that you use for seed germination, crop
3 establishment, land preparation. Those are minor, but still
4 they come into the equation.

5 But the leaching is extremely important in IID and also
6 in the Lower Colorado River Basin because, as we all know
7 that, the water comes from upstream. The water quality, the
8 salinity increases as the river comes downstream. For
9 example, just like Lake Powell, way upstream --

10 MR. OSIAS: On the Colorado River.

11 DR. MESGHINNA: On the Colorado River. As I remember
12 it, the salinity content of the water is, like, 0.8
13 decisemens per meter. When it comes down to Imperial Dam,
14 the quality of the water becomes 1.2 decisemens per meter.
15 So what is happening in between is, as the water is used and
16 reused, its quality has been, you know, deteriorated. When
17 you use this water, when this water is applied on the lands,
18 what happens is the plants only take, you know, the pure
19 water and leave in the soil or in the root zone the salinity
20 or the salts.

21 And if the salts are left there, if the salts are not
22 washed out, if the salts are not removed through drainage,
23 those salts will make the lands, you know, it will become
24 unbearable for the plants to pull water from the root zone.
25 We need to remove the salts from the soil root zone as we

1 irrigate. Because there are millions of lands in the world
2 that have become nonirrigatable, nonhabitable due to
3 salinity all over the world, so that is very important.
4 That is part and parcel of the crop production.

5 MR. OSIAS: You studied how much leaching is required
6 in Imperial?

7 DR. MESGHINNA: Yes.

8 MR. OSIAS: Or used, I guess is that what you did?

9 DR. MESGHINNA: Yes.

10 MR. OSIAS: How is salt removed currently on Imperial
11 Valley farms?

12 DR. MESGHINNA: First let me just give a brief
13 background information so that all of us can understand what
14 I am discussing rather than entering into how much it is.

15 First of all, when you think of IID, when you think of
16 the Imperial Valley, when you think of Lower Colorado River
17 Basin, you think that this is a desert area, desert climate
18 and you would have sandy soils or light soils as we call
19 them. But when you come to IID, especially at IID in that
20 Valley in that central valley, where most of the irrigated
21 lands are, the lands are really -- I mean the soil is really
22 clay soil. It is gravelly clay which is primarily made out
23 of clays.

24 So this clay soils, this clay soils are very
25 impermeable. That is the ability of water to pass through

1 the soil is very, very low, extremely low. Because of being
2 clay soil, what is happening is when the soil dries, when
3 the soil dries it cracks. And this is probably the most
4 important distinct characteristic of the soils in IID.
5 Because the formation of these cracks, the formation of
6 these cracks changes the behavior on how water is available
7 and how the process of leaching goes on compared to other
8 soils.

9 MR. OSIAS: I just had Mr. Hattam put a map up. This
10 is an exhibit to Exhibit 2, which identifies soil types.
11 Maybe you could tell us from the colors which are the heavy
12 soils which are the light soils.

13 DR. MESGHINNA: Okay. The light brown soils are the
14 heavy soils, the medium heavy soils. We call them medium
15 heavy soils. The yellow and the green soils are the lighter
16 soils. The green is much light while this one is medium.
17 But we are amalgamated, most the yellow and the green has
18 light soils.

19 MR. OSIAS: So most of the soil is medium to heavy soil?

20 DR. MESGHINNA: Most of the soil is medium and heavy
21 soil. What it means is really these soils are the soils
22 that tend to crack. And the cracking is different. Some of
23 them crack very much and some of them crack less. But
24 these are the soils that have low permeability and tend to
25 crack.

1 MR. OSIAS: How did that affect your analysis of how
2 much water is needed for leaching?

3 DR. MESGHINNA: Many researchers before me did this,
4 many studies, especially during the 15 years, have
5 determined that because of the cracking of the soil, the
6 nature of the cracking of the soil, when water is applied on
7 the head of the field --

8 MR. OSIAS: The head is the upper?

9 DR. MESGHINNA: Upper end of the field. When water is
10 applied on the upper end of the field, first, because you
11 have the cracks, the water fills up the cracks very fast and
12 very rapid. And then when the cracks are filled, when the
13 cracks are filled, the soil becomes quite impermeable.
14 Because as I informed you before, the soil has very, very
15 low permeability. So when the cracks are filled. It takes
16 -- the water goes out from the cracks, fills out the cracks
17 and moves fast horizontally towards the lower end of the
18 field or towards the tight end of the field.

19 When it goes to the tight end of the field, it also
20 leaches the soil in the cracks, that is salts in the cracks,
21 and takes it with it with more additional salts. So the
22 water moves from the upper part of the field to the lower
23 end of the field and the quality of the water, called the
24 salinity content of the water, increases as the water moves
25 from the upper end of the field to the lower end of the

1 field.

2 MR. OSIAS: Some of the tailwater that leaves the
3 field is serving a salt removal purpose; is that your
4 conclusion?

5 DR. MESGHINNA: Yes. What I am trying to say, because
6 the salt content of that water is about 30 percent higher
7 than the applied water at the head of the fields. So it is,
8 indeed, leaching horizontally.

9 MR. OSIAS: Therefore, leaching water is a necessary
10 component of the amount you need to produce a crop?

11 DR. MESGHINNA: Yes. It is necessary and is extremely
12 important to leach the soil so this type of soils leach both
13 vertically and also horizontally.

14 MR. OSIAS: You have a diagram, I believe, which
15 illustrates how you analyzed the efficiencies of both the
16 distribution system and the on-farm; is that correct?

17 DR. MESGHINNA: Yes.

18 MR. OSIAS: Maybe we can get those out and do them in
19 either order that you wish.

20 Speak up when you are away from the microphone.

21 DR. MESGHINNA: Before I go to that leaching I --

22 MR. OSIAS: Describe for us what this is. This is on
23 Page V-2 of Exhibit 2, IID Exhibit 2.

24 DR. MESGHINNA: As I said earlier, the beneficial use
25 has two components, in general. One is the

1 evapotranspiration or consumptive use and the other is the
2 leaching factor. So when we add those two of them, it gives
3 us the beneficial use.

4 Let me go through the first component of beneficial use
5 very briefly, which is consumptive irrigation requirement.

6 What we are doing to determine the consumptive use is,
7 there are several methods to determine consumptive
8 use. There are very, very similar empirical methods. But
9 the one that has been recommended for IID by various
10 researchers and people who studied it is really the water
11 balance method. The water balance method is nothing but
12 just inflow minus outflow, in short.

13 So what are the inflows? The inflows are the water
14 that comes from All American Canal, that surface inflows
15 that come in from Mexico, that is the Alamo River and the
16 New River, the rainfall, the subsurface inflow and also some
17 local inflows, surface local inflows, that comes into the
18 valley. And outflows are primarily the outflows that go in
19 that drain water and the water that comes in from, again,
20 from Mexico through the Alamo River and the New River and
21 subsurface from outflows to the Salton Sea, as direct
22 outflows.

23 All these outflows go into the Salton Sea. When I say
24 Alamo River and New River, they are not only carrying the
25 amount of flows that they bring from Mexico as groundwaters,

1 but also almost a large portion of the drainage water, the
2 tiles and so on, all the tile drains and so on, coming into
3 Alamo River and New River. And then, of course, its own
4 flow of water that comes from Mexico comes into Salton Sea.
5 As you know the outlet for everything is the Salton Sea.

6 So we subtract all this and a similar change of
7 storage, because there is not much change. There may be
8 change daily, but on the long term there is no change
9 because, if you see, the irrigated lands, the base irrigated
10 lands is -- they'll not change very much.

11 Once we -- the inflow and as outflow will determine
12 total water consumption. But when we say total water
13 consumption, it also includes other consumptions like
14 evaporation from the canal, from the reservoirs, that have
15 nothing to do with the crop. So what we did is we estimated
16 those from the canals, from the reservoirs.

17 MR. OSIAS: You estimated evaporation using weather
18 data?

19 DR. MESGHINNA: Yes. Once we took out all those, then
20 we determined the consumptive use of the crops because the
21 crops themselves.

22 MR. OSIAS: You have a picture of your analysis there?

23 DR. MESGHINNA: Now, I am coming.

24 MR. OSIAS: Thank you.

25 DR. MESGHINNA: As you know from --

1 MR. OSIAS: This is on Page IV-30 of IID Exhibit 2.
2 Start with the conclusion. What is at the bottom of
3 the chart?
4 DR. MESGHINNA: The on-farm irrigation efficiency is 83
5 percent.
6 MR. OSIAS: That is your opinion?
7 DR. MESGHINNA: That is my opinion.
8 MR. OSIAS: How did you get there?
9 DR. MESGHINNA: First of all, you know the water comes
10 from All American Canal and enters into the canals through
11 1,700 mills and through the reservoirs and so on, and
12 finally it comes through the laterals and from the laterals
13 to the headgates, the rivers. There are around 5,600
14 headgates in IID.
15 And these are the headgate deliveries. As you see, we
16 have a hundred percent here as it comes.
17 MR. ROSSMANN: Raise your voice a little bit. You can
18 do it sitting, if you wish.
19 DR. MESGHINNA: No, I want to do it from here.
20 MR. OSIAS: Then yell.
21 DR. MESGHINNA: Then when it comes to the farms, as I
22 discussed before, the consumptive use is around 70 percent.
23 This is consumptive use.
24 MR. OSIAS: It is the plant evapotranspiration?
25 DR. MESGHINNA: Plant evapotranspiration from the seed

1 germination, evaporation, crop establishment and what have
2 you. So it becomes 70 percent, which is 1,746,000
3 acre-feet.

4 What is left is the left water from the consumptive
5 use, headgate river consumptive use gives us the leaching
6 deep percolation and tailwater. Based on the study that we
7 have conducted and based on thousands of data that IID has
8 measured, the tailwater rather than 15 percent what we found
9 out is 17 percent.

10 MR. OSIAS: The total tailwater on a Districtwide
11 basis?

12 MR. MESGHINNA: The total tailwater is really 17
13 percent based on our study that we have conducted, which we
14 have conducted only ten fields. But there has been
15 thousands of fields that were -- and thousands of
16 measurements that we have received from others.

17 Based on that, the tailwater is really 17 percent. Now
18 of what is left from the 2,503,000 meter minus 1,746,000.
19 So this becomes 30.2 percent, which is a hundred percent
20 minus 69.2 percent. So we know that tailwater is 17
21 percent. So the left tailwater of 13.2 percent, based it on
22 the studies that we have conducted, and based it on previous
23 studies, we have determined how much vertical leaching
24 during irrigation. When we irrigate, as we said before,
25 there is horizontal leaching and there is also vertical

1 leaching.

2 But in IID it is not only during cropping that they
3 leach water. They leach water also between crops. When you
4 have rested crops, almost every year or some crops like
5 alfalfa, they are rested every four years, they leach also
6 every four years or for Bermuda grass every five years or so
7 on the average.

8 There is three components of leaching. One is
9 vertical leaching during irrigation. One is horizontal
10 leaching during irrigation. And the other one is leaching
11 irrigation between crops. So based on that study, we have
12 determined that for heavy soils the leaching requirement is
13 9.1 percent or 228,000 acre-feet for the ten-year study.

14 MR. OSIAS: That is vertical leaching.

15 DR. MESGHINNA: Yes. Vertical leaching, yes.

16 That is for heavy soils and that is from 1998. Our
17 study goes from 1988 to 1997.

18 And for light soils, which are only about 13 percent,
19 the total leaching is around 35,000 acre-feet, 35,000
20 acre-feet. In total the vertical leaching is about 10.5
21 percent.

22 MR. OSIAS: Going back to the tailwater, which totals
23 17 percent, what portion of that is leaching?

24 DR. MESGHINNA: Leaching is only 3 percent. You know,
25 we say that tailwater is leaching, but we cannot say that

1 all of it should be considered as leaching. If you compare
2 it with the vertical leaching, the effective leaching is
3 only 3 percent. Remember, that although we are leaching
4 horizontally, it is not as effective as vertical leaching.
5 So we have to compare it with the vertical leaching and we
6 determine that the 3 percent -- that only 3 percent of the
7 17 percent can only be counted as leaching. Although the 17
8 percent is leaching water.

9 MR. OSIAS: That 3 percent is contributing to crop
10 production?

11 DR. MESGHINNA: That 3 percent is contributing to crop
12 production. So the total leaching is 3 percent plus 10.5
13 percent. It is 13.5 percent. Along with this is what you
14 asked me a long time ago, but this is the total leaching
15 that we have determined.

16 MR. OSIAS: We have about ten minutes left. Can you
17 quickly do conveyance efficiency and then I want to talk
18 about injury to legal users of water?

19 DR. MESGHINNA: If you add 10.5, 3 percent and 69.8, it
20 will give 83 percent.

21 MR. OSIAS: There is where the 83 percent on-farm comes
22 in?

23 DR. MESGHINNA: Yes.

24 MR. OSIAS: Quickly on this one.

25 DR. MESGHINNA: I will make it very quick.

1 MR. OSIAS: This the conveyance efficiency you analyzed?

2 DR. MESGHINNA: Yes, this is the conveyance efficiency
3 we analyzed. This is very simple to analyze. Doesn't
4 require much because everything is measured data. The water
5 that comes in that is delivered to IID, and when we say
6 delivered to IID, the amount of water that comes through All
7 American Canal, just starting from the East Highline Canal
8 and for the entire system, is around 2.799 million acre-feet
9 of water or a hundred percent.

10 The amount of water that is delivered to the farms, we
11 have seen it before, is 2,503,000 acre-feet. If you divide
12 these two, it becomes, like, 89 percent. And if you
13 determine what the spills are and what the seepage is and
14 the evaporation from the canals, those are really only
15 losses that you have between the main canal and between the
16 farm. That is about 5 percent, and seepage is around 4 1/2
17 percent and canal is around 1.2 percent. If you add these
18 two, it becomes 5 percent, and canal seepage is around 5
19 percent, roughly.

20 So in total the efficiency is 89 percent, and we are
21 losing 11 percent.

22 MR. OSIAS: In determining that IID's water use is
23 reasonable, did you compare these efficiencies to other
24 irrigation districts that you are familiar with?

25 MS. DIFFERDING: Excuse me, could you identify for the

1 record that chart?

2 MR. OSIAS: That is Page V-27 and 28 of IID Exhibit 2.

3 MS. DIFFERDING: Thanks.

4 MR. OSIAS: I'm sorry.

5 And this one -- go ahead.

6 DR. MESGHINNA: They are in two separate pages. We put
7 them in one.

8 First of all, 89 percent is really a good and high
9 efficiency for the river system, from my experience. And
10 based on it, the USBR data, we have received from 1990, as
11 you can see, Imperial District has 89 percent according to
12 the estimate, which is the same as our estimate. And it is
13 only lower by 1 percent from Melton Mohawk. As you can see,
14 it is a very high efficiency.

15 MR. OSIAS: Why are you using 1990 data?

16 DR. MESGHINNA: Because we found that 1990.

17 MR. OSIAS: Is that the most current data the Bureau
18 has collected?

19 DR. MESGHINNA: Yes. There other data also from the
20 Bureau, but it comes somewhere to 90 percent. 89 percent.

21 MR. OSIAS: Go to on-farm efficiency, how we compare
22 this.

23 DR. MESGHINNA: This on-farm efficiency, as you can
24 see, is a bit old, is in the 1979 efficiency.

25 MR. OSIAS: Is this the Bureau's table that you are

1 citing?

2 DR. MESGHINNA: Yes, and water resources department for
3 California.

4 And as you can see, also, it has a very high
5 efficiency at that time. And as there are many other
6 studies that have been done on IID, by the way, and the
7 lowest efficiency study that I have seen on IID so far is 76
8 percent.

9 MR. OSIAS: Seventy-six percent?

10 DR. MESGHINNA: Seventy-six percent on-farm
11 efficiency. There was another extensive study conducted in
12 1993, I believe by Boyle Engineers, and that came up also
13 with 83 percent, just like ours. All the others are in
14 between.

15 MR. OSIAS: You considered all the other studies in
16 formulating your opinion?

17 DR. MESGHINNA: Yes, I considered all. I have studied
18 those.

19 MR. OSIAS: If we can turn, then, to the question of
20 injury to legal users of water. Did you study water right
21 holders below Parker Dam?

22 DR. MESGHINNA: Yes.

23 MR. OSIAS: What questions were you trying to answer?

24 DR. MESGHINNA: What we are trying to answer in here is
25 due to the reduction, if we assume that the reduction of

1 200,000 acre-feet of water from Lake Havasu, what would be
2 the effect or what would be the impact to legal water users
3 downstream of Parker Dam.

4 MR. OSIAS: What was your conclusion?

5 DR. MESGHINNA: My conclusion is that there is no
6 injury. There is no substantial injury.

7 MR. OSIAS: What does that mean, there is no
8 substantial injury?

9 DR. MESGHINNA: What it means is that every water right
10 holder will receive their water rights, the water that they
11 have been diverting. And our study, as I said before, goes
12 from 1998 -- from 1988 to 1997. The first stretch is from
13 Parker Dam to Imperial Dam, and the second stretch is from
14 Imperial Dam on All American Canal downstream.

15 MR. OSIAS: Every water right holder would be able to
16 divert the quantity of water that they are entitled to
17 despite a reduction of flow of 200,000 acre-feet?

18 DR. MESGHINNA: Yes. What they have been, history,
19 diverting. And this water is based on the decree of 1964,
20 and we received all the data and information from Bureau of
21 Reclamation.

22 There are two ways that we -- there are two ways in
23 which someone can be affected or can be impacted. One is
24 would their water right be reduced. When you think about
25 it, there is no reason why it should be reduced because that

1 is really Imperial water that is being reduced. But in any
2 event, we went day-by-day analysis and checked each
3 diversion and found out that if the diverter was satisfied,
4 just to shortly, for the first stretch which is from Parker
5 Dam to Imperial Dam, the lowest, the lowest it has been at
6 the outlet of All American Canal, satisfy everybody, which
7 is January 1, 1993, the lowest it has been 1,050 cfs after
8 satisfying everybody. And then the lowest it has been below
9 that on All American Canal is after satisfying Coachella,
10 there was 42 cfs left for IID. But IID was short by 277
11 cfs. But 277 cfs is the 200,000 acre-feet of water if you
12 divide it into 365 days is converted to 277 cfs. So because
13 of this, no one was injured. No one was short.

14 MR. OSIAS: If you divert more water at Parker and less
15 flows down the river, no one's supply will be shorted; is
16 that your conclusion?

17 DR. MESGHINNA: No supply will be shorted.

18 MR. OSIAS: That is based on ten years of data that you
19 gathered from the Bureau?

20 DR. MESGHINNA: The Bureau. As diversions and return
21 flows. And then we also conducted another study to see by
22 reducing by 277 cfs is the head will be, the hydraulic head,
23 will it be reduced and will it cause any harm to other
24 water users, the same water users? And we found out there
25 will not be any damage.

1 MR. OSIAS: So the ability to divert and the supply are
2 not affected by this reduction?

3 DR. MESGHINNA: They are not affected.

4 MR. OSIAS: That is all I have.

5 CHAIRMAN BAGGETT: Thank you.

6 MS. DIFFERDING: Before you go on, there was the last
7 chart that had reclamation data.

8 MR. HATTAM: Let me clear that up. There were two
9 charts that were referred to. The one that has the two
10 tables, which was the last one Dr. Mesghinna held up, is the
11 irrigation distribution system efficiency and on-farm
12 irrigation efficiency. That is IID Exhibit 2, the water use
13 report, Pages V-27 and V-28 collapsed into one exhibit.
14 Those two pages on that exhibit.

15 The other one that was earlier, which is the canal
16 delivery system efficiency, that was one that Dr. Mesghinna
17 developed for demonstration here today. That is not in his
18 report. We will get copies and distribute those.

19 MR. OSIAS: Mr. Slater was sitting with his witnesses.
20 That is a style I am not used to. Is that where you would
21 like me to be when they are cross-examined?

22 CHAIRMAN BAGGETT: It's your choice.

23 MR. OSIAS: I suppose there is some advantage. I will
24 ask him later what it is.

25 CHAIRMAN BAGGETT: It is not atypical for the way we do

1 our proceedings here.

2 MR. OSIAS: I guess I can kick them.

3 CHAIRMAN BAGGETT: You can sit with them.

4 MR. ROSSMANN: You are like the coach sitting next to
5 the figure skater when the numbers come up in the Olympic
6 games. You are there to cry on your shoulders.

7 CHAIRMAN BAGGETT: San Diego, Scott.

8 ---oOo---

9 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

10 BY SAN DIEGO COUNTY WATER AUTHORITY

11 BY MR. SLATER

12 MR. SLATER: Mercifully, I think I will be brief. I
13 only have questions for Jesse and not that many as it is.

14 Mr. Silva, you testified on direct, I believe, that in
15 establishing -- first, that you were involved in the
16 negotiations of the IID/San Diego deal; is that correct?

17 MR. J. SILVA: That's correct.

18 MR. SLATER: You further testified that the price paid
19 by San Diego under that contract is based upon the cost of
20 Met water; is that correct?

21 MR. J. SILVA: Yes, I believe so.

22 MR. SLATER: You didn't mean to imply, did you, that
23 IID's cost of conservation was not an important factor in
24 setting price in that transaction, did you?

25 MR. J. SILVA: No, I did not.

1 MR. SLATER: Secondly, in your testimony, I believe it
2 is Page 19, Paragraph 50, Lines 14 through 15, could you
3 take a second and review that for me, please.

4 MR. J. SILVA: Okay.

5 MR. SLATER: Could you clarify, is it your testimony
6 that the payments under QSA are insufficient to cover all of
7 the potential costs of conservation?

8 MR. J. SILVA: That's correct.

9 MR. SLATER: Would you distinguish between the payments
10 made under the QSA, are all the parties making equal
11 payments?

12 MR. J. SILVA: No. I believe I said that the 200,000
13 acre-feet agreement with San Diego, the costs for that are
14 different. That was an agreement that was reached between
15 the two. The costs to conserve the additional hundred
16 thousand acre-feet is what we are referring to in these two
17 sentences.

18 MR. SLATER: Your testimony should not be construed to
19 suggest that the payments being made by San Diego are
20 insufficient to cover the costs of conservation?

21 MR. J. SILVA: That was not my intent.

22 MR. SLATER: Thank you.

23 CHAIRMAN BAGGETT: Colorado Tribes.

24 ----oOo----

25 //

1 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT
2 BY COLORADO RIVER TRIBES
3 BY MR. SHEPARD

4 MR. SHEPARD: Just have one question for Dr.
5 Mesghinna.

6 In the course of your review of the impacts of the
7 proposed transfer, did you analyze the impact of the
8 proposed transfer on hydropower generation?

9 DR. MESGHINNA: In my report, initially when we did the
10 study, we did not conduct that study. But later on after we
11 saw the fighting by the Colorado River Indian Tribes we
12 looked into it. And there are data and information and
13 studies that have been conducted earlier in 1991 and 2000 by
14 the Bureau of Reclamation. We reviewed that and we found
15 out that there was no, you know, substantial injury from
16 what we have found.

17 MR. SHEPARD: You are familiar with those studies?

18 DR. MESGHINNA: Yes, I am familiar to a certain extent,
19 yes.

20 MR. SHEPARD: What did those studies say about the
21 impacts?

22 DR. MESGHINNA: There are two of them. One is 1991
23 study and other one is year 2000. The 1991 assumes that if
24 480,000 acre-feet of water is transferred out of the
25 Colorado River, what would be the affect on the surface

1 water elevation of the river downstream. And what they
2 found is that, first of all, based on normal flows, given
3 normal flows, the reduction inflow will be in the
4 neighborhood of about four inches.

5 MR. SHEPARD: What does that translate to in an impact
6 on power generation capacity?

7 DR. MESGHINNA: We did not really conduct in terms of
8 power generation. But what we conducted is we studied the
9 amount of power generated. We received information. We
10 collected data from the BIA, Bureau of Indian Affairs, and
11 one thing that we have found is that although the headgates
12 of the dam was constructed and built from 1988 to 1993, I
13 mean in 1941, the hydropower generation, there are three
14 turbines there. Each one of them, 6.5 megawatt capacity.
15 Total of 19.5 megawatt capacity.

16 There was a flood that occurred in October 2, 1998, and
17 between October 2, 1998, to September 2, 2000, those
18 turbines were out of service because they were being
19 repaired due to the flood problems. So we analyzed the data
20 from 1994 to 1997, because that gives us consecutive years
21 and also it is within our study years. As you know, as I
22 said before, our study goes from 1998 to 1997.

23 MR. OSIAS: '88.

24 DR. MESGHINNA: Yeah, 1988 to 1997.

25 Based on that, we found out that there is a fluctuation

1 of energy produced by about 200 percent, energy produced
2 from year to year. And then we went and see by reducing
3 200,000 acre-feet how much reduction will there be in terms
4 of power generation.

5 And we determined that it will only be about 3
6 percent. And since the 3 percent is between that
7 fluctuation, you know, 200 percent fluctuation, and that is
8 the reason why I said that you don't see much of substantial
9 injury.

10 MR. SHEPARD: Thank you.

11 CHAIRMAN BAGGETT: Defenders of Wildlife.

12 ----oOo----

13 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

14 BY DEFENDERS OF WILDLIFE

15 BY MR. FLETCHER

16 MR. FLETCHER: My questions are all for Mr. Silva.

17 Mr. Silva, are you familiar with IID Exhibit 7, which
18 is the transfer agreement between IID and San Diego County
19 Water Authority?

20 MR. J. SILVA: I am familiar with it, yes.

21 MR. FLETCHER: Do you have a copy before you? In your
22 testimony you referenced a section that I would like to talk
23 about.

24 MR. J. SILVA: I don't have the agreement in front of
25 me, but I can find it here. Okay.

1 MR. FLETCHER: It is Article VII, Section 7.1,
2 Subdivision C. That is on Page 41.

3 MR. J. SILVA: That is 7 what, C?

4 MR. FLETCHER: 7.1 and then Subdivision C.

5 The first sentence of that, I will just read part of
6 that. It states that IID has within 18 months of the
7 execution date entered within subscriptions with landowners
8 expressly conditioned upon IID's compliance with
9 environmental laws pursuant to Article IX of the agreement
10 expressing landowners' interests in undertaking water
11 conservation efforts.

12 Now, is that sentence intended basically to allow for
13 general expressions of intent? Is my understanding of that
14 correct?

15 MR. J. SILVA: From the farmers you mean?

16 MR. FLETCHER: From the farmers, potential participants
17 in the program.

18 MR. J. SILVA: Yes.

19 MR. FLETCHER: Has IID received those subscriptions?

20 MR. J. SILVA: Yes, we have, the first portion of that,
21 yes.

22 MR. FLETCHER: What form did those take?

23 MR. J. SILVA: We mailed out to each of the account
24 holders just basically a questionnaire that said, "Would you
25 sign up to conserve water based upon what we know right

1 now," which wasn't very much. And we did return -- we had
2 farmers return enough of those in a positive -- with a
3 positive response to be able to continue this.

4 MR. FLETCHER: Those questionnaires on a general level
5 indicated that there would be enough farmer interest to
6 potentially conserve 130,000 acre --

7 MR. J. SILVA: 130,000 acre-feet.

8 MR. FLETCHER: -- -feet of water.

9 Did those general survey cards that were issued, did
10 they discuss pricing, price formulas, responsibility for
11 investment in conservation, equipment, things like that?

12 MR. J. SILVA: I don't recall that it was that -- it
13 was pretty general. It just said are you willing to
14 conserve, how much can you conserve between zero and one,
15 and just gave them -- it was very, very general. I don't
16 recall that it had any specific prices that would be
17 offered. But I am not -- it's been some time ago and I am
18 not entirely clear on that.

19 MR. FLETCHER: Moving on to ii under that same
20 subdivision. I will just skip over Subdivision i.

21 It basically says that IID has --

22 CHAIRMAN BAGGETT: What page are you on?

23 MR. FLETCHER: I am still on Page 41, Section 7.1,
24 Subdivision C, and just the next condition there.

25 It states that IID has no more than 120 days after

1 satisfaction of the conditions described in the previous
2 sections, which relate to CEQA compliance, entered into
3 contracts with landowners that call for, expected to yield
4 at least 130,000 acre-feet of water.

5 Once those conditions are satisfied under the CEQA
6 conditions and other environmental conditions are satisfied,
7 how does IID anticipate that it will notify farmers of
8 opportunities to participate in the program?

9 MR. J. SILVA: What we had been contemplating is that
10 we would have actually agreements that would be prepared and
11 that farmers then would be able to sign up that agreement,
12 and that agreement would have the conditions, price, term,
13 how much water they could conserve, those kinds of things.

14 MR. FLETCHER: Have those agreements been developed yet?

15 MR. J. SILVA: No, they have not.

16 MR. FLETCHER: Do you know if those agreements will
17 offer the program participants the opportunity to
18 participate in transfer on a long-term basis or a short-term
19 basis, or flexible, at the term of their election, duration
20 of their election?

21 MR. J. SILVA: That still has not been decided. We've
22 talked about short -- there has been proposals for long term
23 and short term, so that has not been decided yet.

24 MR. FLETCHER: Within those agreements will
25 participants elect, completely subject to their own

1 discretion, the conservation measures or will there be a
2 menu, or will IID select those?

3 MR. J. SILVA: Again, that has not been determined yet,
4 the programs that were offered or proposed by some of the
5 Board study groups that I mentioned earlier in my testimony
6 included letting the farmer choose whatever he could think
7 that he could do and all the way to saying this is what you
8 have to do. So everything has been offered but nothing has
9 been settled yet.

10 MR. FLETCHER: On compensation I understand, if I
11 remember correctly, there isn't a formula for compensation
12 yet, but is it anticipated that farmers will be compensated
13 on the basis of the cost of conservation implemented or on a
14 per acre-feet basis?

15 MR. J. SILVA: Again --

16 MR. OSIAS: Objection. That is ambiguous. Those
17 aren't mutually exclusive. They aren't necessarily
18 different.

19 CHAIRMAN BAGGETT: Can you rephrase?

20 MR. FLETCHER: Is it anticipated that farmers may be
21 compensated at cost of -- based upon, in some measure, the
22 cost of conservation measures?

23 MR. J. SILVA: When the agreement was entered into,
24 when it was negotiated, it was negotiated to cover the costs
25 of conservation plus other costs. So that is the basis of

1 the agreement. We have not determined at this time how that
2 would actually be paid, whether it would be per acre-feet or
3 actual cost. That has not been determined yet.

4 MR. FLETCHER: Or possibly a combination?

5 MR. J. SILVA: Probably one or the other.

6 MR. OSIAS: Can I ask a question? He answered the
7 wrong question.

8 CHAIRMAN BAGGETT: You can object.

9 MR. OSIAS: I will object. The question was directed
10 to farmers. I think he was answering with respect to the
11 District.

12 CHAIRMAN BAGGETT: That is fine. It is already
13 answered. It's too late.

14 MR. FLETCHER: If the conservation -- if physical
15 equipment is required for conservation requires significant
16 investment up front, is it anticipated -- who might provide
17 the investment?

18 MR. J. SILVA: Again, we have not determined that part
19 of the agreement either.

20 MR. FLETCHER: Would it be possible that -- has it been
21 discussed that loans may be available to farmers from IID or
22 other sources?

23 MR. J. SILVA: We haven't got that far into the
24 discussions yet, no.

25 MR. FLETCHER: Let me take a minute. You have answered

1 a few of my questions.

2 If farmer participation does not yield the -- if the
3 initial sign-up period doesn't yield enough conservation to
4 reach the 130,000 acre-feet benchmark, how will IID generate
5 the required water to comply with the agreement terms?

6 MR. OSIAS: Objection. Assumes facts not in evidence.
7 The agreement doesn't provide for an election at that
8 point.

9 CHAIRMAN BAGGETT: Sustained.

10 MR. FLETCHER: Does IID have the capacity to generate
11 130,000 acre-feet using lands, basically, all resources of
12 its own irrespective of the number of participants sign up?

13 MR. J. SILVA: Let me see, let me make sure I
14 understand your question. You're asking under this
15 agreement with San Diego can the District proceed with the
16 agreement if we do not have a hundred thousand acre-feet of
17 water conserved by farmers?

18 MR. FLETCHER: No. The question was: Do you have the
19 physical capacity to generate that quantity of water
20 independently of participating farmers through system
21 improvements and your own holdings?

22 MR. J. SILVA: Again, the question is do we have the
23 capacity to do it, not contractually do we have to do it?

24 MR. FLETCHER: No. Just physically.

25 MR. J. SILVA: The estimates I believe that I have seen

1 from Dr. Mesghinna is about 10 percent on systems. So that
2 amount of water that we've anticipated is only about a
3 hundred thousand. So I don't think we've got enough from
4 the system to complete the minimum amount that is required,
5 and the contract doesn't allow it, anyway, so it is kind of
6 a moot point.

7 MR. FLETCHER: You stated in your testimony that IID
8 couldn't, and I am paraphrasing here, would not be able to
9 put in place a program for people to sign up until after the
10 Board completes or receives final comments on the
11 environmental document.

12 Is that correct?

13 MR. J. SILVA: That's correct.

14 MR. FLETCHER: Why is that?

15 MR. J. SILVA: Again, the agreement that you had me
16 read there on the second part says we have 120 days after
17 the complete satisfaction of conditions. One of those
18 conditions says the completion of the EIR document,
19 certification. Again, the Board wants to hear all the
20 comments and then be able to decide after the comments are
21 received what particular method we would utilize to conserve
22 that water.

23 MR. FLETCHER: Is it your understanding that the term
24 of the agreement prevents development of the sign-up program
25 in more detail or that it does not require it?

1 MR. J. SILVA: I don't see where it prevents it, no.

2 MR. FLETCHER: Moving on to another topic. Are you
3 familiar with staff Exhibit Number 7, which is the IID
4 DEIR/DEIS for the water transfer?

5 MR. J. SILVA: No, I am not.

6 MR. FLETCHER: There is statements in there -- are you
7 familiar with statements of this kind? It is repeated
8 throughout the document that the surface elevation of the
9 Salton Sea is destined to decline whether or not the
10 transfer is implemented as planned? Are you familiar with
11 general statements of that type?

12 MR. J. SILVA: Yes, I am.

13 MR. FLETCHER: In your testimony you stated that the --

14 MR. SLATER: Mr. Chair, this sounds like Phase II
15 cross-examination, and if we are going to stay on schedule
16 we'd appreciate --

17 CHAIRMAN BAGGETT: I would sustain that objection.

18 Can you focus -- we have a whole another phase on
19 Salton Sea.

20 MR. FLETCHER: I was actually intending to ask just
21 about his just one statement. It is a single question and
22 the statement had -- a statement that was made in his
23 previous statement regarding the Board's fund for
24 compensating landowners. Just a single question.

25 CHAIRMAN BAGGETT: Okay. Ask the question.

1 MR. ROSSMANN: There is a citizens' advisory committee
2 that your District has appointed; is that correct?

3 MR. J. SILVA: That's correct.

4 MR. ROSSMANN: Am I correct in understanding that they
5 might finalize their report sometime this week or next week?

6 MR. J. SILVA: I believe so, yes.

7 MR. ROSSMANN: Let me ask you about the EPA comments.
8 You're a co-lead agency on the QSA EIR; is that correct?

9 MR. J. SILVA: Yes.

10 MR. ROSSMANN: Have you seen the EPA comment letter?

11 MR. J. SILVA: I have received it, but I have not
12 looked at it.

13 MR. ROSSMANN: Finally, sir, could you look at, I think
14 it is, Imperial Exhibit 7, which is the proposed agreement?
15 Would you look at page -- start at Page 58.

16 MR. J. SILVA: Okay.

17 MR. ROSSMANN: First of all, I want to understand that
18 you did participate in the negotiations of this agreement?

19 MR. J. SILVA: As I said, I was involved, yes.

20 MR. ROSSMANN: It is my understanding that Article 14.2
21 on Page 58 prohibits following as a source of water
22 conservation for the Imperial/San Diego transfer; is that
23 correct?

24 MR. J. SILVA: That's correct.

25 MR. ROSSMANN: Could you also look at Page 5, and

1 particularly the definition of conserved water? I think it
2 is Subparagraph aa.

3 Is it your understanding that that subparagraph also
4 prohibits fallowing as a source of conserved water?

5 MR. OSIAS: Objection. The document speaks for
6 itself.

7 MR. SLATER: Join.

8 MR. OSIAS: Also, to the extent it calls for a legal
9 conclusion regarding interpretation of the statute.

10 MR. SLATER: Join.

11 MR. OSIAS: Beyond the expertise of this witness.

12 CHAIRMAN BAGGETT: The second objection I will sustain.
13 He is an engineer.

14 MR. ROSSMANN: That is fine.

15 CHAIRMAN BAGGETT. He states he is an engineer.

16 MR. ROSSMANN: He's participated in the negotiations.
17 I've found that engineers know more than lawyers about
18 these.

19 Thank you very much.

20 CHAIRMAN BAGGETT: California Farm Bureau.

21 MR. RODEGERDTS: No questions.

22 CHAIRMAN BAGGETT: Mr. Du Bois.

23 MR. DU BOIS: I promised Jesse I would ask him some
24 questions.

25 MR. J. SILVA: Told him he didn't have to.

1 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

2 BY MR. DU BOIS

3 MR. DU BOIS: Mr. Silva, you testified that IID holds
4 water rights in trust; is that correct?

5 MR. J. SILVA: That's correct.

6 MR. DU BOIS: Who makes the policy for the District?

7 MR. J. SILVA: The Board of Directors.

8 MR. DU BOIS: They're the ones that determine what to
9 do with the water rights that you hold in trust?

10 MR. J. SILVA: That is their duties, yes.

11 MR. DU BOIS: How are directors selected?

12 MR. J. SILVA: As I testified, they are elected at
13 large by all of the registered voters in the water service
14 area boundary.

15 MR. DU BOIS: Do you have knowledge of how many farmers
16 there are in your district?

17 MR. J. SILVA: As far as farming, actual farming
18 families, about less than 500 probably.

19 MR. DU BOIS: Do you have knowledge of how many voters
20 there are in the District?

21 MR. J. SILVA: No, not exactly. From what I recall in
22 the elections probably more than ten thousand, but I don't
23 remember the exact. Actually the ones that vote. There
24 are, like, 14,000 or so.

25 MR. DU BOIS: Do you consider that the farmers have an

1 ability to elect directors that they want to run the Board?

2 MR. J. SILVA: Yes, they have a vote just like
3 everybody else.

4 MR. DU BOIS: Just like everybody else. But there are
5 more other people than there are farmers?

6 MR. J. SILVA: If you're talking about professions,
7 yes.

8 MR. DU BOIS: This matter of fallowing has been
9 discussed. In reading the Draft EIR fallowing was discussed
10 at great length for many purposes, both to serve the Sea and
11 also to furnish water for the transfer.

12 In your opinion, if the transfer is approved, how much
13 fallowing do you anticipate will be accomplished?

14 MR. J. SILVA: We anticipate no fallowing accomplished.
15 We intend to do the conservation through the efficiency
16 improvement-type of projects that we anticipate.

17 MR. DU BOIS: The results of the efficiency are going
18 to be -- there will be less water running into Salton Sea;
19 is that correct?

20 MR. J. SILVA: That's correct.

21 MR. DU BOIS: Have you assessed the liability of the
22 Imperial Irrigation District for damages which occur to the
23 Sea?

24 MR. OSIAS: Objection. Outside the scope of this
25 witness' expertise based on his testimony today.

1 CHAIRMAN BAGGETT: Sustain that. It wasn't part of his
2 -- I will sustain it. It wasn't part of his testimony. It
3 wasn't in the record for Mr. Silva. Maybe there is another
4 witness later.

5 MR. OSIAS: Also outside his training. The question is
6 what is the assessment of liability for the Salton Sea.

7 MR. DU BOIS: I asked the question on the basis that I
8 thought it was no more than reasonable to think that the
9 general manager of a district would assess the liability of
10 certain actions by the district.

11 MR. OSIAS: In that sense I object to the extent it
12 calls for attorney-client privilege. If he has consulted
13 with counsel to find out what his liability exposure is, he
14 is not obligated to disclose that.

15 CHAIRMAN BAGGETT: I will sustain that one. That is a
16 good objection.

17 MR. DU BOIS: Have you considered how the District will
18 finance the system improvements?

19 MR. J. SILVA: No, I have not specifically. We don't
20 know how much yet, Bill, so we haven't got that specific
21 yet.

22 MR. DU BOIS: You consider that the District has the
23 financial capability to pay for the system improvements?

24 MR. J. SILVA: You mean with current revenues or
25 expected revenues?

1 MR. DU BOIS: Yes.

2 MR. OSIAS: Objection. Ambiguous. There are two
3 yeses. He asked a current revenues or expected revenues.

4 MR. DU BOIS: Let me put it this way: It is my
5 understanding, and if I am incorrect I will learn that, but
6 it is my understanding that the District has to produce the
7 water first. It gets paid for it after it is produced and
8 delivered.

9 Is that correct?

10 MR. J. SILVA: On an annual basis that is correct,
11 yes.

12 MR. DU BOIS: So the District will have the investment,
13 whatever it takes to produce the water system improvements,
14 before it receives any payment for it?

15 MR. J. SILVA: That's correct.

16 MR. DU BOIS: So it will have to finance the system
17 improvements itself?

18 MR. J. SILVA: By finance you mean borrow money?

19 MR. DU BOIS: Yes. It will -- the District intends to
20 borrow the money to do the financing of the system
21 improvements?

22 MR. J. SILVA: I am not sure what we intend to do yet,
23 Bill. Again, without knowing the final details of the
24 program that we're going to enter into, we just haven't made
25 that decision yet.

1 MR. DU BOIS: Are you acquainted with the fact that the
2 agreement with San Diego expresses the intent, I'd guess you
3 would say, of the on-farm conservation being performed first
4 and the system conservation performed afterwards; is that
5 correct?

6 MR. J. SILVA: No. I think we can do the opposite as a
7 matter of fact.

8 MR. DU BOIS: That is not the way I read it. I'm
9 pleased with that answer.

10 The other question I have is: Do you feel that the
11 farmers will have the flexibility to raise crops, like
12 sugarcane, to the extent that it's possible after the
13 District is reduced to having only available 2.6 million
14 acre-feet of water a year?

15 MR. J. SILVA: Again, if we do the projects that we've
16 anticipated, in other words, if we conserve the water by
17 becoming more efficient, the water available for the plants
18 on your farm should remain the same, and we should be able
19 to maintain the same capabilities to grow the same types of
20 crops we have been growing throughout the history of the
21 District.

22 MR. DU BOIS: Now as I read the EIR, the District has
23 the intention of determining what a farmer's right to use
24 water if he signs a contract, an agreement, to conserve or
25 transfer, his transferred water will be determined by his

1 history, is that correct, over a five-year period?

2 MR. J. SILVA: Where is that coming from? I am not
3 aware of it. Did you say in the EIR?

4 MR. DU BOIS: From the Draft EIR that was recently --
5 what I heard.

6 MR. J. SILVA: I am not familiar with that, Bill, but
7 go ahead.

8 MR. DU BOIS: Let me ask it from a different point of
9 view. Is it the present policy of IID to determine the
10 amount of water available for transfer is the difference
11 between what the history of the gate was and what its
12 current use will be after he signs the contract?

13 MR. J. SILVA: Again, I think I testified that the
14 District board has not approved a final plan of how we are
15 going to conserve the water and the details of how we are
16 going to determine the water to conserve. The board has
17 approved one portion of -- if you recall when we did all of
18 the meetings that we had, we had a long list of items that
19 we wanted to clarify that would be included in an agreement
20 with the farmers.

21 One of them was how water would be determined, how
22 water conservation would be determined. We had to determine
23 first what the water use, a baseline of water use on the
24 lands would be. And the Board was asked by the water
25 conservation advisory board to determine that based upon

1 water history of the years 1987 through, for ten nurse, '96,
2 I guess it is, and then we would throw out the high and the
3 low and get the average of that. That is just one very
4 small bit of information that we would need to develop the
5 on-farm conservation contracts.

6 MR. DU BOIS: That policy has not been set yet by the
7 Board?

8 MR. J. SILVA: The board has not approved a total
9 agreement with the farmers. The only thing that they've
10 done is they said if we are going to use a baseline, we are
11 going to use that formula to determine what that baseline
12 would be. The board did approve that. It did pass that.

13 MR. DU BOIS: Haven't determined what the baseline --

14 MR. J. SILVA: How it's going to be utilized or
15 anything else.

16 MR. DU BOIS: I have no further questions.

17 CHAIRMAN BAGGETT: Thank you.

18 Mr. Gilbert.

19 MR. GILBERT: Thank you, Mr. Chairman. I would like to
20 ask a question of Mr. Mesghinna first.

21 ----oOo----

22 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

23 BY MR. GILBERT

24 MR. GILBERT: You're probably familiar with the soils
25 in the Imperial Valley from your years of studying down

1 there. Would you say that some of those soils are -- their
2 productivity is still impaired by salinity that's built up
3 over the years?

4 DR. MESGHINNA: I have not really studied field by
5 field. I have studied its totality Districtwide. But based
6 on the studies that I have conducted, there are some soils
7 that have higher salinity content.

8 MR. GILBERT: Additional leaching would be helpful on
9 those soils?

10 DR. MESGHINNA: Yes.

11 MR. GILBERT: Thank you.

12 Let me pursue the questions about liability in regards
13 to the Salton Sea. Question for Jesse.

14 You may have discussed the possibility of liability on
15 the Sea with somebody other than your attorneys. And I
16 suppose that it would be of interest to the farmers before
17 they signed up to agree to a transfer whether there might be
18 some liability that would accrue to them. I presume that
19 you would want to apprise them of that potential liability
20 before you asked them whether they would sign up or not.

21 Is there possibly some liability that might be incurred
22 as a result of environmental effects as a result of the
23 transfer?

24 MR. OSIAS: Objection. Calls for him to form a legal
25 opinion and then state it. Beyond the qualifications of

1 this witness.

2 I thought he was going to ask has he told somebody this
3 already, in which case he can report on what he said.

4 CHAIRMAN BAGGETT: Can you rephrase that question. I
5 think it doesn't seem out of the realm of a general
6 manager's role to at least have some idea where they are
7 going without discussing the attorney-client privilege. I
8 understand the closed session aspects are privileged
9 conversations. But the question here is going to, if I can
10 help you out, the general concept. Is this in the plan of
11 IID management to advise the farmers before they sign up of
12 what liability, is there liability. I think that is a
13 reasonable question.

14 MR. GILBERT: Yes, thank you.

15 MR. J. SILVA: The question again, was what? Do we
16 plan to give you a notice or tell you what the liability may
17 be before we ask you to sign up, is that it?

18 MR. GILBERT: Yes.

19 MR. J. SILVA: Well, again, I have before talked about
20 the fact that once we hear, once the Board hears all the
21 comments regarding the EIR, once we get all of that, once we
22 determine what the impacts are and what the mitigation may
23 be, we will have a better idea of -- should have a very good
24 idea whether we want to proceed, first of all, based upon
25 those costs if we can determine.

1 If we want to proceed, then I think everybody will know
2 what those liabilities at the Sea or anywhere else may be,
3 and I don't know that we will include them specifically in
4 the agreement with the farmers, but I think it will be
5 common knowledge. The board will have taken that into
6 consideration when they make a decision on how to proceed
7 and agreements that we make with the farmers.

8 MR. GILBERT: That might be a matter of very great
9 interest to the farmers before they sign up?

10 MR. J. SILVA: I think of interest to all of us, yes.

11 MR. GILBERT: May come back for something related to
12 that in a few minutes.

13 Already talked about the issue of up-front funds from
14 the transfer that it is going to be paid as the water is
15 transferred. Some of the conservation measures that IID
16 would anticipate are pretty heavy capital intensive. Is
17 that a correct statement for the system improvements?

18 MR. J. SILVA: Yes, that is correct.

19 MR. GILBERT: So in order to transfer the water by
20 system improvements it would need to borrow money in order
21 to get the conservation done in time to transfer the water?

22 MR. J. SILVA: If that is what the final plan is, then
23 it may make sense to borrow money and pay back with revenues
24 received from the contract, yes.

25 MR. GILBERT: If the District were going to go on a

1 pay-as-you-go basis and were not able to borrow the money or
2 chose not to borrow the money, then it is possible that
3 there might be some transitional fallowing involved in the
4 early years of the contract?

5 MR. J. SILVA: Again, the current agreement that we
6 have with San Diego, kind of where it is now, does not allow
7 fallowing. I think transitional fallowing is just a name,
8 but it is still fallowing. So I don't see how we can do
9 that under the current agreement we have with San Diego.

10 MR. GILBERT: It kind of then almost requires that you
11 borrow the money to put in capital improvements so the water
12 can be transferred as it's needed?

13 MR. J. SILVA: That is what the plan is, yes.

14 MR. GILBERT: Are you aware that some of the water
15 users seem to be objecting to borrowing money to do the
16 transfer expenditures to put in the capital necessary?

17 MR. J. SILVA: I heard that for a few years, yes.

18 MR. GILBERT: That may be because the contract or the
19 transfer is subject to termination under certain conditions,
20 and if the contract were prematurely terminated then the
21 revenue stream would stop, but the debt would still be
22 there. Is that a fair statement?

23 MR. OSIAS: Objection. I am not sure what a fair
24 statement means. Is that a fair summary of what people
25 said? Is that what he is asking?

1 MR. GILBERT: An accurate statement?

2 MR. OSIAS: Of who?

3 CHAIRMAN BAGGETT: You're asking for Mr. Silva's
4 opinion?

5 MR. OSIAS: We started out he's heard?

6 CHAIRMAN BAGGETT: I understand. I am trying to help.

7 MR. GILBERT: The point I am trying to make is that or
8 the question I am trying to get an answer to is that since
9 the contract is subject to termination before it is
10 completed, if IID borrowed money to build conservation
11 improvements, if the contract was terminated before that was
12 paid off, IID would lose its revenue stream to pay off that
13 debt.

14 CHAIRMAN BAGGETT: Good question.

15 MR. OSIAS: No objection.

16 CHAIRMAN BAGGETT: Overruled before you could object.

17 MR. J. SILVA: Again, if we borrowed money, if that is
18 the plan, we borrowed money and the plan is terminated and
19 we don't have insurance or any other thing, then that is a
20 possibility, yes.

21 MR. GILBERT: The agreement does include what we have
22 called off-ramps, that if environmental costs particularly
23 are too high then the contract would just not take place or
24 it could be terminated partway through. That doesn't --
25 well, that obviously covers expenses that IID would have to

1 pay in order to mitigate effects of the transfer.

2 Do you know if that covers costs that might be imposed
3 directly on the farmers within the district?

4 MR. J. SILVA: For what cost?

5 MR. GILBERT: For environmental mitigation.

6 MR. J. SILVA: The agreement that we have or that
7 portion of the agreement calls for the -- if before we start
8 the conservation program, if the District at its sole
9 discretion feels that the cost is going to be greater than
10 \$50,000,000, we would not proceed.

11 Mitigation to me means all mitigation. So I am not
12 sure I understood your question. That is what the agreement
13 says.

14 MR. GILBERT: So if farmers were directly required to
15 do some activities, costly activities, to mitigate effects
16 of the transfer, would they be covered under that agreement,
17 that off-ramp?

18 MR. J. SILVA: If the farmers were having to pay
19 something directly that would be part of the mitigation
20 cost, that would be part of the decision that would be made
21 to either continue or not at the beginning. And then later
22 on, if it comes up again later on, we would have another
23 \$15,000,000 if it approached that, and we would be able to
24 get out of the agreement again.

25 MR. GILBERT: That would cover costs that farmers were

1 required to pay directly to mitigate effects of the transfer
2 on the Sea or other environmental situations?

3 MR. J. SILVA: Again, it is all mitigation costs
4 related to environmental mitigation.

5 MR. GILBERT: That obviously is a comforting response.

6 One thing that I'm not sure that is covered, if there
7 are unanticipated impacts to the environment or to persons
8 or property as result of the transfer, and some qualified
9 body ordered that to either be mitigated or someone to pay
10 damages, is the District or it is farmers or water users
11 protected from payments of such claims or orders?

12 MR. J. SILVA: Larry, I am not an expert in the
13 agreement. I don't know -- I can't answer that
14 question. You have to have an attorney that was involved in
15 preparation of that document answer that.

16 MR. GILBERT: Was that, as far as you know, part of the
17 agreement or part of the QSA?

18 MR. J. SILVA: What was your question again, Larry?
19 I'm sorry, I lost my -- ask the second one.

20 MR. GILBERT: That unanticipated impacts that were
21 discovered later and some qualified body ordered those to be
22 mitigated or paid for, is that, to your knowledge, anywhere
23 in the contract agreement or in the QSA? Is that -- are we
24 prevented from paying those costs? Is anybody protecting us
25 from that?

1 MR. J. SILVA: You said prevented?

2 MR. GILBERT: Protected.

3 MR. J. SILVA: Larry, I don't recall. Either, we
4 talked about getting insurance, that we would have
5 insurance, so that in case something did come up later we
6 would be covered. I don't recall at this moment whether
7 that has been finalized in the QSA. It is not in the San
8 Diego agreement, but I don't know whether it is in the QSA
9 or not. We have talked about it.

10 MR. GILBERT: Is that considered to be an important
11 issue for IID?

12 MR. J. SILVA: Obviously, we were concerned about that
13 and that is why we were talking about some kind of
14 insurance, purchasing some kind of insurance, that we would
15 be covered under those circumstances.

16 MR. GILBERT: Thank you.

17 Does the IID have a timetable when they would approve a
18 conservation plan that would include how the conservation
19 would be done? I don't mean by tailwater return systems or
20 some other means, but an overall conservation plan. Is
21 there a timetable when the IID plans to have that approved?

22 MR. J. SILVA: Again, the only thing that we know we
23 have to have it done by 120 days after the certification of
24 the agreements. So we don't have any other schedule besides
25 that.

1 MR. GILBERT: So if the transfer is going to be
2 completed by the end of December 31, is only about four
3 months left in order to do that?

4 MR. J. SILVA: That's correct.

5 MR. GILBERT: Is there some way that the District plans
6 to insure that farmers have a meaningful voice in the
7 preparation of that conservation plan since, as was pointed
8 out earlier, they are not a big factor in the electorate?

9 MR. J. SILVA: Again, Larry, we have gone through, I
10 think, an extensive process to get where we are now. You
11 are very well aware that you and the Farm Bureau have
12 submitted another proposal that is farmer-based, I would
13 say, more than the other ones because it is coming directly
14 from the Farm Bureau. There is no specific plan that I know
15 of. I know the Board is concerned about making sure that
16 whatever agreement that we come up with that the farmers
17 are flexible, you have flexibility to continue to farm
18 however you want to. And all of those criteria that were
19 developed back a couple years ago. So even though we don't
20 have a specific plan, I can tell you that the Board is
21 committed to getting the farmer input because you are the
22 ones that have to conserve the water. I don't know how
23 specific or how we are going to do that, but I know the
24 Board is committed to that.

25 MR. GILBERT: It is not IID's desire that water rights

1 of any farmer be diminished without compensation; is that
2 correct?

3 MR. OSIAS: Objection. Assumes any farmer has a water
4 right. That is not the evidence that was just testified to.
5 It is held in trust by the Board.

6 CHAIRMAN BAGGETT: I understand that.

7 MR. GILBERT: The right to receive water. And I state
8 it that way. No farmer or landowner's right to receive
9 water would be diminished without compensation?

10 MR. J. SILVA: The right to receive water, we don't
11 intend to hurt your economic viability of your farms. We
12 don't intend to hurt whether it is right to receive water or
13 right to drain water or anything else. Our intent is to
14 make sure you can conserve the water and continue to farm
15 and be an economic industry.

16 MR. GILBERT: Thank you. That is all.

17 CHAIRMAN BAGGETT: Maybe you did go to law school.

18 I have a few questions. Then we'll see where we go
19 from there.

20 ----oOo----

21 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

22 BY THE BOARD

23 CHAIRMAN BAGGETT: I guess I'm a little perplexed. I
24 guess after the last two witnesses it appears we don't know
25 how much water, when it is coming or who is going to give

1 it, what water there really is to transfer at this point in
2 time.

3 So I guess my question is: Why are we even here
4 talking about transferring water when there seems to be so
5 many details missing? My questions are kind of going to go
6 to that.

7 For Dr. Mesghinna, how many acre-foot -- I think this
8 was buried somewhere in the three volumes in your comments.
9 How many acre-feet of water, exclusive of I guess the,
10 quote, on-farm improvements, is there available to continue
11 to conserve and available to transfer?

12 DR. MESGHINNA: At the farm level there will be -- that
13 is 17 percent return flow. I mean, whether you will be able
14 to conserve all of it or not, that is not the thing.

15 CHAIRMAN BAGGETT: That is what I am asking. The
16 numbers I've got, and you were arguing 83 percent of the
17 most efficient district anywhere. So you've got 17 percent
18 to work with.

19 Exclusive of on-farm improvements, so how many
20 acre-feet does that turn into that you think is
21 realistically available for transfer?

22 DR. MESGHINNA: It all depends how much money someone
23 is going to spend to improve the efficiency over and above
24 83 percent to save that 17 percent. There is one thing
25 here, when you -- let's assume that we use pump back

1 system. When we use pump back system, we are going to
2 rotate the water, and there will be -- instead of the water
3 escaping out, the water is going to come back by pumps at
4 the head of the field, and it will be mixed with the
5 freshwater that is coming from the Colorado River. And then
6 we get to it so on and so on.

7 At some point that water will have, towards the end of
8 it, when you use it and then reuse it, it will have high
9 salinity, and you don't want to use it then. You would
10 leave it out of it. But from some studies that I have seen
11 before I think there is a potential of -- this is what I
12 have seen. I haven't analyzed its potential of saving. If
13 you have, you know, if you invest a lot of money, up to 10
14 percent or so even more.

15 CHAIRMAN BAGGETT: The percent of the 17, so that would
16 be --

17 DR. MESGHINNA: Yes. There is also --

18 CHAIRMAN BAGGETT: Ten percent versus 17 percent.
19 You're saying you would operate 93 percent efficiency, be
20 the outside limit if you spent money and did all the state
21 of the art?

22 DR. MESGHINNA: I have not studied that.

23 CHAIRMAN BAGGETT: I understand.

24 DR. MESGHINNA: I think that is where it would be,
25 probably.

1 CHAIRMAN BAGGETT: How many acre-feet would that be
2 approximately?

3 DR. MESGHINNA: That would be around a hundred -- no,
4 about ten times 25. Be around 200-, over 200,000 acre-feet.

5 CHAIRMAN BAGGETT: That would be enough to satisfy
6 them?

7 DR. MESGHINNA: That is estimate. As I told you, I
8 have not really studied it.

9 CHAIRMAN BAGGETT: You had a lengthy discussion of soil
10 types, and I think - is it fair to say that the soils are
11 extremely high in salts, but clay-type soils in general?

12 DR. MESGHINNA: I think the salt is coming from the
13 water itself, from the Colorado River.

14 CHAIRMAN BAGGETT: Colorado River. So I understand
15 what is going on.

16 DR. MESGHINNA: Yes. So what is going on is when the
17 plans take the water, they only take the pure water and they
18 leave the salts there. And the farmers have been struggling
19 with this and, you know, they have been, during irrigation,
20 as I said before, there is leaching going on horizontally
21 and then vertically. Then between crops they also leach the
22 soil.

23 So some of the soils, in some of the soils from the
24 studies that -- from the research that I have seen, have
25 high salinity content. If you are applying more water,

1 those salinity contents can be reduced substantially, but
2 they are still producing crops.

3 CHAIRMAN BAGGETT: I guess what -- I understand that.
4 Is the majority, again in your opinion and based on all the
5 numbers behind me here, is the majority of the salt or what
6 is mixed between Colorado River salt and the high TDS water
7 coming in and the salt buildup after it goes through
8 once? I understand recirculating it gets exponentially, I
9 assume, compounded the problem. In terms of what is the mix
10 between salt from the soils and running through the farmers
11 versus salt that is coming into the system to begin with?
12 50/50? 60/40? Do you have a guess? 80/20?

13 DR. MESGHINNA: From the studies that we have done in
14 general, when a farmer irrigates -- this is in general. On
15 this medium to heavy soils about 50 percent of the salt
16 that's been introduced with the irrigation water is leached
17 vertically and horizontally, and then about 50 percent is
18 left there. So if say, for example, that specific crop
19 requires between planting and harvesting 12 irrigations, it
20 means that 50 percent each is remaining there. So what they
21 do at the end of the crop is they come back and leach
22 irrigation. That is it takes several days, probably ten
23 days or even more than ten days, they, you know, apply water
24 into it and they leach the water vertically. They're
25 holding it. They don't let it go. They are not allowed to

1 let it go. By the way, there is a resolution from IID that
2 leaching water cannot escape just like tailwater. That is
3 the way they know how they leach it and how they get rid of
4 it.

5 CHAIRMAN BAGGETT: So the salt buildup is really a
6 factor of the water coming in from the Colorado as opposed
7 to in other parts of the state where you have salinity and
8 other salts in the soil which actually compound the problem.

9 DR. MESGHINNA: It is primarily the salts from what
10 I've seen.

11 CHAIRMAN BAGGETT: From the Colorado?

12 DR. MESGHINNA: From the Colorado.

13 CHAIRMAN BAGGETT: I have a couple for Mr. Silva.

14 So at this point IID has yet to adopt a plan or policy
15 on how it is going to deal with the on-farm improvements.
16 Is that what I heard? You don't -- there is no policy or
17 way you are going to define what those are or how many or
18 what percent, you are still developing that?

19 MR. J. SILVA: By contract we have to conserve 130,000
20 on-farm. We do -- and so far the Board has approved that
21 for a baseline measurement to determine on-farm how water
22 conserved would be determined, they have set a baseline. We
23 have heard -- we have about nine or a dozen proposals of how
24 specifically to do that.

25 We have not finalized those specific rules. But we are

1 still -- like I say, we just got one a month ago from the
2 Farm Bureau. So we are studying all of them, waiting for
3 the finalization of the EIR so that we can then finalize.
4 It is not like we haven't done anything. We are still
5 studying all of those proposals. We will finalize it within
6 the 120 days when we can get it out to the farmers and meet
7 the requirements of the agreement with San Diego.

8 CHAIRMAN BAGGETT: So 120 days will be what date, by
9 what date, time certain?

10 MR. J. SILVA: It depends, we are looking at the EIR
11 having the Board certified at the end of May. So by July
12 1st we would have -- excuse me, by the end of April we will
13 have -- by April 30th we hope to get the Board certified
14 EIR. We will then have 30 days after that to wait for
15 anybody's complaint. And after that period we have -- I'm
16 not sure when we are going to do the determination of
17 preferred alternative. But sometime after we will do that.
18 So it will be sometime in the fall when we will have the
19 plan prepared and out to the farmers.

20 CHAIRMAN BAGGETT: This is predicated on enough farmers
21 signing a contract with permit terms yet to be determined to
22 consumptively save 130,000 acre-feet; is that correct?

23 MR. J. SILVA: Yes. When we finalize the specifics of
24 the agreement with the farmers, we will put that out and the
25 farmers will determine whether they want to conserve the

1 water under those terms, yes.

2 CHAIRMAN BAGGETT: Is there a contingency -- maybe this
3 is for another witness later. What is the contingency if
4 you don't have 130,000 acres worth of sign-ups?

5 MR. J. SILVA: Well --

6 CHAIRMAN BAGGETT: You are obviously committed to
7 this. So you go to a transfer process and it is only 75,000
8 sign up by September. Is there a contingency plan?

9 MR. J. SILVA: No, not anything specific. But again,
10 we expect that by working with the farmers, and you have
11 heard the comments from a couple farmers today, by working
12 with them we can put together a program that will be able to
13 conserve 130,000 acre-feet on a farm. If we don't, then the
14 way it is right now the District then has not met its
15 condition and agreement would not go through.

16 CHAIRMAN BAGGETT: You had a chart up there which
17 showed significant fluctuations that was due to different
18 diseases, different weather patterns, like the one with USDA
19 crop fallowing incentive program. You see a big drop when
20 an incentive is coming from feds.

21 With those kind of fluctuations, how do you pick 3.1
22 million acre-feet as a fixed line?

23 MR. J. SILVA: We would rather have had 3.4.

24 CHAIRMAN BAGGETT: How was that picked? Maybe I should
25 have asked Mr. Underwood. I am just curious, how did 3.1,

1 when I see this thing -- or do you have another witness that
2 might be better later on.

3 MR. OSIAS: I do. I think Mr. Silva knows, but if he
4 doesn't we have another witness.

5 MR. J. SILVA: I don't know specifically how we got
6 3.1. I know we want as much as we could get.

7 CHAIRMAN BAGGETT: It was just something I noticed.

8 The last question I have, there was a lot of talk about
9 on-farm improvements, to use the term of art here, as
10 opposed to the other term of art, fallowing. A previous
11 witness talked about -- I realize this might be out of your
12 scope -- the Palo Verde where they are doing on-farm
13 improvements, but clearly were doing some fallowing-type
14 programs, but they call them fallowing programs.

15 How do you define -- is that same definition you are
16 using on IID for on-farm improvements, quote-unquote? I am
17 trying to understand what that really means. Because in
18 another QSA project it seemed to me you could do fallowing,
19 but in this once it doesn't.

20 MR. J. SILVA: I think I understand your question. The
21 San Diego/IID agreement prohibits fallowing in any of its
22 forms or descriptions. And I think you're referring to the
23 Palo Verde fallowing program. They don't call it a
24 fallowing program.

25 CHAIRMAN BAGGETT: That is my point.

1 MR. J. SILVA: It was a land management program. But I
2 think they are not saying they are trying to hide. It is a
3 fallowing program. That is what it is for. So I am not
4 sure that -- we are not going to do fallowing under the
5 proposal that we have in place. Palo Verde is doing a
6 fallowing program.

7 CHAIRMAN BAGGETT: You said at this point you have
8 maybe 12 different alternatives being proposed for the
9 on-farm improvement program. Could you give an idea what
10 those 12 types of programs are?

11 MR. J. SILVA: They are variations on basically the
12 same thing. And what I mean by proposals, they are the
13 details of how farmers would conserve the water, terms of
14 agreement, how long would the agreements be, is it with the
15 farmer that is actually farming or is it with a landowner of
16 the land or is it both, how you determine how water is
17 conserved, whether you look at how much water that is
18 delivered or whether you look at a combination of delivery,
19 how much goes to the tailend. All of those details --

20 CHAIRMAN BAGGETT: Monitoring programs?

21 MR. J. SILVA: Yes. All of those things. That is
22 really -- all of those 12 are not that far apart. It is
23 just variations of all of those, how you determine each of
24 those issues.

25 CHAIRMAN BAGGETT: I guess it is -- well, but the

1 testimony I think between the two of you, was that you are
2 already running the most efficient district anywhere by
3 far. So I guess I am just trying to understand what
4 programs you are looking at to make it more efficient. We
5 seem to determine if you spend a lot of money, you can
6 probably increase the efficiency of the non-farm part of the
7 system. Maybe this is a question for the doctor.

8 How would you -- what are you looking at to do that
9 kind of efficiency on -- you already got drip irrigation. We
10 know you have very efficient -- there are reams of documents
11 attesting to the efficiency of irrigation and the farming
12 techniques and the state of the art that truly is the rest
13 of world, I understand, is learning a lot from what you have
14 done down there.

15 But what is there to do, I guess, to increase that
16 efficiency? That is what I am trying to get at. How are
17 you really going to come up with consumptive savings?
18 Either one, whoever feels most comfortable.

19 DR. MESGHINNA: Let me try to understand and then
20 maybe Mr. Silva can answer.

21 As I said before, you know, the measure of efficiency
22 is consumptive use plus leaching, in general. And the
23 consumptive use is not changing. Consumptive use will
24 remain consumptive use. If you irrigate the same amount of
25 land in the same type of cropping pattern. If we assume the

1 same climate will occur in the future in general, as we
2 pointed, the main area where we are going to save water is
3 going to be by improving efficiency.

4 The reason why we are getting high efficiency, there
5 are two things. One is because studies have shown that the
6 consumptive use, the potential consumptive use, of the crops
7 in IID in general are not met. So they are underirrigated.
8 In fact, there is an estimation that between 200,000 to
9 400,000 acre-feet of water is short of the potential
10 consumptive use of the crop.

11 So the reason why we are getting high efficiency in
12 part is because we are underirrigating. If you
13 underirrigate, your beneficial use is going higher. So what
14 it means is your efficiency is getting higher. We are not
15 really fully satisfying the crops in general.

16 Secondly, the water that is -- that I characterize at
17 17 percent tailwater, although it is escaping, I am assuming
18 that 3 percent of it can be considered as beneficial use.
19 So I am not -- we are not saying that you have to -- another
20 3 percent for leaching requirement. So really, we still do
21 have water left for conservation but it is always a function
22 of cost. From this onward the cost will be much higher,
23 much more expensive on a per acre basis.

24 CHAIRMAN BAGGETT: I am trying to understand how.

25 MR. OSIAS: What project would you put in?

1 DR. MESGHINNA: I think the main -- I think my point of
2 view is I have not really studied that. What I have studied
3 is really whether it is beneficial or not. But one of the
4 areas that I see from my point of view is really pump back,
5 is one of them.

6 CHAIRMAN BAGGETT: The beneficial use is not really an
7 issue. I'm not focusing on it at all. You have lots of
8 testimony about beneficial use. If you want, we could
9 probably have another hearing on beneficial use and waste
10 and those kind of things. I don't think anybody is ready
11 for that one yet; I'm certainly not. I am just trying to
12 get how do we conserve beyond what's beneficially been
13 used.

14 MR. J. SILVA: The pump back return system, in other
15 words, recapture, capture of tailwater and recirculation is
16 one of the ones we have talked about. Dead level basins, in
17 other words, where you would -- on a slope field you would
18 level it in a perfectly level basis so no water escapes and
19 you can apply the correct amount of water that you wish to
20 apply. Drip irrigation for certain crops, like some of the
21 vegetables that they produce. More utilization in the
22 system to have more storage so the farmers can shut off the
23 water at a more appropriate time based upon when the crop no
24 longer needs it. More utilization of 12-hour runs.

25 We have had farmers talking about being able to put

1 more labor in the field to be able to cut off the water at
2 exactly the right time, in other words, more management-type
3 programs. Those are the things that have been identified by
4 our farmers, and those are the things we expect to utilize.

5 CHAIRMAN BAGGETT: I guess I apologize, I am not
6 familiar with all nine volumes at this point. I suspect at
7 the rate it is going I will be before June.

8 But is there an analysis of those proposed methods
9 yet? I gathered you don't have them yet? Is there an
10 analysis of what kind of conservation you expect or
11 consumptive saving from, say, land leveling or
12 recirculating? Is anything prepared yet?

13 MR. J. SILVA: We don't know how much utilization by
14 farmers we would have of each one. There are studies that
15 show how much you can conserve on a per unit basis. For
16 instance, on tailwater systems and all of those types of
17 methods that have been tried in the past. New method is you
18 put more labor and how much do you get. We don't have
19 that.

20 CHAIRMAN BAGGETT: That is information that I guess I
21 was hoping to get to.

22 Any other questions?

23 ----oOo----

24 //

25 //

1 CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

2 BY STAFF

3 MR. PELTIER: Mr. Silva, this is Tom Peltier. I am
4 curious on the Quantification Settlement Agreement, it is my
5 understanding that IID would voluntarily limit itself to 3.1
6 million acre-feet. But I am not entirely clear about how
7 that would be enforced.

8 Is it your intent that the State Water Board would
9 enforce that 3.1 million acre-foot limit?

10 MR. J. SILVA: The Department of Interior, Bureau of
11 Reclamation would monitor that because they are signatory to
12 that agreement as well.

13 MR. PELTIER: To the Quantification --

14 MR. J. SILVA: To the Quantification Settlement
15 Agreement, yes.

16 MR. PELTIER: No more questions.

17 MS. DIFFERDING: Just one question for you, Dr.
18 Mesghinna; is that right?

19 DR. MESGHINNA: Yes.

20 MS. DIFFERDING: When you did your analysis of
21 potential injury to other legal users, did you use actually
22 historic diversions or did you use the face value of right
23 holders in the reach of the river that you looked at?

24 DR. MESGHINNA: The actual diversions that have been
25 going on for the last ten years, from '88 to 1997.

1 MS. DIFFERDING: Thank you. That is it.

2 CHAIRMAN BAGGETT: Redirect?

3 MR. OSIAS: Thank you.

4 ---oOo---

5 REDIRECT EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

6 BY MR. OSIAS

7 MR. OSIAS: Mr. Silva, are you familiar with what is
8 the Secretary Implementation Agreement?

9 MR. J. SILVA: Yes, I am familiar with it.

10 MR. OSIAS: What is that?

11 MR. J. SILVA: It's an agreement that we entered into
12 -- we're going to enter in when we all sign all the
13 agreements at the end of year, hopefully, with the Secretary
14 of the Interior, that the obligations that the Department of
15 Interior will have under this Quantification Settlement
16 Agreement.

17 MR. OSIAS: Is that what you meant when you said they
18 would sign the QSA?

19 MR. J. SILVA: Yes.

20 MR. OSIAS: The Bureau is not actually signing the
21 Quantification Settlement Agreement itself?

22 MR. J. SILVA: That's correct. That was a
23 misstatement.

24 MR. OSIAS: The Inadvertent Overrun Program, I think
25 you heard Mr. Underwood talk about that.

1 Are you familiar with that?

2 MR. J. SILVA: Yes, I am.

3 MR. OSIAS: Briefly, what is that?

4 MR. J. SILVA: The Inadvertent Overrun Program is a
5 safety net that we have. And by we I mean the other -- IID
6 and the other agencies from California, that when we have
7 the cap, the 3.1 million cap. For instance, in any one year
8 that we go over, we can go over up to 10 percent total. In
9 other words, in total, and we can pay that back over a
10 period of time. And if the reservoirs get full and they
11 have flood releases, whatever account we have left is
12 forgiven. It is a safety net to make sure that if we go
13 over any one year we don't have to cut our farmers off
14 completely.

15 MR. OSIAS: That is a necessary condition to living
16 under this cap of 3.1?

17 MR. J. SILVA: Yes. Because otherwise we don't have
18 that experience. We would need something to help to protect
19 ourselves from that cap.

20 MR. OSIAS: Was that a factor in setting the level for
21 the cap?

22 MR. J. SILVA: Oh, yes.

23 MR. OSIAS: There was a question about that.

24 With respect to determining the savings of water, you
25 still have in front of you the hard copy of 1A, the picture

1 with all the Easter egg colors?

2 MR. J. SILVA: Yes.

3 MR. OSIAS: As a result of the conservation activity,
4 will the District reduce its diversions from the river?

5 MR. J. SILVA: Yes.

6 MR. OSIAS: So it will have less water coming in,
7 correct?

8 MR. J. SILVA: That's correct.

9 MR. OSIAS: And if efficiency is done on-farm, will it
10 require less water to farm?

11 MR. J. SILVA: Yes.

12 MR. OSIAS: And the reduced delivery should match the
13 reduction in water needed for farming, correct?

14 MR? J. SILVA: That's correct.

15 MR. OSIAS: Now, there was a discussion about a
16 baseline. What is the purpose of a baseline?

17 MR. J. SILVA: Again, the purpose of a baseline was to
18 -- when a farmer -- when the District enters into a
19 agreement with a farmer to conserve water, that if in the
20 future, for instance, when he says or the farmer says I am
21 going to put in a pump back system and I am going to
22 conserve .6 acre-feet per acre with that pump back system,
23 and he commits to, so in the future his water orders should
24 be reduced by that amount that the system would save. So we
25 are going to prepare then what the baseline amount was

1 before, what is after he puts in the water conservation
2 system.

3 MR. OSIAS: So if the District brings in less water and
4 delivers less water to the farmer who is signed up, does the
5 District care, at least today, does it care if it saves the
6 water, for example, more labor or a level basin?

7 MR. J. SILVA: No, it doesn't make any difference to
8 the District.

9 MR. OSIAS: Will different farmers choose different
10 strategies, do you believe?

11 MR. J. SILVA: Yes, I believe so. I already heard them
12 say that, yes.

13 MR. OSIAS: What would influence the farmer's choice if
14 he was given one?

15 MR. J. SILVA: Depends if he thinks -- what he thinks
16 he can do the most. Some farmers think they can do a lot of
17 good with labor. Others like the technology of having
18 reservoirs and pumps and everything. Others, the crops will
19 -- what they can do, for instance, if they have a higher
20 value crop, they would probably put in a higher
21 conservation drip, those kinds of things. It depends
22 entirely on the farmer, his specific conditions.

23 MR. OSIAS: At least today, you mentioned flexibility.
24 Is it the Board's position that the farmer, so long as
25 commits to reduce, should get to choose how to do it so long

1 as he doesn't fallow?

2 MR. J. SILVA: Correct. That is one of the criteria
3 the Board set up a couple years ago.

4 MR. OSIAS: The details that are being worked out deal
5 with, I think you mentioned some, duration. Was that one?

6 MR. J. SILVA: Term of the agreement with the farmer,
7 yes.

8 MR. OSIAS: Landlord and tenant or just landlord?

9 MR. J. SILVA: Yes.

10 MR. OSIAS: Price?

11 MR. J. SILVA: Price.

12 MR. OSIAS: Any other issues you can think of?

13 MR. J. SILVA: How you measure the inflow of water
14 coming into the field only or do you measure both the
15 tailwater and the inflow. Details of how you monitor
16 whether the savings is occurring or not.

17 MR. OSIAS: Do you know if there have been any
18 discussion of what we call a secondary market?

19 MR. J. SILVA: Yes.

20 MR. OSIAS: Can you explain that?

21 MR. J. SILVA: Well, again, based upon one of the
22 proposals that we had to conserve water on-farm, there was a
23 concern by farmers of not having enough water to farm a high
24 water use crop. So there was the proposal that included a
25 secondary market with farmers that were not going to utilize

1 all of their water that year, could sell it to the farmers
2 that were going to use more water that specific year.

3 MR. OSIAS: Any decision made on that?

4 MR. J. SILVA: No, it has not.

5 MR. OSIAS: These are the kinds of tools that are being
6 discussed; is that right?

7 MR. J. SILVA: These are the kinds of proposals and
8 details that we have been talking about, yes.

9 MR. OSIAS: I think you said the EIR would be certified
10 at the end of April; is that right?

11 MR. J. SILVA: April --

12 MR. OSIAS: It's currently April. That is why I wanted
13 to correct that. The comment period ends April 26th.

14 MR. J. SILVA: May 30th. I had all these board
15 meetings changed regarding these meetings also.

16 MR. OSIAS: So we do expect a certified EIR by the end
17 of April?

18 CHAIRMAN BAGGETT: I can emphasize with the confusion.

19 MR. J. SILVA: May 30th; the Board meeting was changed
20 to May 30th.

21 MR. OSIAS: Thank you.

22 CHAIRMAN BAGGETT: I have one question in terms of
23 Phase II. I assume that Mr. Silva is not a witness for
24 Phase II. So I don't know if it is fair, maybe tomorrow,
25 for at this point to allow questions. I understand we

1 bifurcated this. We do have the general manager of the
2 District requesting a transfer here and to avoid him having
3 to be subpoenaed or come back if somebody wants to talk to
4 him about Phase II, do you have any suggestions?

5 MR. OSIAS: Well, yes. Certainly he didn't testify
6 about anything to do with Phase II. We have designated
7 three witnesses for Phase II. One who is now an outside
8 consultant but used to be, you can correct the title, Mr.
9 Silva, what did Mr. Eckhart used to be?

10 MR. J. SILVA: Manager of the water department.

11 MR. OSIAS: He is now a consultant, but he is in that
12 role. He will know, and that is why he was designator, he
13 will know far more about these questions that we are
14 starting to get to than Mr. Silva who is more operation.

15 My proposal is that he not be a witness for Phase II.
16 We didn't have him testify as to anything.

17 CHAIRMAN BAGGETT: I understand. Just given his
18 capacity on cross-examination you can go to the scope of, at
19 least the way we do cross-examination here, it would be
20 fair. I didn't realize at first. I just assumed he would
21 be here for the whole hearing, but I have a feeling he has a
22 district to run.

23 MR. OSIAS: I think here for Phase I.

24 CHAIRMAN BAGGETT: Maybe, unless there is an objection,
25 maybe people who have questions on recross, and I would be

1 very strict, if it is something that you feel Mr. Silva is
2 critical for, when we come back with recross, that it
3 affects the second phase, that is fine. Recognizing that
4 don't take liberty to get into issues that there are three
5 experts, that there are people who are very familiar with
6 the details. If it is something that you feel only -- I
7 guess that is advice to the other parties that if there is a
8 question I would allow that. I think, since he won't be
9 here, I'd hate to see someone have to subpoena him to come
10 back.

11 MR. OSIAS: I think, frankly, he'd prefer to come back
12 if he was told what subjects he was going to deal with. We
13 didn't go through it. He described the organizational
14 structure. One of those people that answers to him is any
15 department that deals with environmental issues. But he has
16 to delegate; he has 11,000 employees. This is not something
17 where his experience puts him hands on.

18 CHAIRMAN BAGGETT: I am suggesting it would be a very
19 narrow question only.

20 Mr. Rossmann.

21 MR. ROSSMANN: Let me just make an observation. If Mr.
22 Osias is willing to keep open the possibility that Mr. Silva
23 might come back after he's presented his three witnesses in
24 Phase II. There are two areas where I think he might be
25 helpful. One was the question that the citizens advisory

1 committee is going to report later this week, and he might
2 be the best witness to bring that information to the Board.

3 And I would just make a request that -- we are all in
4 this together, but I just think it is highly unlikely that
5 an EIR of this complexity and the comments that are going to
6 come in next week is going to be ready for final
7 certification on May 30th. At the friendly request that he
8 might consult with his EIR consultant and see if we might
9 have a better prediction when that will be.

10 MR. OSIAS: That may, in fact, be illustrative of why
11 he is not right person to ask these questions of. This is
12 not what he is hands on managing at the moment. We have
13 other people doing that.

14 CHAIRMAN BAGGETT: It is not a good night for me, so I
15 don't want to go late tonight at all.

16 What about recross? Do other parties intend to have
17 one of those issues which were just raised? Maybe just go
18 down the list and see.

19 San Diego?

20 MR. SLATER: San Diego waives.

21 CHAIRMAN BAGGETT: Tribes?

22 MR. SHEPARD: We waive.

23 CHAIRMAN BAGGETT: Defender's?

24 MR. FLETCHER: Waive.

25 CHAIRMAN BAGGETT: County?

1 MR. ROSSMANN: County waives.
2 CHAIRMAN BAGGETT: Farm Bureau?
3 MR. RODEGERDTS: (Nods head.)
4 Mr. Du Bois?
5 MR. DU BOIS: (Nods head.)
6 CHAIRMAN BAGGETT: Mr. Gilbert?
7 MR. GILBERT: (Nods head.)
8 CHAIRMAN BAGGETT: I think we will close for today,
9 and this panel is dismissed. We will wait and enter all the
10 evidence into the record at the end of your case.
11 So tomorrow morning 9:00 here. Let me take a poll
12 before we break. Do people mind starting early on Monday?
13 8:00, is that a problem for people? I assume most of you
14 are coming up the night before.
15 What was it noticed for, nine or ten? It was noticed
16 for nine. Most people are here the night before?
17 MR. ROSSMANN: I think you had it noticed for ten.
18 29th is noticed for 10:00.
19 MR. OSIAS: If it is at nine we have to come the night
20 before.
21 CHAIRMAN BAGGETT: If it is at ten, you wouldn't?
22 We'll just keep it at ten. If it is noticed at ten
23 that is a pretty big jump. Nine I would expect you; ten, a
24 lot of you could fly up that morning. We will plan on doing
25 a long day Monday, then. Give you warning. And then

1 Tuesday we are starting at nine, right?

2 MR. SLATER: Tuesday at nine.

3 CHAIRMAN BAGGETT: That is supposed to be Phase II. I
4 guess the other question I have, since this is a factor of
5 housekeeping. Is 8:00 a problem for people if it is not a
6 Monday morning, if you are not in town? I don't mind
7 starting at eight. I'd start at eight and get done at five
8 then start at nine and get done at six.

9 MR. SLATER: We're fine with that.

10 CHAIRMAN BAGGETT: We will just give you a notice
11 change. We will do 8:00 on Tuesday and we will start at
12 10:00 on Monday.

13 UNIDENTIFIED VOICE: We will start at 8:00 tomorrow or
14 nine?

15 CHAIRMAN BAGGETT: 9:00 tomorrow.

16 MR. OSIAS: Next Tuesday.

17 CHAIRMAN BAGGETT: Next week. And then we will see
18 where we get at that point.

19 We are recessed for the day.

20 Thank you.

21 (Hearing recessed at 4:50 p.m.)

22 ---oOo---

23

24

25

1 REPORTER'S CERTIFICATE

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

I, ESTHER F. SCHWARTZ, certify that I was the official Court Reporter for the proceedings named herein, and that as such reporter, I reported in verbatim shorthand writing those proceedings;

That I thereafter caused my shorthand writing to be reduced to typewriting, and the pages numbered 66 through 270 herein constitute a complete, true and correct record of the proceedings.

IN WITNESS WHEREOF, I have subscribed this certificate at Sacramento, California, on this 3rd day of May 2002.

ESTHER F. SCHWARTZ
CSR NO. 1564

□□□□□□□□□□□□□□□□

