

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
WATER RIGHT APPLICATIONS 30358A AND 30358B
FILED BY THE WOODLAND-DAVIS WATER AGENCY

JOE SERNA, JR., CALEPA BUILDING
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2ND FLOOR
COASTAL HEARING ROOM
SACRAMENTO, CALIFORNIA

TUESDAY, JANUARY 18, 2011

11:08 A.M.

TIFFANY C. KRAFT, CSR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 12277

APPEARANCES

BOARD MEMBERS

Mr. Charlie Hoppin, Chair
Ms. Frances Spivy-Weber, Vice Chair
Ms. Tam M. Doduc
Mr. Dwight P. Russell

STAFF

Mr. Thomas Howard
Mr. Jonathan Bishop, Chief Deputy
Ms. Caren Trgovcich, Chief Deputy
Mr. Michael A.M. Lauffer, Chief Counsel
Ms. Jane Farwell, Environmental Scientist
Ms. Kathleen Groody, Environmental Scientist
Mr. Nathan Jacobsen, Staff Counsel

ALSO PRESENT

Mr. John Herrick, South Delta Water Agency
Mr. Michael Jackson, California Sportfishing Protection Alliance
Mr. Alan Lilly, Woodland-Davis Clean Water Agency

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Walter Bourez

Ms. Teresa Dunham

Mr. Sid England, U.C. Davis Assistant Vice Chancellor

Mr. David Guy, Northern California Water Association

Mr. Dan Rich

Mr. Don Saylor, Yolo County Board of Supervisors

Mr. Stephen Souza, Davis City Council

Mr. James Yost

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EXHIBITS

SWRCB	Marked for identification	Received into evidence
Exhibit 1-3 A030358A, A030358B		23
Applicant		
WDCWA 300, 301		157
WDCWA 112, 113, and 114		157
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1 PROCEEDINGS

2 VICE CHAIRPERSON SPIVY-WEBER: We are officially
3 opening the hearing on Water Rights Application 30358A and
4 30358B filed by the Woodland-Davis Clean Water Agency,
5 Sacramento River, Yolo County.

6 This is the time and place for the hearing to
7 receive evidence relevant to determining whether to
8 approve subject to terms and conditions water right
9 applications 30358A and 30358B filed by the Woodland-Davis
10 Clean Water Agency.

11 The Board will also hear evidence on conditions
12 necessary to protect the environment, public interest, and
13 downstream water users in any permits the Board approves.

14 I'm Frances Spivy-Weber, Vice Chair of the State
15 Water Resources Control Board. And with me are Board
16 Chair Charles Hoppin and Board Members Tam Doduc, and soon
17 I think Dwight Russell will be joining us, to Charlie's
18 right.

19 Also present are staff assigned to assist with
20 this hearing, Staff Attorney Nathan Jacobsen and
21 Environmental Scientists Jane Farwell and Kathleen Groody.

22 For those of you who were not here at the start
23 of the Board meeting, a few words about the evacuation
24 procedure that's required. Please look around now and
25 identify the two exits closest to you. And in the event

1 of a fire alarm, we are required to vacate this room
2 immediately. Please take your valuables with you and do
3 not use the elevators. Exit down the stairway and go to
4 the relocation site across the street from Cesar Chavez
5 Park. If you have difficulty carrying this out, Charlie
6 has volunteered to help you.

7 Conduct of the hearing. This hearing is being
8 held in accordance with the Notice of Public Hearing dated
9 November the 5th, 2010. The purpose of this hearing is to
10 provide parties who have filed a Notice of Intent to
11 appear an opportunity to present relevant testimony and/or
12 evidence that address the four key issues contained in the
13 hearing notice. The key issues address whether approving
14 application 30358A and 30358B will cause injury to any
15 legal user of water; whether water is available for
16 appropriation and will be put to beneficial use; whether
17 approving these water rights would result in significant
18 adverse impacts on water quality, the environment, or
19 public trust resources. And if the Board approves the
20 requested actions, what conditions, if any, should the
21 Board impose.

22 The hearing notice also requested parties to
23 provide information indicating whether the adoption of
24 certain terms in draft permits for applications 30358A and
25 30358B will be sufficient to dismiss the outstanding

1 protests of the California Sportfishing Protection
2 Alliance.

3 We're broadcasting this hearing on the Internet
4 and recording by both audio and video. A court reporter
5 is also present to prepare a transcript of the proceeding.
6 Anyone who would like a copy of the transcript must make
7 separate arrangements with the court reporter.

8 To assist the court reporter, please provide her
9 with your business card and make sure you speak into the
10 microphone when you speak.

11 Before we begin the evidentiary proceedings, we
12 will hear from any speakers who wish to make
13 non-evidentiary policy statements. If you wish to make a
14 policy statement and have not filled out a Notice of
15 Intent to Appear, please fill out a blue card and hand it
16 to the staff if you've not already done so.

17 The Board will also accept written policy
18 statements. A policy statement is a non-evidentiary
19 statement. It is subject to the limitations identified in
20 the hearing notice. Persons making policy statements must
21 not attempt to use their statements to present factual
22 evidence either orally or by introduction of written
23 exhibits. Policy statements should be limited to five
24 minutes or less.

25 We expect to have a member of the Legislature

1 this afternoon, Senator Lois Wolk. So we will not be
2 recognizing her at this point. But when she does come in,
3 staff should let me know, and we will make sure we have
4 room for her to make a policy statement.

5 Are there any other blue cards? I have five blue
6 cards. And I understand Mr. Herrick is also going to be
7 making a policy statement. So we will start with Mr.
8 Herrick.

9 MR. HERRICK: Thank you, Madam Chair and Board
10 members.

11 John Herrick representing South Delta Water
12 Agency.

13 I had originally requested to be a part of the
14 hearing and to conduct cross-examination. As necessary,
15 due to other circumstances, I will not be able to do that.
16 So I just wanted to real briefly give you our concerns.
17 And we'll make comments when the proceeding is over, just
18 like another member of the public.

19 Our concerns, as we've stated before, deal with
20 the current situation with regards to area of origin
21 priorities and rights. Our interest is to comment on and
22 make sure the Board is aware of those priorities and how
23 they apply to the current system. And by that I mean, we
24 don't have sufficient surface water at most times to
25 supply all of the needs on those. The State Project

1 originally anticipated additional five million acre feet
2 from the north coast rivers, and that has never been and
3 will not be developed probably. So the system may be
4 starting off five million acre feet short based on those
5 older calculations of means.

6 Any time there is a new application, the issue
7 arises as to how it fits into the priority system. And we
8 believe that, as evidence is produced and
9 cross-examination will show, that we're at the point now
10 where we have to start recognizing that applications for
11 water in the areas of origin will necessarily cut into
12 export supplies if there is not a sufficient surplus flow
13 of the system.

14 Now, what is surplus flow is very difficult, can
15 be very complicated depending on the water years. But
16 it's very important that we keep in mind the priority
17 system so that we don't create an entire sub-class of
18 inferior rights in the areas of origin when they're
19 supposed to be able to recoup water from the projects.
20 And absent some development of new water that necessarily
21 means there will be less available for export, whether
22 it's from storage or from natural flow.

23 Thank you very much. I appreciate your
24 willingness to listen to me. I apologize for sticking my
25 nose in and having to withdraw. Thank you.

1 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

2 I wanted to see if Mr. Robert Baoicchi -- he said
3 that he submitted something to appear but is not here.
4 Okay.

5 David Guy.

6 MR. GUY: Good morning, again, members of the
7 Board.

8 David Guy on behalf of the Northern California
9 Water Association.

10 We are here today to support the water right
11 application before you. There were originally some
12 protests from some of the NCWA members. Those have been
13 resolved, as most of the protests have in this matter.

14 I just want to touch on one point for kind of
15 your emphasis as part of a policy statement. And that's I
16 think the regional planning that is going into this
17 effort. There is a lot of talk about regional planning
18 within this Board and throughout state government. And
19 this, to me, is an example of real regional planning,
20 where it's actually working.

21 And let me give you two aspects of that that I
22 think are important. Of course, as you know very well,
23 the water quality challenges facing urban areas in
24 California and, of course, the cities of Davis and
25 Woodland are very much facing that. And so I think as a

1 result of this, that will help with their water quality
2 challenges.

3 At the same time, there is a lot of talk about
4 conjunctive use and conjunctive management. And by doing
5 this, this will benefit the agricultural water users in
6 the region in Yolo County and beyond. I think this is the
7 classic very good regional planning. There's been a very
8 good process in place in Yolo County and broader that we
9 support and urge you to adopt the application for the
10 water rights.

11 Thank you.

12 VICE CHAIRPERSON SPIVY-WEBER: Thank you very
13 much.

14 Mr. Sid England.

15 MR. ENGLAND: Thank you very much for this
16 opportunity to speak.

17 My name is Sid England. I'm Assistant Vice
18 Chancellor for Environment Stewardship and Sustainability
19 at University of California at Davis. In that role, I
20 work on environmental planning issues, including
21 preparation of CEQA documents, resource management, and
22 sustainability issues for the campus.

23 I've been involved with the project since the
24 permit application was filed in 1994, and it's great to be
25 here today to bring this forward to the next major

1 milestone in the project.

2 Water, of course, is an important part of the
3 lifeblood of the campus of U.C. Davis. With over 30,000
4 undergraduate and graduate students, we're best known for
5 our strengths in agriculture, biological and environmental
6 sciences, medicine and veterinary medicine.

7 Our reputation is grounded on the century-plus
8 tradition of excellence that stretches across all of our
9 disciplines, including five colleges, five professional
10 schools, and more than 100 academic majors and 86 graduate
11 programs.

12 We are one of the nation's top research
13 institutions, sixth among U.S. public universities, ninth
14 among universities nationwide, tenth in our funding for
15 our research in agriculture and environmental sciences are
16 two of our very strong areas. And we're Sierra Club
17 considers to be 16th in America's top 100 green colleges
18 and universities. We're also a major economic engine in
19 the Sacramento area, second in employment with 30,000
20 employees.

21 Water is necessary for what we do. We've been
22 involved in this project now since 1994. During that
23 time, we evaluated a number of different options to bring
24 in clean, reliable, secure water source to the campus. We
25 think adding surface water and current use of groundwater

1 is the right way to go.

2 We currently draw all of our domestic water from
3 deep aquifers that are typically 1,000 to 1500 feet below
4 the surface of the ground. We know through testing it is
5 a restrained aquifer, and we know that increased pumping
6 from use by the communities and others would probably not
7 be sustained by this aquifer over time.

8 Groundwater is also high in salts. We have water
9 quality issues, just like everybody. We discharge from
10 our own wastewater plant which treats campus wastewater.
11 And having a high quality water supply would help us meet
12 the challenges of our NPDES permit.

13 We think the EIR for the project, which you're
14 going to hear today, and the written materials that have
15 been submitted will show this project does not have a
16 significant negative impact on the environment. In fact,
17 has positive impacts with regard to water quality, water
18 reliability.

19 Therefore, we have concluded that this is the
20 best way for us to go forward to make sure we have a
21 secure, reliable water source for the campus. And we ask
22 you to act positively and quickly on this permit so the
23 project can go forward. Thank you very much.

24 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

25 Don Saylor.

1 MR. SAYLOR: Good morning, Mr. Chair and members.
2 Thank you for the opportunity to speak to you this morning
3 about the applications for Woodland and Davis.

4 I'm currently serving as a member of the Yolo
5 County Board of Supervisors, but that's a job just two
6 weeks old for me. I just recently departed service as
7 Mayor of the city of Davis where I served as a member of
8 the Council from 2004 until 2010.

9 When I would walk through the farmers market or
10 anyplace else in Davis and people would say to me, "What's
11 the most important issue you're dealing with today," and
12 the answer is making sure that we have a secure water
13 future for the city of Davis and for the city of Woodland
14 so that we have an ability for people to turn on their
15 facets and have water come out that's clean, safe, and
16 reliable.

17 As a county supervisor, the job is a little bit
18 more than that. It's to make sure that we balance the
19 uses of the different needs of agriculture and habitat and
20 the cities for domestic use. I'm very confident this
21 proposal that you have today is carrying out the
22 responsibilities both as a member of the Council and
23 member of the Board of Supervisors.

24 The significance, the historical significance of
25 this application to you for you today is -- cannot be

1 overstated. This has been in the works for 16 years.
2 There have been numerous appeals, challenges that have
3 been resolved and a satisfactory way to balance the
4 interests of all concerned. There's one remaining, and
5 it's here today. If you act in favor of these two
6 applications, you will secure drinking water for over
7 120,000 people for the future. But this isn't the only
8 issue that needs to be resolved in order for this secure
9 water future to go forward.

10 Some of the other issues that have already been
11 addressed are how do we provide for the dry months,
12 because the application before you today only addresses
13 the wet months. The dry months has been -- that has been
14 addressed in a recent agreement between the private
15 property owner and the joint powers authority that's
16 presenting to you today. Where should the intake facility
17 be? How many straws should be dropped into the river?
18 That issue is being addressed as well by an agreement that
19 was reached between a private property owner and a
20 resource district that you're going to hear about. That's
21 been resolved to the satisfaction of environmental
22 concerns because only one intake facility will serve both
23 agriculture and domestic purposes.

24 Conjunctive use is a big part, because we'll
25 continue in the cities of Woodland and Davis to draw

1 groundwater and to blend it with the water that comes from
2 the Sacramento River if this application is approved. So
3 we'll have conjunctive use.

4 The city of Davis has long been a champion of
5 water conservation. This is not about taking water and
6 spilling it out on lawns or in swimming pools. What we're
7 doing for years is that we've had metering for water.
8 We're giving incentives for people to use less water. And
9 we're finding new ways and greater emphasis on water
10 conservation and domestic applications.

11 Again, this is a long time coming. I'm so happy
12 to be able to stand before you as a member of the Board of
13 Supervisors and tell you that Yolo County supports the
14 acquisition of water for these two cities and has been on
15 record in doing that. And we recently at the county level
16 adopted complementary agreements to support this project.
17 And I'm eager for this action to be completed. And thank
18 you for the opportunity to support it and put it in front
19 of you.

20 VICE CHAIRPERSON SPIVY-WEBER: Thank you, sir.

21 Stephen Souza.

22 MR. SOUZA: Good morning, Board, Chair Hoppins,
23 Vice Chair Spivy-Weber, Board Members Russell and Doduc.
24 I thank you very much for allowing me to be before you
25 this morning.

1 I'm a member of the Davis City Council. I'm
2 Stephen Souza. I'm also the Vice Chair of the
3 Woodland-Davis Clean Water Agency. I have in the past
4 served on Quail Ridge Wilderness Conservancy. I, at this
5 time, serve as a representative to the State LAFCO Board
6 of Directors. I'm also a member of the Yolo Habitat
7 Heritage Program. I'm the alternate to the Yolo-Solano
8 Air Pollution Management District. I have --

9 CHAIRPERSON HOPPIN: Do you have a life?

10 MR. SOUZA: Well, I have other bodies I serve on,
11 sir, but I do have a life. And I do have a -- I'm a small
12 business owner. I have 31 years of activity that deals
13 with water. It's water maintenance in both swimming pools
14 and the repairs thereof. Water has been my life.

15 And I must say that given the new astrological
16 leanings that we see, I don't know if I'm an Aquarian
17 anymore. I used to be a water bear.

18 Today, you have before you, as was mentioned
19 prior, something that the city of Davis has worked on for
20 a very long period of time. We began the process 20 years
21 ago with the Water Master Plan that pointed out that we
22 needed to find a more secure and reliable and clean source
23 of water that had a smaller impact upon the environment.
24 Sixteen years ago, we began the application process, and
25 that is culminating with this hearing here today. So I'm

1 so happy to have seen this day arrive and me to be here
2 before you and speak.

3 The city of Davis has had a long history of
4 environmental stewardship. We have many activities that
5 we have undertaken in our city to the PWUSA, which is a
6 research facility, to the wetlands that we have within our
7 wastewater treatment facility. We have walked as soft as
8 we can on this planet trying to not leave an imprint for
9 the future generations that come after us.

10 What you have before you is another potential
11 step for us to take. There are two aspects of this
12 particular project that I think are worth noting. First
13 and foremost, there is an old intake facility. It's a
14 1914 intake facility that is unscreened. That facility
15 does tremendous damage to fish and the habitat. This
16 particular facility we have reached an agreement with RD
17 2035 to remove it and put in a state-of-the-art screened
18 facility.

19 The second aspect that I think is very important
20 for us to note is that we, the city of Davis and the city
21 of Woodland, for that matter, have had new regulatory
22 requirements placed upon us in the discharge of water that
23 we put back into the bay delta. That water will be a
24 cleaner form of water with less selenium, less magnesium,
25 less boron, and all of the other total dissolved solvents

1 that are an environmentally impacting source to both birds
2 and fish. I think these two particular aspects are unique
3 and will allow us to continue to walk that soft pace on
4 this earth.

5 I believe you will hear from my partner next on
6 the Clean Water Agency Board Member Dote. You also have
7 heard we have an unprecedented relationship between two
8 cities separated by a small distance but working together
9 to secure for the 120,000 citizens that we serve a source
10 that comes into our house and goes out of our house that
11 is much better for our citizenry and the environment.

12 I ask you to please approve this water permit
13 application that's before you today. And I thank you very
14 much for your time.

15 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

16 And I thank you for telling me how to pronounce
17 Mr. Dote's last name. Martie Dote. Oh, sorry -- Ms.

18 MS. DOTE: Good morning. Actually, I was nearly
19 drafted into the Marine Corps because I didn't use my
20 middle name, which is Louise.

21 Good morning. I'd like to thank you for this
22 opportunity to discuss the water application.

23 My name is Martie Dote. I'm a second term
24 Council member from the city of Woodland. I also serve on
25 the Habitat Conservation Plan with my colleague Stephen

1 Souza and during my first term I was on the Water Resource
2 Association Board. Dr. Marble is the other member on our
3 JPA Board from the city of Woodland. He's also the Board
4 Chairman. Unfortunately, he was not able to be here
5 today.

6 But we both submitted written policy statements.
7 And in those statements, we have more detailed discussion
8 of the benefits of this project of both cities.

9 What I'm going to do is try to summarize 16 years
10 of work on what's been an escalating water problem. We're
11 a county of origin where we really mostly deal with
12 flooding. But one of our former Yolo County Flood Control
13 District Executive Director's Jim Eagen knew that one day
14 we would need to be thinking about getting water back into
15 the county. So he's the one that submitted the permit on
16 behalf of -- the permit application on behalf of
17 Davis-Woodland and the University of California Davis.
18 This was visionary thinking on his part, because he
19 understood eventually the problem we would face if we
20 continue to rely solely on groundwater for our water
21 service.

22 We pump groundwater for about 53,000 residents in
23 the city of Woodland, as does Davis and also UCD. And
24 even though we expended just recently about \$12 million to
25 take our wastewater treatment to tertiary level, we still

1 have a level of selenium, boron, and dissolved solids in
2 our wastewater treatment that faces us with increasing
3 regulatory issues and increasing restrictions and
4 penalties for our effluent. And mainly it's because our
5 sources of water is low quality groundwater.

6 The wastewater discharge permit that we have is
7 conditional on our movement towards improving our source
8 of water quality. To get to there, we formed the JPA with
9 the city of Davis after a somewhat historical joint
10 council meeting between the two cities and then proceeded
11 together down the pathway to get the water permits done,
12 intake facility, and treatment plant so we supply water
13 for both the cities and U.C. Davis and solve our mutual
14 discharge problems. The joint project has been in
15 cooperation between the two cities and is working out very
16 well.

17 This is a critical project for the health and
18 well-being of both our citizens and our cities and also
19 the residents of U.C. Davis. It will reduce our boron,
20 selenium, and other salts in our drinking water, as well
21 as improve, strangely enough, conditions on the river
22 mainly because it's going to improve the effluent that we
23 put back into the river. But also through our cooperative
24 efforts with Reclamation District 2035, we're going to be
25 replacing an antiquated version of facility on the river

1 with the modern fish screen facility.

2 We have been doing our homework at the JPA in
3 anticipation of this permit. We contracted with several
4 water -- as we know, this is only a permit for high water
5 flows. And also we identified the rights of the
6 facilities and also of the treatment plant. And we have a
7 cooperative agreement and management structure in place
8 now with the reclamation district 2035 management at the
9 intake facility.

10 The key remaining point is the Woodland water
11 diversion permit, which as you know has been around for 16
12 years. The city of Woodland council has supported this
13 project 100 percent from the beginning and hope for a
14 successful and speedy conclusion to our permit
15 application. We're attempting to do the right thing for
16 our city residents' drinking water as well as for the
17 river that receives our municipal effluent.

18 Our Council is willing to do whatever we have to
19 locally to make sure this project succeeds, and we
20 appreciate your consideration of our application. If I
21 can answer any questions, I would be happy to.

22 VICE CHAIRPERSON SPIVY-WEBER: Thank you very
23 much. Charlie has a question.

24 CHAIRPERSON HOPPIN: Mr. Lilly, as we go forward,
25 all three of the members of local government have referred

1 to the potential improvements in quality of the POTWs,
2 which we all know is in dire need. At some point, before
3 we get done and before we make a decision, we're going to
4 need to hear more than just an opinion that this is going
5 to be better and how much better, just so you're
6 forewarned, if you will. Knowing you, you probably are
7 already prepared for this. And it's not that I don't put
8 great stock in the comments of the governing bodies of
9 these two municipalities. But that is going to be a
10 critical quantifiable issue we need to hear.

11 MR. LILLY: We appreciate the comment, and we do
12 have evidence with numbers, which I'm sure will be exactly
13 what you're looking for.

14 CHAIRPERSON HOPPIN: I'm sure. Thank you.

15 VICE CHAIRPERSON SPIVY-WEBER: Is there anyone
16 else who wishes to make a statement? Thank you.

17 Now there's more instruction.

18 We will now move to the evidentiary portion of
19 the hearing for presentation of evidence and related
20 cross-examination by parties who have submitted Notices of
21 Intent to appear. We will hear the parties' cases in
22 chief in the following order: Woodland Davis Clean Water
23 Agency. Alan Lilly will be directing that effort. And
24 second, the California Sportfishing Protection Alliance,
25 which will be led by Michael Jackson.

1 At the beginning of each case in chief, a
2 representative of the party may make an opening statement
3 briefly summarizing the objectives of the case, the major
4 points that the proposed evidence is intended to
5 establish, and the relationship between the major points
6 and the key issues.

7 After any opening statement, we will hear
8 testimony from the parties' witnesses. Before testifying,
9 witnesses should identify their written testimony as their
10 own and affirm that it is true and correct. Witnesses
11 will summarize the key points in their written testimony
12 and should not read their written testimony into the
13 record.

14 Direct testimony will be followed by
15 cross-examination by the other parties, Board staff, other
16 Board members, and myself. Redirect examination may be
17 permitted followed by recross-examination. Any redirect
18 examination and recross-examination is limited to the
19 scope of the cross-examination and the redirect testimony
20 respectively. After all the cases in chief are completed,
21 the parties may present rebuttal evidence. Parties are
22 encouraged to be efficient in presenting their cases and
23 their cross-examination.

24 Except where I approve a variation, we will
25 follow the procedures set forth in the Board's

1 regulations, the hearing notice, and subsequent rules.
2 This is important. The parties' presentations are subject
3 to the time limits of my January 5 letter. Opening
4 statements are to be limited to five minutes for each
5 party. Oral presentations of direct testimony will be
6 submitted by one panel of witnesses for each party. The
7 panel will be limited to a maximum of 20 minutes to
8 summarize their written testimony.

9 Cross-examination by Davis-Woodland Clean Water
10 Agency and California Sportsfishing Protection Alliance is
11 limited to one hour per panel of witnesses. South Delta
12 Agency is limited to a total of -- well, actually, he's
13 not going to be here. So thank you. You saved us an
14 hour. Additional time may be allowed upon a showing of
15 good cause.

16 Each party may present an oral closing brief
17 limited to ten minutes. There will not be written closing
18 briefs for this proceeding.

19 With that in mind, I invite the appearances by
20 the parties who are participating in the evidentiary
21 portion of the hearing, will those making appearances
22 please state your name, address, and whom you represent so
23 that the court reporter can enter this into the record.

24 Woodland-Davis.

25 MR. LILLY: Good morning, Ms. Spivy-Weber,

1 members of the Board. My name is Alan Lilly. I'm with
2 the Law Firm of Bartkiewicz, Kronick & Shanahan here in
3 Sacramento. And today, I will be representing the
4 Woodland-Davis Clean Water Agency and also the cities of
5 Davis and Woodland and University of California Davis.

6 VICE CHAIRPERSON SPIVY-WEBER: California
7 Sportsfishing Alliance, Mr. Jackson.

8 MR. JACKSON: Good morning, Ms. Spivy-Weber. And
9 good morning, Chairman Hoppin. Good morning, Dwight.
10 Good to see you there. Good morning, Tam.

11 Michael Jackson representing the California
12 Sportsfishing Protection Alliance, Box 207, Quincy,
13 California, 95971.

14 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

15 Now, I will administer the oath.

16 Will those persons who may testify during this
17 proceeding please stand and raise your right hand.

18 (Thereupon all prospective witnesses were sworn.)

19 VICE CHAIRPERSON SPIVY-WEBER: Thank you. You
20 may be seated.

21 At this time, I would like for Jane Farwell to
22 introduce staff exhibits.

23 MS. FARWELL: I ask that water right applications
24 A030358A, A030358B be accepted into evidence as SWRCB
25 Exhibits 1 through 3 respectively. These are the

1 applications currently owned by the Woodland-Davis Clean
2 Water Agency.

3 VICE CHAIRPERSON SPIVY-WEBER: Are there any
4 objections?

5 MR. JACKSON: No objection.

6 VICE CHAIRPERSON SPIVY-WEBER: Thank you. We
7 will accept those into evidence.

8 (Thereupon the above-referenced document was
9 received into evidence.)

10 VICE CHAIRPERSON SPIVY-WEBER: We will start with
11 the opening statements, and so Mr. Lilly.

12 MR. LILLY: Thank you.

13 As I said, I'm Alan Lilly representing the
14 Woodland-Davis Clean Water Agency.

15 At the outset, I'd like to thank you very much
16 for taking the time to schedule this hearing. I know your
17 schedule is very busy, and we appreciate you fitting this
18 into it.

19 By way of background, I have worked on the water
20 right applications since the original filing in 1994
21 through the Yolo County Flood Control cities and now the
22 Clean Water Agency.

23 During today's hearing, we will have three
24 witnesses for summarizing their direct testimony. First,
25 James Yost, the project engineer, who will explain the

1 background and the need for the project. And particularly
2 we've heard some of this in the policy statements, but he
3 will go into this in more detail. The cities of Davis and
4 Woodland and the U.C. Davis domestic water system
5 presently are 100 percent supplied by groundwater wells.
6 And like many cities in California, they want to shift to
7 a surface water supply. Even though it will be
8 considerably more expensive for them and their rate
9 payers, they want to do this to get better long-term
10 reliability and to improve the quality of both the
11 drinking water supplies and the resulting wastewater
12 discharges.

13 Both cities had to shut down numerous wells
14 already because of drinking water quality problems,
15 particularly with nitrates, arsenic, and chromium. And
16 the concentrations of these constituents in the remaining
17 wells are an ongoing concern.

18 The other major concern is wastewater discharges,
19 particularly the concentrations of salinity, boron, and
20 selenium in the city's wastewater discharges are so high
21 that they cannot meet the present and anticipated future
22 requirements.

23 And we have two other witnesses available for
24 rebuttal, Teresa Dunham and Dan Rich, in case there are
25 any specific questions regarding the city's discharge

1 requirements.

2 Because the concentrations of these constituents
3 are so much lower in the Sacramento River, the cities will
4 be able to meet both drinking water standards, drinking
5 water quality, and the NPDES requirements with this
6 project. And those are the primary goals of this project.

7 The city of Davis as CEQA lead agency certified
8 the EIR for this project in 2007. Woodland approved it as
9 a responsible agency. It analyzed numerous different
10 alternatives and concluded that this proposed project is
11 the environmentally superior alternative. The
12 environmental benefits have been mentioned in the policy
13 statements. They include replacing the largest unscreened
14 diversion facility on the Sacramento River with a new
15 screened diversion, reducing the salt load from the city's
16 discharges into the Sacramento River system by 20 tons of
17 salt per day and reducing the city's discharges of boron
18 and selenium.

19 The EIR also analyzed the project's impacts on
20 the delta and concluded the impacts would be less than
21 significant, primarily because the diversions by this
22 project are such a small fraction of the Sacramento River
23 flows and delta flows. This conclusion was reached for
24 both the present conditions and future conditions.

25 We have updated the CalSim-II modeling that was

1 done for the EIR. Walter Bourez will be here to testify
2 about the updated modeling work he did. And Charles
3 Hanson, fishery biologist, will be able to testify about
4 the fisheries' impacts based on that updated modeling.

5 As stated in the hearing notice, there were
6 eleven protests filed to the application through -- and I
7 will say a lot of work -- we negotiated and signed protest
8 dismissal agreements with ten of those, including nine
9 different water rights holders and the California
10 Department of Fish and Game. And the California
11 Department of Fish and Game agreement, 36 pages long,
12 trust me, it addressed their concerns in detail. And they
13 did have numerous environmental concerns, and we addressed
14 them all.

15 The CSPA protest is remaining. Their primary
16 concern is whether or not there's unappropriated water.
17 We believe their analysis is incorrect. Fundamentally,
18 the problem is they look at the issue on an annual basis
19 in terms of millions of acre feet per year, and that is
20 not correct. And they do reference the State Board's new
21 flow criteria report. Of course, the flow criteria
22 report, as we all know, is not adopted as a regulatory
23 requirement to begin with. But even more important, any
24 water availability analysis must be done in California on
25 a monthly or a daily basis. Annual analysis simply

1 ignores the large variations between the flows and the
2 surplus water available in the winter months versus those
3 in the summer months.

4 And our testimony will show when the analysis is
5 done with a monthly time step, there is water available
6 for appropriation during substantial months of each year,
7 obviously more months in the wetter years than the drier
8 years.

9 Finally, although CalSPA questions the use of the
10 standard permit Terms 80, 90, and 91, the State Board
11 staff has analyzed those, and we agree with the State
12 Board staff that those terms will adequately protect both
13 delta flows and senior water rights under both present and
14 future conditions. And therefore, at the end of this
15 hearing, we will ask the State Board to dismiss the CSPA
16 protest and issue the water right permits.

17 Timing is critical. The viability of this
18 project, particularly to the city's rate payers --
19 potential bidders for construction depends on there being
20 water rights to show we have a viable project. We need
21 the permits for the other ancillary permits, of which
22 there are many. We need the permits to show the grant
23 funding and loan funding agencies that the project is
24 viable. And finally, for the financing through the
25 revenue bonds for a \$300 million plus project. We need

1 the permits to show the viability. So, therefore, we will
2 be asking the Board to act promptly on the applications.

3 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

4 I want -- how long do you think your panel --
5 twenty minutes -- is it going to be less than 20 minutes?

6 MR. LILLY: It won't be less. I asked each one
7 to pull a couple slides and exhibits from their testimony.
8 We will steamroll through and do it in 20 minutes.

9 VICE CHAIRPERSON SPIVY-WEBER: Then I recommend
10 that we ask questions of Mr. Lilly, but that we then take
11 a break for lunch and come back with the panel. Does that
12 work for staff as well?

13 CHAIRPERSON HOPPIN: Mr. Lilly, if you'd like to
14 defer the answer to my question to your panel or later,
15 that's fine. I won't take it as a duck.

16 When previous speakers have mentioned the
17 alternatives, this isn't necessarily the low cost
18 alternative. You're not only talking about a considerable
19 expenditure for infrastructure, but a potentially
20 significant monthly increase in annual water or monthly
21 water bills to the users.

22 Has this been taken before the voters? Is there
23 a potential we could deal with the Prop. 218 vote on this?
24 How secure and comfortable are you with the people that
25 aren't here that are actually going to be paying for this?

1 MR. LILLY: Well, it's certainly a very good
2 question. And people are very concerned about that, that
3 right now the water rights in Davis and Woodland being
4 groundwater only systems are among the very lowest in
5 California. They are predicted in rough terms, and this
6 is just very rough numbers to double, which would get them
7 about to the middle range of what water rate holders --
8 little over the middle range what water rate payers in
9 California are paying. So it is a concern.

10 We have an extensive public relations campaign to
11 explain the benefits of the project. Of course, the
12 customers will get better quality to drink and have less
13 impacts on their water fixtures as well. Won't have to
14 replace their water heaters as often or have water
15 softeners anymore.

16 But to answer your question under the law, the
17 cities obviously will have to follow the Prop. 218
18 requirements for any rate increase. And the city councils
19 will have to address that. There has not been a vote.
20 Depending on how the Prop. 218 process goes, there could
21 be a referendum down the road. We don't know whether that
22 will happen or not.

23 The city councils did just approve a very
24 substantial agreement for the purchase of the summer water
25 with the Conaway Preservation Group with the recognition

1 of the rate increases. The city councils are certainly on
2 board. There were not any large public outcries at either
3 of those hearings. So we think we have at least
4 indications of public support, but we don't know for sure.
5 That's certainly an unknown as we go forward.

6 CHAIRPERSON HOPPIN: But given the potential of a
7 Prop. 218 vote and public sentiment all over the
8 United States, we don't want to pay more. We just want
9 everything -- I know you are dealing with a very tight
10 time schedule here. How do you secure financing with a
11 very aggressive program as far as the point of diversion,
12 pipelines, surface water treatment facilities, and all
13 that prior to a Prop. 218 vote?

14 MR. LILLY: Well, basically we face the same
15 problems that any water purveyor in California has
16 regarding potential risks under 218. And the answer is we
17 go forward with a well-conceived project with the permits.
18 And if the Prop. 218 challenge goes forward, then we
19 address it at that time.

20 But I'll just kind of turn it back to you, Mr.
21 Hoppin. The Prop. 218 challenge is much less likely to be
22 successful if we have water right permits for the project,
23 because rate payers are legitimately going to say we don't
24 want our rates to double if we are not going to get the
25 better water. And the way we can ensure we're going to

1 get the better water is to have the permits for the
2 project and be able to go forward.

3 CHAIRPERSON HOPPIN: I usually agree with your
4 analysis. I'm not sure I'm stuck on that one, but it was
5 a good try.

6 MR. LILLY: If you're asking me to predict how
7 125,000 people will vote, that's a tough one to do.

8 CHAIRPERSON HOPPIN: I recognize that. Thank
9 you.

10 VICE CHAIRPERSON SPIVY-WEBER: Any other
11 questions? Dwight?

12 Then we will adjourn the hearing at this point
13 and come back at 1:00 and start with the panel of
14 testimony.

15 (Whereupon the Board recessed for lunch at
16 11:52 AM)

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AFTERNOON SESSION

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1:04 p.m.

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VICE CHAIRPERSON SPIVY-WEBER: This is the oral presentation of the direct testimony, and you have 20 minutes for the panel. And everyone should affirm that they have already affirmed that they are telling the truth. I believe I indicated earlier that you should say this when you speak.

So the other thing is Senator Lois Wolk is coming in at 1:15. So we will stop when she arrives.

MR. LILLY: That's certainly fine.

Before we start, there are couple things I forgot in my opening statement. Can I cover those right now? My clients reminded me that I forgot some things.

First of all and most important, I wanted to introduce Eric Mische, the Woodland-Davis Clean Water Agency's General Manager, who is at the end of the table. And Greg Meyer, the City of Woodland Public Works Director, is also at the table.

One of the things Mr. Meyer told me I forgot, and he was right, is in response to Chair Hoppin's questions, the Woodland City Council actually has adopted five years of 20 percent per year rate increases for this project. They received some letters, but far, far below the Prop. 218 threshold. And, in fact, at the City Council meeting,

1 they had more support for the rate increases than opposing
2 the rate increases, which is pretty amazing, considering
3 it's more money people are paying. That is important.

4 If necessary, we can have Mr. Meyer or somebody
5 else testify. It wasn't exactly a hearing issue, but I
6 wanted to make sure we respond to the question.

7 The other thing he pointed out and also Steve
8 Souza from Davis pointed out to meet the Regional Board's
9 anticipated future TDS and electrical conductivity
10 requirements, if we don't build this project, the least
11 cost alternative is doing reverse osmosis treatment, and
12 Mr. Yost will testify about that. That's about twice as
13 expensive, in addition to having more environmental
14 impact. Assuming there is any rationality in the rate
15 payers, we think there will be, while nobody likes a rate
16 increase, this is the least cost alternative. I want to
17 make sure I got those two points back to Chair Hoppin.

18 VICE CHAIRPERSON SPIVY-WEBER: Chairman Hoppin
19 was confirming that Lois is in the Senate, not the
20 Assembly. But that just goes to show when you're around
21 long enough, people are in all of these positions. So she
22 is in the Senate, and Senator Wolk will be here shortly.

23 So Allen.

24 MR. LILLY: We will start and be glad to take a
25 time out when Senator Wolk is here.

1 With that, I'll start with James Yost, our first
2 witness.

3

4

DIRECT EXAMINATION

5 BY MR. LILLY:

6 Q Mr. Yost, please state your name.

7 A My name is James Yost.

8 Q Have you taken the oath for today's hearing?

9 A Yes, I have.

10 Q Is Exhibit WDCWA 1 an accurate statement of your
11 testimony for today's hearing?

12 A Yes, it is.

13 Q Do you have any corrections to that exhibit?

14 A Yes. There is one correction. Paragraph four of my
15 written testimony, Page 4, Line 7 should read, ".2 to one
16 times," not two to ten times.

17 Q And then what is your occupation?

18 A I'm a registered civil engineer in the state of
19 California.

20 Q Just very generally, what work have you done and are
21 you doing for the Davis-Woodland water supply project?

22 A Several folks have mentioned this morning I was
23 involved in the project since 1994. I've been involved in
24 this project for a very long time. Assisted the cities
25 and the university in many feasibility studies over those

1 years. I'm very pleased now to be serving as the program
2 manager to assist the Water Agency in implementing this
3 project.

4 Q And with that, I know you have pulled some of the
5 slides from your testimony, since our time limits are much
6 shorter. And I'll just ask you to go ahead with your
7 presentation of your slides since I see the first one is
8 already up on the screen.

9 (Thereupon an overhead presentation was
10 presented as follows.)

11 MR. YOST: The cities and the University of
12 California Davis are facing significant challenges in
13 meeting the State and federal regulations for operations
14 of their water and wastewater utility systems. Both
15 cities completely depend on groundwater as their sole
16 source of supply. And they're experiencing declining
17 production in drinking water quality compliance problems
18 with the groundwater system.

19 Many wells are reaching the end of their useful
20 lives. The contaminant levels, particularly nitrates,
21 arsenic, and chromium are increasing. And of course, the
22 drinking water standards are becoming more stringent. As
23 a result, they've had to shut down a number of wells, and
24 they are facing a situation of losing capacity in their
25 system and not being able to meet water quality drinking

1 water standards with these wells.

2 They also are experiencing similar problems with
3 operation in their wastewater system. When the
4 groundwater passes through the uses in the city and the
5 wastewater treatment plant, they have a lot of difficulty
6 complying with the existing and even more difficulty in
7 the future complying with the discharge limits for
8 salinity, selenium, and boron.

9 --oOo--

10 MR. YOST: As this table shows -- and
11 incidentally, this is slide number four from my testimony.
12 The first one was slide number four. This is slide number
13 15 from my written testimony.

14 These are the major wastewater concerns faced by
15 the city of Woodland.

16 Problem one in this table shows the constituent.
17 The middle column shows the anticipated future discharge
18 limit for that constituent. And column three shows the
19 current discharge concentration of each of those
20 constituents. It's very clear that without some
21 improvement in their source water quality or very
22 expensive and sophisticated treatment to get these
23 parameters down they will not be able to comply with these
24 anticipated future discharge limits.

25 --oOo--

1 MR. YOST: The next slide, which is slide number
2 16 from my written testimony, shows the same picture for
3 the city of Davis. You can quickly compare the middle
4 column and the third column and see quickly that Davis is
5 in exactly the same situation.

6 --o0o--

7 MR. YOST: The two agencies and the University of
8 California at Davis got together to begin studying --
9 developing a solution to help them meet these challenges
10 they're facing. And they developed what's called the
11 Davis-Woodland water supply project with these objectives.
12 The first three are obvious. They are to meet the current
13 and anticipated drinking water standards. And in doing
14 so, consistently meet their projected water demands and to
15 facilitate compliance with the current and anticipated
16 discharge permits. They also would like to achieve these
17 objectives, while minimizing the potential adverse impacts
18 and minimizing the impacts on customer costs. And this
19 project is currently planned to begin operation in 2016.

20 --o0o--

21 MR. YOST: Many, many studies have been developed
22 over the years. And as has been mentioned earlier, an
23 environmental impact report was developed and certified.
24 Conclusion from all those and some objective third party
25 critiques conclude very conclusively that the

1 Woodland-Davis water supply project facility shown on this
2 figure, which is slide 22 from my written testimony, is
3 the most cost effective and least environmentally adverse
4 project that could be implemented to position the cities
5 to meet these requirements.

6 Just to get you oriented, the Sacramento River is
7 coming down the upper right-hand corner of this figure,
8 and Highway 80 crosses the figure down on the bottom.
9 Davis and Woodland are kind of centered in the figure.

10 The first element of the project is a 400 CFS
11 intake and pump station that would be developed and
12 constructed cooperatively with RD 2035 and provide
13 capacity for both M&I and ag water use. Water from that
14 intake pump station would be conveyed to a new water
15 treatment facility, which would be located just to the
16 east of the city of Woodland. And the treated water from
17 this plant would be distributed -- transmitted to both the
18 city of Davis and the city of Woodland. In addition, both
19 cities will put in substantial improvements in their local
20 distribution facilities to convert from groundwater
21 distribution to a mixture of groundwater and surface
22 water.

23 --o0o--

24 MR. YOST: This project will allow the two cities
25 to achieve the first objective, which is compliance with

1 quality objectives consistently, or will the system
2 periodically go back into a situation where they are in
3 violation of their NPDES permit? And if so, why?

4 I realize it doesn't take an engineer to see that
5 potentially the quality of water is going to be better.
6 But how we get at these numbers and how we have comfort
7 that we have accomplished a goal is going to be critical
8 in everyone's decision.

9 Like I said, if you're not the appropriate one --
10 MR. YOST: I can answer that.

11 Interesting enough, the project -- the amount of
12 surface water that this project has been designed to
13 deliver is actually based on analysis of compliance with
14 these discharge limits long term. We're going to bring in
15 sufficient surface water from the Sacramento River so when
16 we blend it with the drinking water in the summer -- you
17 have to realize this is a conjunctive use project. We'll
18 meet the base supplies using surface water. In the
19 summertime, we'll run the wells for a short period of time
20 to help meet peak summer demands.

21 The amount of surface water that we need to bring
22 into the project in the summertime to be mixed with
23 groundwater was based on calculations to show that we
24 would still be able to meet these limits for the entire
25 year. And this is envisioned to -- this is developed to

1 allow the cities to be in compliance with these limits
2 through 2040, which is the life of the project.

3 CHAIRPERSON HOPPIN: When I look at this, I mean,
4 there is a spread in your numbers. But you anticipate
5 that they are going to be variability in water quality
6 based on the time of year and availability of water from
7 this proposed contract; is that not correct?

8 MR. YOST: That's correct.

9 And one of the things that maybe would complicate
10 this discussion today, we're looking at the possibility
11 and meeting with the Regional Board to talk about this
12 integrating an ASR well component into the solution here
13 so that we could actually put water in the ground when we
14 have a lot of water available in the wintertime and
15 improve the groundwater quality. So when the cities do
16 use groundwater, it would be much higher quality.

17 CHAIRPERSON HOPPIN: As far as storage, you're
18 limited to very finite storage and blending facilities as
19 this project is proposed currently; is that correct?

20 MR. YOST: That's correct.

21 VICE CHAIRPERSON SPIVY-WEBER: Tam has --

22 BOARD MEMBER DODUC: Two questions. The first:
23 Is it your intention to reduce your groundwater use when
24 you are blending with the surface water from this project?

25 MR. YOST: Yes. Yes.

1 BOARD MEMBER DODUC: Corresponding amounts?

2 MR. YOST: Yes.

3 BOARD MEMBER DODUC: Could you briefly describe
4 some of the other source control efforts in order to
5 obtain the standards?

6 MR. YOST: Well, first of all, let me say that
7 the project is designed to integrate a very aggressive
8 water conservation program. So one of the first efforts
9 has been to reduce the per capita water demand. Both
10 cities have done and will continue to do investigation of
11 the sources of salt contributing to their wastewater
12 discharges. That will continue. They will also be
13 conducting a number of -- city of Woodland is just
14 becoming metered. Davis is metered. They will be
15 conducting a number of studies to determine where leaks
16 are. So they are doing the standard things that you would
17 expect to control the sources and they're not just relying
18 on this project to meet these long term.

19 BOARD MEMBER DODUC: Is it fair to say these
20 other efforts are mainly conservation and leak prevention?
21 Are there any other types of activities?

22 MR. YOST: One of the primary objectives for this
23 project is to convince the residents of both Woodland and
24 Davis that they can get rid of their water softeners. So
25 we want to consistently meet the quality level needed for

1 them to be confident that they will not need the water
2 softeners in the future and they would take them out of
3 their homes.

4 BOARD MEMBER DODUC: Thank you.

5 MR. YOST: I don't remember exactly where I was.

6 --o0o--

7 MR. YOST: This is slide number 30 from my
8 written testimony. In addition to meeting the wastewater
9 and the water limits, there will be significant
10 environmental impacts that will result from implementation
11 of this project. This is the RD 2035 intake that provides
12 agricultural supply at the Conaway Ranch. This intake
13 will be abandoned and will be replaced.

14 --o0o--

15 MR. YOST: And incidentally, just to orient you,
16 to go back quickly, that's the I-5 bridge in the
17 background. This is just upstream of the I-5 bridge near
18 the airport.

19 --o0o--

20 MR. YOST: That will be replaced by this intake,
21 which will be an intake with a state-of-the-art fish
22 screen. The facilities in orange show the lines that will
23 provide ag water supply to RD 2035. The green is
24 indicative of an M&I facilities that will provide water to
25 the state. This would meet both ag and M&I needs and have

1 an 80 CFS capacity reserved for the M&I needs consistent
2 with the water rights under consideration today.

3 VICE CHAIRPERSON SPIVY-WEBER: Mr. Yost, I
4 interrupted you a moment ago. Could we interrupt you for
5 a few moments for Ms. Wolk and then have you resume?

6 MR. YOST: Certainly.

7 VICE CHAIRPERSON SPIVY-WEBER: I believe we have
8 Senator Wolk here to make a presentation.

9 Thank you. Very glad to see you.

10 SENATOR WOLK: Thank you very much for allowing
11 me to speak to you today.

12 I'm here in support of the proposed
13 Woodland-Davis application, and I believe it's 30358A and
14 30358B, both by the city of Woodland, city of Davis, and
15 the University of California.

16 I've served this region in many capacities, as
17 you know, including currently representing the region in
18 the California State Senate, as well as prior to that in
19 the Assembly and prior to that eight years on the council
20 and four on the Yolo County Board of Supervisors. I'm
21 quite familiar with this effort and the decades' long
22 effort probably short compared to what usually happens in
23 water law. I'm very familiar with this effort and I'm
24 very strongly supportive.

25 In 1994, when I was on the Davis City Council and

1 I was Mayor, the head of the Yolo County Flood Control
2 District met with me in my capacity as Mayor to inform me
3 of an opportunity to improve water quality for both our
4 residents and for the discharge into the Sacramento River.
5 Chair Jim Eagon at the time had the foresight to see that
6 the region needed to take action to address both water
7 quality issues while diversifying the region's water
8 supply.

9 Seventeen years later, and numerous studies later
10 and numerous meetings later, the cities have brought
11 forward what I believe is a responsible application.
12 These applications will allow the region to meet the
13 discharge requirements that are ahead of it by improving
14 the quality of water coming into the treatment facilities
15 and benefiting the water quality in the Sacramento River.
16 The project also provides benefits to the fisheries that
17 depend on the Sacramento River by facilitating screening
18 of one of the largest unscreened intakes remaining on the
19 Sacramento River.

20 I have been and remain a strong advocate for
21 balancing the water demands with protecting the Sacramento
22 River and delta. And in this case, I'm very happy to
23 support what I believe is a very responsible application
24 that will meet both the needs of the communities and that
25 provides the ecosystem benefit.

1 In improving the conditions for both water
2 quality and fisheries in the Sacramento River and the
3 delta, this project is also consistent with statewide
4 water management goals.

5 I urge your support of the two related
6 applications that are before you. And I wish you well in
7 your deliberations. And I again thank you for allowing me
8 to present this at this time. Thank you, all.

9 VICE CHAIRPERSON SPIVY-WEBER: Thank you from all
10 of us, and we would love to see you here more often.

11 CHAIRPERSON HOPPIN: Mr. Lilly, aside from common
12 courtesy, it's a little bit clearer now your willingness to
13 cede time to Senator Wolk. Want to thank you for your
14 generosity.

15 MR. LILLY: You're welcome.

16 VICE CHAIRPERSON SPIVY-WEBER: Now, if you
17 remember where you were, go for it.

18 MR. YOST: I will just say before I start, I was
19 informed we do have additional information we could
20 present to Board Member Doduc, if you would like, on some
21 of the activities the two cities intend to pursue to
22 reduce their salt load. Would you like to hear that?

23 BOARD MEMBER DODUC: Someone, if you would.

24 MR. JACKSON: We've been sitting here watching a
25 whole bunch of information come in that is not in the

1 record. And I was wondering how do you want to deal with
2 things like the Conaway Ranch, which is not part of the
3 record, things like what we just heard, which are not part
4 of this record. Do you want to reopen the record? How
5 are we going to do that?

6 VICE CHAIRPERSON SPIVY-WEBER: Thanks, Michael.

7 Nathan, how would you advise the Board members on
8 this, asking questions about information that is not in
9 the record?

10 MR. JACOBSEN: Well, with respect to what Mr.
11 Jackson referred to, Conaway Ranch, which was alluded to
12 in the policy statement and opening statements, that is
13 correct that there is no evidence currently in the record
14 before us regarding Conaway Ranch or alternate supplies
15 that city of Davis and Woodland are relying on.

16 I would suggest that the Board take the evidence
17 under submission and we would discuss the relevance of
18 that evidence and the weight to give it and proper actions
19 on that evidence at a later date. But it would be my
20 suggestion that the Board accept the evidence under
21 submission.

22 MR. LILLY: Excuse me. I just would like to
23 clarify in response to Mr. Jackson, if the Board members
24 ask questions and our witnesses answer them under oath,
25 that is evidence in the record. And there is nothing in

1 the Board's rules that prohibit that from coming into
2 evidence.

3 I agree with Mr. Jackson; policy statements are
4 not evidence. But answers by witnesses under oath to
5 questions from Board members are evidence in the record.

6 VICE CHAIRPERSON SPIVY-WEBER: Nathan.

7 MR. JACOBSEN: Well, that's correct. However, I
8 believe -- Mr. Jackson can correct me if I'm wrong. I
9 believe he's referring to evidence that would point to the
10 alternate water supply that the city of Davis and Woodland
11 is exploring.

12 MR. JACKSON: That's part of what I'm pointing
13 to. The idea is that -- it's not the fault of anyone, I
14 don't think. But at the time that we all put in our
15 evidence, the Conaway Ranch operation hadn't been
16 completed. There was no contract. I've got all kinds of
17 ideas about how the Conaway Ranch changes what you ought
18 to do. But I don't know how to cross-examine over it, and
19 I don't know how to present the evidence that we would
20 counter that within a circumstance in which the record is
21 closed.

22 MR. LILLY: May I respond?

23 VICE CHAIRPERSON SPIVY-WEBER: You can respond,
24 but I'm going to turn back to Nathan to make a
25 recommendation as to how we should proceed.

1 MR. LILLY: Frankly, I largely agree with Mr.
2 Jackson. That doesn't happen very often, but it does
3 happen sometimes. The only reason -- well, of course, we
4 were answering the question from Board members about the
5 summer supply. That's why the Conaway Ranch testimony
6 came in.

7 I agree with Mr. Jackson that's not a hearing
8 issue for today's hearing. Obviously, when that agreement
9 is in the process of being implemented, there will have to
10 be a subsequent Water Board proceeding where that can be
11 addressed in detail. And, of course, CSPA can participate
12 in that proceeding. I agree we need to keep it under
13 control.

14 But if the Board members are going to ask our
15 witnesses what are we going to do about supplies during
16 times when Term 91 is in effect, our witnesses have to
17 answer we have planned for that and we do have a way to
18 deal with that.

19 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

20 Nathan.

21 MR. JACOBSEN: Well, I agree with that statement.
22 And, of course, the Board recognizes that Mr. Jackson and
23 CSPA have not had an opportunity to adequately
24 cross-examine or address this issue of Conaway Ranch. So
25 again, I would advise for the limited purposes of just

1 clarifying the possible alternate water supply that the
2 city of Davis would rely on where it's relevant to the
3 discussion I think the Board could take that evidence
4 under submission.

5 VICE CHAIRPERSON SPIVY-WEBER: Thank you. Tam.

6 BOARD MEMBER DODUC: Well, the discussions have
7 always been on the Conaway Ranch issue.

8 My questions were more towards the source
9 control, because, for me, one of the important factors is
10 that is the project's indication that their shift would
11 benefit water quality and the attainment of future water
12 quality requirements and standards. So for me, the source
13 identification as a part of your methodology achieving the
14 EC standards is something that is relevant to these
15 proceedings. And, therefore, I would welcome any
16 additional information that you wish to provide on that
17 issue.

18 MS. DUNHAM: Thank you.

19 Teresa Dunham here on behalf of the city of
20 Davis. And yes, I have taken the oath.

21 And I just wanted to provide some additional
22 information specific to the city of Davis on your
23 question, Member Doduc.

24 The city of Davis also has a very robust
25 pretreatment source control program in association with

1 its pretreatment program. And they are conducting
2 monitoring of specific areas within the city to determine
3 where some of the larger industrial salt loads may be
4 coming in from. For example, they are monitoring Sutter
5 Hospital, Sudwerk Brewery as well as others that input
6 into their system so they can work with those industrial
7 folks to try to limit the salt salinity coming in from the
8 industries as well. That is a big part of the city's
9 source control program as part of the pretreatment program
10 as well.

11 MR. RICH: Dan Rich, consultant for the city of
12 Woodland. I have taken the oath.

13 From the city of Woodland's perspective, they've
14 also done their version of what Tess just described in
15 terms of source identification and pollution prevention.

16 I'll give you an example. What they know from
17 looking at the amount of TDS generated within the city,
18 they know over half of it is from the potable water side,
19 and about 20 percent of it is from sulfur generating water
20 softeners. The other 30 percent is conjunctive use or
21 consumptive use, I should say.

22 So we know that this project will have a
23 significant impact on the relative amount of salt
24 discharge to the wastewater treatment plant.

25 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

1 Now, you can proceed.

2 MR. YOST: That slide was slide number 28 from my
3 written testimony.

4 --o0o--

5 MR. YOST: That was a great cue because what I
6 wanted to say was the salt loading to the Sacramento River
7 will be reduced by over 50 percent. This says over 50.
8 It's actually, if you look at the 2009 levels of
9 discharge, it would be about 48 percent. If you look at
10 the future levels of discharge maybe in 2040, it would be
11 as much as 52 or 53 percent. This is tons per day. Many
12 tons per day of reduction of the salt load to the
13 Sacramento River in the delta. It will also result in
14 substantially reduced selenium discharges into the Yolo
15 Bypass in the delta. In doing so and implementing this
16 project, we'll be implementing a project with the lowest
17 carbon footprint of any of the alternatives we studied.

18 --o0o--

19 MR. YOST: The cities have actually begun raising
20 their water rates. You heard this from a couple folks
21 now. And bond financing and sale of bonds is projected to
22 occur in 2012, 2013. The project will be designed,
23 constructed, and operated using a process called design to
24 build operate. And under the DBO procurement process,
25 which we will begin in about ten days, we will be awarding

1 contracts for design, construction, and operation of this
2 project in late 2012. Construction will occur over the
3 period from 2013 to 2015. And startup is projected to
4 occur in 2016. This is slide number 24 of my written
5 testimony.

6 --oOo--

7 MR. YOST: So obvious question. If this project
8 won't begin diversion from the Sacramento River until
9 2016, why do we need the permits now?

10 Well, some of the questions today I think answer
11 one of these questions. This is the largest capital
12 program that these two cities have ever implemented. They
13 will significantly increase their user fees. And they all
14 know that getting this water right in place is a critical
15 component of the successful implementation of the project.
16 So to get the public support, we need to pass these
17 significant rate increases. We need to make sure they
18 understand we have that water right in place and the
19 project has jumped another major hurdle.

20 Other issues. We will be starting the DBO
21 procurement process I described earlier later this month.
22 This process will require about three bidders who will be
23 short listed to spend a million dollars of their own money
24 preparing a proposal for this project so they can be
25 selected. They must be confident this project can be

1 implemented. And they have repeatedly asked me what's the
2 status of the water right permit. Have you secured the
3 water rights yet? Very important to that process.

4 Last of all, these are very hard economic times.
5 I don't need to tell anyone that. But ironically this is
6 a good time to actually implement a public works project.
7 Interest rates are low. Bids are coming in way below
8 estimates. It's very uncertain how long this condition
9 will actually last. But any delays in this project could
10 end up costing the two cities millions of dollars. The
11 quicker we can get this out on the street, the better.

12 So that's another reason why it's very important
13 to make sure there are no hiccups in our implementation
14 plan, and getting over this water rights hurdle is
15 paramount to our successful implementation of the project.
16 That's slide number 40 from my testimony.

17 Thank you very much.

18 MR. LILLY: If there aren't any questions --
19 there is a question. Excuse me.

20 VICE CHAIRPERSON SPIVY-WEBER: There is a
21 question.

22 BOARD MEMBER DODUC: You mentioned in your
23 statements that this was the alternative with the least
24 adverse environmental impacts. And in looking through
25 your written testimony, I didn't see any discussion of

1 what some of those adverse environmental impacts might be.

2 Could you please spend some time briefly discussing that?

3 MR. YOST: I'm the engineer on the process. I
4 would suggest that might be a better discussion for our
5 fisheries expert to discuss.

6 BOARD MEMBER DODUC: Okay. Will that be part of
7 the upcoming testimony?

8 MR. LILLY: That's coming. We are going to have
9 Dr. Hanson testify.

10 Ms. Doduc, maybe you can clarify. Were you
11 talking about the environmental impacts of this project or
12 of alternatives?

13 BOARD MEMBER DODUC: Of this project.

14 MR. LILLY: I think if you don't mind waiting,
15 we'll have Dr. Hanson go forward.

16 And actually, our next witness in order is Walter
17 Bourez and then we'll come to Dr. Hanson.

18 BY MR. LILLY:

19 Q Mr. Bourez, please state your name.

20 A Walter Bourez.

21 Q Have you taken the oath for today's hearing?

22 A Yes, I have.

23 Q Is Exhibit WDCWA 100 an accurate statement of your
24 testimony for this hearing?

25 A Yes, it is.

1 Q Do you have any corrections to that?

2 A Yes, I have some corrections. I have a two-page sheet
3 of corrections that I've submitted.

4 Q Okay. We have circulated that to everyone. It's
5 Exhibit WDCWA 12. Have you prepared slides for your
6 testimony today?

7 A Yes, I have.

8 Q And that is -- we've also circulated Exhibit WDCWA
9 113. This is a compilation of his previously submitted
10 exhibits to try to streamline it. We'd like to go forward
11 with that.

12 Please summarize your testimony.

13 A Okay.

14 (Thereupon an overhead presentation was
15 presented as follows.)

16 MR. BOUREZ: The first part of the summary -- I'm
17 sure the State Board knows the Term 91 probably better
18 than I do. But summarizing, Term 91 specifies the method
19 for determining when water is not available for diversion
20 under post 1965 water rights within the watershed. It's
21 very important to note that water right permits and
22 licenses with this term are junior in priority to any
23 future delta flow requirements.

24 Next slide.

25

--oOo--

1 MR. BOUREZ: So the next thing we did is looked
2 at potential future conditions and looked at water
3 availability under these potential future conditions. And
4 this is going to address the August 16th, 2010, letter to
5 the State Board. And basically that letter from CSPA
6 suggested that an additional three to five million acre
7 feet of Sacramento Valley water supplies would be required
8 to meet greater delta outflows. So we did an analysis
9 based on the flow criteria.

10 Next slide.

11 --o0o--

12 MR. BOUREZ: And what we did is we used the State
13 Water Project delivery reliability report CalSim modeling
14 and did an analysis to look at how often additional water
15 supplies would be required to meet those requirements, the
16 75 percent November through June. And based on the CalSim
17 modeling in our analysis, we found there's still
18 significant water available for diversion. And the table
19 up here shows that in January roughly 34 percent of the
20 time water would be available. February, 29 percent of
21 the time. And, of course, it's available much less often
22 than under current operating criteria. During the summer
23 months, there is no water available.

24 MR. LILLY: Just to clarify, this would be the
25 amounts of water or the frequency of water availability,

1 even if the State were to adopt the August 2010 delta flow
2 criteria report as a regulatory requirement?

3 MR. BOUREZ: That's correct.

4 BOARD MEMBER RUSSELL: Quick question.

5 I'm looking at percentages. Is this presuming
6 the diversion is going a full rate at a 80 CFS?

7 MR. BOUREZ: That's correct. Based on the
8 pattern of diversion. In the wintertime, it's not a full
9 CFS. It's less.

10 BOARD MEMBER RUSSELL: During the months water is
11 available, is the project diverting an 80 CFS full
12 capacity, or does it throttle back at some point in time?

13 MR. BOUREZ: In the wintertime, if you go back to
14 the exhibit, go back a couple slides to Exhibit 103,
15 page 2, you can see the wintertime demands are less than
16 the summertime demands. And in the future if the State
17 Board criteria were adopted as a standard, the water would
18 typically be available in the wintertime where the demand
19 is a bit lower. So it wouldn't be the full 80 CFS in the
20 wintertime.

21 BOARD MEMBER RUSSELL: Thank you.

22 CHAIRPERSON HOPPIN: Mr. Bourez, I don't know if
23 it's appropriate for you or Mr. Yost, but something that
24 Dwight just raised raises a question in my mind as well.
25 Were you really -- you're not pumping into a reservoir or

1 aquifer with this proposed diversion. I would assume even
2 your daily diversions wouldn't be static, would they? I
3 mean, to the maximum diversion rate of 80 CFS? 2:00 in
4 the morning, you're not going to be diverting 80 CFS, or
5 do you have the ability for that?

6 MR. YOST: There will be some storage built into
7 the system. But you're absolutely correct. The capacity
8 that this treatment plant will operate on will vary during
9 the day. Probably only be changed once or twice during
10 the day, but there will be some variation.

11 CHAIRPERSON HOPPIN: And that diversion in your
12 proposal as far as a diversion will be I assume a rather
13 sophisticated system that allows you to not pump water in
14 excess of what you need or will it be a bypass flow? Or
15 how will that work?

16 MR. YOST: We expect the diversion will be
17 controlled from the treatment plant. And so it will be
18 operated to meet the demand.

19 CHAIRPERSON HOPPIN: Water demand system.

20 MR. YOST: Yeah.

21 MR. BOUREZ: I'm talking very fast because I'm
22 racing the clock.

23 MR. LILLY: Mr. Bourez, before you go on in
24 response to Mr. Russell's question, I think you need to
25 clarify when Term 91 is not in effect, does the project

1 divert at the full amount of the projected demands for
2 that month?

3 MR. BOUREZ: It can, if the demands exist. In
4 the wintertime, the demand is lower than the summertime.

5 MR. LILLY: But it will divert for the full
6 demand at that time?

7 MR. BOUREZ: Correct.

8 MR. LILLY: Because basically when Term 91 is not
9 in effect, there is much more surplus water than the
10 amount of flow this project would need?

11 MR. BOUREZ: That's correct.

12 MR. LILLY: If you can go on with your next
13 slide.

14 MR. JACOBSEN: Maybe you can go back to the last
15 slide that shows the months and percentages. I'm having a
16 little bit of a hard time understanding that annual 61
17 percent.

18 MR. BOUREZ: That's a good question. If I were
19 to look at every February, every March, there is sometimes
20 water would not be available in February, but it would be
21 available in March. Maybe it's available only in February
22 in a particular year.

23 But if I looked at every year and looked at is
24 there a single month in that given year that water is
25 available, in 61 percent of the years, there would be

1 water available in at least one month.

2 MR. JACOBSEN: So that's really a composite
3 figure looking at best case scenario in each year. Is
4 that correct?

5 MR. BOUREZ: That's looking at if there is one
6 occurrence within the year, one month within a year, that
7 would count as one occurrence. So in 61 percent of the
8 years, there is at least one month that water would be
9 available.

10 --oOo--

11 MR. BOUREZ: This slide shows some examples when
12 water would be available. The picture on the left is a
13 picture of the Sacramento Valley in 1940. And with that
14 much water in the system, it's highly likely that water
15 would be available, regardless of the outflow requirement.
16 And looking at the Fremont Weir in 2004, the amount of
17 water that's in the system, it's reasonable to assume that
18 water would be available for diversion with that much
19 flooding occurring.

20 Next slide.

21 BOARD MEMBER RUSSELL: I have a question. Could
22 you go back to the previous slide, please? I'm looking at
23 this.

24 My concern is if we have such a situation as this
25 wet -- and granted there would be a lot of water

1 available -- would you be pumping it into the same rates
2 you would before?

3 MR. BOUREZ: Like your question you mentioned
4 earlier, when it's very wet, the demand for water tends to
5 be lower. So they would divert up to the demand, the less
6 the demand, or 80 CFS.

7 BOARD MEMBER RUSSELL: I understand that. Do you
8 have any idea what the demand is projected to be during
9 wet periods? Are we talking something that would be
10 satisfied by 40 percent of the capacity or 80 percent of
11 the capacity?

12 MR. YOST: I don't have that number right off the
13 top of my head. But I would expect it would be probably
14 less than half an 80 CFS in many months in the wintertime.

15 BOARD MEMBER RUSSELL: During that time you have
16 less impacts. Thank you.

17 --o0o--

18 MR. BOUREZ: The next issue that we addressed is
19 the statements that the Sacramento basin is greatly
20 over-appropriated to address this issue.

21 Next slide.

22 --o0o--

23 MR. BOUREZ: We looked at several examples. This
24 example I have is of the Pit River system and PG&E power
25 plants. Water is diverted through each of these power

1 plants several times as the water flows down through the
2 river. And then the water ends up in Shasta Lake where it
3 is diverted again.

4 If we go to the next slide, we show --

5 --oOo--

6 MR. BOUREZ: -- the cumulative diversion. So if
7 you sum up all those rights, the direct diversion amount
8 is over 42,000 CFS. And the face value of those water
9 rights in these diversion is over 31 million acre feet.
10 None of this water is consumptively used and is converted
11 through each of those power plants and ends up in Shasta
12 where it's diverted again.

13 --oOo--

14 MR. BOUREZ: Next slide.

15 If you look at the application in the face value
16 for water rights for Shasta, the face value of the water
17 rights is approximately 31 million acre feet. So if you
18 look at Shasta and just the PG&E power plants on the Pit
19 River, we're showing a face value of water rights over 60
20 million acre feet. So we feel that face value of the
21 water right is not an indication if the Sacramento River
22 basin is over-appropriated or not.

23 MR. LILLY: With that, we'll go on to Charles
24 Hanson. Dr. Hanson --

25 VICE CHAIRPERSON SPIVY-WEBER: Before we get

1 started, do you have three more witnesses?

2 MR. LILLY: Dr. Hanson is our last witness. He
3 probably will take two to three minutes. I think we
4 didn't quite stop the clock every time a Board member
5 started asking questions.

6 VICE CHAIRPERSON SPIVY-WEBER: I just wanted to
7 make sure we didn't have 20 minutes per person left.

8 MR. LILLY: Your letter was pretty clear.

9 BY MR. LILLY:

10 Q Dr. Hanson, please state your name.

11 A Charles Hanson, H-a-n-s-o-n.

12 Q Have you taken the oath today?

13 A Yes, I did.

14 Q Is Exhibit WDCWA 200 an accurate statement of your
15 testimony for today's hearing?

16 A Yes, it is.

17 Q Just very generally, what is your occupation?

18 A I'm a fisheries biologist.

19 Q And what is your -- very generally, what is your
20 experience regarding delta fisheries?

21 A I have 35 years of studying delta fisheries. I have
22 done extensive work on Endangered Species Act issues. I'm
23 a participant in the Bay Delta conservation planning
24 process. Certified by the National Marine Fisheries
25 Service and U.S. Fish and Wildlife and delta fisheries.

1 Q And just generally, what is the work you've done for
2 the Davis-Woodland water supply project?

3 A I was responsible for doing the fisheries analysis
4 that was presented in the 2007 draft EIR, as well as I
5 participated in the discussions for dispute resolution
6 with the Department of Fish and Game.

7 Q Have you updated your previous analysis based on
8 Walter Bourez's new hydrologic analysis?

9 A Yes, I have.

10 Q And because our time is limited, I'll just ask you to
11 briefly summarize your testimony using Exhibits WDCWA 211,
12 212, and 215.

13 MR. HANSON: I'll talk about my analysis and I'll
14 address your question about the alternative impacts.

15 In terms of a fisheries analysis for the proposed
16 project, we really looked at three potential major impact
17 mechanisms. The first was construction of an on-bank
18 intake structure, as Mr. Yost has pointed out. We
19 identified a number of potential impacts that could occur
20 as a result of that. But we also identified through
21 mitigation measures best management practices that would
22 reduce and avoid those impacts. That has become part of
23 the project.

24 In terms of water operations, entrainment,
25 impingement of fish is a key issue. The intake would be

1 designed and operated in accordance with the Department of
2 Fish and Game, the National Marine Fisheries Service, and
3 the U.S. Fish and Wildlife Service intake design criteria.
4 And we have provisions for performance monitoring and for
5 evaluating the performance of the intake.

6 On the last issue, one of the key elements of our
7 impact analysis was to work with Walter and to look at the
8 effects of the project operations and the diversion of
9 water from the Sacramento River on the fisheries community
10 and their habitat within the river downstream of the point
11 of diversion. And to do that, we originally used the set
12 of CalSim operational models that were based on the 2004
13 biological opinion. That modeling, as Walter pointed out,
14 has now been updated and now reflects the current
15 CalSim-II as well as the 2009 biological opinions.

16 When we went back and compared the results and
17 our major findings from those two sets of analyses, they
18 were in agreement with one another. What's shown in
19 Exhibit 211 is a summary of the difference. And this is
20 the difference in average monthly flow and CFS at
21 Freeport. And this is the difference with the project and
22 without the project. So you can see that during this
23 time -- also, the top row should have had a column that
24 says current condition and future condition was the bottom
25 row. So that we ran the model both under the current

1 project would have both in the current condition and the
2 future on delta fisheries as well as fishery habitat
3 within the river.

4 I was going to go on and answer the questions.

5 In terms of looking at the impacts, there were
6 two different ways that the impacts were looked at. One
7 is we recognize that there was an opportunity for greater
8 environmental benefits from a fisheries perspective if
9 this project could be integrated with the RD 2035 intake
10 and consolidated currently unscreened relatively old
11 diversion with a new diversion that had state-of-the-art
12 positive barrier fish screens that was operated and
13 designed and managed to protect fisheries within the
14 Sacramento River.

15 And this project offered that opportunity.
16 However, at the time I was doing this analysis, that had
17 not yet come to pass. So that's not reflected in the
18 environmental effects, nor the environmental benefits that
19 would occur as a result of this now consolidated project.

20 But as we went through the planning process,
21 preparation for looking at the designs, preparation for
22 doing the CEQA analysis, there was consideration given to
23 a wide range of different alternatives, different intake
24 locations, different routes for the pipeline corridors,
25 different infrastructure that would occur as a result of

1 different project configurations. And through our
2 analyses, we looked at the impacts of each of the
3 alternatives. They were looked at in terms of their
4 effects on terrestrial species, wetlands, land use, how
5 they would affect different fisheries' components based on
6 the intake location. Those kinds of considerations in
7 combination with effects on traffic and noise and air
8 quality.

9 The other CEQA types of components were all
10 evaluated as part of the 2007 draft EIR and subsequently
11 embodied and adopted as part of the final EIR for the
12 project. And they go through each of the various
13 alternatives and describe those different impacts. That
14 was the basis upon which we were able to look at this and
15 say this has the least impacts and the greatest benefits.

16 VICE CHAIRPERSON SPIVY-WEBER: That last part was
17 in answer to your question. Okay.

18 Is that the close of the panel?

19 MR. LILLY: That's it. We do have some exhibits,
20 but I'll wait until after cross-examination to offer
21 those. So we are now done with our summary of direct. We
22 tried to keep it under 20. We were pretty close.

23 VICE CHAIRPERSON SPIVY-WEBER: Now we will go
24 to --

25 CHAIRPERSON HOPPIN: I have one question.

1 VICE CHAIRPERSON SPIVY-WEBER: We're going to
2 have cross-examination.

3 CHAIRPERSON HOPPIN: I can wait.

4 VICE CHAIRPERSON SPIVY-WEBER: For everybody.
5 Everybody gets to do cross-examination.

6 So Michael will go first and then staff and Board
7 members.

8 MR. JACKSON: I've listened to Chairman Hoppin
9 many times, and I can't always get exactly the same
10 question that he gets, but I'll try.

11 Most of these questions I think will be for Mr.
12 Yost. But if there's someone else who believes they want
13 to take a shot at the answer, just let me know. I'm not
14 trying to be rude to anyone.

15 VICE CHAIRPERSON SPIVY-WEBER: Michael, you know
16 you have 60 minutes. You have an hour.

17 MR. JACKSON: I understand.

18 CROSS-EXAMINATION

19 BY MR. JACKSON:

20 Q Mr. Yost, from your work with WDCWA, did you start
21 from the point of view that you had ample water to serve
22 your people at the present time?

23 A Well, that's a complex question, because ample
24 involves water quality as well. And we do not have ample
25 water quality.

1 Q Let me separate it. Do you presently have enough
2 water to serve to the folks in your district?

3 A Dismissing the concern over water quality?

4 Q Separating out water quality from water that's
5 available.

6 A I would say the answer is probably, but there has been
7 some subsidence of the land in that area. And the city of
8 Woodland, for instance, has been experiencing -- has
9 experienced in the past significant subsidence from the
10 groundwater pumping. So that's indicative to me that
11 there probably is not sufficient water. It's somewhere
12 probably less than the amount of water being pumped out of
13 the groundwater aquifer at this time.

14 Q Have you determined the safe yield for the groundwater
15 basin?

16 A We have not.

17 Q Has there ever been a time in either of these cities'
18 experience where -- putting aside quality for a moment --
19 there has not been enough quantity to serve from the
20 groundwater basin?

21 A There have not been those kinds of conditions. But as
22 I said earlier and I'll repeat it, Woodland has
23 experienced problems with their wells with subsidence of
24 the ground around these wells and actually separation of
25 the casing because of subsidence of these wells, which

1 indicates an over pumping of the groundwater aquifer.

2 We have also conducted a number of studies.
3 These studies were conducted jointly with initially
4 Woodland or -- excuse me -- Davis and University of
5 California Davis and then eventually with the city of
6 Woodland to investigate the yield from the deep
7 groundwater aquifer which we perceive to be part of the
8 solution from a water quality standpoint. And the
9 indications are there is not sufficient yield available in
10 that aquifer to serve both the communities of
11 Woodland-Davis and the university.

12 Q Now I'd like to call your attention again talking
13 about water quantity and availability. To your
14 prospective operation, which is that in months in which
15 Term 91 is playing a role, summer months when your demand
16 is highest, you would receive very little water, if any,
17 from the river under this application. Where would you
18 get your water?

19 A We have consummated an agreement with the Conaway
20 Ranch to purchase 10,000 acre feet of water during those
21 critical months in the summer. And we would supplement
22 the water supply available under the water right permit
23 with that purchased water.

24 We envision investigating additional sources of
25 supply. I mentioned earlier we are in the process of

1 looking at the SR well component and whether that could be
2 integrated into the process. And we also have some
3 additional studies going on, water that could be created
4 within Yolo County that would provide additional supply in
5 the summertime.

6 Q And those studies are not finished at the present
7 time?

8 A That's correct.

9 Q And I guess just for the benefit of all of us who read
10 the newspapers, how did you select 10,000 acre feet to
11 purchase from Conaway Ranch instead of their total --
12 instead of your total amount of water from Conaway Ranch?

13 A Well, as I'm sure you're well aware, the amount of
14 water we need each year varies dramatically based on the
15 hydrology for that given year. We analyze that hydrology.
16 We worked with Alan Lilly and others to try to determine
17 how we could basically get the most bang for our buck,
18 where could we spend money on water and have that water
19 available when we need it the most. And 10,000 acre feet
20 was a number that matched pretty closely with our needs.
21 We understand that we will have to have additional supply,
22 but that will satisfy something like 75 or 80 percent of
23 our needs.

24 Q So you haven't determined where the rest of the water
25 will come from for the summer months?

1 A We expect we would proceed as we did with Conaway to
2 either negotiate with upstream water rights holders to
3 purchase additional water. We would consider implementing
4 ASR wells or work out some kind of a solution with our
5 local partners in Yolo County to get additional water.

6 Q So you're expecting to get the additional water also
7 from the river through means of some other contract?

8 A It's unclear at this point. We have not reached that
9 conclusion.

10 Q Calling your attention to the quality portion of your
11 program, presently both Davis and Woodland you indicate in
12 your testimony on page 3 have upgraded to tertiary
13 treatment?

14 A The city of Woodland has upgraded their wastewater
15 treatment plant to tertiary treatment. City of Davis has
16 not.

17 Q So this is for the city of Davis. Will they go
18 forward and do tertiary treatment if this application is
19 approved?

20 A I'm not an expert on the progress being made by the
21 city of Davis on their expansion of their wastewater
22 treatment plant, but I know that that project has been
23 under planning and evaluation for practically as long as
24 this water project has. And they're currently -- and the
25 concept was this water supply project should go first,

1 improve the quality of their water, and then they will
2 base their wastewater recommendations on that assumption.
3 Possibly Tess can shed more light on that subject.

4 MS. DUNHAM: I would just note that, first of
5 all, Davis is not expanding their wastewater treatment
6 plant. It is just to maintain current capacity. It would
7 be an upgrade, not an expansion. Don't want anybody to
8 think we have a capacity expansion.

9 The city of Davis will be required by their NPDES
10 permit to meet new effluent limits by 2017. Those
11 effluent limits are akin to a tertiary treatment
12 requirement. So they will need to comply with that permit
13 by 2017. The city of Davis City Council has made some
14 preliminary decisions with respect to the upgraded
15 project. And the final end of the day they have to meet
16 the permit at 2017.

17 MR. JACKSON: So at 2017, you would be then
18 meeting the water quality standards for the water you pump
19 out of the ground and service your customers that ends up
20 in your wastewater treatment plant?

21 MS. DUNHAM: I'm not sure what you mean by water
22 quality standards out of the ground. We will be meeting
23 our effluent limits in our NPDES permit by 2017.

24 MR. JACKSON: The water that comes into your
25 system, in many cases, is from the water that is delivered

1 to your customers; correct? I mean, has the salts, has
2 the selenium, has the boron, and has the arsenic we've
3 been hearing about here?

4 MS. DUNHAM: For certain parameters.

5 MR. JACKSON: And those are parts of the
6 parameters after your wastewater treatment plant attempts
7 to deal with it that you're trying to meet what you
8 believe to be increased State standards?

9 MS. DUNHAM: Let me clarify. I'm not sure if I'm
10 answering your question correctly. Let me clarify the
11 effluent limits within the city's permit.

12 The city of Davis' permit will require it to meet
13 BOD TSS type limitations associated with tertiary
14 treatment by 2017. They currently already have in place a
15 final limit for selenium. That limit is currently in
16 effect. They have a time schedule order to protect it
17 from mandatory penalties up to 2015. It is a CTR
18 constituent and therefore is not eligible for any
19 compliance schedule.

20 They do not currently have salinity limits up
21 towards the 700,000 and performance-based limits at this
22 time with a finding in their current permit that says the
23 Board will adopt a new salinity effluent limit much lower
24 than their current interim effluent limit within its next
25 permit renewal, which will occur in 2012.

1 MR. JACKSON: With the updating of the wastewater
2 treatment plant in 2017, will you be able to meet
3 standards?

4 MS. DUNHAM: You need to specify which standards
5 you are referring to. You can't --

6 MR. JACKSON: It's existing standards.

7 MS. DUNHAM: If we upgrade the treatment plant
8 for tertiary treatment, we will comply with our effluent
9 limits as they are currently adopted in our permit for
10 2017 for those constituents for which limits currently
11 exist.

12 MR. JACKSON: Thank you very much.

13 BY MR. JACKSON:

14 Q Now Mr. Yost, you've indicated that one of the
15 benefits of going to surface water from the river is that
16 the river water is cleaner than the water that you pump
17 out of the ground; is that correct?

18 A Yes. By cleaner, I assume you mean the water quality
19 is improved.

20 Q The water quality is improved.

21 You just heard the answer that by 2017 folks are
22 going to be meeting the standards that are required by the
23 State that are in existence now; correct?

24 A Yes. But she said the standards that they know will
25 be imposed on them because they already exist. They

1 anticipate there will be additional standards that they
2 will not be able to meet unless they change the source of
3 supply. And their assumptions in the wastewater treatment
4 plant design are based on the assumption that this water
5 supply project will go forward.

6 Q If your folks are able to meet the water quality
7 standards in 2017 and are worried about what new standards
8 might be that they're anticipating, that really doesn't
9 make your people any different than anyone else in the
10 state, does it?

11 A The primary difference might be that they're going to
12 have to spend in upwards of 100 to \$150 million to try to
13 solve that problem. So, you know, when they spend that
14 kind of money, they want to make sure they've invested it
15 wisely and they have a long-term solution. And I don't
16 think they're willing to gamble that these standards
17 aren't going to be increased, because it's very clear
18 that's the direction they're headed.

19 Q Understanding that, that does not make you any
20 different than anyone else who's on groundwater anywhere
21 in the state, does it?

22 MR. LILLY: I'm sorry. I know we have loose
23 rules of evidence here, but that question is very
24 ambiguous and unclear, because other cities with
25 groundwater in the state are going to have totally

1 different fact patterns. So unless there is some more
2 specific detail, the question is so vague and we can't
3 get -- it's not appropriate to try to get a reasonable
4 answer to it.

5 VICE CHAIRPERSON SPIVY-WEBER: Michael, do you
6 want to hone in on the exact question?

7 MR. JACKSON: Sure.

8 MR. JACKSON:

9 Q The laws as they increase in terms of -- or as they
10 decrease the limits are applicable statewide, are they
11 not?

12 BY MS. DUNHAM:

13 A Not necessarily.

14 Q And how do they differ?

15 A Well, first of all, a lot of your water quality
16 objectives and criterias they apply are based upon the
17 beneficial use that's applicable.

18 For example, for the cities of Davis and
19 Woodland, there is no MUN use for the Yolo Bypass.
20 Therefore, it's a surface water discharger. The municipal
21 drinking water standards are not applicable. It is not
22 generic. It changes based upon your area, the basin plan,
23 the beneficial use, and any site-specific factors,
24 especially for some of the agricultural water quality
25 objectives. So I think it is absolutely not correct to

1 say generically that standards will change for everybody.

2 That isn't necessarily the case.

3 Q Okay. Do you know how the standards will change for
4 you?

5 A Can you specify for what constituent you're
6 specifically talking about?

7 Q Let's talk about arsenic.

8 A Okay. First of all, for surface water such as the
9 city of Woodland and Davis, when you're talking about the
10 effluent from the NPDES permits, arsenic, the standards
11 for arsenic are based upon the drinking water standards.
12 They are not applicable to the city of Woodland and city
13 of Davis because they discharge to the Yolo Bypass where
14 MUN is not a beneficial use.

15 Q For nitrates?

16 A Same thing.

17 Q For boron?

18 A Boron is an agricultural benefit associated with the
19 agricultural beneficial use. Boron is applicable to the
20 city of Woodland, as well as the city of Davis. And both
21 of their permits -- currently, the Regional Water Board
22 has said based upon the United Nation's report we need to
23 determine site-specific conditions to determine what would
24 be the appropriate site-specific standards for Davis and
25 Woodland as directed by the State Water Board in its order

1 for the city of Woodland. So those determinations are
2 currently ongoing.

3 Q And have not been finished?

4 A City of Woodland has submitted a study before the
5 Regional Board, but it currently has been sitting there
6 since 2006. The city of Davis is submitting a work plan
7 on February 1. We are awaiting to hear from the Regional
8 Board what they will do from there.

9 Q Now, Mr. Yost, in regard to the time period in which
10 you are not diverting from the river under the Term 91
11 agreement that you reached with State and federal
12 contractors, how much storage will you have to get you
13 through that period of time?

14 BY MR. YOST:

15 A We have not built any significant storage of the
16 system. This is a system that will respond to demands and
17 provide treatment capacity and response to demands.

18 Q How much then of your existing groundwater supply will
19 you be using in those months?

20 A We will use something like 15 or 20 percent --
21 something like 15 to 20 percent of the annual demand in
22 dry years will be met by groundwater.

23 Q And so basically you're going to use the surface water
24 to mix so that you have less in the way of pollutants?

25 A As I described earlier to Board Member Hoppin, the

1 computation of the amount of surface water required for
2 this project really started with compliance with
3 anticipated discharge limits and led us back to how much
4 surface water we needed and how much groundwater we could
5 mix with that and still achieve the discharge limit.

6 Q And so if the discharge limits were changed, you would
7 need more surface water?

8 A That's correct. Probably more or less. I don't know
9 how they would change.

10 Q Now, you could clean the groundwater; correct?
11 Reverse osmosis, something like that?

12 A That's one of the alternatives.

13 Q And that's more expensive?

14 A Nearly twice as expensive.

15 Q So part of your goal here is least cost; correct?

16 A That's correct.

17 Q And surface water, if you were given a right, would
18 cost a lot less?

19 A Be much more reliable.

20 Q What do you mean by reliability?

21 A We are constantly discovering new concerns related to
22 groundwater. And we have a very disbursed system for
23 distribution of water in both cities.

24 With a surface water system, you have a
25 centralized plant. If the regulations change, you have an

1 ability to very easily modify your treatment system to
2 comply with those changes in the regulation. So on the
3 one hand, having centralized treatment plants with surface
4 water versus having a decentralized system with wells all
5 over the place, your ability to respond is like an order
6 of magnitude.

7 Q So in the course of the testimony that was put on, you
8 gave and you heard from other people here on your panel,
9 there was an interest in getting the application now
10 because that would help you in the sale to your own people
11 in terms of the increased costs for the homeowner?

12 A I listed a number of reasons why that's extremely
13 important to the implementation of this project, yes.

14 Q And it's important for the bonding agency?

15 A I'm sorry?

16 Q It's important for the people who buy your bonds?

17 A That's correct.

18 Q And it's important basically for the public relations?

19 A That's correct.

20 Q If, in fact, the State -- let me step back. I'll come
21 back to that in a minute.

22 Mr. Bourez, when you started working on the
23 project, you had a number of protests; is that correct?

24 BY MR. BOUREZ:

25 A I came on working on the project after the protests

1 were --

2 Q After the protests.

3 Was there anybody here working when the other
4 protests were --

5 MR. LILLY: I don't know how you want to address
6 this. I've been on the project from the beginning. I
7 negotiated the agreements. There are other people in the
8 audience who worked with me on negotiating these
9 agreements. They're not the people on this panel. We
10 didn't designate them as witnesses. I don't know what
11 relevance this has. We have signed agreements on the
12 other protests.

13 VICE CHAIRPERSON SPIVY-WEBER: Do you want to
14 clarify?

15 MR. JACKSON: Sure. I'll rephrase the question.

16 BY MR. JACKSON:

17 Q At some point, you folks agreed to insert Term 91 in
18 this application; correct?

19 MR. LILLY: Again, I don't really want to get in
20 the point of testifying. The original application filed
21 in 1994 acknowledged that the applicants would accept Term
22 91 as a permit term. So there is really no evidentiary
23 question here. That's a fact that anybody can tell from
24 reading the original application.

25 And then several of the protest dismissal

1 agreements also provide terms that say the Term 91 will be
2 in there. There's never been any dispute about that.

3 MR. JACKSON: All right. Let me see if I can
4 deal with this here.

5 BY MR. JACKSON:

6 Q Mr. Bourez, did you, in doing your work to prepare
7 your testimony for this hearing, take a look at the effect
8 of this diversion on X2?

9 BY MR. BOUREZ:

10 A Yes, we did.

11 Q Was there an effect on X2?

12 A We have prepared a table. I think we can circulate
13 that table. There is an effect. It was slightly less
14 than what was published in the EIR. And I think we can
15 make that available.

16 Q Now, the EIR --

17 MR. LILLY: Excuse me. Just so our record is
18 clear, we have an exhibit we were prepared to have Mr.
19 Bourez submit for rebuttal evidence, but we're happy to
20 have it circulated now so Mr. Jackson can ask questions
21 about it. It's an update of a SIM table in the EIR. CSPA
22 had criticized us for not having the updated CalSIM. So
23 we did the updated CalSIM, and we now have the table that
24 has that output for the X2 effects on the cumulative
25 conditions. And we've numbered it Exhibit WDCWA 114.

1 We're more than happy to circulate that and have Mr.
2 Jackson ask questions about it, if he would like to.

3 VICE CHAIRPERSON SPIVY-WEBER: Nathan, should
4 we -- we haven't had all the exhibits submitted yet.

5 MR. JACOBSEN: Well, I mean, I think for the sake
6 of fluidity and the discussion right now, if there are no
7 objections, I believe we could go ahead and allow that
8 into evidence now.

9 VICE CHAIRPERSON SPIVY-WEBER: Okay. There are
10 no objections.

11 MR. JACKSON: I have no idea, because I haven't
12 seen it.

13 VICE CHAIRPERSON SPIVY-WEBER: Now you will. The
14 number on this is --

15 MR. BOUREZ: WDCWA 114.

16 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

17 MR. JACKSON: Let's do this in a couple stages.

18 BY MR. JACKSON:

19 Q The environmental impact report showed effects on X2
20 from the addition of this diversion; correct?

21 BY MR. BOUREZ:

22 A That's correct.

23 Q And what were those effects?

24 A I can't remember exactly what was in the EIR.

25 Q Is it fair to say that in the worst case X2 moved

1 upstream?

2 A Yes, in the worst case, it would move upstream.

3 Q And that in the worst case it moved upstream by about
4 .8 miles?

5 A In our analysis -- I didn't perform the analysis for
6 the EIR. In our analysis, the maximum upstream movement
7 is .4 kilometers.

8 Q Right. And so you don't remember what the EIR said?

9 A No, I don't.

10 Q All right. You used CalSim-II to develop your charts?

11 A Yes.

12 Q And did you examine the peer reviews of CalSim-II?

13 A Yes, I have. I participated in some of the peer
14 reviews, being a developer of part of the model.

15 Q CalSim-II assumes basically an unlimited amount of
16 water. I mean, there's never a time when water is
17 unavailable?

18 A That's not true. There is a limited amount of water
19 in the system.

20 Q What do you think that is?

21 A What do I think --

22 Q What is the -- how much water is there in the system?

23 A I mean, if you want to look at the unimpaired flow and
24 say how much unimpaired flow is in the system, or are you
25 asking how much is in the system under a given operation

1 and where in the system?

2 Q Well, let's start with unimpaired flow. How much
3 unimpaired flow is there above your proposed diversion?

4 A Above the proposed, the places that unimpaired flow is
5 reported is Sacramento River at Red Bluff, which is fairly
6 far upstream from the diversion. I'd have to add the
7 unimpaired flow of the Feather River and the Sacramento
8 River, and I don't have those numbers memorized.

9 Q Do you know what the unimpaired flow is at the I
10 Street bridge, in an average year?

11 A On an average, it's approximately 18 million acre
12 feet. I do have an exhibit that shows the unimpaired flow
13 of the Sacramento River as part of my testimony. I'll
14 pull up the exhibit number for you. It's Exhibit WDCWA
15 111. And if you look at that, it shows an average
16 availability of water at a ten percent exceedance of 32
17 million acre feet in the Sacramento Valley. And at a 90
18 percent exceedance, it would be nine million acre feet.
19 If you're looking at the delta watershed, a ten percent
20 exceedance probability is 49 million acre feet, while 90
21 percent exceedance is 12 million acre feet.

22 Q All right. So -- and it's up and down depending on
23 what kind of water year it is. But you're going to need
24 the water at all times; right? You're going to need it in
25 dry years?

1 MR. LILLY: I'm sorry. The question is ambiguous
2 when he says "you're going to need," because if he's
3 referring to the project, it's still unclear under these
4 permits or under these permits plus additional sources.
5 So I request that the question be split up and clarified.

6 MR. JACKSON: Yes. I can do that.

7 BY MR. JACKSON:

8 Q Under the permit you're requesting, you are going to
9 need water every month of the year; correct?

10 A I think Jim would be better to answer the question.

11 I mean, I performed the modeling based on what
12 Jim provided as the demand.

13 MR. YOST: Yes. The answer is yes.

14 MR. JACKSON: And you're going to need water in
15 every kind of water year, every type?

16 MR. YOST: We are going to need some surface
17 water in every kind of year. That's correct.

18 MR. JACKSON: So let's do it this way. Do you
19 agree with Mr. Bourez that there are approximately five
20 million acre feet of rights that are in the Sacramento
21 Valley?

22 MR. YOST: That's a question to ask Mr. Bourez.

23 BY MR. JACKSON:

24 Q Mr. Bourez, is that the number?

25 BY MR. BOUREZ:

1 A That number is based on consumptive use of all
2 agricultural and urban lands within the Sacramento Valley,
3 and it's approximately five million acre feet on an annual
4 basis.

5 Q And there are years in which the flow is as low as
6 nine, I believe from your testimony?

7 A That's correct. That's unimpaired flow. That doesn't
8 account for water stored in reservoirs that would be
9 available to meet that consumptive demand.

10 Q Which you have foregone by signing -- which has been
11 foregone by signing the Term 91? You're not going to get
12 any stored water?

13 A When Term 91 is in effect, the project will not be
14 able to divert out of the Sacramento River unless they
15 have another source, like a purchase order. So under this
16 permit, that water would not be available when Term 91 is
17 in effect.

18 Q Now, there are other claimants of water rights on the
19 Sacramento River, are there not?

20 A I'm sure there's many claimants of rights on the
21 Sacramento River.

22 Q Have you reviewed the State Board's letter that they
23 send to Delta Vision?

24 A Yes, I have.

25 Q In that letter, there was an indication that the face

1 value of water rights was in the 245 million area;

2 correct?

3 A I can't remember the exact number.

4 Q Okay. But it was large?

5 A My recollection is that it was stated that the base
6 was eight times over-appropriated.

7 Q And you pointed out with your Pit River example that
8 the -- some of the water is power use?

9 A That's correct.

10 Q And that turns out to be probably about half of it?

11 A I'm not sure if on the basin wide it's half of it.

12 But when I looked at the example -- and we only looked at
13 the PG&E power plants on the Pit River and Shasta on the
14 Sacramento River and the examples up there. Of those
15 eight power plants, the face value of those water rights
16 was over 30 million acre feet for just those PG&E plants
17 on the Pit River.

18 Q So if you were trying to determine how much of that
19 245 million -- or we're using that as an example of the
20 total face value -- were available for power purposes, you
21 would argue that that comes back into the river and is
22 usable for consumptive use downstream; correct?

23 A It is usable downstream for consumptive use.

24 Q And so if the number is half of the eight times in
25 terms of power, leaving us with four times the claims on

1 the river for consumptive use to what the average flow is,
2 on its face, it would look like it's over appropriated,
3 wouldn't it?

4 A If you're looking at the face value of consumptive
5 water rights -- if we can go to the next slide after this
6 one -- actually, two more slides, the one that
7 demonstrates the Shasta water rights. And this one -- I
8 issued a correction for this one.

9 Q I noticed your correction.

10 A One of the totals was incorrect. If you could go to
11 the Power Point slide, it has the correction on it. And
12 it would be the last slide. And here, this is the
13 corrected number. So if you looked at the consumptive use
14 portion in terms of acre feet, it's close to 17 million
15 acre feet. 16,850,779 is the consumptive use portion of
16 that water right, while the power portion is 14,103,000.

17 Q Okay. So not 50/50, but at Shasta at least relatively
18 close?

19 A Yes. And if you -- just to add, the consumptive use
20 of the water that's in Shasta is probably on the order
21 from two to three million acre feet on average annual
22 basis. So even though there's a face value water right
23 for close to 17 million acre feet consumptive use, the
24 actual consumptive use is far less than that.

25 Q I actually agree with that. The holder of the

1 16,850,779 acre feet is the Bureau of Reclamation;

2 correct?

3 A I believe so.

4 Q And the Bureau of Reclamation has filed a petition to

5 extend time to use that water; correct?

6 A I'm not familiar with that.

7 Q Is there anybody on this panel that's familiar with

8 any program by the Bureau of Reclamation to use the rest

9 of their 16,850,779 acre feet?

10 VICE CHAIRPERSON SPIVY-WEBER: Nathan, are we

11 getting far afield here?

12 MR. JACKSON: Hearing none --

13 VICE CHAIRPERSON SPIVY-WEBER: Wait just a

14 second.

15 MR. JACOBSEN: Well, I'm not sure was there a

16 response from the panel.

17 MR. JACKSON: There wasn't.

18 MR. JACOBSEN: There's no indication -- you know,

19 I guess Mr. Jackson you can allow him to continue to see

20 where he's going with this. If there are no objections,

21 Mr. Jackson would request the Board to take official

22 notice perhaps of the petitions that were filed is another

23 possibility.

24 MR. JACKSON: Actually, it's in our filing.

25 MR. JACOBSEN: It is an exhibit that you have

1 submitted?

2 MR. JACKSON: Yes.

3 MR. JACOBSEN: Oh, okay.

4 VICE CHAIRPERSON SPIVY-WEBER: Okay.

5 MR. JACKSON: Do you, any of you, have any idea
6 if the -- let me step back a minute.

7 You are asking not to have -- you're not asking
8 to have any of the State filings released to you for this
9 water right?

10 MR. LILLY: Again, I think we're getting a little
11 far afield here. I'll stipulate we are not asking for
12 that. The question has so many assumptions, I really need
13 to object to it. But we'll just at this point try to move
14 things along. We will agree we are not asking for an
15 assignment of any State filings for this project.

16 MR. JACKSON: Do the State filings have priority
17 over your request?

18 MR. LILLY: I'm not going to keep testifying. If
19 none of the witnesses know the answer to this, I think Mr.
20 Jackson needs to move on.

21 VICE CHAIRPERSON SPIVY-WEBER: Michael, I know
22 what you're trying to get them to say, but I don't think
23 they are able to do that.

24 MR. JACKSON: You don't think they know?

25 VICE CHAIRPERSON SPIVY-WEBER: Well, if they

1 know, I have no idea. But I don't think they are prepared
2 for that.

3 BY MR. JACKSON:

4 Q Now, calling your attention -- I think we've talked a
5 little bit before, Mr. Bourez. And thank you for clearing
6 up the annual figure on WDCWA 104. This exhibit is the
7 percent of time you would expect there to be some surplus
8 if the State Board adopted the delta flow criteria as a
9 flow requirement; is that correct?

10 BY MR. BOUREZ:

11 A That's correct.

12 Q And the numbers from May -- all of the zeros, May,
13 June, July, August, September, October, there would be no
14 water available if the criteria that the State Board
15 indicated as a result of the flow hearing were to be met?

16 A Based on our analysis, yes, that's correct.

17 Q Present day condition, would there be any water in
18 May, June, July, August, September, and October now?

19 A There would. If you go to the slide five, the areas
20 in gray are when Term 91 is in effect and water would not
21 be available. So there are quite a number of occurrences
22 during the summer months when water is not available for
23 appropriation.

24 Q Are you assuming that there would be water available
25 for -- I notice on your 104 November and April are listed

1 at 4 percent and 2 percent. Not very much of your water.

2 But under present conditions, is there enough water to

3 satisfy your needs full time in November and April?

4 A If you again go back to slide five, you can see that

5 in November there are a number of occurrences where water

6 is not available. But for the majority of the Novembers,

7 water would be available.

8 Q And on slide five, if it is not dark, there would be

9 enough water to get full delivery?

10 A That's correct.

11 Q Okay. And if it is dark, you can't get any?

12 A That's correct.

13 Q So using the term that was brought forward earlier

14 used by someone who testified maybe in a policy statement

15 on your behalf, this is -- have you ever heard the term

16 "winter water diversion permit"?

17 A Yes, I have.

18 Q Is that what this really is?

19 A No, it's not. Not in my opinion.

20 Q And, of course, the person was reflecting the fact

21 that you're only going to get water in the winter months;

22 correct?

23 MR. LILLY: Wait a minute. I'm going to object.

24 If Mr. Jackson said policy statements are not evidence, so

25 it's not fair for him to ask questions about them now.

1 VICE CHAIRPERSON SPIVY-WEBER: I agree with that.

2 Can you rephrase?

3 MR. JACKSON: Sure. I can rephrase it.

4 BY MR. JACKSON:

5 Q The diversion permit that you're asking for is for all
6 year round, but you have agreed to Term 91 limits; is that
7 correct?

8 A That's correct.

9 Q You indicated that you spent a lot of time on regional
10 planning. I think I'm back to Mr. Yost. And when you
11 talk about regional planning, you're talking about the
12 three parties in your program?

13 BY MR. YOST:

14 A The city of Woodland, city of Davis, and University of
15 California.

16 Q You're not talking about the Sacramento Valley region?

17 A Those two cities and the university participate in a
18 number of water organizations and do participate in
19 planning with a number of regional agencies.

20 Q Did you make any attempt to determine whether there
21 was water available on the river as a whole, you,
22 yourself?

23 A Yes. We worked with MBK to develop this table that
24 you see here indicating when we thought we would have
25 water available and when we would not.

1 Q Did you discuss with any of the water rights holders
2 in the Sacramento Valley, the Bureau, or the State Water
3 Project whether or not they were getting their full water
4 today?

5 A They were getting what?

6 Q Their full permitted water today.

7 A No.

8 Q Do you know how your proposed water right relates to
9 the priority system in the Sacramento Valley?

10 BY MR. BOUREZ:

11 A Because Term 91 would be associated with this water
12 right, it would be junior to project diversions. So if
13 the projects are releasing supplemental water in the
14 system, Term 91 would be in effect. And that would be
15 indicated by the gray areas on that table.

16 Q Did you make this same examination of the other senior
17 water rights holders in the valley, whether or not they
18 were getting full deliveries?

19 A In our analysis, they receive full delivery and were
20 unaffected by this diversion.

21 Q So what then was your analysis of what the Central
22 Valley Project's full deliveries would be from the
23 Sacramento Valley?

24 A You mean under a base line condition -- we define base
25 line as being the way the system operates under current

1 operating criteria with the salmon and smelt biological
2 opinion D1641CBIA. Under those conditions what would the
3 deliveries be to Central Valley Project users?

4 Q Yes.

5 A In terms of Central Valley Project deliveries, there's
6 quite a diverse group within the Central Valley Project.
7 You have Sacramento River settlement contractors,
8 Sacramento River ag service contractors.

9 Q Let's start with the settlement contractors.

10 A The settlement contractors, their deliveries are based
11 on inflow to Shasta and are not affected by this project.
12 The ag service contractors north of the delta --

13 MR. LILLY: Why don't you just put up -- if we
14 can put up exhibit -- the witness is looking at Exhibit
15 WDCWA 102, page 4. So if we have that on the screen,
16 everyone can be on the same page, so to speak.

17 MR. BOUREZ: This exhibit is long-term average
18 flows and deliveries and dry period flows and deliveries.

19 And the question you're asking is on the very
20 bottom of the table under CVP SWP deliveries. CVP north
21 of delta agricultural contractors on the long-term average
22 are affected by 1,000 acre feet on average annual basis.
23 And CVP M&I deliveries in the northern part of the state
24 are not affected. CVP south of delta agricultural
25 deliveries are effected by an average annual of 2,000 acre

1 feet.

2 MR. JACKSON: So people who are not present in
3 this hearing could possibly lose water from this
4 application?

5 MR. BOUREZ: Based on this analysis, it is
6 possible.

7 MR. JACKSON: Thank you.

8 BY MR. JACKSON:

9 Q Mr. Hanson -- Dr. Hanson, you indicate that a benefit
10 of the project is that RD 2035 would go from an unscreened
11 diversion to a screened diversion if, in fact, they did a
12 joint project.

13 BY MR. HANSON:

14 A That was one of the things that we looked at. At the
15 time, that joint project was not a certainty.

16 Q And you indicated that it was not a certainty. Is
17 the -- you indicated that the project, if it went forward,
18 would be in the neighborhood of 95 percent effective?

19 A The 95 percent effectiveness is a general criteria
20 that has been used by the National Marine Fishery Service
21 and the Department of Fish and Game to simply look at the
22 performance of a state-of-the-art positive barrier fish
23 screen. And in looking at that, the Department and NMFS
24 basically said what would we expect to be the performance
25 of that fish screen in avoiding entrainment impingement of

1 salmonids. That was the genesis of the 95 percent.
2 Through additional field studies at some site-specific
3 locations, the Contra Costa Water District Old River
4 intake, for example, it's been shown to be greater than 95
5 percent.

6 Q And you indicate in your testimony on page 2 in
7 paragraph five that the diversion structure would be
8 either a flat plate screen or cylindrical screen. Has
9 that been designed yet?

10 MR. YOST: As a matter of fact, it has not. It's
11 in the process of being designed as we speak.

12 BY MR. JACKSON:

13 Q All right. Until the design is finished, I guess
14 we're not going to know whether or not the fish screen
15 will screen small life stages and larva and eggs?

16 BY MR. HANSON:

17 A My understanding -- and the fish screen has not yet
18 fully been designed, but the typical screen mesh that is
19 identified as part of the Fish and Game and NMFS criteria
20 has a certain slot or certain mesh opening. And when we
21 look at that size of that mesh opening relative to the
22 morphology of larval fish -- and this was done through
23 some laboratory types of experiments -- what they found
24 was that a screen that had a mesh between one and two
25 millimeters opening was 99 percent effective in excluding

1 larval fish greater than about 15 millimeters in length.
2 So our assumption is that for those fish eggs and larvae
3 as well as zooplankton and other smaller organisms, they
4 would not be excluded by the barrier of a screen but would
5 be vulnerable to entrainment through the screen mesh based
6 on the diversions and the seasonal timing of when those
7 diversions occurred relative to the life history stages of
8 those species.

9 Q You indicate on page 3 in the tenth paragraph of your
10 testimony that in recent years there's been a general
11 overall decline in the abundance of fish and other
12 organisms within the delta.

13 A The California Department of Fish and Game has been
14 conducting annual surveys since the mid 1960s. The two
15 prominent surveys that we rely on to look at long-term
16 trends are the summer townet and the fall midwater trawl
17 surveys. Those survey results in recent years have shown
18 a decline -- a substantial decline in the abundance of
19 pelagic species, delta smelt, longfin smelt, delta stripe
20 bass, threadfin shad, those types of species have declined
21 substantially. That has been referred to as the pelagic
22 organism decline, or the pod.

23 Q There was a recent midwater trawl fall I believe?

24 A The fall midwater trawl surveys are conducted at about
25 50 sampling stations in September, October, November, and

1 December. And then based on the cumulative total catch of
2 an individual species at all of those stations over the
3 four surveys, a broad index is developed for the abundance
4 for each of those individual species. That survey was
5 completed in December of 2010, and those results were
6 distributed in late December, early January.

7 Q And that confirmed that the pelagic organism decline
8 was still going on, in your opinion?

9 A In my opinion, it does confirm it's still going on.
10 We saw a slight increase in the abundance index for delta
11 smelt and longfin smelt. But the index are not nearly as
12 high as we would have hoped and not nearly as high as they
13 have been historically.

14 Q By not as high as they have been historically, could
15 you quantify that in magnitude?

16 A In magnitude, for example, for delta smelt, they might
17 be ten percent of what they had been historically.
18 They're near the record lows, but not at record low levels
19 anymore.

20 Q And for striped bass?

21 A Striped bass had a very low index in 2010. I don't
22 remember the exact number, but it was very low.

23 Q Threadfin shad?

24 A They were down as well, I believe.

25 Q To the lowest they have ever been?

1 A I believe they were.

2 Q Now, the reason -- and green sturgeon?

3 A Green sturgeon are not effectively sampled by the fall
4 midwater trawl survey. The trawl survey samples basically
5 in the upper part of the water column. In green sturgeon,
6 in the delta are typically juveniles. Some are adults
7 that are living on or near the bottom.

8 Q Okay. So the reason I'm asking about those particular
9 species is they're all present in this area, are they not?

10 A They are not. Back up. In which area?

11 Q In the area of your diversion -- proposed diversion.

12 A They are not.

13 Q Calling your attention to page 4, number 17, you
14 indicate that the planktonic eggs and larva less than
15 approximately 15 millimeters in length will be vulnerable
16 to being entrained through the fish screen mesh. These
17 fish eggs and larva could include but not limited to
18 species such as striped bass and American shad during the
19 seasonal period in which the spawning occurs by these
20 species upstream in the river. You see that?

21 A That is correct, yes.

22 Q So those are present?

23 A Yes, striped bass and American shad both spawn
24 upstream of the point of diversion.

25 Q And their eggs and larva float down stream?

1 A They are planktonic. They are floating down stream
2 with the current.

3 Q And could leave the river from this location?

4 A For those specific species and the proportion of the
5 population that spawn upstream of the river, some
6 percentage of those would be at risk of being entrained in
7 that larval stage. But for other species like delta smelt
8 and longfin smelt, their geographic distribution is
9 further downstream and they would not be vulnerable.

10 Q In regard to the Sacramento River salmon smolts,
11 they're all pretty much upstream of this location?

12 A All of the Sacramento River Chinook production, with
13 the exception of those coming from the American River,
14 occurs upstream of this location.

15 Q And they have to pass this location?

16 A All of the adults would pass this location on their
17 upstream migration. All of the juveniles would pass this
18 location, again with the exception of those that take
19 alternative migration pathways or those that are produced
20 in the American River. But the majority would pass this
21 location.

22 Q The removal of fish eggs and larva from the two
23 species that you indicated, the striped bass and the shad,
24 is there anything that could be done about that if this
25 diversion is allowed to go forward?

1 A There are two classical approaches to addressing that
2 issue. The first approach is to design the screen with a
3 much smaller screen mesh. That would exclude smaller
4 larval or egg stages. It suffers from the standpoint that
5 then you get a very large physical structure and it's hard
6 to maintain and hard to clean. The alternative approach
7 has been to look at reductions in flow, reductions in
8 diversions during the seasonal period when those
9 particular species in these particular planktonic larva
10 are in the area.

11 Q When would that period be?

12 A That period is typically in the late winter, early
13 spring months. It varies from year to year based on flow
14 and temperature and other considerations. But it's
15 typically springtime period.

16 Q Which is basically January, February, March period?

17 A No. For the species that we identify here, for
18 example, striped bass, they're a warm water species. So
19 they spawn in the spring when the water temperatures in
20 the river are going up. So their spawning primarily
21 occurs in April and May.

22 Q And I notice that April is one of the time periods in
23 which folks would be taking water out of the river for
24 this project; is that right, Mr. Bourez? That you would
25 be taking water out of the river in the month of April?

1 MR. BOUREZ: Yes. I do want to add it's probably
2 not that full diversion at this time of year.

3 MR. JACKSON: Do you have any idea what the
4 diversion rate would be?

5 MR. BOUREZ: If you go back to the slide I think
6 it's 102 -- yes. My eyes aren't what they used to be. In
7 April, it's about 3.7 thousand acre feet on average.

8 MR. JACKSON: If April were not one of the months
9 in which you were diverting, would that have major effects
10 on your project?

11 MR. YOST: Well, obviously if we didn't have
12 surface water available, we would have to have an
13 alternative solution.

14 MR. JACKSON: Alternative to this diversion, this
15 application?

16 MR. YOST: During that period, correct.

17 MR. JACKSON: In the small amount of time I have
18 left, we've talked about the Conaway Ranch. And you have
19 a contract now to purchase 10,000 acre feet of water?

20 MR. LILLY: Do we want to go -- I don't think we
21 want to go into this. I object on grounds of relevance.

22 VICE CHAIRPERSON SPIVY-WEBER: You brought it up
23 and you had --

24 MR. JACKSON: Well, actually, I didn't bring it
25 up. The Board did.

1 VICE CHAIRPERSON SPIVY-WEBER: That's true. That
2 is true. But, well, let me turn to Nathan again. Can we
3 go into this? It seems --

4 MR. JACOBSEN: I'm sorry. I was discussing an
5 issue. Can you repeat --

6 VICE CHAIRPERSON SPIVY-WEBER: The issue of
7 Conaway Ranch. Michael wants to delve into whether or not
8 there is a contract for Conaway Ranch yet, I assume other
9 issues associated with that. It has been brought up.

10 MR. JACOBSEN: It's been brought up. But as we
11 discussed earlier, that Conaway Ranch agreement is not
12 before the Board in this hearing. I think to the extent
13 that bringing up Conaway Ranch or alternate water supplies
14 are relevant to the discussion as to whether or not to
15 approve these applications, you know, again, the Board
16 could take that evidence under submission and determine
17 the relevance of it at a later date.

18 VICE CHAIRPERSON SPIVY-WEBER: Michael, if you
19 can focus in not on the condition of their agreement but
20 how it relates to what we're going to have to decide.

21 MR. JACKSON: I think we're on the same page with
22 that.

23 BY MR. JACKSON:

24 Q The Conaway Ranch, at least according to the press
25 reports, has much more than 10,000 acre feet of water; is

1 that correct?

2 BY MR. YOST:

3 A You're talking about the owner of the water right,
4 which in this case is Conaway Preservation Group. And
5 yes, that is correct.

6 Q Why could you not purchase the water that's available
7 at Conaway Ranch for sale?

8 A Our objective is to try to deliver a project for our
9 users at as low a price as we can. And why would we buy
10 water from them when we can divert water under our water
11 right.

12 Q For free?

13 A That's correct.

14 Q So we come back again to you want to have a new water
15 right because you get free water; correct?

16 A I didn't say that.

17 Q All right. Is one of the cost advantages the fact you
18 get free water?

19 A One of the advantages of a water right of our own is
20 we can divert the water.

21 Q And any alternative to purchase it from an existing
22 water right upstream or adjacent to you is bound to be
23 less cost effective for you if you have to purchase the
24 water?

25 A It will certainly not be free.

1 Q Thank you.

2 VICE CHAIRPERSON SPIVY-WEBER: Thank you very
3 much.

4 We are going to take a break for ten minutes
5 until 3:10. When we come back, staff and Board members
6 should be prepared to further cross-examination. Thank
7 you.

8 (Thereupon a recess was taken.)

9 VICE CHAIRPERSON SPIVY-WEBER: The hearing is
10 back in session. Do we have everyone here?

11 Do staff have cross-examination questions for the
12 panel? Identify yourself and --

13 MS. GROODY: My name is Katherine Groody.

14 VICE CHAIRPERSON SPIVY-WEBER: And your role.

15 MS. GROODY: I'm the environmental scientist.

16 VICE CHAIRPERSON SPIVY-WEBER: Speak into the
17 microphone so the court reporter can hear you.

18 MS. GROODY: I have a question for I think Mr.
19 Bourez or anybody that can answer this question.

20 Did the EIR actually look at the contribution
21 that the effluent from the wastewater treatment facilities
22 would make to the delta water quality to improve delta
23 water quality?

24 MR. BOUREZ: I think that would be a question for
25 Jim.

1 MR. HANSON: I wasn't part of that portion of the
2 study, so I don't know.

3 VICE CHAIRPERSON SPIVY-WEBER: Can anyone answer
4 the question as to whether or not? I believe the
5 statement was made that this would be an improvement in
6 terms of water going back into the delta.

7 MR. YOST: I made the statement that the salt
8 loading and the loading of other contaminants to the
9 Sacramento River system, including the delta, would be
10 significantly reduced by implementation of this project.
11 But I don't know how that relates to the overall salt
12 loading for the entire system.

13 MS. GROODY: Is there any information about what
14 kind of volume from the wastewater treatment facilities,
15 including Woodland-Davis and U.C. Davis, actually reached
16 the Sacramento River?

17 MR. YOST: The discharges from cities of Woodland
18 and Davis eventually get into what's called the Tule Canal
19 upstream of Highway 80. And below that I believe it's
20 called the toe drain. And that is directly tributary to
21 the Sacramento River down by Rio Vista down in that area.
22 U.C. Davis discharges to Putah Creek, which eventually
23 winds its way also in the toe drain and eventually gets
24 down into the delta.

25 MS. GROODY: Would that be during high flow

1 season or during the summer as well?

2 MR. YOST: It's complicated, because the folks
3 that divert water out of the toe drain, such as some of
4 the agricultural properties just north of I-80 and the
5 wildlife refuge south of I-80, they actually have a dam in
6 the toe drain. When the tide comes up, water is actually
7 backed up, held behind the dam, and they divert that
8 water. And so this water would intermix with all of that
9 water and, you know, eventually because they don't use it
10 all, it would be released and eventually make it all the
11 way down into the delta.

12 CHAIRPERSON HOPPIN: Mr. Yost, just to clarify,
13 when Walter was giving his analysis of flows at Freeport,
14 even under current conditions, none of this water goes
15 into the Sacramento River above Freeport. It all goes
16 into essentially the upreaches of the delta.

17 MR. YOST: That's correct. This water does not
18 go into the mainstream of the Sacramento River until it
19 gets clear down by Rio Vista.

20 MR. JACOBSEN: Just to clarify, Mr. --

21 CHAIRPERSON HOPPIN: You need to identify
22 yourself, even though you live here.

23 MR. JACOBSEN: Nathan Jacobsen, staff counsel.

24 Is that also true then in dry years or dry
25 periods of the year the water reaches the upper -- near

1 Rio Vista I believe you stated. It doesn't -- during dry
2 periods, it doesn't percolate into the local groundwater?

3 MR. YOST: No. As I described earlier, there is
4 a unique system of providing water supply for the folks
5 just downstream on the toe drain, just downstream of
6 highway 80. They have a dam there. When the tides rise,
7 water actually comes up out of the delta, is held behind
8 that dam. And that's where they get the water -- water
9 supply for the wildlife refuge and some of the ag areas
10 above and below the wildlife refuge. So this water would
11 intermix with that water. And depending on their rate of
12 diversion and their volume of diversion, that eventually
13 makes its way down into the delta.

14 MR. JACOBSEN: That also applies to U.C. Davis
15 and Putah Creek?

16 MR. YOST: I would have to say I don't know
17 specifically the answer to that. That's a much smaller
18 channel. I don't know how much of that water makes it to
19 the toe drain.

20 CHAIRPERSON HOPPIN: Would it be correct to say,
21 Mr. Yost, that under the current system in both Woodland
22 and Davis that arsenic, boron, selenium, and other natural
23 constituents in the soil are being taken up by your water
24 treatment plants, put into the waste stream of POTWs, and
25 a portion of it is translocated into the wildlife refuge?

1 MR. YOST: I believe that's a correct statement.

2 VICE CHAIRPERSON SPIVY-WEBER: Do other Board
3 members have questions?

4 BOARD MEMBER DODUC: I believe the question is
5 for Tess. And this is following up on a line of
6 questioning that Mr. Jackson had.

7 Is it your understanding and expectation that the
8 city of Davis will continue to move forward to upgrade its
9 treatment plant to tertiary treatment even if this project
10 is approved?

11 MS. DUNHAM: Yes, absolutely. And for a couple
12 of different reasons. I mean, I think it's really
13 important to note that the tertiary treatment facility and
14 the requirements in the NPDES permit aren't necessarily
15 related to the specific constituents that we are
16 discussing here. A tertiary treatment facility is not
17 going to treat to remove salt that currently exists within
18 the effluent. So that project will have to go forward
19 independent of what happens on this water supply project.

20 The question is: How do we then meet salt limits
21 regardless of the tertiary treatment facility?

22 Interestingly enough, with selenium, the city of
23 Davis has an interesting scenario that our current
24 over-land flow and wetlands system currently keeps us
25 pretty much within compliance with our salinity limits.

1 Sometimes on the ragged edge but in compliance. Once we
2 move to a new treatment facility and we aren't using those
3 effluent processes, we will no longer be in compliance
4 with our salinity effluent limit -- or selenium. They're
5 too similar. Our selenium effluent limit.

6 So absent the water supply project, we would
7 probably have to look to alternative treatment such as
8 reverse osmosis for salinity and selenium collectively
9 because tertiary treatment facility isn't going to get us
10 there.

11 BOARD MEMBER DODUC: And then a follow-up
12 question. I'm not sure to which panelist.

13 But there was discussion about conservation as
14 another measure of source control. What has been the
15 success to date in Davis and Woodland with respect to
16 conservation?

17 MR. YOST: I'll take the first shot at that. In
18 the city of Davis, it's been very good. They have
19 substantially reduced their per capita demands, and we
20 are --

21 BOARD MEMBER DODUC: By how much and what base
22 line, do you know?

23 MR. YOST: I can't tell you the actual
24 percentages. But I can tell you that both Davis and
25 Woodland when they gave us the recent estimates of the

1 demands needed for this project showed a reduction greater
2 than 20 percent of the per capita demand over the life of
3 this project. So they both intend as part of this project
4 to meet the 20 by 2020 requirements.

5 And Davis and Woodland -- Davis is completely
6 metered. Woodland is in the process of being metered, and
7 they will both be fully metered before this project is
8 ever completed.

9 BOARD MEMBER DODUC: The final question. This
10 may be a very, very oversimplification of the situation.
11 But would it be fair to say that it is not the Clean Water
12 Agency's intention via this project to increase either
13 your total water demand, water consumption, water supply,
14 or to increase your wastewater discharge?

15 I think Ms. Dunham already addressed the
16 discharge portion of it. So would it be fair to say this
17 project will not result in increasing the three parties'
18 consumption of water?

19 MR. YOST: Absolutely not. As a matter of fact,
20 I believe the opposite will be true. They will be putting
21 extreme effort into reducing the amount of water they
22 would use as I described earlier on a per capita basis and
23 then for the entire project.

24 BOARD MEMBER DODUC: Can you point me to what
25 specific exhibits?

1 MR. YOST: I don't believe I have any exhibits in
2 my testimony. I can certainly provide that information.

3 MR. LILLY: Ms. Doduc, this is -- the EIR is on
4 file with the State Board.

5 BOARD MEMBER DODUC: It's in the EIR?

6 MR. LILLY: I'm sorry we didn't have the EIR
7 here. We didn't realize the questions would go this
8 broad. But I think it does address at least most of the
9 questions you've been raising today.

10 BOARD MEMBER DODUC: Thank you.

11 VICE CHAIRPERSON SPIVY-WEBER: Charlie.

12 MR. YOST: I would add to that that we are in the
13 process of developing a technical memorandum for the two
14 cities that will describe their water conservation
15 programs. And that would probably be available in
16 about -- I don't know -- two weeks or a month. Something
17 like that.

18 CHAIRPERSON HOPPIN: I have two questions. I
19 think, Mr. Yost, the first is probably more appropriate
20 for you since you mentioned several times during your
21 presentation the water softeners in both Davis and
22 Woodland. Would you envision that people would be able to
23 eliminate or remove their water softeners? Or are we
24 talking about minimizing the use and still have water
25 softeners in place?

1 MR. YOST: One of the objectives of this project
2 would be to provide sufficiently high water quality that
3 they would remove their water softeners.

4 CHAIRPERSON HOPPIN: And again, commensurate with
5 that goal, have you discussed any programs that would
6 provide incentives for removal of water softeners in the
7 effected area?

8 MR. YOST: We have not defined that kind of a
9 program at this point. Certainly could be considered in
10 the future.

11 CHAIRPERSON HOPPIN: Thank you.

12 The other question I got probably would be for
13 the representatives of Woodland and Davis. It's my
14 understanding that we are talking about not one water
15 right but two. But that there is an MOU in place that
16 provides for sharing of water. And having been raised in
17 Woodland and having traveled to the people's republic of
18 Davis on occasion, I realize that there are differences in
19 the community. Are we going to be facing you folks at a
20 later date talking about squabbles about why the MOU fell
21 apart and we didn't grant the fair amount of water to
22 either party if we do this originally? Are you
23 comfortable with this thing? Mr. Yost, you seem more
24 interested in the answer than Ms. Dunham.

25 MR. YOST: I can tell you the cooperation between

1 these two cities is just incredible. And they are working
2 very diligently to try to solve the joint issue. And they
3 are making sacrifices on each other's end to make sure
4 that joint objective is achieved. I can't imagine we're
5 going to come to a situation that you described. They are
6 very interested in making sure that this project is
7 effective and works very well for both parties.

8 MR. LILLY: Ms. Spivy-Weber, may I just follow up
9 on that from the legal point of view?

10 I did want to clarify both applications specify
11 the exact same points of diversion purposes of use and
12 places of use. In other words, the water may be diverted
13 and used under either application within either city. We
14 just got the assignments to the Woodland-Davis Clean Water
15 Agency done. So they now all have the same applicant as
16 well. So we haven't had time to ask the State Board to
17 combine them into one.

18 But if Chair Hoppin's concern is shared by the
19 Board members, we have no objection to the applications
20 being combined and one permit being issued on both
21 applications. We didn't want to do anything like that
22 that would slow up the hearing process. But if that, in
23 fact, would expedite the hearing process or facilitate and
24 address a concern, we have no objection to that. There
25 would be one permit held just by the Clean Water Agency.

1 This Board then would not have the possibility of being
2 involved in disputes between the city.

3 And if there are further questions on that, we
4 have designated another witness who can talk about the
5 joint powers agreement between the two cities, which does
6 discuss the allocations in detail. But that process would
7 eliminate the State Board from that issue completely.

8 VICE CHAIRPERSON SPIVY-WEBER: We will consider
9 that later.

10 MS. FARWELL: Staff has another question.

11 MS. GROODY: This question refers to Exhibit 102,
12 page 2, that table that we've been referring to
13 frequently. So I believe that's you, Mr. Bourez.

14 MR. BOUREZ: Yes.

15 MS. GROODY: It's apparent from the table that
16 the full amount of water under the two applications won't
17 be available in all year types; is that correct?

18 MR. BOUREZ: That's correct.

19 MS. GROODY: So if not, how will the operator
20 know how much to divert on a daily basis?

21 MR. BOUREZ: For the Term 91 restrictions, the
22 State Water Board sends out notifications when Term 91 is
23 in effect. And that would go to I believe the Clean Water
24 Agency, and they would have to cease diversion under the
25 Water Act.

1 MS. GROODY: But this is in the situation when
2 Term 91 is not in effect. So we're looking at historical
3 data here.

4 MR. YOST: I could respond to that question.

5 We intend to provide sufficient water supply for
6 all months of the year to meet the needs of the two
7 cities. So there will not be a period of time where we
8 would have to turn our diversion facility off and our
9 water treatment plant off. We will have water in all
10 months of the year. And they will operate the water
11 treatment plant in response to the demand imposed on the
12 system, and they will deliver water directly from the
13 diversion facility to the water treatment plant to the
14 cities to meet those demands.

15 MS. GROODY: Understand. But I guess the
16 question goes to more bypass flows. Is there an amount of
17 water that's a bypass flow to accommodate downstream water
18 users or riparian use pre-1914?

19 MR. BOUREZ: There's flow requirements in the
20 system at the point of the diversion -- this is below the
21 confluence of the Sacramento-Feather River. And
22 typically, that stretch of river is not controlling the
23 operations of the system, because there's typically so
24 much water right in that reach that it doesn't control.
25 If the delta is in balance and Term 91 is not in effect,

1 then the projects will operate to comply with the
2 standards in the delta through changes in operations.

3 MR. JACOBSEN: Just a quick follow-up on that
4 question.

5 So your statement, Mr. Yost, is that you will
6 divert -- full diversion will be running full time all
7 year round?

8 MR. YOST: That's the intention of the project.
9 That's correct. It won't be running at 80 CFS all year
10 round as Walter Bourez has indicated. But we will be
11 diverting surface water in all months of the year, unless
12 restrictions are placed on us that we aren't aware of at
13 this point.

14 MR. JACOBSEN: So if alternate supplies are
15 exhausted, how will you operate that surface diversion?
16 My understanding was that you pump groundwater.

17 MR. YOST: Well, what you're asking me is a
18 different question. We will -- when we're pumping
19 groundwater, we will also be using surface water. So in
20 the summertime, we expect we'll meet as much of the demand
21 as we can up to the capacity of the water treatment plant.
22 Any demand in excess of that capacity would be met by
23 pumping groundwater. And we had looked at the demand over
24 the projected life of the project, which extends out into
25 2050, which is the permit extension date. And we've

1 determined how much water we will need and how much
2 groundwater we have to meet those demands. We will ensure
3 that there is sufficient surface and groundwater available
4 to meet the demands in all months. So there will be some
5 months that we're pumping no groundwater; we're relying
6 entirely on surface water. There will be some months when
7 we'll have a mixture.

8 VICE CHAIRPERSON SPIVY-WEBER: Charlie.

9 CHAIRPERSON HOPPIN: Mr. Yost, to that point, at
10 times when you're taking -- you're proposing to take both
11 surface water and groundwater, you currently treat your
12 groundwater at the well head site; is that correct?

13 MR. YOST: No. There is no treatment for the
14 groundwater currently.

15 CHAIRPERSON HOPPIN: You're removing some
16 constituents everywhere or taking everything into the
17 system?

18 MR. YOST: No removal.

19 CHAIRPERSON HOPPIN: Then with the proposed
20 treatment plant you're proposing, you'll have the ability
21 to blend groundwater with surface water; that's correct,
22 of the --

23 MR. YOST: That's correct.

24 CHAIRPERSON HOPPIN: Will that groundwater come
25 into the facility for the surface water treatment, or will

1 you just adjust the quality by blending it at the current
2 points of entrance into the system? In other words, will
3 all of the groundwater go into the proposed surface water
4 treatment for blending and further treatment, or will it
5 be distributed now but just be diluted by a different
6 source of water?

7 MR. YOST: The objective of the local facilities
8 projects will be to blend the groundwater and the surface
9 water. And that will be blended either in -- we're
10 talking about some fairly long transmissions that will run
11 the water treatment plant, for instance, over to the west
12 side of the city of Woodland. And the groundwater would
13 be injected in those transmission mains for blending. It
14 would be injected into the storage reservoirs for
15 blending. And something that I think holds a lot of hope
16 for the project is if we can implement an ASR recovery
17 well component storage to this project, we can put water
18 into the ground and actually have higher quality water
19 stored in the ground.

20 VICE CHAIRPERSON SPIVY-WEBER: But that's not
21 before us right now. But that project doesn't exist right
22 now.

23 MR. YOST: That doesn't exist right now.

24 CHAIRPERSON HOPPIN: The proposal you have before
25 us, the groundwater will be blended in approximately the

1 site that's being taken from the ground. It won't all go
2 into the new treatment facility to be combined there.

3 MR. YOST: That's correct.

4 VICE CHAIRPERSON SPIVY-WEBER: Dwight, did you
5 have any questions?

6 BOARD MEMBER RUSSELL: Yes, I have one.

7 Mr. Yost, this notion of blending the water seems
8 to me that if you do put it into the ground at some future
9 date, are you going to come back to the Board and ask for
10 a diversion of storage?

11 MR. YOST: Yes.

12 BOARD MEMBER RUSSELL: So this --

13 MR. YOST: This would not be permitted under the
14 current water rights that are under consideration today.

15 BOARD MEMBER RUSSELL: Thank you.

16 VICE CHAIRPERSON SPIVY-WEBER: Kathleen, do you
17 have more questions?

18 MS. GROODY: I'm going to try this one more time.

19 Is the water -- is the rate of flow -- or the
20 maximum rate of flow that's going to be permitted is 80
21 CFS; is that correct?

22 MR. YOST: Yes, that's correct.

23 MS. GROODY: How is it you're going to know how
24 much water you can divert? Is the system metered?

25 MR. YOST: That's correct. We will have a meter

1 on the diversion facility.

2 MS. GROODY: Okay.

3 MR. YOST: Just as there is a meter now on the RD
4 2035 pumping station, there will be a meter on this
5 station.

6 MS. GROODY: Thank you.

7 VICE CHAIRPERSON SPIVY-WEBER: Tom.

8 EXECUTIVE DIRECTOR HOWARD: Just a couple of
9 quick questions.

10 VICE CHAIRPERSON SPIVY-WEBER: Introduce
11 yourself.

12 EXECUTIVE DIRECTOR HOWARD: Tom Howard, Executive
13 Director of the State Water Board.

14 Mr. Yost, do you know how many months of the year
15 the Term 91 was actually in effect to 1977 water year?
16 Not the model, the actual.

17 MR. BOUREZ: I only have from 1984 to 2010. I
18 don't have that --

19 MR. YOST: I believe the answer to that question
20 is six months but --

21 MR. LILLY: We might clarify whether you mean
22 modeled or in realtime. I don't think Term 91 existed in
23 1977. I think it was adopted by the State Board after
24 that date.

25 MR. BOUREZ: I think it was 1984.

1 EXECUTIVE DIRECTOR HOWARD: Thank you.

2 The biologist in the group, I was just curious,
3 in your opinion, do the low flows in critically dry and
4 dry years, are they a contributing factor to the present
5 depleted condition of estuarian resources in
6 the watershed?

7 MR. LILLY: I have to object. The question is
8 not clear when you say low flows as to where in the system
9 you mean.

10 EXECUTIVE DIRECTOR HOWARD: Delta outflow.
11 Sorry.

12 MR. HANSON: The results of a number of the
13 studies that we have available that look at the survival,
14 for example, of juvenile Chinook salmon migrating down the
15 Sacramento River have shown that in general there is lower
16 survival of those juvenile salmon when the Sacramento
17 River flow is lower. So under dry and critically dry
18 years, we have lower flows. We frequently have higher
19 temperatures. And those conditions contribute to reduced
20 juvenile Chinook salmon survival.

21 Correspondingly, in high flow years, we typically
22 have cooler temperatures and higher flows resulting in
23 better survival of juvenile Chinook salmon. We don't have
24 detailed data on steelhead. That is starting to be
25 collected through some of the acoustic tagging work. But

1 that general pattern of flow versus fish survival has been
2 documented on both the Sacramento and the San Joaquin
3 Rivers.

4 EXECUTIVE DIRECTOR HOWARD: Thank you.

5 VICE CHAIRPERSON SPIVY-WEBER: Any other
6 questions from staff or Board members?

7 Okay. I think that ends the cross-examination.

8 Are you going to want redirect testimony?

9 MR. LILLY: Yes. I have some redirect questions.

10 VICE CHAIRPERSON SPIVY-WEBER: Now is the time.

11 REDIRECT EXAMINATION

12 MR. LILLY: I'm going to start by circulating two
13 exhibits. Just for housekeeping, I want to circulate the
14 resumes for Teresa Dunham and Dan Rich. We didn't know
15 whether or not they were going to testify. But since they
16 ended up testifying, I'd like that to be on the record.
17 So I'll give those to staff to circulate.

18 BY MR. LILLY:

19 Q And Mr. Rich, I'll start with you. Is Exhibit WDCWA
20 302 an accurate statement of your resume?

21 A Yes, it is.

22 Q And while I'm asking you questions, some questions
23 came up during cross-examination about water softeners.
24 Could you please explain what water softeners do to the
25 salinity in wastewater discharges of the city of Woodland?

1 A Absolutely. A water softener is an ion exchange
2 process where it takes various anions and the mineralized
3 deposits within the water and sticks them to a resin. As
4 a result, softens the water. There's two types of water
5 softeners. One is a canister type where that resin is
6 taken and recharged in a separate facility and that ion is
7 discharged wherever that facility may be located. In the
8 Central Valley, more often than not, they're
9 self-regenerating water softeners where there is a brine
10 solution and sodium ions are used to purge the resin every
11 day, typically, if they're on a timer base. That brine
12 ends up in the wastewater system. So there is a
13 concentrated effect of additional mineralization, if you
14 will, of the water hitting the wastewater treatment plant.

15 As an example, just to give you a perspective,
16 about 35 pounds of TDS per month per typical home is added
17 in the city of Woodland based on the hardness of their
18 water. So you can actually -- if you go to the grocery
19 stores -- in Woodland, if you go to the grocery stores and
20 the hardware stores, one of the first things you see is
21 bags of rock salt or potassium from people adding the salt
22 to regenerate their water softeners.

23 Q So I take it if those water softeners were removed,
24 that would also reduce the salinity in the wastewater
25 coming out of Woodland and Davis?

1 A Absolutely. We've done surveys that indicate up to
2 half of the people use self-regenerating water softeners
3 in town. And that represents about -- we think about 20
4 percent of the salt load going into the wastewater
5 treatment plant.

6 Q If I can ask, Mr. Lindsay, can you put up the slides
7 from Jim Yost's testimony? I think it's slide 16. And
8 while we're doing that, I'll hand Exhibit WDCWA 303 to Ms.
9 Dunham and ask her if that's her resume. Is this Exhibit
10 303, in fact, an accurate copy of your resume?

11 MS. DUNHAM: Yes, it is.

12 BY MR. LILLY:

13 Q I'll shift over to you, Mr. Rich -- or back to you to
14 talk about Woodland. This table, as Mr. Yost has
15 explained, shows the anticipated future discharge limits
16 and the current discharge limits. And I realize you
17 cannot predict with absolute certainty what the Central
18 Valley Regional Water Quality Control Board is likely to
19 impose as an effluent limit in Woodland's future NPDES
20 permits. But if you can please explain what is your best
21 estimate of what's the highest level that the effluent
22 limit for EC salinity is likely to be in the future.

23 BY MR. RICH:

24 A If I understand your question correctly, just to back
25 up a bit, we have an interim limit in our current NPDES

1 permit for Woodland of a performance-based interim limit
2 of 1835 microhms per centimeter. That's a
3 performance-based limit based on how the plant has
4 historically performed based on the brackish water that
5 comes from the plant. In the future, we've been told we
6 will be given a final effluent limit as many of the more
7 recent permits have been given. They feel as a policy
8 issue they cannot issue an interim limit without also
9 issuing a final limit as well. That range of 700,000 is
10 consistent with some of the other permits that have taken
11 place in the south San Joaquin Valley.

12 Q If you can just go on and talk -- basically answer the
13 same question for boron.

14 A So we have an interim-based performance-based limit
15 for boron currently in the existing permit for Woodland of
16 3100. We could not meet that obviously with -- it's a
17 performance-based limit. The 700 is based on narrative
18 agricultural water quality goal that's been listed in
19 several of the other exhibits.

20 The selenium is a little bit different. It's a
21 California toxics. It's a federal standard related to
22 aquatic toxicity. IT's not an agricultural genesis. So
23 that number right now is -- we cannot meet it right now.
24 We have an interim limit that expired in May of 2010 and
25 currently confined by the Regional Board if we exceed our

1 selenium limits.

2 Q Just to clarify, are the numbers shown in this table
3 for selenium in the current permit?

4 A Yes, they are.

5 Q Okay. And so you said the city of Woodland is
6 actually in violation now and being fined by the Regional
7 Board for selenium exceedances?

8 A Every violation, \$3,000 per violation.

9 Q Let's go down to slide 16.

10 I'll ask Ms. Dunham the same questions for Davis.

11 Basically, this slide shows the anticipated
12 future limit, the current discharge concentrations for EC.
13 Please tell us as best you can where you believe the
14 Regional Water Quality Control Board is headed on the EC
15 limits for Davis.

16 BY MS. DUNHAM:

17 A For the city of Davis, as you all know, the limits for
18 electrical conductivity are based upon the narrative
19 chemical constituent objective, which then the Regional
20 Boards interprets based on different available criteria.
21 And also based upon direction given by this Board in
22 previous State Board orders pertaining to water quality.
23 And based upon current studies that are existing, past
24 practice by this Board and information the best that we
25 know as to what is protective of the agricultural

1 beneficial use in interpreting narrative criteria, the
2 best that we can guess is that the future discharge limit
3 would be about 700 to a thousand range to protect the
4 agricultural beneficial use, give or take depending upon
5 where the Regional Board ultimately agrees is appropriate
6 for protective use in the area.

7 Q Please answer the same question for the boron
8 requirement.

9 A Same applies with boron. Again, it derives from a
10 narrative objective that's being interpreted. This Board
11 has directed the Regional Board to consider site-specific
12 factors. There are a number of studies that have
13 undergone to try to determine what is the appropriate
14 level. Boron has been a much more difficult constituent.
15 There are different models for EC that have been
16 developed. There are none available for boron. The
17 number here is what appear in the United Nation
18 agricultural goals report. To our knowledge, no one has
19 indicated whether it would be much higher than that or
20 not.

21 Q When you say the number here, are you referring to the
22 700?

23 A The 700 parts per million that shows on this slide.

24 Q And then just going forward, for selenium, are these
25 numbers effluent limits in Davis' current permit?

1 A These are final effluent limits in the current NPDES
2 permit. As he indicated earlier, we do have a time
3 schedule order, because we do run on the ragged edge.
4 However, they are final limits. Any violation of them,
5 while we may not be subject to the MMPs because of the
6 time schedule order, it is considered an actual permit
7 violation. And as we indicated earlier, we actually are
8 able to maintain some ragged edge compliance because of our
9 current system. When we go to a new wastewater upgraded
10 wastewater treatment facility, we actually will no longer
11 be able to meet these final limits for selenium, unless
12 something is done with the source water supply.

13 MR. LILLY: Now, turning to Mr. Bourez. If we
14 can put Exhibit WDCWA 100 on the screen.

15 Mr. Bourez, Mr. Jackson asked you some questions
16 about this looking at the face value of water right
17 permits and licenses and this argument of the eight times
18 over appropriation. And you answered some questions that
19 he asked about the power water right permits and licenses
20 and about the example you gave for Shasta Dam. But if you
21 could just elaborate. I believe paragraphs 55 through 59
22 of your testimony -- don't read them. If you can just hit
23 the main points. I believe that there are some other
24 reasons why this method over-counts the amounts of water
25 that are actually diverted and consumptively used. Please

1 elaborate.

2 MR. BOUREZ: There's a number of reasons. One is
3 you need a water right to cover the maximum diversion,
4 which you probably don't use under all cases. Some years
5 are drier and you need more water. Your crops may need
6 more water. In other combined term limits, you may have
7 more than one water right or a particular diversion, and
8 there may be a combined term limit that limits the
9 combined use. Other cases are US BAR settlement contracts
10 where under those contracts diverters have agreed to
11 divert less per the contract -- divert less than their
12 water right. Other conditions are physical limitations on
13 their ability to divert -- physically divert the water up
14 to the terms in the water right. Demands, sometimes the
15 demands aren't as high as what's specified in the water
16 right, so they wouldn't divert up to face value. Water
17 availability, there's some tributaries within the
18 Sacramento basin that water isn't available all the time.
19 It wouldn't be there to divert the face value of the water
20 right.

21 Others are limitations like the CVP SWP export
22 pumps have that are based on biological opinions and other
23 water right terms that -- and regulatory standards that
24 prevent them from diverting up to the maximum water right.

25 Q And then just to wrap this up, in paragraph 60 of your

1 testimony, you've described why using the CalSim-II
2 modeling is a better way to determine water availability
3 than looking at the face value of water right permits and
4 licenses. And please just summarize that.

5 A The demands that are in CalSim are developed based on
6 land use and land use surveys that are done by the
7 Department of Water Resources. And so what we do with the
8 CalSim modeling is develop diversion requirements that are
9 based on the actual land use that's forecasted to be out
10 there at current level development and future if we are
11 analyzing future level development. So it's based on
12 actual use for the system.

13 And in developing -- I developed quite a number
14 of those demands. Developed the ones for the San Joaquin
15 River system and a large part of the Sacramento River
16 system. What we've done is cross-correlate the DWR
17 database with local water district records to ensure that
18 land use numbers are the same. And when we developed the
19 demands that goes into CalSim, we validate that those
20 diversions for those large water districts and smaller
21 water districts are similar to what has happened
22 historically so that we make sure that the CalSim model is
23 predicting actual diversions that have occurred in the
24 system. So in a nutshell, it tries to come up with what's
25 actually being used in the system, whether you have an

1 appropriate right or riparian right or pre-14 right. It's
2 based on all the land use that exists in the system.

3 Q And then finally I'm going to turn to you, Dr. Hanson,
4 following up on questions Mr. Jackson asked about American
5 shad and striped bass and the potential impingement of
6 eggs at the new diversion facility.

7 First of all, are American shad and striped bass
8 native species to California?

9 A Neither. Both were introduced from the east coast.

10 Q Is either of these species listed as a threatened
11 species or an endangered species or a species of concern
12 under the Federal Endangered Species Act or the California
13 Endangered Species Act?

14 A They are not.

15 Q And then finally are, in fact, the adults of these
16 species predators of some the species like delta smelt
17 that are listed under the Endangered Species Act?

18 A Striped bass are a predatory fish.

19 MR. LILLY: Thank you.

20 I have no further questions. At this point, I'm
21 prepared to offer exhibits into evidence or I can wait,
22 depending on what the Board wants to do.

23 VICE CHAIRPERSON SPIVY-WEBER: Let's wait until
24 we have the re-cross and additional questions from the
25 Board and staff. And then you can finally.

1 RE-CROSS EXAMINATION

2 BY MR. JACKSON:

3 Q Mr. Bourez, you've indicated you think there is a
4 better way to evaluate how much water is available than to
5 just look at the face value of water rights that have been
6 previously given?

7 A Using actual use values is a better indicator of water
8 use in the system than face value of the water right.

9 Q So if someone gets a water right and it adds for one
10 of the -- as a hypothetical, it has a 10,000 acre feet per
11 year value and they only take 8,000, they don't get to
12 take 12,000 next year to make up for that, do they?

13 A I don't believe they do. I haven't seen the terms of
14 this hypothetical water right but --

15 Q These are not sort of storage devices or carry over or
16 anything like that, to your knowledge?

17 A It's a direct diversion right you're speaking of, then
18 it would -- I'm assuming it would be an -- probably have
19 to see some diversion on it as well.

20 Q Now, in regard to the water rights that are held by
21 water rights holders who are senior to this application,
22 it's fair to say that there's more face value than there
23 is flow in a dry year; correct?

24 A From what I've seen, there's more face value than
25 there is flow in the wettest of years.

1 Q Okay. Are you saying that there's some limitation on
2 what someone can take out of their water right? In other
3 words, if hypothetically I have a water right with 10,000
4 acre feet per year, I have the choice of taking 10,000 or
5 some reduced amount; correct?

6 MR. LILLY: I'm going to object, because that's
7 an incomplete hypothetical. Doesn't talk about supply,
8 demand, permit conditions, contracts or any of the other
9 things that Mr. Bourez just talked about.

10 VICE CHAIRPERSON SPIVY-WEBER: Can you narrow
11 your question?

12 MR. JACKSON: Mr. Bourez has indicated he doesn't
13 think looking at the face value of water rights is a
14 reasonable thing to do. What I'm trying to find out is
15 why it's not reasonable.

16 MR. LILLY: And I'm sorry to belabor this, but
17 I'm going to object. He didn't say it wasn't a reasonable
18 thing. He said it was not a reasonable way to estimate
19 demands for purposes of determining water availability. I
20 think that's a different thing.

21 VICE CHAIRPERSON SPIVY-WEBER: I will accept
22 that. I think -- but I do think that it's the same
23 question. If you can once again -- do you want him to
24 repeat why he thinks it's not sufficient?

25 MR. JACKSON: Yeah. The idea is the -- let's

1 just take the Bureau of Reclamation. Assuming their claim
2 for water rights in the Central Valley is somewhere around
3 125 million acre feet and assuming that the Bureau of
4 Water Rights -- or the Bureau of Reclamation has a water
5 right that because it's a released State filing, has a
6 1927 date, and assuming that the Bureau wants to further
7 develop the projects, how would you take into account in a
8 water availability study their prior right to take more
9 water?

10 MR. BOUREZ: I'm not quite sure I understand.
11 You're asking if Reclamation -- Bureau of Reclamation
12 wants to apply for an additional water right --

13 MR. JACKSON: No. Actually, they have a face
14 value of a right that is already large enough for them to
15 take additional water. How do you account for that in
16 your theory that you simply look back historically and see
17 what people took?

18 MR. LILLY: I'm sorry to object, but he never
19 ever said you look back historically. Described the
20 CalSim modeling looks into the future and takes in all of
21 the constraints that would apply to the Bureau under that
22 situation.

23 VICE CHAIRPERSON SPIVY-WEBER: I will ask the
24 question. Basically what I understand you're asking is if
25 the face value is not an appropriate way to determine how

1 much water is available and, in fact, you recommended
2 using CalSim as a way of identifying how much water would
3 be available -- would be needed, what the demand would be,
4 you use CalSim, because that shows you what the -- what
5 kind of crops are being raised. And that's how that
6 system works. There is a disconnect, it appears, between
7 the water rights that someone has that they can take --
8 again there are lots of determinations that go into when
9 they can take it, if they're senior, pre-14, all the
10 various decisions and what the CalSim predictive model is
11 saying is needed so that the difference between what
12 people can take and what is needed, is that what you're
13 getting at, Mike?

14 MR. JACKSON: Yes.

15 VICE CHAIRPERSON SPIVY-WEBER: But then where are
16 you going from that? Are you asking if there is a
17 difference --

18 MR. JACKSON: How in the world would the Board
19 know in using CalSim whether or not there were more rights
20 already granted than you could use that -- people could
21 use at the present time?

22 MR. BOUREZ: This is kind of a confusing
23 question. I'm going to start by addressing CalSim for a
24 moment. We have a depiction of current level and a future
25 level, a 2030 level. At the 2030 level, that is the land

1 use with all the foreseen water rights that -- and
2 increase use that would occur up to the year 2030. When
3 we look at the cumulative condition CalSim run, we're
4 assuming that all those rights will be expanded up to that
5 point. So that is showing what the use would be in the
6 year 2030. And the water available that we analyzed in
7 our project assumes that future land use would be in
8 place. So whether that's riparian, pre-14, Bureau of
9 Reclamation, additional groundwater pumping that would
10 occur, those are the conditions that we're analyzing.

11 Now, if you're asking is there water available
12 for appropriation at that level, that's a question of
13 where in the system is it; what are the constraints on
14 that; what's the water available at the point of
15 diversion. There's so many different constraints to
16 address and defining water availability and how it effects
17 the system. You're asking a very complex question here.

18 MR. JACKSON: Well, it may be a complex question.
19 Shouldn't we know the answer as to how much people can
20 take out of the system under the existing water rights
21 before we grant new water rights?

22 VICE CHAIRPERSON SPIVY-WEBER: That's more of a
23 question for us than for them I think.

24 MR. JACKSON: Well, I do believe it's a question
25 for you. But there has been an argument made here that

1 you can do that with CalSim and that's a better way to do
2 it than simply doing arithmetic.

3 MR. BOUREZ: I said it's a better way of looking
4 at water available than it is to look at face value of
5 water rights. It's not a perfect way of doing it. It's a
6 difficult question you're asking.

7 MR. JACKSON: I'll leave it as the difficult
8 question.

9 VICE CHAIRPERSON SPIVY-WEBER: Does staff have
10 questions?

11 MS. GROODY: This is the same question that I
12 asked previously. It's about water availability on a
13 daily basis. And I guess I still don't understand, so I'm
14 going to read this. The non-Term 91 months, your modeling
15 shows that in many months the full amount is not
16 available.

17 MR. BOUREZ: In the non-Term 91 months, we show
18 that water was available. In our analysis, we diverted
19 water in the non-Term 91 months.

20 MS. GROODY: But the full amount.

21 MR. BOUREZ: The full amount up to the full
22 demand. We didn't -- and Jim is probably better to answer
23 this question. But in the wintertime, you don't need the
24 full diversion amount because the demand isn't as high as
25 it is during the summer months when the demand is much

1 higher. So if the demand is at its peak, say, in July of
2 a wet year -- and there are some -- if you look at the
3 Exhibit 103, page 2, there are some wetter years where the
4 system is in surplus all year long. 1983 is one of them.
5 There's some other really wet years. So in the
6 summertime, Term 91 of those wetter years would not be in
7 effect, because there would not be supplemental water in
8 the year and they could divert up to the full diversion
9 rate.

10 MS. GROODY: But this question refers to the
11 months that Term 91 is not in effect. Okay.

12 MR. BOUREZ: That was my -- that's what I thought
13 I was answering. In the wetter conditions, if you look at
14 the wintertime in December/January and all years in this
15 analysis, there's -- Term 91 is not in effect in those
16 winter months. But the demand is much less than the full
17 diversion rate. So we would be diverting as much as we
18 needed to under the water right.

19 MS. GROODY: Okay. But the question is about the
20 modeling is done after the fact with all the available
21 information because it was historical information;
22 correct?

23 MR. BOUREZ: I need to step back. The model is
24 not a historical model. It uses historical hydrology and
25 historical preset, and imposed upon that historical

1 hydrology is the current land use. So if we had today's
2 regulatory standards and the biological opinion for salmon
3 and smelt and the current reservoirs and the current land
4 use from 1922 all the way through 2003, that's what we're
5 modeling right now. When you look at that historical
6 period, it is not history. It's a forecasted or projected
7 level of development.

8 MS. GROODY: So this is not historical data.
9 This is modeled data.

10 MR. BOUREZ: That's correct.

11 MS. GROODY: So the question still is when the
12 project is operated on a daily basis, how do you know how
13 much water is available?

14 MR. YOST: I think I understand your confusion.
15 What you're wondering about is when we get in the dry year
16 and there is no water quality available under the water
17 right, how are we going to know whether we can divert
18 water out of the river; is that the basic question?

19 VICE CHAIRPERSON SPIVY-WEBER: Yes.

20 MS. GROODY: Yes.

21 MR. BOUREZ: Under this water right, if Term 91
22 is in effect, the State Board sends out letters to all
23 post-1965 water right holders with Term 91 specifying when
24 Term 91 will be in effect. And those diverters cannot
25 divert during that time. The State Board sends out those

1 notices almost every year.

2 MR. YOST: And this water agency will be
3 purchasing water. So they have surface water available
4 during those months when we know Term 91 will be in
5 effect. And, therefore, we will continue diverting water
6 from the river because we will have bought water from
7 upstream water right holders to fill in that hole.

8 VICE CHAIRPERSON SPIVY-WEBER: I have a question
9 on that point. You had mentioned in your statements
10 earlier that there would be sometimes when you would be
11 taking only surface water and then other times where you
12 would be taking a blend of surface and groundwater. Is
13 there a time that you can envision when you would be
14 taking just groundwater?

15 MR. YOST: No. No. You cannot meet the
16 discharge limits from -- and the wastewater treatment
17 plants if that occurred. So we will guarantee that there
18 will be surface water to mix with that groundwater any
19 time that we can.

20 VICE CHAIRPERSON SPIVY-WEBER: But you will have
21 the -- let's do this hypothetically. You will have the
22 capability in your groundwater system that even if you are
23 violating water quality standards, if you had the --

24 MR. YOST: You mean in an emergency?

25 VICE CHAIRPERSON SPIVY-WEBER: Yes.

1 MR. YOST: Or some condition like that? That's a
2 possibility, but I don't imagine these two cities are
3 going to maintain sufficient wells to provide the full
4 demand capacity. I don't think they intend to do that.
5 They will have a number of wells in service, but not the
6 full complement that they have now.

7 VICE CHAIRPERSON SPIVY-WEBER: Okay.

8 BOARD MEMBER RUSSELL: I have a question for you
9 regarding what you just shared with us, the idea of any
10 time that we -- your project would not be able to take
11 under their own diversion they would then buy water from
12 someone else, okay, that's not before the Board. We don't
13 know what the impacts of that purchase of water would be;
14 is that correct?

15 MR. YOST: I mean, that is not covered by this
16 water right hearing.

17 BOARD MEMBER RUSSELL: You're asking us to make a
18 decision in your favor to grant a permit when the impacts
19 of that, which you've acknowledged are going to be outside
20 the normal operation, you're going to go out and
21 potentially buy water from some upstream water right
22 holders so that water can be conveyed down to your
23 diversion point; is that correct?

24 MR. YOST: I believe, as we discussed earlier, we
25 actually have already done that. We have purchased water

1 from a water rights holder. And that issue will be coming
2 before this Board when that water transfer and water sale
3 of water rights occurs.

4 MR. LILLY: Mr. Russell, that is all analyzed in
5 the EIR also, including the impacts of these water
6 transfers. We can only do one proceeding at a time before
7 this Board. But the EIR as required by CEQA analyzes all
8 of the impacts of those -- what we call summer water
9 transfers, the water transfers when Term 91 would be in
10 effect, the groundwater substitution pumping impacts and
11 everything.

12 BOARD MEMBER RUSSELL: Do I understand you don't
13 want us to consider that in this permit process?

14 MR. LILLY: That is correct. And actually I
15 think we've dispelled a lot of the Board members' concerns
16 here. The draft permits that were attached to the hearing
17 notice have a term six. I believe -- I don't know if it's
18 a standard permit term or not. But it's a term in those
19 permits which says no water shall be diverted under this
20 permit until permittee obtains a long-term water supply
21 covering those periods when water is not available for
22 diversion pursuant to this permit. Permittee shall submit
23 documentation subject to review and approval by the deputy
24 director for water rights that an alternative water supply
25 has been secured for the development period under this

1 permit. This alternate water supply must be pulled into
2 the diversion quantities scheduled for use under this
3 permit.

4 So this point is being addressed in this permit.
5 But as far as what the actual supplies are, that will be a
6 subsequent proceeding before this Board involving someone
7 else's water rights under which a transfer and assignment
8 would occur to Woodland-Davis.

9 BOARD MEMBER RUSSELL: Thank you for the
10 clarification. I did read that in the permit application.

11 MR. LILLY: There are a lot of different things
12 going on here. I appreciate the fact it's complicated. I
13 hope we've clarified it.

14 VICE CHAIRPERSON SPIVY-WEBER: Charlie and then
15 you.

16 CHAIRPERSON HOPPIN: Mr. Lilly, if I understand
17 Mr. Yost's comments and your comments, given stipulation
18 of an alternate water supply, that doesn't preclude you
19 from having multiple supplies; is that correct?

20 MR. LILLY: I certainly read term six to mean we
21 can have several different contracts. And the EIR
22 analyses several.

23 I think the answer to your question is yes, we
24 can have multiple supplies that together satisfy the
25 requirements of term six.

1 CHAIRPERSON HOPPIN: And from a net cost -- Mr.
2 Yost, I don't know if you've looked into this or not --
3 but I would assume you would have an advantage being in
4 your physical location over someone that you might be
5 competing for in a free market to purchase water that
6 happened to rely on transfer south of the delta. Would
7 that not be the case?

8 MR. YOST: That's very true. Certainly it's much
9 easier to deliver water to us, much less expensive and
10 there are no carriage losses associated with it.

11 CHAIRPERSON HOPPIN: You've answered my next
12 question. You would not be dealing with carriage losses
13 you would if water was going south.

14 MR. YOST: That's correct.

15 VICE CHAIRPERSON SPIVY-WEBER: Nathan.

16 MR. JACOBSEN: My question is the alternate
17 supply that is anticipated under term six, does that
18 include groundwater from Davis's wells?

19 MR. YOST: No. The idea is to meet these
20 discharge limits. We can only mix so much groundwater
21 with surface water. So we cannot pump groundwater in
22 excess of the amount we've defined or we will violate the
23 standards. So we will limit the amount of groundwater
24 pumped so we ensure we will comply with the anticipated
25 waste discharge.

1 CHAIRPERSON HOPPIN: But that would not preclude
2 you from buying water that was made available by another
3 party --

4 MR. YOST: Absolutely not -- for instance.

5 CHAIRPERSON HOPPIN: -- groundwater themselves in
6 a different basin.

7 MR. YOST: That's correct.

8 VICE CHAIRPERSON SPIVY-WEBER: Jane.

9 MS. FARWELL: I have a question. When you're
10 diverting water, it's non-Term 91, you can divert under
11 the rights from the river. How much would you divert?
12 Would you divert up to your full capacity? Or would you
13 divert up to -- how much would you divert on a daily
14 basis?

15 MR. YOST: As I explained earlier, we will divert
16 the amount needed to meet the demands diverted on the
17 system by users within Woodland and Davis. So if all they
18 need in a given day is a diversion of 20 CFS to meet their
19 demand, that's what we would need.

20 MS. FARWELL: So you have to have that
21 information prior to that day.

22 MR. YOST: It's going to be a continuing process
23 where both cities will notify the agency ahead of time how
24 much water they need. Obviously, as we get experience
25 running the system, a lot of that will be second nature.

1 In the early stages, it's going to be a continuous update
2 process.

3 MS. FARWELL: Right. Because at this point
4 obviously you have no storage capacity.

5 MR. YOST: I wouldn't say we have none. We'll
6 have probably a maximum day's worth of storage in the
7 system.

8 MS. FARWELL: And you intend on having more in
9 the future.

10 MR. YOST: I don't expect so because that's very
11 expensive. So I mean, we'll follow the standard AWWA
12 delivery standards and have sufficient storage in the
13 system to meet fluctuation in demands.

14 MS. FARWELL: So on a day by day basis?

15 MR. YOST: That's correct.

16 MR. BOUREZ: I just want to point out if you look
17 at the demand pattern that was developed for analyzing the
18 project here, you're close to 80 CFS. And the peak demand
19 in the summertime and less than half of that in the low
20 demand in the wintertime. That's roughly a demand pattern
21 that's based on experience and urban demand patterns.

22 VICE CHAIRPERSON SPIVY-WEBER: Staff, did you
23 have any? Tom, did you have any additional questions?

24 CHAIRPERSON HOPPIN: One more.

25 Mr. Yost, given the fact that you have minimal

1 storage capacity and you're dealing with the contained
2 system, will you have the ability to spill water if you
3 have more than your customers can utilize? I don't
4 understand mechanically how you will deal with the
5 fluctuations and demand day to day or time of the day.

6 MR. YOST: We'll operate just exactly the way the
7 groundwater systems apply and the two cities operate now.
8 They measure pressure from a SCADA system out in their
9 service area and the pumps come on and go off to keep that
10 pressure at a certain level.

11 That same information will be conveyed now from
12 the service areas of both cities to the water treatment
13 plant, and that will affect how much water is pumped out
14 of the river at the intake. It's going to be an
15 automatically controlled system that will go up and down
16 in response to pressure and delivery.

17 CHAIRPERSON HOPPIN: Through a SCADA? Controlled
18 by a SCADA system?

19 MR. YOST: That's correct.

20 CHAIRPERSON HOPPIN: I assume you intend to leave
21 water in your system from the point of diversion to the
22 treatment plant at all times so the pipe doesn't happen to
23 float up.

24 MR. YOST: Those pipes will remain for a long
25 time. Obviously, if we had to shut down and repair one or

1 something, it wouldn't be full. But in normal operation,
2 it would be full of water.

3 CHAIRPERSON HOPPIN: That's it for me.

4 VICE CHAIRPERSON SPIVY-WEBER: Any other
5 questions?

6 I guess my main concern is that you have a number
7 of possibilities of future water supply and they may or
8 may not come to fruition. And you have existing
9 groundwater wells that I assume you're going to take out
10 of the production when you move to this new system. And
11 are you going to do that when you get the assured future
12 water supplies, or are you going to take them out and just
13 in anticipation of getting future water supplies?

14 MR. YOST: We anticipate having all the future
15 water supplies in place by 2016 when the project starts
16 operation.

17 VICE CHAIRPERSON SPIVY-WEBER: 2016. Okay.

18 MR. YOST: So the cities will have full
19 groundwater capacity to serve their demand until 2016.

20 VICE CHAIRPERSON SPIVY-WEBER: Will you be taking
21 your existing groundwater system out of service between
22 now and 2016 or --

23 MR. YOST: No. Absolutely not. It will stay in
24 full production.

25 And just let me say that day one of 2016 the

1 cities are not going to shut down their groundwater
2 system. They'll keep their groundwater systems
3 operational. However, as wells as go out of service
4 because of age or deterioration of the water quality and
5 becomes a problem, they'll probably be dropped out of the
6 system and maybe not replaced.

7 But they will have sufficient capacity in their
8 groundwater system to respond to any kind of needs for
9 additional pumping. And both cities have been doing
10 optimization of their system to figure out exactly what
11 facilities they ought to have in place to meet the
12 groundwater needs and to distribute the surface water
13 throughout their system efficiently.

14 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

15 If there are no further recross-examination, Mr.
16 Lilly, you are now on for submitting your exhibits.

17 MR. LILLY: Thank you.

18 At this time, we'd like to offer into the record
19 all of the Woodland-Davis Clean Water Agency exhibits that
20 were filed on December 17. And I won't list them all by
21 number because there was an exhibit list for those.

22 We also filed a couple of days after that some
23 exhibits that I numbered as WDCWA 300 and 301. 300 is the
24 notice of assignment of University of California Davis'
25 interest in the water right application to the

1 Woodland-Davis Clean Water Agency and 301 is the Clean
2 Water Agency's resolution accepting all of the
3 assignments.

4 I did send a cover letter to you,
5 Ms. Spivy-Weber, with copies to Mr. Jackson as well
6 stating that we could not file those by the December 17
7 deadline because they were in fact not signed and the
8 resolution was not adopted until December 21st. We would
9 like those in the record just to complete the record of
10 all the assignments.

11 VICE CHAIRPERSON SPIVY-WEBER: We will accept
12 those into the record, if there is no objection.

13 (Whereupon the above-referenced exhibits were
14 admitted into evidence.)

15 MR. JACKSON: I did in fact receive them and have
16 no objection.

17 VICE CHAIRPERSON SPIVY-WEBER: Thank you so much.

18 MR. LILLY: And then the exhibits that -- the new
19 exhibits that we offered that we used today that I'd like
20 to also offer into the record. With Mr. Bourez, it was
21 Exhibits WDCWA 112, 113, and 114, and then the resumes of
22 Dan Rich and Teresa Dunham which were WDCWA 302 and 303.
23 So we'd like to have those accepted into the record as
24 well.

25 VICE CHAIRPERSON SPIVY-WEBER: Is there any

1 objection? With no objection, we'll accept those into the
2 record. Thank you.

3 (Whereupon the above-referenced exhibits were
4 admitted into evidence.)

5 VICE CHAIRPERSON SPIVY-WEBER: Is that it?

6 MR. LILLY: That's it for our case in chief.
7 Thank you.

8 VICE CHAIRPERSON SPIVY-WEBER: Thank you.

9 I think we're were going to have to quit at 5:00
10 o'clock anyway. So if it's okay with you, shall we just
11 start tomorrow morning at 9:00?

12 MR. JACKSON: That will be fine.

13 VICE CHAIRPERSON SPIVY-WEBER: And not try to
14 divide everything up. I think mentally we will be much
15 fresher tomorrow morning. Thank you.

16 So this hearing is closed for now. And we'll
17 resume tomorrow morning at 9:00.

18 (Thereupon the California Water Board
19 recessed at 4:25 p.m.)

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1 CERTIFICATE OF REPORTER

2 I, TIFFANY C. KRAFT, a Certified Shorthand
3 Reporter of the State of California, and Registered
4 Professional Reporter, do hereby certify:

5 That I am a disinterested person herein; that the
6 foregoing hearing was reported in shorthand by me,
7 Tiffany C. Kraft, a Certified Shorthand Reporter of the
8 State of California, and thereafter transcribed into
9 typewriting.

10 I further certify that I am not of counsel or
11 attorney for any of the parties to said hearing nor in any
12 way interested in the outcome of said hearing.

13 IN WITNESS WHEREOF, I have hereunto set my hand
14 this 2nd day of February, 2006.

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