

BEFORE THE  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of: )  
 )  
 )  
Amendment to the Water Quality Control )  
Plan for the San Francisco Bay/ )  
Sacramento-San Joaquin Delta Estuary: )  
San Joaquin River Flows and Southern )  
Delta Water Quality and on the Adequacy )  
of the Supporting Recirculated Draft )  
Substitute Environmental Document (SED) )  
\_\_\_\_\_ )

PUBLIC HEARING

Joe Serna Jr. - CalEPA Headquarters Building  
Byron Sher Auditorium  
1001 I Street, Second Floor  
Sacramento, CA 95814

Tuesday, January 3, 2017

9:00 a.m.

**AMENDED DECEMBER 31, 2018**  
SEE ERRATA SHEET

Reported by:  
Peter Petty

APPEARANCES

Board Members Present:

Frances Spivy-Weber, Vice Chair  
Dorene D'Adamo  
Tam M. Doduc  
Steven Moore

Staff Present:

Thomas Howard, Executive Director  
Eric Oppenheimer, Chief Deputy Director  
Will Anderson, Water Resources Control Engineer  
Les Grober, Deputy Director of Water Rights  
Tina Leahy, Senior Staff Counsel  
Erin Mahaney, Senior Staff Counsel  
Daniel Worth, Senior Environmental Scientist  
Yuri Won, Senior Staff Counsel  
Jeanine Townsend, Clerk to the Board  
Katheryn Landau, Environmental Scientist

Public Comment:

Adam Gray, Assembly Member, 21st Assembly District  
Ella Strain, Office of Assembly Member Jim Frazier, 11th  
Assembly District  
Gary Soiseth, Mayor, City of Turlock  
Amy Bublak, Council Member, Turlock City Council  
Larry Byrd, Modesto Irrigation District  
Joe Alamo, Turlock Irrigation District  
Ron Macedo, Turlock Irrigation District  
Erin Foresman, U.S. Environmental Protection Agency  
Jeff McLain, NOAA Fisheries, National Marine Fisheries  
Service  
Donald Ratcliff, U.S. Fish & Wildlife Service  
Dean Marston, California Department of Fish & Wildlife  
Abigail Warner, Self  
Michael Frost, Self  
Penny Frost, Self  
Hap Dunning, Tuolumne River Trust  
Susan Stern, Tuolumne River Trust  
Bill Martin, Self  
Grant Wilson, Earth Law Center  
Hicham ElTal, Merced Irrigation District  
Terry Erlewine, State Water Contractors  
David Braun, RootsKeeper  
Tom Schwertscharf, San Francisco Bay Area Water Committee

APPEARANCES (Cont.)

Public Comment: (Cont.)

Kenneth Gibson, Self  
Carlos Martinez, City of East Palo Alto  
Stephen DeBerry, Bronze Investments  
Joe Sallaberry, Self  
Elizabeth Lasensky, Self  
Margo Schueler, Self  
Alyce Silva, Denair Future Farmers of America (FFA)  
Bryson Prock, Denair FFA  
Mark Holderman, California Department of Water Resources  
Mary Scruggs, California Department of Water Resources  
Erika Lovejoy, Sustainable Conservation  
Victoria Guinard, Turlock FFA  
Jonathan Moules, Turlock FFA  
David Aladjem, Downey Brand, LLP & Northern California  
Water Association  
Charlene Woodcock, Self  
Joe Daly, Tuolumne River Trust  
Larry Kolb, Self  
Erik Young, North Bay Trout Unlimited  
Peter Mangarella, John Muir East Bay Chapter, Trout  
Unlimited  
Alicia Thompson, Self  
Nicole Sandkulla, Bay Area Water Supply and Conservation  
Agency  
Adrian Covert, Bay Area Council  
Vance Ahlem, Hilmar Cheese Company  
David Ahlem, Hilmar Cheese Company  
Chenoa Urchison, Denair FFA  
Mike Tietze, Jacobson, James & Associates  
David Ragland, Self  
Kirk Wilbur, California Cattlemen's Association  
Darcie Luce, Friends of the San Francisco Estuary  
Mark Gonzalves, Self  
Barbara Barrigan-Parrilla, Restore the Delta  
Tom Hicks, Self  
Tyrone Jue, Office of San Francisco Mayor Ed Lee  
Michael Carlin, San Francisco Public Utilities Commission  
Ellen Levin, San Francisco Public Utilities Commission  
John Herrick, South Delta Water Agency  
Karen Wilson, Self  
Barbara Daly, North Delta C.A.R.E.S.  
Ashley McLeod, Self  
Dr. Elizabeth Dougherty, Wholly H2O  
Virginia Van Kuran, Self

APPEARANCES (Cont.)

Public Comment: (Cont.)

Frances W. Brewster, Santa Clara Valley Water District  
Chuck Knutson, Self  
Todd Sill, Self  
Lacey Kiriakou, Merced County, Self  
Maureen Martin, Contra Costa Water District  
Mike Curry, Johnson Farms  
Timothy P. Ruby, Del Monte Foods, Inc.  
Rien Doornenbal, Self  
John Borba, Self  
Rebecca Franklin, Association of California Water  
Agencies  
Rachel Kaldor, Dairy Institute of California  
Jon Rubin, San Luis & Delta-Mendota Water Authority  
Michael Warburton, Public Trust Alliance  
Paul Gardner, Self  
Gail Srendanovic, Self  
Charlotte Allen, Sierra Club California Water Committee  
Crystal Sanders, Fish Revolution  
Kelsey Linnett, Self  
Rick Mazaira, Yosemite Outfitters Guide Service  
Cindy Charles, Golden West Women Flyfishers  
Sean O'Rourke, UC Davis  
Jeanelle Steiner, Self  
Aaron Orsini, Self  
Gary Bobker, The Bay Institute  
Tricia Geringer, Agricultural Council of California

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P R O C E E D I N G S

JANUARY 3, 2017 9:02 A.M.

VICE CHAIR SPIVY-WEBER: If you want to speak fill out a blue card. We have -- Felicia is not here today. She won't be here, actually all week, because her aunt who essentially raised her is on palliative care and so she's staying with her. Wow, that got quiet very fast.

Good morning, we are here to receive public comments concerning potential changes to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and supporting recirculated draft Substitute Environmental Document. Throughout the hearing, we will refer to these documents as the Plan Amendment, the Plan, and the SED.

I am Fran Spivy-Weber, Vice Chair of the State Water Resources Control Board. With me today on my left Board Member Dorene D'Adamo. To my right is Board Member Tam Doduc, who is also the owner of a new cat. (Laughter.) And to her right is Board Member Steven Moore. Chair Felicia Marcus, as I said, is dealing with a family emergency out of town and will be watching the hearing remotely. Hi. Other State Water Board staff are present at the front and back of the room to provide assistance as needed.

1           I have a number of general announcements to  
2 make. Some are procedural announcements and some will  
3 provide context to start us off before turning to staff  
4 for an overview. And it's fairly long, so settle in. I  
5 have to do it and we've done it at every hearing. And so  
6 the procedural announcements are pretty straightforward.

7           First, look around and identify the exits  
8 closest to you. If you hear an alarm we will evacuate  
9 the room immediately. Please take your valuables and  
10 your colleagues with you. Use the stairs, not the  
11 elevators. It's hard to use the elevators here. And  
12 exit to the relocation site across the street in Cesar  
13 Chavez Park, except it's raining and so just find cover.  
14 That is the place that we officially convene and would be  
15 called back in once the emergency is over.

16           If you cannot use the stairs, you will be  
17 directed to a protective area inside a stairwell and  
18 someone will assist you.

19           Today's hearing date is being webcast and  
20 recorded. When speaking, please use the microphone and  
21 begin by stating your name and affiliation. Please get  
22 close enough to the microphone that it is picked up, but  
23 not so close as to generate static, and you'll hear  
24 static.

25           A court reporter is present today, here he is,



1 and will prepare a transcript of the entire proceeding.  
2 The transcript for the hearing will be posted on the  
3 State Water Board's Bay-Delta Phase 1 website as soon as  
4 possible. If you would like to receive the transcript  
5 sooner, please make arrangements with the court reporting  
6 service during one of the breaks, or after the hearing.

7 As a reminder, today is day five of five days  
8 of hearings on the adequacy of the SED. Day one of the  
9 hearing was held in Sacramento November 29, day --

10 (Brief colloquy aside.)

11 -- day two was held in Stockton on Friday, day  
12 three was held in Merced on Monday, December 19. Day  
13 four was held in Modesto on Tuesday, December the 20th.

14 Additionally, for planning purposes, please be  
15 aware that the hearing day could be long since we want to  
16 hear everyone's comments. We will take a short break in  
17 the morning and a short break in the afternoon, or as  
18 needed for the court reporter. We will also take a lunch  
19 break, which may be less than an hour, but will be at  
20 least 30 minutes to give you time to get food. We expect  
21 to continue in the early evening or beyond, if necessary.

22 Finally and most important, please take a  
23 moment and turn off or mute your cell phones. Even if  
24 you think it's already off -- and we have some folks over  
25 here who can help us with that -- please take a moment to

1 double check.

2 I know everyone is eager to get started, but  
3 first I need to provide some background information on  
4 how the hearing will be conducted and information  
5 regarding the Order of Proceeding. Please bear with me  
6 through this opening statement. The statement is going  
7 to be read at the beginning of each day of the hearing.

8 This hearing is being held in accordance with  
9 the September 15th, 2016 Notice of Filing and  
10 Recirculation, Notice of Opportunity for Public Comment,  
11 and Notice of Public Hearing on Amendment to the Water  
12 Quality Control Plan for the San Francisco Bay/  
13 Sacramento-San Joaquin Delta Estuary and supporting draft  
14 revised Substitute Environmental Document, and subsequent  
15 revised notices issued on October 7, 2016; October 18,  
16 2016; December 9, 2016; and December 22nd, 2016.

17 This hearing fulfills requirements for receipt  
18 of oral comments as described in the Board's regulations  
19 in State and Federal law. The purpose of this hearing is  
20 to provide the public an opportunity to comment on the  
21 Plan Amendment and on the adequacy of the SED. The Board  
22 will not take formal action on the Plan Amendment and SED  
23 at the close of the hearing today. Rather, the Board  
24 action will occur at a later noticed Board hearing,  
25 during which time the Board may reopen the hearing to

1 allow for comments on additional potential revisions to  
2 the Plan Amendments or as required by the Board's CEQA  
3 regulations.

4           The final SED will likely be released in the  
5 summer of 2017, depending on comments received. Please  
6 ensure your comments today relate to the Plan Amendment  
7 and the adequacy of the SED.

8           The September 15th, 2016 Notice required joint  
9 presenters who would like more than three minutes to  
10 present their comments to make their request by noon on  
11 October 14, 2016, which was subsequently extended to noon  
12 on November the 4th, 2016. Based on the requests  
13 received, staff prepared a Draft Order of Proceedings  
14 that was sent it to the Bay-Delta Notice email  
15 distribution list on November 18, 2016. Additionally,  
16 the Draft Order of Proceeding was posted on the Water  
17 Board's Bay-Delta website. A revised Draft Order of  
18 Proceedings dated December 6, 2016 was posted on the  
19 Water Board's Bay-Delta website on December 14, 2016.

20           Now, there will be a test for those students  
21 who are in the room on all of these dates, so I hope  
22 you're listening carefully.

23           Accordingly, we will begin with any opening  
24 comments that my fellow Board members would like to make.  
25 We will then hear a presentation from staff. This staff

1 presentation provides background to the proposal and  
2 clarifying information. Following the staff  
3 presentation, we will hear from elected officials,  
4 followed by public comment. As we allow, some groups  
5 asked to present panel presentations. Rather than taking  
6 them all first, as we did during the hearings in 2013, we  
7 will alternate panels and a series of public commenters  
8 to enable individual commenters to begin earlier in the  
9 day. There will be no cross-examination.

10 Per the Hearing Notice participants are limited  
11 to three minutes, unless otherwise allowed by the Draft  
12 Order of Proceedings, which means I will count the  
13 speaker cards and cut the time to two minutes or even one  
14 minute if necessary to enable more speakers to speak  
15 without going late into the evening, so folks can get  
16 home. We have found that a focused comment on what you  
17 want us to consider in reviewing the staff draft is  
18 actually quite effective.

19 Speakers are limited to one opportunity to  
20 speak during the course of the five-day hearing. We do  
21 read your comments and they should be submitted by noon  
22 on March 17, which is an extended submission date. If  
23 you intend to speak, please submit a blue speaker card,  
24 up here to my right. You can find one in the back of the  
25 room.

1           As I noted, we allow a number of groups who  
2 requested to speak as panels at each of the hearings.  
3 They vary in number and approach. We have in many cases  
4 shortened the time requested to enable us to hear from  
5 more of the general public commenters, particularly in  
6 the later hearings, which more people signed up for.

7           There has been one change in today's panel  
8 presentations since the release of the December 6 second  
9 revised Draft Order of Proceeding. One panel volunteered  
10 to be more brief. That is good, keep that in mind, which  
11 we appreciate. For today the joint participant groups  
12 that requested to speak as a panel with additional time  
13 are the following. A joint presentation by California  
14 Department of Fish and Wildlife, U.S. Fish and Wildlife  
15 Service, National Marine Fisheries Service and the USEPA.  
16 They have requested 90 minutes. The California  
17 Department of Water Resources has requested 15. The Bay  
18 Area Water Supply and Conservation Agency, 10. The San  
19 Francisco Public Utilities Commission, 10. The Bay Area  
20 Council -- now these are the ones that get the extra  
21 kudos -- 2 minutes, reduced from the original 10. Contra  
22 Costa Water District, 10 minutes. San Luis and Delta-  
23 Mendota Water Authority, 10 minutes. And a joint  
24 presentation on recreational interests organized by Trout  
25 Unlimited, 20 minutes.

1           I ask that one representative from each group  
2 fill out a speaker card for your panel. And if you  
3 haven't done this already now is the time to do it and  
4 you give that to Jeanine. Put the names and affiliation  
5 of each speaker. If you would like to follow the example  
6 of the Bay Area Council and use less time than was agreed  
7 upon please note your new estimated time on the card, and  
8 know you will please the people sitting behind you.  
9 Please be ready to present your comments when you are  
10 called.

11           There are several points about this hearing  
12 that need emphasis. First, please keep your comments  
13 limited to the purpose of this hearing, which is to  
14 comment on the Plan Amendment and the SED.

15           Second, we're required to respond to the oral  
16 comments we receive during this hearing, however staff  
17 will not respond to oral comments today. Board staff  
18 will prepare written responses to comments on the Plan  
19 Amendment and all significant environmental issues raised  
20 orally and in writing prior to the Board's taking final  
21 action in the next year.

22           Third, while I or the Board members may ask  
23 staff for clarification or information in the Plan  
24 Amendment and the SED, responses to your comments will  
25 not occur during this hearing. We have had and will

1 continue to have opportunities to speak with people  
2 outside the hearing and that is extremely valuable to us.  
3 But in the interest of hearing what folks here have come  
4 here to say, we can't have a conversation with each of  
5 you as much as we would like to. And that's absolutely  
6 true, just because we're quiet doesn't mean we agree or  
7 disagree. We really do need to talk to each of you more.  
8 We must also ensure that our decisions are based on the  
9 record of this proceeding.

10 Fourth, because we're required to respond to  
11 comments on the Plan Amendment and significant  
12 environmental issues raised, please make the essence of  
13 your comments clear to us, especially for those making  
14 longer presentations and in your written comments. We  
15 would appreciate you making a summary of the points you  
16 have about the Plan Amendment and the adequacy of the SED  
17 at the beginning or end of your presentation.

18 Finally, I realize that after all the  
19 presentations are heard, some of you might feel the need  
20 to respond to what others have said. We cannot provide  
21 people an opportunity for rebuttal of these comments in  
22 the hearing. If you have additional comments after your  
23 turn to speak at this hearing, you may give us that  
24 comment in writing by March 17, 2017 noon deadline, as  
25 stated in the Fourth Revised Notice.

1           Now for a bit of context, we are here today to  
2 hear input on a Substitute Environmental Document and  
3 staff proposal for updating the Board's Bay-Delta Plan.  
4 The staff proposal calls for updated flow requirements  
5 for the San Joaquin River and its major tributaries and  
6 updated salinity requirements for the southern Delta.

7           The Bay-Delta ecosystem is in trouble and has  
8 been for some time now. The Lower San Joaquin River and  
9 its tributaries are a key part of the Bay-Delta System.  
10 South Delta salinity is also a vexing challenge, both for  
11 those in the south Delta and for those who rely on  
12 exports from the south Delta.

13           We are also in a separate process to deal with  
14 the rest of the system including the Sacramento River and  
15 the rest of the Delta. The Bay-Delta Plan lays out water  
16 quality protections to ensure that various water uses  
17 including agriculture, municipal use, fisheries,  
18 hydropower, recreation and more are protected. Keep that  
19 in mind. While all of you have a point of view as to  
20 what you are here to say to us, and about the Plan, and  
21 about the SED, remember that is it our job to ensure  
22 various water uses including agriculture, municipal use,  
23 fisheries, hydropower, recreation and more.

24           In establishing these objectives, the State  
25 Water Board must consider and balance all beneficial uses



1 of water. Not pick one and discard the others.

2 We know that flow is a key factor for the  
3 survival of fish like salmon. But the flow objectives  
4 for the San Joaquin River have not been updated since  
5 1995, not substantially updated since 1995. And since  
6 that time, salmon and steelhead have declined. We also  
7 know that there are other important factors affecting the  
8 fishery, such as degraded habitat, high water  
9 temperatures and predation.

10 As I mentioned, staff will provide a short  
11 presentation to provide clarifying information regarding  
12 the proposal today. This staff presentation is different  
13 from the full staff presentation given on day one of the  
14 hearing on November 29th in Sacramento and the shorter  
15 version of the staff presentation given on days two,  
16 three and four at the hearings in Stockton, Merced and  
17 Modesto respectively. Both the full and abridged  
18 versions of the staff presentation are available on the  
19 Water Board's Bay-Delta Phase 1 website.

20 Today's presentation will respond to some of  
21 the issues that have come up in prior hearings, to  
22 clarify what the staff is proposing and what the proposal  
23 is based on while not refuting every misconception voiced  
24 during the hearings. There are some areas where we will  
25 absolutely need to have some clarification that Board

1 members specifically asked the staff to address during  
2 the course of this hearing. And that will occur today.

3           Staff have proposed to increase the proportion  
4 of water left in the river. This is a proposal to share  
5 the rivers, whether times are wet or dry. They conceive  
6 it as a block of water that they hope groups will come  
7 together to shape and use in the most effective ways  
8 possible. They also have proposed an implementation  
9 program that embraces adaptive management and will  
10 accommodate stakeholder settlements that can provide even  
11 greater benefits to the ecosystem than flow alone.

12           The proposed 30 to 50 percent range is less  
13 than 60 percent recommended in the Board's 2010 Flow  
14 Criteria Report, which was a science-based report only,  
15 but still represents a significant increase over the  
16 current conditions. Some have already argued that the  
17 proposed range is too low to improve conditions for fish  
18 adequately while others are adamant that it is far too  
19 high and the impacts on our agricultural communities far  
20 too great.

21           In many cases it is one set of water users  
22 feeling aggrieved by other water users. Our challenge is  
23 to navigate all of those strong feelings, look at the  
24 facts, and try to find the best answer we can. Felicia  
25 was quoted in the newspaper, I believe just recently,

1 saying, "There is no sweet spot in this decision," and I  
2 think that's true.

3           Unfortunately, there is a lot of  
4 misinformation about the staff proposal out there,  
5 whether about its provisions or its intent, that have  
6 distracted commenters away from commenting on what is  
7 actually being proposed. This is unfortunate, because  
8 these issues are hard enough to deal with based on the  
9 real facts, let alone those that are imagined or  
10 manufactured. I see and hear the pain in the comments we  
11 have received already from both sides, much of it based  
12 on misrepresentation of what staff is actually proposing.  
13 Some of it based accurately on what is being proposed.  
14 These complex challenging times and matters.

15           In the end, as I said, the Board's job is to  
16 establish objectives that provide reasonable protection  
17 of the fishery and to balance that with other uses  
18 important to Californians, including agriculture and  
19 municipal uses. We definitely want to provide an  
20 opportunity for people to come together to propose better  
21 ways to meet those objectives by working together to  
22 restore habitat, manage the flows, deal with predation,  
23 and other things. We can't order people to do that, but  
24 we can accept alternative proposals. When people do that  
25 well, we have a record of accepting good alternatives.

1 So please help us do that. Critiques can help, and we  
2 are listening avidly to those, but what really helps even  
3 more is to suggest how we can actually improve on the  
4 proposal to meet everyone's needs better.

5 Our hearings in Sacramento, Stockton, Merced  
6 and Modesto were lively, to say the least, informative,  
7 definitely, and helpful, actually. Lots of disagreement,  
8 but also lots of suggestions. Thank you for your  
9 patience and for your attentiveness and for joining us  
10 today on this rainy day.

11 First, we'll hear from any of my fellow Board  
12 members who wish to speak. And after that we'll hear a  
13 staff presentation from Water Divisions Rights staff, Les  
14 Grober, the Deputy Director for Water Rights will lead  
15 the staff presentation. But first, any comments?

16 MS. D'ADAMO: I normally give an opening  
17 statement, but I'm going to hold off for the discussion  
18 at the end.

19 VICE CHAIR SPIVY-WEBER: Okay.

20 Staff?

21 MR. GROBER: Good morning. Good morning, Vice  
22 Chair Spivy-Weber, Board members and the public, thank  
23 you all for coming here today. I'm joined today on my  
24 left by Senior Staff Counsel Erin Mahaney, and on my  
25 right Senior Environmental Scientist Dan Worth, and Water

1 Resources Control Engineer Will Anderson.

2           As Vice Chair Spivy-Weber said I have not the  
3 usual presentation today, but rather a presentation that  
4 addresses some of the comments, concerns, questions that  
5 have come up. These are not to be construed as the  
6 response to comments on this. We're going to be  
7 providing a much more expansive response to comments and  
8 give all of what we've heard both at the hearings and in  
9 written comments more consideration. But this is rather  
10 to address what we saw as some of the major comments,  
11 concerns that came up during our workshop, hearing days,  
12 things like that.

13           I'll spend a little bit more time on some of  
14 these and a little bit less time on others. My goal,  
15 there's about 50 slides here, is to get through in about  
16 half an hour. So I will go through these quickly, so  
17 that people can see just an introduction to the  
18 information, because this like everything else that we've  
19 presented will also be on our website. So you can dig  
20 in, in a little bit more detail and look at the numbers.

21           So the first topic that has come up a number of  
22 times is this --

23           VICE CHAIR SPIVY-WEBER: Before --

24           MR. GROBER: Yes?

25           VICE CHAIR SPIVY-WEBER: Before you go to the

1 first topic, will everyone who's standing who's not  
2 supposed to be standing, sit. The Fire Marshall says we  
3 have to have people sitting and there's tons of seats  
4 right up here. It's a little bit in the front, but  
5 there's some in the middle as well and the students won't  
6 bite, I promise.

7 Thank you, go ahead.

8 MR. GROBER: And we also have an overflow room  
9 if you want a room probably to yourself just next door in  
10 Coastal. You can watch it on the web.

11 I'm sorry?

12 MS. TOWNSEND: I'm going to go sit over there.

13 MR. GROBER: No, you're not allowed.

14 So the first issue is carryover storage. And  
15 this is a quote lifted from Appendix K, which is the  
16 Program of Implementation language for the proposal. So  
17 carryover storage is very much a part of the project.  
18 That's the key take home, because we've heard questions,  
19 concerns over, "Well, we see effects of the 40 percent of  
20 unimpaired flow, but some of the effects are because of  
21 this change carryover storage." And that is actually  
22 true, you do see some effects of the carryover storage.

23 In order to explore what would happen if you  
24 didn't have carryover storage, and it's important to look  
25 at this, because this is a big perturbation of the

1 system. It's a big change in terms of how reservoirs  
2 would be operated, because if more is left in the river  
3 and you continue to try to draw on the reservoirs also to  
4 maintain deliveries of surface water, there would be  
5 rather large effects. So as part of the overall project,  
6 because the goals are fish and wildlife protection, you  
7 need to set some number that wasn't observed in the past,  
8 some new number that would maintain the current condition  
9 and also achieve the goals of the project.

10           So in order to show what would happen if you  
11 didn't have these carryover requirements we just looked  
12 at -- and this is not part of the SED, this is not one of  
13 the alternatives -- but we looked at that 40 percent flow  
14 objective and said, "Well, reduce it to lower carryover."  
15 And what you see -- what happens -- and this is something  
16 I'll spend a little bit more time on, because you're  
17 going to see a few other exceedance plots here. By  
18 necessity much of the staff presentation has been looking  
19 at averages and looking at simple things, but there are a  
20 lot of these exceedance plots in the report, because they  
21 provide so much useful information.

22           And the way to look at this is that you see on  
23 the left side it shows the annual diversions on the three  
24 tributaries and the total quantity in terms of millions  
25 of acre-feet. And it shows under baseline, that top

1 line, it shows that the diversions can be maintained for  
2 much of the time except in about 20 percent of years that  
3 do have under the current condition not as much water  
4 available. It also then shows under the 40 percent  
5 objective -- that's the lower green line -- how you're  
6 more limited in terms of that water availability. So  
7 there 50 percent of the time it starts dropping out to  
8 something a fair bit lower than under baseline.

9           And as you would expect if you didn't have the  
10 same carryover rules, if you didn't limit the quantity of  
11 water that would be available for surface water, you  
12 allowed reservoirs to run dry, then you would be able to  
13 maintain water supply. One little interesting feature  
14 though is that by running dry you see in the worst years  
15 near that 100 percent it's actually even worse than under  
16 the 40 percent, because there is simply no water left  
17 because the reservoirs are dry.

18           This is far from an optimal condition as I'll  
19 show you in a moment, but this is showing in a little bit  
20 more detail, the effect in all years over average and the  
21 different year types. And particularly in those dry and  
22 critical years it means that if you didn't have the same  
23 carryover requirement you would be able to have a bigger  
24 water supply.

25           And as we've seen at some of the hearing days



1 was presented, we cannot exactly match, because all this  
2 modeling is done in different way, but we can more  
3 closely match some of what's been presented. And this is  
4 just showing for one tributary and one reservoir, New  
5 Melones, that you would have more frequently drawn down  
6 end of September storage. And you would actually be  
7 draining the reservoir it looks like there, in about ten  
8 years.

9           And what does that do? Actually when I go back  
10 if you look at that period just from '91 through '94 when  
11 the reservoir is pretty much dry. Well, this is what  
12 happens is you don't achieve the goals of the proposal,  
13 because on the blue line you see what the temperatures  
14 would be in the Stanislaus under the 40 percent  
15 objective. And under the modified 40 percent or looking  
16 at that different carryover you can see that you have  
17 highly elevated temperatures, lethal temperatures much of  
18 the time. You basically lose temperature control.

19           So another way to look at it for just looking  
20 at the entire reach of the river, now from the right side  
21 at the dam all the way downstream to the left side at  
22 zero, to the confluence with the San Joaquin River. Blue  
23 is showing at the 40 percent objective as we modeled it  
24 and the dashed green is the modified 40 percent  
25 objectives, much higher temperatures than under the

1 baseline condition.

2           So as you see I am going to do this rather  
3 quickly. The importance of June flows, there's also been  
4 the concern, a two-fold concern, why June flows? And  
5 it's two-prong, because the expressed concern is that  
6 there's not an importance or biological significance to  
7 it. And by the way, it's a large quantity of water,  
8 which helps to create some of that water supply effect.  
9 It's true that it creates some of that water supply  
10 effect in real time, but it is an important time period  
11 biologically. The higher flows are important.

12           We frequently, in the past, have focused just  
13 on what's the optimal time, that optimal April-May  
14 period. But there are tails of that period that are  
15 terribly important, especially if you consider the  
16 importance of not just pushing the fish out of the  
17 tributaries, but on through the Delta. Because that's  
18 part of the migration pathway and the intent of the  
19 proposal is to protect the fish and wildlife for the San  
20 Joaquin River and through the Delta.

21           And what does that flow do in terms of  
22 temperature? So since you're pushing the fish on through  
23 the tributaries and through Vernalis into the Delta an  
24 important metric to look at is what is a lethal  
25 temperature that can occur at that time period? And you

1 can see that lethal temperatures of in the higher 70s  
2 occur at that flow of about 3,100 CFS. Why is that  
3 important?

4 This is -- you are familiar with some of these  
5 I think we presented in the past, we've certainly  
6 presented them as part of workshops -- this is excerpted  
7 from one of the tables in the SED. And it shows that  
8 that flow of 3,000 CFS is achieved about 41 percent of  
9 the time under baseline. And under the 40 percent  
10 alternative 30 percent more of the time, so not quite  
11 doubling. But it goes from 40 to 70 percent of the time  
12 you avoid those lethal temperatures, because you have  
13 those higher flows.

14 MS. D'ADAMO: But that's assuming that those  
15 flows are used in June?

16 MR. GROBER: That's correct. And that's  
17 another element of this, is that it has that benefit and  
18 one of the points that you saw in one of the intro slides  
19 is this concern or concept or tension between is it the  
20 unimpaired flow that kind of tracks the natural flow and  
21 do you have this water available in that month? Or do  
22 you use it as a block? And you can't do both those  
23 things, but it's important. The take home is that it is  
24 important in June, but even if not provided in June, if  
25 specific year conditions are such that you have a limited

1 quantity of water if you have to consider everything  
2 else. Again, because this is never about the optimal.  
3 It's about the tradeoff, there is no sweet spot. But if  
4 in the moment the real time operations provides  
5 information to support, well as important as June is, we  
6 need to use that limited quantity of water to provide it  
7 in April and May. As you'll see in just a moment, the  
8 slides will also show it's not a small block of water,  
9 which cuts both ways. It's a water supply issue, but  
10 it's also a block of water that can be used to the  
11 benefit of fish and wildlife.

12 MS. D'ADAMO: I just want to make sure that we  
13 realize though that in order to justify June, you have to  
14 show these big temperature benefits. But the water will  
15 unlikely be used in June, so it can't really be  
16 justified. If it's not used in June then there's really  
17 not much of a need for it, especially as we go through.  
18 I know you have the next chart on the fish presence,  
19 which I think what we need is a little more detail on the  
20 rotary screw trap information and the amount of fish that  
21 are present.

22 Maybe, not maybe but what I would like to see,  
23 is these numbers in wet and normal years. So that we can  
24 look at the benefits in June in wet years when you have  
25 fish that are present compared to in dry and critically

1 dry years where you've got higher temperatures and  
2 unlikely much in the way of fish presence. And then kind  
3 of help us to hone in on when might June be important  
4 versus when it would probably be a waste and unreasonable  
5 use of water to be using it in June. Which at that point  
6 I guess we'd be looking at flow shifting or something,  
7 but not to justify the use of water in June.

8 MR. GROBER: Sure, that will always be that  
9 tension, because if not provided in June, but if it  
10 continues to be part of the proposal it will be a part of  
11 the block of water that will make those earlier flows  
12 even of greater benefit. Because as we've heard during  
13 the hearings, the prior days of hearings, is that the 30  
14 to 50 percent proposal isn't enough. So that June flow  
15 allows that 30 to 50 percent to be bumped up to the 40 to  
16 60 percent. Those more beneficial flows for fish and  
17 wildlife and in April and May period.

18 The point is it's a quantity of water that is  
19 useful both in the moment in June, but also as a block.  
20 And there's that tension because this proposal is not  
21 about the optimal. It's about the balance.

22 VICE CHAIR SPIVY-WEBER: But I think what the  
23 request is that you do at least two graphs here. One for  
24 different year types, for the dry and critically dry, as  
25 well as for the wet.

1 MS. D'ADAMO: Right.

2 MR. GROBER: And then so hold that thought,  
3 because it's --

4 VICE CHAIR SPIVY-WEBER: Okay.

5 MR. GROBER: -- not presented as part of this,  
6 but you'll see because we present more than just  
7 averages. And you can see some of the benefits or some  
8 of the costs by different year types, but also by  
9 different hydrologies.

10 MR. WORTH: May I say something?

11 MR. GROBER: And Dan has something.

12 MR. WORTH: So, part of the issue with rotary  
13 screw trap data in June is we don't have complete sets of  
14 data for the month of June. What often happens is the  
15 river becomes too shallow and the flows are too low and  
16 the traps become ineffective and they end up pulling the  
17 traps early in June. So we have maybe rotary screw trap  
18 data for the first couple weeks of June on average, but  
19 the traps are often pulled early.

20 MS. D'ADAMO: I'm sorry, that is just not going  
21 to work, okay? I've spent a lot of time on this issue  
22 and you do have access to this information. And the  
23 irrigation districts, I think can provide it. So I think  
24 to get a complete picture of June we need to get the  
25 rotary screw trap information. I know that it's

1 available for the Stan and the Tuolumne, I don't know  
2 about the Merced. But I think we need to get the  
3 information in all year types and if the traps have been  
4 pulled then that should be taken into account.

5 But the information that I have, that I've  
6 seen, that's been provided by the irrigation districts --  
7 and I understood that they provide it to you as well --  
8 so we can, I'm sure, work that out. But the information  
9 that I have is that in dry and critically dry years we're  
10 looking at less than 1 percent in June. And these  
11 numbers may be less if you could go to the slide, for 13.  
12 The numbers do, if you look at it in the aggregate, it  
13 does look like there's some movement in June. But I  
14 think if we parse it out and look at dry and critically  
15 dry years versus especially the wet years, there does  
16 seem to be much higher numbers.

17 So not only do we need to look at the different  
18 year types, but I would ask that you get with the  
19 irrigation districts to get the information and provide  
20 it to us.

21 MR. WORTH: Yeah, we (indiscernible) --

22 MS. DODUC: I think, let me actually follow up  
23 and ask a question based on that. I understand your  
24 concern, Board Member D'Adamo, with respect to the dry  
25 and critical years and the benefit of releases in June

1 based on current information that is available. But does  
2 that current information take into account the possible  
3 additional flows in the earlier months in those drier  
4 years that could result in different conditions in terms  
5 of the presence of what we're trying to protect?

6 MS. D'ADAMO: Well, I think that's a good  
7 point, but if you look at the different year types the  
8 wet years -- I think that there's -- I don't want to  
9 opine on it.

10 MS. DODUC: I'm not asking --

11 MS. D'ADAMO: I really don't know, but the  
12 numbers seem to go up in wet years. And so if we're  
13 looking at higher movement in wet years when there's a  
14 reduced impact on water supply that seems to be closer to  
15 the sweet spot, but if we're looking at a year type where  
16 the water supply impacts are much higher. So if you look  
17 at dry and critically dry years the water supply impacts  
18 are about 40 percent. Not 40 percent of unimpaired flow,  
19 because I know there's a lot of confusion on that, but an  
20 actual reduction in water supply by 38 percent I think is  
21 the number.

22 So that's a big water supply hit, and so what  
23 I'm looking for is comparing that to the fish presence in  
24 those critically dry years.

25 MS. DODUC: I understand that and the challenge



1 I think we all have is it's almost always simpler to  
2 estimate the economic costs associated with water supply  
3 than the economic benefit associated with fisheries.  
4 Well, with some exception. And so I acknowledge your  
5 point, but I also don't want us to lose sight of the fact  
6 that in considering the economic costs associated with  
7 reduced supplies in these dry and critical years,  
8 especially in the month of June, that we don't also lose  
9 sight of the potential benefit of these additional flows  
10 moving as a block in the earlier months of those years.

11           And unfortunately, and maybe we'll hear from  
12 some of the fishery agencies, you know, a lot of this is,  
13 yes, speculative on the benefit side. Which is our  
14 challenge, because it is easier to get information from  
15 the water agencies on the water supply impacts. But what  
16 we're also trying to do is to provide as much flexibility  
17 as possible to address water supply impact by also  
18 helping to move some of the flows around as a block.  
19 Perhaps to the earlier months in dry and critical years  
20 that may result in better fishery conditions as well.

21           MS. D'ADAMO: Well, sure. But then what you're  
22 getting is you're getting maybe some increased benefit in  
23 that period of time where the fish are actually moving.  
24 But if it it's in wet years anyways then you'd likely see  
25 some of the benefits regardless.

1 MS. DODUC: But if it's in --

2 MS. D'ADAMO: But I'm not saying not --

3 MS. DODUC: -- dry or critical years then  
4 perhaps you may be seeing additional benefits that are  
5 not being reflected in the current data that are  
6 currently being presented to us.

7 MS. D'ADAMO: That could be. I just would like  
8 to see -- the rotary screw trap information is available,  
9 so I'd like to see it. And I think that when we go to  
10 weigh and balance rather than having numbers in the  
11 aggregate it's best to see what it would be like in these  
12 different year types. Because as we balance certainly we  
13 would be looking at -- it's not just economic benefits of  
14 the fisheries, but, you know, for public trust values  
15 obviously.

16 But where there are higher costs I think we've  
17 got to figure out a way to reduce those costs and an  
18 obvious target would be June in dry and critically dry  
19 years.

20 MR. GROBER: I'm going to provide --

21 MR. MOORE: (Overlapping) Oh, just thank you  
22 for the discussion. I think it's a great discussion. I  
23 would just caution using empirical data based on the  
24 current conditions and operations to determine what's  
25 possible. And I think that's what Board Member Doduc was

1 bringing up.

2 MS. DODUC: Thank you. That's much more  
3 articulate than what I was able to express.

4 MR. MOORE: And empirically the way the  
5 system's been operated for decades has not been to look  
6 into the value of June flows in critically dry years.  
7 But I absolutely acknowledge this is an area as we come  
8 up with a balancing approach where we should make sure we  
9 have flexibility to protect water supply.

10 And so, you know, this is --

11 MS. D'ADAMO: Sure, but --

12 MR. MOORE: -- a key point, but we don't have  
13 enough empirical data on June in dry years with a fish-  
14 based flow management regime to have rotary screw trap  
15 data to reflect the benefits. I think that's key.

16 MS. D'ADAMO: I think that's fine, but I just  
17 want to add one other point as well and that is  
18 temperatures. You know, especially with climate change  
19 we're going to be seeing warmer temperatures and I'm  
20 concerned about moving things as a block of water is one  
21 thing. But in order to get to what's the amount of water  
22 that would be used to begin with if we're using a month  
23 where we could even be seeing higher temperatures. And  
24 this other chart that I think you already went through,  
25 Les, on lethal water temperatures, we're looking at quite

1 high temperatures that are even higher than I think the  
2 USEPA criteria numbers. So we need to be looking at that  
3 as well. You know, what's a wise use of water?

4 MR. GROBER: I was going to type -- I'm not  
5 going to add anything, because I was just going to  
6 reiterate what Board Members Doduc and Moore were saying.  
7 But some of that might fall out from some of the  
8 additional slides, so in the interest of time I'm just  
9 going to actually move forward and these couple of slides  
10 were just to show that that June month can be important.  
11 And as was already stated we have only very limited data  
12 upon which to show, because we've so flatlined the system  
13 that we only see it in the very wet years. We don't see  
14 those middle years.

15 MS. D'ADAMO: But this is a wet year, the year  
16 you show.

17 MR. GROBER: Yes. Yes, because -- well and  
18 that's because of the nature of the operation during  
19 above normal, below normal, those moderate years. That's  
20 when the water's all being stored. We don't have the  
21 data to show the higher flows, because it's all being  
22 captured for water supply or mostly being captured for  
23 water supply.

24 So this actually returns us to like the basic  
25 concept that's showing that the proposal is tracking,

1 though it's a fraction of, it's the 40 percent of the  
2 unimpaired flow. And this just shows in a very general  
3 way how we flatlined that system, so we simply -- and  
4 this is on average for '84 through 2009. But the  
5 observed flows, the red, show that we just tend not to  
6 see the signal at all, of those higher flows. So we have  
7 very limited data upon which to base determinations.

8           And to quantify it this just shows that June  
9 is, if you just looked at the raw percent of unimpaired  
10 flow, it's roughly the 20, a little bit north of 20  
11 percent of the unimpaired flow of the February through  
12 June months. It's disproportionately important however  
13 as a contribution to the unimpaired flow of the 40  
14 percent, because Junes have historically been so low.  
15 You've heard me refer in the past to, in some months  
16 we're in the single digits. It's those June flows that  
17 can be 5, 6 percent of unimpaired flow at time, because  
18 that is when snowmelt is being captured and nothing is  
19 being run through.

20           So we're moving -- June has those two effects.  
21 It doesn't make it available to track the hydrograph into  
22 the flow conditions to which fish are adapted, and to  
23 which there is biological benefit. But it also takes  
24 away a large block of the water you would have to use to  
25 use that 40 percent. Because not to lose to sight that

1 40 percent is not the 60 percent that the scientific  
2 basis report said is needed, and certainly not 100  
3 percent. So by being able to shape flows you can  
4 strategically try to achieve those higher percents.

5 So it's those two reasons why it's terribly  
6 important.

7 MS. D'ADAMO: Can we stop here for just a  
8 moment? If you could go back to slide 16, two slides,  
9 okay. This part puzzles me and so I'm wanting to better  
10 understand. You've got here June at about 20 percent and  
11 that's monthly contributions to the requirement, so it's  
12 my understanding --

13 MR. GROBER: Well, actually it's monthly. This  
14 is just if you looked at unimpaired flows and just said  
15 how much of it comes out in these different months?

16 MS. D'ADAMO: Right.

17 MR. GROBER: So it's not the contribution to  
18 the -- well to the requirement, so much -- and it gets --  
19 and I think anticipating your question, it's June is a  
20 much bigger block of water in terms of the additional  
21 block, because June flows are currently so low. They're  
22 much lower than say April-May flows are, so even though  
23 it's a smaller percent of the total that comes out of the  
24 system it's a bigger quantity in terms of moving it up  
25 from the current condition.

1 MS. D'ADAMO: Well, it's my understanding that  
2 the June flows result in about 45 to 50 percent of the  
3 water supply impacts. So this is the contribution to the  
4 whole pie and --

5 MR. GROBER: Yes.

6 MS. D'ADAMO: -- if you could go back again?  
7 So I'm not quite sure why, but I think in these other  
8 months like February -- let's just take February, for  
9 example. There's probably not a lot of water that's  
10 being moved into storage in some of these other months.  
11 And so the actual reflection in terms of again getting  
12 back to -- I'm just trying to get information out, so  
13 that we can better analyze June.

14 It's my understanding that the water supply  
15 impacts are about 45 to 50 percent as a result of June.  
16 And this chart doesn't really reflect that and maybe you  
17 have a different chart that does?

18 MR. GROBER: Well, that's why I'll try to move  
19 on to the next charts, because it's a math issue in that  
20 because June flows are so very low now by including them  
21 and moving those up, it does have a bigger water supply  
22 effect than this.

23 MS. D'ADAMO: Okay.

24 MR. GROBER: And that's probably I'll just jump  
25 to the next one, which probably shows it most clearly.

1 If you take from these the numbers, the average again  
2 over all years, which is shown on the left side. If you  
3 recall the long-term average surface water supply effect  
4 is 293,000 acre-feet a year. Taking June out would  
5 reduce it to about 220,000 acre-feet a year, so reduce it  
6 by 73,000 acre-feet. So what is that? That's about --  
7 it's not the 40 percent that you cited, but it's closer  
8 to 30, 30 plus percent.

9 MS. D'ADAMO: Yeah, so this might be an area  
10 where it would be helpful between now and the time you  
11 come back to us, to get with the irrigation districts.  
12 Because I'm getting different numbers and I just want to  
13 make sure that we've got the right information.

14 MR. GROBER: Sure. Sure, and this is about --  
15 I apologize that this is going a little bit over, but  
16 it's just these are the important questions. There is  
17 more to it here, but I think a take home based on what  
18 you just said. There's different ways that this can be  
19 modeled. You can come up with different numbers. But  
20 these are based on our analysis, which also then includes  
21 the carryover storage amounts, things like that.

22 If you start making different assumptions  
23 you'll start getting much different numbers in terms of  
24 total water supply effect, to make different assumptions  
25 about groundwater and different things. So we try to



1 provide the flatter, here it is if you just change one  
2 thing, with this. And then those were intended to be  
3 kind of the longer time that I would spend on it, but  
4 there's been this issue and concern. And a real concern  
5 of multiple dry years.

6 Well, as you recall we showed some of these  
7 exceedance plots. That's really the best way of showing  
8 not just what happens on average, because we heard I  
9 think a number of time averages don't tell the whole  
10 story and staff definitely agrees with it.

11 First, before I even move to exceedance plots,  
12 this is based on information that's in the SED and it's  
13 comparing the -- and I'll just refer to the right most  
14 column. We're showing it here for the three tributaries,  
15 but it's showing the total estimated effect on surface  
16 water supplies based on the 40 percent unimpaired flow.  
17 So the baseline was a little over 2 million acre-feet a  
18 year. And under the 40 percent it was that 293,000 acre-  
19 feet less 1.775 million.

20 But a couple of other columns added there, the  
21 next one is the baseline for the critical year average,  
22 which is 1.6 million. And then most importantly under  
23 the 40 percent alternative if you just looked at critical  
24 years the average over critical years is 1 million acre-  
25 feet. So it's half of what it is over the baseline

1 average of all years.

2           And for comparison, because it's been brought  
3 up it's like that drought period from '87 through '92, so  
4 when you have a series of dry years you would have this  
5 water supply effect that happens each and every year in  
6 that order of magnitude for a number of years. All of  
7 that information is in the SED and was considered in the  
8 SED. So we're certainly not hiding any water supply  
9 effect. It's a big water supply effect and it's biggest  
10 in those critically dry years.

11           MS. D'ADAMO: Again, though I think it would be  
12 helpful -- what I had asked for was to have some  
13 information on successive dry years. And so what this is  
14 showing is averages.

15           MR. GROBER: Well, so this is -- the '87  
16 through '92, those were fairly similar. There was one  
17 maybe not critical year, but those are all dry years. So  
18 those are five years in a row when they were at that  
19 level.

20           MS. D'ADAMO: I think it would be helpful, I  
21 think the information is available for each of the  
22 tributaries. And the water supply information on  
23 successive dry years. We have that under baseline  
24 conditions and so what I -- as I recall what we had asked  
25 for was to overlay the SED on top of a series of

1 critically dry years. So just looking at the most recent  
2 drought for example. If we were to go back and pull up  
3 say Modesto Irrigation District's water supply  
4 allocations over the last five years, we'd be able to get  
5 information on what percentage were they shorted. You  
6 know, 20 percent, 40 percent et cetera. And then if we  
7 overlay the SED on top of that what would it look like?

8           And the reason that -- I know this is getting  
9 down in the weeds -- but again getting back especially to  
10 a month of where we would not see big fish benefits, it's  
11 important to know what the water supply picture would  
12 look like over a period of successive dry years. So  
13 instead of say a 40 percent reduction what would you get  
14 in year one? Instead of a 40 percent what would it be,  
15 like 50 percent? And carrying it over year after year  
16 what would it look like? And we would see more frequent  
17 years in which there is zero or near zero supplies.

18           And so looking at it in terms of averages it  
19 sort of masks what would be going on out there in the  
20 real world. And so especially if you have permanent  
21 crops if you've got zero or near zero there's zero  
22 options for you. So I think what we need to see is what  
23 it would look like in actual practice as opposed to just  
24 looking at the averages.

25           MR. GROBER: Yeah, and we have. And again it's

1 hard in a brief presentation, what's shown here is an  
2 average over five years. And yes, it's still an average,  
3 but it's because all the numbers were approximately that.  
4 I don't have the numbers right in front of me, but there  
5 are no zero years, which is I guess maybe that's the  
6 important comment to make. Because if you're talking  
7 about maintaining 40 percent of unimpaired flow in the  
8 tributaries there is still some water supply available.  
9 That means 60 percent is available during that time  
10 period for other uses, so there is no zero supply.

11           And this is demonstrated at -- it's a  
12 significant reduction that's going from over 2 million  
13 acre-feet to just over 1 million acre-feet over a period  
14 of five years. So that's a 50 percent reduction, but not  
15 100 percent. But I hear your comment and we've shared  
16 the full 82-year record of modeling, which shows all of  
17 the variability and that's available. And we can perhaps  
18 do more to show that time series to show what it is for  
19 every year.

20           We did already -- as part of our analysis we  
21 did the drought analysis, which compared that '87 through  
22 '92 period with the most recent drought. And it's the  
23 same magnitude of effect. I mean, there's some  
24 differences, but it's about the same. We did that to  
25 confirm that we've analyzed not just that 82-year record,

1 but also that takes into consideration the most recent  
2 drought.

3           So this theme of the SED does have more than  
4 averages. And I'm going to show a series of tables and  
5 figures with those exceedance plots, because staff agrees  
6 that to understand the effects of the proposal you need  
7 to understand more than just the long-term average. So  
8 we've looked at exceedance plots and tables for things  
9 like what would it do in terms of increasing flows, river  
10 flows. Also, reservoir storage, surface water supply  
11 reductions and also cropping. This then feeds into the  
12 economic analysis.

13           So this is one example that is difficult to  
14 see, but I'm going to zoom in on in a moment, but it's an  
15 example because we've also heard we have 3,000 pages or  
16 3,000 plus pages of document. Well, a lot of it's filled  
17 with tables like this, which this is an example of an  
18 exceedance chart or table. On the left side it's showing  
19 what's the minimum over that 82-year period of record  
20 that we analyzed? What's the maximum, what's the  
21 average, but then also what happens 10 percent of the  
22 time, 20, 30. You know, so it gives you a sense for  
23 what's happening, not in a graphical form. I'll show you  
24 one of those in a moment.

25           But for example, well I'll zoom in first. So

1 I'm going to zoom in just to the -- that's just looking  
2 now at the left most side of it, is looking at the  
3 diversions. So if I look under the 40 percent what this  
4 saying, and we've presented, so here's the average  
5 surface water diversion. This is only looking at the  
6 Tuolumne. We have it for each of the tributaries. And  
7 it's saying on average it's a million or the average is  
8 732,000 acre-feet per year under the 40 percent. And  
9 it's 851 under baseline.

10           And what this also shows is it shows where  
11 those deliveries of water start dropping off. So now  
12 looking across at the 50 percent under baseline it's  
13 still at 878, and under 40 percent it's still at 802.  
14 But you can see under 40 percent it starts dropping off  
15 dramatically, because in those drier years there's simply  
16 less water available for diversion.

17           Looking at it another way, and again I know I'm  
18 going through this quickly, but you can look at it at  
19 your leisure afterwards. It will be posted. This is  
20 showing the same information, but in terms of the deficit  
21 of water supply.

22           For those that like a graphic more than a chart  
23 of numbers this shows all of those 82 years of record.  
24 In an exceedance plot it shows the baseline, which is the  
25 top in the dark blue and it shows you can basically

1 maintain deliveries on the river even under baseline  
2 conditions. There is less as it gets drier, but it stays  
3 pretty stable between 1 million and 800,000 acre-feet.  
4 But then starts dropping off in the 20 percent of wet  
5 year and in particular in the 10 percent of the driest  
6 years.

7 I say wet, in the driest years it starts  
8 dropping off. It drops off more dramatically under the  
9 20 percent unimpaired flow alternative although a drop  
10 tracks it for the full 80 to maybe 90 percent of the  
11 time. But in 10 percent of the years there is less water  
12 available. And it drops off even more dramatically under  
13 the 40 percent unimpaired flow and 60 percent of  
14 unimpaired flow, so a lot more than averages.

15 And here, this is just lumping that same chart  
16 that was just showing the water supply availability.  
17 This is showing the instream flow storage and the  
18 instream flow as a percent of unimpaired flow, so a lot  
19 of information in the report. This same type of  
20 probabilistic information or statistical information  
21 rather is shown, is folded on through the economic  
22 analysis and the SWAP model using the 82 years of record.

23 This is just the slide that we had presented in  
24 our brief 20-minute overview where we come up with a  
25 conclusion of an average annual decrease in economic

1 output of \$64 million, a 2.5 percent reduction. So staff  
2 recognizes how unsatisfying these average numbers are,  
3 which is why throughout the appendices -- and this just  
4 one example shown from Chapter 11 -- this is showing the  
5 exceedance curve of what happens to just one type of crop  
6 in just one district, South San Joaquin Irrigation  
7 District, for small acreage irrigation of dry beans,  
8 processing tomatoes, rice and safflower.

9           And it shows that fully 90 plus percent of the  
10 time there is full cropping of those crops and then it  
11 drops off, you can see on the right side, to something  
12 less during those driest years. But under the proposal  
13 it starts dropping off at about 35 percent of the driest  
14 years and over the 20 percent there is a very significant  
15 drop off.

16           The report has plots for all different crops,  
17 all different irrigation districts and it shows our work  
18 in terms of what then goes into -- from the SWAP analysis  
19 into IMPLAN. And this is then if you look at the overall  
20 results rather than looking at that one average number in  
21 the effect over all years -- this is again an exceedance  
22 plot, so it shows baseline -- that total annual economic  
23 output of \$2.6 million. That's maintained, but then  
24 starts dropping off in 20 percent of years. As you can  
25 see under Alternative 3, it starts dropping off in 50



1 percent of years with the biggest drop off again  
2 happening in the 20 percent of years. So these are very  
3 big effects that are shown already in the SED.

4           And then another way of looking at, and again a  
5 lot of numbers in the table, but just to show you that  
6 the types of information that are in the report -- but  
7 you can also get that information and see how it's a much  
8 larger effect for Alternative 3. Bigger than that \$64  
9 million a year it means that that actually is  
10 concentrated into the driest 30 percent of years. And it  
11 can be upwards of \$235 million or higher in the 10  
12 percent of years.

13           So all of these additional concepts really  
14 require more information, but I'm going to go through it  
15 rather quickly. Groundwater has been a concern that's  
16 been expressed. We analyzed what would be the effects of  
17 the proposal in terms of increases in groundwater  
18 pumping. And that was determined by getting information  
19 from the districts. Most of the districts provided the  
20 information that we requested and we used that to  
21 determine different levels of maximum groundwater  
22 pumping. And we chose to use the lower rate, maximum  
23 rates of groundwater pumping, based on 2009 rather than  
24 2014, because we determined that those are more likely  
25 less unsustainable for a longer period of time.

1           That being said, the question of exactly how  
2 much groundwater pumping is going to happen in the  
3 future, exactly how much recharge is going to happen in  
4 the future when you're changing the system, and now that  
5 we have SGMA; because there is all sorts of things that  
6 can be brought to bear in terms of additional groundwater  
7 recharge, things like that. For all those reasons to  
8 come up with any other result than what we came up with  
9 here in the SED starts becoming really quite speculative.  
10 So we just based our information based on the observed  
11 response to shortage of surface water that have occurred  
12 in recent years.

13           MS. D'ADAMO: Based on baseline conditions?

14           MR. GROBER: That's correct.

15           MS. D'ADAMO: Not with SGMA, as you just said.

16           MR. GROBER: That's correct. So under SGMA the  
17 determination there is that there will be a cumulative  
18 additional impact that will have a greater impact on  
19 water availability for cropping is the biggest impact.  
20 As you would have to get sustainable in general even  
21 though you could potentially offset that with some  
22 greater recharge there would be bigger effects on water  
23 supply and even further reduced water supply.

24           The proposed salinity objectives -- did I just  
25 skip over -- two-fold reasons for reviewing the salinity

1 objective. One, is as I had provided in the introduction  
2 in the past, is this is all about the reasonable  
3 protection. It's both for the fish and wildlife, but  
4 also for agriculture in the southern Delta. It's not  
5 about the absolute protection, so the first component of  
6 this is let's just revisit and do what is reasonably  
7 required.

8           The second reason that we had to reassess is  
9 that there was litigation involving the Water Quality  
10 Control Plan and the application of the current numbers  
11 could not be applied to NPDES dischargers, because the  
12 court found that we did not do the necessary analyses.  
13 That necessary analyses -- so I'll come back to that in a  
14 moment.

15           So the first part I think that I've mentioned  
16 is that the determination -- and it's based on the  
17 science -- is that the salinity of the southern Delta is  
18 suitable for all crops. And that you could increase it  
19 between a range of about 0.9 to 1.1 and still be  
20 protective of all crops normally grown in the southern  
21 Delta.

22           This all gets very much more complicated very  
23 quickly, because it has to do with leaching requirements  
24 and how much rainfall you get. But even if you consider  
25 all of that, that you might have some yield loss, because

1 that's ultimately what it's about -- how high can you  
2 have the salinity without having yield loss? But even  
3 with these numbers there might be some selective yield  
4 loss of about 5 percent during low rainfall years when  
5 you don't get the additional leaching that would be  
6 provided by that cleaner water. That being said, the  
7 proposal is expected to improve water quality in that  
8 February through June period.

9           So since we had lost on the litigation we had  
10 to reevaluate and come up with a new Program of  
11 Implementation that considered the effects on NPDES  
12 dischargers. And we also had to consider those Porter-  
13 Cologne -- the Water Code Section 13241 factors -- which  
14 we have now done that. We've considered the past,  
15 present and future beneficial uses of water. We've  
16 considered the economics and each of these other things.

17           SalSim, another one where I have actually a  
18 number of slides, because it's been presented that -- you  
19 know, the famous only additional 1,000 fish. So the lead  
20 slide here is that in analyzing, in using SalSim. This  
21 is a model that has been actually frankly before the  
22 Board for a number of years. It's been modified,  
23 improved for a number of years. But we recognized in  
24 using it we found limitations, which we've shared with  
25 the California Department of Fish and Wildlife staff,

1 which is why our lead and our description on the use of  
2 SalSim had these words. We recognized early on that it  
3 wasn't doing some of the things that were thought that it  
4 would do.

5           And some of this is tied to some of the earlier  
6 discussion. We simply have not had conditions in these  
7 tributaries that have been of benefit to salmon. And  
8 since SalSim is an empirical model that is based on the  
9 current conditions, it hasn't been able to show how  
10 things would improve. So we recognized that early on and  
11 worked with CDFW. And we had this introduction showing  
12 well we weren't then going to run the model and say --  
13 and then hide it -- so we say, "Here's why SalSim is not  
14 the best tool to use. Let's present what we've done,  
15 what we've learned, and then move forward."

16           So some of the limitations of SalSim even  
17 before finding the problems with it, is that it has  
18 priming years where you don't necessarily see any of the  
19 effect for the early years. It also has a hot-wired  
20 ocean crash, so you can't recover from that, so it's not  
21 illustrative of any other years, and many other  
22 uncertainties with the model. So this chart shows those  
23 priming years and the last five years reflecting the  
24 ocean crash, so just to kind of just take those things  
25 out.

1           And again, this isn't the rationalization to  
2 say well here you can use SalSim. It's just showing our  
3 work and saying well as Jay Lund would say, "You know,  
4 not all models are wrong, some are useful." Well, some  
5 are less useful than others, especially if you identify  
6 problems with them. But one thing this does show is if  
7 you take out the priming years, if you take out the ocean  
8 crash, you start producing more salmon. It still begs  
9 the question, is it enough? This isn't a numbers game.  
10 Again, we didn't rely upon SalSim. What we relied upon  
11 instead are the temperature benefits that we'd expect and  
12 the floodplain benefits.

13           This slide just shows some of the other bullet  
14 point reasons of why SalSim, what we discovered, is not  
15 useful for the SED. And these are things that could  
16 potentially be improved and you might hear some of that  
17 from CDFW later today, but again this is only a model.  
18 It's only one tool. It's not the tool that we relied  
19 upon to quantify the benefits in the SED, which are very  
20 real benefits having to do with temperature improvements  
21 and floodplain inundation which would lead to greater  
22 numbers, production of salmon, and resilience of salmon.

23           MS. D'ADAMO: I have some questions here if you  
24 could go back? So I wish that you had the slides that  
25 you had included from the PowerPoint that you provided in

1 Stockton, okay the 16th. So there are some additional  
2 slides that you had that I spent some time going over on  
3 this, if you're not relying on SalSim what are you  
4 relying on, question.

5           And so on the temperature benefits you have a  
6 slide, and maybe you could come back toward the end of  
7 the day on this. But you've got slide 59 from the  
8 previous PowerPoint and it has information on the  
9 percentage, increase in percent time temperature criteria  
10 is achieved. And so just pulling out under the 40  
11 percent we have here an area that you pulled out, 39  
12 percent increase.

13           And so what I was hoping to do is hone in on  
14 some of the actual empirical data on temperature  
15 benefits, because just digging through here I think we're  
16 only talking about less than one degree. And so I would  
17 like some additional information. If you're not relying  
18 on SalSim, which it looks like with these adjustments  
19 maybe there's a way to shed some additional light on it.  
20 So instead of 1,100 fish it might be 7,600.

21           But you're saying that you're not actually  
22 relying on SalSim. You're relying on these other tools  
23 and so if you're relying on these other tools, I think it  
24 would be helpful for us to have specific information on  
25 what change would we see. Not a percentage change, but

1 what actual temperature benefits do you expect to see?  
2 And if it's less than one degree it's kind of hard for me  
3 to understand how that could produce much more than the  
4 charts that you have adjusted showing perhaps as much as  
5 7,600 fish. I just want to better understand it.

6 And then on floodplain benefits, we did receive  
7 some useful information from some of the NGOs on  
8 questioning the -- oh what was it -- the number of days.  
9 You had a chart, I think at the first Board hearing that  
10 we had, on the number of days that you would see an  
11 increase in floodplain habitat. And so that's an area  
12 that I'd like to better understand as well, because --  
13 and I've raised this issue -- I was just on the Merced  
14 River this weekend and took a look again and spent some  
15 time just kind of walking along the river corridor. It's  
16 hard to see how additional flow would really make much of  
17 a benefit, on the Merced in particular.

18 And so I'm not questioning the need for  
19 floodplain benefits. I'm just questioning that flow will  
20 necessarily get us there. And I think this is why  
21 settlements are so important, because we probably need to  
22 have some actual restoration activities out in the  
23 rivers. So not to go too far off track here, but I think  
24 if we're going to rely -- if we're not going to rely on  
25 SalSim, but we're going to rely on these other components



1 we're going to need some additional information on how  
2 you get there.

3 MR. GROBER: Sure and since that was one of the  
4 specific interests, that was a subject of one of the  
5 workshops and so I would refer -- in response to your  
6 question, but to others that might have the same question  
7 -- we had more slides showing tables similar to some of  
8 the ones I've shown before.

9 For that one having to do with June  
10 temperatures showing, well here's not just the percent of  
11 the time that you're achieving certain criteria, but  
12 here's how much you're reducing temperatures at all  
13 different locations in the river. So we have those  
14 tables are in the Chapter 19 in the report. We have a  
15 number of those and some of those in the PowerPoints from  
16 the workshops that we and December 5th, December 12th.  
17 Thank you.

18 The Merced River SAFE Plan, and I should leave  
19 with this, is that it's certainly good to see proposals  
20 that we -- you know, this is all about encouraging  
21 settlement, but the details are important. And since as  
22 we say, non-flow measure is important, but flow is  
23 equally important -- the limited information that we have  
24 we tried to discern and put in perspective what the SAFE  
25 Plan might be including. Because there was some

1 reference also to FERC proposed plans. So these are just  
2 comparing different flows for the February through June  
3 period by year type.

4 The current baseline FERC numbers, and then  
5 also what's referred to by those developed at the  
6 Strawman Merced River Settlement Agreement, and the final  
7 FERC recommendations; and then to compare them with the  
8 Phase 1 40 percent unimpaired flow. It's shown on the  
9 chart as a minimum, but it's based on the median values,  
10 because of course the staff proposal varies by year type.  
11 But if you take all the wet years or all the above normal  
12 years you can come up with a median flow.

13 So as you can see there's a pretty big distance  
14 between those flows, so there is -- we'll have to as we  
15 move forward and that's a good place to be -- we'll have  
16 to be evaluating what those flows are and see how the  
17 whole proposal comes together.

18 There was also comments and concerns that we  
19 didn't rely upon or describe some of the fish studies  
20 that have been done on the Tuolumne including temperature  
21 studies, predation, population model studies. There has  
22 been a lot of concern, disagreement out there with the  
23 fish agencies with those studies. So these are just the  
24 slides just showing some of the concerns about the  
25 different studies and that the recommendations didn't

1 include certain things.

2           So for temperature it didn't include the  
3 effects on growth, disease, predation, behavioral  
4 responses, predation. It didn't consider the effects of  
5 the full range of conditions in year types. And the  
6 population model didn't account for high water  
7 temperatures, so some of the same failings as the SalSim  
8 model.

9           This concept and the concern with the  
10 unimpaired flow and block of water, I think we've perhaps  
11 already covered it sufficiently in discussion, but it's  
12 both those things. It's both important to get away from  
13 this thought of optimizing, but it's also important as  
14 providing a block of water, because the staff proposal is  
15 certainly not a optimal for fish. It's a balance, it  
16 considers all the other uses.

17           The flow recommendations, I think it had come  
18 up as an issue of like well how does what we're proposing  
19 compare to many of the other proposals? Since this has  
20 come up even back in the last release of the SED, I'm  
21 just showing an example from Chapter 3 of how the flow  
22 proposal -- the Alternatives 2, 3 and 4, which are the  
23 20, 40 and 60 percent of unimpaired flow -- how those  
24 compare to different recommendations that we receive.

25           And this is just one example and it's comparing

1 it to The Bay Institute, the Natural Resources Defense  
2 recommendations. As you can see their recommendation  
3 kind of straddles between the Alternatives 3 and 4,  
4 between that 40 and 60 percent.

5           Predation, the key point for this is that the  
6 underlying conditions in the San Joaquin are because  
7 they're so far from the optimal in terms of flow they  
8 favor non-native species. There's less seasonality, the  
9 variable conditions are gone, you're reducing the  
10 resilience of fish, because temperatures are far less  
11 than optimal, habitat is gone, so these fish are  
12 migrating. And they're already weak and not -- failing  
13 to thrive, so they are more prone to predation.

14           The conditions that salmon used to have to deal  
15 with predators, including the improved temperatures,  
16 improved floodplain but also those high flows and pulses,  
17 the safety in numbers, those are all gone. So there's  
18 not enough fish to satiate the predators. Other things  
19 associated with high flows that are of benefit of salmon,  
20 not just in the San Joaquin but in the San Joaquin River  
21 and the Delta.

22           And here's an example to show why it's  
23 important to show all the data, not just some of the  
24 data. This is a predation study that I had been referred  
25 to in one of the previous hearings, and it showed very

1 little survival. But that was just looking in the yellow  
2 and the green. It was just looking at relatively low  
3 flow conditions. You can see at 482 and 495 CFS, the  
4 average flow, when it's higher you can see predation.  
5 That the number that survive is much higher as a total  
6 that is released, so you have to look at the full data  
7 set.

8           And then finally closing with the concern,  
9 which staff shares over disadvantaged communities. There  
10 was a discussion recognizing that there's the long-  
11 standing -- not just as a result of this program -- but  
12 there's long-standing issues in the San Joaquin and lack  
13 of access to clean drinking water that affects  
14 disadvantaged communities. And there's an  
15 acknowledgement that requiring the additional instream  
16 flow would exacerbate this ongoing problem.

17           So we also discussed that in part of  
18 implementing this, we would provide technical assistance  
19 and also direct consolidations for drinking water  
20 supplies where appropriate. And do other things to  
21 address the concerns and effects.

22           And with that sorry that I ran long, but  
23 hopefully we had a discussion over it as well, was  
24 helpful, and I and staff are available for additional  
25 questions.

1           VICE CHAIR SPIVY-WEBER: Thank you very much.

2           And for those of you who do not know, this is  
3 the only opportunity that all of us can talk to each  
4 other. We have to do it in a publicly noticed meeting  
5 and so the questions that are coming from the dais are  
6 very informative, very good.

7           In terms of elected officials, I only -- how  
8 many more do we -- have two, just two?

9           MS. LANDAU: There's five.

10          VICE CHAIR SPIVY-WEBER: Five, okay. What I'd  
11 like to do is take a break after the elected officials  
12 have spoken. I know Larry Byrd asked for additional time  
13 and he is an elected official. If he could do it after  
14 the break that would be very helpful, because he wanted a  
15 little bit of extra time. So it would be four:  
16 Assemblyman Adam Gray, who's here I believe; Ella Strain  
17 who is here for Assembly Member Jim Frazier; Gary  
18 Soiseth, who's with the City of Turlock; and Amy Bublak,  
19 who's with the City of Turlock.

20          So Adam Gray?

21          (Colloquy re: time to speak.)

22          VICE CHAIR SPIVY-WEBER: Well, three minutes,  
23 but we'll have -- you know, we'll be accommodating.

24          ASSEMBLY MEMBER GRAY: Thank you. Can you hear  
25 me now?

1 VICE CHAIR SPIVY-WEBER: Yes.

2 ASSEMBLY MEMBER GRAY: Thank you members, for  
3 providing some time for comment. In the interest of time  
4 I actually have a letter that I'm going to submit to the  
5 Board. You know, frankly from my perspective the report  
6 is so riddled with inaccuracies and misinformation and  
7 flawed analysis that we put those in the longer letter.  
8 And I'm going to make some briefer comments right now,  
9 more general in their nature.

10 These hearings have offered a very public forum  
11 to display the enormous disconnect that exists between  
12 protecting the San Joaquin Valley water supplies,  
13 environmental goals for fish populations, and what your  
14 Plan actually proposes. Environmental groups criticized  
15 this Plan at the first Sacramento hearing, for failing to  
16 demonstrate any legitimate benefit to salmon populations.  
17 And asked that the Plan incorporate non-flow measures,  
18 which they believe ecological goals cannot be achieved.

19 Agricultural interests have leveled the same  
20 criticism. That without non-flow measures, the proposal  
21 before you today simply wastes precious water without any  
22 discernible benefit.

23 You also heard from irrigation districts as  
24 well as local city and county officials, who explained in  
25 great detail that the proposal will jeopardize the

1 drinking water supplies of one-and-a-half million people  
2 in one of the most disadvantaged areas of the state.  
3 Where one in four live in poverty, where unemployment  
4 consistently remains five points above the rest of the  
5 state. In fact, the area put on the chopping block faces  
6 significant challenges beyond poverty. Challenges like  
7 being the largest contiguous health professional shortage  
8 area in California. Where life expectancy and  
9 educational attainment is among the lowest in the state,  
10 while violent crime rates, air pollution, and premature  
11 deaths are among the highest.

12           We disagree about the number of job losses this  
13 Plan will cause as well as how severe the economic  
14 impacts will be. Although I must point out that while  
15 SED predicts removing 300,000 acre-feet of water from  
16 northern San Joaquin Valley will cost just \$68 million,  
17 your own economists working on the Delta Tunnels Project  
18 predict every 100,000 acre-feet of water has a total  
19 economic value of \$1.4 billion.

20           The only source of consistent agreement  
21 throughout these hearings has been that all parties  
22 prefer the more immediate and enduring option of reaching  
23 voluntary settlements. Unfortunately, because of your  
24 staff's refusal to engage in discussions during the  
25 drafting of this report, failure to respond to comments



1 submitted on the prior version, and the disingenuous  
2 manipulation of the facts contained in the latest  
3 proposal there is a strong and justified belief that you  
4 and your staff have not acted in good faith. The  
5 obligation to restore confidence that legitimate  
6 settlements can be reached to negotiations is squarely on  
7 your shoulders today.

8           There are far too many flaws contained in the  
9 current report for it to be considered a viable starting  
10 point. My recommendation is that you call a mulligan,  
11 send this report back to your staff, and with a directive  
12 to start over. Quite frankly, the only other option is  
13 to spend years bitterly fighting this out in court.

14           Thank you for your time.

15           VICE CHAIR SPIVY-WEBER: Thank you.

16           Ella Strain, and can the other two line up  
17 behind her, so that we can move quickly?

18           MS. STRAIN: Thank you, Board members for  
19 having this hearing today. My name is Ella Strain and  
20 I'm here on behalf of Assembly Member Jim Frazier who  
21 represents the 11th Assembly District and he wanted me to  
22 make the following comments.

23           The communities in the 11th Assembly District  
24 and surrounding regions depend upon a healthy Delta  
25 ecosystem. The Board has taken on a massive

1 responsibility by updating this Plan and Assembly Member  
2 Frazier would like to extend his sincerest appreciation  
3 for the time they have allowed for public comment. It is  
4 important that everyone feels as though they have  
5 reasonable time to voice their thoughts and opinions.

6 A few concerns have come up when reviewing  
7 Phase 1 regarding the proposed flow objectives and  
8 southern Delta salinity standards. The proposed 30 to 50  
9 percent increase in flows in the current Phase 1 SED is  
10 alarming, since as has previously been discovered through  
11 the best available science, the higher flows are needed  
12 in order to save the native species that are rapidly  
13 declining in the Delta.

14 During this process the Board should keep in  
15 mind the fact that these important fish populations, and  
16 the Delta's environment as a whole, have been disregarded  
17 in the past in order to benefit other areas throughout  
18 California. It is understandable that the Board must  
19 make their decision based on a careful balancing act  
20 between the competing needs from different regions.  
21 However, Assembly Member Frazier urges the Board to  
22 support water quality standards that are representative  
23 of best efforts to support the salmon population and  
24 other native fish that are currently suffering from  
25 previous decisions that supported water conveyance over

1 ecological sustainability in the Delta.

2           There are also apprehensions about the  
3 potential for the current proposal to weaken salinity  
4 standards in the Delta. The Delta communities rely on  
5 strong salinity standards in order to ensure a level of  
6 water quality that will not devastate the agricultural  
7 region, compromise rival drinking water, and destroy  
8 fisheries in this area. The Board should not take action  
9 that will put in place a system that will relaxes these  
10 standards to benefit agricultural businesses in the  
11 Central Valley while leaving the burden on the  
12 agricultural community in the Delta. Hurting this  
13 industry will inevitably lead to a loss of jobs in the  
14 Delta region.

15           Public health is also at stake here. The Board  
16 should consider the direct impacts on the residents of  
17 the Delta communities and their water supply that would  
18 result from the weakening of salinity standards in the  
19 southern Delta. This is a major issue that cannot be  
20 ignored when considering the proposed revisions.

21           Thank you again for taking the time to listen  
22 to the public's comments and concerns. Our office looks  
23 forward to working with you guys in the future on these  
24 important issues. Thank you.

25           VICE CHAIR SPIVY-WEBER: Thank you very much.

1 Yes, Mr. Mayor.

2 MAYOR SOISETH: Good morning. My name is Gary  
3 Soiseth and I am here today not only as the Mayor of  
4 Turlock, and an employee of the Modesto Irrigation  
5 District, but most importantly as a proud third  
6 generation almond farmer.

7 As the leader of a city of 72,000 people in the  
8 middle of the Central Valley we're an agriculturally-  
9 based economy with over 3,000 jobs directly related to  
10 food processing from turkeys to milk to almonds to  
11 cheese. We created this economy to play to our region's  
12 strengths, which is why water is fundamentally important  
13 to our ability to maintain and create jobs in my town.

14 When I ran for Mayor two years ago, I focused  
15 on one major topic, water reliability. We started with  
16 23 potable wells, since I've been Mayor we've lost 4 due  
17 to unsafe spikes in arsenic and nitrate levels.

18 As a city and farming community we have  
19 conserved and conserved and conserved some more. But we  
20 can't conserve our way out of a drought and we can't  
21 conserve our way to new sources of drinking water. So a  
22 year ago we worked with the Turlock Irrigation District  
23 to acquire 30,000 acre-feet of Tuolumne River water  
24 annually for 50 years. This was no small task. The  
25 agreement had been an idea for over 30 years, but Turlock

1 and Ceres were finally on a course to drinking water  
2 reliability. A reliability that is now threatened by the  
3 SED.

4           With the SED you have decimated our ability to  
5 provide for ourselves and you demand too much from our  
6 community. Turlock has met and exceeded every standard  
7 you have set for us. You've required us to stop  
8 discharging our tertiary treated wastewater into the  
9 river, so we embarked on a \$35 million recycled water  
10 project to use the water on our farms.

11           You've required meters on our homes, so we  
12 installed them early. And then you use this already low  
13 level of water use as a baseline to cut even more for  
14 drought conservation.

15           You required us to meet stiff conservation  
16 targets. We have met them and will continue to do so.

17           And now you're requiring us to meet the  
18 groundwater standards set up by SGMA, which led us to  
19 embark on a surfacewater project to gain another source  
20 of water for our citizens. A project that can cost  
21 upwards of \$200 million and will raise water rates to our  
22 already financially-strapped towns.

23           These are not easy targets to reach. They  
24 require steep investments. They require political will  
25 and they stretch the already fragile socioeconomic fabric

1 of Stanislaus County.

2 Let me put my community's sacrifice into  
3 perspective. One of the reasons I chose to speak here in  
4 Sacramento was because it can be easy to forget the faces  
5 of those that you met in Stockton, Modesto and Merced who  
6 will directly be impacted by your decisions.

7 Once such person is an 88-year-old Turlock  
8 farmer named Viola Brown. She has farmed the same 20  
9 acres of ground since her husband returned from World War  
10 II and purchased it with his GI bill. They grew hay,  
11 wheat and sweet potatoes. And then they heard about a  
12 Cooperative named Blue Diamond who was encouraging people  
13 to plant orchards, specifically almonds.

14 Planting a permanent crop, a high-value crop in  
15 the 1950s without a large market was a huge risk. The  
16 orchard requires significant upfront costs and took four  
17 years to start producing. And when it did, the price per  
18 pound was weak. To make the farm payments she and her  
19 husband continued their full-time jobs at the nearby  
20 peach canneries and poultry slaughterhouses. Farming  
21 their acreage at night and never expanding past their  
22 original 20 acres, much like the majority of TID and MID  
23 farmers.

24 They lived within their means and strode to pay  
25 off the farm as quickly as possible. They're not out-of-

1 town investors growing thousands of acres of almonds.  
2 They're hard-working Californians that were able to pay  
3 off their farm, because their risk of planting almonds  
4 succeeded. Something that would have never been a  
5 reality without a reliable source of surface water and a  
6 TID canal that's at the back of their property.

7           If the SED is executed as it stands, and that  
8 lateral runs dry without any surface water, her orchard  
9 will be gone. She can't afford to put in a costly drip  
10 system for older trees that have a water root zone. And  
11 even if she could afford it, the establishment of a new  
12 well faces significant political and financial hurdles  
13 for her. And it runs contrary to our region's attempts  
14 to meet SGMA requirements.

15           Viola Brown is my grandmother. And her story  
16 has been repeated up and down the Central Valley for  
17 decades. While our region struggles with the nation's  
18 highest unemployment rates, lowest literacy rates, and  
19 ever-expanding number of disadvantaged communities  
20 farming was and is our values way of upward social  
21 mobility.

22           The SED single-handedly jeopardizes this  
23 reality for thousands of my neighbors, my families, and  
24 my friends. People like my grandmother are anxiously  
25 watching as you threaten their economic existence.

1           So in closing I ask you to look at the science,  
2 not cherry pick statistics. I ask you to look at all  
3 options to restore fish populations, both flow and non-  
4 flow measures. And I ask you to allow local input and  
5 decisions that will impact my local community. I want to  
6 believe that this Board has the best intentions of my  
7 community at heart. But the severe flaws that have been  
8 pointed out in the last few weeks in these hearings  
9 proves that your staff needs to revisit the document.

10           As a Mayor, I would never accept a staff report  
11 with this many inconsistencies on a dog park proposal,  
12 let alone a document that will shape the future of water  
13 in my region. So I urge you to take a more balanced  
14 approach to the SED. The fate of my city rests with you.  
15 The fate of thousands of farmers that grow your food  
16 rests with you. The fate of thousands of employees that  
17 process your food rests with you. And the fate of the  
18 American dream in the Central Valley still rests with  
19 you. Thank you.

20           VICE CHAIR SPIVY-WEBER: Thank you.

21           This will be our last speaker before we take a  
22 break and -- go ahead.

23           COUNCIL MEMBER BUBLAK: Good morning. My name  
24 is Amy Bublak and I'm a Council Member in the City of  
25 Turlock. As a former police officer of two decades, I



1 have consistently stressed the need for a strengthened  
2 police force in Turlock. However, as a member of  
3 Stanislaus Regional Water Authority I have come to fully  
4 realize the importance of water security in our city.

5           As Vice Chair Vierra stated at the Modesto  
6 hearing the SRWA is a joint powers authority consisting  
7 of the cities of Ceres and Turlock. The purpose of the  
8 SRWA is to develop a regional drinking water treatment  
9 supplier by using surface water from the Tuolumne River.

10           Like you the City of Turlock is concerned with  
11 the declining fish population. However, we do take  
12 exception to the approach you are taking to improve the  
13 situation. Our economic base is agriculturally-related.  
14 Our main employers are food processors and over half of  
15 Turlock's residents work in town and are connected to  
16 many of the companies.

17           In addition to diversifying our dependence on  
18 groundwater, Turlock understands our responsibility to  
19 conserve water. Last year we pumped 5.6 billion gallons,  
20 about the same amount as we did in 1994. So despite  
21 adding 24,000 residents in the past 21 years we have been  
22 able to reduce by 34 percent. We know that we need to  
23 expand our portfolio of water resources.

24           For the past 25 years we have looked at various  
25 options to develop a surface water supply. This is our

1 single largest infrastructure investment since our  
2 communities incorporated. We recognize how critical  
3 surface water supply is to our communities. The Ceres  
4 City Council and our counterparts in Turlock embarked on  
5 this forward thinking and ambitious project. The bottom  
6 line is Ceres and Turlock lack the resources to invest  
7 millions of dollars with no assurance that a surface  
8 water supply will be available.

9           The SED further stresses our drinking water and  
10 water quality problems. The SED also takes away our main  
11 opportunity to gain groundwater sustainability in our  
12 region. I ask you to take a more balanced approach to  
13 addressing the fisheries concerns, which we all share.

14           I urge you to be more active in developing  
15 water supply projects, like the one in Turlock, to ensure  
16 the Central Valley's basic right to a safe, clean and  
17 affordable water supply is strengthened. Thank you.

18           VICE CHAIR SPIVY-WEBER: Thank you.

19           We will take a 10-minute break. We'll come  
20 back at 10 of 11:00. We will have the three electeds who  
21 are still before us: Larry Byrd, Sue Alamo and Ron  
22 Macedo. And then we will move to the fish agency panel.  
23 And then we will take lunch, so it depends on how long  
24 that is. Probably it'll be a half hour for lunch. Thank  
25 you.

1 (Off the record at 10:38 a.m.)

2 (On the record at 10:49 a.m.)

3 VICE CHAIR SPIVY-WEBER: California Department  
4 of Fish and Wildlife, U.S. Fish and Wildlife Service,  
5 National Marine Fisheries Service, and USEPA please come  
6 forward and take you places as the panel.

7 (Colloquy re: speaker order.)

8 Okay. As they sit down go ahead and speak. Go  
9 ahead.

10 MR. BYRD: Are you ready for me?

11 VICE CHAIR SPIVY-WEBER: I am more than ready.  
12 You've lost about a minute, so --

13 MR. BYRD: Okay. Thank you for giving me this  
14 opportunity. I'm Larry Byrd, a rancher and a Modesto  
15 Irrigation District Board member and employee for over 40  
16 years. I wanted to today -- I wasn't able to give this  
17 presentation in Modesto, because I was under the weather  
18 and you guys gave our panel 45 minutes. So I kind of  
19 missed out, so thank you for letting me have a few  
20 minutes here today. I'll try to expedite this as quick  
21 as I can.

22 VICE CHAIR SPIVY-WEBER: Please do. If you can  
23 take less than five minutes that would be great.

24 MR. BYRD: Okay. So there's not going to be  
25 any charts, any modeling, or any graphs from Larry Byrd.

1 I'm just a blue-collar simple guy that knows the Tuolumne  
2 River. I've lived on the Tuolumne River for many, many  
3 years. I border it approximately seven miles of the  
4 upper Tuolumne, so I'm actually in the part of the  
5 Tuolumne where most of the salmon eggs are laid. So I'm  
6 very interested in the salmon and always have been.

7 I've followed this very closely since 1971,  
8 very closely. And then prior to that I did a little bit  
9 of research prior to '71 about the fish on the Tuolumne,  
10 because the water is about the fish is what I'm  
11 understanding.

12 So I want you to know I also did the releases  
13 for Modesto Irrigation District for the fish flows for 25  
14 years in the Tuolumne. Not only border several miles of  
15 the Tuolumne and ranch it, but did the releases for the  
16 salmon industry or the salmon fish for over 25 years  
17 manually with a gate. Now it's all automated now, in  
18 conjunction with TID.

19 So I wanted to give you a little history that  
20 MID was formed in 1887. It was called the Wright Act,  
21 built La Grange Dam and completed it in 1893, and started  
22 our first flow of water in 1904 out of our main canal.  
23 That's the history I wanted to have, and now this is  
24 going to be mainly about the Tuolumne River.

25 And I'm concerned about science, I'm concerned

1 about modeling. I don't think anyone understands that  
2 Tuolumne better than I do and has lived it like I have.  
3 Now, I have watched this fish population fluctuate over  
4 years, okay? Since 1971, that I've been there paying  
5 attention to these fish. And it's always done this.

6 On these wet years you get a wet year -- I'll  
7 give you an example, 2011 -- we ran large flows down the  
8 river and no salmon for four years as you guys know.  
9 We've been in a four-year dry period. This year we had  
10 one of our biggest numbers in the last 15 years; 3,521  
11 fish this morning. As of last year at this date, 500.

12 So all that water or no water, no water, and we  
13 have all these fish this year doesn't add up, but it adds  
14 up to me. Because I've seen this happen for years, it's  
15 just like this, it doesn't matter. It's a roller coaster  
16 ride. Some years you have 3,400 fish, some years you  
17 have 3 or 4,000 fish. It's just the way it is.

18 It is never due to the water, because we run  
19 the same flows of water consistently. Especially the  
20 last four to five years, those have been consistent  
21 flows. And when I heard somebody say earlier single-  
22 digit numbers, but it's always 100 CFS plus. And we add  
23 a little bit of water to those flows to show our best  
24 foot forward.

25 Okay. Now I want to talk real quickly about

1 doing restoration work on the Tuolumne. I introduced  
2 Dave and Allison Boucher, who is the Tuolumne River  
3 Conservatory, to a piece of land on the Tuolumne River 20  
4 years ago. So if you scratch my back I've got a little  
5 enviro here, because I am a conservationist. I am an  
6 environmentalist. I want to preserve the land. I want  
7 to preserve the river, but we've got to do it in the  
8 right way.

9           We've got to do it to where we don't do more  
10 harm in the river than we're doing now. I think what  
11 we're doing now, in the flows that we're doing in this  
12 river currently, are the answer. This is what's going  
13 on. You see the fish numbers each year.

14           Also, we need to do more restoration projects.  
15 Allison and Dave did a beautiful restoration project on  
16 the upper Tuolumne at Bobcat Flat where they purchased  
17 this 200 acres of ground. And I helped them find this,  
18 get there, why would I do that? Why would I be working  
19 with an environmental group on the river? Because I want  
20 that river to be the river they want it to be. I want to  
21 see those fish. I want to see the wildlife, which we're  
22 seeing.

23           By the way, a contradiction to what you might  
24 have heard the other day and what I heard in one of the  
25 hearings -- the eagle, the Bald eagle and the beaver were

1 the two comments I heard -- they're not seeing them like  
2 they did. Very untrue. We have such a beaver problem on  
3 the Tuolumne River it's unbelievable. And the Bald eagle  
4 is up there everywhere, everywhere on our ranch. So  
5 we're seeing them everywhere, so I just wanted to dispute  
6 the idea that we're not losing wildlife on the Tuolumne  
7 whatsoever.

8 I know I've only got a couple of minutes --

9 VICE CHAIR SPIVY-WEBER: Can you wrap up?

10 MR. BYRD: -- in closing let me do this, I  
11 hated to close yet, because I have a lot to say but here  
12 we go. In my opinion, my professional opinion and the  
13 guy that lives the river for all these years, more water  
14 doesn't produce more fish. But if we do joint ventures  
15 with the Tuolumne River Conservatory or even MID and TID  
16 and we do these restoration projects like they're doing,  
17 I see some gain in that. I see where we can help things  
18 out.

19 I'm real concerned that if we don't pay  
20 attention to this that we're going to shoot ourselves in  
21 the foot. When I see a large water flow, a lot of times  
22 we're not seeing the fish, because we screwed them up.

23 One more thing I'm going to leave you with,  
24 I've never seen a smolt in that river after March 15th.  
25 There's no spring-run Chinook and by then all the smolts

1 have been worked down the river, so I've never seen that.  
2 I want you to know that, so when you're talking about  
3 those after March flows they're very unnecessary. It's  
4 not there, it's just not there, why waste that block of  
5 water on something that's not there?

6           It's working what we're doing. We'll continue  
7 doing what we're doing. And I promise you that MID and  
8 TID are willing to do restoration programs on that river  
9 or anything besides those flow measures that will  
10 actually do more harm than good.

11           I'm talking from my heart. I'm not talking  
12 from my head. I've got all the graphs here that you guys  
13 have. I've got all that, I've studied it. I'm telling  
14 you, that's not the answer. Thank you.

15           VICE CHAIR SPIVY-WEBER: Thank you.

16           MR. BYRD: Thank you for listening to me.

17           VICE CHAIR SPIVY-WEBER: Joe, I'm sorry -- I  
18 said Sue -- Joe Alamo and Ron Macedo.

19           MR. ALAMO: Thank you, Vice Chair and members  
20 of the Board. Like you said, my name is Joe Alamo, I'm  
21 currently the President of the Turlock Irrigation  
22 District Board of Directors and have served as a Board  
23 member for the past seven years.

24           I'd like to thank you for extending public  
25 comment for an additional 60 days. This extension will



1 allow TID and others impacted by this proposal additional  
2 time to provide a complete technical analysis of the SED.  
3 Also I'd like to say thank you for holding your hearings  
4 in Modesto, Merced and Stockton last month.

5           In Modesto you heard from TID that there are  
6 alternatives other than just flow to improve fisheries.  
7 You've also heard the passionate pleas from our  
8 residents, businesses, and growers in Modesto and Merced.  
9 So I have no reason to rehash those points today. Today  
10 I want to focus on three specific points that those who  
11 attempt to vilify Central Valley agriculture may have  
12 conveniently ignored or perhaps overlooked.

13           I'm unsure where the Board falls on these  
14 areas, but I'd be remiss today if I did not mention them.  
15 Point 1, TID's diversions from the Tuolumne River for  
16 farming have been the same since 1926. Fluctuating, of  
17 course, along with the water type year. Turlock  
18 Irrigation District has served the same 150,000 irrigated  
19 acres for close to a century. Our farming footprint  
20 hasn't increased over the last 100 years. Rather our  
21 district is a model for what should be -- sustainable  
22 farming looks like in California.

23           Some groups speaking in front of you have  
24 implied or outright stated that excess diversions for  
25 farming have damaged the fishery in our region over the

1 past 90 years. However, TID's diversion paradigm has not  
2 changed in the last 90 years. During this time ensuring  
3 flows have actually increased. Point Two, the average  
4 parcel size within TID is less than 30 acres. It's been  
5 conveniently, for some advocates of increased flows, to  
6 label TID growers as corporate farmers. However, that is  
7 not what TID is and is not who our over 5,800 growers  
8 are.

9 I would also like to respond to your staff  
10 presentation a little bit. According to our own analysis  
11 in 2014 and 2015, we would have had a zero allocation for  
12 any of our growers under the new SED paradigm if it was  
13 in place in the past.

14 So to close with my final point, this SED as  
15 written does not give us the room to work with the  
16 various agencies to do the things that the river needs  
17 and deserves. Our agencies can either plan for a decade-  
18 long legal battle or we can actually do something  
19 meaningful for the river without harming our region.

20 I'm asking you to thoroughly review the best  
21 and incorporate TID's pending technical comments and  
22 recent science conducted on the Tuolumne. After you have  
23 reviewed all our comments, please communicate with us and  
24 our experts to revise the SED over the coming months.  
25 Allow us the opportunity to work together to arrive at a

1 collaborative solution that minimizes the impacts to the  
2 region and can maximize the benefits to the fishery.

3           There's a better way and the Turlock Irrigation  
4 District is here to help you guys find it.

5           VICE CHAIR SPIVY-WEBER: Thank you.

6           MR. ALAMO: Thank you.

7           VICE CHAIR SPIVY-WEBER: Yes, sir.

8           MR. MACEDO: Good morning, members of the  
9 Board. My name is Ron Macedo and I've been on the Board  
10 of the Turlock Irrigation District for seven years as  
11 well. I've farmed in Turlock my entire life. I grow  
12 pumpkins and run a corn maze and a pumpkin farm there and  
13 we have the pleasure of introducing about 2,000  
14 kindergarteners a year to agriculture there through field  
15 trips. I'd like to continue to do that.

16           I have some comments on the document. The only  
17 numerically quantified assessment on the fishery in the  
18 SED is the fall-run Chinook salmon. I know the staff has  
19 said the SalSim model is flawed and were, quote,  
20 "Surprised to see that it didn't produce a lot of fish."  
21 End quote. SalSim shows an average increase over  
22 baseline production of 1,103 fall-run Chinook salmon at  
23 40 percent unimpaired flows.

24           Based on the admission of staff that the SalSim  
25 model and results are flawed I have one simple question.

1 Why are we still moving forward with this process? If  
2 the main model to show the benefit to the fishery is not  
3 accurate, how can staff be recommending any flow  
4 conditions at all? You need to put off this process,  
5 don't rush this. There is no reason to vote on a  
6 document that isn't 100 percent backed by science. The  
7 impacts to my operation and the community will be  
8 devastating.

9           Go back to the drawing board. Allow the  
10 districts and other stakeholders to provide input to fish  
11 population models. Allow the science to be defensible.  
12 Let's get this right. Let's not settle for a Plan that's  
13 based on averages and riddled with errors. Let's have  
14 factual, quantitative and beneficial results.

15           Your document can't be fixed. Stop this  
16 process, get the districts involved, and let's develop a  
17 Plan that we can all live with. Thank you.

18           VICE CHAIR SPIVY-WEBER: Thank you so much.

19           Now we will move to the panel, and then we will  
20 have at the end of the panel there are four people who  
21 need to leave early, and I will ask them to speak.  
22 Abigail Warner, Kevin O'Brien, Penny Frost and Michael  
23 Frost.

24           And then we will take a lunch break.

25           Go ahead, thank you.

1 MS. FORESMAN: Okay. Good morning, Vice Chair  
2 Spivy-Weber and members of the Water Board. I want to  
3 say thank you for granting additional time to EPA and the  
4 State and the Federal fisheries agencies to summarize our  
5 comments on the proposed water quality standards and the  
6 Phase 1 draft, in the draft Phase 1 update to the Water  
7 Quality Control Plan.

8 My name is Erin Foresman. I'm an Environmental  
9 Scientist for USEPA on their San Francisco/Bay-Delta  
10 team. And I'm joined today by my colleagues from the  
11 National Marine Fisheries Service, U.S. Fish and Wildlife  
12 Service, and the California Department Fish of Wildlife.  
13 And we collaborated on this panel of presentations, so  
14 that we can be efficient with your time. And so that we  
15 had a chance to integrate Clean Water Act and Endangered  
16 Species Act concepts, so we can speak with a unified  
17 voice for aquatic resource management.

18 So I'm going to get started today and these  
19 reflect some of Vice Chair Spivy-Weber's introductory  
20 comments. And this helps me set up the framework for  
21 EPA's review. So EPA's review of proposed water quality  
22 standards is subject to the requirements and the goals in  
23 the Clean Water Act. And water quality standards are  
24 intended to protect many different beneficial uses, which  
25 you see examples of pictured on the screen.

1           So you have municipal water supply for drinking  
2 water and watering lawns, agricultural water supply for  
3 crop irrigation, aquatic life beneficial uses for  
4 coldwater habitat and migratory habitat and spawning and  
5 rearing. And then you have recreational uses for  
6 swimming and boating and commercial and recreational  
7 fisheries.

8           And we know in the SED process the State Water  
9 Board has said that the existing standards aren't  
10 protecting aquatic life beneficial uses. But we also  
11 thought it was important just to observe that the latest  
12 list of the impaired water bodies shows that 85 percent  
13 of existing beneficial use impairments are to aquatic  
14 life beneficial uses. So we very much support the State  
15 Water Board's effort to update water quality standards in  
16 this effort for the Phase 1 update.

17           We specifically support the State Water Board's  
18 effort to update flow standards to improve aquatic life  
19 beneficial uses. So this chart should look familiar to  
20 you. It was presented by your staff on November 29th in  
21 their presentation and it shows fall-run salmon adults,  
22 relative to flow levels that the juvenile cohort  
23 experienced two-and-a-half years prior. And we can see  
24 here that higher flow levels for juveniles generally  
25 result in higher numbers of adult salmon.

1           I also drew a line across the top, this is  
2 something I added to the chart, that shows the salmon  
3 doubling target for the salmon protection objective.  
4 This is the portion for the Lower San Joaquin River  
5 Watershed. And it represents the estimated naturally  
6 returning adults for fall-run Chinook salmon for the  
7 Tuolumne, Merced and the Stanislaus rivers. And that is  
8 an estimate of about 78,000.

9           So this figure really shows that freshwater  
10 flows in the Lower San Joaquin River Watershed play a  
11 significant role in determining abundance of fall-run  
12 Chinook salmon adults, attaining the salmon protection  
13 objective and protecting the beneficial use. All of  
14 which support the Water Board's actions to adopt flow  
15 standards and improve conditions for this commercial  
16 fishery and for aquatic life uses overall.

17           So the next several slides summarize our main  
18 points in the comment letter that we submitted. So  
19 first, I want to focus on the narrative objective. And  
20 the proposed narrative objective is an application from  
21 February to June much like the numeric objective. And we  
22 agree with the text of the narrative objective and all  
23 summaries here, but it's to provide flow conditions that  
24 support and maintain the natural production of viable  
25 native San Joaquin River Watershed fish populations

1 migrating through the Delta.

2           So we think the text is good, but we think it  
3 should apply year-round. And to support that we used  
4 this table for the SED, Table 7-4, and it shows that  
5 target fish species are in the system year-round. The  
6 dark colored boxes and the light gray boxes together show  
7 the primary occurrence and non-primary occurrence periods  
8 in the system.

9           We've talked with staff about this for several  
10 years. And we understand it will cause a large delay to  
11 go back and make the narrative objective year-round. So  
12 instead of suggesting that we recommend slightly  
13 modifying the text of the narrative objective to state  
14 the implementation of the Lower San Joaquin River flow  
15 objectives should not cause adverse impacts to fish and  
16 wildlife from July to January. So just in the months  
17 outside the window of the narrative objective.

18           MS. D'ADAMO: I have a question on that?

19           MS. FORESMAN: Yeah?

20           MS. D'ADAMO: Are you proposing that that be in  
21 the table?

22           MS. FORESMAN: Uh-huh, Table 3, yes. We  
23 submitted it in our letter and we have the text in there.

24           So next I'm going to focus on the numeric flow  
25 objective. The SED proposal is for a 30 to 50 percent



1 unimpaired flow range at the confluence of each one of  
2 the tributaries: the Stanislaus, Tuolumne and Merced  
3 rivers. And the implementation plan suggests starting at  
4 40 percent of unimpaired flow. And this has been  
5 discussed as having a block of water to use for aquatic  
6 resource management.

7           The proposed block of water approach, we feel  
8 has a better chance of success, if we define the  
9 equations and the measurements that determine the size of  
10 the block of water in Table 3 of the Water Quality  
11 Control Plan. And we're making this recommendation,  
12 because that provides instream users and consumptive  
13 users a way to calculate and estimate how much water they  
14 will have to work with during that month or season.

15           The next recommendation we have, and this  
16 speaks a little bit to Les's presentation earlier, is to  
17 identify reservoir storage targets again in the  
18 objective. And I put the assumption that was used in  
19 modeling in the little blue part of the beaker there, the  
20 end of your September storage of 300,000 acre-feet.  
21 That's the assumption that was used in the modeling, in  
22 the SED and we did see substantial habitat benefits,  
23 which we were very encouraged by. But we're concerned  
24 that those benefits won't actually occur if we don't have  
25 some sort of decision rule that holds some water in the

1 reservoirs to be used when it's needed for temperature  
2 mitigation.

3           So my next four points work very tightly  
4 together, so I'll try to weave this in a way that makes  
5 sense. We're also recommending that the starting percent  
6 of unimpaired flow be included in the objective in Table  
7 3, not just in the implementation plan. And we want to  
8 couple that with a biologic goal for shifting percent of  
9 unimpaired flow within the approved range.

10           So an example of a biological goal is perhaps  
11 using a freshwater survival rate for achieving salmon  
12 doubling. This would be for fall-run Chinook salmon. So  
13 if you have a freshwater survival rate that is achieving  
14 doubling within a specified time period you could pick  
15 three to four salmon generations or approximately ten  
16 years.

17           Then if you're achieving that rate then you can  
18 reduce your percent of unimpaired flow within the  
19 approved window to below 40. If you're not achieving  
20 that rate then you need to increase your flows to above  
21 40. And we feel like this is a good way that you can use  
22 a biological goal coupled with the percent of unimpaired  
23 flow to ensure that you're actually making progress  
24 toward achieving the salmon doubling objective, or I'm  
25 sorry, the salmon protection objective.

1           Then the next point I want to make is we're  
2 recommending that we add a percent of unimpaired flow  
3 compliance point at Vernalis. As I explained earlier the  
4 proposal is to have compliance points at the confluence  
5 of the Stanislaus, Tuolumne and Merced rivers. But once  
6 that water enters the lower stem, the stem of the Lower  
7 San Joaquin River, then it's really not protected  
8 anymore. And if you add a percent of unimpaired flow  
9 compliance point at Vernalis it'll increase the  
10 likelihood that those waters actually get to Vernalis.

11           And one reason this is so important is that we  
12 need the flow range at Vernalis to promote survival  
13 through the Delta. And that is part of the intent for  
14 Phase 1 update of the Water Quality Control Plan. And  
15 this is a very important piece that I want to make sure I  
16 get right, so I'm going to check my notes, but we need to  
17 be thinking of the next phase and ensuring that flows at  
18 Vernalis are high enough to provide an uninterrupted San  
19 Joaquin River corridor through the Delta.

20           So in many ways the success of Phase 2 is  
21 really dependent on the flow range that we identify in  
22 Phase 1 to make sure that we can successfully move  
23 juvenile salmon from Vernalis through the Delta.

24           MS. D'ADAMO: But then maybe what you're not --  
25 maybe what you're looking for is a block of water, a

1 certain amount of water, as opposed to unimpaired flow.  
2 Because unimpaired flow especially -- well it could get  
3 pretty low.

4 MS. FORESMAN: Well, so there is the base flow  
5 standard at Vernalis which is 1,000 CFS, which I think is  
6 substantially lower than the 30 to 40 percent range  
7 that's being proposed in most years. And I think that  
8 what I mean to say is that we need that range to be high  
9 enough to promote that survival through the Delta.

10 Did that answer your question?

11 MS. D'ADAMO: (No audible response.)

12 MS. FORESMAN: Okay.

13 Okay. A few words on adoptive management, my  
14 colleagues are going to cover this on more detail.  
15 Adaptive management will be part of the implementation  
16 and we support the State Water Board using active  
17 adaptive management to shape flows and to really get the  
18 most we can out of the water in the river for this  
19 beneficial use.

20 We feel like it will be more successful if at  
21 the outset, the rules of the working group participants  
22 are defined. That there is some structure and function  
23 for decision-making processes that the work group  
24 participants can use. And that they don't need to use  
25 their precious time to come up with that at the beginning

1 to provide some criteria to trigger management actions  
2 and to do some work ahead of time, so that we can  
3 identify targets for shaping flows. And I think doing  
4 all of these things will set up the working group for a  
5 successful start.

6           And last, but definitely not least, we're  
7 recommending that the State Board establish an  
8 independent monitoring assessment and science program,  
9 recognizing that adaptive management is being relied  
10 upon, so heavily for implementing the standard. And that  
11 you'll need data sources you can trust. And right now I  
12 don't you're collecting all the data that you'll need to  
13 make informed decisions. And this is a more efficient  
14 way to get the data that you need to the decision makers,  
15 than identifying individual monitoring requirements for  
16 individual users.

17           So in summary, instream flows are needed to  
18 protect aquatic life uses all year. We're recommending  
19 that you adopt standards that are well defined and  
20 protect the beneficial use. We recommend that you  
21 identify a structure and targets for adaptive management  
22 and to establish a monitoring assessment and science  
23 program to give adaptive management process the  
24 information it needs.

25           And with that, I will hand it off to Jeff.

1           MR. MCLAIN: Good morning, Vice Chair and  
2 Board. My name's Jeff McLain. I'm from the National  
3 Marine Fisheries Service. I'm the Division Manager in  
4 the California Central Valley office. I'm happy to be  
5 here to share some of our comments.

6           First thing I wanted to talk about was the NOAA  
7 Fisheries role, or otherwise known as National Marine  
8 Fisheries Service. The West Coast region of the National  
9 Marine Fisheries Service manages approximately 90 species  
10 of fish, along the coastline that are dependent on the  
11 marine environment. Many of those are commercial fishing  
12 species and many also depend on the estuarine  
13 environment.

14           And so, in our case, the fish that are in the  
15 San Joaquin area that are germane to this discussion, is  
16 the California Central Valley steelhead, as well as  
17 designated critical habitat of the Central Valley spring-  
18 run Chinook salmon.

19           We also have the Magnuson-Stevens Fishery  
20 Conservation and Management Act, which designates  
21 essential fish habitat for Pacific salmon in our area  
22 that we're talking about. And then finally, there's a  
23 reintroduced population of Central Valley spring-run,  
24 upstream of our area in the San Joaquin River Restoration  
25 Program we designated a non-essential experimental

1 population several years ago. And downstream of the  
2 restoration area, those fish would be simply Central  
3 Valley spring-run.

4           So our first comment is related to the 40  
5 percent default and 30 to 50 percent range that you  
6 proposed. And as discussed in the documents, in the  
7 prior documents as well as the SED, the 60 percent  
8 unimpaired value would be the best for increasing  
9 survival and perhaps a recovery of our species. However,  
10 we recognize this isn't a recovery plan. And there are  
11 many, many factors that you are taking into account.

12           We agree that 40 percent is a good start for  
13 the start of this. And we want to make it clear though  
14 that we don't expect to achieve recovery with that 40  
15 percent. According to our assessment we think 40 percent  
16 would likely have higher flows on the Stanislaus River  
17 slightly, and higher flows on the Tuolumne and Merced  
18 rivers, that would benefit fisheries.

19           We have commented on this before. We do feel  
20 that a year-round flow schedule is important. Both of  
21 our species are commonly in fresh water for far longer  
22 than the February to June period. And so we feel that  
23 the whole year needs to be looked at. We also recommend  
24 a flow criteria at Vernalis similar to what EPA was  
25 talking about.

1           So this is just an example of the 2e flow  
2 schedule on the Stanislaus River. This is a requirement  
3 in our 2009 Water Operations Biological Opinion that one  
4 of the requirements to move the water, we have to have a  
5 flow schedule. It's called the 2e flow schedule that  
6 designates different parts of the season, the fishery  
7 season so to speak. It gives you bits of water for  
8 outmigration cues as well as just outmigration flows.  
9 And then there's water use for fall attraction and winter  
10 rearing purposes.

11           And this varies by water year type. And you  
12 can move water between these chunks of flows here. We've  
13 provided a detailed review of this in our recent letter  
14 to you.

15           Well, I was happy to see that in the staff  
16 report that you talked about the reservoir constraints,  
17 because that is one of the things that we found. We saw  
18 that there was a need to have some carryover for the  
19 system to not crash. And so thank you for the report  
20 this morning. We do feel that those constraints should  
21 be in Table 3 or somewhere in the Plan, so that we have  
22 those out front.

23           Getting back a little bit more to the  
24 Endangered Species Act side of things, the Environmental  
25 Protection Agency will request consultation with the



1 National Marine Fisheries Service. And in that process,  
2 we're going to have to look at the environmental baseline  
3 of the population. And then apply the effects of this  
4 project on the baseline. And so we did want to make it  
5 clear that as stated already -- in fact, Vice Chair, you  
6 already said this morning that the species are in trouble  
7 -- and yes our species are in trouble. And substantial  
8 efforts are going to be needed to reverse the declining  
9 trends that we're seeing.

10           The two little graphs on the left there just  
11 show the difference between historic and current  
12 distribution of Central Valley steelhead. And you can  
13 see it's been dramatically reduced. The graph on the  
14 lower right is taken from the SED and it just shows the  
15 magnitude of the decrease in the flows. And these are  
16 just two of the factors that we're dealing with.

17           MR. MOORE: You know, on this point this is  
18 something that we've talked about a bit during these  
19 hearings. And looking at these maps the historic range,  
20 to some extent that's not real helpful to the discussion  
21 today, right? But what's interesting is the timing.  
22 Given the map that shows where the rim dams are what I'm  
23 struck by is that those changes to the system, the  
24 physical changes, really predate the observed decline in  
25 salmon numbers by a long time.

1           1967 to 1991 is your baseline you use for your  
2 salmon doubling goal in the CVPIA. And with this map  
3 we're looking at here, with its rim dams, they were in  
4 within during that period. The 1967 to 1991 period, we  
5 have what I think you would say are acceptable salmon  
6 numbers.

7           And so I think it's a real -- we have to be  
8 clear that something's happened since the physical  
9 alterations that we need to address. So I just think  
10 when we look at these historic maps, sometimes it's a bit  
11 of a distraction, because that's not really what we're  
12 aiming for. We're aiming for achieving what is in the  
13 map with the dams in it that we were able to achieve  
14 prior to the -- which is setting up our doubling goal.

15           So I want you to help in your testimony, kind  
16 of focus us there. What are the factors that you've  
17 observed since the physical alterations? That helped?

18           MR. MCLAIN: Yeah.

19           MR. MOORE: Because if you look at the spikes,  
20 the testimony talks about we do see good salmon numbers  
21 during wet years and it's true, you know? But are they  
22 less than previous wet years? And so I think we need to  
23 focus the discussion a little bit about what's  
24 attainable.

1 MS. D'ADAMO: Well, especially if you look at  
2 the system as a whole, right? I mean if you look at  
3 including the San Joaquin and the Delta, the changes with  
4 respect to the entire watershed.

5 MR. MCLAIN: Yeah, thank you. I will add that  
6 this does show a lot of resilience in salmon and  
7 steelhead. It takes time for populations to go down and  
8 go up. And when we see year-to-year changes in  
9 abundance, that can be not necessarily a population level  
10 change. It can be a specific to a watershed or specific  
11 flow conditions. But I would have to defer to our  
12 scientists on the actual population dynamics part of it.  
13 We certainly can bring more information back if needed on  
14 that.

15 MR. MOORE: Thanks.

16 MR. MCLAIN: Yeah.

17 A little bit about the adaptive management  
18 process, we do support the idea of adaptive management  
19 process. We just have a hard time figuring out what the  
20 structure of that process would look like and we'd like  
21 to see more clear biological goals and objectives. And  
22 any adjustments of the protective measures should be  
23 linked to meet the narrative fish and wildlife protection  
24 objectives.

1           I should probably revise that bullet to say  
2 NMFS is reluctant to spend a lot of time on the adaptive  
3 management process. We're just short on staff and a very  
4 intense adaptive management, we are concerned, would take  
5 a lot of time. And we're concerned is that we couldn't  
6 represent our fish. And so any improvements in the  
7 direction and structure would be helpful for us.

8           We did notice that there was some language in  
9 Appendix K that talked about protecting the water as it  
10 went down into the Delta. And we would like to see that  
11 actually in Table 3 or somewhere in the Plan. We need  
12 more scientific basis for the flows at Vernalis as well.  
13 We would like to see that water protected all the way  
14 into the Delta. And presumably, if we're going with the  
15 30 to 50 percent range and the 40 percent start, the  
16 flows would be pretty good at Vernalis assuming that's  
17 the case and that water was protected, so.

18           And finally we had our economics expert from  
19 the Science Center, Dr. Cameron Speir, review the  
20 economics analysis. He right up front stated that, "Yes,  
21 there's a slightly less than 3 percent change in regional  
22 economic output in employment." He found some agreement  
23 with that and then but he did feel that there was an  
24 overestimate in that. And that was definitely the higher  
25 end of things. Primarily due to the context, the

1 regional context, he looked at prior times when there  
2 were cutbacks and found that it was lower -- impacts were  
3 lower than anticipated, based on prior times.

4 In summary, I'll just state that we would like  
5 to see a year-round flow schedule that would be better  
6 protective of the various life stages of our fish. Thank  
7 you for the carryover storage discussion this morning.  
8 We would like to see more biological goals and objectives  
9 associated with the adaptive management process, as well  
10 as clearer direction in structure. And again, we feel we  
11 should protect that water as it flows through into the  
12 Delta.

13 VICE CHAIR SPIVY-WEBER: Thank you.

14 MR. MCLAIN: Thank you.

15 MR. RATCLIFF: Good morning, Vice Chair and  
16 Board, and thank you from the Fish and Wildlife Service.  
17 My name is Donny Ratcliff. I'm the Central Valley  
18 Supervisor as of this last week. Before that, I was the  
19 Assistant Program Manager at the Anadromous Fish  
20 Restoration Program, so I've worked with CVPIA since  
21 about 2009 with the Fish and Wildlife Service. This is  
22 the California Department of Fish and Wildlife, sorry.  
23 We're the other. We used to be Fish and Wildlife and  
24 Fish and Game, and that was easier.

1           Well, I'd like to start by saying the Fish and  
2 Wildlife Service is extremely appreciative to the Board,  
3 to the Board staff. We recognize, I think especially  
4 from the CVPIA perspective, just how much work goes into  
5 an endeavor like this. We've done that -- something  
6 similar for 20 plus years -- and boy it's an awful lot of  
7 work still. And to start an endeavor like this and to be  
8 so willing to take comments from experts and the public  
9 is very much appreciated.

10           I will focus mostly today on the Fish and  
11 Wildlife Service's interest and responsibilities, mostly  
12 related to the geographic scope of Phase 1 at this point.  
13 We do obviously have Endangered Species Act regulatory  
14 issues and concerns in the Central Valley, mostly related  
15 to Delta smelt. But that will come mostly likely with  
16 our review of Phase 2. Most of the review that I will  
17 summarize today comes from our restoration staff under  
18 CVPIA. And some of the other staff that works out of our  
19 Lodi Fish and Wildlife office, with non-anadromous or  
20 non-CVPIA target fisheries.

21           So we will go much more in-depth in our letter,  
22 which we're preparing right now, into individual specific  
23 points. But for today I've tried to group some of our  
24 comments in three general areas. And those would be  
25 flow-related needs for fish and aquatic habitats,

1 measureable goals and objectives -- things that we can  
2 work towards to measure success -- and adaptive  
3 management. And try to give some perspective of where  
4 we're at right now, because we are undertaking a very  
5 similar process of trying to move towards implementation  
6 via adaptive management and more science-based framework  
7 at CVPIA.

8           So to start when thinking about flows and how  
9 they impact fish and habitat within the rivers, we were  
10 very pleased to see the shift from the previous version  
11 of the SED to the current revised version, utilizing a 7-  
12 day running average versus fourteen. But we would also  
13 like to highlight a couple of points that we think should  
14 be considered when the adaptive management implementation  
15 actually occurs.

16           And that's that by solely using a 7-day running  
17 average there is still the potential that with short,  
18 high-intensity storms that may only occur over a few  
19 days, that you may decouple the managed flows that you  
20 would release from the benefits you would be getting from  
21 some of the other natural benefits that come along with  
22 the storm event. But also some of the additional water  
23 supply that may come in from below the rim dams or via  
24 groundwater.

1           It may also limit your ability to spatially and  
2 temporally connect floodplains and other beneficial  
3 habitats. You may actually get a longer temporal  
4 connection depending on how those flows are shaped, but  
5 you may connect much to less habitat by not being able to  
6 basically add to what the system is naturally getting  
7 from storm events.

8           So this next slide is a graph. This is just a  
9 short snapshot utilizing flows from the Stanislaus in  
10 2009 from just after the start of February to about the  
11 end of March. The white line here is based on the flow  
12 record that we have from 2009, from that time period,  
13 what would be released basically instantaneously. What's  
14 40 percent of unimpaired flow, without any operational  
15 constraints?

16           The blue line is what you would get with  
17 straight releases based on a 3-day average. And the  
18 yellow line is a 7-day average. So what we want to point  
19 out here in the green circle is notice the spikes that  
20 you get. The magnitude of those spikes with both the  
21 white and blue lines, versus the yellow line representing  
22 the 7-day average. Again, this is just with straight  
23 releases based on those averages.

24           We see a difference in magnitude there of over  
25 1,500 CFS. We also then, if you noticed the red arrow



1 down at the bottom, potentially start to see a decoupling  
2 from the benefits you might get beyond just flow from the  
3 storm event: barometric pressure changes, cloud cover,  
4 natural turbidity, some of the other things that we  
5 believe influence fishes' success and survival and  
6 potential to outmigrate. Those cues that they naturally  
7 developed through natural storm events.

8           Now, you potentially have missed that entire  
9 peak. And so again we are pleased to see that move from  
10 a 14-day to a 7-day average. But we would urge the  
11 Board, staff, folks to make sure that when the adaptive  
12 management process is being further refined that we think  
13 about what additional flexibilities we might be able to  
14 add to get those benefits of coupling with storm events.

15           MR. MOORE: I appreciate this. This gets to  
16 the heart and soul of why I'm doing this job, why I'm up  
17 here, is to better engineer biology, because I get  
18 backgrounds in both. And this is a key point. Not only  
19 are you missing benefits during when the natural cues are  
20 happening, but look at that shoulder on the yellow.  
21 That's a big chunk of water that's in the name of fish  
22 that everyone who wants to see fish survive, from all  
23 perspectives, can be very frustrated with. Because  
24 that's a bunch of water that's not going to get the

1 benefit, because we've averaged based on an operational  
2 constraint that we are imagining, okay?

3 We're imagining that we have to stay with the  
4 7-day approach. We can do better. In water distribution  
5 systems, in sanitary sewer collection systems, we operate  
6 better than 7-day averages. We can operate rivers in  
7 that way as well.

8 And so I think this is a key graph. I  
9 appreciate the time you've put into this and your  
10 explanation of it. And I'm talking to my friends in the  
11 irrigation districts, in the City and County of San  
12 Francisco with these comments. But I'm interested in how  
13 we -- and DWR for that matter -- how we modify our  
14 operations statewide to be more real time. Thank you.

15 MR. RATCLIFF: Okay. So now I'd like to shift  
16 a little bit. Obviously we are very closely tied to the  
17 SED or the salmon protection objective, although we call  
18 ours the CVPIA doubling goal. But we also do an awful  
19 lot of work, or attempting to start doing an awful lot of  
20 work with some of the other CVPIA species. We have  
21 focused an awful lot on fall-run Chinook and they are  
22 obviously a very important species. But we at the  
23 program have, after 20 years, started to try to improve  
24 the science, in recent years, on some of the other  
25 species that we're charged with doubling as well.

1           And so specifically for the San Joaquin portion  
2 of the Central Valley, one of the species that we have  
3 focused greatly on since about 2011 are white sturgeon.  
4 And this was prompted by writing the San Joaquin River  
5 Restoration Program, Fisheries Plan, Management Plan, and  
6 finding that the common belief amongst California  
7 fisheries managers was that sturgeon, both white and  
8 green, did not use the San Joaquin. And yet we had  
9 reports from anglers, for many years, from our friends at  
10 the Department of Fish and Wildlife, that sturgeon  
11 anglers were actively catching fish in the San Joaquin,  
12 well above the confluence of the Stanislaus. So not just  
13 slowly migrating a little bit out of the Delta.

14           So in 2011 we started an effort to find and  
15 identify the population and the habitats they might be  
16 using of white sturgeon in the San Joaquin. And what we  
17 found in the past five years is that adult white sturgeon  
18 definitely do use the San Joaquin every year. They are  
19 in the main stem every year. We have over 80 fish  
20 acoustically tagged now with 10-year tags in them. And  
21 we're able to pick them up every year, throughout the  
22 year.

23           We've also then seen in a couple of our drier  
24 years, as much as we would like to have not experienced  
25 them they've given us a good test case, that with a very

1 modest amount of flow that not only are those fish  
2 present, but they appear to be cueing to spawn. And  
3 we've actually documented successful spawning in a couple  
4 of fairly lean water years.

5           So these next two slides are examples of that  
6 from the 2012 and 2016 years. What we have here is  
7 stream flow in cubic meters per second on the left y  
8 axis, stream flow in cubic feet per second on the right,  
9 because I could not get my sturgeon biologists not to  
10 leave their metric axis on there. And January through  
11 June, on the x axis.

12           The top white line, the solid line, is flow  
13 within the main sub San Joaquin in what we call the  
14 Stanislaus Reach, which is generally downstream of the  
15 Stanislaus up until about the Tuolumne confluence. And  
16 the dashed line below it is the Merced Reach. So that's  
17 San Joaquin River flow, mostly in the Merced River Reach  
18 confluence and just slightly above.

19           And the verticals bars that you see in the  
20 graph are documented sturgeon spawning events where we  
21 have collected actual eggs, sturgeon eggs, after these  
22 flow events. And so we put sturgeon egg mats out in the  
23 river. It is very much a needle in a haystack hunt, but  
24 we have successfully been able to find some of these and  
25 age the eggs and tie them back to the date of spawning.

1           MR. MOORE: Real quick, just to help illustrate  
2 this flow regime, how much was sort of uncontrolled flow  
3 in these events versus really methodically controlled and  
4 determined by pulse flow agreements between the agencies  
5 and the districts?

6           MR. RATCLIFF: Specifically, I guess we haven't  
7 done the analysis back to where they may have been  
8 managed flows for salmon or other species. I can  
9 definitively tell you that none of these are anything but  
10 natural flow events as far as relating to sturgeon.  
11 We've never, to this date in the San Joaquin, released  
12 any managed flows specifically to target sturgeon.

13          MR. MOORE: I get that. But really my question  
14 was more just for the audience and ourselves really, to  
15 understand this flow regime we're looking at. How human-  
16 caused is this hydrograph versus storm events that got  
17 away from us?

18          MR. RATCLIFF: Okay. Yeah, so I can come back  
19 to you with that on 2012. I'm a little less familiar --  
20 I will say in 2016 -- because my Direct Report who works  
21 on this -- and I had quite the wager when he told me he  
22 knew when they would spawn -- this is moving to 2016,  
23 same type of graph. That first event you see, just to  
24 the right of the March label, was completely an actual  
25 storm event. That was towards the tail end March, last

1 year when we had a couple of days of a really strong rain  
2 event that pelted the San Joaquin Valley for about a day  
3 and a half, a pretty incredible lightning show came along  
4 with it. So he may remember. And sure enough, within  
5 three days, we had sturgeon eggs in our mats.

6           And so we believe, at this point, that we can  
7 forecast that something along the lines of a bump of  
8 1,000 to 1,500 CFS cues these fish and potentially  
9 something lower than that. And so, we wanted to  
10 illustrate this to show that there are other species in  
11 the system that may benefit from how we craft these  
12 spring flows. It appears that variability, on a very  
13 short time scale, in the main stem at least for sturgeon,  
14 can be extremely beneficial. With what I hope we can all  
15 agree with a fairly modest amount of water, considering  
16 some of these modeled results we've seen for protecting  
17 some of the other species.

18           Another example, this is not from our CVPIA  
19 program, this our Delta Juvenile Fish Monitoring Program,  
20 one of the services components of the IEP Program and the  
21 work we do there. This graph shows a comparison of our  
22 catches in the Lower San Joaquin of Sacramento splittail  
23 from 1994 to 2012. So the y axis here you have an index  
24 of recruitment success. And so this is in May to June,  
25 after spring spawning events of Sacramento splittail

1 larvae that are sampled that we believe have successfully  
2 recruited into the population.

3           On the x axis then you have what is basically  
4 an average of the 45 days between March and May at  
5 Vernalis, when we had the 45 consecutive highest days of  
6 flow. So even there are low flow days in there, in that  
7 time period, these are the 45 consecutive highest days in  
8 that time window. And what you'll see is that in the  
9 years that we've had higher flows during that time period  
10 we have four of our five highest years of successful  
11 recruitment of splittail.

12           Obviously, there's a large area in there  
13 between about 7,000, 7,500 CFS and somewhere in the  
14 14,000 to 15,000 range that we don't have data points  
15 for. But again, here's another species that's  
16 benefitting from these increased springtime flows.

17           In addition to those other species, as you've  
18 heard from Jeff and probably heard in other  
19 presentations, there are other needs for other salmonids,  
20 Central Valley steelhead and potentially spring-run  
21 Chinook, as they are reintroduced to the area through the  
22 San Joaquin River Restoration Program. I hope I've shown  
23 a little snapshot of what we believe our sturgeon needs  
24 within the spring, but there are also sturgeon needs  
25 outside of that window, as well as splittail and other

1 native fishes.

2           And so as with our colleagues that have  
3 presented before, we agree that there should be  
4 consideration of year-round needs of fish and how flows  
5 will affect. Especially when adaptive management comes  
6 to potentially making decisions about how you would  
7 change things in the spring and how that might affect  
8 water availability or operations in the rest of the year.

9           Additionally, building upon the comment that  
10 was made earlier, the comments from both EPA and NMFS,  
11 the downstream or ultimate fate of the water that is  
12 released is crucial, both at Vernalis but also  
13 downstream.

14           And here's a graph of this, I guess, kind of  
15 balancing the line between Phase 1 and Phase 2 in our  
16 mind, where we have long-term work that has gone on with  
17 our office and several of our collaborators, related to  
18 VAMP. And then survival studies after it where we have  
19 coded-wire tagged fish released in the main stem San  
20 Joaquin. The blue diamonds here are coded-wire tag  
21 returns. The two red diamonds are fish that were  
22 acoustically tagged in 2012.

23           This is flow at Vernalis measured when these  
24 fish were released and estimated survival to Jersey  
25 Point. So from the release point at Durham Ferry to



1 Jersey Point, and a few fish released as Mossdale,  
2 through the Lower San Joaquin. And again the general  
3 trend is that when there's a higher flow, upon release in  
4 the lower main stem San Joaquin, we do see better  
5 survival of these fish albeit still relatively low and  
6 something we'd like to see higher.

7           So getting past and kind of on to the next  
8 section, and this speaks more to our time with CVPIA,  
9 thinking about goals and objectives. And I understanding  
10 the things that are in Appendix K currently speak to  
11 specific objectives, whether numeric versus whether  
12 narrative. But we have both of those in CVPIA. And I  
13 can tell you from experience, our program could tell you  
14 from experience, that trying to compare narrative goals  
15 is challenging. Especially when you bring in multiple  
16 potential beneficial uses whether those are fish-related  
17 or any other beneficial use.

18           When it comes to make decisions about  
19 alternatives, not having potential numeric targets or  
20 goals to weigh the pros and cons against, is an extremely  
21 challenging endeavor. That goes beyond just comparing  
22 and accountability when it comes to reporting. And it  
23 goes to real-time tracking. It can be extremely  
24 challenging and ineffective to determine how effective  
25 your decision may or may not have been without some

1 numeric target to track toward.

2           And again, as has been mentioned previously, at  
3 this point we think that the narrative salmon protective  
4 objective, or the CVPIA doubling goal in our world, that  
5 is reflective of what's proposed in the revised SED of  
6 the 40 percent unimpaired flow, will be very challenging  
7 to meet.

8           We certainly believe that a move towards  
9 recovery and better conditions is there, but we've done  
10 modeling in the past. A report from AFRP in 2005 for the  
11 three tributaries showed our estimates to show what it  
12 would take to see a 53 percent increase towards the  
13 doubling goal. So think of it as just slightly over half  
14 of doubling. You'll see in wet and above normal years,  
15 we're in the 30s, up towards 38 percent on the Stanislaus  
16 and Merced in an above normal year. We get beyond that  
17 and we start to see, at least from our modeling results,  
18 unimpaired flow rates that would be required at 50  
19 percent and above, up towards 60 percent like we've heard  
20 from other folks that have done these analyses, to truly  
21 move towards the doubling goal.

22           And so while we understand the need to balance  
23 benefits to all of the different things being considered  
24 by the Board under this SED, we also want to convey how  
25 important it will be to think about how this 40 percent

1 of unimpaired flow is utilized and how flows may be  
2 crafted to receive the maximum benefit if we are truly  
3 going to see a move towards doubling.

4 VICE CHAIR SPIVY-WEBER: And are you  
5 considering the habitat enhancements that -- the use of  
6 these flows for habitat enhancement. Is that what you're  
7 referring to?

8 MR. RATCLIFF: Absolutely. I mean at this  
9 point in 2005 -- and so things have changed -- we would  
10 need to update this to give you our current estimate of  
11 real numbers. That was with the habitat work that had  
12 been done by our program and others at the point. And  
13 the assessment of other areas that would be activated by  
14 flow releases that aren't active habitat restoration.  
15 There's been work done since then that we would need to  
16 incorporate.

17 Obviously, the bread and butter of our program  
18 is to continue to work on habitat restoration and so we  
19 very much appreciate through the hearings, hearing that  
20 folks believe, a lot of folks believe that a combination  
21 of flows and habitat restoration, are really what is  
22 needed along with addressing other potential limiting  
23 factors. But at this time yes, this basically was real  
24 time in 2005, so these numbers would have changed some  
25 certainly.

1           MR. MOORE:  And I'm interested in this table  
2  too, because it relates to a lot of our discussion and  
3  comments we received about the critical years being so  
4  stressful and difficult for the water supply perspective.  
5  And yet here you indicate it's really important for the  
6  fish, but how much can we take this sort of off the  
7  linear scale?

8           And you don't have to answer this now, but this  
9  came up with some of the NGO comments.  Does it make  
10 sense in critical years to move to more of a triage  
11 approach and not a hard percent unimpaired flow approach?  
12 Here it's, "Oh, look at the benefits for the salmon  
13 doubling."  But isn't it true, that's not when salmon  
14 double.  That's when salmon lay low.  Maybe hang in the  
15 ocean for that year, because of no pulse naturally would  
16 come.

17           So I just want to maybe encourage you in your  
18 comments to think of creative ways that we can do  
19 effective fish management through the critical years  
20 without maybe having such a big water supply cost.

21           MR. RATCLIFF:  Absolutely.

22           MR. MOORE:  Thanks for that.

23           MR. RATCLIFF:  I just also wanted to show that  
24 this is an example of where we've moved our narrative  
25 doubling goal very similar to your salmon protection

1 objective. Two numbers, both for Central Valley-wide,  
2 which you have on the left here for all of the species  
3 and runs of Chinook that we work with, the CVPIA. And  
4 then just a snapshot, this is not the full table, but we  
5 have those targets natural production targets by  
6 watershed.

7           So the number that was shown there in the EPA  
8 presentation was the combination of those bottom three  
9 numbers, that 78,000-ish fish that would need in the San  
10 Joaquin Basin for doubling comes from the Stan, Tuolumne  
11 and Merced.

12           And so this is just to show you that we really  
13 had to go here early on to be able to report tracking, to  
14 be able to analyze what we might do in one watershed over  
15 another, and we do this Central Valley-wide. And I think  
16 that as Phase 2 rolls out this is something that we're  
17 going to want to think about if we're going to really be  
18 able to incorporate adaptive management.

19           So finally I wanted to hit just a little on  
20 adaptive management, and again we're in the middle of  
21 this process at CVPIA, so it's near and dear to our heart  
22 right now. At least you're not doing it with a 20-year-  
23 old program. We're having to change horses in mid-  
24 stream. And it makes an interesting extra layer.

25           At its face, adaptive management looks awful

1 simple to a lot of folks I think. And this is a very  
2 simple diagram that comes from our Department of Interior  
3 technical guide on adaptive management. And the idea is  
4 that you identify a problem, you design something to fix  
5 that whether it's a specific project or a program, or a  
6 plan. You go and implement that, monitor it, evaluate  
7 the data you've got in front of you and adjust how you  
8 manage.

9           But it's a lot more complex than that. And  
10 every one of those circles requires an awful lot of  
11 effort. And the reason that I brought this here today  
12 was to tell you that for those of us in the room that are  
13 scientists and are exposed to adaptive management early  
14 on, we think about this from how it's implemented as a  
15 scientist, right? How you would design your project,  
16 your monitoring plan, how you would pay for and collect  
17 data. How you would analyze that data and how you would  
18 turn that analysis into something you can give to a  
19 manager to help him make a better decision.

20           But I'm learning right now, in real time, with  
21 CVPIA, that there's a whole other circle to this and  
22 that's the governance and the logistics of it. And  
23 especially as you get into a large program and move away  
24 from adaptive management on a small scale, you have to  
25 think about the time and the resources. And so starting

1 with measurable goals and objectives from the front end,  
2 narrowing the decision space, realizing that a huge part  
3 of adaptive management is to foster creativity. And to  
4 be able to analyze different proposals and decide what  
5 you think will help you best achieve your objectives and  
6 learn from that and adapt through time is extremely  
7 important.

8           But what we learned at CVPIA, I think in the  
9 last four years -- the last two years extensively where  
10 we put in an awful lot of time and resources and we've  
11 had an awful lot of partners that have come to speak to  
12 you, a lot of the same folks participating in our  
13 processes -- is that without having some of that  
14 governance and some of those larger 30,000-foot level  
15 sort of side boards and general objectives on the plate  
16 for those folks to help narrow their decisions base,  
17 we've spent an awful lot of time and resources with those  
18 folks.

19           And so we've come an awful long ways in two  
20 years, but I think that this is something that we felt  
21 like in our review of SED really stood out to us. That  
22 we would urge you to think about how you work with the  
23 Board or through other folks, to give the SED and working  
24 group and other folks who'll be helping you, devise and  
25 implement this adaptive management plan some sideboards.

1 Something more about objectives that you really want them  
2 to consider when developing the models and the decision  
3 process and how they might implement an adaptive  
4 management program.

5 MR. MOORE: Yeah, certainly we have language in  
6 Appendix K that starts toward this correct staffing. I  
7 mean, we look at within six months of adoption the Bay-  
8 Delta Plan Phase 1, we would have biological goals  
9 established. Is that in --

10 MR. GROBER: That's correct, yes.

11 MR. MOORE: Is that consistent with what he's  
12 talking about here?

13 MR. GROBER: Yes. And to recognize the  
14 importance of having a numeric goal as well, as opposed  
15 to just words.

16 MR. MOORE: Right.

17 MR. RATCLIFF: And we were very pleased to see  
18 that. We very much support it. It's ambitious. And so  
19 we would love to work with you and help on where our  
20 processes -- and if we can share some lessons learned and  
21 help each other out, fantastic. It's very noble to want  
22 to manage programs these ways. It's also very hard.

23 So finally, the general recommendations that  
24 you will see in our letter are to, "Consider fish and  
25 habitat flow related needs for all of the native species



1 throughout their life cycles." And we feel this has been  
2 done fairly well in the SED. There's been an awful lot  
3 of work done here and we appreciate that. But we do have  
4 some other species that we do think some recent work has  
5 shown will also likely be impacted, and in many cases  
6 benefited, by implementation of this objective and  
7 exactly how it's been implemented. And should be  
8 considered when we're thinking about adaptive management  
9 for the system, not just for any of the individual  
10 species or runs.

11           Secondly, to think about where we can, "Define  
12 measurable goals and objectives," more. To really jump  
13 start where we can jump off with our partners on adaptive  
14 management and further define the process, the governance  
15 as much as possible, and the decision space that folks  
16 might have in that. I think hopefully, we will be in a  
17 lot of the same situation that Jeff said for NMFS, other  
18 than with through CVPIA we have local habitat restoration  
19 coordinators that would very much want to be involved in  
20 the process. But our ability to expend those resources  
21 and assist would be greatly improved with a little more  
22 guidance on the front end, I think.

23           So with that, I'll -- this is a San Joaquin  
24 River sturgeon. And if you're less than 29 years old in  
25 this room, this fish is older than you, just over eight

1 feet.

2 VICE CHAIR SPIVY-WEBER: Go ahead, Dean.

3 MR. MARSTON: Good morning, Board members and  
4 Board staff. My name is Dean Marston. I'm an  
5 Environmental Program Manager and oversee our fisheries  
6 projects in the central region and I'm headquartered out  
7 of Fresno. And one of the projects I oversee is our  
8 Lower San Joaquin River and San Joaquin River Tributaries  
9 Anadromous Fish Restoration and Research Project.

10 We acknowledge that this has been a long and  
11 trying process for you all and that you have a difficult  
12 challenge before you to balance competing beneficial  
13 water uses. That said, as the trustee agency for  
14 California's fish and wildlife resources, and we're  
15 charged with conserving them for future generations,  
16 we're compelled by the science that's been brought  
17 forward to date to conclude that the San Joaquin River  
18 ecosystem and the south Delta ecosystem is in decline and  
19 that change is needed. And that we agree with the SED  
20 that a revised flow regime is needed.

21 Reduction and flattening of the San Joaquin  
22 River's hydrographs have altered the physical, chemical  
23 and biological characteristics of the San Joaquin River,  
24 and its tribs. And have created habitat conditions that  
25 have compromised anadromous fish by making them sick,

1 injured, unhealthy and susceptible to predation.

2           Reduction and flattening of the hydrographs has  
3 favored the proliferation of non-native species,  
4 substantially contributive to the decline in anadromous  
5 fish population abundance, making these populations non-  
6 resilient to stochastic mortality events, such as ocean  
7 conditions.

8           A return to a more natural flow regime  
9 hydrology would reverse these trends and could preclude  
10 the need to develop a TMDL for water temperature  
11 impairment, which is now legally required given a water  
12 temperature impairment listing.

13           A more natural flow regime would help support a  
14 portfolio effect for fry, parr and smolt contribution to  
15 adult production via a presentation that was given to you  
16 by Dr. Sturrock and Dr. Johnson earlier in this workshop  
17 process. And adding more adults being produced in the  
18 San Joaquin would actually level, if you will, or more  
19 level the adult Chinook production in the fall -- overall  
20 Central Valley fall-run ESU.

21           And lastly, a natural flow regime would create  
22 a boost in natural production thereby reducing the need  
23 for hatchery fish.

24           MR. MOORE: Before you go on, this is the first  
25 that the TMDL issue's been raised in the five days, could

1 you quickly tell us which reaches and are they proposed  
2 listings or just listing for temperature impairment?

3 MR. MARSTON: They're existing listings for  
4 temperature impairment. And on the main stem San  
5 Joaquin, it goes from the confluence of the Merced  
6 downstream to I want say Vernalis or Mossdale, I forget  
7 the exact demarcation. And then each of the three tribs  
8 on the Merced, the Tuolumne and the Stanislaus River, it  
9 goes from the lower rim down, down to the confluence.

10 Regarding implementation, implementation should  
11 be based on a systematic watershed-based approach and  
12 should focus on achieving connectivity between tributary  
13 watersheds and the Bay-Delta to protect anadromous and  
14 non-anadromous native fish species.

15 Regarding monitoring, a strong effective  
16 monitoring program will be indispensable to managing and  
17 evaluating implementation. Progress towards goal  
18 attainment is needed and a comprehensive monitoring  
19 program is a pathway to accomplish this.

20 Regarding adaptive and collaborative  
21 management, the Department supports collaborative  
22 adaptive implementation of a block of water. Recognizing  
23 that there is a distinction between annual real-time  
24 operations and longer-term adaptive management.

25 Decisions on use should be tied to achieving biological

1 goals and objectives and be coupled with effectiveness  
2 monitoring.

3           Regarding strengthen decision making, decisions  
4 on implementation of flow, say percent of unimpaired flow  
5 and non-flow, should be tied to achieving clearly defined  
6 fish and wildlife narrative objectives. This includes  
7 decisions on adaptive adjustments to the February through  
8 June time period. That includes flow shape by, for  
9 example, percentage of unimpaired flow and also flow  
10 shifting.

11           Regarding governance, the Department supports  
12 flexibility and alternatives to the STM work group where  
13 there are voluntary agreements in place. The Department  
14 supports strong leadership and facilitation by the Board  
15 for the STM work group including such things as early  
16 establishment of the STM group, i.e., within 180 days of  
17 the adoption of the amendment. And development of  
18 government structure like operating rules -- how it's  
19 going to operate, timing for products, things like this.  
20 Also, focus participation of the STM so that the group  
21 remains affective or to consider subgroups or forums to  
22 allow additional stakeholder and water user involvement.

23           Lastly, require use of biological goals to  
24 guide and inform adaptive management. It's a common  
25 theme that you've heard here this morning.

1           Regarding voluntary agreements, the Department  
2 appreciates that the Board recognizes the efforts to  
3 secure collaborative voluntary agreements. Voluntary  
4 agreements should accelerate implementation while also  
5 increasing the synergies of individual actions both flow  
6 and non-flow throughout the watersheds, according to an  
7 agreed upon schedule of implementation.

8           Regarding the Board's use of SalSim, we  
9 acknowledge and recognize the Board used SalSim and found  
10 issues, that is in better stated errors resulting in less  
11 fish than would be expected given empirical data. And I  
12 as the Project Manager for the Department would like to  
13 apologize to the Board for the fact that this model does  
14 in fact have a couple of errors. I'm going to take  
15 ownership here. So we found that the egg mortality is  
16 excessive, it was killing off eggs in the fall during the  
17 spawning time period only over a few days. And it should  
18 have been occurring over a much longer time period, say  
19 two weeks to a month.

20           So that calculation in the model has been  
21 fixed, if you will. It's corrected to behave as it  
22 should given the underlying empirical data that was used  
23 to inform that mathematical calculation.

24           Then in the spring, juvenile mortality was  
25 insufficient, because flow level was overriding the

1 effects of temperature. So that was also fixed and  
2 errors have been corrected and the detail of this will be  
3 provided to the board in our comments here in mid-March.  
4 We've recalibrated the SalSim model. And again the  
5 detail will be provided in our formal SED comments.

6 This is a graph showing Mossdale water  
7 temperatures amongst other things. And there's a lot of  
8 information here. And this comes from the Board's HEC-5Q  
9 water temperature model. And basically what you see,  
10 it's kind of hard for the colors here, but you'll see the  
11 sinuous lines showing water temperature prediction at two  
12 places, Vernalis and at Mossdale. And the purple line,  
13 the elevated line for temperature on the right axis --  
14 and this is for the baseline Board's model run -- and it  
15 shows that temperatures can exceed 100 degrees Fahrenheit  
16 during the February through June time period.

17 And then on the left y axis, looking at flow in  
18 cubic feet per second, you'll see a green line that kind  
19 of moves up and down a bit between 0 and 5,000, say at  
20 the 2,500 CFS range for the years January of 2000 to  
21 about the end of 2004 -- excuse me -- end of 2003. And  
22 then basically it bottoms out to near zero. So the flows  
23 in this particular baseline at Mossdale go to near zero.

24 And all at the point that I wanted to make here  
25 with this is that the HEC-5Q water temperature model

1 provides the inflow and the water temperature data to run  
2 SalSim. So if the flow data and the temperature data are  
3 inaccurate, then by default regardless of the issues I  
4 said earlier with SalSim, SalSim's error is going to be -  
5 - the output is going to be in error as well.

6           So I don't want to belabor this, other than to  
7 say that in the process of developing decision support  
8 tools, finding and fixing bugs is a standard operating  
9 procedure. That's just how they go, you know? Our cell  
10 phones, our software, we're getting patches all the time.  
11 It happens. Do we want it to happen? No, but we fix it,  
12 we find it and we fix it.

13           So a combo of elevated water temps and reduced  
14 flows at Mossdale, a lack of results and substantial  
15 juvenile salmon mortality for not only salmon entering  
16 the Delta, but also for salmon survival through the  
17 Delta. And adult salmon production estimates as I said  
18 are likely substantially lower than they should be, given  
19 the factors that we've just discussed.

20           So there's been some talk about the importance  
21 of June flows. So what we have here, a lot of action  
22 going on here, but what we have a graph depicting on the  
23 x axis the period of time in early April 2011 through the  
24 end of June 2011. And then on the y axis estimated  
25 juvenile Chinook salmon catch at Mossdale. And this



1 represents the -- we heard some comments earlier about  
2 the District's rotary screw trap. Well, the Department  
3 has been conducting a Mossdale/Kodiak trawl to develop an  
4 index of outmigrating fall-run Chinook salmon juveniles  
5 for the period April through June, for the past 30 years.  
6 And we see here in this particular that there's a big red  
7 box over there and you can see the caption for yourself.  
8 The smolts leave the San Joaquin River in June when flow  
9 is provided.

10           And then just in the red there, it might be  
11 hard for folks to see, but just remember the juvenile  
12 portfolio effect described by Drs. Rachel Johnson and Dr.  
13 Anna Sturrock in that all life states are important.  
14 We're trying to protect the genetic integrity of fall-run  
15 Chinook salmon.

16           And just as important, and maybe not more  
17 important for fall-run, is late fall-run. Because they  
18 come in and spawn in the San Joaquin River tribs in say  
19 the late December/January time period. And given five or  
20 six months for the eggs to hatch and juveniles develop  
21 and out-migrate out they're fallen right in to this June  
22 time period. So it's critical for this species of  
23 Chinook salmon.

24           And then here's another example of a wet year,  
25 in 1999. I don't want to belabor the point other than to

1 say that in June, we still have a fair amount of  
2 juveniles outmigrating from the San Joaquin River tribs  
3 making it to Mossdale, and are captured here and depicted  
4 here in our graphic.

5           And then lastly, I just want to say that this  
6 is basically the trend. When we have more San Joaquin  
7 River tributary flows in the spring, we get more juvenile  
8 salmon entering and exiting the Delta, which leads to  
9 more salmon production. Does it happen every single  
10 year? No. We get things like ocean crashes, but the  
11 data collected to date indicates that probability is, is  
12 that when you have more spring flow, you're going to have  
13 a greater number of juveniles. And when you have a  
14 greater number of juveniles, they're going to survive at  
15 higher rates, to and through the Delta. And we're going  
16 have more adults being produced for ocean fisheries and  
17 then for escaping spawners to come back to spawn in the  
18 fall.

19           So we might ask the question, is flow important  
20 in light of the SED. Again, a busy graph here. On the x  
21 axis we have a number of years, 1995 through year 2015.  
22 And what it's depicting here is the naturally produced,  
23 or wild produced, fraction of escapements. So this is --  
24 the data for this is from the Department's fall-run  
25 Chinook salmon escapement surveys in both the Tuolumne,

1 which is the red line, and in the Stanislaus, which is  
2 the blue line.

3 And the way that we fractioned out on an annual  
4 basis the number of wild fish or naturally produced fish,  
5 versus the number of hatchery fish, is to take a look at  
6 otoliths, the little ear bones from the fish after  
7 they've spawned and died. Then we can capture them in a  
8 survey, and then conduct analysis. And this analysis is  
9 paid for by the Fish and Wildlife Service, conducted by  
10 UC Davis, and also paid for TID.

11 And my apologies to Modesto Irrigation  
12 District. I understand that they are they were also a  
13 funder for the analysis of otoliths.

14 So what we have are basically three categories  
15 here, looking up the y axis from the bottom to the top.  
16 We had a wet-year period, a dry-year period, and then  
17 I'll get to that far-right period in a moment. But  
18 basically the Tuolumne Basin is twice the size of the  
19 Stanislaus and had twice the annual runoff approximately.  
20 And we see in wet years is that we get a response in  
21 terms of natural production on the Tuolumne when the  
22 Tuolumne's actually releasing water. And it far, far and  
23 away exceeds the number of fish that are being produced,  
24 those naturally produced fish that are being produced on  
25 the Stanislaus.

1           And then we go into the dry-year period, to the  
2 one in the middle, and we see that production crashes if  
3 you will in both cases, but it's better on the  
4 Stanislaus. And it's known that in dry years the  
5 instream flow schedules on the Stanislaus are better than  
6 on the Tuolumne or actually even on the Merced. And that  
7 just has to do with the way the agreements have been  
8 worked out through the years.

9           But there's been another interesting thing  
10 that's happened over the last 20-to-25 years. And that's  
11 depicted by that red dash line, which actually exceeds  
12 into the far right, but just for illustrative purposes I  
13 kept it where it is. And just to show that there's been  
14 non-flow restoration actions that have occurred both in  
15 the Stanislaus River Basin as well as in the Tuolumne,  
16 but they have been predominantly being constructed in the  
17 Tuolumne River Basin downstream of La Grange Dam. By the  
18 order of tens of millions of dollars greater in magnitude  
19 in terms of effort and expenditure and construction spent  
20 on doing non-flow habitat restoration measures in the  
21 Tuolumne.

22           So now I'm going to go to the far right column  
23 there. So if non-flow actions are driving production  
24 than that blue line that starts to rise in the more  
25 recent time period should be red, not blue. But we find

1 the exact opposite. So the question is, "Well, what  
2 happened?" So we looked at that to try to answer that  
3 question. So I know there's a lot of words here. I just  
4 go the graph itself and what it's depicting. And this  
5 shows the years 2009 through 2015. And then again, the  
6 natural salmon adult escapement on the right y axis. And  
7 then you see the Tuolumne in the red and the Stanislaus  
8 in the blue.

9           And these data are from FishBio Weir Count that  
10 the districts pay for. And then again the on/off  
11 analysis paid for by TID, Fish and Wildlife Service,  
12 conducted by UC Davis, and also the Department of Fish  
13 and Wildlife providing the otoliths. And again my  
14 apologies to Modesto Irrigation District for not listing  
15 them as a funder.

16           But we again asked ourselves well what happened  
17 here? So we've effectively -- and you can see here,  
18 I'll read them for you here -- so we effectively had in  
19 situ experiment occurring in the SJR tributaries that  
20 allowed us to evaluate emphasis on flow versus emphasis  
21 on non-flow.

22           And we found that the Delta BiOp operation and  
23 RPAs flow increases were implemented in approximately  
24 2009. This effectively brought spring flows in the  
25 Stanislaus to approximately 40 percent of unimpaired.

1 And we recognize that there's a little bump in production  
2 in 2011 for the Tuolumne, which gave it some reprieve.  
3 But otherwise the populations have generally dropped.  
4 And I'm talking about naturally produced populations.  
5 However the Stanislaus population has shown a steady rise  
6 throughout.

7           So the take home is that these results indicate  
8 that restoration actions have primarily focus on flow  
9 improvements are by far out-producing those results  
10 produced by emphasis on non-flow actions.

11           MS. D'ADAMO: Do you include the non-flow  
12 measures that have been implemented on the Stanislaus?

13           MR. MARSTON: The --

14           MS. D'ADAMO: So on the Tuolumne you're looking  
15 ---

16           MR. MARSTON: The answer is yes. We recognize  
17 that non-flow actions have occurred on the Stanislaus.  
18 But the actions that have occurred on the Tuolumne far  
19 outweigh the amount of restoration action that's occurred  
20 on the Stanislaus in the non-flow sense.

21           MS. D'ADAMO: And what non-flow measures are  
22 you considering on the Tuolumne?

23           MR. MARSTON: Gravel reintroduction, floodplain  
24 improvement, riparian improvement, gravel mining or  
25 gravel pit fill-in. Those are the ones that come to mind

1 immediately. I mean, we could provide a whole list to  
2 you in our comments and probably will.

3 MS. D'ADAMO: I would just -- I think we should  
4 get maybe more information on this, because it's my  
5 understanding that the non-flow measures that have been  
6 implemented on the Stan, Honolulu Bar and I forget the  
7 name of the other project, but they are successful, non-  
8 flow restoration projects. And --

9 MR. MARSTON: And we are not -- if I might  
10 finish, if you might -- we're not saying that they're not  
11 successful. We're just saying that the non-flow actions  
12 by themselves are not as productive as they could be in  
13 the absence of flow increases. And that restoration  
14 actions tied to a revised flow regime would provide a  
15 multi-pronged approach to reverse a decline. But absent  
16 an increase in flow they won't by the selves create  
17 substantial improvements in anadromous fish populations.  
18 Restoration actions augment flow benefits, but they do  
19 not replace them.

20 MS. D'ADAMO: Right, so the projects on the  
21 Tuolumne, I think, a couple -- one in particular that was  
22 quite costly -- the Special Pool?

23 MR. MARSTON: SR9 and 10, Special Request 10?

24 MS. D'ADAMO: Right. I mean it is quite costly  
25 to move the gravel into this area. And it seems that

1 that was not a very successful project, because the pool  
2 is quite large. And there still maybe flow challenges,  
3 but also predation hot spots in that area.

4           And so I guess I'm just pointing out -- I don't  
5 know the answer to these non-flow issues -- but when I've  
6 been out on both rivers the non-flow measures that were  
7 implemented on the Stan have been -- and I've been out  
8 there with representatives from the irrigation districts,  
9 but also the NGO community -- that those are successful  
10 non-flow projects. And on the Tuolumne not so much so.

11           And so I would expect through adaptive  
12 management and some of the discussions hopefully that  
13 you'll be having as part of the settlement discussions  
14 and otherwise, that there'd be some lessons learned about  
15 what types of projects might be the ones that you'd want  
16 to focus on, in terms of the non-flow measures. And so I  
17 don't know if this is an apples-to-apples comparison.

18           MR. MARSTON: In closing, the Department  
19 appreciates the State Board's efforts. At the core of  
20 the Department's interests throughout this process, as  
21 the state's trustee agency for fish and wildlife, is the  
22 undisputed fact that the Bay-Delta ecosystem is in  
23 crisis. The Department will move ahead tirelessly to  
24 work with the State Board and other stakeholders to  
25 develop solutions to reverse current trends, while



1 reasonably protecting all beneficial uses of water within  
2 the framework identified in the SED and proposed  
3 amendments. Thank you.

4 MS. D'ADAMO: I have one more question.

5 VICE CHAIR SPIVY-WEBER: Sure.

6 MS. D'ADAMO: Okay. So I can't tell this slide  
7 number, but the June flows -- one, two, three, four --  
8 maybe back up five slides -- on the importance of June  
9 flows.

10 So, and I do recall the testimony that Dr.  
11 Rachel Johnson and Dr. Anna Sturrock provided and this is  
12 an accurate quote, but there's other things that they  
13 said as well. Mainly that it depends on the year type  
14 and possibly on better monitoring to determine whether or  
15 not the smolts are present as to whether or not June  
16 might be an important use of water.

17 And so just looking at here what you're saying  
18 on the importance of June flows, and we've heard a lot  
19 about flow shifting, are you saying that this unimpaired  
20 flow regime -- it would be best to implement it in June -  
21 - to actually utilize the flows in June?

22 MR. MARSTON: I'm saying or depicting -- the  
23 Department's depicting here that there is advantages to  
24 fall-run Chinook salmon production by having flows in  
25 June.

1 MS. D'ADAMO: Okay. So I'm trying to, you  
2 know, I understand in a perfect world it sounds like what  
3 you're saying is June flows are important. But my  
4 question is if you were to have this opportunity for flow  
5 shifting -- and you kind of have to rank at what time the  
6 Department would recommend the use of the flows,  
7 especially with carryover storage, et cetera -- would you  
8 actually use June for those flows?

9 Or would you suggest to shift doing some --  
10 using the unimpaired flow block of water from June  
11 shifting it around to a different time frame?

12 MR. MARSTON: And you can imagine that's a  
13 complicated question that you've asked and so the  
14 immediate thought that comes to my mind is that it  
15 depends. And it depends on a real-time management sense,  
16 right? Because effectively what we're trying to do,  
17 based on what we've seen in the past, is that we have a  
18 population that crashes, all right? Crashes in every  
19 dry-year period and rises up again in a wet-year period.  
20 And what we're trying to do is reduce the crash that  
21 occurs.

22 In other words dampen the peaks and also  
23 shorten the duration between the two maximum development  
24 time periods. So it could be that on -- yes, maybe when  
25 a decision's made that we can forego flow in June in a

1 particular year, say a current year, by way of example to  
2 accomplish some other biological objective that we're  
3 trying to achieve. In order to keep the population from  
4 crashing we may choose to do that.

5           And I can't think of one off the top of my  
6 head, but the opposite decision might be made. You know,  
7 it's maybe more important from a genetic integrity  
8 perspective to allow a greater number of juveniles to  
9 leave the basin in a particular year. And so therefore  
10 June flows aren't important or we might decide that on a  
11 late fall-run, we've got to have some June flows in a  
12 particular year. So it depends.

13           MR. MOORE: Oh, I've got a --

14           VICE CHAIR SPIVY-WEBER: Go ahead.

15           MR. MOORE: Thanks. While I have the panel  
16 here, in my travels to the different rivers and learning  
17 about the different studies that have been conducted, I  
18 thought it was compelling there's some developing science  
19 around temperature tolerance.

20           And I asked Mr. Grober on November 29th, and  
21 staff, if these temperature thresholds we're using, that  
22 are often derived from science in the northwest, if they  
23 were refined based on science in these tributaries, which  
24 is the southern-most runs that may have more temperature  
25 tolerance. Would some of the thresholds change in terms

1 of the flow needed to achieve temperature thresholds that  
2 protect the salmon and achieve biological goals.

3           So and the answer was, "Yeah, sure. If those  
4 thresholds change you don't need as much flow to meet  
5 temperature, right, if the thresholds are higher." So I  
6 just wanted to give you the opportunity to comment on the  
7 state of the science on temperature tolerance in the  
8 Stanislaus, Tuolumne, and Merced rivers and Lower San  
9 Joaquin and what you think of it. And where that's going  
10 and some problems with it that you see or some science  
11 advancements that you're seeing.

12           MR. MARSTON: Well, I'm not a scientist, but a  
13 little aware that that is hotly debated. And we haven't  
14 seen any evidence to go with anything other than the  
15 existing criteria we're using.

16           MS. FORESMAN: So I do know, well we have  
17 encouraged, through our work with the Delta Stewardship  
18 Council, getting more science for thermal plasticity.  
19 Trying to really figure out what are the thermal  
20 tolerances for Central Valley Chinook. And I think that  
21 the temperature criteria you're referring to are EPA's  
22 Region 10 temperature criteria that were developed in the  
23 Pacific Northwest.

24           And we have a little bit of science on the  
25 Central Valley Chinook and I think O. mykiss as well.

1 But it is just really starting to get going. The  
2 temperature guidance that was developed in the Pacific  
3 Northwest took ten years. It did all kinds of different  
4 types of studies and the newer science that we have now  
5 is using physiology and different tools than were used in  
6 the Region 10 guidance. So I definitely think it's worth  
7 exploring to figure out -- I certainly think it's worth  
8 exploring to figure out is thermal tolerance for the  
9 southern-most part of the range showing physiological  
10 plasticity in these species? And trying to figure out  
11 what are appropriate temperature bounds for each one of  
12 the life stages that are important in this system.

13 So I certainly think that that's worth looking  
14 into, but I don't think it's a short exercise. It would  
15 take many years and lots of different types of studies to  
16 really come up with a range that you have confidence in  
17 managing with.

18 MS. D'ADAMO: Well, that's a good question,  
19 because I think TID in collaboration with -- I don't  
20 remember who the science -- UC Davis?

21 MS. FORESMAN: It's Nann Fangué at UC Davis.  
22 And if I'm thinking of the right study, and she's doing  
23 temperature physiology studies with a new tool. You kind  
24 of put a fish on like a -- it's almost like a little fish  
25 treadmill, sort of thing. And you expose them to

1 different temperatures and you figure out their thermal  
2 tolerance. And they did O. mykiss, so they did  
3 steelhead.

4           And then we paid Nann Fangué to also look at  
5 fall-run Chinook salmon and we used hatchery fish in the  
6 laboratory. That's one of the reasons you really need  
7 multiple studies, because well-fed fish in the laboratory  
8 perform a lot better than starving fish in the river. So  
9 and that's just one of the examples of needing to look at  
10 different physiological metrics, such as growth and what  
11 are egg tolerances, things like that. So that you get a  
12 broad picture for each life stage to have a range that  
13 you're confident is protective.

14           Did that answer your question about it? Okay.  
15 Thanks.

16           MR. MOORE: Good answer, thank you.

17           VICE CHAIR SPIVY-WEBER: Any other questions  
18 from Board members?

19           (No audible response.)

20           Great. Thank you very much. This has been  
21 incredibly informative and I assume to the staff as well.

22           I will have four speakers: Abigail Warner,  
23 Kevin O'Brien, Penny Frost and Michael Frost. If you  
24 could come down to the -- to just be lined up.

25           Go ahead. Thank you.

1 MS. WARNER: Hello. My name is Abigail Warner  
2 and I'm from Palo Alto. I'm here because throughout high  
3 school and parts of middle school, I was given the  
4 wonderful opportunity to spend time in the Bay-Delta  
5 every summer with my nana and Sea Scout group learning  
6 fishing and doing various activities. I believe the  
7 Delta deserves to be preserved or at least conserved not  
8 only for future kids like me, but for also for the fish  
9 and ecosystem that resides in the Bay-Delta and the Lower  
10 San Joaquin.

11 Now, I understand that agriculture is a huge  
12 chunk of California's economy and is a large employer.  
13 However, around 2,200 salmon farmers will lose their jobs  
14 if the flow of the San Joaquin remains this low. It's  
15 also important to note that the highly-feared  
16 agricultural job losses would not be caused by allocating  
17 more water towards the watershed, but instead would be  
18 caused by those who could have saved thousands of jobs  
19 and water by investing in irrigation technologies,  
20 farming high-value water efficient crops, or implementing  
21 numerous other strategies with long-term payoffs.

22 Everybody who was here today, or has voiced  
23 their opinion past hearings, values the Bay-Delta and its  
24 water at some significant level. No one wants the Delta  
25 destroyed. The reallocation of water would restore the

1 watershed's proper chemistry diminishing the growth of  
2 cyanobacteria and increasing oxygen levels allocating or  
3 allowing the ecosystem to flourish and naturally maintain  
4 its health.

5           These reasons, restoring the chemical balance,  
6 lowering agricultural waterways, saving the salmon, and  
7 preserving it for recreational use are why it is so  
8 important to conserve this water source to the quality it  
9 needs to be at by reallocating water towards it. Thank  
10 you.

11           VICE CHAIR SPIVY-WEBER: Kevin O'Brien?  
12           Penny and Mr. Frost, Michael Frost.

13           MR. FROST: Thank you. I read a book called "A  
14 Short History of Progress," by Ronald Wright. It's a  
15 very, very good book, highly recommended. He describes a  
16 situation called a progress trap where innovations create  
17 new problems to which society is unable or unwilling to  
18 solve. Or, inadvertently create conditions that are  
19 worse than what existed before the innovation.

20           Some progress traps that he went through in the  
21 book, two of them were Sumer, current day Iraq, the  
22 confluence of the Tigris and Euphrates rivers. And over  
23 millennia a large irrigation system, overgrazing, and  
24 land clearing resulted in desertification and soil  
25 salination. So we take a look present-day Iraq, it is a



1 dry dusty desert. Thousands and thousands of years ago  
2 it was covered with trees and it had a very fertile Delta  
3 there. So there's definitely some parallels to  
4 California.

5 Easter Island, another one, logging to make  
6 statues and boats destroyed the ecosystem and lead to war  
7 and collapse and everyone left the island.

8 Another one is the Aral Sea, the fourth largest  
9 lake worldwide. The 1950s and '60s, Soviet agricultural  
10 innovations allowed for the diversion of the two chief  
11 water sources, two rivers, to grow cotton in the desert,  
12 which sounds very similar to Kern and Westlands. The  
13 Aral Sea experienced a 90-percent reduction in size and a  
14 10,000 percent increase in salinity. And it's an  
15 absolute ecological disaster today.

16 You know we're dealing with, in a larger scale  
17 here, reductionist management. You know, forgetting to  
18 look at the whole picture. So what we're asking today is  
19 for the Board is to set policy to manage agriculture in a  
20 living ecosystem. It's necessary to understand that  
21 we're living and farming in the context of an estuary.  
22 Working with nature instead of against it, will benefit  
23 the region in the long term.

24 And recognizing Kern and Westlands and their  
25 impact is imperative. You know we're dealing with the

1 southern Sierras all the way up to Mount Shasta is one  
2 system. We like to break things up and look at little  
3 pieces of them, and that's what we're doing today, which  
4 is what we're doing. But it's important to take a look  
5 at the larger picture.

6           And also take a look at, where are the  
7 misaligned incentives? Which assumptions need updating?  
8 We're dealing with a zero-sum game extinction levels of  
9 Delta smelt, salmon, amongst others. Time is a variable  
10 by which everything is measured. And what are we solving  
11 for today? This quarter? This year or this decade?

12           Please, take a very long-term prospective,  
13 multi-generational. Permaculture, dry farming, urban  
14 rainwater capture, and other shared sacrifice will help  
15 us maintain a healthy ecosystem.

16           VICE CHAIR SPIVY-WEBER: Thank you.

17           Penny?

18           MS. FROST: My name is Penny Frost. I enjoy  
19 visiting the Bay-Delta Estuary to go fishing, see the  
20 wildlife, and learn about life on earth. Today, the  
21 numbers of fish are very low, extinction levels.  
22 Something is badly wrong. I am asking this Board to  
23 increase freshwater flows all the way to the ocean to  
24 keep the fish alive.

25           We do not know the long-term costs of a further

1 degraded estuary and the fish extinction. Please make  
2 the core freshwater flows a priority for my generation.

3 VICE CHAIR SPIVY-WEBER: Thank you. Thank you  
4 very much.

5 (Applause.)

6 We'll take a break for lunch, but we will start  
7 with -- I have about 60 cards of individuals who would  
8 like to speak. And we want to hear from each of you. I  
9 will intersperse these cards 10 at a time with panels  
10 that are -- that will occur before us. But we will be  
11 here late.

12 We will start at 1:00 o'clock precisely,  
13 precisely at 1:00 o'clock, with Hap Dunning followed by  
14 Terry Erlewine, Susan Stern, Bill Martin, Grant Wilson,  
15 John Borba, David Braun, Kaylen Herbert, Tom  
16 Schwertscharf, Kenneth Gibson. And if you could be --  
17 put yourselves over right here, so that you can go right  
18 up to the microphone, that would be very helpful.

19 Thank you. See you at 1:00

20 (Off the record 12:38 p.m.)

21 (On the record at 1:00 p.m.)

22 VICE CHAIR SPIVY-WEBER: I think we're ready to  
23 get started.

24 I see that Hap is here. We have Hap Dunning  
25 followed by Terry Erlewine, Susan Stern, Bill Martin,

1 Grant Wilson, John Borba, David Braun, Tom Schwertscharf,  
2 Kenneth Gibson, Stephen DeBerry -- who's going to take  
3 two minutes -- and Carlos Martinez, who's also going to  
4 take two minutes.

5 Then that will be followed by the California  
6 Department of Water Resources. And then we'll go back to  
7 more speakers.

8 MR. DUNNING: Well thank you very much, I'm --

9 VICE CHAIR SPIVY-WEBER: Be sure and announce  
10 your name and your affiliation.

11 (Brief colloquy aside.)

12 VICE CHAIR SPIVY-WEBER: I'm sorry, Hap. All  
13 these last-minute things, they don't take away from your  
14 time. Okay, go ahead. Thank you very much, Mr. Dunning.

15 MR. DUNNING: I am Hap Dunning. I'm a Board  
16 member for the Tuolumne River Trust. I'm here in that  
17 capacity.

18 And I want to remind you of what a predecessor  
19 Board did in 1994. Decision 1631, I'm going to mention  
20 very briefly, because I see some strong parallels between  
21 what happened back in the '90s and what you're trying to  
22 do now. As I'm sure most people in the audience know,  
23 1631 was about the restoration of Mono Lake. And you'd  
24 had on the one hand, environmental groups pushing hard  
25 for full restoration or close to full restoration. You

1 had a very powerful city, Los Angeles, resisting and  
2 apprehensive about what the detrimental consequences  
3 might be.

4           The Board reached what I regard as a  
5 compromised decision in providing full restoration of the  
6 lake to a certain level, but certainly not the level that  
7 it was before the diversions. Some areas that were  
8 important, waterfowl areas, were not to be restored under  
9 the Plan.

10           But the point is, the point I want to make is  
11 what the Board did was enough to put the lake on a good  
12 restoration path. And most important of all Los Angeles,  
13 this major city in our state, was able to make a number  
14 of accommodations, so it wasn't really damaged by what  
15 happened. They could accommodate more people with less  
16 water -- I'm not going to go into all the things they did  
17 -- but here's where I see similarities to what you have  
18 today. You have environmentalists pushing for  
19 implementation of what that study showed back in 2010, 60  
20 percent unimpaired flow. You have others resisting,  
21 understandably very apprehensive about what this might do  
22 to San Francisco or to the agricultural districts.

23           But I think, as was the case back in the '90s  
24 and the early part of this century, accommodations can be  
25 made. This can be done in a step basis. And as you work

1 toward a much better environmental situation for the  
2 river I think those now in opposition may be able to  
3 adjust more than they realize. Thank you.

4 VICE CHAIR SPIVY-WEBER: Terry is -- has Terry  
5 come back in?

6 MS. TOWNSEND: No, he is actually on his way.

7 VICE CHAIR SPIVY-WEBER: Okay. Susan Stern?

8 MS. STERN: Good afternoon. My name is Susan  
9 Stern, I'm a Board member of the Tuolumne River Trust, a  
10 former Board Chair of Camp Tawonga, one of the family  
11 camps on the middle fork of the Tuolumne. I'm a hiker, a  
12 birdwatcher, and a consumer of Central California's  
13 abundant bounty of produce.

14 I'm very concerned about the health of the  
15 complex ecosystem, which is the San Joaquin Delta fed by  
16 its major Sierra tributaries. Canoeing with the Tuolumne  
17 River Trust, many past Novembers I've witnessed the  
18 crashing number of spawning of Chinook salmon in the  
19 lower Tuolumne below La Grange Dam. In June I had  
20 portaged my canoe, because of the invasive water hyacinth  
21 near the confluence of the Tuolumne and the San Joaquin.

22 Every February I go bird watching at the  
23 California Department of Fish and Wildlife area at  
24 Grizzly Island. I worry about the health of the  
25 ecosystem for the multiple species that rely on the

1 health of the Suisun Marsh. Some animals, like the  
2 California Clapper rail and the Suisun shrew live  
3 exclusively in that title wetland. Rare and threatened,  
4 endangered species, include the salt marsh harvest mouse  
5 and Peregrine falcon, California Ridgway's rail and  
6 others.

7 I believe it's crucial that increased and  
8 improved flows from the tributaries go into the San  
9 Joaquin Delta. The current 20 percent unimpaired flows  
10 from the Tuolumne is unsustainable for all. Chairwoman  
11 Marcus has stressed that a 60 percent standard represents  
12 what fish would have asked for if fish could talk. I  
13 believe that would be ideal. However, I understand we  
14 need to strike a balance for many interests for our  
15 common good. The Bay-Delta is a public trust.

16 I would urge the Board to choose my preferred  
17 goal of 50 percent unimpaired water flow. I believe we  
18 can all make that work. Thank you.

19 VICE CHAIR SPIVY-WEBER: Thank you.

20 Bill Martin?

21 MR. MARTIN: Thank you. My name is Bill  
22 Martin. I am a San Francisco resident since 1972 and a  
23 customer of the San Francisco Public Utilities  
24 Commission. During those years I have hiked, camped and  
25 fished all over the Northern California watersheds. I've

1 fished the Tuolumne, I've hiked around Hetch Hetchy.  
2 I've fished in the Merced and the Stanislaus. And I've  
3 kayaked and fished throughout the Delta. I've paddled in  
4 the Delta with otters, sea lions, with the sky dark with  
5 migrating and cackling geese. In spite of all we do and  
6 all that we continue to do, the Delta does hold on. Life  
7 does continue, although at a fraction of its previous  
8 levels.

9           Your proposal for higher flows in the Delta is  
10 one step in helping this entire estuary. In the June  
11 2016 election over 70 percent of Bay Area voters approved  
12 Measure AA, a parcel tax of \$12 per parcel to fund  
13 restoration projects in San Francisco Bay. That's over a  
14 million votes. I don't see them lined up behind me to  
15 speak today, but I hope that you'll consider those votes  
16 as you make your decisions about the -- relative to the  
17 SED.

18           Also, in July of 2014 the San Francisco Board  
19 of Supervisors approved Resolution 288-14 urging  
20 protection of the San Francisco Bay-Delta Estuary. And I  
21 quote from that resolution, "The San Francisco Bay-Delta  
22 Estuary helps to power the region's economic engines, is  
23 the globally recognized symbol of our region, and its  
24 health reflects on our region's capacities, values and  
25 vibrancy." I believe that over 70 percent of Bay Area



1 voters would agree with that statement.

2           Some opponents claimed that habitat  
3 restoration, including approved spawning gravels,  
4 floodplain nurseries, would be enough to restore the  
5 salmon populations. But as we heard earlier today that  
6 myopic view ignores two critical elements. First, the  
7 science is clear that higher flows are needed along with  
8 those habitat restorations. And second, that salmon are  
9 not the only endangered species that will benefit from  
10 these higher flows. The entire estuary and all the  
11 creatures that depend on them need these higher flows.

12           Please do all you can to make that happen.

13 Thank you very much.

14           VICE CHAIR SPIVY-WEBER: Thank you.

15           Grant?

16           MR. WILSON: Thank you, Board members, for this  
17 opportunity to comment. My name is Grant Wilson and I am  
18 the interim Director of Earth Law Center. We are a  
19 nonprofit that advances legal rights for ecosystems and  
20 species to exist, thrive and evolve.

21           Earth Law Center is concerned that the SED does  
22 not adequately protect Bay-Delta water quality,  
23 particularly as it pertains to aquatic species and  
24 habitat. The SED recommends a flow requirement in the  
25 San Joaquin River and its tributaries of 30 to 50

1 percent, with a starting point of 40 percent unimpaired  
2 flow from February to June. But these flow requirements  
3 are inadequate, both under the Clean Water Act and  
4 ethically, as they represent another step towards the  
5 extinction of numerous fish species.

6 Under the Clean Water Act state flow objectives  
7 must fully protect beneficial uses. With their multiple-  
8 use designations, flow objectives must support the most  
9 sensitive uses, in this case fish and aquatic life uses.  
10 Ecosystem and species needs cannot be balanced away. The  
11 SED's flow requirement will fail to protect fish and  
12 aquatic life, whether fully or reasonably.

13 According to the State Water Board's 2010 Flow  
14 Criteria Report, an estimated 60 percent of unimpaired  
15 flow in the San Joaquin from February to June would be  
16 protective of aquatic life, fish and wildlife beneficial  
17 uses. State and Federal Fish and Wildlife Agencies have  
18 also testified that similar amounts are necessary to  
19 restore fish populations.

20 However, the SED's flow requirements fall well  
21 below this threshold and will predictably fail to correct  
22 the continued decline of salmon and other fish species.  
23 The SED itself explicitly recognizes that the Bay-Delta  
24 is in an ecological crisis, yet it fails to put it on a  
25 path towards recovery. In order to comply with the Clean

1 Water Act and protect the most sensitive beneficial uses,  
2 the State Water Board must adopt flow criteria similar to  
3 the recommendations of the August 2010 Flow Criteria  
4 Report.

5           Additionally, many are calling for a minimum of  
6 50 percent San Joaquin flow in order for salmon and other  
7 species to have a shot at survival and we agree this is a  
8 step in the right direction.

9           We are also concerned with the State of  
10 Emergency Change Provision in the SED, which would likely  
11 be used to further weaken these already inadequate  
12 standards. With regards to drought we can no longer call  
13 them emergencies and significantly weaken our  
14 environmental protections. Droughts have always occurred  
15 with regularity in California and will continue to  
16 increase in frequency and severity as climate change  
17 impacts worsen. We must treat drought and climate change  
18 impacts on water as the new normal. And we must update  
19 the SED to prepare for rather than succumb to these  
20 challenges.

21           In sum, I urge the State Water Board to call  
22 for revisions to the SED in order to restore flows and  
23 protect the ecological health of our waterways. Thank  
24 you.

25           VICE CHAIR SPIVY-WEBER: Thank you.

1           John Borba has graciously given up his space  
2 and introduce yourself.

3           MR. ELTAL: Hicham ElTal, Merced Irrigation  
4 District. I didn't mean to have to speak today, but  
5 there was a couple of things that the Board brought up  
6 and I would like to just clarify. One of the questions  
7 was about the continuous drought, like multiple years of  
8 drought. And yes, even without the SED in 2015 the  
9 Merced Irrigation District had no diversions from the  
10 Merced River. So it could have that impact and that  
11 would be multiplied.

12           Another thing, for example, the median runoff  
13 to the Merced River is about 850,000 acre-feet, which is  
14 the smallest of the three tributaries. The total inflow  
15 to these reservoirs in a critically dry year was like  
16 200,000 acre-feet. So it's less than a quarter. And if  
17 you have about 100,000 acre-feet of certain commitments,  
18 be it riparian water, refuges, and other districts, so  
19 basically you're left with about 17 to 18,000 acre-feet.

20           So to say that there's 60 percent that you  
21 could still do something with, it doesn't mean that  
22 you'll always have the 60 percent, because there's a  
23 certain amount of water that you have to divert  
24 regardless of the type of year. We have no way to say to  
25 those folks that we provide water to, on their

1 commitments that, "It's a dry year. I can't give you  
2 water." So basically, we rely on the storage from  
3 previous years to supply water in any critically dry  
4 year. There's not enough water in the river.

5 Another point that I want to bring up is the  
6 SAFE Plan. I'm kind of disappointed that the SAFE Plan  
7 was brought up in that fashion today, because it was  
8 brought up on the base on flow when we have been saying  
9 along, "It's not a flow only. It's flow and ecosystem,  
10 the river system restoration."

11 (Timer beeps.) Man, that was three minutes?  
12 Okay, can I finish? Can I ask you a question, Board or?

13 VICE CHAIR SPIVY-WEBER: Go ahead and finish.

14 MR. ELTAL: Yeah, so basically it's a  
15 combination of things, it's not one. And by the way,  
16 it's not less water than the FERC Environmental Impact  
17 Statement, it's the same amount of environmental system,  
18 it's not less than that plus other restoration.

19 And the other thing is we looking at your graph  
20 that -- it shows the amount of escapement versus the flow  
21 of how do you explain 2008, for example, it had a higher  
22 escapement but less -- it was a critically dry year. And  
23 also how do you explain the highest return out of the  
24 salmon to the Merced River this year?

25 So all these things, I think they need to be

1 taken into consideration.

2 VICE CHAIR SPIVY-WEBER: Thank you.

3 MR. ELTAL: And one last point which also was  
4 brought up today, just to kind of answer that, is there  
5 is a capacity to the rivers to accept salmon. I mean,  
6 there will be a point of diminishing returns. You could  
7 dump all the water you want to, but there's only so much  
8 room for spawning in the rivers even after you do the  
9 restoration. So that's something that we need to look  
10 at.

11 VICE CHAIR SPIVY-WEBER: Thank you. And you  
12 were on a panel before, so you have gotten extra time.  
13 Could you please fill out a blue card, so that we have  
14 your name?

15 MR. ELTAL: I did. I did.

16 MS. D'ADAMO: So I have a question, probably  
17 not for you to answer now, but because I'm really trying  
18 to get the answer to this. So if you could take, in your  
19 written comments to us, if you could take the last five  
20 years of drought and compare your baseline conditions in  
21 terms of your water supply allocations -- percentage of  
22 reduction as opposed to inches, because I know staff is  
23 looking at percentages -- so percent reduction under the  
24 baseline conditions compared to the SED, the objective  
25 that's contained in the SED, not with carryover, okay?

1 And what would that look like? So, in other words, in  
2 one year if you had 20 percent what would it look like  
3 with the SED without carryover and then with carryover,  
4 each year in a row.

5 MR. ELTAL: Will do.

6 MS. D'ADAMO: Okay. And then the second  
7 request is what percentage impact do the districts have  
8 with -- does Merced have with June? What, of the overall  
9 impacts, what percentage is contained in June? Thank  
10 you.

11 MR. ELTAL: Will do, thank you. Sorry about  
12 that.

13 VICE CHAIR SPIVY-WEBER: Thank you.

14 Terry, followed by David Braun. And just line  
15 up right here. And then Tom, Kenneth, Stephen and  
16 Carlos.

17 Hi, Terry.

18 MR. ERLEWINE: Thank you for letting me step  
19 in. I represent the State Water Contractors, who are 27  
20 water agencies that have contracts with the State Water  
21 Project. We've commented on the first draft of the SED  
22 on Phase 1 and we've commented on Phase 2 also.

23 We had three points that I wanted to bring up.  
24 One of them was the concerns that we've raised in the  
25 past about the appropriateness of using unimpaired flow

1 as opposed to functional flows. And what we've commented  
2 on before is that for salmon and most fisheries that it's  
3 really the functions that are provided by flow, things  
4 like temperature, turbidity, nutrients that are the  
5 primary drivers. And those are not directly addressed by  
6 unimpaired flow. So that's the first point.

7           Second point, which is related to water quality  
8 in the south Delta and the Phase 1 SED, does tend to  
9 confuse impacts from the export projects with other  
10 impacts. And there's water quality impacts in the south  
11 Delta; a lot of those are occurring from local  
12 degradation, inadequate flow. There's an implication in  
13 many places that those problems are caused by the  
14 barriers in the south Delta. And that's not completely  
15 accurate. So that's a concern.

16           And the last one is a technical concern with  
17 the SED that the groundwater impact analysis, I think,  
18 really needs improvement. Ignoring the requirements of  
19 SGMA that a long-term overdraft not be allowed and to  
20 effectively allow -- provide that there would be long-  
21 term overdraft that could continue. That's not an  
22 appropriate assumption. And the analysis is not done to  
23 identify what the effects, even if you did allow that  
24 long-term pumping to occur, what would the effect on  
25 stream flow be? And those effects are not identified.



1 There's existing analysis tools that are available:  
2 there's groundwater models by the USGS, groundwater  
3 models by the Department of Water Resources, those could  
4 readily identify those impacts. And those were not  
5 included in the SED and they really should be.

6 Thank you for letting me comment. I'd be happy  
7 to answer any questions.

8 VICE CHAIR SPIVY-WEBER: And I assume you'll  
9 send it in a letter with those points?

10 MR. ERLEWINE: Yeah.

11 VICE CHAIR SPIVY-WEBER: Thank you.

12 MR. ERLEWINE: That's what I forgot to tell  
13 you, too. We will be sending a letter.

14 VICE CHAIR SPIVY-WEBER: Okay, great.

15 MR. ERLEWINE: Thank you.

16 VICE CHAIR SPIVY-WEBER: David and followed by  
17 Tom. I don't see Tom standing up here or Kenneth. Oh,  
18 there he is. Okay, good.

19 MR. BRAUN: Hi, good afternoon. And my name is  
20 David Braun, I'm with a group called RootsKeeper. And I  
21 want to thank you very much for allowing me to comment.  
22 And thank you for your proposal to increase water flows.

23 It's my understanding that you did -- the Water  
24 Board did an analysis in 2010 that called for a 60  
25 percent flow. I would advocate for what your science

1 concluded, that would seem reasonable. If you run the  
2 numbers I understand that upwards to 400,000 salmon used  
3 to run in these rivers. With 1,000 now there in these  
4 rivers we are looking at about a quarter of 1 percent.  
5 That's collapse, that's a crisis. And I have much  
6 respect for what you do. I know that you're under  
7 immense pressures. But for the charter and the  
8 responsibilities of this Board, I would say to be  
9 considered a success, if this gets any worse you have  
10 failed. I don't know how to say that nicely.

11           Also, worthy of consideration is that there is  
12 a tree of life that is connected to this water flow, to  
13 these fish, to this estuary, to all of the different  
14 organisms. We get half of our oxygen that we breathe  
15 from the ocean. I haven't heard anyone commenting or  
16 talking about this, but these species go out and are food  
17 supplies and live and breathe and are an essential link  
18 in the food chain in our ocean, not just our estuaries.  
19 How on earth can we say that we are leaders on climate  
20 change if we can't even facilitate a reasonable amount of  
21 good health in our own estuaries? Any growth has to be  
22 sustainable.

23           Now, I hear lots of folks -- obviously it's a  
24 very difficult situation -- that need water for various  
25 uses for their lives. But any growth that's not

1 sustainable is short-term. And if we kill our oceans and  
2 if we kill our rivers, so someone can have a job growing  
3 almonds that we export to Japan for a super-high price,  
4 then we have failed. Because that person will have that  
5 job only until we run out of oxygen, until climate change  
6 exacerbates the world, until our rivers and our oceans  
7 are completely dead and we're eating Soylent Green.

8           This is where we're headed: 200 years, 300  
9 years of society, we have not been living in these sort  
10 of organized societies for very long. It's a very short  
11 period of time and to do this much damage in such a short  
12 period of time we are completely abdicating our  
13 responsibility to leave this planet for the future  
14 generations. And for that I implore you, 60 percent, no  
15 less.

16           VICE CHAIR SPIVY-WEBER: Thank you.

17           Tom?

18           MR. SCHWERTSCHARF: Yeah. Hello, my name is  
19 Tom Schwertscharf and I'm speaking in favor of increasing  
20 water flows to protect fisheries. I'm a member of the  
21 Sierra Club. I have past certifications from the State  
22 of California for Water Treatment Operator Grade III and  
23 registered Environmental Health Specialist. I was also  
24 certified as a Water Quality Analyst Grade III by the  
25 American Water Works Association. I currently volunteer

1 at a Salmon Habitat Restoration Project in Marin. And  
2 I've sent you some more detailed things about the biology  
3 and chemistry that I'm concerned about.

4           The one thing I wanted to point today was that  
5 the -- let me just get this up here, okay -- one of the  
6 groups that wasn't represented here today that's part of  
7 the State of California is the California Bioassessment  
8 Program. And I went to their last conference up in  
9 Davis. And they've been putting together these programs  
10 for the state for about 24 years. And I would urge  
11 speaking with them, because they have some really great  
12 recommendations about flows and duration for preserving  
13 salmonids and other fisheries. And they're tied into the  
14 food web, so they look at what are the fish eating, what  
15 kind of condition do those species need? And so, adjust  
16 the flows for that. So, I'd definitely get in touch with  
17 them.

18           The other thing I'm concerned about is whether  
19 you're diverting water through tunnels or you're  
20 diverting it in other ways, it seems to me over the last  
21 ten years or so that we've been talking about this the  
22 broader scientific community has been kind of shut out.  
23 And I know that I hear a lot of stuff about it, it's a  
24 fair stakeholder process, but if you shut out this  
25 scientific community that's not a fair process. And I've

1 seen that going on in the last ten years.

2           The final thing I wanted to say is it kind of  
3 gets lost that San Francisco Bay is such an important  
4 body of water. And we have tourism, we have fishing,  
5 sailing, we have the shipping terminals. And we need a  
6 healthy Bay to keep all of that going, so don't just  
7 think about the Delta, think about the Bay also. Thanks  
8 a lot.

9           VICE CHAIR SPIVY-WEBER: Thank you.

10           Kenneth?

11           MR. GIBSON: My name is Kenneth Gibson, I'm  
12 from Oakland. I'm a customer of the East Bay Municipal  
13 Utility District. This is the third of five Phase 1  
14 hearings that I have attended.

15           First, let me say *Ahéhee'*, *Ahéhee' lah*.  
16 (phonetic) Thank you. Thank you very much for the  
17 attentiveness you have shown to all the presentations and  
18 the citizen speakers at these hearings.

19           In the mid-1950s when I was a young boy my  
20 family moved to *Dinétaah*, the Navajo nation comprising  
21 most of northern Arizona. At that time windmills were  
22 scattered across the plain, drawing water from well  
23 throughout the semi-arid land. The same technology is  
24 used there today, drawing water from the same aquifers to  
25 provide water for sheep and horses, occasionally to deer

1 and coyotes and to people, freely. The aquifers remain  
2 useful and safe across the vast land. Please work with  
3 the sister agencies of the state to protect the aquifers  
4 through the state from being treated like dumps for  
5 waste. Irrigation water and rainwater runoff could be  
6 more naturally stored in this way throughout much of the  
7 urban and agricultural state.

8           During the current drought I began looking at  
9 the pricing structure of urban water. My professional  
10 background is commercial lending and finance. Tiered  
11 water rates could be used much more effectively to  
12 provide potable water for essential household use at low  
13 cost, while charging the full delivery cost of larger  
14 volumes of water used for irrigation in gardens or  
15 wherever. In fact, more and steeper tiers with better  
16 comport, with core expectations than water rate tiers  
17 reflect the cost of delivering water.

18           Fixed charges may make it easier for water  
19 agency planning, but they are unfair. Tiered rates based  
20 on employment could also be extended to commercial and  
21 industrial water users. High-volume uses of water for  
22 irrigation or certain industrial uses would thus be  
23 incented to work with urban water agencies to make  
24 maximum use of recycled water.

25           Tiered rates could also be applied to

1 agricultural lands. Again, the cost of irrigation water  
2 for agriculture should not be based on the amount of land  
3 you own, but on the number of jobs the farm provides. Of  
4 course, rural delivery of water would continue to be much  
5 cheaper than water delivered for urban uses. But it  
6 should not be a free ride. For too many years I've seen  
7 water sprayed high into the air over the Central Valley  
8 fields on hot summer days. I've also seen water sprayed  
9 into the air when it's raining. Central Valley fields,  
10 like those in peoples' gardens, must be served water at a  
11 high enough price that they will honor it and treat it  
12 with respect.

13 I urge you on the State Water Resources Control  
14 Board to declare new expectations for water use in  
15 California. Natural agriculture will be protected. The  
16 claims of First Nation peoples to preserve their cultural  
17 fishing practices will be protected. And the state will  
18 accommodate urban and rural population growth, not by  
19 diverting evermore water from its natural purposes, but  
20 by using less water much more wisely.

21 VICE CHAIR SPIVY-WEBER: Thank you.

22 Carlos Martinez for two minutes and then  
23 Stephen DeBerry.

24 MR. MARTINEZ: Good afternoon Madam Chair,  
25 members of the Board. My name is Carlos Martinez. I'm

1 the City Manager of the City of East Palo Alto. For  
2 those of you that may not be familiar with the City of  
3 East Palo Alto, we're a small community about 30 miles  
4 south of San Francisco. To the north we're bordered by  
5 the City of Menlo Park and to the west by the City of  
6 Palo Alto. However, we're not the City of Palo Alto,  
7 even though East Palo Alto is in the middle of Silicon  
8 Valley, in the Valley of Wells. We are composed of a  
9 minority and disadvantaged community. About 65 percent  
10 is Hispanic, 15 percent approximately is African-American  
11 and we have a good percentage of Pacific Islander, about  
12 7 percent, and the rest are other races.

13           When the city was incorporated we received a  
14 relatively small water allocation of 2 million gallons a  
15 day. And we have been conserving, conserving, conserving  
16 to the point that we are actually using about 43 gallons  
17 per capita per day, which is much lower than the BAWSCA  
18 region that uses approximately 60 gallons per capita per  
19 day, or the state average.

20           Due to that the City Council had to pass a  
21 Water Connection Moratorium last September. As a result  
22 of it we have been processing, but we won't be able to  
23 entitle a number of projects. Just to mention a few, we  
24 have a couple of projects that are proposed that would  
25 create 1.4 million square feet of space, which creates a



1 substantial number of jobs for our community. There is  
2 the primary school. This is a project proposed by the  
3 Zuckerberg Foundation that would provide quality  
4 educational opportunities for low-income residents in  
5 East Palo Alto. And not only that, but also support  
6 health services, wrap-around services, for approximately  
7 500 children to have better educational health  
8 opportunities. All of that has been -- is impeded by the  
9 limited amount of water.

10 And if I may just, to wrap up, the point is --

11 VICE CHAIR SPIVY-WEBER: Very quickly, very  
12 quickly.

13 MR. MARTINEZ: -- yeah, the point of my  
14 testimony is to urge the Board to consider these types of  
15 impacts and also allow time for negotiative voluntary  
16 agreements to take place, so that the SED goals are  
17 achieved while mitigating the potential negative impacts  
18 to minority and disadvantaged communities.

19 VICE CHAIR SPIVY-WEBER: Thank you.

20 MR. MARTINEZ: Thank you for your time.

21 VICE CHAIR SPIVY-WEBER: Stephen?

22 MR. DEBERRY: Hello, my name is Stephen  
23 DeBerry. I run an investment firm called Bronze  
24 Investments, which focuses on social-impacted investing.  
25 We're in the business of supporting companies that have

1 products or services that have a positive impact on  
2 lower-income communities, like East Palo Alto. Our  
3 investment strategy we describe as an eastside investment  
4 thesis. We're really working to address the fact that  
5 East Palo Alto has such radically different life  
6 experiences than, literally, the other -- if I had my  
7 high-school quarterback arm I could still throw a rock  
8 across the freeway -- to five times more jobs.

9           What I can tell you that I think is a non-  
10 obvious but really important thing to understand, is that  
11 in the middle of Silicon Valley where property prices  
12 have gone up 75 percent in the last 6 quarters, 18 months  
13 or so, East Palo Alto is basically the only community  
14 that has undeveloped land. And in a market that is  
15 spiking the way it is you might ask yourself, "Why is no  
16 one developing property in East Palo Alto?" The reality  
17 is -- and I'm living this reality, you can go into East  
18 Palo Alto, you can invest the capital to buy land. You  
19 could invest the capital to build a building. What you  
20 can't do is get an occupancy permit from the Fire  
21 Department, because there's not enough water to flush  
22 toilets, have people wash their hands.

23           And this matters. It's not just about real  
24 estate, but ultimately what it is about is the jobs that  
25 would come with those buildings. And in a community like

1 East Palo Alto that's struggling to increase its property  
2 tax base. And to keep the people of color who have been  
3 in that community there instead of being pushed out of  
4 what is arguably the most, the deepest economic  
5 inflection point in human history, we need to have more  
6 water, so that we can build and bring in the kinds of  
7 companies that will give job access to the folks who are  
8 already there in that community.

9           So look, I'm a fisherman. I'm a patriot of the  
10 state. I love the outdoors and support everything that's  
11 been said, but I want a full consideration of the species  
12 including the people in East Palo Alto.

13           So, I'd urge you to consider and support this  
14 negotiated settlement.

15           VICE CHAIR SPIVY-WEBER: Thank you.

16           MR. DEBERRY: Thank you.

17           VICE CHAIR SPIVY-WEBER: Next will be the  
18 California Department of Water Resources.

19           And then we'll follow that with 10 more people,  
20 but I have an offer. For those who are willing to speak  
21 for just one minute, you can line up here and speak for  
22 that minute and jump the queue. So, if anyone is willing  
23 after the Department of Water Resources makes their  
24 comments, please line up.

25           Go ahead. Thank you, Mark?

1 MR. SALLABERRY: Good afternoon, my name is --

2 VICE CHAIR SPIVY-WEBER: No, no, no --

3 MR. SALLABERRY: -- is Joe Sallaberry. I am a  
4 farmer from Turlock. And I bought my farms, one of them,  
5 in 1965 and the other one in 1983. And I struggle. I  
6 mean it was hard to make my payments, so I started doing  
7 pump work. And I did night work, service work, 24-hours  
8 a day for 35 years. I made the payments on my ranch,  
9 both of them paid for. It'll be three years ago I made  
10 my last, final payment. Now, when I bought those ranches  
11 I didn't see in my deed anything that says that you guys  
12 own my water, EPA own my water. I didn't see any of that  
13 in my deed.

14 And you really guys, think that --

15 VICE CHAIR SPIVY-WEBER: Are you speaking for  
16 one minute? If you are, then you should sit down. Thank  
17 you.

18 MR. SALLABERRY: Okay. Let me -- that guy --  
19 the environmental demonstrator, he took quite a while.  
20 So let me finish it?

21 VICE CHAIR SPIVY-WEBER: Okay. Finish it.

22 MR. SALLABERRY: -- let me finish it, because  
23 you've got something to hear. This is getting ridiculous.  
24 You guys are getting like a runaway truck without brakes  
25 going down in the hill. This is unreal.

1 VICE CHAIR SPIVY-WEBER: Okay, thank you.

2 MR. SALLABERRY: This has got to stop.

3 VICE CHAIR SPIVY-WEBER: And could you give  
4 your name to the court reporter?

5 MS. TOWNSEND: We already have it.

6 VICE CHAIR SPIVY-WEBER: Oh, we have his name.  
7 Okay, that's very good. Thank you so much, sir.

8 And now we will hear from the Department of  
9 Water Resources.

10 MR. SALLABERRY: How would you guys like to pay  
11 60 percent of your wages to support this, because that's  
12 exactly what you're trying to take out of my paycheck.

13 VICE CHAIR SPIVY-WEBER: Okay, thank you.

14 MR. SALLABERRY: Sixty percent, would any of  
15 you guys want to pay 60 percent of your paycheck? If  
16 that guy in there wants to pay 60 percent of his paycheck  
17 to support this --

18 VICE CHAIR SPIVY-WEBER: Thank you. Thank you,  
19 thank you, thank you.

20 MR. SALLABERRY: -- because that's exactly  
21 what you are asking for me.

22 VICE CHAIR SPIVY-WEBER: Could we have -- could  
23 you -- from the Department of Water Resources?

24 MR. SALLABERRY: Let me give you my card.  
25 You're welcome to call me anytime.

1 VICE CHAIR SPIVY-WEBER: Okay.

2 Go ahead.

3 (Colloquy off mic to set up panel.)

4 MR. HOLDERMAN: Good afternoon Vice Chair  
5 Spivey-Weber and members of the Board. My name is Mark  
6 Holderman. I'm the Chief of the South Delta Branch in  
7 the Bay-Delta Office of the Department of Water  
8 Resources. And I'll be presenting today, a brief summary  
9 of the key topics of interest to the Department, which  
10 will be also detailed in our written comments that we're  
11 providing by March 17th. And I'll see if this clicker  
12 works.

13 (Colloquy re: presentation setup.)

14 VICE CHAIR SPIVY-WEBER: If you don't mind,  
15 I'll call a couple of public? For those who want to  
16 speak for just one minute, we would love to hear you.  
17 But be sure and slowly say your name and your  
18 affiliation.

19 MS. LASENSKI: Elizabeth Lasenski, Davis,  
20 California. I'm here on behalf of the salmon and the  
21 other fish.

22 I just want to say that the salmon are  
23 essential to the environmental quality of the Delta. And  
24 actually to consumers like myself, they're very  
25 important. And according to the 2010 State Water Board

1 Report, 60 percent of unimpaired flow between February  
2 and June would be fully protective of fish and wildlife.  
3 And I urge you to go with the science and respect the  
4 science and go with that recommendation. Thank you.

5 VICE CHAIR SPIVY-WEBER: Thank you.

6 MS. SCHUELER: I'm Margo Schueler. I'm  
7 speaking for myself as a retired pipeline construction  
8 superintendent for one our major metropolitan water  
9 companies. Ten percent of the water, in this state it's  
10 considered a good record in the urban infrastructure if  
11 only you're losing ten percent through leaks. The  
12 infrastructure crisis is sucking our rivers dry.

13 If we fix the pipes, renew our infrastructure  
14 and make the investment in our urban distribution systems  
15 we don't have to have this argument about the rivers and  
16 taking more water out of them.

17 Thank you.

18 MS. SILVA: Hello, my name is Alyce Silva. I  
19 am a member of the Denair FFA and I am currently serving  
20 as the Denair Chapter Historian. We are located in the  
21 Stanislaus County and agriculture has an immense impact  
22 on all of our lives in the community.

23 I was born into a agricultural family and have  
24 been raised around the ag community my entire life. My  
25 dad and his siblings owned a family dairy and it was sold

1 two years ago. Since selling, my dad has worked for  
2 another family-owned dairy/farm. The dairy has two  
3 sites, each around 2,000 cows, with a total of about  
4 4,000 cows between the two sites. Along with the cows  
5 this family has many acres of land that are used to grow,  
6 which is necessary, to feed the animals.

7           If the proposed Plan takes effect we are forced  
8 to send more water into the Bay-Delta for fish and  
9 wildlife use. Many families will suffer. Not only will  
10 people like my dad be in danger of losing their job, but  
11 prices are going to skyrocket. If we are not able to  
12 grow our crops locally, because of a shortage of water,  
13 we are going to have to import the crops from foreign  
14 countries. This will increase costs for farmers all  
15 over, which will in turn require them to raise their  
16 prices in order for them to see a profit and be able to  
17 pay their employees with feed -- and their families.

18           This price will increase direct affect to  
19 consumers. We will see prices for meat, fruits,  
20 vegetables and nuts, and any other agricultural related  
21 products -- if the Bay-Plan Delta goes into action, we  
22 will all be left struggling for the sake of a few fish.  
23 Thank you.

24           VICE CHAIR SPIVY-WEBER: Thank you.

25           MR. PROCK: Good afternoon. My name is Bryson



1 Prock and I am the current Vice President of the Denair  
2 FFA Chapter at Denair High School. Denair is a small  
3 community, on the outskirts of Turlock. Our small  
4 community is big on teamwork and everyone carrying their  
5 own weight. I saw this firsthand as one of the only 16  
6 young men who played on our varsity foot football team,  
7 that at one point played a game with only 12 players and  
8 won against teams twice or three times our size. We'd  
9 held them scoreless. How did we do this? Teamwork.

10 I represent the third generation of my family,  
11 who works in our family dairy, hay, and beef cattle  
12 business. Together my family overcomes great challenges  
13 and obstacles such as low prices, labor challenges, or  
14 other regulations you propose. How do we do this?  
15 Teamwork. What your staff has proposed is a one-sided  
16 approach to solving a multidimensional water framework  
17 within our expansive state. There is no teamwork. And  
18 this Plan is all about forcing farmers and communities  
19 into doing things the way you want them done.

20 My dad has often been heard saying, "If we all  
21 row the boat together, we will get where we want to go  
22 faster. If we all row on our own, all we will get is  
23 choppy water." Please quit rowing on your own and row  
24 together with our communities.

25 Teamwork is more -- is how we move mountains,

1 so please join the team whose lives depend on agriculture  
2 and let's work together to make California great again.

3 VICE CHAIR SPIVY-WEBER: Thank you.

4 Now, Mr. Holderman? I don't think we can have  
5 any more disruptions. I don't know.

6 MR. HOLDERMAN: Well, I'm just rolling with it,  
7 it's fine then. Actually, I would like to also again,  
8 say that DWR appreciates the opportunity to review and  
9 comment on the Board's draft revised SED. We recognize  
10 the hard work and the long hours that you and the Board  
11 staff have put in to developing this SED. And the  
12 tremendous effort yet to come as you review and consider  
13 the comments from so many stakeholders.

14 We found portions of the SED to be well-  
15 documented. However, for the reasons I'll mention today  
16 and we'll provide in our detailed comments, we suggest  
17 various revisions to the SED to make it more factually  
18 accurate and consistent with California Water Law.  
19 Our comments will focus on the remaining topics that I  
20 have on this outline slide.

21 An overarching comment on the SED is that the  
22 document, including its implementation plan, contains  
23 language assigning responsibility for portions of the  
24 Water Quality Control Plan to specific parties, including  
25 DWR. Such assignments should be reserved for Phase 3 in

1 the Plan update, because the Plan update provides a  
2 foundation for considering the implementation elements in  
3 a subsequent proceeding.

4 DWR believes it is inappropriate to include  
5 language within the Water Quality Control Plan and SED  
6 that dictates a result during the subsequent Water Rights  
7 hearing. This would be contrary to the procedural  
8 protections afforded to DWR and other affected water  
9 rights holders. It is the position of DWR that all  
10 language assigning responsibility to a particular party  
11 or parties within the SED and the proposed Water Quality  
12 Control Plan should be removed.

13 Furthermore, any measures to protect beneficial  
14 uses that are related only to flows and water allocations  
15 should be postponed to the Water Rights phase the Board's  
16 proceeding.

17 Regarding the San Joaquin River flow  
18 objectives, DWR believes that the SED relies, in part,  
19 upon incomplete and out-of-date scientific information.  
20 The SED also lacks information on the impacts of  
21 predation on salmonids. It does not consider the Delta's  
22 historic flooding and saltwater intrusion.

23 One consequence of this reliance is the  
24 mistaken conclusion that there exists consensus about the  
25 benefits to fish species of a barrier at the head of Old

1 River. The SED fails to acknowledge that there are  
2 various regulatory agencies prescribing the actions  
3 related to the barrier, which may lead to incompatible  
4 operational requirements.

5 DWR believes that unimpaired flow objectives  
6 are ill-suited for real-time operations. While  
7 theoretically feasible, there are several hurdles that  
8 must be overcome before water project operators can use  
9 computed unimpaired flow for real-time operations. The  
10 primary hurdle is that some of the necessary data are not  
11 available in a timely manner.

12 We also question a primarily flow-only approach  
13 to protecting fish. DWR recommends a more flexible  
14 approach that takes into consideration other actions to  
15 protect fish species, such as EcoRestore and the Delta  
16 Smelt Resiliency Strategy. It is only through a careful  
17 analysis of flow and its intended benefits that SED will  
18 adequately analyze how to protect beneficial uses.

19 MR. MOORE: Yeah, on this point I can't let  
20 that go without having staff perhaps provide a little bit  
21 of a clarification.

22 Clearly, unimpaired flow is carefully  
23 calculated metric the Department uses. And yet, as we've  
24 discussed extensively for days, this can be a surrogate  
25 for real-time flow in terms of real-time operation. So,

1 my question is can't we achieve, with basic flow-  
2 monitoring technology, some information that's more real-  
3 time on a 3-day basis that is not strictly academically  
4 unimpaired flow as calculated by the Department, but  
5 something that's akin to it that could be operationally  
6 useful?

7 MR. GROBER: The detailed answer to this  
8 question is something that we're going to have to answer  
9 when we get into the implementation, but you're  
10 identifying the tension that we saw this morning. The  
11 why a 3-day or even an instantaneous is better.  
12 Somewhere between the instantaneous and a 7-day becomes -  
13 - we just start pushing against what is feasible in terms  
14 of measurement.

15 The Department already posts information in  
16 terms of real-time flow. If you look at that daily  
17 information it's kind of glitchy, because it relies upon  
18 estimating storage in reservoirs, determining numbers by  
19 difference. All of those things, once you get to a daily  
20 time step become very hard to measure. But it starts  
21 evening out over some time period. Seven days seems to  
22 be a potential sweet spot there. The last time we went  
23 out, we went out with a 14-day. A 14-day, you really  
24 start losing some of those optimal conditions.

25 The bottom line is to the extent that you

1 cannot precisely measure it in real time this is  
2 something that you can always catch up, because the  
3 requirement would be based on ultimately what does come  
4 down. So it's really not much of an issue in terms of  
5 determining the days, because you might not know it  
6 exactly day to day. But you certainly will know it in  
7 sufficient time in arrears to operate to it.

8 MS. D'ADAMO: But in follow-up isn't unimpaired  
9 -- I mean, this is -- I actually think a block of water  
10 and adaptive management through a settlement process,  
11 ideally, where you've got a whole team of people working  
12 on the needs of the river in combination with non-flow --  
13 I think that's probably the best way to go. But in the  
14 meantime, we're using unimpaired to calculate a block of  
15 water, because we're talking about using flow shifting  
16 anyway. So, it's not being used.

17 I mean, whether it's 3-day or 7-days in that  
18 chart that Board Member Moore, you called out that NOAA  
19 had, about how it was -- it can be a little bit unartful  
20 at times if you use a certain running average. In the  
21 end, isn't it going to get down to, or shouldn't it get  
22 down to functional flow? And so this block of water  
23 wouldn't be used as unimpaired flow. It would be used as  
24 a block of water that a team would determine what's the  
25 best, highest use for that water.

1           MR. GROBER: Well, that's precisely one of the  
2 reasons to try to operate down to that 7-day and if  
3 possible even shorter, because that becomes -- that's one  
4 of the functions as was shown is important in terms of  
5 cueing various biological functions.

6           That being said, there is difficulty with it.  
7 This can always be trued up in measuring that block of  
8 water. We shouldn't lose sight of the fact that the  
9 current objective is based on unimpaired flow, the  
10 determination of water year type. And then backing up  
11 from that, on having a flow requirement. All of it a  
12 month in arrears. So that's far less than optimal than  
13 the proposal, which is trying to both tighten up the  
14 operation to achieve some of those -- some of the  
15 peakedness and some of the cueing and the timing -- to  
16 agree more with the what's happening in real time, but  
17 mindful of the difficulty of doing so.

18           So, it's trying to achieve really, the best of  
19 both worlds.

20           MS. D'ADAMO: Right. But I mean, the --

21           MR. MOORE: Yeah. Because I have to say, Board  
22 Member D'Adamo, my ideal is real-time operation. I mean,  
23 I respect the block of water approach. I think we can  
24 accomplish a lot. So I'm not absolute, but I think where  
25 possible agreements and real-time ability to deploy has

1 to be built within it. Otherwise, it becomes  
2 biologically meaningless. So I think what Mr. Grober is  
3 saying is there's a balancing here between the  
4 approaches.

5 MS. D'ADAMO: Yeah. I mean, I was going to get  
6 into this at the end, but now might be a good time as  
7 well. If you look at Table 3 -- and there's a lot of  
8 talk about flow shifting, carryover storage -- but the  
9 objectives are in Table 3. And Table 3 has unimpaired  
10 flow and it's the 30, 40, 50 percent range.

11 And probably what we should do -- now's not the  
12 time to debate this and get a legal analysis -- but I  
13 think we should as we follow up with staff, get a better  
14 understanding. It gets back to the issue that was raised  
15 on day one and that "what is the project?"

16 So the project that's being analyzed, and I  
17 know you had a chart or a slide on it, that it's  
18 contained in Appendix K. Appendix K, my understanding is  
19 the Program of Implementation, it's how it would be  
20 implemented. But the objectives have an unimpaired flow  
21 and it doesn't have anything in there on flow shifting.  
22 It doesn't have anything in there about this flexibility  
23 of the block of water.

24 So, I agree. I'd call it tension. I'd call it  
25 a legal tension as well.



1           MR. MOORE:  Anyway, yeah.  So you're not going  
2 to make comments on the flow standard without getting a  
3 big discussion up here.

4           MS. D'ADAMO:  Yeah.

5           MR. MOORE:  But I'm sure we'll have more  
6 discussions with you, with the Department about this  
7 concept, because I don't think I got the whole story in  
8 your overview there.

9           MR. HOLDERMAN:  Well, I agree.  I think a  
10 workshop with our staff and your staff to go over,  
11 particularly our operators, on how they operate the  
12 releases from the reservoirs and the travel time and all  
13 that in trying to figure out if they can do that in a  
14 real-time situation, which right now I don't they can.

15           So, moving onto this slide on water quality the  
16 SED contains inappropriate and erroneous information on  
17 water quality within the south Delta.  Including water  
18 levels within the SED is inappropriate, as water levels  
19 do not affect water quality.  Assimilative capacity of  
20 local channels is related to net flow, not water levels  
21 or tidal flux.

22           And it has been shown frequently in passport  
23 proceedings that the temporary barriers in the State  
24 Water Project pumping do not change net flow in the south  
25 Delta.  Temporary barriers are installed as mitigation

1 for the SWP impacts. And water levels are designed to  
2 maintain or improve circulation in the area when compared  
3 to what would be present, absent the barriers in State  
4 Water Project pumping.

5           The barriers are not specifically designed to  
6 improve water quality, but by sometimes modifying the  
7 culvert openings to improve circulation, which by the way  
8 is always at the expense of water levels, the barrier can  
9 sometimes, but not reliably, improve water quality in  
10 poor circulation areas that are upstream of the barriers.

11           While the Board has in the past has recommended  
12 DWR continue to install the barriers, DWR does not agree  
13 the barriers should be required by the Board in a Water  
14 Quality Control Plan or a Water Rights Order, because the  
15 barriers are not a significant or reliable tool for  
16 meeting south Delta water quality objectives that DWR,  
17 frankly, should not be responsible for.

18           DWR does not degrade water quality in the south  
19 Delta. The salt loadings in the south Delta occurs from  
20 salts centering in the south Delta at Vernalis and  
21 agricultural and M&I discharges in the south Delta  
22 downstream of Vernalis. DWR does not discharge salts in  
23 the south Delta and has no reservoir on the San Joaquin  
24 River from which we can release dilution water.

25           The exports from the south Delta at Banks Pumping

1 Plant removes some salts from the system, but the pumps  
2 are used in a dynamic sense to provide water supplies to  
3 south of Delta customers and to minimize adverse impacts  
4 to protected fish. Therefore, it is not practical to use  
5 the pumps for south Delta salinity control, as this may  
6 have unintended adverse impacts to export water supplies  
7 and fish.

8       Regardless, the removal of salts from the south  
9 Delta area due to export operations will have little  
10 effect on south Delta water quality objectives.

11               As to the factors that do impact water quality,  
12 DWR has conducted many years of data collection analyses  
13 regarding impacts to the State Water Project on south  
14 Delta water quality and hydrodynamics. Tremendous staff  
15 time and effort continue to be dedicated to gathering and  
16 validating that information.

17               Because of these efforts, DWR and the Board  
18 possess sufficient information to appropriately assign  
19 responsibility for south Delta water quality objectives.  
20 Therefore, the SED should be modified to reflect the  
21 actual impacts in the State Water Project on south Delta  
22 water quality. Namely, that DWR's operation of the State  
23 Water Project export facilities and the temporary  
24 barriers improves water levels for local water users,  
25 maintains net flows, maintains or improves circulation,

1 and can occasionally improve water quality in the south  
2 Delta from what is otherwise naturally available.

3           The SED recognizes that there is a considerable  
4 amount of salt loading in the south Delta downstream of  
5 Vernalis, which occurs primarily through local drainage  
6 return flows. The additional salt load is not  
7 attributable to either the CVP or the State Water  
8 Project. And it is not reasonable to expect the water  
9 projects to control it. The SED documents this when it  
10 proposed 0.7 EC at Vernalis and 1.0 EC in the interior  
11 south Delta compliance stations during the spring and  
12 summer irrigation season. DWR agrees with that proposal.

13           However, if the Board is to set reasonable  
14 objectives for salinity in the south Delta it should also  
15 allow for the degradation of water quality in the fall  
16 and winter months by setting salinity objectives  
17 downstream of Vernalis at a higher level than the  
18 objectives set at Vernalis. This change would account  
19 for the high salt loading from normal agricultural soil  
20 leaching that typically occurs in these months.

21           Although the SED evaluated and discounted a 1.4  
22 EC year-round objective at the interior locations, DWR  
23 recommends a 1.3 to 1.4 EC objective during the fall and  
24 winter months when the Vernalis objective is 1.0 EC.

25           DWR recently contracted with consultant ICF to

1 conduct a study and report evaluating salinity patterns  
2 and effects of tidal flows and temporary barriers in the  
3 south Delta. The study identifies the source of high  
4 salinity water in Paradise Cut and Sugar Cut and explains  
5 how this higher EC water is tidally mixed with the Old  
6 River flow and increases the measured EC at the Old River  
7 near Tracy Road Bridge Station, or the ORT Station, as we  
8 call it, the "Old River Tracy."

9           The report provides an increased understanding  
10 of the south Delta channel flows and salinity patterns.  
11 It explains the effects of CVP and SWP pumping on south  
12 Delta salinity. And it demonstrates that export pumping  
13 and barrier operations do not increase the measured EC at  
14 the ORT Station or the frequency of D-1641 exceedances.  
15 This report, which we are -- just completed, will be  
16 available to the Board and will be available online to  
17 the public early this month, probably in a week or two.

18           In addition to this recent study and report, it  
19 has been repeatedly shown by past field studies and  
20 reports that salinity at the ORT Station is heavily  
21 influenced by saline return flows that originate in  
22 Paradise Cut and Sugar Cut. Consequently, it is not  
23 reasonable to set salinity objectives at this location.  
24 It may be more reasonable to continue the Middle River  
25 and Brandt Bridge locations as compliance stations. The

1 DWR recommends that the Board discontinue using the ORT  
2 station as a compliance location.

3           The objectives for the proposal alternatives  
4 include meeting water quality objectives throughout  
5 channel reaches, rather than through previously specified  
6 compliance locations that are in D-1641. Such an  
7 approach to monitoring water quality would place  
8 additional responsibility on DWR to control for in-Delta  
9 diversions and discharges, factors that DWR cannot  
10 influence.

11           Flows downstream to the compliance locations at  
12 Old River at Tracey Road Bridge and Old River at Middle  
13 River are naturally low during the irrigation season.  
14 Modeling indicates that almost all the incoming flow is  
15 diverted by in-Delta uses. And the reduced amount of  
16 flow returned to the channels is of worse quality.  
17 Therefore, controlling and monitoring for water quality  
18 within channel reaches could be very difficult and  
19 costly. Nonetheless, DWR believes it should not have the  
20 responsibility to ensure water quality within the south  
21 Delta.

22           DWR also has concerns with respect to the SED  
23 and evaluation of impacts to groundwater and  
24 implementation of Sustainable Groundwater Management Act,  
25 or SGMA. The SED acknowledges that groundwater in basins

1 subject to SGMA will be impacted by the increased flow  
2 alternatives, some of them significantly.

3           The SED also assumes that groundwater  
4 sustainability plans can bring the basins to sustainable  
5 conditions without considering the impact of additional  
6 groundwater pumping caused by meeting the proposed  
7 alternative flow requirements. Deflecting the burden to  
8 address unquantified impacts from additional groundwater  
9 pumping to the groundwater sustainability agencies would  
10 result in a failure to reach sustainable groundwater  
11 management in the basins.

12           The SED states the annual average groundwater  
13 balance can be expected to be reduced in terms of the  
14 equivalent about one-inch across the subbasins. It isn't  
15 clear what this means, as the adverse impacts cannot be  
16 evaluated or compared when pumping is expressed  
17 qualitatively and location-specific information is not  
18 provided.

19 DWR believes that the extent of impacts of groundwater  
20 pumping should not be averaged across the entire basin.  
21 DWR recommends the amount of additional groundwater  
22 extracted to replace the loss of surface water deliveries  
23 should be expressed as a volumetric unit, such as acre-  
24 feet, and be location specific.

25           Also, the groundwater data are not current and

1 are not reflective of groundwater conditions affected by  
2 the current five-year drought. Groundwater extraction  
3 and subsidence has increased significantly during the  
4 drought and groundwater elevations have not recovered.  
5 DWR recommends the starting point for the evaluation of  
6 the alternative should reflect current groundwater  
7 conditions, should be more location-specific, express  
8 impacts in quantifiable units, and take in consideration  
9 future climate change impacts.

10 MS. D'ADAMO: I have a question on that last  
11 slide. So we had a speaker -- I wish I could remember  
12 who it was, maybe about five back -- that said that our  
13 staff's analysis is inadequate on groundwater and that it  
14 should analyze the SED with SGMA. And that the  
15 Department has some information that our staff could use  
16 in developing that analysis. Is that accurate? Do you  
17 have information that could help our staff in the  
18 development of an analysis with SGMA?

19 MR. HOLDERMAN: Well, I'm not the expert in  
20 groundwater. We do have an expert here that may be able  
21 to answer that question if you'll allow her to come  
22 forward.

23 MS. D'ADAMO: Yes, I think it'd be helpful.  
24 And I'm not remembering -- does anyone remember? The  
25 speaker mentioned a couple of reports that are readily



1 available at the Department.

2 MR. GROBER: I think it might have Terry  
3 Erlewine with the State Water Contractors.

4 MS. D'ADAMO: Oh, that's right. It was Terry,  
5 yeah.

6 VICE CHAIR SPIVY-WEBER: Be sure and identify  
7 yourself and clearly your affiliation with the  
8 Department.

9 MS. SCRUGGS: I'm Mary Scruggs. I'm with the  
10 Department of Water Resources and I work in the  
11 Groundwater section.

12 I'm not sure what report is specific, but SGMA  
13 is just starting right now. And GSAs, groundwater  
14 sustainability agencies, and the groundwater  
15 sustainability plans, are being developed. The GSAs are  
16 required to put together by April of this year. Plans  
17 are not due until 2020 or 2022.

18 And so, there is a lot of existing data. The  
19 data that was used in the SED went up to 20 -- I mean,  
20 sorry, 2010. It doesn't include information on  
21 groundwater from the drought. And so the conditions have  
22 worsened, as Mark had said in our comments, and so that  
23 starting point should be from where it is. So SGMA is  
24 requiring local agencies, the GSAs, to bring the  
25 groundwater basins to be sustainable by 2020 or 2022.

1           Several of these basins are critically  
2 overdrafted. The additional requirements of groundwater  
3 pumping on unimpaired flows would increase that burden  
4 onto the groundwater, but it's unclear -- it's not  
5 quantitatively described in the SED -- to how much. So,  
6 they're already working at a deficit. What further  
7 deficit are they going to have to be working at to be  
8 able to be sustainable?

9           So, hopefully -- and there is data available on  
10 groundwater levels, but there's also a lot of holes in  
11 groundwater. Groundwater is one of the ones we just  
12 don't have all that data. And you can't go back and get  
13 historical data if it wasn't already collected. So it's  
14 moving in the right direction, but there's a lot more  
15 work to be done.

16           MS. D'ADAMO: Well then how would you, if you  
17 think it should be a more specific detailed and  
18 quantitative analysis, how would you recommend going  
19 about that?

20           MS. SCRUGGS: If you're going to -- what volume  
21 would be taken out and what basins would that be? So  
22 what would that be extracted and where are they now? And  
23 so what's that additional part that would be taken of  
24 where they are. That's what would be needed. Does that  
25 help?

1 MS. D'ADAMO: Yes. And do you have any  
2 information that could assist in coming up with a range  
3 of what a potential groundwater management plan would  
4 look like in terms of the range that would be needed for  
5 the basin to rebound?

6 MS. SCRUGGS: There's several sources. There's  
7 existing data that we have, there's local agencies that  
8 have groundwater management agencies or irrigation  
9 districts. The Department released the regulations on  
10 what's needed in the groundwater sustainability plans, so  
11 it would be a matter of looking at the particular  
12 subbasin. What volume would that be considered to be --  
13 would be replaced, the surface water that would be  
14 replaced by groundwater -- and looking at it in a  
15 specific subbasin.

16 And that's what will be looked at in preparing  
17 and developing the groundwater sustainability plans. And  
18 in these areas that are critically overdrafted, they are  
19 going to have to figure out what do they reduce or how do  
20 they bring in more supplies to recharge that groundwater.  
21 So, additional burden of pumping on the groundwater is  
22 just it's digging a deeper hole, so how do you dig them  
23 out?

24 And the way the SED was written, is it  
25 acknowledges that it will have a significant impact, but

1 it also plays off saying that SGMA will take care of  
2 groundwater. Well, SGMA can't take care of groundwater,  
3 unless everything is taken into consideration. So in  
4 areas where you've got critically overdrafted basins and  
5 you're putting more burden onto it you're going to worsen  
6 the situation. So, is it tipping the scale to make it no  
7 longer sustainable? Or what will happen?

8 I mean, it's going to take years to be able to  
9 get these basins to recover.

10 MS. D'ADAMO: Okay. Thank you.

11 MR. MOORE: I actually think based on the  
12 staff's briefings over the last couple of years we have  
13 taken recent groundwater data into account. We've looked  
14 at 2014 pumping rates -- I mean, correct me if I'm wrong,  
15 but I don't know if I agree with this bullet that I'm  
16 looking at right now as far as we haven't taken any of  
17 that, the drought, into account.

18 MR. GROBER: I think we can all agree that  
19 groundwater is a big issue that will have to be resolved,  
20 but we used the best data that we had in front of us.  
21 So, I think what I've heard is that there haven't been  
22 other reports that have come up with the storage levels,  
23 the groundwater pumping rates. But we have. And I'm  
24 just looking in the Executive Summary, where we've  
25 exactly tried to do that. And we have a groundwater

1 chapter where we've done a mass balance, where we have  
2 quantified the increase in groundwater pumping that we  
3 think would occur based on 2009 rates of groundwater  
4 pumping, recognizing that that's lower than the full  
5 capacity, based on 2014. And I think as I'd said  
6 earlier, mindful of using a number that is less  
7 unsustainable.

8           What the sweet spot is, what is sustainable is  
9 an impossible question to answer. I expect there will be  
10 a lot more information in the next few years, but we did  
11 do that analysis to look at any number of ways what the  
12 current levels of groundwater overdraft are and how this  
13 would increase those rates of groundwater overdraft.

14           MR. MOORE: That's right. And also, this is a  
15 water-supply-focused discussion. And I haven't heard  
16 anything about water demand management in that discussion  
17 yet, as far as SGMA goes. Thank you.

18           MR. GROBER: And that's correct. Thank you for  
19 that, because I think it's worth pointing out that the  
20 principle effect of the proposal would be to reduce the  
21 quantity of surface water available. That will have an  
22 effect. And then the next effect that we see would stem  
23 from that would be some level of increased groundwater  
24 pumping. But the project itself is certainly not  
25 requiring or advocating increased groundwater pumping,

1 it's just observing what has happened when there has been  
2 water shortage.

3 MS. D'ADAMO: If we could get back to -- one of  
4 the things that I found confusing in going through the  
5 staff analysis is this metric for determining an impact,  
6 so many inches. And I think what I'm hearing you say is  
7 that we shouldn't be looking at it from a broad level, we  
8 should be looking at the local subbasin. And that  
9 information, at least the current state, is compiled --  
10 the current information that you have is compiled by  
11 subbasins.

12 MS. SCRUGGS: Correct. If you average it  
13 across the entire subbasin, you know where are the wells  
14 actually going and where's the pumping? So, if all the  
15 pumping is in one area, averaging it across you've now  
16 averaged it, so you're not really seeing what's  
17 happening. Groundwater is very location-specific. So  
18 depending upon is you're aquifer more productive in an  
19 area. Do you have area subsidence? Are you increasing  
20 that? It's location, location, location.

21 The data that was used in the reports that were  
22 referenced was DWR reports and it was a groundwater  
23 report, but it was based on data up through 2012 --  
24 sorry, 2010 and 2009. We haven't compiled further than  
25 that, because that was last we've done.

1           There is data out there and it's available, but  
2 it's a matter of compiling it and getting it and  
3 evaluating it. And that's what will be happening under  
4 SGMA on the basins and on developing these sustainable  
5 groundwater management plans, they'll have to be looking  
6 at their specific basins and getting that data and  
7 bringing it up to date. But there's been a significant  
8 impact to groundwater with the drought over the last four  
9 or five years.

10           MS. D'ADAMO: Yeah. And I'm just thinking that  
11 with all of the testimony that we've had from  
12 disadvantaged communities and concerns about drinking  
13 water wells, schools, and in certain communities like  
14 Planada, and I think Denair, it does seem that those  
15 impacts already are quite localized. And I don't know  
16 enough about what's causing those localized impacts.

17           Is it the -- are we talking about shallow  
18 wells? But there are shallow wells throughout the  
19 region. But these are communities that seem to get hit.  
20 And so it does seem that spreading it out through across  
21 the entire subbasin isn't going to give us the  
22 information that we need in order to determine those  
23 disadvantaged community impacts that have been  
24 highlighted.

25           MR. GROBER: But I think as you are hearing

1 here, we don't have that, the detailed information,  
2 certainly not in reports. So we've done actually quite a  
3 bit for a programmatic analysis to know what the overall  
4 effect. And we say some words that we can't know exactly  
5 where these are all happening, but we do identify that  
6 there have been locally areas that have already  
7 groundwater problems. And that they are not going to get  
8 better with having reduced surface water availability.

9 MR. MOORE: I think this gets to the issue, and  
10 it's a bit of a legal issue, but in terms of are we doing  
11 an adequate job of describing the potential impacts? And  
12 how much granularity is necessary? And what kind of  
13 threshold of significance that we need to do for this  
14 exercise? I mean, we're definitely encouraging comments  
15 on this. If we're too coarse in our analysis, and as you  
16 point out there may be specific areas that are vulnerable  
17 in the SED project area, we're listening. But in this  
18 discussion I didn't hear a lot of detail from DWR saying,  
19 "Oh, you ought to look at this report, because --" or  
20 "This new CASGEM data really gives insight into this  
21 area. That should be highlighted in the SED."

22 So I just want to manage everyone's  
23 expectations here. This is a disclosure of potential  
24 impacts. It's really dependent -- the level of  
25 granularity of this analysis is dependent on available



1 data. We can talk about, academically, what we've missed  
2 and all the important points about hydrogeology and its  
3 heterogeneity. But there's available data. And then  
4 there's an acceptability, to some degree, to accept a  
5 qualitative analysis of disclosed impacts. I don't know  
6 if you have any comments on that.

7 MS. WON: Well, yeah. I would echo your  
8 statement that we can only do what's reasonably  
9 foreseeable. And that's the standard by which we are  
10 going to be held in a court of law.

11 MS. D'ADAMO: So I'm going to just jump in  
12 here. I think that that's a good way to describe the  
13 issue is what is legally required of us? But on SGMA in  
14 particular, this is a top priority for the administration  
15 and so is drinking water. And so I think --

16 MR. MOORE: For this Board.

17 MS. D'ADAMO: Yes. So, I think you may be  
18 correct from a legal perspective. I think from a policy  
19 perspective we need to do more, to the extent that we  
20 can. And so, if you do have some reports that you could  
21 help identify to turn, to point staff in the direction it  
22 would be greatly appreciated. Because I think that we  
23 have an obligation from a policy perspective to do more  
24 on the SGMA issue.

25 And I know there was a slide that staff had on

1 today's presentation on the disadvantaged community  
2 issue, in saying that -- there was the last bullet there,  
3 I'm looking for the slide, I'm not pulling it up here --  
4 but that the disadvantaged community analysis would be  
5 done as part of groundwater sustainable plans. That's  
6 not something we should be kicking down the road. I  
7 mean, that's something that we should be looking at to  
8 the extent that we can incorporate it into the analysis.

9 VICE CHAIR SPIVY-WEBER: Go ahead.

10 MR. HOLDERMAN: Okay, I'll be wrapping up  
11 quickly. I'll just talk about climate change and then  
12 move to my summary slide.

13 The last update of the Water Quality Control  
14 Plan was over a decade ago and flow objectives for the  
15 San Joaquin River have not been updated for over two  
16 decades. During that time our understanding about  
17 climate change impacts has substantially improved.  
18 However, the knowledge has yet to inform the Water  
19 Quality Control Plan and in fact, will not significantly  
20 do so, even in this update as the hydrologic analysis for  
21 the Water Quality Control Plan does not consider future  
22 climate change impacts.

23 Further, continual updating of the Water  
24 Quality Control Plan will continue to include the  
25 hydrology of the past, which is becoming increasingly

1 irrelevant for water resources planning. For instance,  
2 the continued inclusion of hydrology from the first half  
3 of the 20th Century will dampen the impact of the  
4 increased variability experienced in the last half of the  
5 20th Century and the markedly increased warming  
6 experience since the turn of the century.

7           Since Water Quality Control Plan update  
8 processes can last 10 to 20 years, or more, the SED  
9 evaluation of impacts should consider future climate  
10 change impacts as part of the analysis.

11           This last slide is a summary of the major  
12 topics I wanted to talk about today. The key issues I'd  
13 like to leave the Board with are: Consider other actions  
14 besides flow that can potentially be more effective at  
15 protecting fish.

16           Assign responsibility for water quality  
17 degradation to those responsible for the degradation.

18           Recognize from years of modeling and study  
19 data, including a recent report that you'll soon see,  
20 that south Delta's salinity problems are not caused by  
21 the State Water Project.

22           Revise salinity objectives that account for  
23 degradation downstream of Vernalis in the fall and the  
24 winter months.

25           Recognize that the Old River Tracy Station is

1 not a reasonable compliance station for measuring overall  
2 south Delta water quality. And compliance by reach is  
3 going to be very problematic.

4 And also apply DWR's recommendation that the  
5 Board's SED include groundwater and climate change  
6 impacts.

7 That completes DWR's presentation today. We  
8 appreciate the opportunity to provide our oral comments.  
9 We'll soon be completing our more extensive and detailed  
10 written comments. And we look forward to working further  
11 with the Board and Board staff as this process moves  
12 forward. Thank you.

13 VICE CHAIR SPIVY-WEBER: Thank you. Any  
14 questions? Okay.

15 I have ten cards that I will read off. And if  
16 you could line up, so that you can move in very quickly.  
17 And if you can keep it to two minutes it would be great.  
18 We will set the clock for two minutes. If you have to go  
19 over a little bit to make your point we'll take that into  
20 account, but we'll set the clock for two minutes.

21 Erika Lovejoy, Victoria Guinard, Jonathan  
22 Moules, David Aladjem, Charlene Woodcock, Joe Daly, Larry  
23 Kolb, Erik Young, Peter Mangarella, Alicia Thompson.

24 Go ahead, Erika.

25 MS. LOVEJOY: Hi. I scheduled mine for three

1 minutes, but I'll do my best. I --

2 VICE CHAIR SPIVY-WEBER: Please do.

3 MS. LOVEJOY: Okay. I'm Erika Lovejoy with  
4 Sustainable Conservation, a nonprofit that's working on  
5 water issues statewide. We recognize the urgent need to  
6 address the species declines and ecosystem changes that  
7 occurred in the San Joaquin River and Delta system and we  
8 appreciate your effort to do a balanced approach.

9 In order to address the problems impacting the  
10 environment in local communities we believe that a fully  
11 integrated approach is needed. And that should take into  
12 account not only an adaptive strategy for managing flows  
13 in wet versus dry years and implementation of non-flow  
14 restoration actions, but also water conservation,  
15 agricultural water use efficiency, and groundwater  
16 recharge at a meaningful scale.

17 Then further evaluation also needs to be made  
18 too, and options spelled out for disadvantaged  
19 communities, as you all have been talking about. We  
20 think that's really important, especially with the  
21 anticipated increase in groundwater pumping that's likely  
22 to occur.

23 Now, we're going to submit more detailed  
24 comments on those items, but today I'd like to recommend  
25 specific actions for the Water Board to encourage

1 development of settlement agreements that include a wide  
2 spectrum of non-flow action. So, we strongly believe  
3 that increased flows in the San Joaquin system must be  
4 accompanied by badly needed habitat improvements in order  
5 to adequately address fish and wildlife beneficial uses.

6           So first, we recommend creation of a roadmap to  
7 help potential project proponents to understand how to  
8 acquire partners and to plan, develop, and implement  
9 restoration projects, okay? So restoration isn't  
10 necessarily a key area of expertise for many water  
11 agencies. And guidance on how to get the work done is  
12 really needed.

13           Next, there's also a need to help identify  
14 potential funding sources and collaborators for projects.  
15 And the Water Board could dedicate regional staff to help  
16 identify viable projects and help to store them along  
17 through the permitting and implementation process.

18           Finally, we believe that programmatic, or  
19 simplified permits, should be developed now to cover a  
20 variety of estuary restoration actions. If you're going  
21 to get these projects done, you can't wait till later, so  
22 that would definitely save time and money and get more  
23 projects done and create a lot of incentives. Because  
24 otherwise, if some of these actions aren't taken into  
25 advance I'm afraid that folks aren't going to pursue

1 these voluntary settlement agreements.

2 VICE CHAIR SPIVY-WEBER: Thank you.

3 MS. LOVEJOY: Thank you.

4 VICE CHAIR SPIVY-WEBER: Victoria.

5 MR. MOORE: Yeah. And that area of  
6 programmatic permitting, we talk about it a lot. And  
7 different regional boards have advanced this prospect a  
8 lot. And so, we certainly are aware of that and want to  
9 encourage that and appreciate that. It is a multi-agency  
10 commitment and so it requires our Water Boards to work  
11 the other permitting agencies, but certainly, are very  
12 interested in that.

13 And good to see you Ms. Lovejoy. I haven't  
14 seen you since Santa Clara Basin --

15 MS. LOVEJOY: Yes.

16 MS. GUINARD: Hello, my name is --

17 MR. MOORE: -- back in the '90s. Sorry.

18 MS. GUINARD: Hello, my name is Victoria  
19 Guinard. I'm with the Turlock FFA. And I'm here more  
20 importantly on behalf of Turlock, along with other  
21 communities as a whole. So ultimately, I'm not here  
22 today to give a spiel about my family, farm or anything  
23 of that nature, because I actually grew up with no  
24 agricultural background whatsoever. I joined FFA simply  
25 to become more involved in any way possible; hence the

1 reason why I am here today.

2           However, I do feel that regardless of whether  
3 or not I have an agricultural background, agriculture is  
4 constantly reflecting not only my life, but impacting my  
5 community as a whole, for the simple fact of being that  
6 one our greatest socioeconomic opportunities and  
7 opportunities for successes. And where we've actually  
8 seen the majority of our successes is directly from the  
9 agricultural realm, where we've seen job opportunities.  
10 Where we've seen students within the FFA program, which  
11 is the largest youth organization across the nation, is  
12 constantly revolutionizing individuals' mindsets in order  
13 to ensure that they have opportunities for success within  
14 the future.

15           So ultimately, today I'm not necessarily  
16 advocating for a world where we're not going to see any  
17 benefits towards the fish industry. But I'm ultimately  
18 suggesting a way in which we're capable of increasing the  
19 opportunity for negotiations, where we're going to see  
20 the agricultural industry still in the spotlight.  
21 Especially taking into consideration the benefits not  
22 only on the economic standpoint, but to our day-to-day  
23 lives.

24           We have to realize that it's not just our lives  
25 in the future that are going to be impacted, but its



1 youth organizations where we have 635,000 members within  
2 the FFA program; 85,000 of which are residing within  
3 California as of right now. That's 85,000 peoples'  
4 futures solely anticipated and solely relying on an  
5 agricultural industry that were currently jeopardized  
6 within the California realm. Thank you.

7 VICE CHAIR SPIVY-WEBER: Thank you.

8 Jonathan?

9 MR. MOULES: Hello, my name is Jonathon Moules.  
10 I'm a senior at Turlock High School and a four-year  
11 member of the Turlock FFA Chapter. As you can see, I am  
12 wearing the -- (Timer beeps.)

13 (Laughter.)

14 VICE CHAIR SPIVY-WEBER: Time's up.

15 MR. MOULES: Okay. As you can see I'm wearing  
16 the blue and gold jacket that you've seen multiple times  
17 over the course of these meetings across the Central  
18 Valley. And as you can already probably figure out, I'm  
19 the son of a farmer. And of course, this proposal will  
20 affect our family's livelihood as farmers. But over the  
21 past few months there have been many different and  
22 redundant testimonies on how the unimpaired flow proposal  
23 will be affecting family farms and other professional  
24 businesses and organizations.

25 But one matter has not been discussed -- on how

1 it'll affect everyday K-12 students. According to the  
2 California Department of Education 2015-2016 school year  
3 database of how many children are on the free or reduced  
4 lunch program, nearly 67 percent of those students in  
5 Stanislaus County, 61-and-a-half percent in San Joaquin,  
6 and 80.6 percent in Merced County students are on this  
7 program.

8           The Free Lunch Program is granted upon families  
9 where their yearly income is at or below 130 percent of  
10 the poverty line. And reduced price is granted upon  
11 those who are between 130 and 185 percent. And keep in  
12 mind that the poverty line for the year of 2016 was about  
13 \$25,000 for an average family of four.

14           The Lunch Program requires all students who  
15 come into the cafeteria to eat lunch to take the main  
16 meal, which can vary from being a sandwich to nachos, to  
17 take a fruit or vegetable, and a milk. And which every  
18 part of that meal is, obviously, an agricultural  
19 commodity. Not to mention how the water quality in  
20 schools will fall if more groundwater has to be used.  
21 But anyways, the full price of the meal varies from \$2.00  
22 to \$3.00.

23           The question that you need to answer is will  
24 the estimated jobs being lost affect a number of families  
25 needing to use the School Lunch Program? And will the

1 full price of those meals have to be raised and therefore  
2 decrease the number of students eligible for those free  
3 and reduced lunch programs in the counties stated  
4 previously and other surrounding areas?

5 Thank you very much for your time.

6 VICE CHAIR SPIVY-WEBER: Thank you.

7 David.

8 MR. ALADJEM: Good afternoon Vice Chair Spivey-  
9 Weber and members of the Board. David Aladjem, Downey  
10 Brand, here this afternoon on behalf of the Northern  
11 California Water Association. Northern California Water  
12 Association, NCWA, and all of its member organizations  
13 very much appreciate the opportunity to speak this  
14 afternoon and also, the extension of time for comments.  
15 We will be providing extensive comments at the March  
16 deadline.

17 The Board is well aware of Northern California  
18 Water Association's interest in the Sacramento Valley.  
19 You maybe wondered why are we here this afternoon on the  
20 San Joaquin. The short answer is that the approach taken  
21 by your staff on the SED, the unimpaired flow approach,  
22 we believe is fundamentally wrong-headed. We believe  
23 that it involves an outdated, regulatory mindset that  
24 essentially takes a meat axe to this problem where we  
25 need a scalpel.

1           What we've been proposing for the last few  
2 years, as many of you know, is what we call a functional  
3 flow approach. What it does is it starts with Water Code  
4 Section 13000, the basis for Porter-Cologne. And it says  
5 let's treat all of the beneficial uses as equally meeting  
6 in your Water Quality Control Plan. It then says let's  
7 look at all of those beneficial uses, all of the needs  
8 for the environment, for agriculture, for urban uses and  
9 let's figure out what those needs are. And then let's  
10 figure out -- and we call this functional flows -- what  
11 flows are necessary to meet which specific purposes. Not  
12 an unimpaired flow approach that literally says we're  
13 going to have a huge amount of water without tying it  
14 very closely to the needs of fish or agriculture or urban  
15 areas.

16           This morning Member Moore, you used the phrase,  
17 bioengineering -- let me please finish --- and we think  
18 that's exactly the right way for this Board to approach  
19 it. We urge that you take that type of an approach and  
20 rely upon the Delta Science Panel's recent report from  
21 November that did not identify unimpaired flows or even  
22 flows at all as one of the limiting factors in the Delta  
23 estuary.

24           Thank you very much for your time.

25           VICE CHAIR SPIVY-WEBER: Thank you. And we

1 look forward to those comments.

2 Charlene?

3 MS. WOODCOCK: Hello, my name is Charlene  
4 Woodcock. I was born and raised in Arcadia in Southern  
5 California. And childhood trips to the desert taught me  
6 that I lived in an arid country and the water is precious  
7 and needed to be treated with great care.

8 VICE CHAIR SPIVY-WEBER: Can you bring your --  
9 yes, there. Perfect.

10 MS. WOODCOCK: Later, camping on the Eel River  
11 in the Redwoods taught me the close relationship between  
12 the richness of those woods and the inner-dependence  
13 between them and the water and the salmon.

14 At a time of water scarcity, what's needed is  
15 conservation and efficiency. Not only of water, but of  
16 energy. The health of the Delta is essential to our  
17 economy as well as to California's water system and the  
18 diversity of fish, plants and animals it supports, and  
19 people.

20 We want our salmon fisheries to thrive, not to  
21 be sacrificed to industrial agriculture profits.

22 Inadequate freshwater flows are damaging the Delta and  
23 the salmon and steelhead populations and the larger  
24 California economy.

25 There have been a couple of mentions of the

1 suffering of disadvantaged communities, for lack of  
2 adequate water. At the same time we see very wealthy  
3 communities, perhaps adjacent as in Palo Alto and East  
4 Palo Alto, where there's a great deal of water waste,  
5 extravagant use. So it seems to me some need exists to  
6 do a little evening of water use. In Southern California  
7 I've read in recent years that water districts have  
8 recognized that they can't continue to expect the water  
9 from Northern California, so they're investing in water  
10 cleaning and recycling plants.

11 In view of the drought's effects and the  
12 escalating consequences of climate change we can no  
13 longer allow California water policy to defer to the  
14 demands of industrial agriculture. Thank you.

15 VICE CHAIR SPIVY-WEBER: Thank you very much.  
16 Joe?

17 MR. DALY: I'm Joe Daly, a founding Board  
18 member of the Tuolumne River Trust and currently on their  
19 Advisory Board. And for more than 35 years I was a river  
20 outfitter on the Stanislaus, Merced and Tuolumne rivers.  
21 I will give you the Reader's Digest of what I was going  
22 to say. But the three points I was going to make would  
23 be: 1) having to do with flows, 2) having to do with  
24 technology and 3) having to do with attitude.

25 With regarding flows, the evidence this morning

1 was just simply overwhelming. This, I think what the  
2 scientists said, just means we have to have a greater  
3 flow: 50 percent is better than 40 percent, 60 percent is  
4 better than 50 percent. And we cannot continue what we  
5 have presently for our flow through that Lower San  
6 Joaquin. It'd be almost like driving around on four flat  
7 tires.

8           Secondly, in terms of technology, there are  
9 companies out there that I think can do much to help.  
10 And I think the experts within the Board should reach out  
11 to a company like XiO in San Anselmo, California. They  
12 have worked with municipal and mutual water communities  
13 to help with devices that are cloud-controlled and  
14 brought about some tremendous efficiencies. And so I  
15 would encourage you to contact them and have a  
16 conversation, but I'm sure there are many other companies  
17 out there too. And by the way, I don't own any stock in  
18 that company.

19           Third, and this could well be the most  
20 important point for you all, and that is the attitude  
21 that we all take now. Pretty much it's an "us versus  
22 them" attitude. And we really do need to move away from  
23 that. The young man that spoke earlier about teamwork, I  
24 think there's some merit in that. I think we're getting  
25 people of very diverse points of view into the same room.

1 It might be knocking heads a little bit, but I think it's  
2 worth getting beyond that. Otherwise it's going to be a  
3 bigger challenge for all of you.

4 Thank you very much. I do have a petition  
5 signed by 1,200 people I'd like to submit to you all  
6 concerning increased water flows on the lower flow.  
7 Thank you.

8 VICE CHAIR SPIVY-WEBER: Thank you.

9 Larry? Larry.

10 MR. KOLB: Thank you Madam Chair and Board  
11 Members. I think of the many things that this Board gets  
12 involved in none is more thankless than this one, this  
13 kind of thing, of reallocating water in the interests of  
14 the environment. So I want to say, "Thank you." I think  
15 that makes me a committee of one, but I just -- just so  
16 once you could hear that. And I want to express my  
17 admiration also for the quality of the staff work and for  
18 the patience and good graces of this Board in attending  
19 hearings in places where you're going to get nothing but  
20 criticism. So, thank you for that.

21 Much of the testimony has been concerned with  
22 economic impact of reducing some of the water. All the  
23 crops grown in California amount in normal years to  
24 around \$36 billion. That's the highest in the country by  
25 a big measure. However, I'd like to note some other



1 California institutions that are not in agriculture.

2 For example, Apple has revenues of \$234 billion  
3 last year, Google at \$75 billion, Intel at \$55 billion.  
4 These and other innovative firms like Facebook and Sales  
5 Force and Twitter and eBay, to say nothing of Hollywood  
6 and Aerospace or our great universities, they help drive  
7 the state's economy, which is currently at \$2,500  
8 billion. So, if you take the \$36 billion as a  
9 percentage, it's less than 2 percent of California's.  
10 And if you include all of the indirect ones and you  
11 generously define them it's well under 10 percent. So,  
12 this is not a giant engine of growth in California.

13 I think we want to have successful,  
14 sustainable, profitable farming. But there are other  
15 priorities, as well. Thank you.

16 VICE CHAIR SPIVY-WEBER: Thank you.

17 Erik?

18 MR. YOUNG: Hello, my name is Erik Young and  
19 I'm President of the North Bay Chapter of Trout  
20 Unlimited, one of 13 local grassroots chapters that Trout  
21 Unlimited has in California. Our chapter has slightly  
22 over 900 members, who live in Marin, San Francisco and  
23 San Mateo counties. These members belong to our  
24 organization, because they believe in the importance of  
25 trout and salmon in their habitat. We spend many

1 volunteer hours in direct support of that belief. As an  
2 organization, Trout Unlimited prides itself on working on  
3 a collaborative basis with agencies, landowners and  
4 ranchers in achieving results, which benefit coldwater  
5 fisheries.

6           Why do we care about maintaining river flows?  
7 Enjoying the peace and freedom that comes with being out  
8 in nature. Spending precious time with our friends and  
9 family outdoors in a beautiful watershed. Looking  
10 forward to, and planning for a trip and all the  
11 preparation that entails, creating memories that last a  
12 lifetime. Just standing alongside a swiftly-flowing  
13 river on a cold morning. And the thrill and uncertainty  
14 of having even a small chance to catch and release a  
15 fish.

16           All of our members, whether they fish or not,  
17 support and appreciate knowing that healthy fish  
18 populations exist in the rivers, which are the focus of  
19 today's meeting. And perhaps, most importantly, we want  
20 to ensure that these experiences are available to future  
21 generations.

22           In considering our requests for freshwater  
23 flows that are adequate to support fish populations,  
24 please also consider the economic contributions that  
25 recreational fishing makes to the California economy.

1 We buy equipment, we stay in local hotels, and eat at  
2 local restaurants when we travel. We provide revenue to  
3 the California Department of Fish and Wildlife in the  
4 form of licenses and fees. We pay a 10 percent federal  
5 excise tax on fishing equipment that goes directly  
6 towards supporting local conservation.

7 Thank you for providing this forum today and  
8 for considering our views.

9 VICE CHAIR SPIVY-WEBER: Thank you.

10 Peter?

11 MR. MANGARELLA: My name is Peter Mangarella  
12 and I'm going to keep this very simple. I'm the  
13 President of the John Muir East Bay Chapter of Trout  
14 Unlimited, which covers Alameda and Contra Costa  
15 counties. The mission of TU is to protect and restore  
16 coldwater fisheries. Our Chapter supports the State  
17 Water Resources Control Board in the efforts to help  
18 farmers, commercial and recreational fishermen, urban and  
19 industrial water users, and environmental groups  
20 cooperate on the issue of increasing river flows into the  
21 Bay-Delta.

22 As a student in the '60s, 1960s, I fished the  
23 Tuolumne River in the high country, as well as the lower  
24 river prior to the completion of the New Don Pedro Dam.  
25 At that time, the flows in the river were much higher

1 than they are today. Following graduation, I worked as a  
2 civil engineer. And today I'm retired.

3 I live with my wife in Oakland. I try to  
4 conserve water. I disconnected my irrigation system.  
5 During the rainy season, all roof runoff is diverted to  
6 the garden. I wash my car at a carwash, which recycles  
7 the water. I converted my concrete driveway to gravel to  
8 infiltrate the rainfall. My wife and I have become more  
9 aware of the water required to produce different foods  
10 and think more about the implications of our food choices  
11 on water usage.

12 These are small steps in the big picture  
13 surrounding this issue, but many small steps help.  
14 Considering climate change, drought, the potential  
15 extinction of salmon and steelhead, we Californians need  
16 to come together and agree that water conservation and  
17 water-use efficiency can play an important role in  
18 increasing flows in the rivers that I fished 50 years  
19 ago.

20 Thank you.

21 VICE CHAIR SPIVY-WEBER: Thank you.

22 Alicia?

23 And we have two -- I'm going to call two  
24 panels. And if you could come up and sit together, one  
25 is the Bay Area Water Supply and Conservation Agency and

1 then the Bay Area Council, which reduced its time from  
2 ten minutes to two minutes. So, we'll have both of them  
3 after Alicia. Thank you.

4 MS. THOMPSON: Thank you so much. Thank you  
5 for your time and for being here. We have an extremely  
6 multidimensional issue here on our hands and I think that  
7 river flow rates are just one piece of the puzzle as  
8 we've heard a little bit today.

9 Although I agree with the increased flow rates,  
10 I think that many other systems need to be implemented  
11 simultaneously. One of them being, let's offer some  
12 subsidies and some incentives for farmers who are  
13 conserving their water resources and implementing more  
14 conservative practices.

15 Let's focus on groundwater recharge. We've  
16 heard a lot earlier about how we know very little about  
17 groundwater and how it's so critically overdrafted at  
18 this point. We're pulling much more out of the ground  
19 than we're replenishing and it's going to hurt us, I  
20 think, and be extremely detrimental in the long run.

21 Let's start putting a tax on wells and water  
22 that we're taking out of the ground. Other states are  
23 doing this and it's something that California hasn't  
24 started, but I think that it's a public resource. And  
25 buying land shouldn't give landowners unlimited access to

1 the resources below them, at least without some sort of  
2 monetary exchange for the resource. We can take that  
3 water tax and put that into research for groundwater and  
4 start to learn more about the movement and distribution  
5 of groundwater and how to efficiently replenish it.

6 I think we can continue to make habitat  
7 improvements and build more surface storage and catchment  
8 systems.

9 I feel like my generation inherited a water  
10 debt and crisis that I don't want to pass on to the next.  
11 As a Water Board, you have immense power to protect our  
12 state's natural landscapes. You have the power to leave  
13 a positive legacy for future generations. Central Valley  
14 is blessed with uniquely fertile soil and it behooves us  
15 to take advantage of that resource.

16 And there's a certain amount of water that's  
17 also needed for agriculture. I wholeheartedly agree with  
18 that. I grew up in Turlock and my family is deeply  
19 rooted in ag. However, there are ways to provide food  
20 for families without destroying ecosystems that make this  
21 state what it is. We can't put short-term interests  
22 above long-term sustainability. No new practices are  
23 going to be installed and implemented until there is a  
24 driving force requiring us to do so. We can be that  
25 driving force.

1           Transitioning to new irrigation systems may be  
2 difficult and initially costly, but there's no price tag  
3 on having healthy and sustainable watersheds for all  
4 generations. So, although I think it's very important to  
5 increase flow rates I think we should also be investing  
6 our energy and money into solving the water issue  
7 holistically.

8           VICE CHAIR SPIVY-WEBER: Thank you. Thank you  
9 very much.

10           Les, we should consider hiring her. She's  
11 quite good.

12           After these two panelists, we will take a short  
13 break of ten minutes.

14           (Colloquy re: speaker order.)

15           MS. SANDKULLA: Good afternoon Madam Vice  
16 Chair, members of the Board. My name is Nicole  
17 Sandkulla. I'm the Chief Executive Officer for the Bay  
18 Area Water Supply and Conservation Agency. I too will  
19 keep my comments short in respect for your time and the  
20 time of everybody here today. BAWSCA represents the  
21 interests of the 26 water suppliers who purchase on a  
22 wholesale basis two-thirds of the water that's produced  
23 by the San Francisco regional water system, which is  
24 operated by the SFPUC, the San Francisco Public Utilities  
25 Commission.

1           On September 15th, 2016, this Board released  
2 your recirculated draft Substitute Environmental  
3 Document. This State Board proposal could cause  
4 substantial reduction of water from the Tuolumne River to  
5 the Bay Area for the 1.7 million residents, 40,000  
6 businesses, and thousands of community organizations in  
7 Alameda, San Mateo and Santa Clara counties whose water  
8 interests BAWSCA represents.

9           The proposal's purpose, as you know, is to  
10 update the Water Quality Requirements in the San Joaquin  
11 Delta. And to establish minimum flows in major  
12 tributaries, including the Tuolumne River, which supply  
13 the San Francisco regional water system.

14           BAWSCA understands the value of the Bay-Delta  
15 ecosystem and that the status quo is not sustainable.  
16 In nine words, BAWSCA supports the objective of the Bay-  
17 Delta Plan: simple, clear and understandable. In twenty  
18 words, BAWSCA will work with other stakeholders to  
19 protect the water quality in the Bay-Delta for the  
20 humans, fish and other wildlife. Again, simple, clear  
21 and understandable.

22           BAWSCA is already committed to exploring  
23 scientifically proven ways of rehabilitating fish habitat  
24 in the Tuolumne River, such as gravel augmentation,  
25 managing fish predation and ensuring the flows support



1 habitat improvements.

2           Now your document, the SED with its appendices,  
3 is large and a complex document. And I sincerely  
4 appreciate the extension of the comment deadline that you  
5 have provided. The SED raises a number of concerns,  
6 including the unproven presumption that other water  
7 supplies or transfers will be available to the Bay Area  
8 in times of shortages, to make up for the water  
9 reductions due to increased flows.

10           BAWSCA is also concerned that the SED fails to  
11 take into account the likely actions in times of  
12 shortages of other water suppliers, who use the largest  
13 portion of this supply.

14           Lastly, BAWSCA is concerned that while the SED  
15 recognizes that implementation of the flow proposal is  
16 expected to result in potentially significant economic  
17 impacts in the Bay Area, a full analysis of these impacts  
18 is actually not included in the draft SED. So, as part  
19 of our comments on the draft, BAWSCA will providing this  
20 Board critically important data about the potential  
21 environmental, economic, and other impacts of the  
22 proposed actions that must be considered as part of any  
23 decision on the Bay-Delta Plan.

24           So, I brought with me a map today I'd like to  
25 share with you. And it shows my 26 member agencies in

1 San Mateo, Santa Clara and Alameda County. I will call  
2 out in particular -- we did have a representative here  
3 from East Palo Alto, who is one of my member agencies.  
4 And this map shows what the residential-per-capita use  
5 was in the service area during the most recent mandatory  
6 reduction period. And you'll note that there are 10  
7 water suppliers that serve 55-gallons-per-capita per day  
8 or less during that period, including the City of East  
9 Palo Alto. And that there are only 3 that serve more  
10 than 80, which is actually the statewide average.

11           And we believe, looking at this, it really hits  
12 home that conservation is an essential responsibility of  
13 our agencies and their water customers that they serve.  
14 At the same time we believe it is equally important for  
15 this State Board to understand and acknowledge that  
16 municipal water users, specifically in our three-county  
17 area, need a reliable supply to support the economic  
18 viability of their communities.

19           In a recent *Chronicle* article, State Board  
20 Chair Felicia Marcus, shared her opinions on the Bay-  
21 Delta Plan and the SED. Chair Marcus is correct that  
22 this is not an effort to choose a winner between the  
23 urban and agricultural water users or the environmental  
24 advocates. BAWSCA agrees. This is an effort to protect  
25 the water quality of the Bay-Delta for all users: for

1 humans, fish and other wildlife.

2           The solution may be out there, but everyone  
3 will have to do their part. The Governor has indicated  
4 his strong support for negotiated voluntary agreements to  
5 resolve this issue. BAWSCA is committed to continuing to  
6 work closely with the diverse interests and stakeholders  
7 to develop that shared solution. This should be a  
8 strategic process, not a legal brawl. It is about  
9 sharing the river for our mutual benefit. It requires  
10 tough action and respect for all interests, ingenuity,  
11 open minds, sticking with the facts, crafting a solution  
12 in which all users can survive and thrive.

13           BAWSCA is pleased to help. I thank you for the  
14 opportunity to speak to you today. And I will leave  
15 copies of this map and my statement with your secretary.

16           VICE CHAIR SPIVY-WEBER: Thank you very much.

17           MS. SANDKULLA: Thank you.

18           VICE CHAIR SPIVY-WEBER: Adrian?

19           MR. COVERT: Good afternoon, my name is Adrian

20 --

21           VICE CHAIR SPIVY-WEBER: Oh, turn on your mic.

22           MR. COVERT: Good afternoon. My name is Adrian  
23 Covert. I'm the Vice President for Public Policy at the  
24 Bay Area Council. I'd like to thank the Board for  
25 providing this opportunity to provide public comment on

1 the Bay-Delta Water Quality Control Plan.

2 The Bay Area Council is the San Francisco Bay  
3 Area largest multi-sector business association,  
4 representing the largest employers in technology,  
5 biotechnology, finance, trade, utilities, engineering and  
6 construction and much more.

7 The Bay Area is home to California's most  
8 valuable economic asset. The San Francisco, Oakland, San  
9 Jose Metropolitan area boasted a \$667 billion economy in  
10 2015. If this region was its own country, it would have  
11 the 22nd largest economy on earth. San Jose's economy  
12 alone grew at a rate of 8.9 percent in 2015, outpacing  
13 even China. Despite only have 17 percent of the state's  
14 residence, the Bay Area generates about 30 percent of the  
15 state's general fund revenues.

16 But the Bay Area economy cannot function  
17 without water from the Tuolumne River. Water from the  
18 Tuolumne River accounts for approximately 85 percent of  
19 San Francisco's fresh water and about 55 percent of the  
20 fresh water for the 1.8 million described by our previous  
21 presenter in the BAWSCA service area, across four  
22 counties. If the Bay Area's Tuolumne River users were  
23 their own hydrologic region, they'd have the lowest water  
24 rates in California.

25 Residents in the San Francisco-BAWSCA combined

1 service area used just 54 gallons per day over the last  
2 12 months, compared to the statewide average of 82  
3 gallons. San Francisco residents themselves used just 41  
4 gallons per person per day in 2015, one of the lowest in  
5 the industrialized world. However, the San Francisco  
6 Public Utilities Commission estimates its users would  
7 face cuts up to 50 percent during droughts with rationing  
8 beginning immediately after a first sign of drought.

9           This level of rationing could only be avoided  
10 by major investments in new supplies that have no  
11 certainty of being able to be procured. Because the Bay  
12 Area is already the lowest water user in California,  
13 these cuts would leave our region no place to go. And  
14 could have devastating economic impacts by crippling our  
15 already overwhelmed housing supply and undermining water-  
16 intensive institutions such as hospitals, academia, the  
17 biotech industry and data centers.

18           Between 2011 and 2015 the region created  
19 500,000 jobs and just 65,000 new units of housing. This  
20 imbalance has led to skyrocketing and inequality and the  
21 widespread displacement of poor and middle-class  
22 families.

23           VICE CHAIR SPIVY-WEBER: Are you wrapping?  
24 Because you had two minutes.

25           MR. COVERT: Okay.

1 VICE CHAIR SPIVY-WEBER: Sorry.

2 MR. COVERT: I originally had ten.

3 VICE CHAIR SPIVY-WEBER: I know.

4 MR. COVERT: And I foolishly took off seven.

5 VICE CHAIR SPIVY-WEBER: And I moved you up,  
6 because you had two.

7 MR. COVERT: Okay. Give me one more minute, if  
8 you don't mind? Thank you.

9 By 2040 the region is projected to create an  
10 additional 1.3 million jobs necessitating 820,000 new  
11 households. The draft SED, we fear, could forever and  
12 completely put solving the region's housing crisis out of  
13 reach and force our employers to expand elsewhere.

14 In conclusion, the Bay Area likely creates more  
15 economic value per gallon of Tuolumne River water used  
16 than is created by any other water source in California,  
17 and probably the United States. The Bay Area Council  
18 applauds the Board's intent to improve the ecosystem of  
19 the San Joaquin River and its tributaries and appreciates  
20 the difficulty in balancing the human needs of water and  
21 the environmental needs of water.

22 We urge the Board to take whatever measure is  
23 necessary to meet these competing needs through voluntary  
24 agreements.

25 VICE CHAIR SPIVY-WEBER: Thank you.

1 MR. COVERT: Thank you for considering our  
2 views.

3 VICE CHAIR SPIVY-WEBER: Thank you very much.

4 We will take a break until five minutes after  
5 3:00. And Joe Sallaberry will be the first person up  
6 followed by Vance Ahlem, David Ahlem, Mike Tietze as in  
7 "pizza," David Ragland, Elizabeth Lasensky, Kirk Wilbur,  
8 Darcie Luce, Mark Gonzalves, Barbara Barrigan-Parrilla  
9 and Tom Hicks.

10 (Off the record 2:54 p.m.)

11 (On the record at 3:05 p.m.)

12 MR. V. AHLEM: Ready?

13 VICE CHAIR SPIVY-WEBER: Yes.

14 MR. V. AHLEM: Okay. Good evening, Madam Vice  
15 Chair, thank you for your time today. My name is Vance  
16 Ahlem. I'm a fourth-generation farmer from Merced  
17 County. We're farming the same ground we settled in  
18 1901. I currently oversee farming operations that  
19 provides direct employment to 50 people, with a payroll  
20 of about \$2 million to our local economy a year.

21 Each year we constantly reevaluate irrigation  
22 practices to gain efficiency and better use valuable  
23 water supply that we currently have. Some of these  
24 upgrades have been going away from flood to center pivot  
25 irrigation technology, minimal tillage, and even dipping

1 into the technology sector for soil mapping for  
2 evaporative transportation rates to help us better use  
3 the water we have. While these are helping reduce our  
4 water use I fear that further cuts would hinder our  
5 ability to produce high quality feed and food for the  
6 audience, who all looks well-nourished today, and I'm  
7 glad to see that.

8 I was going to hit on the SalSim report, but  
9 we've already acknowledged that as flawed and changes  
10 need to be made to it. So having said that I would like  
11 to ask staff if there is any other potential flaws,  
12 matrixes that are wrong that they have found, or how we  
13 proceed from here.

14 I think a great model was shown today on your  
15 adaptive management by the U. S. Department of Interior  
16 and we have definitely assessed the problem. We have a  
17 design, a design that's flawed, and going further with  
18 implementation on the flawed plan will lead to not only  
19 more economic damages to the Valley, but also will not  
20 get you the desired increases in fish population you  
21 want. So I implore you to please take a step back, look  
22 at all the available science out there from the IDs, from  
23 your own department, from the FERC relicensing going on  
24 with TID, and reevaluate before we make a fatal mistake.  
25 We have one chance to get this right.



1           In closing, your groundwater impacts, I feel,  
2 are another thing that needs to be addressed. I  
3 currently do farm in an irrigation district that has no  
4 water. We have raised our fees 300 percent to start  
5 addressing SGMA and these unimpaired flows could damage  
6 all of that work. Thank you for your time.

7           VICE CHAIR SPIVY-WEBER: Thank you. What  
8 irrigation district are you in?

9           MR. V. AHLEM: Eastside Water District.

10          VICE CHAIR SPIVY-WEBER: David?

11          MR. D. AHLEM: Good afternoon. My name is  
12 David Ahlem. I'm the President and CEO of Hilmar Cheese  
13 Company. Hilmar Cheese Company is located in Hilmar,  
14 California. We presently employ nearly 1,000  
15 Californians and receive milk from nearly 200 family  
16 dairy farms located in Merced, Stanislaus, and San  
17 Joaquin counties.

18           I'm here today because I'm concerned about the  
19 long-term viability of ag in this region and the  
20 communities that depend on a predictable and reliable  
21 supply of water. Our employees and the families  
22 supplying us milk will be directly impacted by the  
23 proposals we are considering here today.

24           I've got three requests. Fully consider the  
25 economic impact. Milk's California's number one valued

1 ag commodity and the dairy industry is responsible for 65  
2 billion in economic activity. I'll leave a report that  
3 details that. This economic activity is dependent upon a  
4 reliable supply of pasture and field crops. Forage crops  
5 are foundational to a cow's diet. There are no  
6 nutritionally adequate substitutes and importing these  
7 feedstuffs is not economically feasible. If forage crops  
8 are nearly eliminated under the 40 percent unimpaired  
9 flows, as the SED predicts, dairy farms will be  
10 eliminated, local food production eliminated, and all the  
11 beyond the farm jobs that are dependent on this fresh  
12 milk supply.

13           The SED fails to fully consider the value of  
14 the loss of forage crops by failing to consider the  
15 downstream impacts. When these are fully considered, I  
16 believe the impacts of the proposed unimpaired flows will  
17 have a devastating economic impact on this region.

18           Two, recognize that disadvantaged communities  
19 will be hit the hardest. Water is the lifeblood of our  
20 communities in this region. This region is home to 1.5  
21 million people, most of whom live in disadvantaged  
22 communities. Milk is a fresh, perishable product that  
23 cannot be transported long distance. If a milk supply is  
24 not readily available, dairy processors will be forced to  
25 close or relocate out of state, taking their skilled

1 year-round jobs with them. Hilmar Cheese Company alone  
2 represents \$100,000 million in annual payroll and nearly  
3 1,000 jobs. In our case, Merced County would be the  
4 hardest hit, where the unemployment rate is 8.6 percent,  
5 already 60 percent higher than the state average.

6 In the end, this decision will hurt people and  
7 the most disadvantaged communities in the state. This is  
8 why I believe it's critical we understand the impacts and  
9 mitigate the negative outcomes for people in this region.

10 MS. D'ADAMO: Thank you. I have two questions.

11 MR. D. AHLEM: You bet.

12 MS. D'ADAMO: Okay. So first of all to the  
13 extent that you're able to answer this question, because  
14 I understand -- well first of all, how many producers do  
15 you rely on?

16 MR. D. AHLEM: Two-hundred.

17 MS. D'ADAMO: Two-hundred?

18 MR. D. AHLEM: Yes.

19 MS. D'ADAMO: So do you have a sense of the  
20 forage crops that are supplying the two-hundred dairymen?  
21 In other words, you know, just --

22 MR. D. AHLEM: What are they?

23 MS. D'ADAMO: Yeah. Are they supplying their  
24 own, on average, or what sort of a crop mix are you  
25 seeing?

1           MR. D. AHLEM: It's a mix, so it's either  
2 they're growing their own or they're relying on neighbors  
3 to sell them those products as well.

4           MS. D'ADAMO: Okay. So to the extent that we  
5 are making any assumptions that a dairyman may retire  
6 their forage crop, so that the water can be moved to  
7 somebody with permanent crops, does that make any sense?

8           MR. D. AHLEM: No, not on an ongoing basis,  
9 it's just not practically feasible. So on a small degree  
10 from -- possibly, but forage is key to a ruminant's diet  
11 so nutritionally you can't replace it. There's not a  
12 substitute, so if forage goes away you're talking about  
13 importing and the distances are so far that it's not  
14 economically feasible. You're going to see cows leave  
15 and dairies leave the state before you see that happen,  
16 if we have unpredictable and unreliable water. And the  
17 chances of that are even greater if you consider the SGMA  
18 impacts that we're looking at as well.

19           MS. D'ADAMO: Okay. And then that was my next  
20 question and that is where are you going to get the feed  
21 if you happen to have a dairy where you're reliant on --  
22 maybe you don't have enough land to grow your own forage  
23 crops entirely and you're reliant on your neighbors --  
24 where are you going to get that feed? And I hear you  
25 saying that those dairies would likely be slated for

1 closure. But if you got feed from someplace else where  
2 would it be coming from?

3 MR. D. AHLEM: You're going to struggle to find  
4 that up and down the Valley if we're all in this basket,  
5 so it's already a competitive market for feed. You're  
6 looking at bringing in feed from out of state and that's  
7 just not economically feasible.

8 MS. D'ADAMO: Okay. Thank you. Thank you.

9 MR. D. AHLEM: So?

10 VICE CHAIR SPIVY-WEBER: No, that's it. Thank  
11 you.

12 MR. D. AHLEM: That's it. That's my time, so I  
13 just encourage bring all the stakeholders to the table  
14 and get a good settlement out of this, so thank you for  
15 your time.

16 VICE CHAIR SPIVY-WEBER: Thank you. Thank you.

17 Chenoa?

18 MS. URCHISON: Good afternoon, I'm Chenoa  
19 Urchison. I am the Secretary for Denair Chapter FFA.  
20 And first off I'd like to thank you on behalf of my FFA  
21 chapter and any kids who have come here and spoken. As  
22 members of FFA we'd just like to thank you for giving us  
23 your time, to come up here and speak.

24 First off, I would like to talk about how I  
25 could be affected by the proposed revision, but I think

1 that we need to step back and take a look at the bigger  
2 picture. Back in 2012, when the Bay-Delta Plan was  
3 revised a draft clearly stated, and I quote, "That there  
4 would be a significant, but unavoidable impact to our  
5 region." Well, since then our region has worked  
6 tirelessly to cut down and conserve water usage. And has  
7 done so quite successfully.

8           Please tell me that we didn't waste billions of  
9 dollars building dams, hatcheries, canals and farms in  
10 efforts to have a reliable source of water that was  
11 supposed to be ours for over 100 years. So I say to the  
12 Delta our region has been generous enough, even years  
13 later after all the water conservation efforts, you still  
14 want more. The fact of the matter is our region has  
15 nothing more to give. It's time to start thinking of the  
16 vast impact this proposed Plan will have, the lives and  
17 futures and jobs of countless people in our region will  
18 affected.

19           All in all I'm asking that you sit and rethink  
20 all of the impacts, no matter how small you think that  
21 they might have. Revise and rethink as much as possible.  
22 I urge you to reconsider. The State Water Board has  
23 already taken so much for our region, so I just ask you  
24 to keep this one question in mind. What if this time  
25 you're asking for too much?

1 VICE CHAIR SPIVY-WEBER: Thank you.

2 Mike Tietze, as in pizza, Tietze.

3 MR. TIETZE: Yeah, Mike Tietze. Thank you for  
4 allowing me to comment this afternoon. I'm a certified  
5 hydrogeologist and engineering geologist in the State of  
6 California. I'm currently working for Stanislaus County  
7 to help them develop and implement a discretionary well  
8 permitting program under their new groundwater ordinance,  
9 which was the first in the state adopted that was  
10 deliberately aligned with SGMA. Currently, we're in the  
11 process of gathering regional data to characterize  
12 groundwater conditions and assessing available tools for  
13 the same. I'll get to that a little bit later.

14 We all understand that the SED comes on the  
15 heels of a long and detailed evaluation of unimpaired  
16 flow benefits to aquatic habitat. And that as a  
17 programmatic document it's not going to be able to  
18 analyze the impacts in as much detail. However, the  
19 approach taken to groundwater impact evaluation in the  
20 SED represents a fundamental imbalance in how ecosystem  
21 benefits are evaluated compared to regional adverse  
22 impacts to water supplies.

23 Specifically what I mean is this, where on one  
24 hand work on evaluating instream ecosystem benefits was  
25 informed by several scientific panels, there were no

1 panels to inform the impact analysis. Instream processes  
2 were evaluated using several models, but the approach to  
3 groundwater resource evaluation was very generalized,  
4 based on an incomplete water budget, and did not include  
5 any modeling.

6           So on the one hand the ecosystem effects are  
7 able to -- the ecosystem evaluation is able to predict  
8 specific temperature profiles along the streams, acre  
9 days of floodplain inundation and it's tied very clearly  
10 to benefits, outcomes and objectives. On the other hand  
11 the groundwater impact analysis uses a regionalized  
12 theoretical metric of one inch of draw-down to predict  
13 whether significant or adverse impacts to water supplies  
14 will occur. That metric is very abstract and there's no  
15 explanation how it was derived, why is it not one-half  
16 inch or two inches? And it's virtually impossible to  
17 tell even the approximate location of where adverse  
18 impacts will occur.

19           Finally, the ecosystem analysis spans a range  
20 of potential conditions whereas the water supply impact  
21 analysis is based on a single groundwater use scenario.  
22 The scenario was selected ostensibly as the most likely  
23 outcome, but no evaluation was performed to see if it  
24 actually meets the criteria for being sustainable under  
25 SGMA.



1 VICE CHAIR SPIVY-WEBER: Thank you.

2 MR. TIETZE: For a meaningful analysis, we  
3 would expect that at the very least there would be a  
4 sensitivity or an uncertainty analysis done.

5 VICE CHAIR SPIVY-WEBER: Thank you.

6 MR. TIETZE: And as it is, I believe it leaves  
7 the state vulnerable to criticism of a policy bias.

8 VICE CHAIR SPIVY-WEBER: Thank you very much.

9 MS. D'ADAMO: Sir, I have a request that as  
10 part of your written comments, could you provide  
11 recommendations as to how a more detailed analysis on  
12 groundwater could be done so that we could incorporate  
13 SGMA? And I'm not just saying just that it should be --  
14 suggesting that you say it should be done -- but  
15 providing very specific information about the current  
16 reports and information that could be readily available,  
17 so that the staff would be able to incorporate it into  
18 its analysis?

19 MR. TIETZE: Yes. And in fact if I could just  
20 add for a moment? I have to respectfully, but  
21 emphatically disagree with what was said earlier about  
22 all the available tools having been used. C2VSim is a  
23 model that was specifically developed by DWR for this  
24 kind of evaluation. And it's currently being utilized by  
25 several local efforts in Merced, Stanislaus and San

1 Joaquin counties, and would be very capable of doing this  
2 kind of evaluation without having to go to protracted  
3 lengths to gather additional data.

4 VICE CHAIR SPIVY-WEBER: Thank you.

5 David?

6 MR. RAGLAND: Hello. Thanks very much to the  
7 Board and to all of the people that have worked so hard  
8 on this Plan revision and to everyone who's come to give  
9 their input. My name's David Ragland. I'm a family man,  
10 an entrepreneur since I was 14, an employer. I'm a civil  
11 engineer and land surveyor in Senora, California. Famous  
12 now locally as the yokel who jammed his Thule box against  
13 the parking garage roof.

14 I began my working career at 14 in the sport  
15 fishing industry, tying flies and working at Johnson's  
16 Bait and Tackle in Yuba City. My stepfather and my  
17 friends and adopted uncles also all worked and depended  
18 on the rivers as guides and at Johnson's. I was a poor  
19 kid, living in a campground that wished it was a trailer  
20 park, living on salmon and other fish. My brother Miles  
21 was a commercial fisherman out of Bodega Bay who had to  
22 change careers due to declining stocks of salmon and  
23 other fish, with disastrous results on his life.

24 Diversion, one definition is the action of  
25 turning something aside from its natural course. The

1 irrigation districts and San Francisco are very good at  
2 this with respect to water. Another definition is  
3 something intended to distract attention from something  
4 more important. And I'm thinking that these folks are  
5 even better at that. Have you seen the information  
6 campaigns? Even their names are not honest, "Worth your  
7 fight." Worth my fight to help them continue devastating  
8 the Tuolumne River, so that they can keep extracting six-  
9 tenths of a billion dollars in revenue a year? How  
10 about, "Save the Stan?" It should be called, "Save the  
11 Stan for the people who dammed it, removed the upper 60  
12 percent of the spawning area, and take about half of the  
13 average yearly flow out of it."

14 They even describe these river flow increases  
15 that we're now talking about as diversion and taking  
16 water from the river -- the exact diametric opposite of  
17 the truth.

18 VICE CHAIR SPIVY-WEBER: Thank you so much.

19 Elizabeth? Elizabeth Lasenski. She already  
20 spoke, Okay.

21 Kirk?

22 MR. WILBER: Members of the Board thank you for  
23 the opportunity to address you today. My name is Kirk  
24 Wilber and I represent the California Cattlemen's

1 Association including a number of beef producing families  
2 within the plan area.

3 We will be filing more extensive comments with  
4 the Board prior to the deadline. Today, I wanted to  
5 focus on some concerns that CCA has about the economic  
6 analysis done within the SED.

7 Firstly, the SED significantly under examines  
8 the potential impact of the proposed Plan changes on the  
9 beef industry. Throughout all of Chapter 11 and the  
10 Appendix G, I think there's about five paragraphs that  
11 speak specifically to beef production. That's simply not  
12 enough analysis. Not only does the SED fail to properly  
13 examine the impacts on the beef community, the  
14 conclusions drawn from a scant analysis also fail to  
15 accurately reflect the economic burden that the new faux  
16 standards would impose upon the beef producing community.

17 The SED acknowledges that under reduced surface  
18 water conditions summer pasture can become scarce and may  
19 limit grazing opportunities, resulting in potential  
20 reductions in herd size. What the SED fails to  
21 acknowledge, however, is that California's cattlemen have  
22 already significantly reduced herd sizes in response to  
23 the ongoing drought and further reductions will imperil  
24 their economic viability.

1           The SED downplays the loss of pasture resulting  
2 from reduced surface water availability by mentioning  
3 that Cal CAF operations are able to substitute other food  
4 sources for irrigated pasture land. But the SED fails to  
5 appreciate the significant economic burden of securing  
6 and transporting that substitute feed source. The SED  
7 predicts that the impacts upon grazing are less than  
8 significant, because much of the pasture in the plan area  
9 is unsuitable for conversion to other crops or  
10 nonagricultural uses. However, the risk of conversion is  
11 far from the only relevant concern. This analysis  
12 ignores any consideration of whether that pasture  
13 continues to have any economic viability for that  
14 rancher's livelihood. Additionally, the SED overlooks  
15 the reduction in agricultural land values that would  
16 attend the reduction in water supply reliability.

17           Finally, I just wanted to state that all of  
18 those harms that I've mentioned will be exacerbated by  
19 the failure of the SED to account for the Sustainable  
20 Groundwater Management Act. That will reduce water  
21 supply even further and will increase those harmful  
22 effects upon ranchers.

23           In conclusion, if I may real quick, I don't see  
24 this as a situation where we're asking you to prioritize  
25 agriculture above other beneficial economic uses -- or

1 beneficial uses, I should say. What we're asking is  
2 simply that you fully examine the other alternatives to  
3 strike a better balance among all beneficial uses  
4 including agriculture. Thank you.

5 VICE CHAIR SPIVY-WEBER: Darcie? Darcie Luce?  
6 Darcie Luce?

7 MS. LUCE: Hello. Thank you, Board members and  
8 Vice Chair Spivy-Weber for the opportunity to speak to  
9 you today. My name is Darcie Luce and I'm with Friends  
10 of the San Francisco Estuary. And as our name implies,  
11 we urge actions that ensure a thriving, resilient Bay-  
12 Delta Estuary for generations to come. Just a few  
13 thoughts today, to be articulated further in our comment  
14 letter.

15 Number one, the economic harm anticipated by  
16 farming communities and urban areas has been a  
17 significant focus of these meetings. But the economic  
18 benefits of these recovered river systems have received  
19 less attention. The revised SED does a much better job  
20 than the previous version in referencing potential  
21 economic benefits including fishing, recreational values,  
22 and nonuse or existence values.

23 However, the SED makes quantitative estimates  
24 of impacts, but only offers a qualitative analysis of  
25 some benefits leaving us with trying to balance hard

1 numbers against an incomplete narrative description. We  
2 know that a monetary value can be ascribed to a healthy  
3 river system, whether or not people intend to use it for  
4 recreation or other active uses. And its value can be  
5 calculated as provided by some examples in Chapter 20 of  
6 the SED. In fact, one of the most comparable examples in  
7 Chapter 20, the 1990 Upper San Joaquin River study would  
8 indicate a possible total willingness to pay a benefit of  
9 almost \$20 billion annually, in 2009 dollars, as a result  
10 of restoring salmon on the Upper San Joaquin River  
11 through higher instream flows.

12           Furthermore, the value of ecosystem services  
13 that restoring these rivers and their salmon populations  
14 could provide in the form of nutrient cycling, sediment  
15 transport, soil and water quality, reduced water  
16 treatment requirements, aquatic and terrestrial food webs  
17 and other services. All of that could total in the  
18 hundreds of millions of dollars. A quantitative estimate  
19 of these benefits should be developed or you run the risk  
20 of underestimating their value.

21           Secondly, adaptive management strategies must  
22 balance flexibility with strong enough safeguards to  
23 protect and restore salmon and other fish and wildlife,  
24 water quality, sediment transport and the river  
25 ecosystems. These safeguards should be maintain natural

1 variability and a hydrograph to ensure these benefits and  
2 enough flows must be available for them to be successful.

3           And finally, voluntary settlement agreements  
4 must achieve the benefits that the Water Quality Control  
5 Plan is responsible for. And the SED provides an  
6 important backstop to these discussions and ensures that  
7 a key system recovery does not get bargained away in the  
8 process.

9           Thank you very much.

10           VICE CHAIR SPIVY-WEBER: Thank you.

11           Mark?

12           MR. GONZALVES: Good afternoon, and thank you  
13 for holding this meeting. My family has been in  
14 California since the 1700s. My ancestral grandmother was  
15 a Melones Indian and she was the first recorded Native  
16 American to marry a Spaniard in the 1700s, which was  
17 officiated by Junípero Serra. And I think about what the  
18 river systems were then.

19           You said we can't go back to the beginning.  
20 But when we're arguing over 10 percent of the water if  
21 you think historically what have we done to the  
22 California rivers, which one is still thriving and  
23 sustained like it was originally? I don't think there's  
24 a very big answer to that question. So to -- and  
25 gradually through mining, diversions, farming, it is



1 incrementally destroyed, gradually, gradually, gradually.  
2 So now when we're here talking about this 10 or 15  
3 percent of water we all recognize that river systems are  
4 essential for the life of California. So we have to  
5 incrementally revive it through special application,  
6 better irrigation.

7 But the focus should be to have a thriving  
8 river system, which we don't have right now. So anything  
9 we can do to that is essential and we have to think of  
10 the big picture. You know, we can't think of the next 10  
11 years. We should be thinking of the next 300 years.  
12 Thank you.

13 VICE CHAIR SPIVY-WEBER: Thank you.

14 Barbara followed by Tom.

15 MS. BARRIGAN-PARRILLA: Vice Chair Spivy-Weber  
16 and Board members, first I want to wish you all a Happy  
17 New Year. I wish you peace and prosperity and good  
18 health. And today, I'm here to ask of you to grant the  
19 same thing to the people and fisheries of the Delta.

20 Recent news reports over the vacation break  
21 explain that fish are not rebounding. Not because flows  
22 don't matter, but because we have depleted the estuary of  
23 flows for far way too long. We can no longer split flows  
24 in a way that favors unsustainable growth. This is why  
25 the SED is flawed, 40 percent unimpaired flows will not

1 save or restore fisheries or protect urban and  
2 environmental justice residents from degraded water  
3 quality.

4           When I'm talking about unsustainable growth,  
5 I'm talking about what I saw on my family trip to L.A.  
6 and back. The west side of Kern County, on the south end  
7 of Kern County, has all new sticks of almond fields as  
8 far as the eye could see. And they're all young juvenile  
9 almond trees all the way planted up through Westland  
10 along the I-5. There are more green lawns in L.A. than  
11 there are in the urban areas around the Delta. There's  
12 no shared sacrifice being asked of Californians to  
13 preserve the Bay-Delta Estuary.

14           What is proposed in the SED is only enough  
15 water to prolong time until we reach extinction of  
16 fisheries -- fisheries, which support multiple economies  
17 in the Delta and coastal economies. A lack of needed  
18 flow will also lead to a weakened salinity standard that  
19 will impact domestic use of water for hundreds of  
20 thousands of people in the Delta, agriculture jobs, and  
21 tens of thousands of people who are subsistence fishers.

22           If the Board rules a 40 percent average  
23 unimpaired flows, and a weakened salinity standard, are  
24 the new standards for the San Joaquin River then you will  
25 make the Delta the sacrifice region for California. The

1 State of California will be writing off the Bay-Delta  
2 Estuary for unsustainable agricultural development in the  
3 San Joaquin Valley. And the State of California will be  
4 writing off the people of the Delta for exports of  
5 almonds.

6 My last sentence is that this will violate  
7 social, economic and environmental justice policies as  
8 set by the State of California. Thank you.

9 VICE CHAIR SPIVY-WEBER: Thank you.

10 Jeanine, did you have something?

11 (No audible response.)

12 Okay. Tom. And after Tom could the San  
13 Francisco PUC come up and have a seat in front? Yes, go  
14 ahead.

15 MR. HICKS: Vice Chair and other Board members,  
16 thank you for the opportunity to speak. My name is Tom  
17 Hicks and I'm here in two capacities today. One is as a  
18 San Francisco resident, married, I have two children,  
19 five and seven, and they are having their first day back  
20 in school today. They couldn't be here, but at the very  
21 least we are recreationalists. We enjoy the Tuolumne  
22 River. We enjoy our time away from the urban sprawl of  
23 the Bay Area and we get out to the Central Valley and  
24 many places. And we just make any appeal to restoring

1 the environmental values that are obviously the backdrop  
2 of this epic public debate.

3 But more specifically and the second reason why  
4 I'm here today is in my capacity as an attorney. I'm a  
5 water attorney. I'm not here on behalf of any client  
6 today and I'm not getting paid. I drove up to San  
7 Francisco on my own dime. But at the very least I do  
8 represent a number of landowners and increasingly public  
9 interest organizations that, when they look at the SED  
10 and they see a big section on voluntary agreements, for  
11 some of us that's shorthand for a section of the Water  
12 Code called Section 1707.

13 These voluntary tools do risk going into  
14 machine gun fire of sorts if agencies like the Wildlife  
15 Conservation Board are putting publicly backed water bond  
16 dollars on the table for the assurance that the State of  
17 California and Californians, are getting an environmental  
18 benefit that enhances stream flow. Whether it be  
19 groundwater sustainability or other mathematics and  
20 metrics it becomes very difficult for any so-called  
21 petitioner to initiate a petition that might run the  
22 gauntlet of trying to come out of any of these  
23 tributaries: the Merced, Tuolumne or Stanislaus.

24 And again, this is only Phase 1. Phase 2 has other  
25 tributaries in the Sacramento that each could voluntarily

1 bring a contribution to an instream flow target outside  
2 the regulatory gambit of Endangered Species Act, the  
3 Clean Water Act, and of course the Public Trust Doctrine.

4           So all I would ask is that the state agency do  
5 its utmost to protect the integrity of those expenditures  
6 of public dollars for environmental values, but  
7 recognizing that it's not a all or nothing regulatory  
8 gain. Thank you.

9           VICE CHAIR SPIVY-WEBER: Thank you. Thank you  
10 very much, Tom.

11           And after the San Francisco PUC has their ten  
12 minutes for their panel I will ask for those who want to  
13 speak for just one minute, one minute, you can jump the  
14 queue. You can start lining up over here about five  
15 minutes into their presentation. Thank you.

16           So Michael -- oh, I'm sorry.

17           MR. JUE: Good afternoon, Board. Thank you for  
18 the opportunity to present today and I thank you for your  
19 patience all day in accepting comments from everyone. My  
20 name is Tyrone Jue. I'm a Senior Advisor to San  
21 Francisco Mayor Ed Lee, and today representing Mayor Lee  
22 and the City and County of San Francisco.

23           The City and County of San Francisco owns and  
24 operates the Hetch Hetchy Regional Water System, which  
25 provides a reliable, high quality water supply to 2.6

1 million people in the Bay Area. Eighty-five percent of  
2 our system's water comes from the Tuolumne River and it  
3 is a critical pillar supporting the economic vitality of  
4 the Bay Area and the State of California.

5 Over the last decade, San Francisco and our  
6 regional customers have been making significant  
7 investments to improve the reliability of this system.  
8 We are now completing a \$4.8 billion program that will  
9 improve our ability to deliver water after a major  
10 earthquake. And that also includes new water recycling  
11 and groundwater facilities.

12 We deeply care about the Bay-Delta ecosystem as  
13 the defining characteristic of our region. And believe  
14 that another defining characteristic is our regional  
15 water system and how our San Francisco and regional  
16 partners efficiently use water from that system.

17 We appreciate the Board granting a 60-day  
18 extension to allow for further discussions. And believe  
19 that a voluntary settlement is the best path to achieve  
20 the balanced solution required that will both improve the  
21 environment and provide sufficient water for our region  
22 and other important interests.

23 I would now like to turn it over to Michael  
24 Carlin, Deputy General Manager from the SFPUC.

25 MR. CARLIN: Good afternoon, Board members,

1 it's a pleasure to be here today. I hopefully will not  
2 use the entire 10 minutes that we have, because I'm  
3 trying to sell some minutes in the hallway to some folks.  
4 (Laughter.)

5 I just wanted to make some comments. We are  
6 going to submit a comment letter and it's going to be  
7 much more detailed than the comments I make today. But  
8 just to put things into perspective, we hear lots of  
9 things about how much water do we divert from the  
10 Tuolumne River and such. We divert about 14 percent of  
11 the unimpaired flow. And when you consider the Tuolumne  
12 River is about 1.8 million acre feet, that's a pretty low  
13 number.

14 The second thing is when you look at the entire  
15 Delta we're 0.7 percent -- 0.7 percent of the unimpaired  
16 flow in the Delta. That's all the rivers, everything.  
17 And we serve about 7 percent of the state's population  
18 and businesses in our service area. So when you look at  
19 the impact to us, and I'll talk about this a little bit,  
20 it's not proportional to the amount of water that we  
21 actually divert. And we want to make sure you understand  
22 that, because it really hurts us in a lot of ways.

23 You heard from other people testifying, our  
24 wholesale customers, Nicole Sandkulla, the Bay Area  
25 Council, you know, our water use is really low. Right

1 now the average water use in our service area, including  
2 San Francisco, is 54. When you look at just San  
3 Francisco it's 41. And you've got to remember that  
4 number is 41, because we'll talk about that a little bit  
5 later about the impact to our customers during dry  
6 periods. It's not during the high wet periods, it's  
7 during the dry periods when everybody is suffering across  
8 the state.

9           Now one of the things that you talked about  
10 today, and I appreciate, is the adaptive management and  
11 the adaptive implementation of the flow measures. And I  
12 think this is really, really important, because one of  
13 the things that we don't see in the document that we need  
14 to kind of consider -- and we saw this in the recent  
15 letter from the State Board Chair to the Governor -- is  
16 creating a framework for accepting voluntary agreements.  
17 I think this is the way to go and it would exceed the  
18 proposed fish and wildlife objectives that you have  
19 proposed.

20           At the same time you're actually working on the  
21 Sacramento River. And we need to understand how the  
22 Sacramento River impacts the San Joaquin River, because  
23 it is an ecosystem. And you can't consider these things  
24 in isolation. And how they kind of fit together in the  
25 end with everything else that happens, is important.



1           One of the points -- when I go back to saying  
2 0.7 percent of the unimpaired flow into the Delta --  
3 please remember you have a State Water Project, a Central  
4 Valley Project that actually takes more water out of the  
5 Delta than our 0.7 percent. But we're asking to pay a  
6 huge price for that. So what is the impact on our  
7 system? We have long-standing agreements with the  
8 Modesto and Turlock Irrigation Districts. And that's  
9 what really kind of drives -- these are contractual  
10 agreements. We go back over 100 years on the river, and  
11 many of them are here today, and making sure that I say  
12 everything correctly. But in a drought or if we had to  
13 give up water, we would have to give up 52 percent of the  
14 water, based upon the agreement we have with the Modesto  
15 and Turlock irrigation districts. That's what really  
16 hurts us in a dry year.

17           If this unimpaired flow is just a straight  
18 objective, a standard that has to be met, even in a  
19 critically dry year it hurts really hard in the Bay Area.  
20 Remember that 41 gallons? Imagine you only have 20 in a  
21 dry period, so every resident has 20 gallons of water per  
22 day to use. Four five-gallon buckets, just think of it  
23 that way, and how are you going to use them? And that's  
24 in multiple dry years whether it's at 223 million gallons  
25 a day, which we're delivering now, or 265 million gallons

1 a day.

2           We're looking at it every which way of how to  
3 do this and the uncertainty that we have is basically, we  
4 do not know if we can actually build projects to make up  
5 the difference or have water come from someplace else to  
6 make up the difference. We have a contractual obligation  
7 with our wholesale customers, 184 million gallons per  
8 day, again a contractual obligation with our customers.  
9 San Jose and Santa Clara are not permanent customers with  
10 us. They're interruptible. Would you like to tell the  
11 Mayor of San Jose that we have to interrupt his water  
12 supply, because we no longer have a reliable source of  
13 water to serve them? I don't think so.

14           You heard from East Palo Alto today. East Palo  
15 Alto has hit their contractual limit. They're trying to  
16 work something out with other communities, such as Palo  
17 Alto, but the uncertainty of the reliability of the water  
18 system going into the future right now has pushed  
19 everybody away from the negotiating table. So it has a  
20 lot of impacts on housing and jobs in our service area.

21           What is our response to your proposal? Well,  
22 we need to take action for the fish. But we disagree  
23 with your staff's proposal, plain and simple. Our  
24 comments will focus on our potential water supply  
25 impacts, our doubts about the benefits for the fish and

1 wildlife, and if there's a better way we can do this,  
2 we're going to propose it. And based on the information  
3 that we've done with the irrigation districts, we heard  
4 staff kind of say something about those today. I don't  
5 agree with those, but that's okay.

6           So we'll continue to develop our comments with  
7 our partners on the San Joaquin River, with the Modesto  
8 and Turlock irrigation districts, with the San Joaquin  
9 Tributaries Authority. And we are actively exploring  
10 voluntary agreements and we will continue to explore  
11 voluntary agreements because that's the better way to go.

12           In the end we think that is going to be painful  
13 and costly to come to an agreement with all these  
14 parties. It's not going to be easy, but it'll be  
15 durable. It'll be lasting. And it'll get for the  
16 environment something sooner rather than later if we have  
17 to go into some sort of protracted litigation.

18           So we're hopeful and we are willing to work  
19 with you, your staffs and all those other parties, to see  
20 if we can come up with a solution that we can all agree  
21 to across the board. Thank you.

22           VICE CHAIR SPIVY-WEBER: Thank you.

23           Go ahead.

24           MS. D'ADAMO: I have a question. First of all  
25 thank you for your leadership on the settlement and

1 discussions, and thanks for all of the collaboration that  
2 the City has been involved in with the agricultural  
3 communities. I think it's a partnership that could  
4 really set the standard for other places in the state  
5 with this whole fish versus farm and urban areas versus  
6 rural areas. What you're doing can pull the pieces  
7 together and so really appreciate your work on this.

8           The question that I have for you has to do with  
9 your economic analysis. So I will just be very up front  
10 that there have been questions about the analysis that  
11 the City had submitted in the last round. And I know  
12 that you're updating it. And so just want to give you an  
13 opportunity here to maybe shed some light on the analysis  
14 that you already submitted, and any changes in  
15 methodology or approach that you'll be using in the most  
16 current SED that's before us.

17           MR. CARLIN: Ellen?

18           UNIDENTIFIED SPEAKER: Mike, do you want me to  
19 answer?

20           MR. CARLIN: No, it's okay. It's not a  
21 Jeopardy show. (Laughter.)

22           I'm calling up Ellen Levin who's the Deputy  
23 Manager for our Water Enterprise and she's the closest  
24 one to the economic analysis.

25           MS. D'ADAMO: Yeah, and the reason I ask --

1 we're going to get your comments, but I always think it's  
2 helpful to just hear from folks sort of on the highlights  
3 and some of the key areas that we should be looking for  
4 when we get your comments.

5 MS. LEVIN: Sure. I'm Ellen Levin. I'm the  
6 Deputy Manager for Water at the San Francisco Public  
7 Utilities Commission.

8 The analysis that was submitted in 2013, that  
9 supported our comments on the SED for 2012, was actually  
10 an analysis that was done to support a Federal Energy  
11 Regulatory Commission administrative law judge proceeding  
12 in 2009. We didn't have a lot of time to produce  
13 comments on the 2012 SED and so our socioeconomist used  
14 the bases of that analysis to look at what would happen  
15 if we had a 50 percent reduction in supplies on the San  
16 Francisco PUC's regional water system. And that is what  
17 was presented.

18 We have since updated that analysis and we are  
19 using the same economist, David Sunding from UC Berkeley.  
20 He will be producing a revised analysis. He will be  
21 using the same models, but using updated economic  
22 information for the Bay Area, including updated demand  
23 projections as well as income projections for the Bay  
24 Area that will result in a different socioeconomic  
25 affect, but using the similar methodology.

1                   VICE CHAIR SPIVY-WEBER:  When will this be  
2 available?

3                   MS. LEVIN:  It'll be submitted with our  
4 comments in March.

5                   MR. CARLIN:  Thank you.

6                   MR. MOORE:  Hold on.  Thanks, good to see you.  
7 Real quick, I was confused on the numbers a little bit,  
8 so when you're saying 0.7 percent of --

9                   MR. CARLIN:  Unimpaired flow to the Delta.

10                  MR. MOORE:  -- unimpaired flow to the Delta, is  
11 that CCSF diversion or is that --

12                  MR. CARLIN:  1,000 acre feet.

13                  MR. MOORE:  -- is that all of the diversions  
14 from the Tuolumne River?

15                  MR. CARLIN:  No, that's just San Francisco's  
16 diversions.

17                  MR. MOORE:  Okay.  Okay.

18                  MR. CARLIN:  So that's in 1,000 acre feet.  
19 It's similar to what East Bay Municipal Utility District  
20 diverts as well.

21                  MR. MOORE:  Right, yeah.  A similar size  
22 service area.

23                  MR. CARLIN:  Uh-huh.

24                  MR. MOORE:  Okay.  Thanks, good to see you.

25                  MR. CARLIN:  Good to see you.

1 VICE CHAIR SPIVY-WEBER: Thank you very much.

2 Now we'll go to the one-minute people. And  
3 John Herrick is the lead here. This is by his personal  
4 request and actually it was recommended by DeeDee as  
5 well.

6 MR. HERRICK: That I get one minute?

7 VICE CHAIR SPIVY-WEBER: You get one minute.  
8 You go to the front of the line.

9 MR. HERRICK: Thank you very much, John Herrick  
10 for the South Delta Water Agency. At the Stockton  
11 hearing meeting we put on evidence for you, so I won't go  
12 through that except to say that that makes the salinity  
13 part of this easy, we think. And that is that the SED's  
14 recommendations for salinity changes is based upon a  
15 report that uses information that can't be used to  
16 calculate leaching fractions. And instead we've  
17 presented evidence of harm by local farmers and a report  
18 that indicates that salt does and is building up in the  
19 soils. So at this point, in my view, it looks like  
20 there's no scientific evidence to support a change in the  
21 standard. There's evidence to suggest that there's  
22 damage that's being done under the current situation.

23 So I'll leave it at that. The last thing I'll  
24 say is Mark Holderman's left, but apparently I have to  
25 sit down with DWR again and discuss causes and effects.

1 But thank you very much, that's under one minute.

2 VICE CHAIR SPIVY-WEBER: Thank you.

3 MR. MOORE: That's good. I'm glad to hear  
4 about the sit down. That will be good.

5 VICE CHAIR SPIVY-WEBER: And say your name --  
6 no come up -- say your name and affiliation.

7 MS. WILSON: Oh, I'm Karen Wilson. I've  
8 already turned in a card.

9 VICE CHAIR SPIVY-WEBER: Okay. No, that's all  
10 right.

11 MS. WILSON: So thank you, I think the first  
12 hour was about salinity and I missed it. But I'll listen  
13 to the broadcast on that.

14 So two things that I haven't ever heard you  
15 mention at these hearings, that one is the fact that the  
16 carcasses from fish decaying or being predated upon and  
17 the -- you know, what comes out of the animal, becomes a  
18 lot of fertility in all of the Valley actually. But it  
19 begins usually where the salmonids spawn and die.

20 The other thing is that I appreciate your  
21 attention to scientific detail. Oh gosh, but when you're  
22 trying to get counts of native fish I would suggest that  
23 you use your influence to make every single hatchery fish  
24 marked. Thank you.

25 VICE CHAIR SPIVY-WEBER: Thank you.



1 MR. MOORE: Thank you. And we did actually  
2 discuss that issue on November 29th. There was -- if you  
3 want to look at the video, there's some good testimony  
4 about the contributions of salmon carcasses to soil.

5 MS. WILSON: What was the date?

6 MR. MOORE: On November 29th.

7 MS. WILSON: Thank you.

8 MR. MOORE: Yep.

9 MS. DALY: Good afternoon, my name is Barbara  
10 Daly and I'm with a group out of Clarksburg in the north  
11 Delta, called North Delta C.A.R.E.S. And I have been  
12 listening to the different broadcasts and I listened to  
13 the one especially from Modesto, where Felicia Marcus,  
14 Board Member Marcus, seemed very receptive to asking for  
15 solutions and input. So I have a question. If we do  
16 have solutions or something to input, how is there a way  
17 to engage with you on it and not just share it with you?  
18 And I don't know if you can --

19 VICE CHAIR SPIVY-WEBER: No, we can set up an  
20 appointment with one of our assistants or through  
21 Jeanine.

22 MS. DALY: Through Jeanine?

23 VICE CHAIR SPIVY-WEBER: Look forward to it.

24 MS. DALY: Thank you.

25 VICE CHAIR SPIVY-WEBER: She will refer you to

1 the right person to set it up.

2 MS. DALY: Okay. Perfect.

3 VICE CHAIR SPIVY-WEBER: Thank you.

4 MS. DALY: Thank you very much.

5 VICE CHAIR SPIVY-WEBER: Next?

6 MS. MCLEOD: Hi, I'm Ashley McLeod and I am one  
7 in 40 million people who live in California. I'm going  
8 to be as fast as possible, because my dad could teach me  
9 how to follow the rules.

10 The Delta is in need of help in a couple of  
11 ways. There is an intrusion of salt that is happening in  
12 the Delta that is affecting the agricultural community  
13 and the surrounding communities, as well as the wildlife  
14 around and in the Delta is declining. The staff proposal  
15 recommends 30 to 50 percent of unimpaired flow with a  
16 starting point of 40 percent in the critically dry years.  
17 The Water Board staff should know that the SED is in need  
18 of revision in salmon population and economical impact  
19 alone.

20 I would like to stress that I feel the public  
21 is not yet well aware enough to appropriately discuss  
22 this topic. I would like to give the public some things  
23 to think about on top of the predation and restoration on  
24 the river. (Timer beeps.) Oh, I'm sorry. With the  
25 chance of 40 percent less water our agriculture in the

1 Central Valley is in trouble. David Sedlak said it best  
2 when suggesting four new water tops to our state: Storm  
3 water harvesting, water reuse, water conservation and  
4 seawater desalination. The public has not yet had an  
5 appropriate amount of time to prove out all aspects to  
6 say that this Plan will work.

7           There is just not enough water in California  
8 currently to say that we can let go of 40 percent of  
9 unimpaired flow. Flow is necessary for the health of the  
10 river. We just need to bring all the puzzle pieces  
11 together for a better life here in California. Currently  
12 as we stand, one will win, one will lose, and it's all  
13 bad.

14           VICE CHAIR SPIVY-WEBER: Thank you.

15           DR. DOUGHERTY: Hi, my name is Dr. Elizabeth  
16 Dougherty. I'm the Director of Wholly H2O. We do  
17 education on water conservation and water reuse and I  
18 want to thank the Vice Chair and the Board for the  
19 opportunity to speak.

20           I just want to mention first of all, that in my  
21 household we use 17 gallons a day of water in the winter  
22 and 20 gallons a day in the summer. So the suggestion  
23 for the SFPUC that their residents would somehow be  
24 stressed on 20 gallons a day, I just want to say there's  
25 no stress in my house, so it can be done easily:

1 rainwater reuse, gray water reuse. So here we're on this  
2 planet for 4.4 billion years, there's been a water cycle  
3 that has functioned unbelievably well, right? Same  
4 water, same planet, 4.4 billion years, until the last 200  
5 years when humans decided that out of the 8.7 million  
6 estimated species on this planet, we should take the  
7 water for us alone.

8           And I just want to mention that for salmon,  
9 which someone here called a cute fish, is a keystone  
10 species. And that's a species that other species depend  
11 upon. And if they are taken out of the system, the  
12 system falls into collapse. So what we're talking about  
13 here are not just cute fish or sportsmen or recreational  
14 only, but we're talking about the health of the planet in  
15 a long-term fashion. Thank you.

16           VICE CHAIR SPIVY-WEBER: Thank you.

17           MS. VAN KURAN: My name is Virginia Van Kuran.  
18 Thanks for this opportunity to speak before you. I've  
19 already submitted my comment letter and my name is on the  
20 petition that you received from Tuolumne River Trust.  
21 I'm a resident of Santa Clara County, and I wanted to  
22 quote from the resolution in support of improving the  
23 Bay-Delta ecosystem that the Santa Clara County Board of  
24 Supervisors submitted.

25           Their following principles be applied: A

1 healthy Bay-Delta Estuary, recognize the protection and  
2 restoration of a healthy, sustainable Bay-Delta Estuary.  
3 It includes improvements in habitat, water quality flows  
4 and water supply to support fisheries, wildlife and a  
5 resilient ecosystem. Habitat restoration, provide for  
6 the restoration of native habitat to protect endangered  
7 fish, wildlife and plant species and to improve the  
8 ecological functions of the Bay-Delta Estuary as a whole.

9 VICE CHAIR SPIVY-WEBER: Thank you.

10 MS. VAN KURAN: Thank you.

11 VICE CHAIR SPIVY-WEBER: Thank you so much.

12 Now, we'll have five more speakers: Francis  
13 Brewster, Chuck Knutson, Todd Sill, Lacey Kiriakou and  
14 Jon Rubin.

15 The first one is Francis, hi.

16 MS. BREWSTER: Good afternoon.

17 VICE CHAIR SPIVY-WEBER: Oh two minutes, I'm  
18 sorry two minutes, yes.

19 MS. BREWSTER: Two minutes, yes.

20 Good afternoon, my name is Francis Brewster.

21 I'm a Senior Water Resources Specialist with the Santa  
22 Clara Valley Water District. We are the primary water  
23 resource management agency for Santa Clara County  
24 providing water supply, flood protection, and  
25 environmental stewardship for Silicon Valley and its 1.9

1 million residents.

2           The District supports the ultimate goal of  
3 improving the Bay-Delta ecosystem and water is clearly an  
4 important component of that restoration. However, given  
5 the stakes involved we urge you to take a more reasoned  
6 and balanced approach to addressing ecosystem needs.  
7 Santa Clara County relies on water from the Delta  
8 Watershed for 55 percent of its water supply on average;  
9 40 percent is conveyed through the Delta by the State and  
10 Federal water projects. And, 15 percent or 60,000 acre  
11 feet per year comes from San Francisco's regional water  
12 system. Any reductions in San Francisco's supplies will  
13 put significant additional pressure on Santa Clara  
14 supplies.

15           Your staff's analysis shows impacts as high as  
16 45 percent reduction in supplies to San Francisco's  
17 regional system during a repeat of the '87 to '92  
18 drought. This level of reduction will have a significant  
19 impact in Santa Clara County. Your staff's analysis  
20 asserts that there will not be a supply impact, because  
21 San Francisco will be able to secure transfer supplies to  
22 make up the difference. Based on limited success despite  
23 a considerable commitment of resources during the recent  
24 drought, San Francisco and Santa Clara will be hard  
25 pressed to find the volume of transfer supplies that your

1 staff envisions.

2           In dry years demand exceeds available transfer  
3 supplies and sellers face political and environmental  
4 pressure to abstain from transferring water outside of  
5 their region. In years when transfer supplies were more  
6 plentiful, conveyance capacity across the Delta can be  
7 limited. In 2016, there was no conveyance capacity for  
8 transfers. Conveyance losses were also high, as much as  
9 35 percent of purchased water can be lost in transit.

10           The Santa Clara Valley Water District has long  
11 been committed to sustained reliable water supplies as  
12 well as environmental stewardship. We will continue to  
13 encourage the State Board to develop solutions that will  
14 meet both of these objectives.

15           VICE CHAIR SPIVY-WEBER: Thank you.

16           Chuck?

17           MR. KNUTSON: I would like to have three  
18 minutes if possible?

19           VICE CHAIR SPIVY-WEBER: Really, there are 35  
20 people behind you.

21           MR. KNUTSON: Sorry, I didn't know there was  
22 that many, okay.

23           VICE CHAIR SPIVY-WEBER: So I would love to  
24 give it to you, but I'd then have to give it to everyone  
25 else.

1 MR. KNUTSON: Okay.

2 My name's Chuck Knutson and I was a fishery  
3 biologist, senior fishery biologist in California for 34  
4 years, and I've been retired for the last 10 years. So  
5 I'm here representing myself and I thank you for your  
6 time.

7 So based on my field experience during the '70s  
8 and '80s, and statistical analyses of salmon production  
9 and fresh water flows on the San Joaquin, I found a good  
10 positive correlation back then between freshwater flows  
11 down the tributaries from February through June and  
12 returns of adult salmon two-and-a-half years later. The  
13 reasons were that higher spring flows increased  
14 freshwater habitat for salmon juveniles, prevented lethal  
15 high water temperatures from forming in the lower  
16 tributaries and main stem, improved the safe passage of  
17 juvenile salmon down the tributaries through the Delta  
18 and into San Francisco Bay, and increased planktonic food  
19 production for salmon in the fresh water-salt water  
20 mixing zone of the estuary.

21 Besides salmon, freshwater flows also are  
22 highly beneficial to other estuarine species that depend  
23 on the estuary for food and reproduction. Examples are  
24 Dungeness crab, lowery (phonetic) white and green  
25 sturgeon, steelhead, California halibut, sharks and rays,



1 and forage species, such as redbfin shad, Pacific herring  
2 and various species of smelt and shrimp. Many fish-  
3 eating birds such as kingfishers, herons, grieves, turns,  
4 pelicans, sea gulls and mergansers feed on the these  
5 forage fish. Adult fish are also important for mammals  
6 that depend on them, such as river otters and sea lions.

7           It is critically important that this food web  
8 and nursery area be protected and improved with increased  
9 freshwater flow as estuaries are one of the most  
10 productive ecological systems in the world. So without  
11 significant improvements to instream flows, the  
12 implementation of non-flow measures while beneficial,  
13 will not meet the salmon objectives alone as required by  
14 law or protect fish and wildlife beneficial uses.

15           So best available science demonstrates that  
16 current flows are insufficient to protect public trust  
17 resources and uses within the Basin or the Bay-Delta.

18 (Timer beeps.) Already?

19           VICE CHAIR SPIVY-WEBER: That's what everyone  
20 says, sorry.

21           MR. KNUTSON: Well, I'll send you a longer  
22 comment letter.

23           VICE CHAIR SPIVY-WEBER: I would love it. That  
24 would be great.

25           MR. KNUTSON: All right, I hope you read it,

1 because it gets better.

2 VICE CHAIR SPIVY-WEBER: I will read every word  
3 of it, I promise.

4 MR. KNUTSON: Okay. Thank you.

5 VICE CHAIR SPIVY-WEBER: And Barbara Daly, you  
6 spoke earlier for the one minute and I don't have a card  
7 for Barbara, do you?

8 Okay, come on up, Chuck. Chuck Knutson?

9 MS. TOWNSEND: Oh, yes. You have the card for  
10 Barbara, because it's got the piece of paper attached to  
11 it.

12 VICE CHAIR SPIVY-WEBER: Oh, Barbara? Okay.  
13 I'm sorry, it's a new one. Okay.

14 Okay, so Todd Still? (sic)

15 MR. SILL: When one has so little time to  
16 speak, you can't afford to be subtle.

17 MS. TOWNSEND: Can you say your name?

18 MR. SILL: My -- she just -- Todd Sill.

19 VICE CHAIR SPIVY-WEBER: Uh-huh, Todd Sill.

20 MR. SILL: I think -- I don't want to be an  
21 opponent of anybody, the fish people or the farmers. But  
22 we're operating on two different sets of truth here,  
23 because the truth I hear is that this water is going to  
24 replace water from the Sacramento River that goes down to  
25 the twin tunnels and gets shipped down south. The truth

1 to the fish people is that this water is for the fish, so  
2 we're operating on two different sets of truth. So it's  
3 really hard for us to negotiate or compromise or settle.

4 I'm not sure which -- I know who I believe,  
5 because I witnessed down in Modesto kind of how  
6 disingenuous the Board treated Modesto Irrigation  
7 District by making them speak at the end of that meeting  
8 when they were the host. And they didn't get to speak  
9 before a packed crowd, standing room only. So, you know,  
10 there's not much time like I said. And I don't want to  
11 be the opponents of the fish people, but somebody has  
12 forced us to be. So now we're at this standstill.

13 So I guess my only question since I have so  
14 little time, faced with the survival of the fish or the  
15 survival of your family, your friends in your  
16 communities, what would you fight for more and what  
17 lengths are you willing to go to? If you answer that  
18 question truthfully you will have a better understanding  
19 of our mindset. There's no fish in this world that is  
20 worth my family, my friends, or my community.

21 VICE CHAIR SPIVY-WEBER: Thank you so much.  
22 And I'm not quite sure how the order gets put together,  
23 but I am quite sure that the irrigation district was  
24 consulted about this, so I will double check. But I  
25 think that that particular criticism is probably

1 misplaced. I guess --

2 MS. DODUC: And can I just quickly add that I  
3 assure you while they may have presented last, that did  
4 not at all diminish the importance and relevance of what  
5 they had to say. I thought it was an excellent  
6 presentation by the district.

7 MR. SILL: Yeah, but our community didn't get  
8 to see how MID stood up.

9 VICE CHAIR SPIVY-WEBER: Okay. That's fair,  
10 thank you.

11 Lacey?

12 MS. KIRIAKOU: Good afternoon Board members,  
13 I'm Lacey Kiriakou. I'm the Water Resources Coordinator  
14 for Merced County. In Merced County we've been working  
15 closely with the other water management agencies in our  
16 groundwater basin to coordinate and implement the  
17 Sustainable Groundwater Management Act. Though Merced  
18 County faces undesirable results in five of the six  
19 sustainability indicators identified by DWR, such as  
20 subsidence, which you heard about from the Merced County  
21 presentation at the December 19th hearing; and the  
22 lowering of groundwater levels, which our County  
23 Superintendent of Schools talked about, we are still  
24 committed to managing our high priority critically  
25 overdraft Merced Subbasin in a sustainable manor, as

1 required by SGMA. This proposal threatens our path to  
2 sustainability by restricting the most significant  
3 instrument we have for addressing our groundwater issues  
4 and that surface water recharge.

5           It's imperative that before the Water Board  
6 makes such a far-reaching policy decision on the SED that  
7 you have all of the information about the impacts that  
8 taking 40 percent of unimpaired flows will have,  
9 especially under SGMA, which will be in effect in the  
10 very near future. Without knowing the effects that this  
11 proposal will have on groundwater and the economic  
12 impacts with SGMA in place, you cannot truly make an  
13 informed and balanced decision.

14           Merced, Stanislaus, San Joaquin counties have  
15 partnered together on an independent economic analysis of  
16 the SED, which looks at both pre- and post-SGMA economic  
17 impacts. And we will be sharing the study with you and  
18 encourage you to examine the findings, which demonstrate  
19 that the economic analysis in the SED severely  
20 underestimates the potential regional impacts. And it  
21 clearly shows the potential effects both with and without  
22 SGMA implementation.

23           Thank you for the opportunity to speak and I  
24 hope you take into account the hundreds of comments  
25 you've heard over the past several weeks highlighting the

1 concerns and threats that this proposal poses to our  
2 communities. And the many studies, reports, and analyses  
3 by our counties and irrigation districts on the SED.

4 Thank you.

5 VICE CHAIR SPIVY-WEBER: Thank you. Thank you  
6 very much.

7 And Jon, you're on the panel, so do you want to  
8 be on a panel or do you just want to speak for two  
9 minutes?

10 MR. RUBIN: Either way I am the panel, so I can  
11 speak now or --

12 VICE CHAIR SPIVY-WEBER: Two minutes.

13 MR. RUBIN: It would probably be about a little  
14 bit longer than that.

15 VICE CHAIR SPIVY-WEBER: Well, then you should  
16 be on the panel and Contra Costa is before you, sorry.  
17 So Contra Costa, you should be coming up. Maureen  
18 Martin. And then Jon be prepared after those comments.

19 Thank you. Go ahead.

20 MS. MARTIN: Wait to get -- oh and now the  
21 waiting is done.

22 VICE CHAIR SPIVY-WEBER: Twenty minutes.

23 MS. MARTIN: Good afternoon, Board. Thank you.

24 My name is Maureen Martin. I'm from the Contra Costa

25 Water District and I want to thank you for the

1 opportunity to provide comments on the Phase 1 SED. I  
2 also want to thank your staff for a lot of the work that  
3 they've done. They've been very responsive to a lot of  
4 the requests we've made, so we really appreciate that.  
5 So we have four key things to talk about today.

6           The first is our number one concern is Delta  
7 water quality throughout the Delta, but specifically at  
8 our intakes. And despite what the SED concludes we still  
9 remain concerned that there could be water quality  
10 degradation in the Delta absent standards violations.  
11 And we feel the SED is inadequate, because it did not  
12 evaluate the full range of potential Delta water quality  
13 changes and Delta operations. And finally CCWD requests  
14 that water quality management plans be required for all  
15 operational and adaptive management plans that are being  
16 developed as part of the Water Quality Control Plan.

17           So a little bit of background about Contra  
18 Costa Water District, why we care about Delta water  
19 quality. We have four intakes, I hope you can see them.  
20 They are the green dots on the map here. The western-  
21 most intake is on the western edge of the Delta. That's  
22 our Mallard Slough Intake, followed by Rock Slough,  
23 moving inward, and we have our Old River Intake and our  
24 Middle River Intake. And the purple area shows our  
25 service area. We serve just over 500,000 customers. And

1 the red line is your plan area. And you can see that our  
2 Middle River intake is right on the plan area and yet an  
3 analysis of water quality at our intake was not included  
4 in the SED, and so we have concerns about that.

5 But all of our operations in our facilities are  
6 based on Delta water quality and when we talk about Delta  
7 water quality we're mostly talking about salinity. We  
8 have our Los Vaqueros Reservoir that we built originally  
9 in the '90s. We expanded it from 108,000 acre feet to  
10 160,000 acre feet in 2012. And we are currently  
11 evaluating further expansion of it with the regional  
12 partners, many of whom you've heard from today including  
13 San Francisco, BASCWA, Santa Clara and others, to improve  
14 water supply reliability in the area.

15 And so this is a graphic of why and how water  
16 quality in the Delta affects Contra Costa Water  
17 District's operations and so this is a graphic. The dark  
18 line represents salinity throughout the water year at our  
19 intakes. It's just a representative salinity, so you  
20 start with October over there on the left and then  
21 September. And the green -- and the dotted line I should  
22 say -- is this water quality threshold.

23 So we operate our Los Vaqueros Reservoir to  
24 provide a consistent year-round water quality. So the  
25 Delta goes from salty to fresh depending on the



1 freshwater flows and we use this off-stream reservoir to  
2 pump water into the reservoir when the Delta is fresh,  
3 and release it when it is salty. And so when the  
4 salinity is below that threshold, we're able to directly  
5 divert to our customers or divert to storage for release  
6 later when water quality in the Delta is above that line.

7           And so as water quality salinity in the Delta,  
8 you move the salinity above that line, that has a lot of  
9 impacts in terms of limiting our opportunities to fill  
10 our reservoir and further requiring more releases to be  
11 made to maintain that water quality. And so I just want  
12 to also just draw your attention to there are quite a few  
13 months where right now it's below the line, by the  
14 threshold, by just a tiny bit. So even small increases  
15 in Delta salinity at our intakes can have a pretty large  
16 effect on our operations and the cost of our operations.

17           And so, just like I said, despite what the SED  
18 concluded that the water quality in the Delta is going to  
19 improve, as a result of all the changes made, we have  
20 some concerns. Specifically, that some of the key  
21 assumptions in the modeling cannot be implemented as  
22 they've been modeled. And so the block of water concept  
23 requires perfect foresight, so the 40 percent unimpaired.  
24 So the way the modeling works is it's able to look  
25 forward for the entire water year and determine if there

1 is enough water in the system and decide, "Oh, I need to  
2 shift flows," or things like that. And the model is able  
3 to make those decisions with perfect foresight and we all  
4 know that that won't really be able to happen.

5           And so the operations that have been modeled --  
6 I know we've talked a lot about the carryover storage  
7 requirements as well and so I won't go into that -- but  
8 really what we've heard about this carryover storage and  
9 the flow shifting is that these sort of act like de facto  
10 mitigation requirements. So they are in there to offset  
11 impacts. And so what we would recommend is that you  
12 actually display the range of potential impacts, and then  
13 discuss the possible changes in operations that could be  
14 employed, and potentially a range of operations, to  
15 offset those impacts rather than describing them as  
16 adaptive management that isn't required as part of the  
17 Plan.

18           And so this graphic over here is from your  
19 modeling. This is from the WSE model and this shows the  
20 change in Vernalis salinity with and without flow  
21 shifting. And so the blue line represents what your  
22 conclusions in the SED are based on that, you know, in  
23 outside of the February through June window salinities  
24 will continue to decrease, because there will be flow  
25 shifting available into those months.

1           However, because they're not required and the  
2 implementation in their model is based on perfect  
3 foresight, we have reason to believe they won't actually  
4 be implemented as they've been modeled. And so you can  
5 see with outflow shifting salinity at Vernalis will  
6 actually increase in several of those months.

7           We also believe that the SED is inadequate,  
8 because the baseline does not reflect existing  
9 conditions. I recognize that it reflects conditions  
10 potentially at the time of the NOP, but those are no  
11 longer current conditions. But really importantly it did  
12 not evaluate the potential water quality impacts outside  
13 of that red line we talked about, the project area. And  
14 it really didn't evaluate degradation in water quality  
15 beyond compliance with those objectives.

16           And as many people have discussed here, it did  
17 not evaluate changes in Delta operations. And not just  
18 ours, but the CVP-SWP projects as well. And so all of  
19 those combined have a big impact, can affect Delta water  
20 quality throughout it. And we believe that deferring the  
21 evaluation of those changes in Delta conditions until  
22 Phase 2 is not sufficient. So even though I recognize  
23 you'll be evaluating the changes to the Plan in phases,  
24 the evaluation of the potential impacts need to be  
25 considered in the full area, I think for each phase.

1           So we came with solutions as well, not just a  
2 list of complaints. In order to rectify some of the  
3 inadequacies of the SED we request that the baseline be  
4 updated to reflect current conditions, that a full range  
5 of potential water operations are analyzed. I know that  
6 we've talked a little bit about the with and without the  
7 carryover storage, but also with and without flow  
8 shifting. That you include an analysis of changes in  
9 Delta water quality and operations. And on this point I  
10 would like to offer to the staff, we have developed a  
11 CalSim model that is integrated -- can be integrated with  
12 your WSE model -- so that we have spent a lot of time, so  
13 we can make that available.

14           And we will make it available in our comment  
15 letter that we'll submit in March. But in terms of being  
16 able to facilitate that information, making it into the  
17 next version of the SED, we'd be happy to work with your  
18 staff to provide that technical assistance in those  
19 modeling products. And so with those additional  
20 analyses, we hope to see a broader range of potential  
21 impacts and describing of its impacts. And, you know,  
22 any impacts need to be mitigated rather than balanced  
23 away by adaptive management.

24           And lastly, we would like to request that water  
25 quality management be a key component of all of the other

1 management activities that are being considered. I know  
2 you've heard a lot about fish and other beneficial uses,  
3 but sometimes it seem as though the water quality in the  
4 Bay-Delta is not receiving as much attention in terms of  
5 the development of those management actions when they're  
6 being developed. And so we want to ensure that as those  
7 plans are being developed, specifically the STMs of that  
8 Adaptive Management Plan and the Comprehensive Operations  
9 Plan proposed for the State and Federal water projects,  
10 also include water quality management plans. And we  
11 would like to participate in the development and review  
12 of that particular portion of those plans.

13           And we also recognize that a similar type of  
14 plan would need to be required in development of Phase 2.  
15 So thank you.

16           MR. MOORE: And on that point, I mean -- oh  
17 sorry, on the water quality management plan, see that's  
18 what basin plans are, you know? And that's kind of what  
19 this Water Quality Control Plan is supposed to be. And  
20 so I think on that point are you thinking of other  
21 examples around the state that you would point to as a  
22 model for a water quality management plan that you're  
23 looking for or is this something kind of novel?

24           MS. MARTIN: Well, I think that this is the  
25 best way we could come up within your adaptive management

1 framework. And so being able to ensure that changes in  
2 water quality are properly modeled and evaluated when the  
3 other objectives of your Plan are being developed. So  
4 absent -- so we could suggest that we have these hard and  
5 fast water quality objectives that need to be met. And  
6 you do have those. You have the narrative and the  
7 numeric objectives.

8           And yet there still can be degradation in the  
9 absence of violation of those standards, right? And so  
10 what we would like to ensure is that we work with those  
11 folks just to know ahead of time potentially what the  
12 management of the operations will be. And how they will  
13 affect Delta water quality, so that we will be able to  
14 provide input. And most of the time I think that they  
15 really -- they won't necessarily be in conflict. You  
16 know, you can see that the flow shifting is provided for  
17 temperature management. And so that decrease in salinity  
18 in the modeling and so I don't think that it's  
19 necessarily conflict. I think that Delta hydrodynamics  
20 and salinity are quite complex.

21           And so actually we showed that we have water  
22 quality intakes throughout the Delta. Sometimes an  
23 increase in Vernalis flows can be a decrease in water  
24 quality, because San Joaquin is a lot saltier than the  
25 Sacramento River. So depending on the mix of waters,

1 where you're getting them from, we would expect to see  
2 even a degradation under certain conditions with  
3 increased flows at Vernalis, depending on the cross  
4 channel operation, and the exports.

5 And so we just wanted to -- this was our way of  
6 trying to ensure that even if there aren't violations of  
7 standards that water quality is still a consideration and  
8 the improvement and the maintenance of water quality in  
9 the Delta is a priority.

10 VICE CHAIR SPIVY-WEBER: Thank you very much.

11 MS. MARTIN: Thank you.

12 VICE CHAIR SPIVY-WEBER: Now, we'll have ten  
13 speakers, again two minutes. Mike Curry, Tim Ruby,  
14 Kelsey Linnett, Rick Mazaira --

15 MS. TOWNSEND: Those two people are on a panel.

16 VICE CHAIR SPIVY-WEBER: Rick and --

17 MS. TOWNSEND: Kelsey.

18 VICE CHAIR SPIVY-WEBER: -- Kelsey, okay. So  
19 John McManus, Adrian Covert, Rien Doornenbal?

20 MS. TOWNSEND: Adrien Doornenbal is not on the  
21 panel.

22 VICE CHAIR SPIVY-WEBER: Okay. Hicham ElTal,

23 MS. TOWNSEND: Hicham already spoke in John  
24 Borba's spot.

25 VICE CHAIR SPIVY-WEBER: Okay.

1 MS. TOWNSEND: Which, but John Borba does still  
2 want to speak.

3 VICE CHAIR SPIVY-WEBER: Okay. And Rebecca  
4 Franklin and Rachel Kaldar, so John Borba will be third  
5 from the last.

6 MS. DODUC: And as they are coming up, if I  
7 might say something to clarify, because I see Ms. Daly is  
8 still in the room and I wanted to make sure she hears  
9 this before she leaves. North Delta C.A.R.E.S. is a  
10 party in the WaterFix hearings and so Ms. Daly is well  
11 aware of the ex parte prohibition associated with that.

12 So when the Vice Chair invited you to come in  
13 and meet with us to discuss solutions for this  
14 proceeding, it's with the caveat that the solution does  
15 not involve the WaterFix or the tunnels, because we still  
16 cannot discuss that, all right? Thank you.

17 VICE CHAIR SPIVY-WEBER: Thank you, very much.

18 Okay. Mike Curry, followed by Tim Ruby,  
19 followed by John McManus.

20 MR. CURRY: Good afternoon, my name is Mike  
21 Curry and I'm employed at Johnson Farms in Denair.  
22 Johnson Farms is a family-owned and operated almond farm  
23 and huller-sheller that's been operating, or farming, in  
24 our local community for well over 100 years. We are  
25 extremely concerned with the revised SED and its proposed



1 unimpaired flow and carryover requirements. As you know,  
2 California produces 50 percent of the U.S. fruits, nuts  
3 and vegetables, much of which are grown from the Central  
4 Valley.

5           Your Board's proposal will not only severely  
6 impact our local region and its communities, it will have  
7 far reaching impacts on families across the country. In  
8 the U.S. less than 10 percent of a family's income is  
9 spent on food, compared to some developing countries  
10 where 75 percent of a family's income is used for food.  
11 This Plan, as proposed, will shift food production to  
12 other regions of the world, greatly reducing job  
13 opportunities in our area, collapse our communities, and  
14 increase food prices throughout the U.S.

15           Equally concerning is the SED doesn't account  
16 for the damaging effects it will have on groundwater  
17 quality and sustainability. If implemented, the SED be  
18 the direct cause of groundwater reduction in our  
19 communities.

20           Currently, we employ 18 full-time team members  
21 and during harvest we employ 40 more additional people,  
22 many of whom return year after year. We provide  
23 financial support to scholarship funds and youth  
24 organizations targeting disadvantaged children. We are  
25 stewards of the land and we believe in a strong, viable

1 and balanced ecosystem. We are incredibly resourceful  
2 and are continuously innovating new ways to conserve our  
3 resources.

4           However, if the SED is implemented as currently  
5 proposed we estimate a minimum of 750 acres of our land  
6 will have to be fallowed as a direct result of  
7 groundwater depletion. We will be forced to lay off  
8 long-time employees, who we consider family. And future  
9 generations of the Johnson family will not be able to  
10 continue its heritage of farming and supporting its  
11 community as it has done for so many years.

12           And finally we urge the Board and its staff to  
13 abandon the proposed SED and begin meaningful dialogue  
14 with the mindset of reaching balanced solutions to  
15 preserve the vital resources our communities are so  
16 dependent upon. Thank you.

17           VICE CHAIR SPIVY-WEBER: Thank you so much.

18           Tim Ruby followed by John McManus -- go ahead  
19 and line up, it's faster -- Rien Doornebal. Go ahead.

20           MR. RUBY: Thank you for the opportunity to  
21 comment today, I'm Tim Ruby from Del Monte --

22           VICE CHAIR SPIVY-WEBER: Oh, can you get the  
23 mic closer so that we can --

24           MR. RUBY: Okay. I'm Tim Ruby from Del Monte  
25 Foods, Incorporated. And I'm the Corporate Environmental

1 Water Manager and I'm a soil scientist. And I've worked  
2 at Del Monte for 16 years. And we're -- Del Monte is  
3 very concerned about both the Phase 1 and Phase 2  
4 projects for the Bay-Delta Plan.

5 Del Monte has packed fruits and vegetables in  
6 California for 125 years. And our continued operations  
7 for another 125 years depends on reliable sources of both  
8 surface and groundwater. Del Monte operates a tomato  
9 processing facility in Hanford and a fruit packing  
10 facility in Modesto. Our two California factories are  
11 business critical and employ 3,500 employees during the  
12 summer packing season months. The facilities are  
13 responsible for approximately 14,000 contracted acres of  
14 local farmland and approximately 550,000 raw tons of  
15 fruits and tomatoes annually.

16 Del Monte fully concurs with the underlying  
17 purpose and goals for the new flow objectives, and  
18 applauds the Water Board's efforts to formulate a very  
19 complex adaptive management approach for maintaining and  
20 improving salmon and steelhead populations in the Lower  
21 San Joaquin River and its tributaries.

22 Del Monte is very concerned that the Lower San  
23 Joaquin River Alternative 3 may be too aggressive. In  
24 particular, we are very concerned that this level of  
25 protection may not measurably improve fish populations

1 over the less aggressive Alternative 2. And would be  
2 much too impactful in negative way on the region's  
3 fragile farm economy, and already strained groundwater  
4 resources. Del Monte projects that implementation of  
5 Alternative 3 will measurably impact its ability to  
6 continue to source, harvest locally grown tomatoes and  
7 fruits, shorten its seasonal factory packing days causing  
8 job losses, and increase fixed production costs at both  
9 of our California plants.

10 Del Monte projects that 53,000 growers, 2,200  
11 acres and 73,000 raw tons of fruits and tomatoes, with a  
12 current value of \$18 million historically grown within  
13 the basin will be in jeopardy if Alternative 3 were fully  
14 and aggressively implemented by the Water Board, as  
15 stipulated in the SED.

16 VICE CHAIR SPIVY-WEBER: Thank you very much.  
17 Thank you.

18 MR. RUBY: We do urge you to go back and look  
19 at Alternative 2. We think there could be some tweaking  
20 with Alternative 2 that will cause less of an impact on  
21 our local economy and our business directly. We think  
22 there are some opportunities to look at there --

23 VICE CHAIR SPIVY-WEBER: John McManus is next.  
24 I'm sorry, thank you, sir.

25 He left. Rien Doornenbal.

1           MR. DOORNENBAL: My name is Rien Doornenbal.  
2 My wife Lieske and I farm northwest of Escalon. We farm  
3 in the South San Joaquin Irrigation District.

4           I was pleased to hear that the Board recognizes  
5 that predation is a problem, but the solution suggested  
6 to increase flow to somehow move predatory fish out of  
7 the way to become less of a threat to the native species  
8 sounds to me rather fishy. The irrigation districts have  
9 suggested reducing the number and size of predatory non-  
10 native fish by increasing sport fishing pressure -- the  
11 suggestion so far has been ignored by all of the other  
12 stakeholders. We feel that this is disingenuous. This  
13 is an issue that makes us wonder if the other  
14 stakeholders are acting in good faith.

15           I'd like to address another elephant in the  
16 room and that is water rights. South San Joaquin  
17 Irrigation District and Oakdale Irrigation District share  
18 water rights. These water rights allow these two  
19 irrigation districts to divert water that is the result  
20 of snowmelt from a specific geographical area in the  
21 Sierras. MID and TID have similar water rights. These  
22 are senior, adjudicated, and pre-1914 water rights.

23           Are there problems in the Delta? Certainly, we  
24 could spend all day speculating how they came about. But  
25 let's not forget that there have been many changes.

1 (Timer beeps.) I have 40 more words. There have been  
2 many changes in the state's water system that affect the  
3 Delta, that came after SSJID, OID, MID and TID started  
4 diverting. We feel the Board is trying to put the whole  
5 problem on our backs.

6 I cannot predict how the water rights issue  
7 will play out. But I will predict, with 100 percent  
8 certainty, that those of us with senior, adjudicated,  
9 pre-1914 water rights will go to the mat to protect what  
10 we have.

11 VICE CHAIR SPIVY-WEBER: Thank you very much.

12 John? John Borba, followed by Rebecca  
13 Franklin, followed by Rachel Kaldor, and then the long-  
14 awaited Jon Rubin.

15 MR. BORBA: I'm John Borba, grower and  
16 cattleman. I've used Merced River water for 66 years.

17 The Merced River flow, an average of 1,000,000  
18 acre-feet per year. MID diverts 550,000 acre-feet of  
19 which 300,000 is sold to its growers for use on 100,000  
20 acres; 250,000 is consumed by people with riparian  
21 rights, system distribution seepage, and evaporative  
22 loss; 450,000 acre-feet continue down the river to the  
23 Delta for fish and wildlife and other uses thereof.

24 The water is first accumulated in our  
25 watershed, then contained in our Lake McClure behind

1 Exchequer Dam, then distributed in coordination with  
2 government officials with rules and regulations thereof.  
3 Our containment and river rights are pre-1914 in  
4 accordance with the law of the land. You are presently  
5 on average receiving nearly half of the Merced River flow  
6 and when you want it, plus the bottom 115,000 acre feet  
7 of McClure belongs to you and we deliver 15-second feet  
8 to the Merced Wildlife Refuge.

9           MID constructed and paid for Exchequer Dam  
10 containment. If Exchequer Dam were constructed today,  
11 the cost would be one and a quarter billion dollars.  
12 Merced Irrigation, I mean MID irrigating 100,000 acres  
13 also influences with underground recharge, another  
14 400,000 acres totaling one-half million acres with a crop  
15 value of three-quarters of a billion dollars and with a  
16 land, equipment and capital improvement value of \$10  
17 billion.

18           We have built these improvements,  
19 infrastructure and inputs for over 100 years. We have  
20 had a cattle ranch for 80 years, which is also a private  
21 fish and wildlife preserve with no fishing or hunting  
22 allowed. The large creek within depends -- (Timer  
23 beeps.) -- I've got eight sentences. The large creek  
24 within depends on small amounts of MID flow change over  
25 flows. During the drought, this creek dried

1 intermittently and we lost fish. If increased Merced  
2 River flows were required we are concerned that would  
3 occur more often.

4 Merced River has the least reliable and the  
5 lowest yielding watershed of all major rivers north. We  
6 also deliver the highest concentration of salt, 700 parts  
7 per million, after entering the San Joaquin. Merced  
8 River flow requirements have been maximized and balanced  
9 considering all aspects of this project, but we are  
10 interested and want to do our part to enhance the life of  
11 the fish with the MID, Merced River SAFE Plan.

12 VICE CHAIR SPIVY-WEBER: Thank you.

13 MR. BORBA: Thank you.

14 VICE CHAIR SPIVY-WEBER: Rebecca followed by  
15 Rachel.

16 And then Jon, you can come and sit up here all  
17 ready.

18 MS. FRANKLIN: Good afternoon Vice Chair and  
19 members of the Board, my name's Rebecca Franklin, with  
20 the Association of California Water Agencies. ACWA  
21 represents more than 430 public water agency members that  
22 collectively supply 90 percent of the water that's  
23 delivered for agricultural, industrial, and municipal  
24 uses statewide. Our membership includes a number of  
25 irrigation districts and water districts that you've



1 heard from throughout this public hearing process.

2 We appreciate the hearing process you've held  
3 as well as the recent 60-day extension that you granted  
4 on the written comment period. We want to underscore all  
5 of the comments you've received regarding the need for a  
6 more open, transparent, collaborative approach to  
7 developing this Water Quality Control Plan. The Water  
8 Quality Control Plan must be developed in a manner that's  
9 consistent with the direction outlined in the California  
10 Water Action Plan and established state policies,  
11 including the Delta Reform Act, the Sustainable  
12 Groundwater Management Act, and the Human Right to Water  
13 Act.

14 The current unimpaired flows approach will not  
15 help the state achieve its policy objectives and will  
16 actually undermine established state policies by  
17 increasing groundwater overdraft, making investments in  
18 storage projects irrelevant, and negatively impacting  
19 disadvantaged communities as you've heard about a lot.  
20 The current proposal will also have a devastating impact  
21 on California's economy and the disadvantaged communities  
22 that comprise 40 percent of the area affected by this  
23 Plan. This is an unacceptable outcome for a Water  
24 Quality Control Planning process, the objective of which  
25 is to balance out all establish beneficial uses of water.

1 Considering these negative outcomes, the best available  
2 science must support the unimpaired flows approach as the  
3 only approach that will achieve desired ecological  
4 outcomes.

5           The 2012 Delta Independent Science Board peer  
6 review of this approach states that flow is but one of  
7 many stressors affecting fish and wildlife. And the  
8 choice of flow criterion metrics needs to serve the  
9 broader needs of ecosystems as well as individual  
10 species. Given the altered hydrodynamics of the Bay-  
11 Delta ecosystem simply adding water to the system will  
12 not achieve desired ecological outcomes. Flows must be  
13 applied in a manner that's functional to available  
14 physical habitat and timed appropriately for aquatic  
15 species life cycles.

16           The Coop identifies the need for an integrative  
17 multi-pronged approach to determining ecological flow  
18 needs. ACWA's member agencies have demonstrated their  
19 interest in such an approach and have the technical  
20 ability to help inform the process if they're included.  
21 Just one more thing, ACWA encourages the State Water  
22 Board to continue to work with the Natural Resources  
23 Agency on negotiating voluntary settlements and to engage  
24 stakeholders in an open, transparent, collaborative  
25 process that incorporates the best available science as

1 this process moves forward. Thank you.

2 VICE CHAIR SPIVY-WEBER: Thank you.

3 Rachel?

4 MS. KALDOR: My name is Rachel Kaldor. I'm the  
5 Executive Director of Dairy Institute of California.  
6 Dairy Institute is a statewide trade association  
7 representing the manufacturers of milk, cheese, cultured  
8 dairy products and frozen dairy products. We are  
9 absolutely supportive of the work of this Board, the  
10 staff, and allied experts to sustain and improve water  
11 quality and the ecosystem. I'm here to testify in  
12 support of a balanced approach, one which benefits the  
13 Tuolumne River, related water systems, and all that  
14 depend on them.

15 Our members rely on dairy farms to supply milk  
16 to Central Valley dairy processing plants that then go on  
17 to serve a global market. Dairy farms and processing  
18 plants are the source of thousands of year-round well-  
19 paying jobs in Central Valley communities, most of which  
20 would suffer significantly higher unemployment and loss  
21 of tax and business revenue if these operations were  
22 forced to leave.

23 Looking to the future, as our farms and plants  
24 modernize, employees with these year-round jobs also gain  
25 employment education and training. These opportunities

1 drive their futures and the well-being of they and their  
2 families. They also foster the innovation vital to our  
3 affiliated industries and that innovation keeps our farms  
4 and processing plants in operation.

5 We urge the Board to implement science-based  
6 options such as non-flow measures that would help the  
7 salmon population and increase the health and operation  
8 of the river. We would also urge the Board to consider  
9 carefully the impact of unimpaired flows on the state's  
10 and regions' critical need for groundwater management and  
11 recharge.

12 Viable solutions are those that achieve the  
13 balance to sustain both our treasured resources and our  
14 citizens. I appreciate the opportunity to testify before  
15 you today. Thank you.

16 VICE CHAIR SPIVY-WEBER: Thank you.

17 Jon?

18 MR. RUBIN: Yes, thank you. My name is Jon  
19 Rubin. I'm General Counsel for the San Luis & Delta-  
20 Mendota Water Authority. Madam Vice Chair, members of  
21 the Board, staff, it's a pleasure to speak to you and I  
22 will be brief.

23 I have two general comments. Let me first  
24 start with the Delta Independent Science Board. The  
25 Independent Science Board was created as a result of the

1 2009 Delta Reform Act, as you're aware. And it's in  
2 existence to provide oversight on scientific research,  
3 monitoring and assessment programs. And its objective is  
4 to strengthen the science underlying Bay-Delta programs  
5 and the application of that science within the Bay-Delta.

6           The Independent Science Board, as you may be  
7 aware, is reviewing and preparing comments on a draft  
8 Scientific Report that your staff has prepared for Phase  
9 2 of the Water Quality Control Plan. My understanding is  
10 that the Independent Science Board that has released the  
11 draft of those comments is intending to finalize them on  
12 January 12th.

13           The draft comments that were released in  
14 December present some fairly fundamental questions with  
15 regard to the Phase 2 draft Scientific Report. And I do  
16 want to highlight three here today.

17           First, the Independent Science Board, in its  
18 draft comments, questioned why the State Water Board's  
19 draft Scientific Report only considers an unimpaired flow  
20 approach to setting flow regulation. They question the  
21 lack of quantitative treatment of any effects from non-  
22 flow stressors and questioned the limited description of  
23 possible methods for reducing effects of non-flow  
24 stressors. The Water Authority raised these questions,  
25 or noted these questions in its comments on the Phase 2

1 draft Scientific Report. And I note them today, because  
2 I believe these three questions -- and there's others  
3 that they raise -- are directly applicable in this Phase  
4 1 process.

5           The questions that the Independent Science  
6 Board has raised with regard to the draft Scientific  
7 Report for Phase 2 are questions that were raised in this  
8 Phase 1, when the draft Scientific Report underlying the  
9 documents that are before you today, were released for  
10 public comment. I do want to emphasize the first  
11 question that the Delta Independent Science Board has  
12 raised -- the failure to consider approaches other than  
13 an unimpaired flow approach. To me this is a large and  
14 very problematic failure that exists in Phase 2, but it  
15 again is a problem and a failure in Phase 1.

16           And you've heard and you've seen the results of  
17 the focus on unimpaired flow today, I'm sure at the other  
18 hearings that you've attended. By focusing on unimpaired  
19 flow you set a paradigm that's -- the question that's  
20 before you is how much water for fish versus how much  
21 water for people? This is a paradigm that has been  
22 employed for the past quarter century by the State Water  
23 Board. And it's a paradigm that's failed to provide the  
24 desired protection for beneficial uses.

25           It places the State Board in an untenable

1 position of choosing winners and losers. And it also  
2 places you in a position, if the desired results are not  
3 realized, for pushing for more water for fish at the  
4 expense of people. Science, policy and law support  
5 consideration of alternative approaches. Alternative  
6 approaches that may avoid the State Board being placed in  
7 the difficult circumstances I just noted.

8           Alternatives that could be presented to you,  
9 but haven't yet are approaches that you've heard today  
10 from other speakers, like an approach that's based on  
11 functional flows. Other approaches are based on  
12 regression or statistical analyses. By following an  
13 alternative approach solutions focus on the needs of fish  
14 and the needs for people. It allows solutions that do  
15 not necessarily sacrifice one for the other. It allows  
16 solutions that do not place the heavy burden of flow, the  
17 burden that exists when you rely upon flow as a master  
18 variable. It allows solutions that consider flow, a call  
19 on non-flow measures to mitigate for non-flow impacts  
20 that have occurred within the system.

21           The second comment I want to raise is again a  
22 comment that was raised earlier today. And it concerns  
23 the conflation of authority. That the Phase 1 documents  
24 that are before you today conflate authority that you  
25 have under your water quality planning versus your water

1 right planning. And because of the conflation of your  
2 authorities, if you adopt the update as proposed, you  
3 will be violating the law.

4           The example I provide to you today concerns the  
5 Program of Implementation for southern Delta salinity  
6 objectives. Under the law, the Water Quality Control  
7 Plan and its Program of Implementation are not to assign  
8 responsibility for achieving objectives. The proposed  
9 updates and the Program of Implementation do just that.

10           As examples, the Program of Implementation  
11 assigns to the Bureau of Reclamation requirements to meet  
12 south Delta salinity as a condition of its water rights.  
13 And that's on page 42 of the Program of Implementation.  
14 Page 43 has a similar statement obligating DWR and  
15 Reclamation to meet salinity requirements, as condition  
16 of their water rights. And page 45 has a condition on  
17 DWR and Reclamation's water rights with regard to  
18 operation of agricultural barriers.

19           So let me close by highlighting the three --  
20 the concerns that I've raised today. You have concerns  
21 raised by the ISB in Phase 2 that are equally applicable  
22 to this Phase 1 and need to be addressed and more  
23 specifically, the failure to consider a regulatory  
24 approach other than an unimpaired flow approach. And you  
25 have the documents before you that conflate authority,



1 your water quality and water right authority.

2           These are significant concerns. Their  
3 significance however, is amplified by the fact that  
4 you're updating your Phase -- you're conducting your  
5 Phase 1 update within a very complicated regulatory  
6 environment. An environment with multiple other  
7 regulatory processes underway, all of which are focused  
8 on similar resources, and all of which have similar  
9 goals.

10           What the Water Authority recommends is that the  
11 State Water Board expand the analysis that's before you  
12 to address the concerns that I've highlighted. And to  
13 develop the Phase 1 documents to support or complement a  
14 unified institutional structure. That the State Board  
15 develop the Phase 1 documents to help bring a sense of  
16 order and singular purpose to the many processes that now  
17 exist within the Bay-Delta. Thank you.

18           VICE CHAIR SPIVY-WEBER: Thank you. Any  
19 questions? Thank you very much.

20           I have 10 more speakers, Michael Warburton will  
21 be first. Michael, could you come right up right now?  
22 Deanna Wulff, Mark Chow, Paul Gardner, Leah Rogers, Carol  
23 Fitzgerald, Bart Westcott, Gail -- Gail, you'll tell me  
24 how to do it -- Charlotte Allen and Crystal Sanders.

25           Thank you. Michael?

1           MR. WARBURTON: Yeah. I'm Michael Warburton.  
2 I'm Executive Director of the Public Trust Alliance.  
3 It's a non-profit, which represents public interests in  
4 California's waters, which you devote a great deal of  
5 attention to.

6           My brain is fried. I haven't understood a lot  
7 of what's been said and, you know, some people said, "We  
8 own it." And the thing is that things don't have value.  
9 People give it value. And when you have different  
10 people, they put different values on things. And so a  
11 lot of this is totally predictable differences in  
12 perception. People talked about different truths. And  
13 the scientific evaluation has to include an institutional  
14 analysis of where the uncertainties are coming from,  
15 because both camps of people and fish are claiming that  
16 their truth is the truth. And the thing is that both are  
17 the truths.

18           And with that kind of thing when you have  
19 voluntary settlements, some things get traded away. And  
20 I think the process should be transparent enough, so that  
21 people can understand what's being traded away by whom  
22 and who disagrees with who. So I'm just saying at the  
23 end of a day like today, I'm blitzed.

24           And I haven't gotten any further, but I hope  
25 you have.

1           VICE CHAIR SPIVY-WEBER: Thank you. I hope we  
2 have too.

3           Deanna. Deanna Wulff? Mark Chow? Paul  
4 Gardner?

5           MR. GARDNER: Thanks for the opportunity. I'm  
6 a small business man. I'm a salvage contractor in  
7 Silicon Valley and I'm here today, because I'm concerned  
8 about the river though, and its inhabitants. And as a  
9 way of expressing myself I wrote this following little  
10 story, which I hope you'll let me read.

11           The human walked into the Court of the  
12 Honorable Ronald E. Salmon. "Why are you here?" the  
13 Judge asked. "We petition the Court to take a major  
14 portion of the water of the Sacramento-San Joaquin River  
15 Delta," the human answered. "What right do you request  
16 this?" "Well, we need it and we are more intelligent and  
17 more sophisticated than other species." "More  
18 sophisticated?" "Yes. We have advanced technology and  
19 communication and transportation and war. We have been  
20 to the moon."

21           The Judge probed. "Has your technology  
22 benefited the earth and all its inhabitants?" "Well,"  
23 said the human, "Many species have gone extinct and  
24 there's been some environmental destruction." "Some?"  
25 snapped the Judge. "It seems to me there's been a lot of

1 environmental destruction. Have you at least benefited  
2 all humans with your technology?" asked the Judge. "Uh,  
3 no. Not exactly. There are many humans that have  
4 suffered. We could be doing a far better job with food,  
5 health care, energy and more. That's for sure."

6 "My fine scaled friends have not harmed  
7 anyone," the Judge said. "They benefit many other  
8 species, both plant and animal kingdoms along the way.  
9 In fact, they provide many jobs to those of your species.  
10 How will the taking of this water affect my fine finned  
11 brothers?" the Judge asked? "Well," said the human, "It  
12 depends on how much water we take. (Timer beeps.) Many,  
13 perhaps all of you will die. That's just the way it is,"  
14 replied the human.

15 "And you think this might help?" the Judge  
16 asked. "Well," said the human, "We have a lot of humans  
17 to feed." "As there is no other way?" asked the Judge.  
18 "Well," said the human, "This is the easiest way. We  
19 haven't necessarily explored all the other options."

20 "You seem to be a very arrogant species,"  
21 declared the Judge. "Wouldn't methods exploring all the  
22 other conservation measures before taking such a drastic  
23 step? I deny your petition. Don't come back 'till you  
24 have explored all the options and ensured the lives of  
25 all species and the health of our precious Mother Earth."

1           Thanks for your time.

2           VICE CHAIR SPIVY-WEBER: Thank you.

3           Leah.

4           MS. SREDANOVIC: Hi. Thanks for your patience.  
5 I'm Gail Sredanovic. I am a member of San Mateo County  
6 Democracy for America and Chair of the Social and  
7 Economic Justice Task Force. I led them in a study of  
8 water issues and we were surprised to learn that there  
9 are five times as many water rights as there ever has  
10 been water in the State of California. And to learn that  
11 salmon habitat is water, plain and simple, that salmon  
12 flows coincide with water flows.

13           The club has taken a position against the twin  
14 tunnels and the County of San Mateo, the County Board has  
15 passed a resolution reminding everybody that the State  
16 Water Resources Board determined in 2010, that to protect  
17 the public trust resources in the Sacramento-San Joaquin  
18 Bay-Delta ecosystem, 75 percent of unimpaired runoff from  
19 the Sacramento-San Joaquin Watershed should flow out of  
20 the Delta. Also, in their resolution, they noted the  
21 need for regional self-sufficiency to reduce reliance on  
22 exports from the Delta. And they also noted that  
23 protecting the economic viability of industry and other  
24 businesses in the Bay Area was needed. And that part of  
25 this is protecting the shoreline of the greater San

1 Francisco Bay-Delta ecosystem.

2 I would also note since I live in Menlo Park,  
3 that in East Menlo Park where we have Facebook and tons  
4 of jobs, that the low-income residents are being driven  
5 out by rising rental costs. And if similar processes go  
6 on in East Palo Alto, the City Council may get money and  
7 the developers may get money, but similar processes will  
8 drive out the disadvantaged community. And I'm very  
9 concerned about this. I would urge you not to be overly  
10 persuaded by this particular sub-argument.

11 Thank you for your time and patience.

12 VICE CHAIR SPIVY-WEBER: Thank you. Leah  
13 Rogers, is Leah here? No. Carol Fitzgerald? Bart  
14 Westcott? Charlotte Allen? Oh good.

15 MS. ALLEN: I'm here, you finally got someone.

16 (Brief colloquy aside.)

17 MS. ALLEN: I'm Charlotte Allen. I'm the Co-  
18 Chair of the State Sierra Club Water Committee. I'm not  
19 here to speak for the Sierra Club, because I'm not  
20 advocating for anything. I just thought I'd do a little  
21 fact-checking on the claims of economic disaster that  
22 you've been hearing. I'm speaking to this little one-  
23 page chart that I've left you copies of. And I thought  
24 what would be useful instead of talking about modeling  
25 was just to look at two years in similar points on the

1 economic cycle. And I picked 2006 and 2014, both of them  
2 about six years out from major economic collapses. The  
3 2008 one being a more major collapse.

4           The difference between these two years is that  
5 SFPUC water deliveries were 25 percent lower in 2014. So  
6 we're going to see the impact of a 25 percent reduction  
7 in water deliveries. Unemployment however, was down 15  
8 percent in 2014 as compared to 2006. The NASDAQ, which  
9 is kind of a rough indicator of Bay Area economy was up  
10 75 percent between 2006 and 2014. And the median home  
11 value, which is probably a better local indicator of the  
12 economy for the San Francisco Metro area, was up 10  
13 percent between 2006 and 2014.

14           So if I was kind of a radical I might say that  
15 the 25 percent decrease in water deliveries had a  
16 positive impact on the Bay Area economy. But I'm not  
17 going to say that. I'll just say it has no discernible  
18 impact on the Bay Area economy. I would urge you to look  
19 with skepticism on the claims of economic impact and look  
20 at history. A similar history might enlighten us about  
21 the Central Valley. The 20th Congressional District in  
22 the San Joaquin Valley has been crushingly poor since the  
23 1940s in years of plentiful water and no water.

24           So take the claims of economic disaster with a  
25 grain of salt and a dose of history.

1                   VICE CHAIR SPIVY-WEBER: Thank you so much.

2                   And finally Crystal Sanders. And then the last  
3 panel, the joint presentation on recreational interest,  
4 if you all could come up and have a seat up here that  
5 would be great. Thank you.

6                   Go ahead, Crystal.

7                   MS. SANDERS: Hi. I'm Crystal Sanders. I live  
8 in San Francisco. I'm a fisheries biologist, Founder of  
9 Fish Revolution and on the Board of SalmonAid. Fish  
10 Revolution works with chefs, restaurants, and other  
11 businesses in the greater Bay Area to implement  
12 sustainable seafood sourcing practices and to transform  
13 their seafood purchasing practices to ensure healthy  
14 oceans and business success.

15                   Wild salmon is not only an iconic California  
16 species, it is key ingredient on my clients' menus. And  
17 salmon is one of the most recognized and desired fishes  
18 that they offer. And wild salmon is really the only  
19 sustainable options for these businesses to choose. The  
20 problem is that local wild Chinook salmon is so hard to  
21 get, and the price is too high, and availability is too  
22 uncertain for many restaurants and businesses to rely on  
23 it for their menus. This is harmful to both their  
24 businesses and their sustainability goals.

25                   Restoring the San Joaquin River and her



1 tributaries could lead to tens of thousands more salmon  
2 in the ocean every year -- even more if we go up towards  
3 the 60 percent recommendation. This would make supply of  
4 salmon more reliable, less expensive, and while keeping  
5 these economic benefits of salmon sales in our local  
6 area. In most years, the San Joaquin has less than 30  
7 percent of its natural flow. The Water Board's current  
8 proposal to increase that to only 40 percent is  
9 inadequate. The best science tells us that it's too low  
10 to support reliable salmon productivity in this valley.

11 Please protect our wild salmon fishery, the  
12 restaurant and fish-related businesses like mine that  
13 rely on wild salmon by following the science to restore  
14 at least half of the flow to the tributaries to the San  
15 Joaquin. Thank you.

16 VICE CHAIR SPIVY-WEBER: Thank you so much.

17 And who is leading the panel?

18 MR. MAZAIRA: I'm not sure we have a leader.

19 VICE CHAIR SPIVY-WEBER: Well, who starts the  
20 panel then?

21 MS. D'ADAMO: I would say just go down the row.

22 VICE CHAIR SPIVY-WEBER: Okay. Start with Kate  
23 -- Kelsey.

24 MS. LINNETT: Thank you. Good afternoon, Vice  
25 Chair and members of the Board.

1 (Colloquy re: audio setup.)

2 VICE CHAIR SPIVY-WEBER: No, and introduce  
3 yourself.

4 MS. LINNETT: Thank you, turned on the mic.

5 My name is Kelsey Linnett. Good afternoon Vice  
6 Chair, members of the Board. I live and work in San  
7 Francisco and I recently discovered that I love sport  
8 fishing. My first time was last spring. I was enamored  
9 and not just because I was dating the captain of the  
10 boat. (Laughter.) Before I met him, I had no idea that  
11 someone like me could go out fishing. I wrongly assumed  
12 that the world was relegated to a few old geezers and  
13 some hunting enthusiasts. I thought you had to have been  
14 taught by your father or come armed with a set of fishing  
15 poles and a well-stocked tackle box.

16 Then I stepped on to the boat, a 50-foot sport  
17 fishing vessel called the "New Easy Rider." During  
18 salmon season it leaves the dock in Berkeley nearly every  
19 day at 6:00 a.m. sharp. If you don't have your own rod,  
20 you can rent one. There's room for up to 25 people, each  
21 with a spot along the edge of the boat.

22 The first stop is the bait dock where they sell  
23 live anchovies. A few silvery scoops into a couple of  
24 buckets and we're off through the Bay, under the Golden  
25 Gate Bridge, around Point Bonita and into the ocean.

1 That's when you get to fish.

2           You fish for salmon with a trolling method,  
3 which means mimicking a school of anchovies to attract  
4 the salmon to bite. You drop the line with a small  
5 weight attached to a sink release, trailed by leader line  
6 and a hook threaded expertly through the anchovy, so that  
7 it spins in the water. The boat slows down to a crawl  
8 and you wait for the fish to bite. The fish don't  
9 discriminate. They bite for newbies and veterans alike  
10 and some days they don't bite your line at all.

11           When you get a bite you yell "fish on" and then  
12 the deck hands help you weave over and under the other  
13 rods as you slowly reel it in towards the boat. You  
14 follow the fish sometimes all the way around the boat  
15 before it gets close enough to get a net and haul it onto  
16 the deck. It is exhilarating. Your adrenalin is going.  
17 Your forearms start to give if you're fighting too hard,  
18 and you are singularly focused on that fish at the other  
19 end of the line. If you pull too hard the fish will  
20 break the line. And if you're too soft, then the fish  
21 can wiggle free from the hook. And this adventure  
22 continues for a full day. Sometimes up to 12 hours.

23           In the course of managing your rod, you might  
24 be lucky enough to see whales and sometimes a shark. You  
25 hope not to see a sea lion, because they will steal your

1 salmon once you've hooked it. When you catch a salmon it  
2 is the most beautiful creature. And it is so, so  
3 delicious. You learn to eat the whole fish and share  
4 what you're not going to eat. And let me tell you, that  
5 everybody likes getting some fresh salmon.

6           Some additional points about the activity.  
7 It's very inclusive. All generations from kids to  
8 retirees can participate. All abilities and expertise  
9 are welcome. I went on a fishing trip with two people  
10 who were blind. It's very multi-cultural. Fishing is  
11 universal. And it fosters connections. When you're on a  
12 boat all day fishing together, you talk to people. You  
13 trade stories and you learn. You experience the ocean  
14 firsthand and the fishery. And you form a deeper  
15 connection to nature and your food source.

16           It's also a way to mark occasions. I've seen  
17 people come on the boat to celebrate birthdays, to bond  
18 with their work colleagues. And there's an annual  
19 memorial charter to recognize all the people that have  
20 passed.

21           It's a destination and it's stimulates the  
22 economy. It allows commercial fishermen like my  
23 boyfriend to diversify what his boat does beyond  
24 commercial crabbing and support his two kids. People  
25 travel from all over to come out sport fishing. They

1 stay in hotel rooms, they purchase food, they buy their  
2 fishing licenses. And it supports the entire  
3 infrastructure from the Berkeley Marina to the fuel dock  
4 to the bait dock. In short, if sport fishing were no  
5 longer viable it would be an irreplaceable loss to the  
6 community and the state.

7           The fishermen all know, because they've lived  
8 it, that the salmon population has dramatically decreased  
9 to the point of scarcity. It used to be that in the  
10 ocean, outside the Golden Gate the salmon would be where  
11 the feed were. And now it's spotty. As a result, the  
12 fleet watch each other closely and if one boat lands a  
13 fish they all race to get to that same spot just like  
14 kids fighting over the last cookie.

15           The State Water Resource Control Board has this  
16 once in a generation opportunity to restore the salmon  
17 fishery, so that more avid fishermen can catch a fish or  
18 two, which is the limit. In my opinion, it's not a  
19 question of fish versus farm. It's about stewardship and  
20 inclusion. Access for everybody to have the opportunity  
21 to catch a fish is not too much to ask.

22           I am in support of increased flow at the  
23 maximum levels in the Phase 1 proposal, because that is  
24 the minimum flow necessary to restore the salmon  
25 population. You have that power and it's the right thing

1 to do. Thank you.

2 MR. MAZAIRA: Madam Vice Chair, Board, thank  
3 you for the opportunity to speak to you and thank you  
4 very much for the openness that you have in hearing our  
5 comments during this comment period.

6 My name is Rick Mazaira. I am the owner and  
7 operator of Yosemite Outfitters Guide Service at the  
8 headwaters of the Merced and the headwaters of the  
9 Tuolumne. I have a permit standing in the Stanislaus  
10 National Forest, so I also guide there. And I'm very  
11 familiar with these waters and it was good to hear that  
12 you went for a walk through those rivers.

13 I would say that this issue is not about fish  
14 versus food, because food and fish, well, fish are food.  
15 I would say this very simply. It is about stewardship.  
16 It is about a bigger picture that we need to consider and  
17 that we need to keep at the forefront of our minds.

18 I am also a manufacturer's representative for  
19 rod and tackle companies. And it's a \$2 billion a year  
20 industry that has been depleted, not just because of  
21 drought, but because of many reasons. Some would call it  
22 mismanagement, some would call a lack of foresight, some  
23 would call errors of our past. The opportunity we have  
24 is now.

25 And I don't envy you. I do not envy you. I

1 have to make hard decisions. Like I have to choose how  
2 to communicate to international people that come to  
3 Yosemite and want to fish. And I have to not only avoid  
4 crowds, but follow the law. And as a steward I make sure  
5 not to pressure certain areas, because I don't want to  
6 over fish populations. But you have to choose with the  
7 facts and science and you're getting -- it's almost like  
8 the bad kid in the choir that ends up in front of the  
9 microphone. You hear all the sour notes of everybody's  
10 agenda, screaming at you every day.

11           So what I would say is you need to parse out  
12 the facts. Do what's best, because it's not anecdotal  
13 that I look at my Steelhead Report Card and see --  
14 because it's January 1st, or 3rd now and you have to turn  
15 in your Steelhead Report Card every year -- and I'm a  
16 steelheader. It's known as the fish of a thousand casts.  
17 I looked at my report card this year and there was the  
18 most zeroes I've seen. Zeroes representing days where  
19 there was no catch. And that squarely rests on some of  
20 the decisions that are in this proposal.

21           I would also suggest to look past some of the  
22 lazy fact finding, is what I'm going to call it. You can  
23 find out how many people caught fish. Guides like me  
24 have to report that to Fish and Game every time we go  
25 out. You can find out harvest records, which could give

1 you an idea of percentages as well. There's information  
2 out there. I would suggest that not only you look at  
3 increasing the flows, but look at a holistic plan to  
4 restore the ecosystem. And to provide all people a  
5 livelihood, because this is how I pay my mortgage. And  
6 I've got four kids. They're looking at school.

7 Thank you very much for your time.

8 MS. CHARLES: Hello. My name is Cindy Charles.  
9 And I'm the Conservation Chairperson for the Golden West  
10 Fly Fishers for the last 16 years, and a former  
11 Conservation Chair for the California Federation of Fly  
12 Fishers. I am here today to support the proposal by the  
13 State Water Board to increase the flows on these rivers.  
14 This is our last, best chance to attempt to restore the  
15 severely degraded tributaries of the San Joaquin.

16 I grew up in San Francisco, drinking Tuolumne  
17 River water and learned to fish for salmon on fishing  
18 trips with my father. These life-changing outings were  
19 the reason for my degree in Zoology from UC Berkley. For  
20 the last 20 years I worked in banking and finance. I can  
21 understand both the science and the complex economics of  
22 water. Climate change, population growth, and the switch  
23 to permanent crops have placed increased demands on water  
24 resources.

25 The Tuolumne, Merced and Stanislaus rivers have



1 always been my favorite rivers. My now adult son's first  
2 fishing trip was on the Tuolumne. Some of the salmon I  
3 caught with my father began their life in the spawning  
4 gravels of these three rivers. It is not only family  
5 farms that have a connection to these rivers. My family  
6 has a multi-generation connection too. Fishing and  
7 healthy abundant salmon are part of my family's life and  
8 history. I fear a future without salmon to share with my  
9 grandchildren.

10 I have fished the lower sections of the San  
11 Joaquin tributaries for 25 years. I have been witness to  
12 the diminished quality of the aquatic resources and seen  
13 habitat degraded over many seasons and many water year  
14 types. This rapid decline of these once great trout,  
15 steelhead and salmon fisheries has occurred in all three  
16 tributaries. The numbers of people seeking recreation in  
17 natural areas is increasing annually, as is the economic  
18 importance of these visitors.

19 The citizens of California, the same people who  
20 sacrifice their water during periods of drought deserve a  
21 chance to recreate on healthy, environmentally  
22 functioning rivers. Rebalancing the beneficial uses of  
23 these rivers is overdue. Do Californians deserve to live  
24 in a place that is so degraded that salmon are just a  
25 memory? No. They don't. Let's not trade our chance for

1 healthy, functioning river systems and the vibrant  
2 ecosystems that they support for a salty snack that is  
3 mostly exported.

4 I urge the State Water Board to stand firm on  
5 the proposal to increase the flows of the San Joaquin  
6 tributaries, to support the restoration of the Bay-Delta  
7 system, which is so vital to so many species of wildlife  
8 and not only fish.

9 I thank you very much for your time and your  
10 consideration.

11 MR. O'ROURKE: Good afternoon, Madam Vice Chair  
12 and Board members. I'm Sean O'Rourke and I'm a PhD  
13 geneticist, working at UC Davis, in the College of  
14 Agriculture and the Environment.

15 My research focus is salmon and steelhead  
16 genetics. We work with state and federal agencies,  
17 Native American tribes, other universities and anglers up  
18 and down the West Coast from California, Oregon,  
19 Washington, Canada, Alaska and also into Russia and  
20 Japan. We obtain genetic samples from fish and we use  
21 them to discover how fish populations are related and  
22 what genetic mechanisms they have evolved to allow them  
23 to thrive in different environments.

24 I love fish. I've been an avid recreational  
25 angler all my life. I fish for salmon and steelhead on

1 the Sacramento, Feather, Trinity, Klamath, American, Eel  
2 and the Tule rivers in California. I also fish the ocean  
3 as often as I can. I bring friends, family, and students  
4 in our department out fishing with me. Friends come to  
5 fish with us from all over California, other parts of the  
6 U.S. and even other countries.

7 I'm certainly not the only angler that would  
8 appreciate having more salmon and steelhead in the  
9 Central Valley where so many of us live. I help run a  
10 fishing forum with over 37,000 members. So there are  
11 many, many anglers who are interested in getting more  
12 water for our fish. We all buy licenses, tackle, gear,  
13 bait, fuel. I have three boats myself. Angling not only  
14 provides significant economic benefits, but also a  
15 quality recreational experience for individuals and  
16 families in our state.

17 If there were increased salmon and steelhead in  
18 the San Joaquin Basin, it could provide additional angler  
19 opportunity and many of us would love to take advantage  
20 of that opportunity. The San Joaquin Basin used to have  
21 an epic run of a type of salmon called Spring Chinook.  
22 From time immemorial, these fish would come up river  
23 during the spring. And over the summer in cold, clear  
24 pools high up stream, prior to spawning in the fall. Not  
25 anymore. Due to water withdrawals and dams those fish

1 were wiped out. What's left in the basin are fall-run  
2 Chinook and steelhead. And their numbers are holding on  
3 by a thread. By providing higher flows, we can finally  
4 hope to improve our salmonid runs. Many anglers believe  
5 it's very simple to help fix the dire fish situation.  
6 More water equals more fish.

7           And I just want to add recreational and  
8 commercial anglers stand by family farmers. But when we  
9 see vast oceans of corporate farms producing bumper crops  
10 during droughts, towns without any water meters and lush  
11 urban landscaping using imported water, many feel this is  
12 an unjust situation. So I'll close by saying fish need  
13 to have much more increased consideration about our water  
14 allocation choices going forward. Perhaps we can look at  
15 the Trinity River Record of Decision as a model  
16 compromise for all users of the resource. Thank you for  
17 your time.

18           VICE CHAIR SPIVY-WEBER: Thank you. Are there  
19 any questions? Thank you very much.

20           I have four speaker cards, Jeanelle Steiner is  
21 first. Is Jeanelle here?

22           MS. STEINER: Yeah, I'm here.

23           VICE CHAIR SPIVY-WEBER: Okay. So come on up.  
24 Aaron Orsini, Gary Bobker, and Tricia Geringer.  
25 (Colloquy re: people in attendance.)

1                   VICE CHAIR SPIVY-WEBER: Go ahead.

2                   MS. STEINER: First of all I want to thank you,  
3 each one of you, for all that you have been through and  
4 all that you're offering to this process.

5                   My name is Jeanelle Steiner. And I'm a fourth  
6 generation Californian and I'm an environmental educator  
7 as a professional. And I took a vacation day in order to  
8 put my word in for future generations, for all species.

9                   While I appreciate that you're getting outcries  
10 from all communities, and I feel for all those  
11 communities, I urge you to, as human beings, to think of  
12 the big picture here. Our ecosystems and long-term  
13 sustainability is our highest objective here for the  
14 health and well-being of everyone. So I urge you to  
15 choose the maximum flow for the San Joaquin River and  
16 it's clearly -- we clearly need to set a new standard for  
17 what our water carrying capacity can be. And I have  
18 faith that with the creativity that we have available to  
19 us in California, that we can work together to come up  
20 with creative solutions. So I think the human needs and  
21 the economic needs will be a challenge. And I'd like you  
22 to be awake to what's at stake, the potential extinction  
23 of more species and at some point if pushed further,  
24 possible ecological collapse.

25                   An intact ecosystem that sustains the entire

1 delicate web of life and its long-term sustainability  
2 should be the highest objective. Thank you.

3 VICE CHAIR SPIVY-WEBER: Thank you.

4 Aaron?

5 (Colloquy re: microphone setup)

6 MR. ORSINI: My name is Aaron Orsini and I am a  
7 fishing captain out of Bodega Bay. I've been asked to  
8 come here and speak and share my life from Dr. Bill  
9 Bennett, with the US Davis Watershed Center and the Bay  
10 Institute as well as Golden Gate Salmon Association.

11 It's been an interesting one listening to  
12 everything that's going on here. I think all I can do is  
13 kind of share my life and some of my experiences. I grew  
14 up in Bodega Bay and both my parents were charter boat  
15 fishermen. And I've seen the fishing out of Bodega Bay  
16 go from very extensive, very expensive, lots of boats, as  
17 much as ten head boats, to one head boat and a few  
18 struggling six-pack businesses.

19 I grew up with my parents losing their jobs  
20 repeatedly, actually not just once and finding new jobs,  
21 but once and finding new boats and once and finding new  
22 boats. I've seen my uncle who's a commercial fisherman  
23 all my life go to different fisheries. I've seen all of  
24 those collapse.

25 I personally have been struggling just the last few

1 seasons to make a living fishing.

2 I love the ocean. I love fishing and I love  
3 salmon. I'm sorry, I can't convey more in just two  
4 minutes. What has been done isn't enough. And it's been  
5 poorly done. (Timer beeps.) You have an opportunity to  
6 do something else. I'm not saying it's the right thing  
7 or done perfectly, but it needs to be done differently.  
8 People's lives -- I hope you listen to a lot of people  
9 who have put a lot of time and effort and expertise and  
10 have spent their lives creating some kind of alternative  
11 plan.

12 Good luck making your decision.

13 VICE CHAIR SPIVY-WEBER: Thank you so much.

14 Gary?

15 MR. BOBKER: Gary Bobker, Bay.org. The Bay-  
16 Delta Estuary deserves the kind of protection and  
17 attention that we give to other national treasures like  
18 the Chesapeake and the Everglades, but instead we're  
19 letting it collapse and we're all to blame. And the time  
20 to do something about it is long overdue. Salmonids are  
21 not just -- this is not just about fish. It's about the  
22 fact that salmonids are the indicator of a healthy  
23 ecosystem. It doesn't take much for fish like salmon to  
24 succeed. And the fact that salmon are either declining  
25 or locally extinct is evidence of just how degraded this

1 ecosystem is and how beneficial uses are not being  
2 protected. And that is your job.

3           There's overwhelming scientific evidence that  
4 major increases in flow are the effective action to take.  
5 It's a red herring to talk about flow versus non-flow,  
6 because as you have heard time and time again the science  
7 is that flows are -- it takes flows whether you do  
8 habitat or predation measures or not. In fact, it takes  
9 flows to make those be successful. It's also a red  
10 herring to talk about unimpaired flows. That's a method  
11 for providing flow conditions, which happens to be a good  
12 one. But the real issues is what's the level of flow  
13 you're going to provide? If you want to base it on the  
14 best evidence we have about what makes salmon return,  
15 positive recruitment at 5,000 CFS and doubling at 10,000  
16 CFS, go ahead and do that instead. The water supply  
17 impacts will probably be bigger, but you'll achieve the  
18 end goal.

19           The water supply impacts are important to talk  
20 about. I think it's also important to note that, as many  
21 speakers have talked about, in many cases they're  
22 exaggerated. In many cases they can be mitigated.

23           And with all due respect to the fine people in  
24 the Central Valley, in the agricultural industry, I think  
25 that some of those concerns are misplaced, that they're



1 surrogates for the many other issues that the  
2 agricultural industry has to deal with, whether it's  
3 trade policies or world markets. But water is actually  
4 not the thing that is going to make or break that  
5 economy.

6 I will end by saying that I went through the  
7 last round of the major update of the Bay-Delta Plan in  
8 the late '80s and '90s. It took nine years for a Board  
9 that changed radically, because the members didn't last  
10 long enough. It took nine years for the State of  
11 California to adopt water quality standards. I never  
12 thought that I would go through another period where I  
13 thought it's going to take that long.

14 You're not going to have a rabbit pulled out  
15 the hat by anybody else. It's up to you. You've taken a  
16 long time. It's time to move to a decision expeditiously  
17 and one that will protect the beneficial uses. Thank  
18 you.

19 VICE CHAIR SPIVY-WEBER: Thank you.

20 And finally, Tricia Geringer.

21 MS. GERINGER: Good evening, Vice Chair and  
22 Board members. Thank you so much for sticking out  
23 through the evening. Tricia Geringer, Vice President  
24 with Agricultural Council of California. We represent  
25 over 15,000 farmers throughout the states. And our

1 farmers are producing locally grown, healthy products  
2 like peaches, almonds, dairy products, apricots, raisins  
3 and many other healthy nutritious items that our  
4 population loves to put on their kitchen tables. And we  
5 like to say that our members are closer to you than your  
6 own neighbors, because their products end up on your  
7 kitchen table and they're in your lunches.

8 I want to thank you for holding this hearing  
9 and all of the December hearings and for continuing to  
10 take in stakeholder inputs. And thank you also for  
11 extending the written comment period to March 17, as the  
12 Chair Marcus recently stated, in order to create  
13 "positive opportunities" for engagement and negotiation,  
14 which we could not agree with her more and we believe is  
15 crucial going forward.

16 Our organization would like to express concern  
17 over the impact of the proposal on dairy farmers in a  
18 region that is a great contributor to California's vital  
19 dairy industry. Our Council represents over 75 percent  
20 of milk produced in California. And if, as the Appendix  
21 G of the SED states, the proposal would limit, "the  
22 economic feasibility of growing feed crops," this would  
23 be very challenging news for the dairy industry, which is  
24 already struggling as was previously stated by another  
25 speaker.

1           And also you have heard, at I believe it was  
2 the Modesto hearing, the industry is already in a very  
3 strict regulatory environment. And this would be  
4 incredibly challenging, increase costs and as mentioned  
5 before could potentially cause dairy folks to leave. And  
6 frankly no other state or nation can match the regulatory  
7 compliance efforts of California's dairy community. So  
8 we know we do it best here, so we would like to keep it  
9 here.

10           It is also important to note that our state's  
11 almond industry is deeply connected to dairy, through the  
12 hulling and shelling market. So any disruption in the  
13 dairy community also impacts almonds and that community  
14 and all of those jobs.

15           I appreciate very much the conversation  
16 pertaining to SGMA. And I know the Board is keenly aware  
17 that there are many questions regarding the impact of  
18 SGMA and we encourage those continued conversations and  
19 we support that request for further documentation and  
20 reports from your sister agencies in order to seek  
21 further information that can be incorporated into the  
22 analysis going forward.

23           We also support, and respectfully ask the Board  
24 to work with local water leaders and officials, on non-  
25 flow alternatives and support their comments to that

1 effect.

2           Finally, we urge the Board to continue to  
3 engage those of us on the stakeholder side going forward  
4 and prior to making any final decisions. Thank you so  
5 much.

6           VICE CHAIR SPIVY-WEBER: Thank you.

7           Did I miss anyone who turned in a blue card and  
8 I didn't call your name?

9           (No audible response.)

10           Okay. Thank you all for hanging in there with  
11 your interest, cooperation and participation today, and  
12 throughout the hearing.

13           Before I close, are there any -- you mentioned  
14 that you wanted to make a closing statement and if you  
15 two are interested, now is the time.

16           MS. D'ADAMO: Thank you. The hour is late.  
17 And I first of all want to thank my fellow Board members  
18 for their patience. I know I've had a lot of questions  
19 throughout and I am not usually so willing to take up  
20 precious time. But I've spent a lot of time on this and  
21 I'm going to use -- since this is it, it's going to go  
22 back to staff and then we'll have those meetings and I  
23 won't get a chance to talk to you again -- so I'm going  
24 to use this time to again point out some of the main  
25 concerns. And I know that you've already heard about a

1 lot of these concerns, but I would like to put it into  
2 some better context here.

3           So first of all, we all know that we're  
4 required to balance and we've been talking a lot about  
5 the sweet spot. And I'll just say that despite years of  
6 effort, and a lot of effort from staff, I don't think  
7 that what they're presenting to us is the sweet spot.  
8 And that is my own opinion. That's my conclusion and I  
9 know that you all may feel differently, but I just want  
10 to let you know why I don't think we've hit the sweet  
11 spot.

12           There've been a lot of discussions about  
13 settlements. And that settlements is what usually comes  
14 out of these reports, because it is a big challenge to do  
15 a Water Quality Control Plan. And in the past what we've  
16 seen is that staff will put out a document and that will  
17 help drive the discussions toward settlement. And I  
18 absolutely agree with that process. But I think what's  
19 happening here is that staff has put a target out that is  
20 claiming to be balanced. And because it's imbalanced,  
21 that is what is going to drive people to try and avoid  
22 something that is so terribly impactful.

23           And so I'm just pointing this out to say that  
24 where I think we all ought to end up with, is where a lot  
25 of the commenters have encouraged us to look closely at

1 settlements. And to continue to continue the dialogue,  
2 get more information, so that we can end up with  
3 settlements.

4           The concern that I have is that if we don't get  
5 out some additional information and if we don't show some  
6 willingness to move the mark, that it is going to make  
7 those settlement discussions very unlikely, because we  
8 have pushed it to the limit that we've got some folks  
9 that I'm very concerned that they'll just pack their bags  
10 and go to court.

11           And so the areas that I've been focusing on is  
12 not to say that these rivers don't deserve our attention.  
13 It's not to say that these rivers shouldn't have  
14 additional flow. I think we need to give it more  
15 attention, because I feel so strongly that we need to  
16 have a comprehensive package. And that flow alone isn't  
17 going to get us the benefits that staff is saying.

18           In fact, we had the NGO community on the first  
19 day of these hearings on the 29th, say that there are  
20 questionable benefits as to what our staff is saying on,  
21 say for example, floodplain. And so if you look at the  
22 2010 Flow Criteria Report, and if we just focus on flow,  
23 you need to have a lot of flow in order to achieve the  
24 higher benefits, according to some. And because that  
25 would be such a challenge we've got to -- you know, there

1 are other options for us to look at here as far as the  
2 combination of flow and non-flow measures.

3           And looking at sort of the key areas that I've  
4 spent a lot of time with the irrigation districts, I've  
5 spent a lot of time out in the community. And what is  
6 really, I think you know you keep hearing this over and  
7 over again, the areas where we keep hearing the greatest  
8 challenges would be June, lack of dry year relief, SGMA  
9 and the carryover storage requirement.

10           So let's just take carryover storage. I  
11 actually think carryover storage is a key tool that we  
12 probably need to have as part of the package. Now these  
13 irrigation districts can come to us with settlements that  
14 could include carryover storage as part of a voluntary  
15 agreement. But if we have it in a plan, that I fear is  
16 going to cause the irrigation districts to fight and go  
17 to court instead of working with us on a comprehensive  
18 settlement that would include carryover storage.

19           As far as June and dry year relief, I have been  
20 pushing for these things in conversations with staff for  
21 quite some time. And what -- I have to be honest --  
22 what's frustrating is instead of getting some information  
23 about, for example on June, what we get is cherry-picked  
24 wet years that show fish moving in June. And I've  
25 learned a lot through this process. I've learned there

1 are fish moving in June. And I think that information is  
2 helpful, but let's look at all year types. Let's look at  
3 all year types. Let's look at the rotary screw trap  
4 information. I think we should have that information, so  
5 that we can come to a decision as to whether or not what  
6 is before us is balanced.

7           And then as far as dry year relief, same thing.  
8 I remember from the hearing on the 29th in November, we  
9 asked for an overlay of successive dry years, for example  
10 the drought. And what we get is averages. And if you're  
11 out there trying to run a farm an average doesn't make a  
12 difference. What matters is how much water do you get  
13 this year. And so I think we need to get the information  
14 of what it would look like with successive dry years.

15           And staff said that there wouldn't be years  
16 that are at zero. Well, that just doesn't make sense,  
17 because I know that during the drought, even Merced  
18 Irrigation District, they had zero. So something's not  
19 quite connecting here. I think we need to spend a little  
20 more time on that so that we can get information on what  
21 successive dry years look like. And I know there've been  
22 other comments as well on dry year relief, so I think it  
23 would be helpful for staff to come to us with some  
24 alternatives that we could look at with respect to  
25 critically dry years.



1           And then on the fish benefits, I'm looking  
2 forward to getting the updated information from the  
3 Department of Fish and Wildlife on SalSim. And it looks  
4 like staff even though is not relying on SalSim, made an  
5 attempt to make some adjustments. But then also  
6 indicating that it's relying on temperature benefits and  
7 floodplain analysis. I think we need to get more  
8 information on that.

9           Temperature benefits in particular, looking at  
10 the percentage of increase I don't know what that means.  
11 I think we need to have some information on exactly what  
12 temperature improvements are we likely to see. And the  
13 fish benefit, in particular, I think merits having a  
14 workshop. We did hear from the NGO community as well  
15 that they're interested in having biological objectives.  
16 And I know it would be a big challenge to go back and  
17 redo the document to get very specific targets. But one  
18 way to get started is to have more information on the  
19 actual benefits and whether that's with improved CalSim  
20 temperature benefits, floodplain benefits.

21           And then the last thing is SGMA. I think it's  
22 just disingenuous for us to say that well gee, we're  
23 looking at this from a programmatic level. And that at a  
24 future time when SGMA is implemented, that's when they  
25 can look at these issues with respect to the

1 disadvantaged communities. And that it would just be too  
2 speculative.

3 I think one commenter said there's a lot of  
4 things that we have in here that we went further from  
5 speculation, like on temperature and floodplain. So why  
6 not on SGMA? It's a priority for this Administration and  
7 for the Board and I think that communities deserve more  
8 and we deserve more. We deserve more information on what  
9 this project would look like once we have SGMA. And so I  
10 think working with the Department of Water Resources and  
11 the irrigation districts hopefully we can get some  
12 additional information.

13 And really what I'm looking for is in these key  
14 areas, is getting more information to us, so that we  
15 could be in a better position to be able to determine  
16 whether or not what staff has brought forward is balanced  
17 or whether we should be making some additional  
18 adjustments.

19 So thanks for the opportunity to give you these  
20 comments and for bearing with me throughout all these  
21 hearings.

22 VICE CHAIR SPIVY-WEBER: Not a problem.

23 Go ahead.

24 MR. MOORE: Great, thank you DeeDee. Those are  
25 well organized and a logical outgrowth of the many

1 thoughtful comments we've received. And then I think  
2 you've stimulated some excellent discussion through the  
3 five days plus that we've been engaged with stakeholders  
4 on these issues.

5           Let me just say thank you to everyone who spent  
6 a significant amount of time preparing your remarks and  
7 traveling and attending these hearings. I hope that  
8 you've learned as much as we have in terms of insight and  
9 nuance into water management and how many moving parts  
10 there are. And how many human lives, as in everyone, is  
11 touched by water in different ways.

12           Some insightful comments today about how we  
13 related to water a little differently, depending on where  
14 we're from. You know, how we treat it and how it's  
15 important for us to respect mutually each other's  
16 perspective on how water figures into their lives.  
17 That's a key point. And I think moving forward, I hope  
18 that we engender a culture of respect around folks'  
19 relationship with water. And then also challenge  
20 ourselves to evolve that relationship with water.

21           It's pretty exciting what we've even been able  
22 to discover in the last 10 years as a Water Board system  
23 as we look at not just in silos of water quality, but  
24 looking at holistic water resources, multi-benefit type  
25 approaches, and the type of projects that have gone in

1 the ground. They're really great and they represent  
2 partnerships across many backgrounds and perspectives.

3 And just the ownership of these innovative  
4 infrastructure projects. The infrastructure can be  
5 natural. It can be concrete and steel. In the end,  
6 we're getting better in California at doing this and I  
7 hope that this process can engender that culture to keep  
8 it going.

9 So I've provided about eight pages, nothing too  
10 crazy or fancy or technical, to staff about some of the -  
11 - some key questions we should answer that have been  
12 reasonable questions folks have brought up. And I won't  
13 go over those eight pages. I'm going to take a little  
14 time here. Like Deedee says, this is a big issue, and as  
15 big as it gets. And here we are, the opportunity for at  
16 least the four of us to chat, and Felicia's out there  
17 somewhere. And so we can kind of go back and forth a  
18 little.

19 Maybe I'll have a chance to respond to some of  
20 those good points you've brought up. You know, you've  
21 heard me bring up this point many times about taking the  
22 concept of a linear unimpaired flow percentage, which is  
23 as you point out the heart of the existing 1995 Bay-Delta  
24 Plan, however more course that is compared to this  
25 proposal. And is there a way we can, in response to the

1 comments about evaluating a reasonable range of  
2 alternatives, should we get a little more sophisticated  
3 looking at critical years?

4           And are we comfortable making a proposal about  
5 working with the fish agencies, the water users, in  
6 crafting a management approach during critical years that  
7 maintains a reasonable level of protection, but doesn't  
8 have a severe water supply impact. Because it seems that  
9 is the rub. That is the crux of the conflict is the  
10 concern. Like TID modeled a strict 40 percent unimpaired  
11 flow and saw just the last couple of years, which were  
12 critical in the San Joaquin Basin, how that might have  
13 led to no deliveries. And that seems like an outcome we  
14 should avoid.

15           You know, the 20 to 300-acre farms in that area  
16 are a critical fabric of our California culture. It's a  
17 sustainable culture, because it co-existed with healthy  
18 fisheries for generations. And it's only been the last  
19 couple of generations where we seem to have bumped up  
20 against sustainability on the ecosystem side.

21           So let's respect that and think of some side  
22 boards, maybe in a response to comments on how we can  
23 address those situations, which you even brought up about  
24 from the prospective of the San Francisco Bay Area  
25 municipal water supply perspective. It's really those

1 consecutive dry years in critical conditions where they  
2 run into potentially irreversible type impacts. So I  
3 want us to think long and hard about that idea.

4 I'd like a little more explanation why the  
5 American River, Yuba River, Battle Creek, other  
6 tributaries in the Central Valley have better salmon  
7 returns and indicators than the Lower San Joaquin  
8 tributaries, when we compare those two before and after  
9 periods. The 1967 and '91, which is that period we're  
10 using as a basis for salmon doubling and then the more  
11 recent decades. You know, is this related to -- what  
12 factors are at play? Are there enforceable flow  
13 objectives? Is the ongoing working group arrangement,  
14 perhaps with required deliverables, institutional  
15 framework in place in these locations that creates  
16 durable outcomes? And what kind of a package of flow and  
17 non-flow measures are present and is state assistance a  
18 part of those? You know, I'd like a little bit more  
19 insight into what works and how we can replicate that.

20 And acknowledging Board Member D'Adamo's  
21 concern I don't want this process to drive folks, with  
22 venerable senior water rights, into a strictly defensive  
23 posture. I want this to be a partnership and so I don't  
24 want to push the proposal so hard that we're driving  
25 folks away instead of to the table to solve problems.

1           I think the points about disadvantaged  
2 communities are important. So in terms of having some  
3 answers they don't have to be the -- as we discussed  
4 earlier -- the SED, it's not our responsibility to  
5 predict the future with a great granularity. But I think  
6 that's an area where we need to provide additional  
7 insight as to where the vulnerable areas in the project,  
8 the plan area are with respect to dependence on  
9 groundwater.

10           And from a water infrastructure perspective I'm  
11 concerned about the comments on surface water treatment.  
12 And we've talked about this. I've talked to staff about  
13 this. And we just need to have an answer to that  
14 question about the assets that we're actually helping to  
15 fund and our Drinking Water Division wants to see happen  
16 to for water quality. And our Division of Financial  
17 Assistance is putting money on the table to make these  
18 investments.

19           We just need to have a little bit more of a  
20 refined response about where will that be a problem or  
21 where is there flexibility built in? I feel that the  
22 testimony has been a little exaggerated. But I'd like to  
23 see more facts on the issue. I don't think it creates a  
24 \$55 million stranded asset, but there may be situations,  
25 scenarios where the envelope might be being pushed too

1 far.

2           You know one thing that came up a little bit  
3 today was about water quality. I used to work at the  
4 Regional Board level and it's not trivial to me that  
5 temperature is an impairment right now. These rivers are  
6 impaired due to temperature. And when you look at our  
7 TMDL implementation around the state, a little more  
8 smarter targeted management of flow, ends up being a real  
9 important tool for temperature management. So that's not  
10 lost on me. That's an area that needs -- it's a problem  
11 that's been formally identified and it's related to what  
12 we're talking about. And so the temperature benefits, we  
13 have to look at that fairly seriously.

14           But there's also other water quality benefits  
15 that we haven't talked about. We've talked about the  
16 fish benefits, the floodplain. But this issue of a more  
17 sustained healthy river system that's a little more  
18 charged year after year, is going to have water quality  
19 benefits related to nutrient cycling and potential  
20 harmful algae blooms. I'd like to know a little more.

21           We heard today about the bio-assessment work.  
22 Some insight about what the bio-assessment metrics in  
23 these systems tells us today about water quality, because  
24 bio-assessment's a great integrator about water quality.

25           And I'm not sure what kind of historic



1 information we have that we can compare it to, but you  
2 hear me bringing this issue up a lot. Something was  
3 working a lot better not that long ago in the, say the  
4 '70s and the '80s. What was the management regime then  
5 that was producing more a productive system that we're  
6 not seeing now? Because the physical alterations, people  
7 rightfully point out, most of them were already done at  
8 that point. And something's been happening in terms of  
9 the dynamics of the flow regime. Many have commented  
10 that the wild salmon are gone on the Lower San Joaquin or  
11 there's a carrying capacity. We couldn't have more fish  
12 if we tried. I just think we have to answer those  
13 questions. What's possible? And we look at the historic  
14 record for that.

15 I want us to do a good job of answering the  
16 question about -- as I pointed out with the surface water  
17 treatment advancements that we support, we don't want to  
18 undermine those. Similarly, we don't want to undermine  
19 the work of our FERC relicensing efforts. Let's just  
20 make it clear in how this proposal connects to those and  
21 how it builds on it or fills gaps that you would identify  
22 that the FERC relicensing flows don't address. And how  
23 responsibility for meeting the overall flow proposal  
24 doesn't necessarily have to rest solely on the FERC  
25 relicensing entities. Because that's an issue that's

1 come up and is a good concern that we need to provide  
2 answers.

3           It was good to hear from the recreational  
4 panel, recently. And I think when you talk about the  
5 effects on disadvantaged communities, there's a drinking  
6 water effect that we're concerned about, but there's a  
7 recreational opportunity effect. And I'd like us to  
8 answer that question that came up in Modesto about how  
9 the water quality of low flows in the summer or in the  
10 spring might be affecting the opportunities for  
11 disadvantaged communities, low-income folks to enjoy  
12 recreational opportunities or strengthen families, keep  
13 kids from going to lives of crime and drugs and that sort  
14 of thing.

15           There was a question about non-flow measures.  
16 Does it include dam removal? I don't know if that's a  
17 viable issue in the Tuolumne. I'm interested in the full  
18 range of non-flow measures.

19           And there was a predator removal pilot on the  
20 issue of predation in the Mokelumne River that was  
21 brought up during the Modesto hearing that sounded  
22 interesting. I'd like to know more about the viability  
23 of those methods as a package within the non-flow  
24 measures that might be possible.

25           So there's so much to cover I can't give it all

1 enough credence. I appreciate everyone's passions. Like  
2 I said in my opening remarks, I respect those passions,  
3 that commitment to stewardship and problem solving. We  
4 didn't introduce this, I don't believe, as any kind of  
5 effort to take any water by any means. I think what I  
6 wanted to maybe distill in everyone's minds is my top  
7 goal is taking the current Bay-Delta Plan and improving  
8 it. It hasn't worked. We tried.

9           It was an experiment where we put the sole  
10 responsibility for meeting the aquatic life beneficial  
11 uses on the State and Federal water projects. We tried  
12 the experiment for over two, three decades now. It  
13 hasn't worked. Having a flow requirement Vernalis for  
14 the entire complex San Joaquin Basin. We gave it a shot  
15 and tried to make it work with New Melones releases. And  
16 we weren't able to pull it off.

17           We did learn some things along the way. And  
18 that relates to Fish and Wildlife's presentation today is  
19 that there was more flow in the Stanislaus, because of  
20 this experiment, using the Central Valley project. And  
21 so we do see some scientific information there that we  
22 can learn from and incorporate into a joint fact finding  
23 solution. But it didn't work.

24           So, I think the spirit of the proposal is to  
25 roll up our sleeves together, senior water rights, junior

1 water rights, all interests in the healthy rivers and  
2 share in the solution. And figure out what can we live  
3 without in every tributary in the Sacramento-San Joaquin  
4 system to make sure that there's healthy rivers for  
5 future generations. It's a shared solution, a shared  
6 responsibility, and we'll respect senior water rights all  
7 the way. But we have to roll up our sleeves together,  
8 because the experiment we tried with the previous Bay-  
9 Delta Plan, it can't work. And the science shows that.

10           So I look forward -- and the idea of voluntary  
11 settlements, it's great but I support the State Water  
12 Board moving forward with the proposal with good  
13 modifications to make sure people don't get left holding  
14 the bag, have that uncertainty that affects the family  
15 farmers. But we have to move forward, I think, to make  
16 sure that people have motivation to come up with those  
17 creative solutions. And it's our responsibility to be in  
18 there with them rolling up our sleeves, learning along  
19 the way.

20           So thanks to everyone for your thoughtful  
21 input. And we certainly are taking it very seriously.  
22 And look forward to continue to work with you.

23           MS. DODUC: Thank you. I will also echo Board  
24 Member Moore's gratitude to everyone for participating in  
25 all the hearings, for reading all the materials, for

1 providing your stories, your suggestions, your concerns.  
2 And definitely we will, like Board Member Moore said,  
3 we've all learned a lot during these hearings. And  
4 certainly I, like my colleagues, have a list of issues  
5 that we'll be following up with staff on. And I'm sure  
6 it will grow, once we receive your written comment  
7 letters. So I won't go into all of that today.

8 I may also concur with a comment Board Member  
9 Moore made about respecting each other's perspectives.  
10 And I think one of the strengths of this Board is that we  
11 have five Board members from different backgrounds,  
12 different expertise, different perspectives. And we all  
13 respect each other's perspectives.

14 We don't often -- well, we don't always agree  
15 and we should not. But I think the discussions we've  
16 had, the input that each Board member has provided,  
17 ultimately will allow us to move forward, I think, with a  
18 stronger decision that this Board will make. I don't  
19 know what that decision will be. I don't know what  
20 decision I will be making, because there's just a lot of  
21 information yet that we need to consider. But I think  
22 amongst the five Board members, I have a unique  
23 perspective in that much has been talked about the 1995  
24 Water Quality Control Plan, the last major update to the  
25 Bay-Delta Plan, which has not been successful as Board

1 Member Moore pointed out. Well, I will confess that I  
2 was actually on the Board staff as an engineer and worked  
3 on the 1995 Plan that was eventually approved by the then  
4 State Water Resources Control Board.

5           And my supervisor at the time was of now  
6 Executive Director Tom Howard, who was in charge of the  
7 Bay-Delta section at the time. And I'm going to  
8 paraphrase something he said to me around 1995, so it was  
9 a long time ago, but it was significant enough that I  
10 remember at least the context of what he was trying to  
11 convey to me. And that was it was the Board staff's job  
12 to do their best technical and policy analysis to gather  
13 the most relevant data that is existing. And to bring  
14 forth those analyses and those recommendations to the  
15 Board, giving in mind all the challenges involved in  
16 terms of incomplete information, in terms of lack of  
17 resources to carry out maybe some of the analyses that we  
18 would like, in terms of the various pressures that  
19 accompany any major water decisions in California. It's  
20 the staff's job to do their best in gathering that data,  
21 in providing the analysis, and presenting it to the  
22 Board. But it is the Board members' responsibility to  
23 make that decision.

24           And my concern is that the Board staff has  
25 spent quite a bit of time analyzing data, preparing

1 information, presenting us with their recommendation.  
2 And I agree, it's not a sweet spot. I don't, however,  
3 would argue that it's not the staff's job to find that  
4 sweet spot. It's the staff's job to present us with  
5 their best analysis and recommendation. And it's our job  
6 to make the best decision possible, given the information  
7 that we have.

8           And while I would love to have more data -- I  
9 think we would always like to have more information, more  
10 complete analysis, better economic information, better  
11 benefits analysis -- in terms of what these actions will  
12 result in. And while we all, I think are aware of what's  
13 at stake not just for the fisheries and the ecosystem,  
14 but for our growers, for cities, I mean for all of us in  
15 terms of these decisions I would caution us to -- I agree  
16 with Board Member Moore -- to not continue to be the  
17 bottleneck in this very important effort.

18           There will never be a perfect solution. There  
19 will never be complete data and analysis for us upon  
20 which to make decisions. We have to make decisions based  
21 on what is best available at the time, based on our  
22 understanding, based on our hopes and expectations, based  
23 on all the different perspectives that is provided to us.  
24 And I would say, with all due respect to Board Member  
25 D'Adamo's comment, that it hasn't been a staff proposal

1 that has led to, I think some of the major settlement  
2 agreements in the water rights arena, but actually Board  
3 decisions for better or for worse that have led to, for  
4 example, the Yuba Court. I think was one of the  
5 successful agreements that have been implemented in  
6 California.

7           So again, I would urge my colleagues that yes,  
8 there are questions that still need to be answered. That  
9 the input that we are receiving from these hearings and  
10 from the written comments will ultimately lead to more  
11 discussions by us, but ultimately I would encourage us to  
12 move forward with adoption of a proposal, I mean of a  
13 Water Quality Control Plan, as soon as possible this  
14 year. Because I think we're running out of time.

15           And it's not just time, in terms of time for  
16 the ecosystem, but also time for all of those who are  
17 being impacted by the lack of uncertainty associated with  
18 us not making a decision, not having a Water Quality  
19 Control Plan in place, not having a set of standards and  
20 objectives in place. So we do have that responsibility,  
21 as Board members, to make the difficult decision.

22           The late, great Don Maughan, who was Chairman  
23 of this Board for the longest time, and who was Chairman  
24 when I first joined the Board staff, called it a  
25 superhuman task. And it truly is. But it's not going to



1 be made any easier by delaying decisions waiting for a  
2 sweet spot or a complete information that will never  
3 come.

4           So it's a hard task. And I have faith in all  
5 of us. I have faith in everyone who's participating in  
6 this effort, to make our best decision possible, our best  
7 effort, our best step towards providing as balanced a  
8 solution as we can with the data that we have. But also  
9 recognizing that we cannot take years and years in order  
10 to take that next step.

11           MS. D'ADAMO: Just because I think we should  
12 use this as a chance to have a dialogue a little bit  
13 here, I'm not proposing that we take years and years. I  
14 think there's a lot of information that is readily  
15 available. And I'm talking about months, using the time  
16 with the extended comment period, to get this information  
17 out. And I appreciate, Les, what you have said earlier,  
18 that a lot of this is in the SED. I think just calling  
19 out some of these areas where you've seen themes to pull  
20 it out of the SED, so that you can provide it to us. I  
21 think a lot of the information probably is already in the  
22 SED.

23           And I agree this is not -- it wouldn't be staff  
24 expected to be driving these settlements. It'll be Board  
25 action. But it's also, I think, incumbent upon us to be

1 looking at what can best drive those settlements. And  
2 just not to go back and reiterate, but just looking at  
3 one item in particular, carryover storage. Including  
4 that in a Water Quality Control Plan will be very  
5 challenging. But through settlements, it's absolutely  
6 possible.

7           It's no different than the non-flow. I think  
8 what we've heard over and over again is that really flow  
9 alone isn't going to do it. We need additional flow, but  
10 we need some action on non-flow measures. And so what's  
11 the best way to accomplish that? Settlements.  
12 Settlements, just like carryover storage I think can best  
13 be accomplished through settlements.

14           So what I'm looking for is a way for us to help  
15 drive this discussion instead of being silent, as we have  
16 been, over a period of years, because we needed to give  
17 staff the opportunity. Now I think it's important for us  
18 to weigh in during this interim period to help focus, to  
19 help better focus, the discussions and help to provide a  
20 path towards settlement.

21           VICE CHAIR SPIVY-WEBER: Thank you. Thank you  
22 Board members, definitely thank you.

23           And thank you, the public who stayed to listen  
24 to this, because I think you have been given a glimpse as  
25 to the kinds of discussions that we will be having over

1 the next several months. And I hope -- I agree -- it  
2 should not be the next several years.

3 I want to thank you for the time that you have  
4 spent trying to help point us in the right direction on  
5 this issue. Not just at this hearing, but at all your  
6 preparations for the hearings. Your written comments as  
7 well. And there is still time to put in written  
8 comments, March the 17th is the deadline. So I urge you,  
9 even if you have said things here, that you put those  
10 things in writing. And they don't have to be long.  
11 In fact if they're long, it gets even more difficult.

12 If they are short and we have bullet points,  
13 that's perfect, perfect. Because we do understand what  
14 it is you're talking about. You do not have to explain  
15 it to us. We absolutely get it. And we take it  
16 seriously. So the better you are able to put your ideas  
17 into bullet points and just fill one piece of paper, one  
18 side of one piece of paper, that will be wonderful.

19 The Board will take oral comments of what we've  
20 heard over the last five days of this hearing, which have  
21 taken place over the last month or a little more than a  
22 month, as well as the written comments that we receive.  
23 And will consider them in the preparation of the final  
24 SED. If you have further comments you may submit them by  
25 noon, noon, that's 12:00 o'clock, noon, on Friday, March

1 the 17th. I can't tell you how many times people say,  
2 "Oh, I thought it was the end of the day." No, it is  
3 noon.

4           Once we have certified -- we have the certified  
5 transcript from the court reporter for the entire five-  
6 day hearing we will post it on our website. You may  
7 continue to follow this project on our website and all  
8 future notifications will continue to be sent out on the  
9 Bay-Delta notices email distribution list. And if you're  
10 not on that list and want to be on that list, let Jeanine  
11 know.

12           The Board anticipates that the final SED and  
13 revised Bay-Delta Water Quality Control Plan will be  
14 completed by this summer. However, the timeline will  
15 depend on the comments received. Therefore, at a future  
16 Board meeting the Board will consider whether to approve  
17 the final SED and revised Plan, so there are many steps  
18 yet to go.

19           So this is not the end. This is the end of one  
20 phase that will --

21           UNIDENTIFIED SPEAKER: Phase 1.

22           VICE CHAIR SPIVY-WEBER: Yeah, Phase 1 of Phase  
23 1.

24           And with that I want to thank you for your time  
25 and the hearing is now over. Thank you.

1 (Whereupon, at 6:05 p.m., the hearing was adjourned and  
2 the five-day hearing was concluded.)

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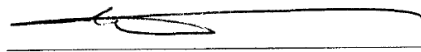
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**REPORTER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of January, 2017.



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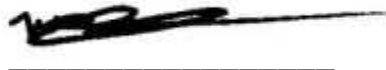
PETER PETTY  
CER\*\*D-493  
Notary Public

**TRANSCRIBER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of February, 2017.



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Myra Severtson  
Certified Transcriber  
AAERT No. CET\*\*D-852

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DIVISION OF WATER RIGHTS ERRATA SHEET

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SIGNATURE:  DATE: 1/2/2019

ERIN FORESMAN