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)	)
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VOLUME II

PUBLIC HEARING

Modesto Centre Plaza
Tuolumne River Room
1000 K Street
Modesto, CA 95340

Tuesday, December 20, 2016

2:20 p.m.

Reported by:
Peter Petty

APPEARANCES

Board Members Present:

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

Staff Present:

Thomas Howard, Executive Director
Eric Oppenheimer, Chief Deputy Director
Les Grober, Deputy Director of Water Rights
Will Anderson, Water Resources Control Engineer
Jason Baker, Staff Services Analyst
Tina Cannon Leahy, Senior Staff Counsel
Erin Mahaney, Senior Staff Counsel
Yuri Won, Senior Staff Counsel
Daniel Worth, Senior Environmental Scientist
Yongxuan Gao, Water Resources Control Engineer
Katheryn Landau, Environmental Scientist

Also Present:

Bob Lloyd, Audio Visual Technician

Public Comment (Volume I):

Anthony Cannella, Senator, 12th Senate District
Heath Flora, Assemblyman, 12th Assembly District
Kristin Olsen, Supervisor-Elect, Stanislaus County, District 1
Chris Vierra, Mayor, City of Ceres
Elaine St. John, Calaveras County Republican Party
William O'Brien, Supervisor, Stanislaus County, District 1
Dennis Miles, Supervisor-Elect, Calaveras County, District 4
Adam Gray, Assembly Member, 21st Assembly District
Vito Chiesa, Supervisor, Stanislaus County, District 2
Steve Brandau, Council Member, City of Fresno
Jim DeMartini, Supervisor, Stanislaus County, District 5
Tom Changnon, Superintendent of Schools, Stanislaus County

Public Comment: (Volume I Cont.)

Terry Withrow, Supervisor, Stanislaus County, District 3
Robert Rucker, District Director for Congressman Jeff Dunham
Cathleen Galgiani, Senator, 5th Senate District
Paul Campbell, Modesto Irrigation District
Katherine Borges, Salida Municipal Advisory Council
David White, Opportunity Stanislaus
Jack Cox, Lake Tulloch Alliance
David Minch
Todd Sill
Dennis Larson
Vance Kennedy
Jennifer Shipman, Manufacturer's Council of the Central Valley
Greg Mayer
Duane Marson
Edwin Genasci
Marty Lanser
Don Barton
Don Swatman
Ted Brandvold, Mayor, City of Modesto
Bill Zoslocki, Vice Mayor, City of Modesto
Tony Madrigal, Council Member, City of Modesto, Distict 2
Larry Parlin, Director of Utilities, City of Modesto
Tom MacDonnell, Sierra Mac River Trips
Patrick Koepele, Tuolumne River Trust
Seth Connolly, Tuolumne River Trust
Scott Schuettgen
Dave Lyghtle, Denair Unified School District
Martin MacDonnell, Sierra Mac River Trips
Eric Gaine
Will Derwin
Meg Gonzalez, Tuolumne River Trust
Paul Van Konyenenburg
Sandra Anaya
Ted Heilman
Peter Stavrianoudakis
Rodney Smith, Stratacon, Inc.
Jason Bass, EcoGlobal Natural Resources

Public Comment (Volume II):

Doug Ridenour, Jr.
Greg Tucker
Michael Crowell

Public Comment: (Volume II Cont.)

Christina Bertia
Nina Gordon-Kirsch
Jessica "Jessie" Raeder
Carol Fields
Milt Trieweiler
Kelly Covello
William Wong, City of Modesto
John Davids, Stanislaus and Tuolumne Rivers Groundwater Basin Association
Wrangler Wheeler
Dave Wheeler
Jeff Fairbanks
Carlen Jupe
Chris Guptill
Kent Mitchell
Marisol O'Connor
Stephen Endsley
Jeralyn Moran
Camille King
Bob Triebsch
Elaine Gorman
Steve Boyd, Turlock Irrigation District
Casey Hashimoto, Turlock Irrigation District
Dr. Noah Hume, Stillwater Sciences
Michael Frantz, Turlock Irrigation District
Christine Gemperle
John Stokman
Joan Rutschow
Kevin Kauffman, Eastside Water District
Robert Marchy
Jimi Netniss
Phil Osterli
David Quesenberry
Danielle Veenstra, California Almond
Gordon Hollingsworth
Michael Cooke, City of Turlock
Trish Anderson
John Duarte
Dan Lamb
Pamela Sweeten
Joey Gonsalves
Wayne Zipser, Stanislaus County Farm Bureau
Paul Wenger, Stanislaus County Farm Bureau
Bill Lyons, Jr., Former California Department of Food and Agriculture Secretary
Paul Vermeulen

Public Comment: (Volume II Cont.)

Ric Tilbury
Jacob "Jake" Verburg
Joyce Parker
Matt Dickens
Miguel Denoso
Leonard Van Elderen, Yosemite Farm Credit Association
Julianne Phillips
Greg Salyer, Modesto Irrigation District
Jake Wenger, Modesto Irrigation District
John Davids, Modesto Irrigation District
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P R O C E E D I N G S

DECEMBER 20, 2016 2:20 P.M.

(On the record at 2:20 p.m.)

CHAIR MARCUS: All right. Our next set of speakers before the next panel will be Bob Hackamack followed by Doug Ridenour, Jr., Greg Tucker, Glenn Bakker, Michael Crowell, Alex Vanderstoel, Christina Bertia, Nina Gordon-Kirsch, Jessie Raeder, Carol Fields, Reid Johnson, Bill Maher, Dave Pratt, Jim Wisler, Joe Nijskens.

Okay. I know more people will come in. All right. Mr. Hackamack. Mr. Hackamack? All right. Maybe he left earlier than he said he had to leave.

Mr. Ridenour. Great. Mr. Ridenour, followed by Mr. Tucker, followed by Mr. Bakker. Thank you. Sir, please. Yes. Thanks for joining us.

MR. RIDENOUR, JR.: Good afternoon.

CHAIR MARCUS: Good afternoon.

MR. RIDENOUR, JR.: My name is Doug Ridenour, Jr.

CHAIR MARCUS: Ridenour. I'm sorry.

MR. RIDENOUR, JR.: That's all right. I'm with the Modesto Police Officers Association. Our association is the association that covers 198 Modesto police officers and detectives, so I appreciate the opportunity

to talk.

Fortunately for us, all morning, we've got some really good speakers, most of which are good friends of ours, who did a really good job of providing a lot of good information, so I'm actually not going to re-cover that. You guys already have that information.

The fact of the matter is that anything that affects our economy affects public safety and that's why we're here. That's why we're here to talk about that. Our fear is that anything that puts any type of restriction on our economy trickles down to us. Right now, we're down 30 officers. Right now, we have the highest fatality rate of car accidents since the creation of Modesto. We are having trouble with our public safety here already, and anything that will come down the trickle-down effect that will hurt our public safety is going to hurt the public.

So, that's our stance on it. That's why we support everybody here talking against this for right now. I think there's different ways of dealing with it. I think people need to get together and find a common area, a more balanced approach. And, again, I'm not going to go into everything that everybody has already covered.

So, I appreciate the time and I appreciate you

guys listening to everybody.

CHAIR MARCUS: No, thank you. Thank you for your service.

MR. RIDENOUR, JR.: Thank you. Have a good day.

(Applause.)

CHAIR MARCUS: Mr. Tucker, followed by Mr. Bakker, followed by Mr. Crowell.

MR. TUCKER: Yeah, good afternoon. Greg Tucker. I'm a full-time farmer. I have 20 acres. Well, I have 23, but about 20 in almonds, and it's what I do.

About three years ago, I put in a $50,000 system, which is substantial for a little guy like me, and I went to micro-sprinklers to try to reduce water for the drought. But according to TID, under the proposal put forth, we would have had no water the past two years. And I've got trees out there that are three years old. I wouldn't have been able to survive. I would have had to put in a well. Right now, I guess there's a two-year lead on well drillers because they're all backed up. And, for me, it's just not an option.

I live in the Denair area, which has been hit really hard. A lot of my neighbors' wells domestically have gone dry. And, right now, I'm just hoping that my domestic well will hold up. If this proposal goes

through, I would have to sell my farm.

My grandmother graduated from Ceres High in 1929. So, I think that was the first class. Her picture is still up in the high school library there. And my mother grew up on a peach ranch on Hatch Road there. They got a road named after her maiden name. But it would be a shame to lose my farm, but I'm pretty sure that's what would happen. I don't think I could afford a $120-, $130,000 industrial well after I just got done putting all the improvements in for our irrigation system three years ago.

Thank you.

CHAIR MARCUS: Thank you, sir.

(Applause.)

CHAIR MARCUS: Mr. Bakker. Mr. Crowell, great. Followed by Mr. (sic) Vanderstoel -- I think I'm saying that right, Vanderstoel. And Ms. Bertia.

MR. CROWELL: Good afternoon, Board.

My name is Michael Crowell. I'm from Turlock, within the TID area. My family came into the area about the late 1890s. And my grandfather started irrigating in 1902. And we've been in the farming and dairy business ever since.

And, so, I know a little bit about the district. I served 16 years as a TID board member. So,

I have some history in water. And I like history. I really enjoy history.

I just want to say that, you know, the TID and the Modesto Irrigation District were the earliest formed district in the country, 1887. And then along came Oakdale and Merced and South San Joaquin and so on. And everything went pretty nice.

And then the federal government came and built the CVP, Central Valley Project, and changed things quite a lot. They basically did away with -- we talk about the San Joaquin River, but there's really no such thing. There's no water coming down the San Joaquin.

When you talk about salmon support, it's a goner ever since the late 40s. And so, really, the tributaries have been the producer of water for any salmon on the so-called Tuolumne River.

After the CVP came in, and they were completed sometime in the late 40s, then-Governor Jerry Brown's father, Pat Brown, was responsible for building the State Water Project. And that project, which is to send water down the east -- or, pardon me, the west side of the Valley, and on over the Tehachapis and into the Los Angeles Basin and further on down into the San Diego area.

My point being, I guess, in talking about this

particular thing, really, it was the state project that broke the back of the Delta system. That's when things really went south, an overdraft was created by the state by Governor Brown. Now, Governor Brown wants to fix it on the back of these tributaries of which there is no more San Joaquin River.

You know, the question is, is you folks have these hearings as Phase 1. And, really, Phase 1 should be the water rights hearing, which is Phase 2, because you're not going to get any water from anywhere if you can't get it from them according to water rights and unless you're planning on changing water right laws. But if you can't even change regulations regarding predatory fish that are imported, you can't change water right laws. I mean, how can you do that? It would be -- how could that possibly be possible?

CHAIR MARCUS: Well, the water right proceeding would be Phase 3 and it would proceed according to seniority water rights law, which includes --

MR. CROWELL: Yeah, but I find that --

CHAIR MARCUS: -- public --

MR. CROWELL: I'm just saying that seems a bit convoluted to me because why even talk to anybody if you can't have their water. You know? I don't see how San Francisco wants to give their water up to Los Angeles.

You know?

CHAIR MARCUS: Yeah. That's actually not what it's about. But, you're right, there is a lot of process and procedure that would need to go forward --

MR. CROWELL: All I'm saying is, is my viewpoint is, if you need more water, the first thing you do is you shut off the junior water-right holder and see what happens to the Delta. That would be, of course, precipitous of the State Water Project. That being, I would cut the pumps off right at Bakersfield and see how much water you get in the Delta then.

CHAIR MARCUS: Yes. When we get to the water rights allocation for Delta outflow --

MR. CROWELL: Yeah.

CHAIR MARCUS: -- it will be based on seniority.

MR. CROWELL: I guess I'm just saying you're putting the people through a lot of worry right now. And unless you can change water rights in California -- and it's not just California. Then we get into the fact that as a property owner in Turlock, the land -- I don't own the water rights, but my land does. And that land is -- that's a property right. So, that makes it a taking. You see? The federal courts --

CHAIR MARCUS: Yeah, I don't --

MR. CROWELL: -- won't go for taking.

CHAIR MARCUS: I actually don't want to get into a legal argument with you about --

MR. CROWELL: Yeah.

CHAIR MARCUS: -- the public trust and how it relates to water rights, but your time is up and I want to get to some of these other people.

MR. CROWELL: Yeah. Well --

CHAIR MARCUS: I appreciate what you had to say.

MR. CROWELL: Anyway, my viewpoint --

CHAIR MARCUS: It actually is helpful.

MR. CROWELL: -- is putting water rights at the end of the proceedings is absolutely backwards because, you know, there's no way you're ever getting water rights from TID or San Francisco. I just don't see it. You know? These are pre-1914 rights.

CHAIR MARCUS: Correct. Correct.

MR. CROWELL: Thank you.

CHAIR MARCUS: Yeah. All are subject to public trust, I hate to tell you.

(Applause.)

CHAIR MARCUS: Mr. Crowell. Oh, that was Mr. Crowell.

Mr. Vanderstoel -- or Ms. Vanderstoel.

Ms. Bertia. I'm sorry, I can't read it. Please correct me.

MS. BERTIA: Hi. It's Christina Bertia.

CHAIR MARCUS: Thank you.

MS. BERTIA: I'm with Women Eco Artists Dialogue. And I'm here to speak for the sturgeon since they can't be here obviously to speak for themselves.

CHAIR MARCUS: No one has come to speak for the sturgeon yet, so thank you.

MS. BERTIA: So I once made a 20-foot sturgeon art piece for a show to remind us that they used to be 20-foot long and they used to weigh 2,000 pounds right here in our Delta. And they're like a 240,000,000-year-old species that existed before the dinosaurs. And they are actually still here with us, but they're having a really hard time.

They're very sensitive to our pesticides and our toxins. They bioaccumulate heavy metals because they live to be over 100 years old. They're just amazing. And they are very sensitive to oxygen levels and to temperature. So, you know, when the algal blooms, it really impacts them.

But the biggest problem that they have is that they also go upstream to spawn just like salmon do, but they can't get past the dams. There's dams everywhere

where they would normally go to spawn. And, so, what they're finding from current research is that they can only reproduce in years when there are high flows. They need heavy flows simply to reproduce, simply to be able to spawn in the lower reaches of their rivers.

The reason is that they're -- because they're sensitive to oxygen levels, they need a lot of flow around the eggs, they need the flow to be clearing the silt out of the gravel so that the eggs literally don't smother, and they need that flow for the fry to be able to go down stream, and they need floodplains for the fry to be able to spend time and safety feeding and getting larger. Because they do go out to the ocean just like -- to the estuaries and the ocean just like the salmon do.

So, they're really incredible. And you could say, "Well, who cares?" You know? I'm here saying, yes, let's maintain the flow you're recommending so that they can continue to exist. Well, who cares? Well, we actually should care because they're a key species that maintains the ecosystem health of the whole Bay-Delta. What they do is they control invasive species. They especially eat the overbite clam, which is a problem. And they bioturbate and oxygenate the sediment layer so it keeps it alive instead of going anoxic and becoming a

dead zone.

And, so, I submit that they have a right to thrive and that -- just because of the services they offer. And I hope that we will also serve the ecosystem by maintaining heavy flows for them.

Thank you.

CHAIR MARCUS: Thank you. Thank you for mentioning ecosystem. It's more complex than the dialogue sometimes sounds on all sides, actually.

Next, we have Nina Gordon-Kirsch, followed by Jessie Raeder, followed by Carol Fields.

MS. GORDON-KIRSCH: Hello.

CHAIR MARCUS: Hello.

MS. GORDON-KIRSCH: My name is Nina Gordon-Kirsch. I'm from Berkeley, born and raised, and got a degree in environmental science and then was awarded a Fulbright scholarship to study in Israel and Palestine.

I studied wastewater reuse and specifically for the purpose of irrigation, and I ended up staying in Israel for my Master's Degree to learn what they have to say about using wastewater for irrigation.

I currently work in Oakland for Outward Bound taking thousands of youth every year out on backpacking trips, and I've seen firsthand the nature experiences

that have caused transformation in our youth.

I also currently am in a relationship with someone born and raised in Turlock, and it gives me a lot of respect for the agriculture industry. And I currently buy Gallo wine when I go to the grocery store, and have now a personal connection to the Central Valley.

What I see here today is an opportunity for us, everyone here, and the whole State of California to work together to find more efficient use of our water resources. On my Fulbright, I learned that Israel reuses about 90 percent of their wastewater for irrigation. We have an opportunity here in California to do that as well. We currently use less than one percent.

If we have higher flow rates in our rivers, then we'll be forced to look to other water efficient -- efficiently use our water resources. It will create new jobs for people like me who want to be involved in California's water in the future.

I encourage you to require half the natural flow from the Stanislaus, Tuolumne and Merced to get into the Bay-Delta, and push our State of California to invest in efficient irrigation and water recycling processes.

Thank you.

CHAIR MARCUS: Thank you very much.

(Applause.)

CHAIR MARCUS: There's going to be a future in diplomacy somewhere for you.

Jessie Raeder, followed by Ms. Fields, followed by Reid Johnson.

MS. RAEDER: Hi. I'm Jessie Raeder. I am the president of a coalition called SalmonAid. That's a group to help salmon, not a salmon-flavored beverage. We have a coalition of fishing groups, environmental groups, tribes, and restaurants and chefs that are interested in sustainable salmon in California, and I'm here today mostly to represent my friends in the commercial fishing and -- the commercial and recreational fishing industries and groups.

The fishing community, which has been a significant economic driver in California, has been devastated by what's been happening slowly over time to the salmon populations due to our unsustainable water diversions.

There used to be 10,000 commercial fishing permits issued every year, and now it's less than 2,000. In 2008 and 2009, the fisherman selflessly and willingly agreed to cancel the fishing season entirely, canceling 2,000 jobs and causing a loss of a quarter billion dollars in annual revenue all to protect the resource.

Respectfully, the agricultural community could

and should be asked to put the public good first as well. Of course, economic considerations are important. Today, we keep hearing about the hurting economy in the Central Valley. Given that this plan is not yet in place, I would like to respectfully suggest that this plan maybe isn't the problem and there are larger forces at play.

Regardless of this plan, agriculture is going to be forced to work on better management, water-efficient irrigation technologies and practices and replacing lower value water-intensive crops with higher value water-efficient crops. It's possible to grow more food with less water.

In California, water is a public trust resource, meaning it belongs to the people of California. We can all agree, I think, that food grown for Californians is a beneficial use of that water. I think that's a harder argument to make when we're talking about exports. And, currently, a lot of it is for export.

I think that Californians would agree that preserving such a high-quality local protein like salmon is a greater benefit than subsidizing corporations who are growing almonds for export, especially in areas where almond trees just aren't the most sustainable or suitable crop.

Is that my time?

CHAIR MARCUS: Yup. So, you should wrap.

MS. RAEDER: I want to wrap up by saying that, you know, your own scientists have suggested that 60 percent is what's needed to protect the resource. And I know that we've entered this post-science post-fact sort of era in the national scene, but I think that this is California, we've heard a call from the governor that California needs to be a stronghold of respecting science, and so I ask you to do that today.

Thank you.

CHAIR MARCUS: Thank you very much.

Ms. Fields, followed by Mr. Johnson, followed by Mr. Maher.

MS. FIELDS: Thank you for your work in damage control of the ecosystem. What we're talking about is just totally gigantic, so it's a very big job, and damage control is what I think it is. And it's doing the best with not too much to deal -- work with, which is what everyone here is noticing: They don't have enough to work with.

I want to present for food for thought a very disturbing report, which I don't know if any of you have read this report called, "*Prolonged California Aridity Linked to Climate Warming and Pacific Sea [Surface] Temperature.*" This was published this year. And this

notes that past drought -- there was a past drought here of 5,000 years and another one of 300 years. That, right there, was a stopper.

But the fact is that that has happened, and it occurred when there was warming. That warming, it seems to have been caused by the sun, or whatever it was, but it was a warming period. The droughts went away when the warming went away. And this has been shown by studies in the Sierra and all the lakes and so forth here.

And, so, my point is just we're kind of in a bad place. And that was the bad news. And the good news is we're next to the Pacific Ocean, we have a lot of sun, we could start using alternative energy like solar and wind energy. We have one company now that has applied to put floating wind turbines off our coast, way out where the wind blows all the time. And since I come from a Navy family, I sure would like to see one of our big dry dock ships out there. I would love it if it was my dad's aircraft carrier doing desal out there powered by wind and solar, offering energy and combatting global warming.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Johnson, followed by Mr. Maher, followed by Mr. Pratt.

Mr. Johnson. Mr. Maher. There you go, right there.

MR. MAHER: Good afternoon, Board members. My name is Bill Maher. I'm a former member of the San Francisco Board of Supervisors and a board member of the Tuolumne Trust.

I want to preface my remarks by saying that support for the Substitute Environmental Document does not mean a lack of concern for our Central Valley fellow Californians.

I'm not opposed to negotiations, as long as those negotiations are timely and they maintain an authentic balance of uses.

Population change and climate change are going to be tremendous and scary changes to the Central Valley no matter what we do. And we can try to allay them in some ways, but they're going to happen. I think probably the best thing we can doing for the Central Valley in a lot of ways is advocate for significant state economic support for them.

Whenever science leads to an unpalatable choice, a common tactic is attack the science. Cigarettes and smoking come to mind, sugar and diabetes, global warming, and now water.

The SED has been subject to attacks before it

was ever even put out, and they were organized and strategic to say, "This is how we have to kill this thing because we don't want it to happen." It's good science. It may have minor errors, everything does. But the science is authentic and it's accurate.

You know, this Board has been accused of being disinterested in Central Valley opinions, but you've met with all their opinion leaders and now you've had three meetings in the Central Valley, and I might add, not one in the more populous Bay Area that might have a different perspective.

I think the Central Valley has not been ignored. I don't think their problems are going to go away. I think they're real, but the solution is not to destroy the rivers.

I just want to close by saying, if the alternatives proposed different ways to make ado with less water really worked, that would be fine, but they haven't worked. So maybe what it is, it's time to pass this, and then if the Central Valley can make them work, you have flexibility in that plan to give them more water as they demonstrate that it actually works.

Thank you very much for your time and God bless you for your endurance.

(Applause.)

CHAIR MARCUS: Thank you for joining us. Mr. Pratt. We'll contact all these folks.

Mr. Wisler. Mr. Nijskens. Okay. I'm just going to take a few more and then I'll move to the next panel because we do have a lot of panels of very good people. Milt Trieweiler, Kelly Covello, Katja Irvin.

MR. TRIEWEILER: Chair and Board members.

CHAIR MARCUS: It's Milt, sorry. Hi.

MR. TRIEWEILER: Go ahead?

CHAIR MARCUS: No, go ahead.

MR. TRIEWEILER: Oh.

Chair and Board members, I'm Milt Trieweiler. I was born in Turlock. I live in Turlock. And we human beings think we're pretty clever; in many ways, we are. But what would you say about this: Here in California, we've had five years of drought, we're going into our sixth year of drought in the Central Valley. This year a report came out on October 27th from the California Department of Food and Agriculture. It tells us that since June 1st of last year another 77,000 acres of almonds, new almond orchards, were planted. If we don't have enough water for existing crops, is it wise to be planting more acres of almonds?

This resource of water is needed for everyone in the Valley. It's needed by the people living in the

cities. It's needed by the farmers living on the farms. And it's needed by the fish that live in the rivers.

We, the people, have caused this problem by producing greenhouse gases that are causing our planet to warm up. We cause this warming when we burn coal, oil, and natural gas to produce electricity, heat, and run our transportation. The kind of farms we really need here in the Central Valley, the foothills of the Central Valley, are solar farms and wind farms.

It's needed by our people living in -- we cause this warming – okay -- the kind of farms we really need -- sorry.

The NASA weather model shows us that our Valley droughts will only get progressively worse and worse. If you go on NASA's website, you can see there, it's demonstrated many times over and over, these droughts are going to get worse and worse.

If we human beings really are clever, let's begin planning for the future today by acknowledging that global warming is a reality.

In Turlock, I save -- I use less water in one year than many of the people in Turlock use in half a month, two weeks.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Ms. Covello or Covello.

Tell me how to pronounce it.

MS. COVELLO: Hi. Thank you. My name is Kelly Covello, president of the Almond Alliance of California. Our association represents about 80 percent of the industry based on volume.

And I just want to start out with a statistic. We do contribute 104,000 jobs to the State of California directly, 97,000 of which are right here in the Central Valley where we're hit hardest with unemployment, which you've heard a lot about those statistics today.

One thing I want to -- I've had to cut down my comments quite a bit. But we've heard a lot today about the need to balance the different priorities. And you guys have a large task in front of you, and we understand that. But I think in order to balance those priorities you have to have accurate information to truly assess the costs and the benefits of the decisions that you're making. And there's been several speakers today that are highlighting some of the economic flaws that they've found. And I wanted to just bring to light two different scenarios in Appendix G of the SED, looking at the ag impact directly related to almonds.

So, Appendix G, there is analysis that says

anywhere between 151 acres to 529 acres to 1,588 acres could be lost under the three different alternatives. What exactly this means is really vague. Is it lost production, lost productivity, or something else? But let's assume that these figures are correct, even though they have been disputed by different water districts and different counties. With capital investments of $25,000 per acre for almonds to get their orchards in place and then go without income for several years, if you look at the number 3 Alternative of 1588 acres, that's an impact of $39,000,000 alone to the almond industry. Additionally, there will be lost net income, land values, and other economic multipliers in play.

Another statistic in the SED, Appendix G, is the acreage assessments for MID and TID. They're based on 2009, and 1991 to 2011 data respectfully. Given the increase in acres of tree crops over the last ten years, more current data should be used. We estimate that there's a difference of 1350 acres alone in those two irrigation districts.

And then, lastly, the report does not provide the data used to determine the crop price. So, if you are looking at crop prices from the 1990s, then you are grossly underestimating the value of our crop.

So, given these concerns just with two

irrigation districts, one crop, I think that there's a lot of review that needs to happen on the economic analysis so that you guys can make well informed decisions.

Thank you.

CHAIR MARCUS: Thank you. Thanks for the specifics.

(Applause.)

CHAIR MARCUS: Ms. Irvin. Okay. We'll get to the next panel, which is Stanislaus and Tuolumne Rivers Groundwater Basin Association, fifteen minutes.

And I do still need a speaker card for Panel Number 5, which is the Stanislaus Regional Water Authority and City of Turlock. We do need your card so we know your speaker's name so we can make them name plates, which is important for the webcast.

MR. WONG: Good afternoon, State Board members. Welcome to Modesto.

CHAIR MARCUS: Thank you.

MR. WONG: My name is William Wong. I'm the Engineering Division Manager for the City of Modesto. But, here, I'm speaking on behalf of the seven member agencies of the Stanislaus and Tuolumne Rivers Groundwater Basin Association, who collectively manage the groundwater in the Modesto Subbasin.

MR. MOORE: Well, welcome, Mr. Wong. We got to share a webinar together on recycled water in California, and we shared that information with our counterparts from Israel together. So, it's nice to see you in person.

MR. WONG: Nice to see you, too.

So, you know I'm all about water. And so, hopefully -- it's tough to be after lunch, I know that the speakers have some time, I'll try and be brief and informative in this presentation.

A little about the Modesto Subbasin. It's part of the larger San Joaquin Valley Groundwater Basin. It is bounded by the Stanislaus River to the north, the San Joaquin River to the west, the Tuolumne River to the south, and the foothills to the east. It encompasses approximately 250,000 acres, or 400 square miles, and approximately 70 percent of this area is irrigated.

The Modesto Subbasin is also the water supply for safe and reliable drinking water supply for over a quarter million people in the cities of Modesto, Riverbank, Oakdale, Waterford, and also serves several disadvantaged communities.

The storage capacity of the Modesto Subbasin is about 6.5 million acre-feet to a depth of 300 feet; and 14 million acre-feet to a depth of 1,000 feet. Per the USGS Geological -- U.S. Geological Service groundwater

model, about 62 percent of gain in groundwater comes from deep percolation and precipitation.

The Modesto Subbasin has not been identified by the DWR, or Department of Water Resources, to be in a condition of critical overdraft. And the reason is because the -- it can be attributed to the past and current practices by the local agencies participating in the Stanislaus and Tuolumne River Groundwater Basin Association, or STRGBA.

The STRGBA was formed in 1994 under an MOU to promote the coordination of groundwater management practice and planning activities in the Modesto Subbasin. It consists of seven local agencies, including two large irrigation districts, covering 70 percent of the total area within the subbasin and located entirely within Stanislaus County. Member agencies, agencies that overlie the Modesto Subbasin include the cities of Modesto, Oakdale, Riverbank, Waterford, Oakdale Irrigation District, the Modesto Irrigation District, and Stanislaus County.

We are the envy of water managers up and down the State of California with respect to groundwater management due to our collaborative efforts in working amongst each other, and state and federal agencies.

For over 20 years, the technical staff from

each participating agency has met monthly. Our organization is predicated on relationships and strong technical focus and the belief in cooperation and coordination.

The STRGBA provides information and guidance for the management and protection and enhancement of groundwater quality and quantity in the Modesto Subbasin.

The 2005 Integrated Regional Groundwater Management Plan identified the total water demand in the basin to be approximately 600,000 acre-feet per year, of which surface water provides 70 percent of that water, or about 400,000 acre-feet. Total recharge is 310,000 acre-feet, thus a positive change in the groundwater storage annually.

The STRGBA has been very active since its formation, completing a 2005 Integrated Regional Groundwater Management Plan. It has studied recharge characterizations in our area and has worked extensively with the USGS to complete hydrologic characterization of the subbasin, assessing susceptibility to contamination. It completed a USGS MerStan groundwater model, which studied the groundwater between the Merced River and the Stanislaus River; and has completed a well field optimization study project.

The STRGBA also is recognized as a California

Statewide Groundwater Elevation Monitoring entity, or CASGEM, with the DWR.

In regards to the Sustainable Groundwater Management Act, or SGMA, the STRGBA was organized and enacted 20 years before SGMA was enacted. The STRGBA believes that locals are best equipped to solve local problems, and has spent a tremendous amount of time on education and outreach. Member agencies believe and stay in the course.

The STRGBA will be the groundwater sustainability agency, or GSA, for the Modesto Subbasin, and its formation package is being sent to the DWR later on next year in February.

In stark contrast to SGMA and the direction provided by the governor, it appears that the SED is specifically designed to retraite the Bay perils that the governor, SGMA, and the local water managers have been and are trying to combat.

The STRGBA has concerns with the SED. The SED does not adequately address impacts to municipal water providers and significantly jeopardizes their ability to continue to provide safe and reliable drinking water to over a quarter million residents that depend on this level of service.

The SED is entirely focused on the subbasin's

major water rights holders and simply fails to acknowledge STRGBA's future role as a subbasin's GSA.

The SED also did not utilize acceptable tools for its groundwater analysis and deliberately and adversely interferes with the STRGBA's mission to implement SGMA.

The SED also ignores the existing groundwater relationship and management activities, like the STRGBA, that exist at a local level.

So, in conclusion, we in the STRGBA have been managing groundwater in the Modesto basin for over 20 years and is poised to become the exclusive GSA for the Modesto Subbasin. We believe in local control, and SGMA was predicated on the premise that locals know best. We won't violate SGMA. And the SED ignores the existing groundwater relationship and management entities that exist at a local level. We won't accept -- the impacts of SGMA are speculative and the impacts won't be significant and unavoidable. This conclusion is one that will lead to the absolute demise of our region.

Based on our studies, groundwater and surface water are intimately connected. Taking 290,000 acre-feet of surface water from the plan area will have a devastating effect on our area.

The STRGBA encourages the State Water Resources

Control Board to go back to the drawing board, to work with local groundwater management entities, such as the STRGBA, that have been doing good things for decades. We are proof positive that through transparent collaboration durable solutions to regional issues are possible.

Thank you.

(Applause.)

MR. DAVIDS: I don't necessarily have any direct comments. Will gave the presentation, so I think we're open to questions that anybody from the board may have this afternoon.

CHAIR MARCUS: Please.

MS. D'ADAMO: Well, I'll just say, or ask you, you say that the SED interferes with your ability as the presumed GSA to meet SGMA. Can you explain or quantify, better yet, if you could quantify, how you think it would interfere with your ability to meet SGMA.

MR. DAVIDS: Yeah. Maybe I'll take a stab at that. I think from a practical perspective, you know, the number that Will threw out with respect to the net change in groundwater on an annual basis with the Modesto Subbasin is about 310,000 acre-feet annually. So, when we look at taking, you know, a couple hundred thousand acre-feet of surface water out of the basin, our ability to sustainably manage our groundwater resources into the

future is in significant jeopardy.

And I give, as the chairman for the STRGBA, I have the fortune of giving different talks up and down the State of California. And I'm in an envious spot, you know. And I think that we are a need basin, as I call it. We're bounded by rivers on three different sides. We have the Stanislaus River to the north, the San Joaquin River on the east side, and the Tuolumne to the south, and the foothills to the east, and we're all located in one county. So, our job with respect to SGMA is relatively easy in comparison to other groundwater basins within the State of California.

But I think it really is a discussion with respect to opportunity. And, so, our opportunity to continue to sustainably manage our groundwater system with the loss of resources is a significant concern of our members.

MS. D'ADAMO: Okay. Thank you.

CHAIR MARCUS: Thank you very much. I know we'll be wanting to spend more time with you, but in the interest of how many people are here, I'm going to hold my questions for a subsequent time that we can talk to you. But thank you for all the good work you've done and for being a model.

MR. WONG: Thank you.

MR. DAVIDS: Thank you.

CHAIR MARCUS: All right. I'm going to call 15 more people. And I've given the cards of people who weren't here when I called them to Ms. Landau. And if you wonder whether you were called right at the beginning before we went to this panel, just check with her and we'll take your card.

I just want people who were here early and were in the queue, if they've come back in, I can put you in as opposed to you waiting to the very end to find out that you had been called.

Wrangler Wheeler, which is the best name of the day so far. Dave Wheeler, Todd Heinrich, Dave Soiseth, Jeff Fairbanks, Carlen Jupe, Chris -- I'm sorry, Guptill? Guptill. Kent Mitchell, Marisol O'Connor, Janet Neal, Steve Endsley -- Dr. Steve Endsley, Jeralyn Moran, Camille King, Bob Triebsch, Elaine Gorman.

So, I'll go with Wrangler Wheeler. Oh, we're glad to have you here. Followed by David Wheeler, followed by Todd Heinrich.

Mr. Wheeler, thank you for joining us.

MR. WHEELER: All right. Hello. I would like to start off with thanking you for the opportunity for the public to voice our opinion on this critical subject.

My name is Wrangler Wheeler, and I'm a fifth-

generation agriculturalist, and my family has been farming here in Modesto for 102 years. I'm a proud Future Farmer of America, which is what brings me here today. This decision will directly affect my future far more than imaginable.

Our creed starts with the words, "I believe in the future of agriculture." And water is the vital lifeline of our industry.

By taking away a part of this vital lifeline, you are directly taking a part of my future and for generations to come. I urge you to take into consideration the many lives, jobs, and futures you will be affecting.

Thank you for your time.

CHAIR MARCUS: Thank you for yours.

(Applause.)

CHAIR MARCUS: David Wheeler, followed by Mr. Heinrich, followed by Mr. Soiseth.

MR. WHEELER: Yeah, that was my son.

CHAIR MARCUS: Yeah, you should be proud.

(Applause.)

CHAIR MARCUS: You should be proud of him. You should be proud of yourself for naming him.

MR. WHEELER: Thank you. Don't tell his mom that.

Thank you for coming to Modesto. Twenty-five years ago, we were here looking for flood control. And sometime in the future, the weather will change and we'll cycle the other way and we'll be doing the same thing. Right now, the drought is on our plate.

My family has farmed here for over 100 years, and what you are proposing is the biggest threat to my family passing the farm to the fifth generation of our family.

I urge you to look at other proposals, such as more storage, rather than just dumping the water. It seems to me if you want more water for a fish flow, you should save it with more storage during wet years.

CHAIR MARCUS: Uh-huh.

MR. WHEELER: It's like a bank account.

CHAIR MARCUS: Right.

MR. WHEELER: You build it up and you spend it during the dry times.

CHAIR MARCUS: Right.

MR. WHEELER: The more water stored, the more water available for all of us.

So please go back to the drawing board and start over. Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Heinrich. Mr. Soiseth. Mr. Fairbanks.

MR. FAIRBANKS: Good afternoon, Chair Marcus, Board members.

Can I use their time since they weren't here?

CHAIR MARCUS: You have a whole roomful of people who want to get home for dinner.

MR. FAIRBANKS: If I could, before we start, I would like to acknowledge these future farmers who are here.

CHAIR MARCUS: Yeah, thank you for doing that.

MR. FAIRBANKS: The FFA. Can you guys please stand up, the students?

(Applause.)

MR. FAIRBANKS: And there were a lot more earlier.

I would like to speak to you as a person who's enjoyed the outdoors in Central California since the 70s.

As a Modesto native, I remember fishing down at the Tuolumne River just downstream from Ninth Street. And before sunrise, we would wade out in knee-high deep water and we'd fish into the sand with our hands trying to find clams as fish (sic) for catfish. And we'd always catch catfish all the time. We'd also catch striped bass just below Dennett Dam up here.

Twenty years later, after that, I wanted to take my sons down to the river so they could experience the same local fishing that I enjoyed when I was their age, and that was about ten years ago. Sadly, the clams were very hard to find and the fishing holes were long gone, the striped bass were no longer around. However, the water level, as far as my perception was, and the temperature had always been the same. That didn't change. And, yet, so from spending a lifetime of fishing the local rivers, I submit to you that the water flows and temperatures seemed pretty much the same back then, back when the fisheries were more abundant, back when I, as a kid, would witness hundreds of salmon passing over Dennett Dam in Modesto.

So, what is it that changed that the fish and salmon populations declined over the years without a significant change in water flows and temperature? I submit to you that there are many other non-flow measures that could be considered for this.

One impact was pollution on these waters. When I last fished the Stanislaus River, Goodwin Dam, I filled my backpack with trash. And in that trash, there was several empty worm cartons. And these were in a restricted area of fishing using live bait. Those who fish legally, probably didn't -- about using bait,

probably did not care about poaching salmon. And I suggest we have more law enforcement with our Fish and Game to help control the pollution and the poaching that's going along on our rivers.

What about the toxic chemicals from the waste from meth labs that has been dumped into our rivers?

What about the impact of not controlling the water hyacinth?

Could the Division of Boating and Waterways use more crews to manage the aquatic weed control program?

Could we use inmate work crews to help with that kind of work?

When I was fishing for strippers in the Oakdale Rec. Area, I couldn't catch any strippers, and I was using a three-inch imitation minnow, but I caught lots of carp and sucker fish. And even the sucker fish were eating these imitation -- that looked like an imitation juvenile salmon. So, I'm wondering what studies have been done as far as these predatory fish.

And, in closing, I would just like to know what impact the -- would be the increased flows of water temperatures have on recreational swimmers and those taking a float trip. What is the scientific projection for the increased accidental drownings at the cost of hoping to increase in salmon?

I support -- I submit to you that you please consider the numerous non-flow measures that would be taken in order to reach a win/win reasonable solution to this problem.

Thank you.

CHAIR MARCUS: Thank you. Thank you for recognizing the youth as well.

Carlen Jupe. There you go. Followed by Chris Guptill, followed by Mr. Mitchell.

MR. JUPE: Hi. I'm Carlen Jupe. I'm a retired computer programmer, Bay Area transplant, and that's the first thing I'm going to talk about.

An economic impact that your staff may not have considered --

CHAIR MARCUS: Uh-huh.

MR. JUPE: -- is that if the drinking water supply, residential use water supply out here in the Central Valley collapses, you won't have thousands and thousands of people going over the Altamont Pass to jobs in the Bay Area because they won't want to live out here. And the ones with jobs in the Bay Area have enough money to vote with their feet like happened in Calaveras County, as was recounted earlier today.

There's an additional economic impact that's not been talked about. I will talk about a different

impact, on which I've gained some insight from my years as Secretary/Treasurer in the State California Beekeepers Association. I am not speaking for the Association; this is my observation.

It's been said that about a third of the food that we eat is pollinated by bees. Okay. Follow me on this.

CHAIR MARCUS: Okay.

MR. JUPE: About two-thirds of your standard commercial beekeeper's income comes from pollinating almonds. Now, we're getting a little warmer.

If the almond industry is severely impacted, so will be the commercial beekeeper industry and, therefore, so will the pollination of all those other crops. Bottom line, your food prices are going to go up.

And even if you're able to get -- and that presumes that you'll even be able to get food from around here. A lot of it will have to be imported from places that don't have the FTA looking over their shoulder.

Thank you.

(Applause.)

CHAIR MARCUS: Thank you. Interesting.

Chris Guptill -- tell me if I've got that wrong. Mr. Mitchell, and then Ms. O'Connor.

MR. GUPTILL: Hello.

CHAIR MARCUS: Hi.

MR. GUPTILL: Thanks for being here in Modesto and for letting us come to talk to you.

CHAIR MARCUS: Thanks for having us.

MR. GUPTILL: My name is Chris Guptill. I'm a teacher and organizer of community clean-up efforts along the river. I organized the Operation 9-2-99. But I'm here to talk to you guys about the non-flow issues that we can work on to try to improve the river habitat.

One of the things that we have experienced in Modesto, especially the urban areas of the river, that particularly is harmful to have, which that is the blight that occurs. We have illegal dumping. We have objects in the river that don't belong there. We have abuse of this natural habitat.

CHAIR MARCUS: Uh-huh.

MR. GUPTILL: And so one of the things that I think that is important for you guys to focus on in talking to the municipalities and the districts that are ultimately responsible for the river is that what can we do to try to reduce that.

We've done some local-level things. Our clean-up effort has been going on for two-and-a-half years. We've had 1,500 volunteers come out. We've removed 175 tons of material from the river and adjacent

parks. We've removed 750 shopping carts, 750 tires. And we have an ongoing effort that is a volunteer basis that we're very proud of. But we need to do more of that.

The river has become a dumping ground in a lot of places. And turning the corner on years of negligent is going to take more effort by everybody to do that. We try to work with lots of different groups. And anybody who is willing to do that, is encouraged to help. And lots of people have supported us. But that's one area I think we need to continue to look at specifically.

I'm not an expert in in-channel streambed improvements or riparian floodplain, but some of the things that I think we could look at and that I'm familiar with in my experience in the last three years on the river, in addition to blight are things like the issue with invasive species. We have water hyacinth problems on our river, on the Tuolumne, anywhere from 10 to 15 significant blockages over the past couple of years. Myself and a few other volunteers have worked on clearing all of those blockages, and we currently have a river that's open to navigation, has a natural habitat. But when those blockages show up, they really alter the system and it doesn't work the way it's supposed to.

So, just briefly, the other two things that we really need to focus on in addition to that is getting

rid of Dennett Dam. It serves no purpose. It's a killer. It does not belong. It should have been removed a long time ago.

And, finally, the last thing is our river is not open to recreation to the public very well. And I think that public access to the river is a big help in keeping it clean for volunteer groups. We currently have one river access point in all of Modesto, and that's in the Allegiant Park area where there isn't even a functioning boat ramp, restroom, or safe parking. There are only two other places on the entire river where you have parking, a restroom, and a boat launch to access it, and they're each 20 and 40 minutes east of town, at Fox Grove and up at Basso Bridge.

And, so, we'd like to see an improved access to our river. We would like to help keep it clean. We have volunteers who care very much about it. And these are not flow issues. These are non-flow issues that we can work with people on. And I encourage you to encourage the districts and the municipalities to do everything they can in those respects to try to save on flow and try to get the river in a state that people can be proud of.

CHAIR MARCUS: Thank you. Thank you for your work.

(Applause.)

MR. MOORE: I have a question.

CHAIR MARCUS: Oh, sure. Sorry. Come on back.

MR. MOORE: Sir, thank you for illuminating all of your stewardship. You're a true friend of the Tuolumne River.

What's the name of your organization?

MR. GUPTILL: It's called Operation 9-2-99. That's for the Ninth Street Ridge and the 99 Freeway, which run through Modesto. They're about a mile apart.

MR. MOORE: Thank you. And these are profound comments you've made about the public and its access to the river and its relationship to the river. And you and your volunteers are on the front lines of reclaiming rivers for Californians and improving our relationships with rivers.

Thank you.

MR. GUPTILL: Thank you.

CHAIR MARCUS: Mr. Mitchell, followed by Ms. O'Connor, followed by Ms. Neal.

MR. MITCHELL: Thank you for being here today.

CHAIR MARCUS: Uh-huh.

MR. MITCHELL: I'm here to speak for the river. I am the vice chair of the Yokuts, the local Sierra Club organization.

And the fish versus farmers, what a false

choice that is. We can't think of rivers in utilitarian -- for utilitarian purposes. Water is life. It sustains us. We need to care for our rivers so that they continue to sustain us.

Our local rivers are degraded and hurting. There's just not enough water. There's too many demands, too many diversions, too many almond trees.

I do sympathize greatly with those hurt by the drought, the lack of water, and the farmers who have spoken. It's a tough decision you face. And we all face together. Just the current path we're on, though, is not sustainable, due partly to poor decision-making in the past.

I think the best course of action is to follow dispassionate science and the experts and do what's best to heal our rivers. And from that, develop a comprehensive and balanced solution going forward, and plan for the future accordingly involving sacrifice from all sides.

Merry Christmas to all and a joyous holiday season.

(Applause.)

CHAIR MARCUS: Thank you.

Ms. O'Connor, followed by Ms. Neal, followed by Dr. Endsley.

MS. O'CONNOR: Hello. My name is Marisol O'Connor and I live here in Modesto. I have lived here in the Central Valley for three years, and I am proud to call Stanislaus County my home where I will raise my daughter.

Now, albeit, I do not have the great breath of knowledge, history, and investment as my fellow neighbors do about water here in our Central Valley, but I see this, and this city of good neighbors has -- that we have an opportunity right now, via this Board, a once-in-a-lifetime opportunity to leave for our children and their children a thriving river here in our Central Valley, three thriving rivers.

We, as a community, not just Central Valley, not just Stanislaus, not just Modesto, not just this water basin, but all of California and this world, we have a responsibility to protect and steward our rivers, specifically these three rivers. And that is why I want to thank this Board for their plan and their efforts and their work about how to protect the Bay-Delta and its tributaries.

Thank you.

(Applause.)

CHAIR MARCUS: Thank you.

Ms. Neal. Dr. Endsley. There we go.

Followed by Ms. Moran and Ms. King.

MR. ENDSLEY: Thank you. Thank you for coming and welcoming you with the hundredth welcome.

CHAIR MARCUS: Appreciate that.

MR. ENDSLEY: Winston Churchill once said that, "Americans eventually always do the right thing after exhaustively (sic) attempting to figure out all other possible alternatives."

CHAIR MARCUS: I love that quote.

MR. ENDSLEY: And that's what this reminds me of today. It's been very educational. We should have all the students in the whole Valley here. It's wonderful.

And I'll just tell you my observation. There's three groups that need water. The cities, the farms, and the fish and the environmentalists. But they all need water. And what you're doing now is just fighting over a dwindling supply of water where there's not enough for everybody.

I've been here 40 years. I'm a retired cardiologist. I started a group called "Valley Heart." God forbid you ever get trouble with a heart around here, go to Valley Heart. I'll personally meet you there and help you through it if you need it, although I'm retired, so I won't be too effective.

Everybody needs more water. More water is what you need. Okay. Good. So, what did our forefathers do from one-hundred thirty, to fifty years ago? They looked up in the hills and they saw snowpack and rain, so what did they do? They put in dams. And the dams provide water down the tributaries and into the rivers. That's where we get the water. So, if we need water again, maybe we should do more dams. That's where we got the water initially.

And what do dams do? They do three things. Number 1, they collect more water, which we all need. Number 2, they store the water. There's a double. And, thirdly, they could have hydroelectric power out of dams. Hydroelectric power, of course, electricity, is both clean and renewable. So, I like things where you make one investment and get two things back.

So, I would just say, lastly, if you get state money, instead of saying, "Damn Jerry Brown," you call it "The Jerry Brown Dam," and instead of saying, "Damn Donald Trump," you say, "The Donald Trump Dam."

Thank you.

(Applause.)

CHAIR MARCUS: You have a marketing career in retirement as well.

Ms. Moran. Great. Followed by Ms. King,

followed by Mr. Triebsch.

MS. MORAN: Thanks. Hi. My name is Jeralyn Moran. I'm here to say I really appreciate the thankless work that you've been doing, and I am really concerned about the bigger picture of our environment. And if we can step back a minute and see, that the backdrop we're working against is our continued human population growth and a limited supply of water. And, so, we have to try to divvy out water to all stakeholders, which means an ever-growing human population but also all other forms of life here.

And this is just indicative as something even bigger. Our entire planet is going to be getting shorter and shorter in resources. Water is what we're talking about.

So, I just am here to thank you for the work that you're doing and encourage you to continue reaching out to everybody. We can do this. We can come to an answer. Everybody can have a piece, but nobody can have everything they want. So, let's try to look at it that way.

Thanks.

(Applause.)

CHAIR MARCUS: Thank you for that.

Ms. King, followed by Mr. Triebsch, followed by

Ms. Gorman.

MS. KING: Pull it down for short people.

CHAIR MARCUS: I know. I always hate it. I have to pull it down, too. I hate that.

MS. KING: I'm just also to thank you for being willing to take on a very thankless job. I don't know how -- you couldn't possibly be paid enough to do what you do. As we --

CHAIR MARCUS: It's easier than being a farmer or fish, trust me.

MS. KING: Easier than a fish, yeah, for sure.

You know, we'll all here to share this overpromised and, you know, overextended resource, which is the water in our state. And it's us, it's the people, and the farmers and the fish, and the other little animals and the birds.

And, as was discussed earlier, you know, with the current population of 39 million, and somebody today thinks that we're heading towards 50 in California, we really need to figure out a way to cooperate and -- with each other on all fronts, or we truly will be heading for a water wars it seems to me.

So, thank you. You know, this is a strategic and a truly long-term solution that we're looking for, and thank you for being willing to sort of hang in there

and look to the future because it's just critical for all of us. You know, we're in this together, all of us.

And Bill Maher has left, but I also would second his idea of maybe having some hearing at the Bay Area, you know, where the Bay Area people, you know, the San Francisco and the BAWSCA people drink Tuolumne water and are certainly affected by the quality of the Bay and recreate on the river. So, I would encourage you if you have the time and can fit it into your schedule, you might -- you know, that would be a different perspective that you've been getting from all the hearings you've been doing down here in the Valley.

Okay. Thanks.

CHAIR MARCUS: Thank you. I think we've figured that Sacramento is not that far away from the Bay Area, but we've heard that suggestion from a number of folks.

Thank you.

(Applause.)

CHAIR MARCUS: Mr. Triebsch, followed by Ms. Gorman.

MR. TRIEBSCH: I've served on many boards myself, and I thank you for your attendance here.

CHAIR MARCUS: It’s helpful.

MR. TRIEBSCH: I've been practicing law in

Turlock for over 40 years, representing agricultural interests in a variety of ones, and including one hatchery.

I agree with our environmental speakers here today. Our population is growing and we need more food production. Food production obviously requires water. And I encourage you to try to find the compromise. And I'm going to close with some suggestions for you.

CHAIR MARCUS: Great.

MR. TRIEBSCH: In the 70s, when I was practicing here, we went through a severe drought. And the farmers fallowed half of their land in those days, doubled up the water, and grew half a crop.

Changes in regulatory requirements and consumer demands have changed what the farmers are growing. It's driven by market.

All right. So, in this case, we have more almonds being planted. Those almonds are all being put -- all the new almonds are being put in on drip systems or micro-irrigation, which uses less water than flood irrigation of the old style or row crop irrigation.

Now, in Turlock, this is just one community, for example, we have five cheese plants, two powder plants, one ice cream plant, one Blue Diamond almond

processing center. And that's just to name a few of the businesses.

Collectively, these businesses represent thousands of workers in transportation, at the facility, farmworkers; all depend upon an adequate supply of water. Two, three, sometimes four generations have been involved in building these operations.

It takes over $3 million to build a dairy facility today, and that's just for the facility not the land that is used; $8,000 to $10,000 to develop an acre of almonds.

And almost all of these operations have debt to service. And the lenders who have provided this debt have based upon their historical production of crops to service these loans. If they cannot grow their crops, their farms are actually at risk because of debt service.

The Board's staff is incorrect in assuming that there will be a reallocation by market forces of the water supply. Cows cannot go without feed or water for a year, trees and vines can't go without water for a year.

One of your speakers here also talked about the recharge of groundwater in the basin. That's going to affect a lot of domestic wells. I attended one hearing here in the Valley already where a lot of people who spoke, who are at the lower end of the economic strata,

living on ground well waters that have 25-, 75-foot wells that are driving up. You have the Public Trust Doctrine. You've already heard many speakers about the taking.

There was one additional item that I would point out in that regard. I'm not a litigator. I wouldn't be involved in --

CHAIR MARCUS: Then you should probably wrap.

MR. TRIEBSCH: Okay.

CHAIR MARCUS: Make the point, but just do it quickly.

MR. TRIEBSCH: The dams were not built by the state. They were built by the users. And when you store your water in there, that is a taking.

CHAIR MARCUS: You know, there's one thing I just want to mention.

MR. TRIEBSCH: Sure.

CHAIR MARCUS: I'm not arguing with you. One of the things -- one of my colleagues in a job a long time ago talked about how we all view the world depending upon when we think history begins.

But there has been a provision in California law for a very, very long time that when you build a dam, particularly on a river, you have to keep fish in good condition below the dam. And people seem to forget that part of the deal. And I think people don't realize that.

But it's been around a long time, too. So, just so you know.

MR. TRIEBSCH: If I may, I have just some points for a proposed solution.

CHAIR MARCUS: All right. Go very quickly.

MR. TRIEBSCH: Number 1, expand the season and limits on predators. Number 2, increase the size and number of hatcheries. Number 3, my hatchery clients suggest that instead of the Fish and Wildlife releasing fingerlings at six inches, grow them to one pound where they're more likely to be less consumed by the predators. Improve stream habitat and eliminate hot spots. The functional flow model, I think you're familiar with --

CHAIR MARCUS: Yes.

MR. TRIEBSCH: -- consider the direct quote out of Peter Moyle's study on the Putah Creek that very little water is necessary to support this functional flow model, which is a good compromise between agriculture and the fishing industry.

Thank you very much.

CHAIR MARCUS: Thank you very much.

(Applause.)

Ms. Gorman.

MS. GORMAN: Good afternoon. My name is Elaine Gorman, I'm a retired teacher with Modesto city schools.

In the 1980s, I was trained in the Modesto Irrigation District Program "Every Drop Counts." Anybody else remember that?

My students learned about water conservation, historic and current uses of the Tuolumne River, and basic science facts, such as the water cycle, riparian chemistry, and the dynamics of a watershed.

I have also taken hundreds of students and their parents on field trips to La Grange, where they had the opportunity to learn from Turlock Irrigation District and California Fish and Wildlife biologists about the lifecycle of Chinook salmon.

The kids were always amazed as they watched the salmon as they swam under the La Grange Bridge. They couldn't believe that fish could be that large. We would often see bald eagles. We would learn about the importance of salmon in the entire riparian ecosystem.

Volunteers with Stanislaus Wildlife Care Center would bring local wildlife and share information about the animals that rely on the Tuolumne River. A visit to La Grange Museum would inform students about the cultural uses of the river from local Native Americans to the gold miners, and, more recently, our current system of dams, irrigation canals, reservoirs, and drinking water facilities. These educational activities are some of the

highlights of my teaching career, and I hope that they helped my students become good stewards of the environment.

On October 9th, the Modesto Bee ran an article titled, *"Alarming Findings on San Francisco Bay Health."* Scientists from the Bay Institute and UC Davis explained how the San Francisco Bay and estuary have been damaged and is being choked by the lack of fresh water due to water diversions and recent drought. The effects of this are not just felt by salmon, but on all organisms in the ecosystem, and these affects are far ranging.

I have hiked, canoed, swam, inner-tubed, and backpacked along most of the Tuolumne River. I have drank fresh water Lyell Glacier. I have marveled at Waterwheel Falls in the Grand Canyon of the Tuolumne. I have watered my garden and fruit trees with water from the Tuolumne River. In most places in Modesto, I can open a tap and drink water from the Tuolumne River.

The Tuolumne River is very precious to me. The health of the river and the downstream estuary is important to the entire State of California. I hope that all of us living in this part of California can find some common ground to include an increase in the flows and the health of our local rivers.

Thank you.

(Applause.)

CHAIR MARCUS: Thank you very much.

Thank you. We'll now move to our next panel, which will be Turlock Irrigation District, who has asked for 45 minutes. We have been giving the irrigation districts long periods of time.

Here we are. The "*Great Irrigators*." What was -- the "*Irrigationists*"? What is the name of the video you guys use?

MR. BOYD, "*Irrigationists*," yup.

CHAIR MARCUS: I love that.

MR. BOYD: They were the first.

CHAIR MARCUS: They were the first.

MR. BOYD: Chair Marcus, members of the Board, thank you so much for coming to the Valley. I know you've had kind of a long road trip the last few days, and we appreciate you coming down and listening to all of this.

CHAIR MARCUS: Thank you, it’s helpful.

MR. BOYD: My name is Steve Boyd. I'm with the Turlock Irrigation District. In the interest of time, we're going to try to be brief today. We've also been following each day of the presentations, and right up through yesterday morning, we modified our presentation with the aim of --

MR. LLOYD: Sir, can you speak into your microphone?

CHAIR MARCUS: Oh, yeah. You got to get it just closer to you.

MR. BOYD: Thank you.

MR. LLOYD: Just reposition it.

CHAIR MARCUS: Yeah, reposition it. You don't have to -- you know, just --

MR. BOYD: Is that better?

CHAIR MARCUS: Maybe a little higher. You're tall.

MR. BOYD: How is that?

CHAIR MARCUS: I keep announcing to everybody what their height is as if they don't know, but --

MR. BOYD: As long as we don't go to weight this afternoon, I'll be fine.

CHAIR MARCUS: No, I would never go there.

MR. BOYD: All right. In the interest of introducing new topics today, right up until yesterday morning, we were modifying our presentation based on many of the things that you've already heard.

CHAIR MARCUS: Thank you.

MR. BOYD: It would be a little bit of redundancy, but then also, hopefully, there will be some new material that you'll find of interest.

The SED is obviously a long and very complex document filled with a lot of analysis. And I think you can expect that same level of analysis in our written documents. We're going to take a slightly different approach today.

Through the hearings you've held in the Valley, you've heard a lot of talk about impacts and what the impacts mean. And we're also going to stay away from that as part of today's presentation. But, rest assured, there will be a lot of talk of impacts in our written comments as well.

So, what do we want to do today? We want to talk briefly about who we are and who TID represents. We want to provide an example of what the SED says and what it might mean. And then, more importantly, what the SED doesn't say and what that might mean. And then, finally, perhaps a better way forward than the path we're on.

So, with that, I would like to introduce Casey Hasamoto. He has severed as a general manager of the Turlock Irrigation District since 2011. And under the policy setting guidance of the District’s elected board, he directs the day-to-day operations of the District's extensive irrigation, water storage, and delivery system, as well as the generation, transmission, and distribution of electricity within TID's 662 square-mile service area.

Mr. Hasamoto has been with TID for over 31 years.

MR. HASAMOTO: Good morning, Chair Marcus --

CHAIR MARCUS: Good morning.

MR. HASAMOTO: -- and members of the Board.

I would like to begin with a brief history of the Turlock Irrigation District.

TID was founded in 1887. We were the first irrigation district in the State of California. We first provided irrigation water in the year 1900. And, in 1923, we partnered with the Modesto Irrigation District and built the original Don Pedro Dam and Reservoir.

In ensuing years, we realized that a larger reservoir was needed to withstand the dry years our region experiences from time to time. And, so, in 1970, the Turlock Irrigation District and Modesto Irrigation District partnered with the City and County of San Francisco and built the New Don Pedro project.

Today, TID provides surface water to 145,000 irrigated acres. We have approximately 5,000 family farms. And the average parcel size in our district is less than 30 acres.

We have practiced a successful conjunctive water management plan over the past hundred years, and we continue to make improvements to our irrigation system, including all 250 miles of canals in our system.

And, as the operating entity of the New Don Pedro project, we pride ourselves as good stewards of the river and have spent a significant amount of money and time on the Tuolumne River to closely monitor the river's fishery and riparian habitat.

And, so with that backgrounds about TID, I would like to mention that, although we have many concerns with the SED, I will just only be discussing three of the impacts that the SED will have on TID and the region.

The first impact is reservoir impacts. Appendix F describes the concept of minimum end-of-September storage. And for the Don Pedro Reservoir, this requirement is 800,000 acre-feet. This reduces the effective storage of the reservoir from its existing 1.7 million acre-feet down to 900,000 acre-feet. In addition, the SED has a maximum allowable draw from storage that limits what can be available for diversion over the irrigation season.

So, then, assuming on March 1st that we have a full reservoir, which in this case is half of 900,000 or -- actually, we had a full reservoir and we have to limit our diversion over the irrigation season to 50 percent of the available storage, in this case, it would be half of 900,000 or 450,000 acre-feet. So, you

could see the usable storage in Don Pedro is essentially reduced to 450,000 acre-feet. And, as a comparison, the original Don Pedro Reservoir was slightly under 300,000 acre-feet.

So, this proposal merely takes us back in time in terms of water supply to the point we were prior to the construction of the New Don Pedro project. And, as I mentioned earlier, Don Pedro was built specifically to allow our community to survive a prolonged drought, similar to the one that we're currently in. But the SED would result in a loss of a local infrastructure investment and severely limit the amount of water our community, farmers, and drinking-water customers can use.

Moving on to impacts to groundwater. With passage of the Sustainable Groundwater Management Act, TID took a leadership role and began work immediately to develop and pursue a plan to comply with this new law. TID is part of the Turlock Subbasin, and it's only one of two groundwater basins in the San Joaquin Valley that is currently not designated as critically overdrafted.

We knew that there would be challenges ahead of us. We have 11 disadvantaged communities within the TID service area that rely solely on groundwater as their source of drinking water. We also have 13 other entities that we needed to work with within our subbasin. But I'm

pleased to say that, along with our 13 other partners, we recently formed the West Turlock Subbasin Groundwater Sustainability Agency, and anticipate holding our public hearing and submit our paperwork to the Department of Water Resources within the July 2017 deadline for GSA formation.

However, the SED preferred alternative would substantially deplete groundwater supplies and interfere substantially with groundwater recharge, that is described in the document as significant and unavoidable. This will make it nearly impossible for the new GSA to manage our groundwater sustainably.

And then, finally, impacts to drinking water. We recently completed an agreement with the City of Turlock and the City of Ceres to supply Tuolumne River water as another source of their drinking water. The anticipated benefit is that the cities would gain an alternate water supply and that the TID service area would see a recovery of groundwater as the cities cut back on their reliance on the groundwater.

There is a provision in our agreement where, if there's a reduction in the amount of water delivered to our growers, then the water we provide to the cities would be equally reduced.

An analysis we performed indicates that if the

SED were in place in the 1990 to 2015 time period, TID would only be able to deliver the full amount of water to the cities in only 5 out of those 26 years.

And, so, at this point, I'm going to stop and say that you will hear from the Stanislaus Regional Water Authority and the City of Turlock later today about the impacts that the SED will have on their plans for a regional water treatment plant.

MR. BOYD: Thank you, Casey.

So, that's a bit of a snapshot of where we came from and who we are today. If you'll indulge me now, we're going to cover a little bit of which you heard a fair amount yesterday related to what the SED says, and then we'll really get to the meat of the presentation in just a moment.

So, one of the first challenges you're going to face as you look at the job before you is, does the SED, as written, meet its own goals and objectives? And if you look at SED, in the Executive Summary, Pages 9 and 10, staff states there are eight goals the SED hopes to accomplish. We'll certainly be addressing each of those goals and some analysis related to those in writing, but, today, let's just pick Number 1 and move down the list.

Project Goal Number 1 states, "Maintain inflow conditions from the San Joaquin River Watershed

sufficient to support and maintain natural production of viable native fish populations migrating through the Delta." And, so, let's take a look at that goal and what the SED says about it.

If you look at Page 19-34, and I can't quite read the monitor.

CHAIR MARCUS: The SalSim chart.

MR. BOYD: The SalSim chart.

CHAIR MARCUS: We're going to have to do a whole thing on the 1,100 fish and what it means and doesn't mean, but, please, go ahead.

MR. BOYD: Absolutely. And we're going to do a little of that for you in just a few minutes.

CHAIR MARCUS: Everybody is doing it for us. It's just not the way our staff describes it. But I know it's irresistible so go ahead.

MR. BOYD: Absolutely.

CHAIR MARCUS: If I were advocate, I'd be there, too, I'm sure.

MR. BOYD: Well, thank you.

CHAIR MARCUS: I've been there in the past.

MR. BOYD: Well, the staff document cites about 96 times why SalSim is important to the SED and how it supports the goal, and it cites about 10 times wherein staff tries to sort of move away from that analysis.

But, for today, let's assume that it's correct.

And if you were to look at the top, left column, certainly you folks know this better than anybody, so this is more for the audience, top, left column is what's considered base case or modeling the current conditions for all three tributaries.

And you if you move all the way to the right, the model shows there would be about 11,373 fish in all three tributaries according to the model.

SalSim then models the 40 percent unimpaired flow case. And if you move all the way to the right, it shows about 12,476 salmon in all three tributaries.

And, again, so simple math, that's where everybody has come up with the 1,103 new fish in the river.

Again, assuming everything in the SED is correct, the impact stated show that there'll be about 23,421 acres of irrigated farmland that come under -- out of production and a loss of about 450 jobs and a net impact of $64 million, assuming that's correct.

I'm going to read one more item that is in the SED before we move to sort of some balancing questions you're going to be faced with. The Executive Summary, Page 1 says, "The Bay-Delta is therefore at the center of the ongoing statewide debate about how to reasonably

protect fish and wildlife uses of water without causing unreasonable negative impacts on water supply for agriculture, drinking water, hydropower, and other competing beneficial uses. The southern Delta is at the center of a more local debate on how to reasonably protect irrigated agriculture."

So, absent new information in the SED, you have a very large task and a very tough one. From my perspective, some balancing questions you might have to face moving forward is, do those 1,100 new fish equal a viable population? Of the fish modeled in the baseline, or in the 40 percent unimpaired flow model, how many of those are actually native fish returning to the system? You have to consider if the SED considers predation both through the tributary and through the Delta. And then, finally, is this a reasonable protection of both fish and wildlife without causing unreasonable impacts?

So, that's what the SED says today.

What doesn't it say? One thing you heard yesterday in Merced from the Merced River is the ongoing relicensing on the Merced project. Since 2010, the Turlock and Modesto Irrigation Districts have been working through the FERC relicensing process for the New Don Pedro project. In 2012, we completed over 30 very complex scientific studies using state-of-the-art science

and methodologies. We also built a suite of models aimed at everything from understanding reservoir operations, reservoir temperature, river temperature, floodplain analysis, and steelhead and fall-run Chinook salmon populations.

The State Board staff was involved in the meetings for the development of those studies. They helped shaped the outcome, and they helped shape the development of those models.

There's, I believe, one single mention of all of that work in all 3,500 pages of the SED, yet none of the analysis is used to inform the product.

So, today, what we would like to do is show you one example of the analysis that was done in 2012 and one of those studies, and why that's important to the decision you have before you.

So, at this point, I'm going to ask Dr. Noah Hume, who has been working on the Tuolumne for over 15 years, to run through a bit of an analysis for you.

Dr. Hume holds a PhD in Civil and Environmental Engineering from UC Berkeley and has over 25 years' experience aquatic sciences and engineering, spanning ecology, water quality, water supply and treatment. Dr. Hume's areas of expertise include engineering, water quality management, wetlands ecology, limnology, and

fisheries' biology. He has led and participated in the design and implementation of riverine, wetland, title habitat restoration projects from Oregon to Newport Bay, California, as well as title habitat restoration projects in the Sacramento-San Joaquin River Delta.

And I'll just say, besides his work on the Tuolumne, I believe he's uniquely qualified because of his work on the Delta as it relates to the Bay-Delta Plan.

So, with that --

MR. HUME: Good afternoon, Chair Marcus. Thanks for having me here.

I came before you in 2010 as part of the Delta Flow Criteria hearings. And I haven't met the two new folks here before now. But I wanted to come through and describe -- work through to sort of an interesting approach to comparable salmon benefits to the SED proposals.

So, the next slide.

So, as Steve mentioned, TID and MID have been operating the Don Pedro project together for quite a long time, since the 1970s, under the new dam configuration and a series of licensed articles prescribed fishery flows for spawning and rearing. There was a cooperative study program which has been re-implemented under

different requirements over the years between the districts and DFG, and DFW rather, and Fish and Wildlife Services, as well as long-term monitoring of salmon escapement, and, in the last 15 years or so, a rotary screw trap monitoring at the river mouth looking at salmon production.

So, the point to be made here is that it's maybe hard to find, but they actually are there, if you go to the FERC website, they're all there, numerous studies have been filed with both FERC and CALFED looking at factors that affect Chinook salmon production, and these could include factors affecting spawning, escapement, both monitoring as well as modeling studies, habitat studies looking at the impacts of dams, such as sediment blockage and sediment downstream, and restoration to improve gravel quality and quantity, studies on Redd superimposition, so density-dependent impacts on salmon spawning, food availability, fish health studies, water temperature modeling, water temperature monitoring, water quality. A range of factors.

So, next slide.

So, one of the ones I want to drill down into here is predation. So DFG first identified predation as a major factor affecting salmon production in the late

'80s and TID initiated a range of studies from habitat characterizations to direct predator sampling and predation rate estimates at that time. This is just an example of one mining pit filling project done, it was called Special Run Pool 9, in the lower river, on the bottom left here. And, then, on the right, is some rotary screw trap passage data used to create a small survival index during the spring.

And the point being that there's quite a bit of degraded habitat in the lower river, a lot of very deep and slack water pools that would not respond functionally restored flows. They're just simply too slow.

And the screw trap passage data shows a relationship here, a fairly weak relationship on the order of R-squared of like .15 to .18. It's there. You know, higher flows do improve survival, and this is part of the predation signal.

So, next slide.

MS. D'ADAMO: Could you go back for a moment?

MR. HUME: Yeah.

MS. D'ADAMO: Just to give an idea of the scale, of the size, of these pits, because, you know, maybe some of us are visualizing a river of a certain size and there's these indentations --

MR. HUME: Some of them are --

MS. D'ADAMO: Some of them are quite large.

MR. HUME: -- upwards of 30 feet and more deep. You can't see the bottom kind of thing. Some of them are upwards of a-mile-and-a-half long and maybe 15 feet, something on that order. So, it was really great, because we actually participated in the habitat restoration plan for the river to be able to fill all these areas, but there just isn't enough gravel in the state to do that. They just -- you just couldn't find enough.

So, there can be improvements. There can be sort of reconstruction of spawning riffles and sort of lowering of floodplain areas. There's ways of improving the functionality of the system. But I don't think there's any way back to the pre-human river.

CHAIR MARCUS: Right. Yeah. That gets back to that "When history begins," kind of a --

MR. HUME: Right.

CHAIR MARCUS: -- of an issue. So, the question is what is the art of the --

MR. HUME: Yeah.

CHAIR MARCUS: -- possible?

We've heard a lot about predation, and people toss it off. There's a fight that happens about striped bass --

MR. HUME: Uh-huh.

CHAIR MARCUS: -- the bass wars, and we actually have spent a lot of time talking to Peter Moyle and other folks. And it's more complex then there's taking out striped bass. They're a longer-lived fish, and they're only one of many, another predator concomitant group.

But the issue of hot spots has been something that has intrigued a lot of us and which we've gotten some traction on, which is, if you know you have an obvious hot spot, maybe not all of them, you could give the fish a fairer fight if you dealt with those hot spots. And that the issue is to try to increase the good habitat that gives natives a fighting chance. Flow is a piece of it, but it's just one piece of it. And then you suppress the habitat that favors the predator where they're just sitting at a McDonald's knowing that everybody is going to go by.

And, so, I really -- hopefully, you're going to get to that. I would really be interested in your sense of the art of what's possible that could help. It's all about making it a fairer fight.

MR. HUME: Yes.

CHAIR MARCUS: Not all one or the other.

MR. HUME: Now, first, go back to that first

slide.

This was one of those examples where they filled a pit.

Now, the monitoring on the backside of that did not show fantastic effects because there were pools only a half a mile upstream and downstream of the --

CHAIR MARCUS: So it's just in the middle. Okay.

MR. HUME: So it was kind of like, "Oh, we really wanted some really got data to show that it worked." And it's pretty inconclusive on the other end. Certainly, the survival through that reach was good. But if you were to do a broader look, there's predators that are roaming up and down the river from the nearby pools.

So, it is true that if you improve, I think what you were saying, improve habitat incrementally, you can improve the overall survival down the river.

I'm going to be focusing on kind of more a predator removal idea here.

So, we have this sort of weak flow-survival relationship.

So, let's move to the next slide.

And the districts had sampled predators back as far as 1990, through electrofishing. This 1998/2000 period was that, these pit filling projects. And, then,

most recently, for the relicensing study, again, predator abundance sampling, predation sampling. This is sort of a gory picture here of lavage, or stomach content sampling, here on the right-hand side. And then predator movement tracking through radio telemetry and acoustic tracking in these pool habitats and other locations, as well as sort of the more passive rotary screw trap monitorings that are upstream and downstream of these mining pits. And you can see what happens. And, essentially, very high predation losses in the lower river --

And, then, next slide.

-- in the San Joaquin itself.

So, as we go down into the lower San Joaquin, you know, past Vernalis and into the south Delta, survival is severely impacted by predation. And the VAMP, Vernalis Adaptive Management Protocol, proceedings was attempting to get sort of a flow survival relationship there. And it all started off very starry eyed in the 1990s. And, then, somewhere in the middle 2000s, the studies kind of fell apart. And, essentially, we were getting zero -- zero percent survival no matter what flows were being accomplished.

And the studies -- so, basically, low survival at almost every flow. And the studies were then reverted

to acoustic tracking and looking for predator hot spots and things like that. And they found them.

And these, again, are in slack water habitats, very big channel cross-section areas that will not necessarily respond to the fish energetics just by throwing down high flows. I think predation losses will continue to occur in these habitats.

So, let's move now to the ocean. And you see these well used relationships between lagged outflow and escapement. So, what is the flow in the year that the smolts were reared, and then what are the escapement two or three years later.

And I actually did this analysis for Fish and Wildlife back in the early 2000s. And the San Joaquin Basin is kind of unique amongst all of the tributaries of the Central Valley in that this relationship shows up. It actually doesn't show up in the Sac side.

But the snow-melt signals and the high rainfall amounts that usually accompany El Niño and other conditions, so good ocean conditions, high outflow events produces this fantastic relationship. But you see here in 2006, or 2004 to '05 time frame, it kind of broke down. And there was an ocean fishery collapse. This has happened -- we don't have really good records back into the, you know, 1800s or 1900s, but this happens with some

regularity. There are changes in ocean circulation.

The fear is that this is happening, of course, more and more as we're getting sort of global climate change dread on our minds that we may not really know what's going on in the ocean in comparison to prior years.

So, let's look at the next slide.

This is that same time-lagged relationship of escapement and flow. And, on the left panel, you see it actually explains about -- the spring outflow explains about 50 percent of the variation in annual escapement over the 1970 to 2012 period here shown. But if you shorten the analysis period to 1997, of course, incorporating that ocean fishery collapse, that correlation drops down to .3. And if you were to shorten it still, let's say, to 2005 to 2016, I'm pretty much guessing you would get a much worse relationship.

So, the point here is, although there is a flow signal, it's not a great flow signal and it seems to be deteriorating in time. And, in all of this time, the tributary flows have remained largely the same. So, there's something else going on than what's coming out of the rimmed dams around the Central Valley.

So, next slide.

During the relicensing, we were working with

the district on study plans and we basically didn't want to touch the hot potato of Delta survival and ocean survival. And we said let's focus on just what's happening in the river. And, so, we set about to look at factors affecting in-river production, in-river survival. And the factors that we focused on were spawning conditions, so gravel quality, the Redd superimposition spawning habitat availability; seasonal water temperatures, you know, at the shoulder season, sort of early fall and late spring; as well as the in-river rearing. So, again, predation conditions and flow and temperature effects on rearing and emigrating fish.

Next slide.

We did this information review pretty comprehensively favoring in-basin research over out of basin. And then we also reviewed a series of population models that had been developed previously for the larger San Joaquin Basin, as well as the Tuolumne River. So, a couple commissioned by the districts in the 90's. And then Oakridge National Labs model, as well as CDFG's population model, and then the most recent SalSim model that was used here in the SED. And a decision was made to use a little bit more of an explicit -- it was called "individual based model," which uses actual assessment of habitat availability and its effect on fish movement and

rearing through its life history. So, it's actually day-by-day habitat patch type of a model.

And, then, this was calibrated against seasonal RSD, rotary screw trap, passage, as well as for a longer-term validation.

I'm not going to describe all the parameters, but I just want to say there's a lot of parameters in there.

And their flow and temperature are explicitly included as is, again, habitat area, things like gravel quality, suitability based on velocity, depth, temperature, those sorts of things.

And let's get past that and basically just say, there is a model. It's on file. And we've got output from that model that we want to show you here today.

So, coming back to the predation question, some people today and probably at other hearings have talked about predator removal. I actually stumbled across a recent pilot program in the Mokelumne River where they've actually done a pilot predator removal and showed, I don't have the exact percentage, but I believe it's something like a boost of 50 percent smolt productively on the basis of a pretty modest predator removal program. And that's really what I'm going to be talking about here.

So, based on a predation study done by the districts, if we estimated around a 10,000 individuals between the two rotary screw trap monitoring locations and then a much smaller amount of striped bass, which, of course, are a little more voracious than the smallmouth and largemouth bass, but using the measured abundance and the measured consumption rates, if we took that population and we reduced it by either 10 or 15 percent, we could achieve upwards -- a savings of upwards of 13-, to 20,000 salmon smolts, which, in the scheme of the 1,100 we were talking about, that would be a few hundred if you sort of thought about the survival out to the ocean and back. You might get back a comparable number as what we're talking about from the SED.

So, taking that as a key, we moved into our population model on the next slide. And, essentially, using that model as a tool, we assess that if we reduce predation by a modest 10 percent, we could see a boost in smolt production, and, thereby, a boost in salmon escapement, presumably, by as much as 60 percent.

Next slide.

So, this is -- we also have the ability because of some floodplain models developed by the districts and temperature models and a number of other models to look at some of the proposals under the SED. And we ran a

scenario including predation reduction, as well as, the 40 percent unimpaired, the daily 40 percent unimpaired, not the monthly that was in the SED documentation, but a 40 percent unimpaired scenario. And, essentially, a 10 percent reduction in predation in this river-wide would essentially beat a 40 percent unimpaired flow.

It's not easy. It means you got to get out there every year, maybe every second year or something, doing a predator suppression. But it could achieve comparable benefits as the flow proposal.

So, next slide.

So, just in closing, just to say available Tuolumne River studies do not appear to have been reviewed by the SED preparers. Flow only explains salmon productivity partially. Non-flow factors, such as predation, appear largely unaffected by flow in many years, in particularly, as we moved on into the Delta habitats. Temperature is another example of that. And then model predator reductions can potentially achieve comparable benefits.

Then one more slide, and I'm going to hope I don't go too far off the rails here.

Just sort of general comments in my quick reading of the document. The districts will be putting together formal comments. But, essentially, although it

looks like other factors are acknowledged in the SED document, they don't appear to be used to build the flow proposals, and they don't appear to have been used in the Delta -- the models which appear to be largely relying on flow only.

If we look at the factors shown relevant to salmon ecology, annual divergence from the Tuolumne have been unchanged on an annual basis since 1926, and seasonal discharges from the San Joaquin tributaries have pretty much remained stable or have increased in the recent decades. Whereas, Delta and ocean survival and returns have gone down. So, clearly, something other than tributary flows are affecting salmon returns.

Now, you might hear arguments that sort of a straw that broke the camel's back kind of thing, like there's multiple stressors, and if we relieve this stressor, it will help things. But I don't see a lot of evidentiary science. That sounds very attractive. I don't see a lot of evidentiary science that actually shows that, that you could sort of fight global warming impacts on the ocean productivity with tributary flow increases and that kind of thing.

And, then, lastly, on adaptive management, and this one, unfortunately, I scribbled down. And, basically, as you've seen here, the correlations are not

so good, sort of your typical environmental variability when you do a biological metric. If you're seeing 40 percent R-squared or something, that's actually kind of gold star territory, you're happy that you can explain 40 percent of something. But I'm concerned that the intrinsic variability of most plausible metrics that might be used for adaptive management, whether it's escapement or productivity or genetics or whatever it is, there is sort of an intrinsic variability to that.

And if we try to pretend that there's some adaptive management process that can sort out the right answer between 40 percent and 50 percent unimpaired flow, what would be the response in those metrics amongst the 50 percent noise? How long is it going to take to discern whether that effect is real or just some change in ocean conditions? And I'm not really confident in the structuring of the adaptive implementation of framework, that it actually will inform future management decisions. I have a feeling it will be sort of a year-by-year arguments and then just chasing.

CHAIR MARCUS: Yeah. We don't want that. We've heard that at a number of the hearings --

MR. HUME: Yeah.

CHAIR MARCUS: -- that we need to put more meat on the bones of what we mean --

MR. HUME: Right.

CHAIR MARCUS: -- without defining it, because the whole invitation is for people to come together and tell us --

MR. HUME: What they should be doing.

CHAIR MARCUS: -- what it ought to be. But there's a need, I think --

MR. HUME: Right.

CHAIR MARCUS: -- for more guidance on that.

MR. HUME: So I'm just a little concerned that that's -- that needs --

CHAIR MARCUS: Yeah. If it's fluffy, it doesn't work.

MR. HUME: Okay.

CHAIR MARCUS: Right. Sorry. That's a term of art.

MR. HUME: Back to Steve.

MR. BOYD: Thank you, Noah.

So, hopefully, that gives a taste of sort of the depth and breadth of the analysis we've done through the FERC process. That's available either through us or through the FERC website.

CHAIR MARCUS: And it helps me understand some of the disconnect I've been hearing where folks have talked about all the research being ignored or that there

have been all kinds of conversations but none with staff. And, so, I need to go back to where -- who's looking at what from our staff.

MR. BOYD: That would be very much appreciated. Thank you.

And, so with that sort of as the backdrop and thinking about moving forward, we can think about continuing the trajectory we're on with sort of the staff proposal and other agencies' proposals, or we can kind of talk about, to finish up, a change in that trajectory. And to talk about that change is Michael Franz, president of Franz Wholesale Nursery, a position he's held since 1998. His second-family generation farm is located on the Tuolumne River in Hickman. Mr. Franz is active on local, statewide, and national boards ranging from the nursery industry to public power. He was elected to the TID Board of Directors in 2009. He also serves on the local farm bureau and on advisory boards to the Sustainable Conservation and Public Policy Institute of California. In his capacity as a TID Board Member, he has been deeply involved in stakeholder meetings related to the Water Resources Control Board's update of the Bay-Delta Water Quality Control Plan, as well as our FERC relicensing process of Don Pedro.

Michael.

MR. FRANZ: Thank you, Steve.

Thank you, Chair Marcus --

CHAIR MARCUS: Hi. Good to see you.

MR. FRANZ: -- each of you on the Board, good to see you in Modesto.

I'm also grateful for the community coming out today in such force. There is a lot of passion in the room. And I think a lot of legitimate fear. And, so, I'm grateful for each of you coming and hearing close at home to our matter at hand.

I have had the opportunity to get to know a couple of you and several decision-makers in the Brown Administration over the last few years as this proposal has moved along.

I am extremely grateful that several of you have given considerable amounts of time from your busy schedule to spend the day with me, come to my family's farm, and learn more about the Tuolumne River and our operations.

I recognize that you are required to seek the best path for both this community and the environment. Your role of balancing the competing beneficial uses is extremely challenging. But the Bay-Delta Plan as currently proposed perpetuates the broken adage of "Fish versus Farmer."

This region's entire economy is built around its historic use of surface water. We must maximize the ways to promote a healthy fishery while being as efficient as possible with the people's water, just like we do all over California today, both on farm and at home.

What we have attempted to do to show you in the amount of time allotted to TID today is to show you that there are alternatives other than just flow to improve the fishery. There is best available science that has been conducted on the Tuolumne River that predicts much better results with much less water than is required in this proposed Bay-Delta Plan in front of you today.

The plan you propose has extremely high human cost and predicts low returns for the environment. No one is arguing that the Tuolumne River is a highly modified complex ecosystem that needs improvement. And flow is an important component of a healthy ecosystem. However, history shows that regulated blocks of water for the environment have not delivered promised results. Communities have been devastated by lost water, but the native fisheries often continue to decline.

This proposed plan is heavy-handed and ignores the state's commitment to co-equal goals. The 2009 Delta Reform Act sets a lofty standard for future water

policy-making in the State of California, more reliable water supply, while protecting and enhancing ecosystems. This approach, unimpaired flow as a water management tool, erodes water supply for de minimis environmental gains. High cost and low returns.

Because of our historic reliable water supply in this region, we stand as a beacon of hope for a successful rollout of the Sustainable Groundwater Management Act. This proposal will limit our ability to reach the goals set forth in this landmark 2014 piece of legislation.

The plan states significant but unavoidable human impacts. And between the City and County of San Francisco and the communities around us here today, our respective economists predict billions of dollars of economic loss during dry periods and thousands of lost jobs. And those numbers are modeled at the 35 percent unimpaired flow as proposed in the 2012 version, and is only speaking for the Tuolumne River. All of this for a projected increase of 1,200 fish between the three rivers. This, in my opinion, is not balance.

I and others from this community have engaged in various conversations to offer up solutions outside of a flow only approach. These conversations include topics such as functional flows. This is an example of a 21st

Century approach that advocates for a much more holistic view of flows. I'll quote briefly from Dr. Cliff Dahm and others' work: "We propose a functional flow approach to managing heavily modified rivers. The approach focuses on retaining specific process-based components of the hydrograph rather than attempting to mimic the full natural flow regime. Simply stated, the design of a more natural flow regime without consideration of the implications for sediment transport in channel is likely to have a limited success in river management and restoration." End quote.

In other words, just turning the dial on flow in a highly-modified river system like we have will likely not produce the desired environmental benefit.

TID staff hates it when I go off of my notes, but I would love to have a conversation with you along the topic of Peter Moyle's "novel ecosystems," and how we are never going to be able to be successful until we first acknowledge what we're looking at today. We can't just turn back the clock --

CHAIR MARCUS: Right.

MR. FRANZ: -- and ignore the facts that humans and civilization have developed the rivers and we've developed the communities and we've built farms and factories, and we have to deal with what we have in front

of us if we're going to be successful.

CHAIR MARCUS: Right.

MR. FRANZ: Our conversations -- I'm back to the thought process of me putting up different conversations than just this proposal.

We talked about functional flows, and we've also had conversations that have included considerable emphasis on non-flow measures, such as predation and aquatic weed control and habitat restoration, integration of the latest technology into aging canal infrastructures to promote water efficiencies on farm.

And I'm thankful, Steve, for your time and attention. We spent a couple of hours out looking at TID's latest water conservation project. Significant investment by the farmer community around you in facility that integrates the latest technology and ways to make sure that we're being as efficient as possible with the people's water.

Build on the district track record of real monitoring, adaptive and dynamic managing, and transparent reporting.

Additional storage, both above and below ground, on- and off-stream, storm water capture and reuse, all options on the table.

Even though TID's diversions have not changed

since 1926, we must grow the pie in order to satisfy the competing demands for this finite resource.

I am convinced that this approach, when led by local stakeholders with passion and knowledge of the ecosystem, agriculture, and communities will deliver far more fish while protecting our livelihoods.

We cannot settle for a plan that only proposes to generate 1,200 more fish. Our community deserves better than this, and the State of California can do better than this. These rivers are cherished by the people of San Joaquin, Merced, and Stanislaus County. We recognize that healthy farms are fed by healthy rivers. We have ownership in the outcome.

I would like to close with just this one last comment. What is proposed in these over 3,500 pages will lead to years, possibly decades, of litigation if adopted. The last 30 to 40 years have been called the era of conflict in California water politics and policy. The same period of time has largely been a lose/lose for both the environment and for farms. Neither our communities nor the ecosystem can afford to repeat the failed policies of the past.

I urge you to consider the collaborative, comprehensive, science-based plan that TID and others around us are proposing.

Chair Marcus, here is the challenge, here is the heart of the matter, what's in this plan does not give us the room to work with the various agencies, primarily out of Sacramento and some from Washington, DC, to do the things needed to get the river what it needs and serves. Our respective agencies can fight each other for the foreseeable future, or we can do something meaningful for the river and do it soon. Let's roll up our sleeves and agree to a plan that follows both the letter and the spirit of the California Environmental Quality Act, one that minimizes impacts to humans and maximizes benefits to the fishery, one that truly considers alternatives and provides a path with low human cost and high environmental results.

Thank you for your time and, again, for coming to Modesto to hear from us.

CHAIR MARCUS: Thank you very, very much.

(Applause.)

CHAIR MARCUS: Thank you. Very good. Very good presentation. I know we'll have more chance, certainly, to talk, but I want to turn to my colleagues before we go back to -- thank you very much.

MR. BOYD: Thank you.

CHAIR MARCUS: Very well done.

You okay? Okay. I don't want to take

advantage.

Just to give you the next 15: Christine Gemperle, John Stokman, Joan Rutschow, Karla von Hungren, Arnold Thompson, Chuck Dienning, I think, Robert Marchy, Christina Postma, Jimi Netniss, Phil Osterli, David Quesenberry, Patricia Rowe, Ron Edwards, Danielle Veenstra, and Gordon Hollingsworth.

Again, if you want to go and see Ms. Landau and see if I had called you earlier, she has the cards that we called, if you think you were one of the very early arrivals.

Ms. Gemperle. Oh, good, there you are.

MS. GEMPERLE: Yup.

CHAIR MARCUS: Followed by Mr. Stokman, followed by Ms. Rutschow.

MS. GEMPERLE: My name is Christine Gemperle. I'm a California almond farmer and a former fisheries biologist.

First, I'd like you to understand the implications of the proposed increased flows. Increased flows are not going to fix your salmon issues, as we've heard. You're dealing with an ecosystem that is overrun with non-native species that are voracious predators. So, until you fix your food web problems, allowing more water to flow down those rivers isn't going it make much

of a difference.

Secondly, if you're looking at a species -- you're looking at a species of fish that is at the southernmost end of its range, of its historical range. Given historical natural climate changes, you would probably find that salmon in this area have likely gone in and out of extinction several times without the aid of man.

With current climate change, we have all played a part in, all of us, these fish do not have a chance at this latitude until that is reversed. And if you think you need June flows, you don't. I've worked on this river. I know what it's like in June. You're just beating a dead horse, or, in this case, a dead fish.

And we can talk about fish more or we can talk about one other species that is impacted. I'm talking about the human impact. In this argument, the human component has been trivialized to the point of absurdity. The residents of the Central Valley are treated like second-class citizen, like we don't matter. And I'm here to tell you that we do matter, and remind you that we are living, breathing human beings with the same rights as people in Southern California and in the Bay Area.

I'm asking you to not only open your ears but open your minds and apply logic, common sense, and

honesty about what you're really after here.

Okay. We don't often say a lot, but I have a lot -- or have a lot of political clout because we're busy growing the food on your plate. You have to understand that the stars are aligned here in California. We have been blessed with the most fertile soil on the planet, a near perfect climate that enables us to produce food year-round, political and economic stability, an infrastructure that allows for the storage and movement of water, and regulation that ensures food safety. If farming is to take place anywhere on this planet, it should take place here because of our ability to produce so much variety and volume per unit of water.

And, contrary what a distorted media presents, Californians are very efficient users of water. We live to produce the most with the least amount of water in order to remain solvent. If you take this water away from us, you take away our ability to remain solvent. No water means no farming which means no food.

So where are we going -- where are you going to get your fresh, safe, local produce then? And if it comes to that, you might as well make another endangered species poster, one for the California farmer.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Stokman, followed by Ms. Rutschow, followed by Ms. von Hungren.

MR. STOKMAN: Good afternoon.

A couple years ago Governor Brown and the people of California pushed for Proposition 1. And part of Proposition 1 was add more storage.

With your plan, we are going to be depleting the storage we already have. And I hope that you really listen to this group here, this last panel, and work with them. And there's other solutions than just 40 percent.

And as far as economic impact, I, 17 years ago, was having troubles paying my bills. I grew up on a dairy, knew a little bit about making hay, so I bought some equipment with borrowed money, we started a hay service, hired six people, six young men. And, in those 17 years, they got married, had children, four of them became American citizens, and they are part of our community.

Because most of my clientele was on the west side of Stanislaus County, the feds cut back their water. It didn't make it viable for my clientele to grow fish -- to grow hay anymore, so, this year, we closed the doors on our operation, our hay-making operation. Four of my employees, who had families in those 17 years, are not going to have jobs with me. I'm going to keep two

because I still farm here west side of Modesto, but that's the devastation that this water creates for our economy. It's happening in my ranch already. So, and I'll feel real bad for them.

Thank you.

CHAIR MARCUS: Thank you, sir.

(Applause.)

CHAIR MARCUS: I'm going to take somebody out of order who was in the order. We have them numbered who we pulled out as a repeat but -- what?

Oh, hi, Ms. Rutschow, go ahead, and then we'll take Mr. Kauffman. Please, now that you're here.

MS. RUTSCHOW: Yes, thank you very much --

CHAIR MARCUS: Of course.

MS. RUTSCHOW: -- Felicia.

And my name is Joan Rutschow, and I'm a resident -- I was an -- I'm a resident of Stanislaus County for 50 years. And a retired teacher, 38 years in the classroom, Chatom Union School District.

And I would like to thank the panel and all the attendees for being here today. It's wonderful. Thank you for your time, your efforts, and all the work that you do.

CHAIR MARCUS: Thank all of you.

MS. RUTSCHOW: And everybody in the audience,

too, thank you.

These comments are going to -- are in response to the California Water Bill Measure from the House of Representatives in the Senate. And I -- the proposal, it proposes 27 desal projects, which is wonderful, 105 recycling and reuse projects, 335 million for water storage funding, 558 million in overall funding, all worthy projects. And, especially, there's something for Flint, Michigan, with the water treatment plants there. So, I think this is a great project.

This new bill is going to fund more desal, efficiency, and recycling projects. It's 91-page California package. It's added to the Water Infrastructure Improvements for the Nation Act. It will support 11 billion in projects nationwide. However, the State Water Quality Control Resource Board (sic) is determined to confiscate half of our river water from February 1st to June 30th so water can be shipped south through two 40-foot diameter tubes.

These months, February and June, are the most important for reservoirs receiving melted snow. And this water grab could turn our communities into a dust bowl. Fifty percent of Sacramento River goes to the ocean already. Who will go extinct first, salmon or valley farmers?

Folks, this isn't about fish. It's a water grab, and to heck with our quality of life, economy, farms, and the water we have come to depend on. We must learn from history, we must fight to hold on to our water. We're giving more water and not getting anything back. We must save our water so we can help save our environment during a drought.

No amount of additional water will ever be shown as sufficient to restore Delta fish species smelt and salmon. The professional environmentalists' endgame is to bring an end to Central Valley agriculture by cutting off the water that Valley agriculture needs to feed the state, the nation, and the world; water that our entire economy depends on.

Regulatory agencies, that is, State Water Resources Control Board, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, are the straw men being used to achieve that goal. Irrigation districts and agriculture reps have to be careful of entering into any agreements with these organizations that would jeopardize agriculture and irrigation districts' positions.

After spending millions of dollars and wasting millions of acre-feet of water on outflows and inflows, CALFED has never achieved any of its goals and objectives

or deadlines. Not one. CALFED couldn't prove that even one fish has been saved.

Hopefully, all of us have learned the lessons history has taught us over the last 20 years, bureaucrats, unelected and held unaccountable to the general population, are a danger to our way of life and our very survival.

Thank you for your time.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Kauffman. Sorry about that. I know you've been here all day. But you're only -- you only ended up four behind where you would have been. Apologies.

MR. KAUFFMAN: My bill is in the mail. Oh, red light already.

CHAIR MARCUS: I didn't do that. Go ahead.

MR. KAUFFMAN: Thank you.

No, I wanted to listen to that good talk by TID's people.

CHAIR MARCUS: Yes, that was good.

MR. KAUFFMAN: That was an excellent presentation.

Thank you, Chairman, and members of the Board.

My name is Kevin Kauffman, and I'm a water

resources consultant for Eastside Water District, which relies on purchased surface water from the right holders on the Merced and the Tuolumne rivers.

Many speakers, I've heard many speakers say today, geez, we should pause, we should regroup, we should demand a statewide water plan, figure out what to do with the water rights, modify them if necessary, and then move on with the plan that you're considering under this SED.

Your proposed plan under the SED impacts the Eastside Water District drastically and the entire Turlock Subbasin.

Your staff has not an accounted for the groundwater pumping occurring throughout the lower San Joaquin Valley outside of its existing water district boundaries.

Eastside Water District is in the process of annexing nearly 9,000 acres of such land. And it understands how not accounting for this use can affect your staff's estimates on impacts to the Turlock Subbasin.

The Eastside Water District landowners have committed their own money, $9 million, in capital projects and over $900,000 a year in an operational budget to achieve groundwater sustainability under SGMA.

Your proposed actions on unimpaired flows and operational controls on storage significantly reduce, if not eliminate, all potential for the Eastside Water District water supply.

Without this water, achieving sustainability for the Turlock Subbasin is not possible.

I implore you, and the district implores you, that these impacts are avoidable if you indeed do stop, regroup, tackle the water quality issues planned when you have all of the pieces of this puzzle.

And thank you for your time.

CHAIR MARCUS: Thank you very much.

(Applause.)

CHAIR MARCUS: Thank you, sir.

Ms. von Hungren. Okay. Thank you. Mr. Thompson. Mr. Dienning. Mr. Marchy. And then after you will be Ms. Postma and Mr. Netniss.

MR. MARCHY: Good evening. I know it's been a really long day for you guys. But thank you for listening to us.

Hello. My name is Robert Marchy from Turlock FFA in the central region. I'm representing the 21,000 members of the Central Region FFA, where I currently serve the organization as the 2016, 2017 treasurer.

As most of us know in this room, less than one

percent of water on earth is available for human use. Each American uses an average of 100 gallons of water each day in their home.

California second highest's economic income is the agriculture industry. The Central Valley alone producing one-fourth of the world's entire food supply.

With that being said, the reduction of the agricultural water supply in the Central Valley would not only cause a local and state distribution, but the ripple effects could affect other states and neighboring countries. These are the facts and the statistics. However, coming from a passionate fourth-generation farmer, I'm here to strongly urge you the consideration of the direct effect on me, my family, and our economic future.

On our national basis, only one-and-a-half percent of Americans live on a family operation. I'm more than proud and honored to say that I'm one of those one-and-a-half percent.

That number is continuously dropping due to the costs of sustaining a family farming operation. With the cost increasing to put in wells and now the chance of water being sent out of the Central Valley, failing farms like mine won't be able to keep pursuing our passion for producing an adequate and safe supply of food.

We are trying to work together and strive to better our agricultural industry. As a fourth-generation Marchy dairy farmer, I'm fulfilling our duty and producing a sustainable and safe food supply. But I can only continue this heritage with the most the valuable resource, water.

As I stand before you today in my blue corduroy jacket, please keep this in mind as you vote to keep our valued water safe and allow my family the opportunity to farm for a fifth generation and not lose what my family and others have built over generations.

Thank you.

CHAIR MARCUS: Thank you very much.

(Applause.)

CHAIR MARCUS: Your family would be proud.

Ms. Postma. Jimi Netniss, ready. Followed by Mr. Osterli and Mr. Quesenberry.

MR. NETNISS: Good afternoon.

CHAIR MARCUS: Good afternoon.

MR. NETNISS: Thank you for giving us this opportunity to speak. Thank you for coming to Modesto. My comments and questions are very brief.

My name is Jimi Netniss. I'm a proud citizen of Turlock, and I'm proud to be from a state that considers the disadvantaged when it proposes new laws and

regulations. This appears to be absent from the proposal. What effort was put in to study how the SED impacts our disadvantaged communities? We've already seen many domestic wells run dry in our area. How will families that are on fixed and low income be able to handle this additional burden?

This proposal is simply not sustainable from many aspects. It impacts families and individuals who are most vulnerable and do not consider -- and does not consider the effects on those in our society that should be placed first when considering new regulations.

Access to clean drinking water is essential to the realization of all human rights. Please consider the data and the facts before you and hear the voices of the many in our community that cannot protect themselves.

Thank you very much.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Osterli, followed by Mr. Quesenberry, followed by Ms. Rowe.

MR. OSTERLI: Good afternoon.

My wife is a retired school teacher, and I'm a retired farm advisor from this county from about 40 years ago. Anyway, she told me I write very well but all my sentences run together, so I should hand in the written

item. So, I've done that, but I have a couple of comments, if that's all right.

First, I was stunned by the 3,500-page document that you mentioned. And I don't think I could even pick it up and carry it here.

You've heard a lot about economic impacts and all that sort of thing. I would be curious what that thing cost to develop. Maybe you could enlighten some of us here to tell us what that document cost us. We're taxpayers. It would be nice to know.

Secondly, I was a little bit surprised by the comment from one of the councilmen from the City of Modesto that said that he had approached you to try to talk to you with -- to get some kind of response and negotiations, and it appeared to me that you were not aware that he had talked to the staff and he couldn't get anything out of the staff. So, that --

CHAIR MARCUS: We have a number of miscommunications where folks have had conversations with some people --

MR. OSTERLI: Okay, well --

CHAIR MARCUS: -- not others. We've been involved in conversations --

MR. OSTERLI: I would encourage you to continue.

CHAIR MARCUS: So there's plenty on both sides. We definitely want the conversation.

MR. OSTERLI: That's what has to happen here, I think --

CHAIR MARCUS: Right.

MR. OSTERLI: -- for anything to happen. Okay.

I tried to come up with a couple of things that might be positive, and then I heard -- I saw some things this morning that are different from what I was going to write, so I thought I would throw these out.

One, we're under a state order to reduce our water use. Well, this proposal is to significantly increase the river flow straight to the ocean. That doesn't make any sense. You know, you talk common sense, it doesn't make sense to me. You're talking about pumping groundwater to replace surface water, and we have problems doing both. That really doesn't make an awful lot of sense. Changing the cropping patterns is absurd, that just doesn't make sense at all. And the economic impacts that you heard today that you have developed don't seem to coincide with what happened when you hear elsewhere -- well, I made it just about done, didn't I?

I would just like to finish by saying that over my 35 years as a farm advisor I went to an awful lot of public hearings and I went to a lot of places where

people like you and your staff come out to the various communities, you listen to the comments, you go back to wherever you came from, and sometimes you put them away in a file, and just feel good about making the effort to come down and talk to people. I'm hopeful that this time that you guys will go beyond that. Because I think it really needs to happen.

So, good luck to you.

CHAIR MARCUS: Thank you.

MR. OSTERLI: My kids live here, grandkids live here. It worries me to death to think that the kinds of things that you're talking about are going to be implemented. And that's -- and I'm also an environmentalist. I love to go fishing. But I catch my fish in Alaska. It's a lot easier to do it up there.

(Applause.)

CHAIR MARCUS: It's great if you can get there.

Mr. Quesenberry, followed by Ms. Rowe, followed by Mr. Edwards.

MR. QUESENBERRY: Hello. My name is David Quesenberry. And thank you for when you said the Bay-Delta, calling it an estuary. Because I think when they did the water contracts for the Delta-Mendota and the California Aqueduct, they treated the Delta as a lake, and that has created the problem that you are

having to address now.

And you're trying to treat the symptoms instead of the problem. Is there any way you can treat the problem? You know, I hope you can address the problem because just in -- what is it -- because within 1970, there was around 4-, to 5,000 young strippers in the Delta that the Fish and Wildlife counted, new, young, strippers. In the last count, was in 2010, there was 34 young strippers. And if you correlate the strippers, the Delta smelt, and the salmon population, they probably all decreased at the same time. And this little bit of inflow that the Merced, San Joaquin, and the Stanislaus River are going to inflow, if they do not reduce the pumping while those waters are going, going, going down, it will not help the salmon. It won't help the Delta farmers, where they can't grow -- they don't grow their asparagus anymore because it's too salinity there.

So, okay. Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Ms. Rowe, Mr. Edwards, Ms. Veenstra.

Ms. Veenstra, followed by Mr. Hollingsworth.

MS. VEENSTRA: Good afternoon.

CHAIR MARCUS: Good afternoon.

MS. VEENSTRA: Or good evening, maybe.

CHAIR MARCUS: Is it?

MS. VEENSTRA: Almost. Thank you for sticking with us.

CHAIR MARCUS: We said "good morning" in the afternoon, though, so we may be a little confused.

Great. Thank you.

MS. VEENSTRA: So my name is Danielle Veenstra, and I'm speaking on behalf of the Almond Board of California, a federal marketing order representing California's over 6,800 almond growers and 100 handlers, all based in the Central Valley.

Almonds are the number two acreage and value crop in California, with a farm gate value of $5.3 billion.

Over 91 percent of California's almond farms are family farms, many owned and operated by third- and fourth-generation farmers. I, myself, am from a third-generation almond growing family with roots in California agriculture dating back to the late 1800s.

Additional costs of water harm farmers' bottom line. And this proposal could mean that small businesses like my family's may cease operation and sell out, abandoning our agricultural heritage. This would significantly impact the economic base for our many rural

communities. Many jobs in this area are ag related, as we've heard a lot about today.

The almond industry generates 104,000 jobs statewide, 97,000 of which are in the Central Valley. Reductions in economic output stemming from this proposal are more significant given the region's higher rates of poverty, lower educational attainment, and dependence on agriculture.

We welcome greater coordination with the agricultural community ensuring that farming's long-term prospects and sustainability are enhanced alongside the regions' fisheries. To do this, we must develop a coherent water policy that combines analysis of surface and groundwater supplies under all potential regulatory limitations with increased resiliency to California's climatic variation. Making coherent policy isn't easy, particularly when current state law encourages groundwater sustainability and recharge while this proposal limits surface water supplies and could reduce groundwater recharge.

It is imperative that the Water Board's Bay-Delta Plan amendments are consistent with other policies, like SGMA. The almond industry is investing in research for sustainable solutions for water supply, conservation, and storage, including groundwater

recharge. Implementation of these solutions become more difficult if surface water supplies are reduced.

The Almond Board supports a delay in making a final decision, as more time is needed for wider stakeholder discussions. We also encourage the Board to ensure that any actions taken reflect the impact of recent federal legislation.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Hollingsworth.

MR. HOLLINGSWORTH: I'm Gordon Hollingsworth. Good afternoon, and thank you for your enduring patience. It's been a long afternoon.

Okay. Is that better?

CHAIR MARCUS: Yeah.

MR. HOLLINGSWORTH: Cool.

I'd like to address the argument that's been made today that you should not consider reduce -- should not consider releasing more water until you deal with predation and habitat improvement. And the gist of what I'm thinking is that, as regards to predation, the big issues are introduced species, one of which is the striped bass, which was introduced I think around 1880 into the San Francisco Bay Area.

CHAIR MARCUS: That's another one of those when history begins issues.

MR. HOLLINGSWORTH: Yeah.

And with the Central Valley project and the State Water Project, those fish are now indigenous in California. So, although they are voracious predators, the whole idea of effectively eliminating them or reducing them is problematic, at best.

And I would note that since they've been around for such a long time, as have the warm water freshwater species like smallmouth and largemouth bass, the salmon populations have coexisted with these predators. And we have spent millions of dollars to the irrigation systems' credit in trying to fix the habitat, but it hasn't worked. So, we're basically left with very few alternatives.

If you want to try and preserve the salmon, the only thing that hasn't been tried is releasing more water.

That's my point, and thank you for the consideration.

CHAIR MARCUS: Thank you, sir.

(Applause.)

CHAIR MARCUS: All right. Thank you all. Interesting range.

Next, we have a presentation by the Stanislaus Regional Water Authority and the City of Turlock. Thirty minutes.

Do I need to take a ten-minute break?

MS.DODUC: Yes.

CHAIR MARCUS: I think I need to take a ten-minute break. My apologies. I'm losing Board members left and right. So, let's take a -- just a ten-minute break, though, and then we'll be right back.

(Off the record at 4:46 p.m.)

(Back on the record at 5:02 p.m.)

CHAIR MARCUS: Mr. Cooke.

MR. COOKE: Hello.

CHAIR MARCUS: Got it.

MR. COOKE: Okay. Good evening, Chair Marcus, and members of the Board. I thank you again. Like everybody else, thank you for coming here. It really does mean a lot to us to hear from you. And I've met some of you in person up in Sacramento, so it's nice to see you down here in our part of the world.

My name is Michael Cooke. I'm the Director of Municipal Services for the City of Turlock. I'm also a member of the technical advisory committee for the Stanislaus Regional Water Authority. And you heard from our Vice Chairman this morning, the Mayor of Ceres, Chris

Vierra.

I'm also past president of the Turlock Groundwater Basin Association.

And we supply drinking water to Ms. D'Adamo. She lives in town, so --

As the vice chair's mentioned this morning, the SRWA is a joint powers authority of the City of Ceres and the City of Turlock. And our goal is to develop a supply of drinking water from the Tuolumne River supplied by the Turlock Irrigation District.

And, like you, the City of Turlock is concerned with the declining salmon population. However, we are concerned a little bit with the approach that the SED proposes.

And I'd like to thank you. The previous version of the SED really didn't concern itself by the impacts of unimpaired flows on urban and municipal water supply. You've done a much better job this go around in looking at those impacts, and I appreciate that. So --

CHAIR MARCUS: We still heard some shortcomings in these hearings, but we tried. So, we'll keep trying.

MR. COOKE: And you might hear a few more from me, but --

CHAIR MARCUS: Please.

MR. COOKE: -- I do -- the people who said you

don't listen, I think that's unfair. You do listen. And we may disagree on some points, but I appreciate the changes you've made so far.

So, we recognize, like many others -- and the PPIC had a good paper out recently, there are issues with the salmon population, but we're willing to focus on more issues than just flow, take a more comprehensive and balanced approach to declining salmon populations, look at it more on an ecosystem-wide basis.

We recognize that you have limited tools at your disposal. Water rights is probably your most powerful tool. So, you're a little bit stymied in what you can do. But my concern is water rights is a very blunt instrument that you have for your goals and objectives here. To me, it's like you're trying to do a delicate surgery using a pair of kitchen scissors, and you're sure to have an impact, but the results may not be effective or desirable.

And as a version of the Hippocratic oath, it starts with, "First do no harm." And we're concerned that, although your goals are laudable, you may be doing more harm without achieving your stated objectives.

So, just so you understand, the City of Turlock has a population of 72,000 people. We supply drinking water through about 19,000 connections. As you've heard

many times today, our economy is mainly agricultural based. Our many employers are food processors, including Foster Farms, Sunnyside Farms, Blue Diamond Growers, Land O'Lakes and many, many others. And all these people rely on -- dependent -- all these people are dependent upon a safe and reliable water supply for their existence.

And we're entirely dependent on groundwater for our drinking water supply right now. And we have 19 active wells. I would like to thank Board Member D'Adamo. When considering conservation, she leads the way on our block. She's one of my neighbors, so -- she has the brownest lawn. So, rest assured, she's doing her part.

But we continue to lose wells through contamination and declining water levels. And we've also helped out on our region supplying emergency water supplies to the county through a program they have with -- I can't think of it -- it's Self-Help Enterprises. And we've also done some emergency tie-ins to neighbors who have lost their wells.

So, we take the health of the salmon fishing very seriously. Since 1922, we have discharged our treated wastewater into the San Joaquin River. And, over the years, we've made significant investments, almost $60,000,000 in the past ten years, to improve the quality

of our wastewater effluent. And right now, we're in the final throws of designing our recycled water conveyance pipe plan. You've met me before, the North Valley Recycled Water Program. So, we hope to that under construction towards the end of next year and join in with the City of Modesto and Del Puerto Water District. So, that's been a great project.

And we're also working on getting some recycled water to TID to put in their canal system. So, if we could just get some help from your regional board, we would appreciate it.

And we understand our responsibility to conserve water. Last year, we pumped about 5.6 billion gallons. So, for my ag friends, that's about 17,000 acre-feet, which is about the same amount of water we pumped in 1994.

CHAIR MARCUS: Can I just interrupt you for a minute?

If you're -- I'm happy to have you all have conversations, but if someone can either close the door or let the folks know standing in the doorway that it's just a little distracting and I want to have total focus. Thank you.

MR. COOKE: Okay. So, we've pumped 17,000 gallons -- I'm sorry 17,000 acre-feet last year,

the same amount that we did in 1994. So, in 21 years, we're pumping the same amount of water even though our population has grown by 24,000 people in that time. So, that's a reduction of per-capita reduction by 34 percent. And we will succeed in the requirements under SB X7-7. We've exceeded the conservation requirements in our Urban Water Management Plan. And like there's 33 of us out of 379 who still have conservation orders under your amended emergency regulation. And we adopted a higher standard than we needed to, we went to 20 percent instead of 16 percent, recognizing the issues that we're having with our aquifer.

But despite all that conservation, our aquifer continues to decline. It's at a record low level. So, one of the concerns that we have is the SED really focuses on conservation as if that's a solution. And we've shown that we can conserve as much as we can but it has no impact whatsoever on our aquifer conditions, at least under the City of Turlock.

And, as you saw earlier, we really need to expand our portfolio of water resources as a community. Our groundwater is a diminishing resource. And, as you saw earlier, the Turlock and Modesto subbasins are the own two subbasins in the San Joaquin Valley that are not critically overdrafted, and there's no coincidence to

that. The surface water supplies from the TID and MID are our largest source of recharge and helps recharge our aquifer.

But, despite that recharge, we're looking at various options to develop a service water supply, and we've worked with Ceres to form the Stanislaus Regional Water Authority, and TID to get about 30,000 acre-feet from TID; 20,000 for Turlock, 10,000 for Ceres, which is the maximum build out. It'll start with the smaller amount.

And, also, that's been kind of our means of complying with SGMA. So in-lieu recharge, less groundwater pumping. We thought we had the perfect solution. And, then, in our recent conversations with Turlock Irrigation District, their preliminary estimates show that they'll have very limited water supply to provide us.

So, it looks at this point that we won't be able to make that $150,000,000 investment if we don't have a stable supply to -- a stable raw water supply. So, it's really kind of put our project in this tailspin at this time.

And, so, we're concerned with the flow requirements in the SED will further exacerbate our drinking water supply and drinking water quality problems

and take away our ability to comply with SGMA.

Unlike most of the people who have spoken today, I've really focused on the urban aspects in the SED, Chapters 13 and 16. And -- sorry -- the document notes that there will be a significant reduction in supply and a significant reduction in groundwater quality. And that's a big concern for me.

It notes certain communities like Hilmar, Keyes, and Hughson, and the community of Hickman, may have significant water supply issues. And Hickman's important because my wife grew up there, so that is a concern for me.

So, the SED says, well, you know, you have these impacts, there is two ways out of it. You can reduce groundwater degradation through compliance with SGMA, or you can build a number of infrastructure projects. Okay. That's fine.

It talks about sale and transfer of service water, recycle water supplies, new service water supplies, but all these things are very expensive and we're talking about millions and millions of dollars to make those investments in that infrastructure to offset the impacts of the flow proposals in the SED.

And the document doesn't consider the financial feasibility, the regulatory feasibility, the political

feasibility of doing those projects.

And, so, I'm concerned that we'll have a -- this part of the San Joaquin Valley will lack access to an adequate supply of safe drinking water.

And one of the things that frustrates me as a former CEQA practitioner is that all of the impacts, the state says, well, we can't mitigate those because we don't have control over that. So, if there's a new service water supply needed, well, we don't build service water plants, so somebody else needs to figure that out. And I feel like you're really not taking care of your responsibilities under CEQA as the lead agency.

The Board of Trustees of the California State University System went through this a few years ago with CSU Monterey Bay. Where they said, hey, our traffic impacts off campus are not our problem, that's the city's problem. And the California Supreme Court said, no, if you know you're having an impact, even if it's off your campus, you need to mitigate it. And that was recently upheld again in San Diego as San Diego State was looking to expand.

So, I really encourage you to look at -- it's called the Marina dictum. Your CEQA attorneys will know it better than me. But I think there's obligation for the state to look at providing -- for the State Water

Board to offset some of these impacts to the environment through this project.

And, really kind of as a human being, not just as my professional role, but I'm really concerned that the crisis we've seen the last few years in East Porterville could be replicated on a larger scale in our region.

And I don't say that lightly and I don't mean to be an alarmist. And I think the issue in Flint, Michigan, has really pushed East Porterville off the front-page news, but there's a significant problem down there and it's being addressed, but it's taken three years to get there. And that's a big concern for me.

And, if you've had no running water when you go tent camping or your water supply goes out, you know how miserable it can be to be without running water. And that could affect a large part of this part of the Valley right here.

And, as a kid, why I have a degree in geography, so I always used to watch geography programs when I was a kid. I used to love National Geographic. And as a third grader, you'd see parts of Africa where they're hand pumping water and carrying it in buckets and you felt so sorry for those people. You think, thank goodness I live in a more developed country. But that

could happen here. I don't mean that in a trite way, but that could happen. It's happened in East Porterville; it could happen here. And that's a big concern for me.

And, last summer, the Bee wrote that California has leapfrogged France and Brazil to become the world's sixth largest economy. And I can't believe in the world's sixth largest economy people will be working water from totes and taking showers at a trailer at a church before they go to school. That's what people in East Porterville do.

So, I think we really need to be careful of that as human beings. So --

CHAIR MARCUS: We've spent a lot of time trying to help there.

MR. COOKE: Yeah. But it takes a while, right?

CHAIR MARCUS: Yeah. Water is flowing now to a lot of people.

MR. COOKE: Yeah, it's not easy. Right? But it's been two years of misery for those poor people.

So, the SED correctly states all Californians have a right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. Safe water is necessary for public health and community prosperity. So, we need a safe, clean, affordable, accessible water supply.

So, I urge you to take a more balanced approach to addressing the fisheries concerns, which we all share. I urge you to be more active in developing water supply projects that ensure this region's basic right to a clean, safe, and affordable water supply is ensured. And I urge you to take a more systematic and surgical approach to addressing the ailing salmon populations.

And, again, I fear the proposals will maybe do more harm than good on a human scale in our region. But we are here with you to work on solutions to improving the salmon fisheries. So, anything we can do, we're happy to do so.

Those are my comments. And I lost my panel. They're dwindling faster than the salmon I think. But I would be happy to answer any questions.

CHAIR MARCUS: No. Thank you very much. And we appreciate your spending the time. Questions today? I want to hear more about her lawn, but we'll save that for another time.

MR. COOKE: And she put --

CHAIR MARCUS: I'm so proud of her.

MR. COOKE: She did. She did.

CHAIR MARCUS: She should have a brown lawn.

MR. COOKE: She did. And she has soaker hoses on her trees to keep her trees alive. So, she did the

right thing.

CHAIR MARCUS: That's right, you can train.

Questions?

MR. COOKE: Thank you.

CHAIR MARCUS: Thank you, sir. And thank you for abbreviating it for the folks who are waiting.

(Applause.)

CHAIR MARCUS: All right. I'm going to read off the next 15. Trish Anderson, Diane Kroeze, Jim Duarte, John Duarte, Fred Werner, Daniella Salzman, Dan Lamb, Jeff Duarte.

Do I have that twice? All right. Got it.

Brandi LaForti, Jerry Ogle, Jimmy Duarte, Jessica Raeder.

Oh, we already did Jessica Raeder. I remember that.

Daniel Lara, Susan Lara, Joey Gonsalves.

Ms. Anderson.

MS. ANDERSON: Thank you, Chair Marcus. Thank you, Board. Thanks for sticking with us today.

CHAIR MARCUS: Sure. Thank you for coming and for you sticking with us today.

MS. ANDERSON: Many elected officials have spoken today about the sad statistics of our county here in Stanislaus County and the greater Central Valley. One

thing that hasn't been put up enough today, I don't think, is the people here today. And a lot of them have left. But we know they're here.

We are friends, neighbors, and family. We actually speak to one another still. We like each other. And it's much different than some of the larger communities that are wanting the resources that support us here. So, we take this a little personal.

We are a resilient valley. We have been amazing stewards of our natural drought in the last five years. However, I'm not here to speak about the great stewards who are my friends and family. I'm here to tell you about 545 students who I refer to as "my kids." You see, I'm a school principal of a TK-through-sixth school here in Modesto.

Ninety-seven percent of my students receive free and reduced lunch. That means they're kind of poor. Seventy percent of them are Hispanic and Latinos. These two facts say some things about -- that are really hard to ignore.

Our students live with parents who are proud, hard-working people who came to this state because of the farm labor that was available to them. They continue to work hard to achieve their dreams with companies like Gallo, Foster Farms, Blue Diamond, Crystal, Diamond Pet

Foods, to name a few. They're working hard to improve the future of their children. They expect clean, safe schools, and their landlords' property taxes pay for that. Their future and the future of our school is dependent on water, our Valley's most important resource.

Can I finish? It's very quick.

CHAIR MARCUS: Just make it -- fine. Absolutely.

MS. ANDERSON: Hence the stewardship we have practiced for eons.

I plead to you on behalf of my kids, all 545 of them, consider the non-flow compromises these stewards are offering. The water districts have managed this Valley's water for decades. Bring them to the table. Listen to their research.

And I'll close with this, a quote from Nelson Mandela, "Education is the most powerful weapon you can use to change the world."

Let the local districts educate you about our Central Valley water so I can continue to educate my kids.

Thank you.

(Applause.)

CHAIR MARCUS: Thank you very much.

Ms. Kroeze, Jim Duarte, and then John Duarte.

MR. DUARTE: I'll be your only Duarte today.

CHAIR MARCUS: Huh?

MR. DUARTE: I'll be your only Duarte today.

CHAIR MARCUS: Oh, all right.

MR. DUARTE: My brother Jeff and my father Jim are back running the company while I fight the federal government to farm wheat and argue with you folks about water.

CHAIR MARCUS: It's good to see you. I saw your dad --

MR. DUARTE: John Duarte, fourth-generation Stanislaus County farmer.

I got to say, I do appreciate you being here today. And I have to wonder why you would stay engaged in this process. When I look at what's happening under the FERC process and what our local districts are presenting to you in terms of sound science, multi-pronged approaches to resolve real issues in the Delta using real science and their oversight with federal government agencies, what -- the tools you have in your toolbox, as the gentleman just communicated, are blunt and inadequate and you're likely, in the process of only controlling flows and not looking at any of the over measures being addressed in your FERC process that are much more effective and much less costly to our

community, why you don't back up, stand aside, and let that go forward for a couple of years and let our community use its local resources, $24,000,000 spent already, to come up with our own plan and see if it's not far superior to the 1,100 fish that you'll save with your plan at a cost of -- if it's a $62,000,000 economic impact, it's going to be $56,000 a fish. If it's a billion-dollar impact or more, it's going to be a million dollars of fish. I think we can do better locally.

Second of all, there's a pretense that has been attacked several times today, that this water will go to the Delta and then to Los Angeles. I'll read you from the California Section of the new Water Quality Investment Act from the federal government, just passed recently, a -- just a moment here. A quote that says exactly that, "Adopt a one-to-one inflow to export ratio for the increment of increased flow as measured as a three-day running average at Vernalis during the period from April 1st to May 31st."

So, the new Water Quality Investment Act, to me, now maybe we need to let the agencies get ahold of it and run it around, do their implementation for a few years while you let our districts come up with a better plan that you have any chance at because you've only got one tool and they've got many.

I don't understand why you would go forward with your process with these facts hanging out there. You may not have the federal authority on your side, and you may have a better solution locally, and there are many more tools than what you even have authority over.

CHAIR MARCUS: Yes, we've invited that.

MR. DUARTE: Thank you for being here.

Well, up until today, there's been a theme that maybe you were never communicated the information, maybe it didn't get to you, maybe your secretary ate it. I don't know.

CHAIR MARCUS: No --

MR. DUARTE: But, today, obviously, you've had the information from our local community now, and I think you've had it very credibly. And I hope that does guide you towards a very, very different path.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Werner, who also gave us written.

Ms. Salzman. Mr. Lamb, followed by Ms. LaForti and Mr. Ogle.

MR. LAMB: I would like to also thank you for coming to Modesto and giving me an opportunity and my

neighbors an opportunity to speak to you today.

My name is Dan Lamb. I'm a third-generation farmer on the west side of Turlock. I grow field crops. For what it's worth, I'm also an engineer, also a Berkeley grad. Go Bears.

CHAIR MARCUS: Thank you for doing that. Thank you for doing that just to make her happy.

MR. LAMB: So I'd like to talk to you briefly and give a face and some figures associated with what I thought was casually brought up by some of the analysts earlier, the concept of fallowing in the Central Valley.

So, my irrigation district, the Turlock Irrigation District, says no water for two years when they perform an analysis of the 40 percent flow rate limitation.

What does that mean to me? The face. I'm seriously out of business on my family farm. My family, my employees take that hit. But the thing that really makes my heart sore, "sore" not S-O-A-R, S-O-R-E, is I wonder how bad this is for others and what are the impacts of fallowing. So, I ran a spreadsheet and I did some analysis based on Cornell University research.

Basically, it deals with New York State and how many people are fed per acre of agricultural production, in a broad sense. I made some adjustments for the fact

that here in central California we are unparalleled in our productivity, and so those numbers were adjusted a little bit. And, so, I hope you can see the spreadsheet. I apologize, sometimes these are a little bit small and hard to read. But mine only has one cell. So, this number right here is the number of people that are unfed by my farm. And if the TID doesn't deliver water to me for two years, these are the number of people that are unfed. I didn't say "underfed," unfed for two years. And that number is the reason why I decided to stand up here and talk to you guys because I don't think that's really been recognized, as how significant that really is.

CHAIR MARCUS: We also -- we do have to sit down and see where the numbers --

MR. LAMB: I would be more --

CHAIR MARCUS: It's clearly not the intent, so we have to sit and go over the materials when they come from TID. That's absolutely not the intent, so --

MR. LAMB: Okay. So, my bell has rung here, so I would like to just close by saying that I would like to encourage you not to take water from productive agriculture. Look at all the non-flow alternatives. And I also hear that some of those non-flow alternatives are not under your control. And I would suggest that if

that's the case, we need to take a different approach. The gentleman before suggested one different approach, others have been suggested.

But we look at who's at the table, who has the ability to enforce those non-flow alternatives and leave production of agriculture in the Central Valley doing what it does so well, which is feed people.

Thank you very much for coming.

CHAIR MARCUS: Thank you very much, Mr. Lamb.

Ms. LaForti? Or Pam Sweeten. Okay. So, I'll take that card. You were as an alternate but you were -- got it. That's fine.

It's going to be another card.

MS. SWEETEN: Pamela Sweeten, Stanislaus County California Women for Agriculture and member of American Agri-Women. Thank you to the members for coming and listening to our plight today.

Stanislaus County is a viable, vibrant community that not only feeds ourselves but feeds many people around the country and around the world. Without agriculture, we cannot provide a safe, reliable, domestic food supply. That should be a national security issue for everyone here in this room, not just those of us that are involved in ag, but everyone else.

Every time we go to the grocery store, we

choose if we want American-grown food. And I don't want to feed my family or my grandchildren food grown in a third-world country, which is what you're driving us to do.

So, I really plead with you to look at the solutions that have been brought today. Let TID, MID, OID, let's go back and let's revisit, let's have a conversation. They know the water. They know the rivers. They've done so much studies. We need to put it in their hands and not be dictated by Sacramento or anyone else.

Thank you.

CHAIR MARCUS: Thank you.

(Applause)

CHAIR MARCUS: Mr. Ogle.

I don't want -- are you speaking for every single Duarte? Might there be Duartes that aren't your family of Duartes?

MR. DUARTE: (Inaudible) it's not my Duarte.

CHAIR MARCUS: How about Jimmy Duarte?

MR. DUARTE: (Inaudible).

CHAIR MARCUS: Okay. I just wanted to make sure I wasn't necessarily kicking out people named Duarte that you weren't speaking for.

Duarte, yes.

Daniel Lara, Susan Lara, Joey Gonsalves.

MR. GONSALVES: Thank you for sticking around.

My name is Joey Gonsalves. And I work for Stanislaus Farm Supply, and we're 67-year-old farmer-owned supply cooperative, one of the last in California. You know, the big conglomerates we've got to compete with make it tough.

But we've been able to grow, and we've got about 130 people in California and Nevada that are employed with us, about 85 in Stanislaus and Merced Counties. And, you know, they're good jobs. They're jobs that we have MBAs, we have soil scientists, all the way down to immigrants that are just starting out.

And what is unique about our company is that regardless of your position, if you're a full-time employee, you get company-paid health insurance, you get a 401(k) that's really good. I mean, guys who didn't think they were going to be able to retire, you know, and weren't going to be able to retire earlier, are able to with this. And those jobs go away if food production goes away in this region.

And, you know, I was going to talk a lot about stats and our company and how it would affect us and the community, but I was hearing a lot about water and, you know, there's just not enough to go around, farmers need

to utilize it better. I'll tell you, our company, we sell irrigation equipment to farmers also, and they've put huge investments recently to improve their water-use efficiency, to make better use of that water, and they've done so and improved their production. And they're going to continue to make those investments, at least I hope they do. But they're going to do it better and continue to be great stewards. I mean, they have to work in harmony with the land all of the time.

And when we talk about this, you know, sometimes you got to protect environment from the environmentalists. And I don't mean to disparage anybody with that. But, a lot of times, there's really good intentions and good ideas that have really negative, unintended consequences.

And this 40 percent flow is not a natural flow for the river. And maybe I kind of think from a simplistic thing. I wasn't, you know, a biologist or anything. But I think about before there were people, before there were dams, you know, 10,000 years ago or longer, I mean the river has been around for a long time, there wasn't people monitoring flows, there wasn't people checking temperatures, and those rivers continued to work.

And, you know, you think about what happened.

Well, you had the spring snow melt and runoff, those lives ran full, in fact, so full they ran over and flooded, and those hatchlings were washed out to the ocean. They lived out there. Late summer, fall, you know, those rivers barely ran. In some years, maybe parts of them went dry. And the salmon survived. But it kept those predator fish in check.

Well, now because of dams, you know, of course, we need dams to protect communities and lives from flooding, we needed to provide water for drinking water and food production, but we're able to spoon feed that water and we probably keep those predator fish around a little more than normal.

And I'm scared this 40 percent flow is maybe not a normal flow and what consequences is that going to be? Will we be better off -- maybe we run it full for a couple of months like it normally would and then slowly shut that off. And if there's a drought and the river does go a little drier, you know, that's okay. I mean, life finds a way. It's done that in the past before us and it will continue, you know. But we maybe need to work more in harmony with nature just like farmers do. So, I encourage you to do that.

CHAIR MARCUS: No. Thank you for that. That's all very well said. I mean, part of the challenge is

that the dams, which do incredibly useful things, have cut off where the fish used to summer in the cold-water pool.

MR. GONSALVES: Exactly. Right.

CHAIR MARCUS: So we have a challenge that's more than a puzzle, it's a thorny one.

MR. GONSALVES: Yup.

CHAIR MARCUS: But thank you for your eloquence in what you had to say.

MR. GONSALVES: Thank you for your time, too. All right. Thank you.

CHAIR MARCUS: It was good.

(Applause.)

CHAIR MARCUS: Very good.

Next, we have the Stanislaus County Farm Bureau, who have requested 15 minutes.

I saw you and then I saw you walk out. I thought I was going to miss you entirely. Hi.

MR. ZIPSER: I'm here.

CHAIR MARCUS: Good. Glad to see you.

MR. ZIPSER: Good evening, Chair Marcus, and fellow Board members.

My name is Wayne Zipser. I'm the Executive Manager of the Stanislaus County Farm Bureau. The farm bureau, Stanislaus County Farm Bureau, represents about

1,700 farm families in Stanislaus County. And I want to reiterate "farm families" because 98 percent of all of our farmers in Stanislaus County are family farmers. And --

CHAIR MARCUS: You know what? I was talking to someone earlier, I really do appreciate that. I think the last couple of days, hopefully, we have people listening who -- people make cartoons of ag or of whatever, it's all corporate farmers. There's nothing wrong with corporate farmers. But the amount of emphasis and the actual extent of family farming is something that I think folks overlook because it's convenient to a talking point, just as folks do the same thing to fish sometimes.

So, I just want to thank you and commend everyone who has helped really bring that home the last couple of days.

MR. ZIPSER: And thank you for bringing that up because the vast majority of our farmers in Stanislaus County are probably less than 200 acres on those operations. And, so, again, all family farms. And I just wanted to bring that up.

Also, I've been involved in the farm bureau for over 30 years. And I can't see any other single issue that has affected our region agriculturally than this

issue that we're talking about today.

So, with me today, I brought a couple of speakers with me. And they don't, neither one of them, probably need any introduction, but I will anyway.

To my far left is Bill Lyons, Jr. He is a third-generation farmer here locally in Modesto. He's a past president of the Stanislaus County Farm Bureau and also, as you know, former secretary of the California Department of Food and Ag.

Also with me today is, again, no need for introduction, but Paul Wenger, a Modesto grower, past president of the Stanislaus County Farm Bureau and also current president of the California Farm Bureau Federation.

So, I'm glad to have them with me today.

And, so, I think instead of me giving a lot of comments, I think -- first of all, I want to thank you so much for allowing farm bureau to have a 15-minute segment. I know this is late. I'm sorry that you have to listen to a lot of different testimony. I'm not going to go --

CHAIR MARCUS: It's great.

MR. ZIPSER: -- over anything that you've already heard before. So, I'm going to go ahead and turn it over to Paul, and to have him start the presentation

for the farm bureau.

CHAIR MARCUS: Terrific. And I do want to appreciate you and the other panelists understanding my desire to alternate with the public as opposed to having four hours of panels before the public could speak. Normally, I get complaints when I do that, and I haven't gotten a single one, and I appreciate that.

MR. WENGER: Welcome to Modesto. You've been here a lot, Felicia, and we appreciate it. When you were the Region 9 administrator, you and I walked a lot of fields here between -- in the early 90s, as you got an appreciation for agriculture here in Stanislaus County.

CHAIR MARCUS: You and DeeDee --

MR. WENGER: Yup.

CHAIR MARCUS: -- introduced me to agriculture in the 90s.

MR. WENGER: A lot of farms we walked and to see. And, so, I'll talk fast so that -- Bill certainly has a lot of points that he wants to get through. And you heard a lot of good, the comments, and the particular comments from TID, from the county, but I do want to maybe talk to the heart and soul of this area.

Grandpa came here in 1910. I still live on the same farm that he came to. He came here because of the Wood Colony area, Modesto, is because the soil, the

weather, and the water. And, interestingly, at the time, he thought a reservoir was really pretty stupid. Because if you dug a hole down 30 inches, you could see the water in the bottom of the hole when you dug a posthole.

But we know that the population in California in 1910 is much different than it is today. Folks had the foresight. But I can remember the stories of paying the bonds on retiring a debt. Of course, it didn't retire the debt until they got it to where it started generating power, and then they could go out and get bonds to be able to service a debt on that. But it was the City of San Francisco, the farmers and the ranchers in Modesto and Turlock that didn't have riparian water rights. You had to be in the district and you had to pay those bonds or they would take your land.

It's an irony that we're talking today about flows for a reservoir that, had those forefathers not created and foremothers and forebearers created that, we wouldn't be talking about anything today.

And it seems like folks say that if we didn't have reservoirs our rivers would run full all year. Well, I guess they don't realize the force of gravity, that it would go out very quickly and we'd have nothing left.

And I guess one of the greatest concerns is the

flows is one thing, but to carryover water for the cold water is a real concern because no government agency, there was a little bit of federal money for flood control, but beyond that, this was paid by individuals' money, and now somebody else wants that water.

It's really interesting that we talk about the decline of salmon, predation, habitat, flows, pollution, but we're overlooking the one major issue. Over a hundred years ago, if you were a farmer, you staked out a piece on the prairie, you farmed it until it was no longer fertile, and then you moved on. And you did the same thing again. And we know we can't do that any longer.

California agriculture defines sustainability. Everybody wants to define that word. Best California agriculture, we make our soils more productive, we produce more crop per drop, and we do it with the least amount of carbon than anybody else in the world can do.

It's very interesting, because some of the folks that were probably here today, as I heard them decry the crop protection materials we use and other things, and they probably buy organic, do they realize that their water footprint is greater? And we represent a lot of organic growers. It's a great and growing part, segment, of agriculture production today, but organic

production, it might get there to where it's as efficient with water as what conventional production is, but here we decry the use of crop protection materials and biotechnology, but that's what allows us to squeeze more crop per drop.

So, when you think about it, market hunting disappeared many, many decades ago. We almost killed out the bison, the elk, and the deer. And we did away with market hunting ducks. For up in the Sacramento valley for years, people would go and kill ducks and put them at the market. And we did away with market hunting, and yet we allow market fishing.

A lot of studies have been done by universities around the world, Stanford University one of them, that by 2050, we are very, very close that 90 percent of our fish species will have been harvested. And when you think about the indiscriminate mining and harvesting of our oceans, it's really kind of silly to be talking about what we're talking about here today. Because you're not going to have fish if we don't do something. And what is done is the new technology with the great big trollers in the way that, when you look at these studies, they say we have to go back to smaller boats, the way fishermen used to do it. And my hat is off to the fishermen because they are the farmers of the sea.

But some folks say it's important to catch, be able to go out and catch fish. And, as I like always like to say, there's 40 million Californians, if we all caught a fish every other week, how many fish would we have in California? Not much. It's a luxury item.

The other thing we forget, and as one individual said that he's reduced and reused water and everything, that's great, but there's one thing you can't change, and it takes 1,500 gallons of water to feed every one of us every day a 1,200-calorie diet; 1,200 calorie diet, 1,500 gallons of water. That water is going to come from some place.

We've heard people that say we shouldn't be growing almonds. Isn't it interesting when Japan suffered the earthquake and the terrible tsunami, what was it they did? They started calling California processors of almonds asking for almonds. And when people said, "Why are you wanting to buy almonds?" They said, "We need nonperishable protein."

As an almond grower, I'm proud of that.

When we talk about resiliency in the face of climate change, it is those of us here in California agriculture that will be able to show a way not only for the rest of the country but the world.

I've heard some things said that we're here

from Modesto, we have a lot of underprivileged area, we're uneducated. And, yet, I find it very interesting, and we've had some folks say we need to talk to people in the Bay Area, it was legislators mostly from the Bay Area and other places that passed a $15 an hour minimum wage. When the University of California, Davis, Phil Martin did a study, in 2022 when the $15 an hour minimum wage comes into effect, that will equate, based on the San Francisco, a $15 an hour minimum wage in San Francisco will equate to $6.71 in Modesto. So, since the minimum wage in Modesto would be $15, that means a correlation to San Francisco, the minimum wage should be $33.50 an hour. It's going to be $15 an hour. So, do you wonder why there's a red ribbon of cars every morning going over the Bay Area and a red ribbon of cars coming back, driving by renewable power with windmills and solar fields just extruding all kinds of climate pollutants that we should be concerned about. But, yet, we do nothing about the fact that we have people that can't live and work in the Bay Area.

It's interesting, too, then we have folks that say that we ought to talk about -- and talk to people in the Bay Area. When some of the largest developments that have happened in agriculture in the many sensitive grounds here in Stanislaus County, their home address is

Sand Hill Road in Palo Alto.

Some of the people that are here are probably invested in pension funds or have their pensions invested in funds that are benefiting from things that the family farmers that were behind us here today would never have invested in. They would not have done that. And, yet, we are being the ones that are going to be have to carry the ball for that.

Ironically, you know, when you have those folks over there saying that we're not doing it right and, yet, I have one of my workers makes $15 an hour, bought his first home this year. And he was living on the ranch for $300 a month. And I said, "Why in the world are you buying a home?" And he said, "I wanted to live the American dream." He bought a home.

Some of these folks that were here from Palo Alto today, the median priced home is a million dollars. Good luck buying a home over there even if you're making $150,000 a year.

Lastly, we've heard, "What can we do for the salmon?" Seven years ago, we went up with a -- a number of us went to up the Yakama Indians, the tribe in Washington, to see what some fish biologists were doing in mist incubation. They had been able to increase with mist incubation and flocculating the gravel bed and

reintroducing salmon in the eyed-egg stage into their native habitat. They've increased it by nine-fold, the out-migration of salmon. If you can increase the out-migration by nine-fold, you're probably going to increase the in-migration.

I met with John Laird, met with the administration. We said before Jerry Brown goes for his last and fourth reelection campaign, you could see of a three-year cycle of increased salmon. Nobody wanted to touch it.

So, if we're really going to have everything on the table, and isn't it interesting that PacifiCorp today has a mist incubation system in their possession in their shops in Northern California. Because if those Klamath dams have to be removed, they're going to utilize them to prove that dam removal does equal more fish. Why don't they do it before the dam removal? Because it's not going to accomplish their purposes.

So, lastly, I just want to say that, as we are here, this is the heart the soul, what we do here is family farms. We're proud of what we do. We will show the way for folks. We do want healthy environmental systems and rivers. We can do it. But, unfortunately, it's kind of like we hear about the commitment, the chicken and the pig, they're in the yard scratching

around, the chicken is scratching around for feed, and the pig says, "What are you doing?" It says, "I want to make sure that farmer John has the best eggs he can possibly have for his ham and cheese omelet. "How committed are you, Mr. Pig?," says farmer John's breakfast.

I think those of us in agriculture feel like the pig. When we say we're committed, it's going to come out of our hide. It's going to come out of our future, not only ours, our kids and our grandkids. And when you start looking about this SED, I hate to use puns, but I'll use it in this, I think it's kind of an egg.

Thank you.

(Applause)

CHAIR MARCUS: You know, it reminds me, though, there's a Chinese saying, "A chicken talking to a duck," and it's when folks are talking past each other. And, that, I do see a lot here. And figuring out how to translate I think is the real challenge. Believe it or not, in all of these hearings, I'm seeing the space for compromise and agreement.

MR. WENGER: We do, but, you know, Chairman Marcus, with all due respect, there's been an awful lot of folks that have great ideas but they're not invested.

And it really upsets them that, you know what,

when you say that "It's going to be our future," it's going to be our ability to pay off our mortgages, it's going to be the Stanislaus County and Merced County and the property tax revenues that go to our police departments, our fire departments, our Sheriff's departments, our schools, our churches. We're the ones that are affected. And when you have people from out of the area say, "This is a great solution," then why don't you put your money on the table? Why don't you put your 401(k), why don't you put your mortgage or your house, the equity in your home, and then I'll listen to you.

But when people are over here and they're outside of that, I mean, actions have to have consequences and other people's actions are unfortunately having undue consequences on us potentially. But we would love to visit with you.

CHAIR MARCUS: It's already on my list.

MR. LYONS: I was going to start off by asking about the Niners, but I think I'll go into my subject here.

CHAIR MARCUS: Hey, the Raiders are in the playoffs.

MR. LYONS: Yeah, I know.

CHAIR MARCUS: That's pretty awesome.

MR. LYONS: Our family has been in the area for

90 years. And we've farmed along both the Tuolumne, the Stanislaus, and the San Joaquin River. Our family is also known for its environmental and habitat restoration efforts, being recognized both at the state, national, and local levels.

We have an excellent working relationship with the Tuolumne River Trust, River Partners, U.S. Fish and Wildlife Service. And we truly believe that there are examples of government, the environment, and agriculture working together.

Now, as the former secretary of agriculture here today, I would like to voice my opposition to your staff's proposal of 40 percent flow requirements. The impact to this family farmer region of taking 40 percent would dramatically hit every one of those family farms. And this region is one of the most productive regions in the country.

If Merced, Stanislaus, and San Joaquin County were a state by themselves, they would rank within the top 15 states of the nation. So, what you're asking is you're asking a region that's one of the most productive regions in the country to provide or give up their 40 percent of their water.

CHAIR MARCUS: It's actually --

MR. LYONS: Potentially.

CHAIR MARCUS: It will leave 40 percent in. It's still a big number, but it's not 40 percent off current.

MR. LYONS: Well, I haven't -- yeah, I would say 40 percent is a pretty healthy reduction.

CHAIR MARCUS: No. It's actually a smaller reduction, but it's still big.

MR. LYONS: Okay. I apologize for not saying it correctly.

CHAIR MARCUS: No. No. It's just some people think it's 40 percent off where people are now, and it's -- the proposal, I'm just saying, it's the proposal --

MR. LYONS: Okay.

CHAIR MARCUS: -- is --

MR. LYONS: The 40 percent appears to me --

MS. D'ADAMO: I'm sorry. I just want to jump in here.

Even according to staff, it's about 14 percent on average, but in critically dry years, I think 38 percent. Correct?

MR. GROBER: That's correct. It would be 38 or 40 percent, roughly, in the critically dry years.

MS. D'ADAMO: Okay.

CHAIR MARCUS: In critically dry years.

MR. LYONS: So taking 40 percent -- excuse me 38 percent -- appears to be neither reasonable or balanced, especially for family farmers.

This particular flow requirement, some people describe as a water grab. I don't define it as a water grab. I define it as a water takings by the state. Yet, I see very little, if any mitigation, and no compensation to those communities that are the most affected.

One of the things as a former ag secretary, I sat in your seats in front of public, you know, meetings like this. And one of the things that I've observed while sitting here yesterday and today is I observed public elected assemblymen and women, senators, county board of supervisors, city councils, irrigation district directors complaining about the process and the lack of outreach and the flawed science.

And, as a former public official, it really bothers me that you've got so many public officials complaining about the communication and outreach. And I think that's a question. And I don't want to preach to you, but as someone who used to be in an appointee, that's a question I think you have to really ask yourself and your staff why so many public elected officials have lost trust in this process. I'm very pleased to see you now providing some of this outreach. I do think there

are opportunities to work together in collaboration.

I just hope that these are just more than meetings, that they will be taken back, that staff will work with the experts from the irrigation districts and some of the other individuals that are stakeholders. I think you can come up with a fair and reasonable and balanced approach.

Thank you.

CHAIR MARCUS: Thank you very much.

MR. ZIPSER: Chair Marcus, that concludes our presentation.

CHAIR MARCUS: No, thank you very much, and thank you for coming and for your patience as well.

MS. D'ADAMO: I've just got one question, and I don't know who to pose it to, so just jump in.

I realize that, Wayne, you said that there's, on average, maybe your members about 200 acres on average, that if I look at, and I've been doing some research on this over a period of months, looking at Oakdale Irrigation District, South San Joaquin, Merced, et cetera, the average farm size in this territory that we're looking at is somewhere between about 20 acres and 50 acres. So, obviously, there are some farms that are much larger, but that means that there are some farms that are much smaller.

So, could you speak to the issue of what do you do in situations where, you know, our staff is looking at averages. So, if it's a 14 percent reduction on average, but then if you look at the impact in certain year types, in wet years, there's virtually no impact at all, in critically dry years, as much as 38 percent. So, that would be a 38 percent hit in addition to the reduction that would already occur.

How do you manage in those situations small farm versus large farm? Is it about the same or is it more difficult --

CHAIR MARCUS: That's a good question.

MS. D'ADAMO: -- if you have a larger farm or a smaller farm?

MR. ZIPSER: I would say it would be about the same, because under -- the TID put out a statistic that said that in these last two years of the drought there would have been zero allocation of surface water deliveries. Well, there's a lot of farms out there that don't have the ability to pump water. And when you take into consideration SGMA and what the impacts that's going to do and you look at the possible -- of getting these critical dry years, there's a lot of farms out there that don't have alternatives and they would have to fallow or their permanent crops would wither and die and their

investments would go away.

And, so, there's a lot of other impacts at what happened from that. But there's no saying that the big farmer has the advantage over the small farmer because everyone's situation would be different.

MR. WENGER: The only difference is going to be if the -- last year, you know, with Jake being on the MID board, he said, "Dad, if we have a dry year, we're going to get six inches of water." They already knew that. Now, that's at a time when old Don Pedro hadn't even come out of the surface of the lake yet.

We went through six dry years between '88 and '93. The worst allotment we ever had was 24 inches and could you buy -- I think you were on there then, Bill -- you could buy additional water for additional elevated prices. But we weren't cut back all that -- I mean, we could -- have to buy extra.

But, here, with a shorter-term drought, we are going to be allotted six inches.

We had to drill two wells. Somebody that's got 20 acres isn't going to be able to drill two wells. You know. We have 200 acres that we own, so we drilled two wells on our property, and then other ground that we lease, we could maybe move that water around.

If you've got 20 or 30 acres, there's no way

you're going to be able to drill a well. I mean, you can't even get it done because it's so long. So, the impacts are huge.

But what we have here in Stanislaus, Merced, and San Joaquin counties is very, very unique. The size of the farms compared to the rest of the state is generally smaller. And you have folks that can make a living, and maybe it's augmented by a teaching job or some other job, but it's very unique what we have here in these areas and it's because of the water.

MR. LYONS: Hi. I'd like to follow-up on Paul's comments. You know that the size of our farmers, the smaller farmers in our area would suffer under these regulations. And, you know, it's one thing where you may have a larger farming operation, that if they had to, they can maybe lay out some ground. Not that they'd want to, but they may be able to make some sacrifices.

If you've got 20 acres of almonds and you're a small farmer and someone says, "You're only going to get 25 percent of your water and there's no other water available," you're done. You know. And, so, when people talk about, you know, large corporate farms, that's not the way it is here in Stanislaus, Merced, and San Joaquin County. Almost all primarily family farms.

MR. WENGER: And it really is that way around

the valley, but they've had to adapt.

CHAIR MARCUS: That's an important point.

MR. WENGER: A lot of families have had to vertically integrate and get larger. So, I mean, California agriculture is still a family-based agriculture.

CHAIR MARCUS: Thank you very much.

MR. LYONS: Thank you.

MR. WENGER: Thank you.

CHAIR MARCUS: I love the pride of multiple generations. It's really spectacular.

(Applause.)

CHAIR MARCUS: All right. I have Patrick Cavanaugh. We already had her. Paul Vermeulen, Ann Abruzzini. I have two. Ric Tilbury, Lee Ogle, Jake Verburg, Joyce Parker, Matthew Price, and Miguel Denoso.

Patrick Cavanaugh, Paul Vermeulen.

MR. VERMEULEN: Good well, good morning.

CHAIR MARCUS: Morning. We keep saying that.

MR. CAVANAUGH: Oh, is it morning? Sorry. I wrote this at 8 o'clock --

CHAIR MARCUS: It's timeless.

MR. VERMEULEN: -- when I got here.

CHAIR MARCUS: Timeless.

MR. VERMEULEN: Let's see. My name is Paul

Vermeulen. I own Dunlap Almond Hulling in Modesto, and I'm a board member of the Stanislaus County Farm Bureau. Whew. This has got me nervous. Let's see.

I realize that I don't understand the entire scope of this proposal. Okay? So, I can only speak to its effects on me personally. I'm a young business owner. At 27, I bought our family's farming operation. That was now four years ago. I spent over a million dollars to do so. I didn't own a single acre of ground.

Our business is on Blue Gum Road. And I took over farming right in the driest periods that we'd ever seen since 1977. So, I took over in 2012. And, you know, I've learned the value of having a water supply. Since my crops dropped by 20 to 40 percent when the allocatements (sic) were curtailed down to even only 16 inches. We're still coming back from that. And in order to achieve suitable crops, you know, I need about 60 inches of water to be able to do that.

So, if this proposal was passed two years ago, I would have received zero water. That means that the very -- that only a year after I bought the family farm, I would have lost five generations, I'm the fifth-generation farmer, I would have lost five generations of family farming. We got here in 1905.

So, you know, the amount of -- I just listened

to your question about, "Well what's a large farm? What's a small farm?" I'm a large/small farmer. I farm over 200 acres. I don't own more than 20. And those are spread across 14 different ranches, so there's 14 different, 10-, 28-, 30-acre ranches that I farm. And when they cut us back down to 16 inches, it was hard. Like I said, our crops went down by 20 to 40 percent because they're all permanent crops in almonds.

So, you know, I'll get back to it. You know, the very water rights that my family, the Blickenstaffs, the Millers, the Dunlaps, the Vermeulens, we all gave up land to allow these canal systems to bring water to this parched valley. And that's something that we hold dear, all the land that we've worked hard to maintain.

Ian Wilson said that no amount of sophistication is going to allow -- is go to allay the fact that all of your knowledge is about the past and all of your decision are about the future. And, so, I beg that you keep in mind our future.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: It's a great quote, too.

Ann Abruzzini, Ric Tilbury.

MR. TILBURY: I'm Ric Tilbury.

CHAIR MARCUS: Hi.

MR. TILBURY: I was wondering why the Calaveras and Mokelumne rivers haven't been asked to join into this water --

CHAIR MARCUS: They'll be in Phase 2 --

MR. TILBURY: -- robbery as I see it. They're closer to the cross-channel intake, and it would take less water from those watersheds to keep the salinity out of the Delta, whereas, these three rivers that you want to take water from are -- feed into the Delta through the San Joaquin River and are going to be dispersed before they really do any good. Not to mention --

CHAIR MARCUS: Yeah, the purpose here is not --

MR. TILBURY: -- all the things --

CHAIR MARCUS: -- largely for the Delta, it's for the tributaries themselves. Fine. I'm sorry. I don't mean to interrupt.

MR. TILBURY: The other thing was I guess that you wanted some suggestions for possibly repair of the systems that we have. And I've talked with a few people about a circumferential water system that would start at Shasta Dam and at about the thousand-foot elevation would have a pipeline that would be on the west side of the Sierras clear down to Bakersfield and then back up to approximately Mount Diablo, and then from Shasta Dam and the eastside of the coast range approximately to the Napa

Valley.

Everywhere that a river crossed that pipeline had about a 200-foot additional elevation. It would feed water into this pipeline. This pipe would operate at about an 85 PSI, and the water -- this water could be used in off-stream dam sites. They could either be 2-, or 300-feet deep that would continue to keep this water pressure the same. And then where irrigation districts took the water out, they could generate a positive amount of electricity from the reduction of that water pressure as it's used for irrigation. It's quite more complicated than that.

But the other thing I would like to bring up is how it seems as though this has been less than a democratic attempt at taking water from the area. And it seems like it's -- as we've had recently this electoral college discussion about how we elect people, it seems like the people in L.A. and San Francisco are able to vote whatever they want from our area. And I think that we should have a better voting system here, such as an electoral-college type of system, that allows us to actually have a voice in what goes on.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Mr. Ogle, Mr. Verburg.

MR. VERBURG: My name is Jacob Verburg. I own Verburg and Son Dairy in west Modesto. I'm an immigrant from Holland. We had three generations of dairymen in Holland, and I am the third-generation dairyman in the United States.

I don't want this to sound personal, but I have a problem with your Board. All these people out here, including me and my 14 employees at my dairy, have a stake in this proposal of what you're doing. I don't think any of you Board members have a stake in what's going on here. You're not going to lose your house. You're not going to lose your farm. You're not going to lose your family.

(Applause.)

MR. VERBURG: And I don't feel, being in immigrant and knowing how important this country is to me, every function, I sing God Bless America. And if you want me to sing it now, I can do that. Okay?

But I just don't feel right that your Board is dictating to agriculture, our people, that you can take our water. I'm sorry. It's not going to happen. We're not going to roll over and play dead. We never have, and we sure as heck aren't going to start now.

Thank you.

(Applause.)

CHAIR MARCUS: Thank you. We don't expect that.

Ms. Parker, Mr. Price -- what? Ms. Parker? Oh, terrific.

Followed by Mr. Price, followed by Mr. Denoso or Denoso, I'm not totally sure.

MS. PARKER: You've heard from some very smart people here today, people who are heavily invested, whose roots go deep here. And you've heard from some lobbyists who drove a long ways to get here and tell you about the fish. Let me tell you, I love fish. I particularly love salmon grilled with capers.

Several people have already brought up the twin tunnels and the obvious effect on the Delta salinity and the Bay health. In fact, you've taken umbrage at the idea that this Phase 1 exercise is about replacing Delta water that would be siphoned off through those tunnels.

CHAIR MARCUS: My issue is only impugning our intent when you don't know us. That's not --

MS. PARKER: I am here impugning your intent. Do not be mistaken, I am impugning your intent.

If Stanislaus, Tuolumne, and Merced water is not needed to replace Sacramento River water currently going into the Delta, why not start out with those

tunnels? Build those tunnels now. Build additional water storage, as the California voters have authorized. Construct some desalination plants on the coast and for Southern California. Deal with the predator fish. Accomplish these things before turning the Central Valley into a desert. You need to reevaluate your phase sequence.

(Applause.)

CHAIR MARCUS: Mr. Price.

MR. DICKENS: Hello, Board. First off, I'm representing Matt Price. He was going to tell my story --

CHAIR MARCUS: Okay.

MR. DICKENS: -- for me.

CHAIR MARCUS: Oh, and now here you are.

MR. DICKENS: But now I'm here, so now I get to.

CHAIR MARCUS: Perfect. And you are?

MR. DICKENS: Matt Dickens.

CHAIR MARCUS: Okay.

MR. DICKENS: Background: I'm college educated. I have farmed this -- with my family this area in Stanislaus County, Oakdale and Modesto areas, Tuolumne, Stanislaus rivers most of my life. I now currently work for Modesto Irrigation District. I worked

for Oakdale Irrigation District as a ditchtender. When I was in junior college, I worked for S.P. Cramer & Associates, which is a fisheries consultant agency that was doing studies on the river.

I got firsthand experience on predation of the fish and what happened there. It's like paying with cash for something, you know, instead of whipping out your card, you pay cash money, it leaves your hands. When you see that impact of that fish and what was happening, it hits home. So being boots on the ground, in the trenches seeing what's going on firsthand, farming here peaches, walnuts, and almonds my whole life over, you know, 300 acres with my family, raising beef cattle, seeing the impacts that this proposes, and what it impacts on here, having a document that's 15-inches tall, that's 3,500 pages, that took you guys years to prepare, you need to listen to the education of the people here that are educated in this. Take the time to listen to them and educate yourselves from them also.

So, you have the time. Don't rush through this process. Take your time. If it takes longer, let it take longer. But take your time and study the facts and make your decision wisely off of that.

So, that's all I have to say.

CHAIR MARCUS: Thank you. Thank you.

(Applause.)

CHAIR MARCUS: Folks have been actually quite helpful the last few days, and we appreciate it and they have given us a lot to think about.

Mr. Denoso. Did I get that right? Denoso?

CHAIR MARCUS: I'm sorry. I just can't read the last letter.

MR. DENOSO: Mi nombre is Miguel Denoso. (Speaking Spanish.)

CHAIR MARCUS: Do we have translation to help?

MR. DENOSO: (Speaking Spanish.) That mean, no water, no vegetable or fruit, no farmworkers, no harvest, no food. So, that mean we are people that work in the fields. (Speaking Spanish.) You're not -- almost nobody, very few people maybe, speak regard to the farmworkers. But without the farmworkers, no food.

And please revise your proposal. (Speaking Spanish.) A better water. (Speaking Spanish.) We need the water to survive. And, please, compared to what happened in L.A., in San Diego, they consume more water than our area. So, it's very contradicted. (Speaking Spanish.)

Gracias. Thank you.

CHAIR MARCUS: Gracias.

(Applause.)

CHAIR MARCUS: Next, we have the Yosemite Farm Credit Association. Fifteen minutes.

MR. VAN ELDEREN: Thank you.

CHAIR MARCUS: Thank you.

MR. VAN ELDEREN: You're welcome.

Good afternoon. My name is Leonard Van Elderen. I am president and CEO of Yosemite Farm Credit. And it was afternoon when I wrote this last time. It was morning when I wrote it two days ago. And, now, it's good evening to you. So, thank you for coming, you've heard that before, and we do appreciate that.

Yosemite Farm Credit is an ag lending cooperative, and our headquarters is in Turlock, which is located between the Tuolumne and Merced rivers. We serve four counties. We have $2 billion in ag loans in Stanislaus and Merced counties, we also serve Mariposa and Tuolumne counties, for a total of $2.4 billion in ag loans. Eighty-five percent of our loans are real estate loans. We have had lending relationships with our borrowers for generations. And we've had loans that can typically span 25 years.

As has already been stated, this is a family farming area. We're a local business. We are not a multistate or multinational company. However, our members borrow -- our member borrowers contribute

substantially to the state economy.

We serve ag employers, also known as farmers, ag related marketing businesses, and ag related processing businesses. We employ 135 people in six locations in these two counties. Our budget for 2017 will be approximately $30 million. And we contribute to the local economy.

I happen to be born and raised in southern San Joaquin County, in Ripon. I'm in the area served by South San Joaquin Irrigation District. And, so, we're very familiar with all three tributaries. We're very familiar with all five water districts involved. But we're geographically located within the five water districts that will be permanently impacted by the decisions that you make on unimpaired flow.

We finance employers, who rely on the water that comes down the Stanislaus, Tuolumne, and Merced rivers to operate their family business. We have skin in this area. We've got $2 billion worth of skin in this area. And the purpose of this background is to give you a perspective. As you carry out your obligation to balance all of these interests, those interests that are beneficial and detrimental, economic and social, tangible and intangible considerations to attain the highest quality water, I'm here representing our 5,000 member

borrowers who are residents of Stanislaus and Merced counties. It's a great area, and it's home.

The State Water Resource Proposal put forward will drastically alter the momentum that ag has brought to this economy in our regions. While I say "momentum," it's with the perspective that our two-county area still wrestles with 25 percent or plus -- plus or minus of the people living below the national poverty level.

I don't know if you saw in Merced when we were in Merced yesterday, but there was a man sleeping near the parking lot, wrapped in plastic, in the middle of a bunch of junk. It was one sign of the homeless thing that is going on in our area. And those issues are real for us.

This proposal will increase our risk as a local ag lender. So, what does that mean to the people in our area? The families that depend on ag for their income, including the employees, suppliers, and employers, cannot simply sit out farming during dry years and jump back in when there's water. Many of these employers own one parcel, and the previous panel discussed that, but they own one parcel and they rely on district water. They can't go out and just dig a new well, spend the money on that. The impact will be felt more by small-family employers.

In addition, our loans require monthly or annual installments. The investors that buy our bonds, which is where we get our money to lend, are not going to let us skip a payment in a dry or critically dry year.

Employers who produce milk do not have the option of simply shutting down like a factory. Cows need to be cared for each day. Dairies are required to have more acres, rather than less acres, or reduced acres due to potential fallowing situation.

Irrigated orchards that last 25 to 40 years cannot be dry farmed in the off years. Trees decrease in production and eventually die without water.

Reducing the water supply will also hurt supporting industries in the area, jobs for farm labor, feed companies, nurseries that grow trees, and labor at dairy and nut processing facilities will be negatively impacted. Our local economy is already challenged with higher unemployment.

In addition, and this is really maybe an area that we can bring a different perspective to, in addition, businesses that financially support farming in Stanislaus and Merced counties will need to reassess the risk of extending credit in an area that lacks a reliable source of water.

Our ag employers who hire people, buy seed,

equipment, and other inputs have a high risk in this business if they don't know if there will be enough water to finish the crop.

Higher risk, that is, a less reliable water source, will result in higher costs and less available capital for our employers. The laws of economics will mean higher interest rates for higher risk.

These are some of the direct impacts to the people that we finance. There are other impacts. The impacts that the models and assumptions show are not only things to consider in your decisions. I respect the effort of the SED analysis, but I don't agree with your conclusions.

I think there are also some of these detrimental economic and social, tangible and intangible considerations that lead to a different conclusion.

Without our current water supply, we'll see fourth- and fifth generation businesses, and you've heard from many of them today, shut down. Some of them will be in production. Some of them will be on Main Street that support the farmers and farming employers in our area.

Our young, smaller farmers are younger farmers and their employees are the most vulnerable. Again, back to the issue that they can't afford to just dig a new well. They can't afford to let all their ground lay

fallow for a year.

The effects of this SED will not be spread evenly over our area or equitably. On average, there will be 290,000 less acre-feet of surface water available. The assumption is that we'll be able to pump enough water or lay fallow acreage to make up for the loss.

In the critically dry years, the SED shows six-hundred-and-some-odd-thousand acre-feet less water available. These cutbacks will be primarily borne by ag and the employees directly and indirectly related to ag, along with fish during those years; but it's really going to hurt here.

Averages can be useful, but the models on this particular topic needs to be carefully reviewed, especially the dry and critically dry years. Think about the South San Joaquin and the OID presentation that you heard on Friday. Consider those lean years. Consider the fact that the droughts get spread over more years. Average reductions don't tell the full impact of these proposals.

Based on study, it looks like all requests for water can be met in wet years. The challenge is if we get dry and critically dry years, the loss for human benefit cannot be offset. A single year at higher

pumping levels could be very challenging, and two to four years back to back would be impossible.

With the SED requirements for cold water or storage, it appears there will be less flexibility to store water for the dry years.

With this type of downside risk on water availability, how can ag employers plan? The type of year, wet to critically dry, will not be well known until after crops need to be planted. Who will help those additional unemployed people? The local community at 25 percent poverty level has little reserve.

In addition, as the farming acreage is reduced, the increased food costs will be borne by a growing group of unemployed citizens even less capable of buying the food.

Groundwater quality will also decrease in this area. This is true for those five districts. It's also true for those outside the water districts. These water basins do not track with the districts.

The reduced supplies for cities, counties, and their citizens in towns and out of town may drive a want to deepen existing wells or build more wells as part of the answer. However, we will not even be able to support the groundwater pumping we're doing today.

We have financed the deepening and digging of

wells. Neither of these two things guarantee you'll get quality or quantity of water that the study implies. We have people who have spent a quarter of a million dollars digging a well and ended up with no water, poor water quality, or lost wells due to the effects of subsidence, which is literally the twisting of a well casing. This deepening of existing wells or building more wells is not a solution.

Probably the most frustrating part is that we spent the past two years talking to our borrowers about pending changes in groundwater management as a result of SGMA. It's very likely that we'll be pumping less groundwater in Stanislaus and Merced County when SGMA is fully implemented. We're going to pump less water even before considering the unimpaired flow proposal.

Groundwater pumping is not a solution in an average year and certainly not in a critically dry year. On the one hand, the SED implies there is groundwater to pump to offset surface water that's no longer available. The SED studies say that if you remove surface water it can be replaced with necessary pumping. However, we need to put that next to the science used for the SGMA implementation. The new groundwater law would not have been approved by the governor if everyone thought that current pumping levels are at a sustainable level.

If we say pumping is the answer in critically dry years to replace the removal of 600,000 acre-feet of surface water, there has to be an assumption that our groundwater basins are currently sustainable.

I ask you as a Board to look at the science. It certainly appears that these two proposals, the SED and SGMA law, projections may not be in alignment. We're looking at the same three counties in both the unimpaired flow discussion and the groundwater discussion. And I just encourage you to have a look to make sure you're consistent.

In conclusion, the net result of less water for our region: Degraded groundwater quality. Groundwater quality in our area is already challenged. Removing 14 percent of the clean surface water will reduce quantity and quality of recharge. More unemployed citizens as ag and related employers reduce or close down their businesses in Stanislaus and Merced county. There will be a higher cost to this state's taxpayers to support these newly unemployed people. Also, a reduction of income in our region due to decreased farmable acres. Our ag employers in this area need to own more acres in the wet years to withstand the substantial decrease of surface water in dry and critically dry years.

In addition, please consider what the employers

we finance have just faced. It includes new overtime rules, new minimum wage rules, pending new air quality regulations, groundwater milestones that are rapidly approaching. With this SED, they face even a greater reduction. Reducing the water supply will also hurt supporting industries. The reverberations of this water reduction will rumble through a struggling economy in our area.

For the sake of the economy of Stanislaus and Merced county, I would ask that you look for different solutions than the proposal in front of you. I would encourage you as a Board to collaborate with other boards in this area. This is like a merger, you're asking for a merger of resources. And that's something that needs to be taken care of at a board level. Consider the predatory issue. Consider the reaching out to irrigation districts who know these rivers and dams. Consider other measures available to you.

Please think about the area you are in today and the people that live here. Our local economy and society need a place on the scale as you make decisions that are fair and balanced.

Thank you for the opportunity to speak.

CHAIR MARCUS: Thank you very much.

(Applause.)

CHAIR MARCUS: Don't go yet.

MS. D'ADAMO: Just a second.

CHAIR MARCUS: Don't go yet.

MS. D'ADAMO: Just a second. Sir, I have a question for you, and I'm going to pose a hypothetical, and just do the best you can to answer it.

I really wish that our staff had analyzed the impacts with SGMA so this adjustment or this mitigation to groundwater pumping, in light of the fact that in 20 years from now we're going to see a very different world.

MR. VAN ELDEREN: Yeah.

MS. D'ADAMO: We're also going to see just because of supplies tightening up anyway and the need for greater efficiency, we're probably going to see some challenges with groundwater recharge.

So rather than ask you to speculate what things would look like under SGMA implementation, which I hear in your testimony here that you've questioned the analysis, could you comment on your experience on the west side of Merced, Stanislaus, and perhaps, you know, even Fresno counties, I don't know if you go that far, but the experience that you've had with farms that you're involved with there -- where they have lost surface supplies and may have some groundwater or maybe not

groundwater? Could you comment on what you're seeing in other regions where there's been on impact on surface supplies?

MR. VAN ELDEREN: Well, we serve Stanislaus and Merced county, so I'll limit my comments that.

In our area on the west side where ground doesn't have as much water as it used to, or any water, or poor quality water, and that's the other thing that is starting to show up more, is that the quality of water is not good, we're starting to see some softening of values of those areas.

You're going to see some orchards that are no longer going to be orchards. You're going to see some of those trees go out permanently. And while some may think that's a good thing, that's not necessarily what we're here for.

I think that on the west side the challenge has always been water. It used to be -- I've been in this for 35 years. It used to be when you looked at a hundred acres on the west side you figure that you might farm 60 of it. And that's -- we may be coming back to that. The problem is that we may be coming back to that in the heart of this area in the heart of good water. I think that the SGMA is the thing that really is going to be a fundamental change for this area. It already is starting

with the laws that are in place.

MS. D'ADAMO: All right. Thank you.

MR. VAN ELDEREN: Yeah.

CHAIR MARCUS: Thank you.

Julianne Phillips.

Hi.

MS. PHILLIPS: Thank you, Chair Marcus, and members of the Board.

My name is Julianne Phillips. And often when I appear before you it's representing an organization, but today I'm just Jules. And I'm here as a resident of the City of Modesto, a proud member of this community, and a consumer all of the wonderful things we grow here.

I often think that people's back stories are the most interesting thing about what drives them to do what they do. And you might wonder what inspires a person to get up every day and fight the fights that people tell them that are going to be an uphill battle, they've already been decided, and not in their favor. And that's because I grew up here in Modesto. I lived on a cul-de-sac in north Modesto. And if my mother had it her way, I never would have seen a farm. But, fortunately, her other half, my dad, his business was in Patterson. And I have so many wonderful memories driving out there with him. And he always took the time to point

out the dairies, the alfalfa, the apricots, the almonds. And, of course, I fell in love with the cows, and there was nothing more that I wanted than my own cow.

So, unfortunately, because of zoning restrictions, although, I think my mother was even worse than those were, he had to be a little creative, and he built me this cow. Her name is Mini, and I've had her since she was taller than I was. Yeah.

And that's what this community is. This community shows you that even if you grow up on a cul-de-sac you have such a deep appreciation for what agriculture means for us and for this community that it really is instilled in the heart of everything that we do. And that's what inspires me every day.

And, you know, for a lot of people the Central Valley doesn't really have -- it's a place. It doesn't have an identity. But, for me, it's never been a place and it's never been a sign on a road and it's never been a statistic, like you've heard today, it's a feeling. It's home. And it's home not only for me, but it's home for my family. I have three -- I have two nephews and a niece now, they're growing up here.

And I would say that the best thing about this is that, not being a grower myself, but using the Tuolumne River for my drinking water, I have been able to

understand the frustration of the growers I represent on a very real and personal level, that, "This is my drinking water. This is my ability to water my lawn. This affects my neighbors. This affects all of us."

And, so, I strongly urge you to work more closely with the districts, find better solutions, so that we can keep our community and keep that feeling of home for all of us who live here.

Thank you.

CHAIR MARCUS: Thank you very much.

(Applause.)

CHAIR MARCUS: You folks have done a very good job of humanizing the issue for us.

Modesto Irrigation District. Forty-five minutes.

Thank you so much, as the host, for holding back and letting so many of the public speak. We really appreciate it.

Do folks need another break?

MS. D'ADAMO SPEAKER: No, I'm stretching.

CHAIR MARCUS: Okay. You may stretch.

MS. DODUC: I can't sit for 45 minutes.

CHAIR MARCUS: No, you can't sit that long, I know. Sorry. I can sit for days. I apologize.

Hello.

MR. SALYER: Oh, can we go ahead and get started?

CHAIR MARCUS: Please. You may, yes.

MR. SALYER: Good evening, Madam Chair Marcus, and --

CHAIR MARCUS: Good to see you.

MR. SALYER: -- rest of the Board.

Myself and our panelists, we want to thank you so much for the opportunity to address you tonight and also for you coming to Modesto. I know it's been a long day.

CHAIR MARCUS: But a good day.

MR. SALYER: And we appreciate your patience and we also appreciate everybody that showed up at this hearing and voiced their opinion.

My name is Greg Salyer and I'm the General Manager for the Modesto Irrigation District.

I would like to go ahead and introduce our panelists. Here, on my right, I have John Davids. He's our Assistant General Manager of Water Operations. On my left, I have Ronda Lucas. She's our General Counsel. And next to her, I have Jake Wenger, who is our Board of Director.

Each panelist will be participating today.

As a follow up, we will have written comment

that we'll be submitting, pretty extensive comments.

We're the fifth irrigation district that you've heard talk. There's been a lot of good information provided. I think we mirror a lot of their comments and a lot of their input and a lot of impacts that they had, we agree with those.

Just to give you a little bit of background on the Modesto Irrigation District, we are a fully integrated utility, publicly owned, been in the business well over a hundred years, like Turlock. They say they're the oldest irrigation district, we're the second oldest by a day later.

CHAIR MARCUS: It's really just a day?

MR. SALYER: Yes.

CHAIR MARCUS: Congratulations to you both.

MR. SALYER: Thanks. Yeah.

We have 3,100 irrigation customers, and we irrigate approximately 60,000 acres. We're also the electric utility. We have 117,000 electric customers, a peak load of about 670-some megawatts, including part of that is our hydro. We also provide safe and reliable drinking without to the City of Modesto. You heard from them today. And as you heard from them, they provide water to over 250,000 residents and 6,000 businesses.

You've heard from many of the speakers today

about the impact of this Bay-Delta Walter Quality Plan and the SED, and we mirror that. It definitely has a direct impact to our water operations and our electric operations, and it would devastate the livelihood of a lot of our customers. You heard that today.

You also heard from the Turlock Irrigation District. We own a third of that project and Turlock owns two-thirds of it. And that includes the dam and the reservoir and the powerhouse, a 200-megawatt powerhouse.

You also heard about the extensive studies that were done on that as part of the FERC relicensing and all the modeling that has been done. We were part of that, too, that effort. That project is very valuable to us. It supports approximately $4.1 billion in output, more than $730 million in labor income, and close to 19,000 jobs a year.

As you heard throughout the day, surface water is critical to this area, it's critical to this irrigation district. And not just agriculture; it's critical to our urban homes, it's critical to our churches, to the schools that you heard from today, our businesses, and our industry.

You didn't hear today, but I heard from some of the other irrigation districts, that under this SED proposal, that during wet years, it's not too bad, but

it's when you get into the drought. And there's times when things collapse for us, and we would not be able to provide surface water to our customers.

We took a look at 2015, for example. And, on 2015, under the conditions right now as you heard today, we had to cut our deliveries by 60 percent. So, with 40 percent of deliveries that we delivered, a good portion of that was made up with groundwater. So, we were already impacted, and that was without this SED in place.

So, we looked at what happens if this SED was in place. Well, first off, we would have a loss of about $1.6 billion in economic output, about 167,000 million in farm gate revenue, and a loss of 6,500 jobs. Basically, we would provide almost no surface water to our customers under that condition.

And, as you heard earlier today, a lot of our farming is permanent crops. And with permanent crops, when you don't have the water to give them, if they don't have their own wells with the capacity needed to keep those trees alive, those trees will die, and that would be a huge impact.

Putting numbers aside, I think you heard throughout the day about, with this proposal, it will definitely have a huge impact on groundwater

sustainability, impact our drinking water quality and quantity, also impacts our hydroelectric economics and operability.

I think you heard earlier, and it's true, we're a third of that project, and we rely on Don Pedro. And, in the summer, it's very valuable for us for operations. And under this SED, a lot of the operation would have to be shifted to spring when it's not nearly as valuable.

We also heard a few speakers talk about the quote from your staff that this will have a significant and unavoidable impacts. And that's definitely one thing we can all agree upon.

I also agree with the comment that Les Grober made on the October 18th County Board of Supervisors meeting where he said, "There are smarter ways to do this with less water supply impact." And we strongly agree with that.

As you heard from Turlock Irrigation District, we have done extensive studies. We think there are a lot better methods to be able to provide for the fish. We think there's sound science and practical solutions to achieve the goals for fish and water quality.

So, what we're going to do today when I turn over to the rest of staff is try to communicate some of these things. You will hear today problems, as well as

solutions.

So, with that, I'm going to go ahead and turn it over first to speaker John Davids, again, our AGM of water operations.

MR. DAVIDS: Well, thank you for that, Greg.

And good evening, Chairperson Marcus, and fellow Board members.

CHAIR MARCUS: Good evening.

MR. DAVIDS: I think you're going to hear some common themes in what I have to say. But, also, I hope there's going to be some clarification with respect to comments that you heard earlier in the day, specifically, with respect to our relationship with the City of Modesto, and also groundwater within the Modesto Subbasin. In addition, I'll try to introduce some new thoughts. I'll tell our story from an operational perspective. And then one person -- one thing I can guarantee that I won't do, is I won't talk about 1,100 fish. Okay? So, we won't go there.

CHAIR MARCUS: Thank you. Thank you so much.

MR. DAVIDS: So, as Greg mentioned, my name is John Davids, and I'm the Assistant General Manager of Water Operations for Modesto Irrigation District.

As you can tell from today's turnout in both the Stockton and Merced hearings, our region is united.

We are focused and we are passionate about our history, our resources, and our future.

As AGM water operations for the second oldest irrigation district in the State of California, I have the honor of working with some of the most dedicated and passionate water professionals in the industry, many of whom have stuck around into the evening to hear this wrap up.

Together, we're responsible for the delivery of irrigation water to over 60,000 irrigated acres and the wholesale delivery of safe, reliable drinking water to 250,000 residents and 6,000 businesses.

As a resource manager, my comments will focus on the very practical impacts posed by implementation of the SED, specifically, impacts on reservoir operations, surface water supply, and groundwater.

So, with respect to reservoir operations, I'll let our story begin in 1971 when the construction of the New Don Pedro Reservoir was completed. Unlike other reservoirs in the state, and reflecting the importance of maintaining local control, the City and County of San Francisco, TID and MID financed nearly 90 percent of the total project cost. As constructed, New Don Pedro Reservoir has a maximum capacity of approximately 2 million acre-feet and, on average, the watershed yields

about the same volume. MID's founders were visionaries, they were courageous, they were pioneers, and they believed in bring the collective dreams of a region to a reality without government handouts.

As documented in our centennial book, *The Greening of Paradise Valley*, recreation in New Don Pedro Reservoir was always considered frosting on the cake. Today, we unequivocally know its significance beyond simply water supply.

As California's sixth largest reservoir with a surface area of 13,000 acres and 160 miles of shoreline, New Don Pedro Reservoir has served as a recreational destination for over 40 years. So far in 2016, we've seen nearly 200,000 visitor days in New Don Pedro Reservoir. This represents a 35 percent increase over 2015 when the recent drought was at its peak and New Don Pedro Reservoir was nearing historic low.

With this low, we saw boat ramps out of the water, hundreds of feet of mud between campgrounds and the shoreline, along with dozens of exposed boating hazards. As a result, many of our region's citizens were left without an affordable local recreational destination, and many of the mom-and-pop foothill businesses were left clinging for survival.

Considering the fact that approximately

1.8 million acres of the SED's plan area is home to disadvantaged or severely disadvantaged residents with nearly the entire foothill population being severely disadvantaged, the impacts of your plan can only worsen economic conditions for an already struggling community.

Your staff's determination in Chapter 10 of the SED that there will be no physical deterioration nor reduction in the use of existing recreational facilities at lower lake levels because some boat ramps in New Don Pedro Reservoir are still operable at minimum reservoir elevations is wrong. There will be a significant reduction in the use of existing recreational facilities under what is proposed in the SED. This isn't hypothesis or a scare tactic. This is the harsh reality, one that we lived through in 2014 and 2015, and one that will grow in frequency and magnitude under your proposed alternatives.

Lastly, with respect to reservoir operations, your staff has included minimum reservoir carryover storage targets to help ensure implementation of the flow objectives with management by a yet-to-be defined STM Working Group.

So, recall moments ago when I noted that the City and County of San Francisco, TID and MID, financed nearly 90 percent of the total project cost for the

construction of New Don Pedro Reservoir. For many us in this community and in this room, it's unimaginable that the state would propose to undermine the vision, courage, and determination of our predecessors.

From a practical perspective, these limitations will hamstring my operational flexibility as a local water manager, especially in sequential dry and critically dry years. This isn't a game for us. It's a science predicated on a solid understanding of the watershed and over a hundred years of making the tough decisions that must be made to succeed. We aren't shortsighted in our annual decisions. We balance the resources with the needs of our customers, our community, and the environment both in the near term and the long term.

So, today, on the heels of the worst drought in recent time, New Don Pedro Reservoir sits at 73 percent of capacity. We get responsible sustainable water management. We use the best available science, we plan for the future, and our successes are evident. To propose the managing of the system through the STM Working Group with an unknown set of goals and responsibilities is irresponsible and will be catastrophic to our region, our state, and beyond.

So, shifting from reservoir operations to water

supply and establish a little bit of context for my comments, I think it's important to first understand a few basics. So, my use service area covers approximately 180 square miles and over half the irrigated acreage is in permanent crops. Today, approximately 75 percent of MID's cropland is irrigated with flood irrigation, with a remainder in, quote, unquote, high efficiency irrigation, drip micro-irrigation systems.

In addition to our agricultural customers, we also provide safe and reliable drinking water at a wholesale price to the City of Modesto for its citizens and businesses.

MID's customers, ag and urban alike, have historically enjoyed a very reliable water supply. But let me be clear that there's parody between our ag and urban customers, both from a price and a water supply perspective.

In a December 12th, 2016, technical workshop, your staff noted that with respect to the calculations performed in the SED, the City of Modesto has had their supply held constant at 30,000 acre-feet. So, neglecting the nearly 10 percent difference relative to the true full allocation of 33,602 acre-feet, the City of Modesto's surface water isn't constant from year to year, but instead it fluctuates according to MID's

determination of available water on an annual basis.

In 2015, when MID's available water supply was a mere 40 percent of normal, the City of Modesto was allocated just 13,000 acre-feet of safe, reliable drinking water off the Tuolumne River, less than half of what your staff has assumed for the purposes of the impact analysis in the SED.

So, from MID, this isn't an ag versus urban fight. Any reduction in available surface water will have equally significant and unavoided (sic) water supply impacts to both our ag and urban customers.

Rather than staining water deliveries to both our ag and urban customers and nearly nine out of ten years, implementation of the SED will result in shortage to all of MID's customers one-third of the time, with annual shortages peaking at at least 20 inches per acre over 150,000 acre-feet. So, with that average annual divergence of approximately 300,000 acre-feet, this amounts to half of our annual supply.

Let me be clear that movement to high-efficiency, on-farm irrigation systems cannot mitigate the impacts of these shortages. This isn't something that we can conserve our way out of.

Mr. Grober, at the December 12th, 2016, technical workshop, noted that a move to high-efficiency

irrigation systems results in decreased groundwater recharge and that this is, in his opinion, an interesting problem. From a local perspective, the problem isn't just interesting, it's real.

Your staff's reliance on the differential and applied water between flood irrigation and the high-efficiency irrigation systems is not supported. The differential, in fact, is minimal at best. What we do know is that there's more consumptive use by the crops irrigated with high-efficiency irrigation systems, which equates to hire yields, but that means that less water moves beyond the root zone as deep percolation.

The current SED proposal would make our ability to ensure sustainable groundwater for the future generations an impossible feat. Your proposal would inevitably result in our citizens and businesses not having a safe, reliable source of water, and would further endanger the listed terrestrial species that rely on the agricultural lands and wetlands for their survival.

As you all know, the Modesto Subbasin is one of the two subbasins within the San Joaquin Valley not determined to be in a condition of critical overdraft. And you heard some of that today. This isn't by accident. Reliable surface water supply's effective

conjunctive use and cooperative agreements with other local agencies within the Modesto Subbasin have achieved sustainable groundwater management well before sustainable groundwater management came into fashion.

As local water managers, we understand the importance of the health of our groundwater aquifers, our backup source in drought times. Our management decisions over the past 100 years provided us with the insurance policy that helped use weather the 2014 and 2015 drought.

Since 1994, MID has delivered nearly 700,000 acre-feet of safe, reliable drinking water to the City of Modesto, which would have otherwise come from our local aquifers.

So, through this partnership, we've significantly reduced their once sole reliance on groundwater.

The response to our aquifers is remarkable. A significant cone of depression beneath the City of Modesto has substantially recovered. Instead of losing water near the city along the Tuolumne River, the Tuolumne River is once again a gaining waterway, and groundwater quality continues to improve. This is success predicated on opportunity. Opportunity to solve local problems with local resources for local benefit. For your staff in the SED to cast the impacts to

groundwater as speculative is disingenuous.

As MID's water manager, I can tell you without a doubt that to make up for surface water shortages forecasted in the SED, MID and its customers alone would have had to have pumped an additional 1 million acre-feet of groundwater from 1971 through 2012. During the worst years, and assuming the speculative existence of even the necessary infrastructure to pump that water, groundwater pumping would reach as high as 150,000 acre-feet.

So, one thing I hope we can agree on is the sheer magnitude of these numbers. And, contrary to the calculations presented in the SED, this results in a negative change in groundwater storage. Simply put, this is not sustainable and violates the Sustainable Groundwater Management Act, which affirms this state's policy that groundwater resources must be managed sustainably for the long-term reliability, multiple economic social and environmental benefits for current and future beneficial uses.

SGMA was constructed around the premise that locals know best how to solve local problems with local resources. And, again, you've heard that in this subbasin there's proof positive that this paradigm works and it works well.

As a father and marriage counselor, coach,

mentor, financial advisor, confidant, and friend to the 80 employees that I manage on a daily basis, I understand opportunity.

What you have presented within the context of the SED robs this region of our opportunity to sustainably manage our collective fate into the future as we have done since our forefathers transformed an otherwise arid landscape.

To describe the impacts of your proposed actions as significant and unavoidable is unnecessary by our standards.

As you can see from today's attendance, what's left of it, this region stands united, we stand firm, and we won't endanger the future of our generations to come. We are more than willing to work with you on a solution that benefits the fish and the environment while allowing our communities to prosper. We are the day-to-day operational decision-makers and the experts on our rivers. No one is more invested in preserving them for the future than we are. We are absolutely committed to improving the health in native fisheries and at Tuolumne and San Joaquin rivers. We, as a region, are poised to do just that, and we intend to do it on terms founded on the principles of sound science.

We look forwards to durable solutions that

ensure our long-term sustainability, economic viability, and health of an otherwise underprivileged, disadvantaged, and economically distressed area.

CHAIR MARCUS: Thank you.

MR. DAVIDS: Thank you.

(Applause.)

MR. MOORE: Thank you very much. Before you get started --

Thank you, Mr. Davids, and, clearly, we respect the long heritage here and your diligent efforts and your statement of the goals for water resources management that are broad and diverse, and we appreciate that commitment.

You did state in pretty firm uncertain terms in your remarks just now that "Flood irrigation works and we shouldn't mess with it. We figured it out. This is how we manage our basin." Well, I talked to folks in Israel and I asked them about this area of our state and what they think. Because, you probably know this, but, in Israel, it's not legal to flood irrigate. You actually go to jail. And it's a different culture --

MR. DAVIDS: Sure.

MR. MOORE: -- a different setting and all that. So, I asked them, "Well, what would I tell my colleagues, you know, in this part of our state?" You

know, "What are the compelling reasons to move to high efficiency?" And I think you know the list, but you prevent migration of salts and pollutants to the groundwater, and you help solve water quality problems, you pump less groundwater, which causes greenhouse gas emissions and energy use and that sort of thing.

So, if we take a step back, there may be opportunities for high-efficiency irrigation that we haven't collectively explored and completely thought through. And I was wondering if, you know, there's an open door there do you think to be able to solve some problems?

MR. DAVIDS: Absolutely. I think that we're, you know, as a district, we're focused on being as progressive as we can. So, we're always open to that. But, again, you know, I think it can't be overstated within the context of today's discussion that the fact that the Modesto Subbasin along with the Turlock groundwater basin is in a condition that it is, based, at least, on the past of flood irrigation and the migration of water through the root zone and through the soil profile for the benefit of the aquifer.

So, are we open to that? Yes. But I also want to be cognizant of our future with respect to SGMA and this region's commitment to comply with SGMA. But,

absolutely.

MR. WENGER: And I would like to touch on that, too, a little bit, as a farmer in the area who predominantly flood irrigates.

I think, first off, with all due respect, if you're looking for expertise in farming in the Central Valley, Israel might not be the place to go. You might want to talk to the Central Valley farmers.

(Applause.)

MR. WENGER: So I'm glad you're here to do that.

(Applause.)

MR. MOORE: Of course.

MR. WENGER: But there's always things to learn and we like to look at other countries and nations. I know Australia became popular as one to look at during their millennium drought and things they did. And I know that from a lot of tours that have gone on that really Australia has gotten up to speed with what California was doing 20 years ago.

CHAIR MARCUS: Yeah, that's true on a lot of things.

MR. WENGER: On a lot of things.

CHAIR MARCUS: They've done -- some things are ahead, but I agree, they were catching up with us fast in

a crisis.

MR. WENGER: Yeah. For a lot of it, for the most part, it was overstated that we needed to take some lessons from Australia.

And I think you have some valid points when it comes to water use efficiency, but, at the same time, part of the problem when it comes to determining best usage for irrigation in any region is also dictated by temperature and climate, it's dictated by soil types, and it can vary from --

CHAIR MARCUS: Right.

MR. WENGER: -- one place on one side of the street to your neighbor's place on the opposite side of the street. And you might have a ten-acre block with various soil types. The ground at my house where I live, if I towed (phonetic) peas, you're going to get stuck if you try and drive it. It's just very clay, very heavy soil.

I've got another ranch that I can irrigate, and these are both flood irrigation, I can irrigate it, put water on it at 11 o'clock at night. I finish a check in three hours. I come back at 6:00 in the morning, switching another check, there's no standing water left in the field. It's gone.

And the advantage to that, with flood

irrigation on those sandy soils, is you do see significant groundwater recharge. And, in our irrigation district, we do like to brag that we do have sandy loam soils in a large part of the Modesto irrigation district.

And it goes back to some of the things you folks heard earlier about what are the two subbasins in the Central Valley that are not listed in critical overdraft. Well, they're two of the irrigation subbasins involve two of the oldest irrigation districts that have had very good surface water supplies, that have not had to rely on groundwater and are primarily flood irrigation.

So, it does stand to reason that flood irrigation does have its place if it's located in the right climates, the right regions, and the right soil types.

MS. D'ADAMO: I got to jump in here. I couldn't agree more. There's no one size fits all. I think, in Merced, they don't -- they have quite a few canals that are unlined. And, then, in other regions, you're looking at efficiency measures by lining canals. And I agree with the comment made about, you know, the irrigated lands and movement of salts.

One of the exciting things about settlement is that we can look at this in -- all of these issues from a

holistic perspective. And, from what I understand, part of the settlement discussions do include discussions about groundwater recharge and targeted recharge. So that we can --

CHAIR MARCUS: Targeted recharge, yeah.

MS. D'ADAMO: -- really move in maybe a smarter way at recharging the groundwater basins where it makes the most sense.

MR. WENGER: Absolutely. And I guess I'll just keep going since I'm next up.

CHAIR MARCUS: Yeah, go.

MR. WENGER: Jake Wenger, a fourth-generation farmer here in the Modesto area. I've been raising the fifth generation, who's actually watching -- been watching all day on the webcast. And, for three little kids, keeping them entertained on -- they've even been getting something out of it.

CHAIR MARCUS: That's good. You're allowed to wave if you want.

MR. WENGER: Well, it's bedtime.

So, I've been on the board of directors in the Modesto Irrigation District for three years. And talk about a tough time to decide to jump into the world of water and get on an irrigation district board. We --

CHAIR MARCUS: Oh, talk about it?

MR. WENGER: We get the drought. We end up with some of the lowest allotments -- or the lowest allotments we've ever given out to our growers in the history of the irrigation district. In turn, it's the lowest allotment to the City of Modesto. We see significant water cutbacks. We see -- and, during that process, we have FERC relicensing. And, during FERC relicensing, we have now the SED process, which, as you know, goes sort of hand in hand with our FERC relicensing.

And you get through the drought, and, last year, we really end up in a situation the reservoir where we had an average year and we filled our reservoir, because our forefathers had the foresight building a reservoir with just over 2 million acre-foot capacity, 2,030,000 acre-foot storage capacity. And the average yield for our watershed is right at 2 million acre-feet. So, the nice thing is, in a drought year, we had an average year and were able to pretty much bring our reservoir back to good levels and come back out of it.

And, then, we get hit with the plan that comes out in September in the SED. And we look at, now we're losing significant portions of that. And I don't want to go into a lot of the impacts. You've heard more than enough of that over the last several days of hearings.

But I do want to talk about the possibilities that are coming through it. And we hear a lot about alternative measures and what else can we do besides these impacts that some of them are listed by your staff as significant and unavoidable.

And, Number 1, water will always play a part in that solution. I think the districts have always understood that. We've heard time and again that more water equals more fish. And I think that needs a caveat and a little more clarity. More water equals more fish if it's put in the river when the fish are present, at the right time.

CHAIR MARCUS: Right.

MR. WENGER: And functional flows are a key asset in managing and bringing back salmon to the river system. And when you hear the plan as a base unimpaired flow plan, it doesn't instill a lot of confidence in the people who came up that that's what they were hearing, functional flows. But we hear about we're going to have releases through the year. We know that there's carryover storage in the plan. So, already, the plan is a little bit mislabeled as an unimpaired flow plan, because an unimpaired flow plan implies no impairment, or less impairment, and this one, according to your staff even during one of the technical workshops, there is no

scenario that made unimpaired flow work without carryover storage. And, right there, you have the fight on your hands that you saw today from a lot of very concerned and worried people. When you're talking about, for us, Don Pedro Reservoir, the sixth largest reservoir in California, the largest built without state or federal funds, this is people who believe in their water. And when you see it marked for carryover storage, you start having very concerned people who are going to come and speak like they've spoken over the last few days. So, we know that functional flows is going to be a key part.

But what we have been able to do through the last few years in FERC relicensing is, understand that we've done over 40 studies on the Tuolumne River during that time span. And we've found out that habitat restoration is as critical a component as functional flows, because you need places for spawning, you need places for habitat. And the districts have understood that for a long time. It's not something recent we just learned.

Over the years, since 1996, the districts have been involved in habitat restoration efforts in a much larger way. Through the Tuolumne River Technical Advisory Committee, we've completed four separate non-flow projects assisted our local fisheries and the

Tuolumne River.

Three of those projects looked at restoring habitat by placing different types of gravel in specific parts of the river to help with assisting different spawning behaviors, because there isn't a one-size-fits-all approach to habitat restoration just as there's not a one-size-fits-all approach to flow.

There's lots of other entities that we have partnered with on the river system, from CDFW to Friends of the Tuolumne, Tuolumne River Trust, NRCS, East Stanislaus Resource Conservation District, that we have worked very well with in making significant improvements to the Tuolumne River system.

In total, the districts have placed approximately 44,000 cubic yards of gravel habitat between river miles 50 and 43 since 1996. Additionally, there has been another approximately 178,000 square feet of riffle spawning habitat that's been placed into the lower river by various parties between 1999 and 2003. So, there has been a lot of significant work that has already been done. But what can we do?

So, a lot of studies that we've been doing through FERC relicensing has identified other ways to be able to help the fish. And the primary concern is how do we help juvenile salmon grow strong in our river so that

they can out migrate. Don Pedro studies have identified at least five reaches of the lower Tuolumne River that could be targeted with various gravel augmentation measures to improve the likelihood for successful spawning and juvenile rearing if we act to improve the type of sediment upon which the fish depend to lay their eggs or to raise juveniles.

Don Pedro studies have identified in-river benefits to fish and wildlife by also planting native riparian vegetation along the sides of the river to create a more biodiverse habitat along the sides of the river that offers the benefits of shade and cover. And, let's be honest, for those of us that like to recreate on the river, it looks a little better, too.

But that alone does not also get us to where we need to go. Additionally, it's sort of what's become the four letter word a lot of times in dealing with this issue, which is "predation." And I know that there's been a lot of discussion, and you get a lot of the people from the NGO side and from the fisheries and who -- it's a word they don't like to hear said. But, if we're talking about helping a protected species, you also have to talk about how we're going to deal with the things that are eating them.

And I've heard throughout the hearing that,

"Well, more water is going to help that. If we put more water down, we see predation numbers decrease." Maybe to a point. But I'll put it a different way. If we're all leaving here tonight walking across the street to the parking garage and we found that Modesto had a serious problem, there was a pack of coyotes that lived in the crosswalk, and any time that big flush of us was leaving here to go to the garage and we were getting ripped apart by coyotes, we'd have a problem. We'd go to the city council. We'd say, "You have a problem. There's coyotes in the street by Brenden Theater." And they said, "Don't worry, we have a solution."

CHAIR MARCUS: "We'll send more of you."

MR. WENGER: "We're going to widen the crosswalk to a city block, and, that way, a lot more of you are going to make it across and we're going to diminish the problem." The City of Modesto would have a few people showing up to their counsel to say, "I think you're missing the point."

So, I think when we want to discuss the issue of predation we do have to understand that it is going to require addressing and perhaps eliminating some predators at times. And, when I say "eliminate," we're not removing a species from the river system. But we did find that during our studies, in 2012, for instance,

during FERC, we did a predation study that determined that 96 percent of juvenile salmon were lost due to predation in that year. That was a drought year, and you can add all the caveats. FERC even went on and we were asked by some of the state agencies and fish agencies to do a more detailed study. FERC ordered us to do that study. We said, absolutely, we'll do it. Not at first, but we relented and said, okay, we'll go ahead and do the study. We couldn't get the permit from Fish and Wildlife to do the more detailed study.

So, being that we couldn't get the permit, FERC went ahead and said that the study that we did perform would be the study of record for predation for our FERC license. So, while a lot of people don't agree or find something else, it is our study of record.

So, we do know that predation is going to be a serious problem. And what we did find is there's a 10-percent reduction in predation, and we saw it in TID's presentation earlier, would be equal to the benefit that your staff says we would receive a 35 percent unimpaired flow. So, now, when you start taking into consideration functional flows, habitat restoration, and depredation, you're starting to significantly minimize the impacts on our communities while extremely benefiting the salmon population on the Tuolumne River. And I think that's

what we've all been pushing for.

And we've kind of gotten a little away, and I think it's good from the argument that it's fish versus farmers, because it's not. It's more communities. But it reminds me of a quote that's one of my favorite quotes, by William Jennings Bryan, who said, "The great cities rest upon our broad on fertile plains. Burn down your cities and leave your farms, and your cities will spring up again as if by magic. But destroy our farms, and grass will grow in the streets of every city in the nation." The interesting thing about this plan is it's not just the farms that are threatened, it's the farms and the cities. And if we burn down the farms and the cities in the Central Valley, we have nothing left.

So, I appreciate that your Board has asked for voluntarily agreements and made it very clear that you would look for voluntarily agreements. But I think we do need more assistance in that because, on one hand, we've got a 3,800-page document of things that make people very unhappy, and, on the other side, we've got something that's not very specific that's really two words, "voluntary agreements." But being that you are the governing body that would have to accept any voluntarily agreement, I think it would be helpful to find out, what would you like to see as part of voluntary agreements?

Is there biological objectives that you would like to see maintained? Who are the parties that would you like to see involved and participating in this? What is the time frame that you would like to see this happen in? And when we talk about working with the Board, I think this would be a great step in being able to mend some of that miscommunication that's happened and set up some guidelines to provide these voluntary agreements their best chance for success.

I think along with that, we would like to join the U.S. Fish and Wildlife, Bureau of Reclamation, the Department of Energy and those who have asked for 120-day extension on the comment period, I think that would be a wise decision and helpful in pushing forward on voluntary agreements so that we at the districts and those in the area can continue to work with you guys and the state agencies and the fish agencies and the environmental organizations that we've already been working with to develop a plan that will avoid these significant and unavoidable impacts that are in the SED.

Thank you.

CHAIR MARCUS: Thank you very much.

(Applause.)

MS. LUCAS: Good evening.

CHAIR MARCUS: Evening.

MS. LUCAS: Thank you all very much for staying this late.

COURT REPORTERMR. PETTY: Can you speak more directly into the microphone, please?

MS. LUCAS: Okay.

CHAIR MARCUS: Yes, just pull it closer to you so you don't have to lean forward.

MS. LUCAS: Good evening. Thank you all very much for staying this late and for coming to Modesto.

As you've been told, I'm Ronda Lucas, and I am the General Counsel of Modesto Irrigation District. I'm even newer to Modesto Irrigation District than Director Wenger in that I was hired, I believe, ten months ago. So, I guess I should thank you for making my career so exciting and challenging in my new role at Modesto Irrigation District.

I would like to take a few minutes to do that awful thing we lawyers have to do and talk a little boring process and point out to you some of what we consider to be just some legally deficient flaws in the SED.

As you all know, the SED is a CEQA-equivalent document.

CHAIR MARCUS: Right.

MS. LUCAS: It is to inform you, because you

have a difficult job to do, and we understand that. You have to balance the needs of the fish, the needs of communities, the needs of agriculture. And that is really difficult.

When you have a document that is so fundamentally flawed that it doesn't give you a clear picture about tradeoffs, about assumptions, doesn't even clearly define your project, it makes your job almost impossible. And, unfortunately, the SED as currently written, in our opinion, respectfully, is deficient on its face because it doesn't adequately define the project.

Mr. O'Laughlin in Merced walked you through this somewhat yesterday, and he did a very eloquent job. We are a member of the San Joaquin Tributaries Authority. We obviously concur with his opinion and support his comments. I will not go into great detail there. But I would like to highlight, your project is an unimpaired flow, we believe. It's a 40-percent unimpaired flow -- or it's a range, excuse me, 30 to 50 percent. Your project is not a block of water. It's not flow-shifting measures. It's not carryover storage capacity. In fact, those things aren't analyzed in any great detail. They're just assumptions baked into your models. And, so, that is a fundamental flaw on its face.

Also, when your staff ran the models to support the SED and they just baked in carryover storage, they left out one critical aspect, you don't have a right to that carryover storage, arguably. We, as the Modesto Irrigation District, in partnership with the Turlock Irrigation District, as has already been stated, built Don Pedro. We are the trustees of that project, of that asset. We have constitutional obligations when it comes to the rates that we place upon our members, our customers, about what we can charge them, how we charge them, and that the benefits that we're charging them for stay in the district.

One of the huge benefits of Don Pedro is storage. We can't just give it to you. And, yet, without it, your models, your assumptions, don't work. That's a fundamental flaw on its face. And I don't, frankly, know how you get around it, respectfully.

I'm willing to work with you. We are clearly willing to have discussions with you. But these fundamental flaws have to be fixed in order for you to make an informed decision and do your job to balance the needs.

Another technical problem that we see with the SED -- and this is just a handful I'm going to touch on briefly. We will provide you much more detailed

comments, I can assure you.

CHAIR MARCUS: We need that, yeah.

MS. LUCAS: As I stated before, your project appears to be an unimpaired flow objective, or a regime, 30 to 50 percent. And pages upon pages of the SED are dedicated to analyzing and reporting the unimpaired flow and its various percentages on the three rivers. And you guys -- your staff undertakes this exercise because, as you state in Chapter 19, *The Analysis of Benefits*, quote, "Using a river's unaltered hydrographic condition as a foundation for determining ecosystem flow requirements is well supported by scientific literature." You go on to state, "Developing ecologically protective flow prescriptions concur that mimicking the unimpaired hydrographic conditions of a river is essential to protecting populations of native aquatic species and promoting natural ecological functions." And you have statements like this throughout the document. However, even the SED acknowledges that the unimpaired flow does not represent the unaltered pre-development flow regime to which the fish would be adapted. Native fish could not possibly be adapted to unimpaired flows, because unimpaired flows are a human invention and have never actually occurred in nature. So, it is impossible that these species would be somehow adapted to a flow regime

that never existed.

This basic fact undermines the SED's most fundamental underlying principle. In the end, your staff recognized the problem and presented, by this logic and technical flaws -- presented with this logical and technical flaw, found it necessary to declare by definition in Appendix C, quote, "For the purposes of this report, a more natural flow regime is defined as a flow regime that more closely mimics the shape of the unimpaired hydrograph."

In March of this year, the state agency that is expert in water resources, the California Department of Water Resources Agency, issued a report, Page 1 of which in the Executive Summary states unequivocally, quote, "Unimpaired flow estimates are theoretical in that such conditions have not occurred historically. In sum, the findings of this report..." and, again, this is the Department of Water Resources report, "...showed that unimpaired flow estimates are poor surrogates for natural flow conditions." So, your underlying premise is flawed.

And then the problem is compounded because, in listening to staff, particularly at the December 5th Technical Workshop, when we heard a little more about this carryover storage that was baked into the models and not fully disclosed or analyzed, it became clear that

this unimpaired flow really turned into a block of water, and it just magically morphed into a block of water.

So, after spending large amounts of time and pages stressing the importance of providing flows that mimic the natural flow regime of the eastside tributaries and the lower San Joaquin River and trying to show that unimpaired flow accomplishes this, the SED and your staff's description of how this plan is going to work completely abandons the very basis for its existence. And none of this is truly analyzed in a CEQA context. This is hugely problematic.

The flow shifting that has to occur causes huge amounts of water. For what reason? That's not an unimpaired flow. That's a block of water. Do you want an unimpaired flow, or do you want a block of water? Those are two fundamentally different approaches. And the distinction is critical. The block-of-water concept is why so many in this room and throughout this region believe this is a naked water grab. That's not an unimpaired flow.

The other problem -- one of the other problems with the document is, as we have all heard, we're concerned about the actual benefits you will see to Chinook salmon. I won't get into the 1,100 number. I think it's been illustrated that that is on your graph

and it's in your chart. But what I would like to stay is that the only quantitative -- it is the only quantitative estimate in the 3,500 pages on the effect of the roughly 300,000 acre-foot take of flow from us and the water users in this valley. We can sit -- and it will -- again, it's about 1,100.

But we call this the one-percent solution. Because the SED reports that the San Joaquin River fall-run Chinook population makes up about five percent of the total Central Valley fall-run Chinook population, and that's what is actually listed, is the Central Valley fall-run Chinook population. So, a 10-percent increase in the San Joaquin River will mean less than a 1-percent increase overall to the Central Valley fall-run Chinook population at a cost of 300,000 acre-feet of water, billions of dollars, lost revenue, devastating impacts to some of the most impoverished communities here in this region, a loss of food security and food viability, devastating impacts to local schools, increases in crime, and the list goes on and on. That doesn't appear to be a very well placed balance.

I'm about out of time, so one other flaw that I would like to hit upon, that it is a broad statement, is the use of averages. Frankly, the use of averages hides the true impacts and makes the analysis almost impossible

to really figure out. It masks the true impacts in the most critically dry years, which is where it matters most. That's when we need the water most, that's when the fish need the water most.

And I would just like to end with this useful analogy to drive home the point about averages. Let's pretend that all of us here today were locked in this room and it was airtight. And we're looked in here for 24 hours. But, don't worry, they're going to pump in oxygen for 22 of those 24 hours. That means there's no oxygen for two of those hours. But, overall, averaging throughout the day, we have a 92 percent supply of the needed oxygen. That's a pretty good average, but we're all dead. That's the problem with using averages.

I thank you very much for your time. I want to assure you, this is our river, this is our home, we are committed to fixing the river and we know how to do it. We stand ready, willing, and able, but not at the cost of our water rights, not at the cost of our growers, not at the cost of this entire community. Please do not water this valley and destroy this region.

Thank you.

CHAIR MARCUS: Thank you.

(Applause.)

CHAIR MARCUS: Thank you. A lot to think

about. That was very helpful there.

Next, Western United Dairymen. Thirty minutes.

Thank you very much for joining us.

MS. RAUDABAUGH: Thank you, Madam Chair.

CHAIR MARCUS: And for your patience as well.

MS. RAUDABAUGH: My pleasure.

CHAIR MARCUS: Just wait one second so I can --

Okay.

MS. RAUDABAUGH: Green light?

CHAIR MARCUS: Yeah.

MS. RAUDABAUGH: All right. Thank you, Madam Chair, members of the Board. I appreciate you extending this hearing, the opportunity to the members of the public. My name is Anja Raudabaugh. I am the CEO of Western United Dairymen. With my today, is Paul Sousa, our Director of Regulatory Affairs. He's here to back me up on quite a few of the technical details. He's usually wading in manure management all day long.

The Western United Dairymen is a voluntary trade association that -- and I'm going to move this along because I know that -- I recognize I'm probably the last one going, so -- I know everyone's been very patient today.

We're a voluntary trade association that represents a majority of the dairy farms in the state. A

state where dairy is the number one commodity at a farm gate value of $6.3 billion. This is the value of the commodity, not what the dairy family actually makes.

Dairy is unique to California's climate, geographic location in the world, and is in a symbiosis with all of California agricultural commodities.

Dairy families in California are highly adapted to their regions and remain codependent on agriculture's regional successes and failures. Ninety-nine percent of all dairies in California are family owned. The other one percent belong to the state in a different capacity.

The key survival component of the California dairy family has been their enhanced ability to diversify their components. Our consumers have a very strong desire for their products to be green, environmentally friendly, and so the industry has responded to reducing its carbon footprint by over 35 percent in ten years.

The California dairy industry, however, is in rapid decline. You can see the milk production in pounds year over year. We have just broken a 23-month consecutive decline in milk production. So, consequently, you see the average number of dairy farms in California rapidly declining. That is a red bar going down. We have lost almost 58 dairies just in the last six months in the state.

CHAIR MARCUS: That's actually a very good chart to have, because I know there's been so many consolidation. But that shows the actual amount is also down, it's just not consolidation.

MS. RAUDABAUGH: Yeah. And consolidation is --

CHAIR MARCUS: It's a helpful chart.

MS. RAUDABAUGH: -- pretty misleading because, again, we are talking about the reduction in actual dairy families even when that happens.

CHAIR MARCUS: Right. Right. Yeah. Right.

MS. RAUDABAUGH: So the California dairy industry's costs of production have been exceedingly high, essentially since the drought began. You can see a CDFA based chart where the cost of production really has hit an all-time high and sustained itself at a relatively high level since the drought began.

The California dairy industry benefits consumers, however, we have been able to keep a fairly average low consumer cost, and their consumers have benefitted from relatively low milk prices, which assures the product that is very healthy is also affordable.

The dairy industry is actually highly codependent on composting, and eliminates significant GHG emissions through its production practices.

This is a graph that shows the relationship to

almond whole values. So, again, the two number one industries, the one and two, dairy and almonds, are inextricably linked and one actually cannot exist without the other. We tend to feed almond hulls. It's a carbohydrate-based component in our TMR. So, we take what would ordinarily go into landfills and turn it into feed. And that's something that we're very proud of.

This is kind of something to lighten up the mood, pizza consumption is the heart of America. On any given day, one in eight Americans eat pizza.

CHAIR MARCUS: Oh, you're just trying to compete with coyotes.

MS. RAUDABAUGH: It's really a hard act to follow.

CHAIR MARCUS: The coyotes is really tough to beat.

MS. RAUDABAUGH: And we probably have more coyotes than we do pizza, so -- you know.

But one in four boys between six and nine years old actually eat pizza delivery every day. Because of our love for pizza, mozzarella is America's favorite cheese. And with per capita consumption of more than 11 million pounds per year -- excuse me -- 11 pounds per year per family.

CHAIR MARCUS: These are some great facts.

MS. RAUDABAUGH: Almost 60 percent of the cheese that California produces is mozzarella. And that ties the California dairy industry even more closely to America's love for pizza.

CHAIR MARCUS: Wow.

MS. RAUDABAUGH: Just if you needed something that was more relatability.

CHAIR MARCUS: That's right. And Sac Valley rice farmers are sushi. It's amazing.

MS. RAUDABAUGH: I'll leave that commodity out of the conversation, off the table, at the moment.

CHAIR MARCUS: That's right. Sorry.

MS. RAUDABAUGH: It's all good.

So, again, interest in, eggnog is actually rising. You can see that the peaks represent something around the holidays, and we are on track with selling more eggnog this year than we have in a very long time. So, we're very proud of that. One hundred and thirty-five million pounds of eggnog is consumed in the United States each year. That's a lot of eggnog.

One of the major flaws that we have found with the proposal is that GHG emission impacts were not analyzed in the document. The California dairy industry has recently been regulated for methane, which is a short-lived climate pollutant, classified as a GHG.

Methane's ability to be quantified by both the ARB and the industry is not finite or accurate. We have very few reporting tools that actually quantify that, and we are right now trying to hit and meet targets that we cannot identify baselines for.

The increase in GHG as a result of the SED proposes a serious risk of non-compliance for the dairy industry because of subjective baselines. We're very alarmed about that.

And shifting river flows earlier in the year reduces hydropower, which is a GHG neutral power source, during the peak summer power demand. The loss of power is likely to be at least partially offset by power sources with greater GHG emissions.

And, if dairies cannot grow their feed locally, they will likely purchase or grow feed in more distant places, increasing transportation emissions and, therefore, increasing your GHG linkage issues in the State of California.

Continuing on, the GHG emission impacts will be increased under the plan. As a result of not having surface water available to grow their feed, the inevitable shutdown of dairies in California will lead to major GHG leakage from the displacement of this commodity elsewhere in the world.

Other countries located on the Pacific Rim that will be natural trade partners for California dairy need -- and the U.S. dairies' needs are not a fraction as carbon compliant as we have become.

The conversation about water quality and CV-SALTS is very relevant to this Board. And we'd certainly like to touch on that briefly. Open to more questions. But it is a process that we are fully committed to and have a tremendous amount of investment in. We believe wholeheartedly that the CV-SALTS process will benefit all users and have some long-term goals that we can all meet. It's been working with stakeholders to develop a regulatory process that allows more certainty in industry permitting while ensuring that everyone gets safe drinking water.

Without high quality water to recharge our aquifers, groundwater quality will decline, as we have seen as a result of the drought to date. I know you know that. But this leads to water quality issues for one had everyone, especially for disadvantaged communities, which we happen to surround. CV-SALTS has been working with those disadvantaged communities along with many, many varieties of stakeholders to address this issue but plans to make it -- but this plan makes its job quite a bit more difficult.

The State Water Resources Control Board should consult with CV-SALTS to minimize the impact of this plan on disadvantaged communities and the CV-SALTS efforts. And if you need, there is lots and lots of documents that we can provide, and we'll be providing in our written comments for your reference.

The document fails to consider nutrient management in the economic analysis. Livestock operations, for example, must take into consideration nutrient management at all times. It's one of our number one concerns in the dairy industry.

And while producing alfalfa may be a low value use of lands, as stated by the document, livestock operations may not be presented with a clear choice to fallow that land or convert it to tomatoes, for example, because they need to spread their manure out.

Regulations state that the amount of nitrogen you can apply is tied directly to the amount of nitrogen you can remove. So simply having the acres to do it does not work if there's no crop to remove the nitrogen.

By omitting this linkage between land use and livestock operations, the result of the economic study are skewed and inaccurate.

Again, continuing on the failure to consider nutrient management in the economic analysis. According

to the conclusions of your own economic study and your staff has derived from this proposal, optimal returns to farmers are reached only as water becomes scarcer. And the crops most affected are pasture, alfalfa, rice, and other field crops.

The document states that these crops face the largest reduction because they require relatively high water use and/or generate lower net revenue per acre when considered -- compared to annual crops, such as almonds or pistachios. The modeling results predict that the higher value crops, such as tomatoes, are less affected by reduced surface water diversion than lower value crops because farmers would be expected to fallow lower value crops first.

Decisions regarding land use sometimes are part of an entire operation and cannot be isolated. Livestock operations, for example, must take into consideration nutrient management. While producing alfalfa may be a low value use of the land, livestock operations may not be presented with any further clear choice that that land has to be fallowed, and they need it to spread their manure.

Again, continuing on this topic. Manure management, air quality, and water quality are inextricably linked to operating a sustainable dairy that

meets with California's high standards of green progress.

The SED will force dairies out of compliance with most of their operating permits and all of their operating regulations as a result of restricted surface water.

Moving into some of our comments with more relative terms about CEQA. And this comes from the perception that CEQA is also here to save us as a protected resource in California.

The distinction is really important between a substitute project EIR -- subject EIR versus a project EIR because the SED represents a deferral of environmental and economic analysis. Environmental analysis in the document is deficient towards local agriculture, local water supplies, and total impacts, which we just discussed as part of the economic analysis, and instead the SED explicitly defers analysis over 800 times in these same resource areas.

The full project EIR should be conducted that includes a full analysis under the Public Resources Code, including, but not limit to proper use of what we are labeling as a SWAP economic analysis, any full economic analysis for IMPLAN.

We have -- I've provided you with supplemental written comments. I don't want to bore you or the

audience with -- this is an expert opinion from an economic and agriculture economist that we have under our employ.

Continuing with some of the deficiencies, and I know that MID did an excellent job of covering some of our shared CEQA deficiencies, but because of the geographic significance of this proposal, this should equally be considered as part of our programmatic document.

The suggestion in the document that the previous Bay-Delta Plan is the programmatic document for which all analysis and decisions should be tiered and plan amendments is completely unreasonable, in our opinion.

There's no reference to SGMA. We've been through this. SGMA will have dramatic effects on the region. And certainly not a legal use of the term "later activities" of a geographic region.

All of the baseline conditions, especially as it comes to nutrient management for the fish, for agriculture, and for climate change, have changed dramatically compared to the prior programmatic document.

So, again, moving into the topic of deferral of analysis, the CEQA requires that the significant impacts to any one or all resource areas must not be deferred to

a later date. In all categories of regulatory compliance for the dairy industry, impact is deferred.

Nutrient management equals water quality for us. They are completely linked and we cannot separate the two.

GHG, short-lived climate pollutant management, equals air quality for us. We cannot separate the two.

The real cry for social justice here is equally important for the Board's consideration, and CEQA is required to save agriculture in this case.

Suggestions for collaboration. I know this has been a very hot topic today, so I'd like to see if I can touch on it. Because the California dairy industry is currently in sharp decline, any further regulatory constraints on the industry cannot be suggested as possibilities for collaboration. Areas that are currently within the dairy industry's scope of production costs include, substantial and ongoing investment in the CV-SALTS process, substantial and ongoing investment in regional habitat solutions for salmon and fish populations. We are heavily invested with those in our local irrigation districts, and we look forward to seeing more productive conversations about that. Regulatory costs associated with water quality compliance for both the CDQAP program and future WDR requirements for the

industry are something we also look forward to working and collaborating with you on.

So, summary of comments. There are major economic flaws in the SED model as it pertains to the dairy industry. The lack of analysis for manure management, nitrogen application and overall nutrient management makes the analysis flawed and inaccurate. Tiered analysis from an aged programmatic document has resulted in systematically incorrect baseline assumptions for the dairy industry. The industry is ready to work collaboratively within its existing cost of production, but cannot suggest any further regulatory constraints as a viable option. CEQA is here to protect us all. Specifically, we feel that agriculture is also an endangered species. There's actually far more salmon than there are of us. The real cry for social justice is here and equally important for the Board's consideration.

I'd like to kind of finish by suggesting that when I look at the California dairy industry, I cannot talk about solutions for any one sector. I can't talk about the California dairy industry and not talk about my Southern California dairies. I can't talk about the industry and not consider my Northern California dairies. I have to look at it as a whole. And I don't think that you can look at water quality without discussing all of

the options that are available to fix the Delta. And that's really important for us to consider as a whole because I have dairies all over the state, and I know you consider that.

So, with that, I am here to answer any questions.

I'm not sure, Paul, if you want to add anything?

MR. SOUSA: I'll just briefly add a few words to that.

Again, I'm the Director of Environmental Services of Western United Dairymen. I've actually toured some of you on dairies. I look forward to maybe more tours, if you would be interested in doing that.

My family also has dairies in the Turlock Irrigation District. My father started a dairy in 1971. And, so, I also have a personal connection to this in addition to representing our members.

Some of the things we've heard here today, I just wanted to summarize I think that are very important. That the plan must consider SGMA. The plan states that groundwater will replace lost surface water, but SGMA is the law of the land and it has to be considered. And, in consideration of SGMA, the economic costs are going to be higher because there will be more lands fallowed and

lost, and that needs to be incorporated into the plan.

We also heard a lot about settlements today. And I just -- if this is about the fish, you know, water is not going to be the only piece. We've kind of heard that. But I think that settlements should look first at non-flow elements, I think that's very important, which achieves the same goals with lower economic costs.

So, in closing, I just want to say, please work with the districts. I think we've kind of heard that. The Modesto and Turlock Irrigation District were here earlier today. I know you've heard from the other districts. Please work with them to achieve solutions that we can all live with.

And I thank you again for coming to Modesto and staying out so late to listen to all of us.

Thank you.

CHAIR MARCUS: Thank you. And thank you. That was a very good presentation. And thank you for leaving it with us. And we'll read this as well.

MS. D'ADAMO: Now, I want pizza.

CHAIR MARCUS: Yeah, now you want pizza?

MS. D'ADAMO: So I realize you're talking about Western United Dairymen has a broad territory, so it's just not these three counties. But if you were to look at these three counties, could you compare the three

counties to the rest of the state in terms of the averaged dairy size? Because I think, overall, we're talking about smaller dairies here.

MS. RAUDABAUGH: That's true. These are, I would say, mid-sized dairies, so between 500 to 1,000 cows is the average for these three counties. But, representatively, there are about half of the dairies in these three counties compared to the rest of the state. So, this is a lot of the California dairy industry located and affected directly by this SED proposal.

MS. D'ADAMO: Okay. And then your presentation was excellent. Thank you very much. But, in very simplistic terms, as I understand it, so our staff is saying that, in the economic analysis, that there's an assumption that the water cuts are going to be absorbed by some of the lower value crops and water would go to the highest producing crops. But if you have a dairy and, Paul, maybe you would be the one to answer this question, if you have a dairy and you're growing alfalfa, you're growing feedstock for your dairy, are you going to be willing to fallow that ground so that you can move it to or sell it to somebody else, and what impact would that have on your dairy?

MR. SOUSA: Yeah, I can take this one. So, yeah, the report looks at shifting crop values and going

from low value to high value crops in order to justify the costs. But you're not able to do that as a dairy for a couple of reasons. Because your output is milk. It's not like you have land that, you know, tomatoes this year, bell peppers next year, maybe I'll plant some trees on half of it. You know, what you're producing is milk. And you need feed for your cows and you need to balance it with, Anya was saying, your manure that your cows are producing with the crops that you're growing.

So, dairy farmers don't have that ability to shift from year to year the crops. They need to grow crops that they can apply the manure to and that they can feed to their cows.

So, that flexibility that the economic analysis looked at is not there for dairy farmers. We're much more tied to the crops that we have. Their value on what's coming off of that field might look like low value, but, ultimately, what we're sending to market is the milk.

MS. RAUDABAUGH: And can I add to that? You hear a lot about this conversation from agriculture about the price takers versus price makers and let me see if I can do you one better. The California dairy industry is a California minimum state regulated price. So, our price is not within our control, and it is actually set

by the State. So, we have no ability to pass on any of these costs, which is why I've said very clearly, I hope, that we can only suggest things that are currently within our estimated cost of production.

MS. D'ADAMO: So getting back to the question that I had, would you have information that you could provide to us regarding the amount of acreage that's under control of those that are operating dairies. So, I'm just guessing, perhaps the economic analysis might be correct with respect to acreage that is not feedstock that is not grown by those that are operating dairies. So, for example, if an irrigation district did -- and I know many irrigation districts don't even allow for this, but if they were to change their rules to allow water to be moved from one farm to another, that perhaps those that don't have a dairy, they're selling the feedstock to a dairy, perhaps they would decide to move it to someone that's willing to pay more. In other words, someone that's growing permanent crops. Do you have some information that you could provide to our staff regarding the amount of acres that are under control by those that are operating dairies? In other words, that percentage would probably -- needs to be taken off the table, as far as, you know, moving it to permanent crops. Perhaps those that, you know, could make the choice because they

don't own a dairy, perhaps they would, if the irrigation rules would change, perhaps they might be willing to consider that. But just to give us an idea on, you know, what those percentages might be.

MS. RAUDABAUGH: I think we can do that. I think we would certainly like to defer to a colleague that testified on behalf of Yosemite Farm Credit. To be frank, it would depend on the way their equity situation was.

MS. D'ADAMO: Uh-huh.

MS. RAUDABAUGH: I don't see a whole lot of dairymen being able to -- because of their nutrient management requirements and their regulatory burdens, being able to make that decision. I mean --

MS. D'ADAMO: Oh, no, I'm assuming that they wouldn't. It wouldn't make sense.

MS. RAUDABAUGH: No, they would be going out of business.

MS. D'ADAMO: Yeah. I'm really talking about acreage that is under control of someone that doesn't have a dairy.

MS. RAUDABAUGH: Sure. I will work to -- you've asked me that a couple different ways, so I think we can provide you more. We're going to provide some robust written comments by the end of the comment

period.

MS. D'ADAMO: Thank you.

MS. RAUDABAUGH: Yeah, definitely.

CHAIR MARCUS: Thank you. That's really good.

(Applause.)

MS. RAUDABAUGH: Thank you.

CHAIR MARCUS: Very helpful. You know I have a weak spot for dairies. I know, I go all the way back to DQAP, I know, Dairy Quality Assurance Partnership.

All right. Well, thank you very much.

The hearing will reconvene on January 3rd in Sacramento.

But, before we close, I really, really, really want to thank the people who came today, not just for the good insights, a lot that we need to take seriously and follow-up on and think about, but for the quality of the humanity and the spirit with which folks made their tough comments but which really helped give us a flavor for the impact on people but also the specific issues and the offers of assistance to work with us.

I think -- I always actually like spending time in the Central Valley more than anywhere else because of that quality, with only a few exceptions, actually. I think it's a far more effective way to present, frankly, and I can guarantee you it's had an impact on all of us

just through sharing concerns and thoughts.

I think we'll need to do a lot of thinking about what's been proposed about how we've written things, how we've looked at it, and what we're going to do. And we'll, as is our practice, we will take it all in, talk about it, sleep on it, "water, wealth, contentment, health" going through my mind before going to bed. And I just thank you all for being willing to engage with us. It's very helpful, and we really, really appreciate it.

So, with that, have a good holiday season, and I'm sure we'll see some of you very soon in the new year.

Thank you very much for having us here.

(Whereupon, at 7:40 p.m., the hearing was adjourned, to be continued on Tuesday, January 3, 2017, at 9:00 a.m.)

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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.

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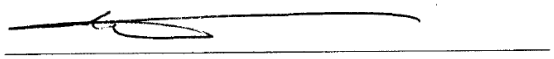

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IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of February, 2017.

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