CENTRAL VALLEY

REGIONAL WATER QUALITY CONTROL BOARD

ITEM 7

CONSIDERATION OF RESOLUTION APPROVING THE CLEAN WATER ACTION SECTIONS 305(b) AND 303(d) INTEGRATED REPORT OF THE CENTRAL VALLEY REGION

THURSDAY, JUNE 11, 2009

HELD AT

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

RANCHO CORDOVA, CALIFORNIA

REPORTED BY: ESTHER F. SCHWARTZ
CSR NO. 1564

ATTENDEES

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RANCHO CORDOVA, CALIFORNIA

THURSDAY, JUNE 11, 2009, 9:15 A.M.

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CHAIRMAN LONGLEY: We are back in session. We are on agenda Item No. 7. This is the time and place for receiving comments on the proposed 303(d) list of impaired water bodies and the 305(b) list on water quality conditions for the Central Valley region.

Anyone present who wishes to comment on this matter?

I have lots of cards here.

Since there are parties who are wishing to comment on this matter, we will proceed. This meeting will be conducted in accordance with the meeting procedures published with the meeting agenda. At this time, comments should be presented on the proposed listings.

Parties will normally be given three minutes to present comments. And I have had some requests for additional time. There is some indication the number of people wanting to testify. When you come up, if you need additional time, other than three minutes, please request it. Once again, if you're part of a group, if you can get together and pool

your comments, that would help us today. Regardless, we want to hear what you have to say.

We will now go with the staff presentation.

MR. BRUNS: Good morning, Chairman Longley, Members of the Board. I am Jerry Bruns. I am the Regional Board Program Manager for the TMDL program.

Today, the Board will be considering approving recommendations to send to the State Board regarding the region's impaired water bodies and condition of the other water bodies in the region. I am going to provide a brief overview, and then Danny Mcclure is going to provide the details. I have also with me Amanda Montgomery, sitting at the front table. She is the unit leader of the San Joaquin TMDL Unit. We have other staff also available to help answer questions and address comments.

As Danny will explain, this effort will satisfy requirements of the federal Clean Water Act for states to assess their water bodies and periodically report to EPA. In his presentation, Danny will be referring to an Integrated Report. In the past, the exercise of identifying impaired water bodies and the general exercise of assessing the condition of our waters was often done as separate efforts and presented in separate reports. These

two efforts have been brought together and combined into one report that is called the Integrated Report. That is what you are going to be hearing about today.

It is important to recognize how this assessment effort fits in with the overall Regional Board's process for water quality control. The Board's programs are generally, and you can see generally from this circular chart we presented here, basically supported by laws and regulations that have the rules that govern what we are supposed to do, how we are supposed to do it, including the Basin Plan, which has water quality objectives, beneficial uses and plans and policies for making sure those are achieved.

The Board implements control programs to make sure that the water quality is sufficient to protect the beneficial uses. And then we have, as going around, a continuous assessment cycle where we see how well we are doing at protecting beneficial uses and how effective our programs are being.

So this is sort of a continuous cycle that keeps going around and around. There is quite a bit of overlap. Each of the pieces of the cycle kind of go on at the same time. But right now we are doing

the assessment cycle, and that is what this agenda item is about today.

As you might imagine, for a region this size this assessment was a massive undertaking. There were hundreds of different data reports from dozens of different data sources to evaluate. We reviewed hundreds of pages of reports and data related to dozens of pollutants and hundreds of water bodies. Staff prepared over 1,800 fact sheets that explain how data was assessed for each water body and providing the rationale for impairment determinations.

Staff resources spent on this effort was similar to the resources that it would take to develop a major TMDL. The amount of information analyzed and the number of assessments completed was very similar to what was prepared during the last listing cycle by State Board for the whole state. The entire process from the start of data collection to the present was two and a half years of relatively intensive work. Throughout the process, there was always additional -- there was at least one or two staff working on this. And for the past year and a half, there has been staff in the TMDL and SWAMP programs that have been brought in to

assist on the effort. While this greatly improved the Integrated Report, because we were able to bring people together with the expertise and the various contaminants in the various watersheds, it also affected and delayed other work that we were doing in these programs, including work developing TMDLs.

However, ultimately the TMDL program will benefit from having a solid assessment framework to support the program. There are several reasons why this effort was done, and I'm just going to briefl talk briefly about what those were.

First, as mentioned earlier, a periodic comprehensive assessment like this one provides feedback on the effectiveness of our control programs. Second, the 303(d) list triggers requirements that the impairment be addressed by TMDLs or some other regulatory process. Third, the assessment helps determine program priorities in future years, including which water bodies should be high priority for TMDL development. And fourth, NPDES and other dischargers discharging to impaired water bodies may have additional monitoring requirements, special studies and/or effluent limits included in their permits, while TMDLs and other regulatory programs are under development.

That kind of concludes my brief overview. So I am going to turn it over to Danny. As Danny goes through this, it is important to recognize that while a lot of the presentation deals with areas where there are differences of opinion, there really is little controversy associated with much of the Integrated Report. Also, it is important to understand the process we used for evaluating the bodies was largely determined by State Board policy and State Board and EPA guidance. So with that, I will turn it over to Danny.

MR. McCLURE: Good morning, Chair Longley, Members of the Board. I am Danny Mcclure, an engineer with the TMDL program in the Sacramento office. I was lead in developing the 303(d) Integrated Report under the supervision of Jerry Bruns.

Here is an overview of what I will be presenting this morning. First, I will provide some background on the 303(d) list and what the Integrated Report is, the requirements for updating the 303(d) list under the state's listing policy. Next, I will discuss the Integrated Report, the methodology used to prepare it, and the results which is the Draft Final Integrated Report. Then I

will discuss comments received and responses to those comments. Then I will discuss next steps in the process. Finally, I will review my presentation and provide the staff recommendation.

There is a lot of information to present. Please feel free to ask questions anytime in my presentation, and I'll also stop periodically for clarifying questions.

So what are the 303(d) list and 305(b) report? Their names come from sections of the federal Clean Water Act. Clean Water Act Section 303(d) requires states to periodically develop lists of water bodies that are impaired. Meaning they are not meeting water quality standards. That's referred to as the 303(d) list.

Clean Water Act Section 305(b) requires the state to report on its overall quality of waters. So that is called the 305(b) report. USEPA guidance recommends that states submit a single Integrated Report, which includes both the 303(d) list and 305(b) report. So that is what I am referring to when I say the Integrated Report.

Some background on the 303(d) list. In California, the 303(d) list is updated every two to four years. When something is placed on the 303(d)

list, it requires a regulatory response to address the impairment. The types of regulatory responses that are appropriate are described in the state's policy for addressing impaired waters. The response can include development of a total maximum load, or TMDL. It can also include revision of the standard and/or delisting if more detailed evaluation shows the standard is inappropriate or the listing was not valid. The Board can also make a finding that an impairment is being addressed by third actions, other than a TMDL.

The 303(d) listings are also a consideration in other regulatory requirements. For example, additional monitoring, special studies and permit limits may be added to permits for dischargers that discharge to impaired waterbodies.

In 2004, the State Water Board adopted a listing policy, which all the regions and State Board must following in developing the 303(d) list. The listing policy requires us to assess all regularly available data. It also describes how the data must be analyzed. The listing policy includes a statistical test that must be used on all data to determine whether something should be listed or delisted.

In addition, it makes provisions for consideration of a weight of evidence as an alternative to the default statistical test. The listing policy also describes the administrative policy for adoption of the list, including soliciting data and responding to comments.

In my discussion I will highlight some of the listing policy sections which guided our actions.

In contrast to the 303(d) list, the 305(b) report looks at all waters, not just the impaired ones. The emphasis of the 305(b) report is how many of the waterbodies are supporting their beneficial uses. The 305(b) report is also updated approximately every two years.

I will stop for clarifying questions, if there are any. If there are none, then I will move on to talk about the 2008 Integrated Report.

This slide shows where we are in the process. The previous 303(d) list, or the current 303(d) list, was adopted by State Board in October 2006 and finalized by EPA in 2007. Solicitation of data for the current 303(d) list update ended in February 2007. Staff held a workshop on potential temperatures listings in the San Joaquin River watershed in September 2007.

In January 2008, about two years after the end of the solicitation period, we released a Draft Integrated Report for a 45-day period, ending in March. During that review period, we had a public meeting to discuss comments. After we received all the comments, staff read and responded to comments, making changes to the Integrated Report where appropriate. This was all included in the Draft Final Report, which was released a month ago.

So that brings us to the hearing today, where the Integrated Report, including proposed changes to the 303(d) list, are being brought to the Board for your potential approval.

After the Integrated Report is approved, it will be forwarded to the State Water Board for inclusion in a statewide Integrated Report, which will also go through a public process. Finally, this will all go to EPA for final approval authority on the 303(d) changes.

The scope of development of the Integrated Report was direct application of the listing policy and existing water quality standards. It did not include reevaluation of the designated beneficial uses or water quality objectives. The listing policy requires us to look at all available data.

I'll go into the data sources more in a couple slides.

So, we had data for 386 waterbody segments. We also had data for over 70 pollutants. Over 1,800 fact sheets were prepared. Each of those fact sheets documents a proposed decision on a potential change to the 303(d) list. The results of the over 80,000 samples were looked at in coming up with our recommendations.

This map here shows where the 386 waterbody segments assessed are located. As you can see, we have pretty good coverage of the waters in the region for this report. The first step in developing the 303(d) list update and Integrated Report was to assemble the data. Staff assessed the data in the 18 submittals we received. We also assembled all the data that was readily available as of the close of the solicitation period in January 2007. Data were available from several internal and external sources that are shown here. The major data sources are shown here. There were others. So, as you can imagine, there was a lot of new data not assessed before.

After staff assembled the data, it was assessed by comparing to water quality objectives. These

include the numeric water quality objectives in our Basin Plan. Examples of these include the Basin Plan objectives for dissolved oxygen, pH, bacteria, trace elements, such as selenium, and some pesticides, such as diazinon. Another example are the drinking water maximum contaminant levels.

We also compared data to the California Toxics Rules criteria, which was promulgated by USEPA in California. So the CTR numbers are treated the same as numeric water quality objectives in preparing the Integrated Report.

Since we do not have numeric objectives for all the pollutants for which we had data, we also compared data to the narrative objectives in our Basin Plan, such as the narrative toxicity and temperature objectives. This was done under the listing policy by using evaluation guidelines to interpret the narrative objective. The listing policy has requirements for what can be used as evaluation guidelines. These include: they must be protective, applicable, scientifically based and peer reviewed, and well described. Staff followed these listing policy requirements as well as the Basin Plan in selecting the evaluation guidelines proposed for interpreting narrative objectives.

Evaluation guidelines used include fish contaminant goals from the California Office of Environmental Health Hazards Assessments for mercury, PCBs and organochlorine pesticides. The evaluation guidelines used also include water quality criteria derived by USEPA for such things as E.coli bacteria, pesticides, ammonia and temperature.

So now that I have described the data sources and objectives and guidelines they were compared to, I'll describe the process of developing the assessments to come up with recommended changes to the 303(d) list. We didn't have the resources to write up fact sheets for all of the data, so we prioritized and focused mainly on evaluation of the data that would potentially affect the 303(d) list.

So first we screened all the data and identified potential 303(d) list changes where there were exceedances of standards. Those were assessed for potential listing. We also screened the data for potential delistings. Things that were listed where there was attainment of standards.

For the waterbody segment pollutant combinations that came out of the screening, we developed detailed fact sheets. The fact sheet

contained a proposed decision on a potential 303(d) list change and assessment upon which the proposed decision is based. The assessments are based on all readily available data. For consistency and information management, all these fact sheets were entered into a statewide database which is used to store some of the information and produce some of the reports.

The fact sheets contain Internet links to the sources of available data and evaluation guidelines, which has made it easier for people to review what we did and provide feedback. In addition to the fact sheets identified in the screening, staff also prepared fact sheets for all the SWAMP data in order to meet SWAMP program requirements.

In assessing the data, we had to make determinations of about how much of a waterbody was represented by the data. Waterbodies were divided into waterbody segments defined by factors such as dams, tributaries and differing land uses. Available data were then assessed for those segments. Many of the smaller waterbodies were not divided into segments, so the assessments were made for the whole waterbody.

This was an area where there is some

discretion and flexibility as to how the waterbodies are divided, and an area when we got a lot of comments and made a lot of refinements.

The 303(d) list decision recommendations in the fact sheets were then determined by looking at how many samples were taken and how many of those standards did not meet the objective. This statistical test in the listing policy was the basis for most of the recommendations.

In some cases where criteria or objectives contained an explicit frequency where half of the samples were allowed to be over the concentration, that was also used under the listing policy weight of evidence provisions. The completion date shown on the 303(d) list are the dates that the TMDL is targeted to be brought before the Regional Board. For TMDLs that are currently under development, the new term dates are what we have projected in our work plans. The dates are approximate for other TMDLs, which we anticipate completing in the next several years, and the rest are scheduled further out to the maximum 13 years from the year of the listing cycle. Those are all either 2019 for things already on the list or 2021 for those proposed new listings.

Potential source categories on the 303(d) list were determined by what we know about the pollutant and by land uses in the watershed.

I will stop again for clarifying questions.

CHAIRMAN LONGLEY: Any questions from Members of the Board?

You are doing a fine job.

MR. McCLURE: So now I will move onto results. Applying the listing policy to the available data, as described, led to 389 proposed additions to the 303(d) list. I would like to emphasize that an increase in the number of listings is not indicative of water quality getting worse, but more likely due to more data being available.

There are currently 342 listings for Region 5, so the proposed changes would bring the total to 708. Just for context, statewide there are currently about 2,000 listings on the current list. And after this listings cycle, there will probably be about 3,000. And these results I am presenting also include changes to the public review draft made in response to comments, which I will talk about soon.

So here is what the proposed listings are, proposed new listings. Of the new ones, most of

them are for pesticides, toxicity, mercury and bacteria. And a note on the pesticides, those are divided between currently registered pesticides and those of legacy pesticides that are no longer used and are still a water quality problem, such as DDT.

So here is the resulting list with the proposed changes. The majority of the listings are for pesticides, toxicity and mercury and metals and trace elements. This map shows the current 303(d) list waterbodies and the proposed new ones. Just to show the geographic extent of the proposed listings.

So here is what the proposed 303(d) list looks like for the Central Valley. This map also shows waterbodies in blue that were assessed but not found to be impaired. The 303(d) list update also includes 23 proposed delistings. Some of these document water quality improvements that are success stories for this region, such as diazinon in the Sacramento Feather and San Joaquin Rivers, metals in the Sacramento River near Redding, bacteria at Whiskeytown Reservoir, and selenium in the San Joaquin Valley.

The delistings also include correction of one erroneous listing for 2006 and a delisting for the San Joaquin River for salt. And the green lines on

this map show waterbodies proposed for delisting -- excuse me, waterbodies that have delisting proposed.

Now moving onto the 305(b) section of the Integrated Report. I am not going to spend a lot of time since it was not commented on. As I mentioned, the 305(b) report is a report on overall water quality conditions. This is done by determining an overall level of beneficial use support for each waterbody for all the pollutants assessed. These categories come from USEPA guidance.

The categories are: For the impaired waterbody Category 5, which is impaired and requiring a TMDL. Category 4 is impaired, but not requiring a TMDL.

For the waterbodies which were not found to be impaired: Category 1 is fully supporting all beneficial uses. Category 2 is fully supporting at least one beneficial use. And Category 3 is not impaired, but there is not enough information to determine beneficial use support.

For unimpaired waterbodies staff was conservative in assuming full beneficial use support, unless we had data for a reasonably full suite of pollutants. We did not assume we knew enough to say a beneficial use was fully supported.

This resulted in more unimpaired waterbodies being classified as having insufficient information, Category 3. This approach provides a more accurate baseline for future assessments. 305(b) categories do not affect the listing decisions. They are largely as a result of the listing decisions. The 303(d) decisions, in other words, largely control what category a warterbody goes into.

Here are the results for the 305(b) assessment. There are 260 Category 5 requiring at least one TMDL. Six Category 4. Those were impaired, but they have TMDLs for all pollutants so they don't need a TMDL. Don't need a new TMDL. Ninety-six Category 3, which were not found to be impaired, but there was insufficient information to determine full beneficial use support. And there are 24 in Category 2. This was based on their being no impairment and a finding that bacteria concentrations were low enough to fully support the water contact recreation beneficial use.

I will stop again for clarifying questions before moving onto comments and responses.

CHAIRMAN LONGLEY: Any questions from Members of the Board?

Thanks. Please proceed.

MR. McCLURE: We received over 30 comment letters on the public review draft. Some of which were quite extensive. We don't have time today to go through each of the commenters' comments, but I will be discussing the major comments. Most of which you will likely be hearing more about from the commenters. These comments came from federal, state and county governments, environmental groups, agricultural groups, pesticide manufacturers, water rights holders and municipal storm water and wastewater discharges. We received comments on approximately 150 assessments, mostly on the proposed new listings. So comments on about or related to about 40 percent of the proposed listings.

We received a few comments opposed to proposed delistings. We received several comments in favor of taking things off the 303(d) list, but staff did not propose to take off the 303(d) list, and a few in favor of adding things to the 303(d) list, which staff did not propose to add to the 303(d). Some of the comments were an expression of general support for the proposed 303(d) changes. As I mentioned earlier, there were no comments on the 305(b) categories.

A common comment was that the water quality objective and/or beneficial use upon which the proposed listing was based are inappropriate.

The staff response is that the reevaluation of water quality objectives and designated beneficial uses was outside the scope of this project. But the comment should be forwarded to our triennial review where the standards in our Basin Plan can be prioritized for reevaluation.

Another comment we received was that some of the proposed metals listings were inappropriate since they were based on total metals concentration and that the CTR water quality criteria were for dissolved concentrations only.

After reviewing this issue, staff revised our metals assessments for the relevant metals and made them based on dissolved data only. This resulted in the withdrawal of several proposed metal listings. Mostly for copper.

Another comment we received was that the evaluation guidelines used for pesticides were inappropriate. Staff response was that we followed the Basin Plan in selecting the evaluation guidelines used.

When numerical water quality objectives are

not available, our Basin Plan instructs us to use EPA or other criteria to evaluate compliance with our narrative toxicity objective. In places where appropriate criteria are not available, the Basin Plan provides guidance on how to use available data on toxicity of pesticides to sensitive aquatic species to determine interim limits. For several pesticides there were no numerical objectives or appropriate numerical criteria to use. So we evaluated data in the manner recommended in the Basin Plan. Some listings were proposed on these evaluations. We made sure the toxicity values used were appropriate for evaluating data under the listing policy.

Another comment we received was that we should use a different value to assess contaminant levels in fish tissue. Our response was that the OEHHA, that is the Office of Environmental Health Hazard Assessment, number used was appropriately protective for consumer's fish and consistent with other state and Regional Board assessments in past 303(d) lists.

CHAIRMAN LONGLEY: Could you comment on that a little farther? Fish tissue, is this primarily in the Delta for mercury?

MR. McCLURE: No. Throughout the region. I think this was primarily in reference to organo pesticides.

CHAIRMAN LONGLEY: So both in the Sacramento and San Joaquin Rivers?

MR. McCLURE: I believe so. I'm not sure exactly what, but I know it was in reference to some Sacramento and American River proposed listings.

CHAIRMAN LONGLEY: By the time you are done, if you can give me some more information on that, I would appreciate it.

MR. McCLURE: Sure. I will look it up.

Many comments were submitted on the proposed temperature listings for the San Joaquin and its major tributaries. These comments came from the San Joaquin River Group Authority and others.

As I mentioned earlier, we hosted a workshop in September 2007. Shortly after we received data submitted requesting to list from the Department of Fish and Game. The comments we received discussed that the natural temperature condition had not been determined, that the criteria used to assess the data was not attainable, that temperature was not the cause of the decline of salmon, that the criteria used to assess data was inappropriate.

And I'll go into the criteria in the next slide. Also, the narrative temperature objective in our Basin Plan was not applicable and that the beneficial use designation designated in our Basin Plan do not exist since fish populations are not healthy.

Staff's general response was that we followed the specific listing policy requirements for assessing temperature data that led us to recommendation to list. We also followed the recommendation of the Department of Fish and Game on the state of the species, potential contribution and appropriate temperature thresholds to support salmon.

The available data showed that temperatures in these rivers do not support healthy salmon habitat during multiple, critical life stages. Migration and spawning for these fish in the waterways under discussion are designated as beneficial uses in the Basin Plan.

Another comment relative to the temperature listings was that USEPA Region 10 criteria for temperature for the Pacific Northwest were inappropriate to use as evaluation guidelines.

Staff's response is that these were the best

available criteria, and they were recommended by the Department of Fish and Game. The criteria were applied appropriately by using the correct criteria for the species of salmon present, when and where their critical life stages occurred. It is also worth noting that the criteria for migration were comparable to the numeric temperature objectives in Basin Plan for the Sacramento River.

We received several comments related to the data, which was not included in draft assessments.

Staff's response was that we made efforts to include the data that was readily available, especially when it approved the accuracy of the Integrated Report. This resulted in the withdrawal of the proposed listings of Pleasant Grove Creek for low dissolved oxygen, the Middle Fork of the Feather River for low dissolved oxygen, and the Lower Kern River for high pH, which I will touch upon later as a late change.

Staff did not, however, continually accept and attempt to incorporate new data that was generated after the solicitation period ended. If we did that, we would never get done, as new data is constantly generated, and also the new information is best incorporated in future listing cycles. So

all new data sources can be assessed, not just ones that happen to be presented to us.

We received several comments that the assessments were based on limited data and more information should be considered. This same concern was stated by a discharger in response to proposed new listings and also by CALSPA, which is an environmental group, in response to some of the proposed delistings.

Staff's response was that the listing policy requires that the decisions be made with existing data and that the 303(d) list can always be revised when more data is available.

Another comment related to several proposed listings was that there weren't enough samples above the objectives to list using the statistical test in the listing policy.

The staff's response is that where the criteria or objective that was used to evaluate data contained an explicit frequency for how the samples are allowed to be over the concentration. Compliance with that was also assessed. This was appropriate under the listing policy evidence provisions. Fact sheets were clarified to better document this basis for the recommendations.

We received several comments on how we propose to divide the waterbodies into segments. The concerns include that the waterbody should be further divided into smaller segments and/or the extent being proposed for listing as impaired based on the available data was too large.

Staff's response was that, in general, the waterbodies had been divided into segments following the listing policy considerations, such factors as dams, tributaries and different land uses. Available data were then assessed to determine water quality in those segments. In several cases how a waterbody was split into segments and/or the extent of the proposed listing was revised based on information provided.

Another comment was that the listings for the Delta waterbodies were not clearly defined.

In response, staff generated maps and lists of what would be considered Delta waterways in these listings. It should now be very clear what they mean. The maps and lists are included as Appendix I.

We received some comments and concerns on the general topic of the potential impact of 303(d) listings, that the listings have negative effects.

This was mostly in regard to the proposed septic tank regulations from the State Water Board.

The general response is that we are required, under the Clean Water Act and the listing policy, to list when data indicates standards aren't being met. We recognize that listing a warterbody as impaired may have long-term and short-term consequences for dischargers that contribute to the impairment. Requirements and permits may relate to the 303(d) list, but their development and adoption are separate processes to which some of the comments should be directed. For example, comments on the State Water Board's proposed septic tank regulation should be directed to the appropriate State Water Board contact.

Another comment was that TMDLs may not be needed for some listings since the impairments are already being addressed by an existing program. This comment was made by several National Forests and coalition groups under the Irrigated Lands Regulatory Program.

Staff's response was that there are specific EPA criteria in the Integrated Report guidelines that must be met to determine that an existing program can take the place of a TMDL. And from the

information provided by commenters, it was not apparent that all those criteria were met.

We work with entities to help them develop programs that can meet EPA criteria for alternatives to TMDLs. Also, one of the first steps we take when we start to work on a TMDL is determine whether a TMDL really needs to be developed. So if we determine a program is in place that addresses the impairment in a timely manner, we will not be developing a duplicate TMDL. And the Board can revise the 303(d) list to place the waterbody in the appropriate category.

USEPA had a comment on the bacteria assessments, that some of the assessments where staff initially concluded that they should not be listed seem to support listing on the 303(d) list, and that EPA might list these waterbodies or bacteria if the Regional Board does not.

In response, staff looked at our bacteria assessments, reevaluated them. As a result, one additional bacteria listing was proposed. Staff found no other listings warranted under the listing policy.

Another comment, which we will be hearing more about today, is that the pyrethroid listings are

inappropriate, that the proposed pesticide listings are based on one line of evidence and that the benthic community data do not support listing and should be given more weight than the toxicity data used to list.

Staff's response is that the listings are required under the listing policy. We have valid chemistry and toxicity data showing toxicity caused by the pyrethroids. The bioassessment data provided do not negate the chemistry and toxicity data. The approach staff used on the listing policy is also consistent with USEPA's policy of independent applicability with regard to the use of biological community data, which states that each test be a chemistry, toxicity and biological community measures, have independent measures and one does negate nor override the other.

Another comment on the algal toxicity test having uncertainty in the results. And the observed toxicity for some waterbodies may be due to such factors as low salinity in the samples or other properties of the water.

Staff's response was that this test is an established EPA test, and the listing policy requires us to list when we have data showing algal

toxicity. Also, the affects of waters on the test was not demonstrated, since some tests did not show toxicity. There is insufficient information available to support the contention that the toxicity observed was due to some inherent property of the water, such as low salinity.

We received a comment from the San Joaquin River Group Authority requesting that we delist the Stockton Deep Water Ship Channel in the Delta near Stockton for low dissolved oxygen since data collected during the aerator demonstration project showed standards are being attained.

Staff responded that the data from the immediate vicinity of the area is not representative of the entire impaired segment. Also, the aerator is being operated as part of a two-year demonstration project, so these data are not necessarily representative of a real change in conditions. And to further illustrate that, the bond funding for the aerator may be on hold. So the aerator may not be operated this summer, unfortunately.

Finally, there were a number of comments on apparent errors in the fact sheet in the public review draft. All of those were examined and

corrections made to the fact sheet when appropriate. When we made corrections in response to comments, we also looked for and corrected any systematic errors that came to as a result -- came to light as a result of the comments.

Just to quickly summarize the response to comments. We received numerous comments from diverse stakeholders. We made changes where appropriate, and this resulted in several proposed listings being withdrawn. Most of which were the metal listings I discussed. The changes in response to comments also involved one additional listing, revisions to the extensive proposed listings, changes to the potential sources and TMDL completion dates in the proposed 303(d) list. The comments received overall improved the accuracy of the report.

There are a few late revisions before you. One is a revised fact sheet for pH in the Lower Kern River. This was proposed for listing in the Draft Final Report, but included some NPDES data which ideally we should have included in the original assessment. Caused us to no longer recommend this to be listed. This late change --

CHAIRMAN LONGLEY: Just one second. Do you

have that fact sheet, or where can I find it?

MR. LANDAU: It should have been handed out to you.

CHAIRMAN LONGLEY: I don't have it. It is lost in all the paper.

MR. LANDAU: It is being handed out to you now.

MR. McCLURE: Sorry about that.

CHAIRMAN LONGLEY: Okay.

MR. McCLURE: Should I go on?

CHAIRMAN LONGLEY: Yes, go ahead.

MR. McCLURE: This late change results in one less listing than the number shown in the staff report. This also causes the lower Kern River to be moved to a nonimpaired 305(b) category since it has no other impairment listings.

There are also a couple of minor late revisions. The San Joaquin River, as mentioned earlier, is proposed for delisting for salt. There was error in the fact sheet that was corrected. So the fact sheet now shows that there were zero exceedances of the salt standard for the period of record analyzed in the fact sheet. This did not change the overall listing or delisting recommendation.

Another minor late revision was for the Pleasant Grove Creek pyrethroid toxicity listing. Just the fact sheet. The fact sheet was revised to add a finding to the extent of the impaired reach, to show that the impaired reach was only in the urban areas upstream of Fiddyment Road.

MS. CREEDON: Clarify for the record which part of the San Joaquin is being delisted. It is not the entire river.

MR. McCLURE: Thank you. Yes. So that the part proposed for delisting is only the San Joaquin River between Stanislaus River and the Delta boundary near Vernalis.

CHAIRMAN LONGLEY: To go back to the fact sheet. What was given to me was late revisions. I still don't have the fact sheet.

MR. ODENWELLER: Last two pages, Karl.

MR. LANDAU: You should have two page. The last two of which -- actually five of which are double-sided. Have one late revision fact sheet.

CHAIRMAN LONGLEY: Go ahead, please.

MR. McCLURE: So the change of minor late revision was just to the fact sheet for the proposed pyrethroid listing for Pleasant Grove Creek to show that the extent proposed for listing was only in the

urban areas upstream of Fiddyment Road. This change to the fact sheet is consistent with the extent of the reach described in the proposed 303(d) list. This did not cling the actual 303(d) list decision recommendation.

CHAIRMAN LONGLEY: Also, you show on this the 23 proposed delistings. I have gone through the list here, and maybe I missed some, but I only count 20. There is supposed to be shown by strike-throughs. Maybe I'm wrong. Maybe I miscounted. I have gong through it several times.

MR. McCLURE: Well --

CHAIRMAN LONGLEY: I think what we can --

MR. McCLURE: The Appendix A was provided as a kind of -- to help illustrate the exact -- how the 303(d) list will look in terms of what is on and what is not. The Appendix F table of contents would have all the 23 proposed delistings. So I am not sure what the difference is there.

CHAIRMAN LONGLEY: We apparently don't have Appendix A.

MR. McCLURE: That is thousands and thousands of pages of fact sheets. The table of contents for Appendix A has the list of 23. I just counted them last night, so I probably just made an

error in preparing Appendix A.

CHAIRMAN LONGLEY: Is Appendix A online?

MR. McCLURE: Yes.

CHAIRMAN LONGLEY: It is there for review. We need to get this correct before we are going to have a lot of comments. So I think it gives you time to go back and evaluate it.

MR. McCLURE: Sure.

CHAIRMAN LONGLEY: Any further comments or questions from Members of the Board?

Thank you.

MR. McCLURE: Almost finished here.

CHAIRMAN LONGLEY: I'm sorry. I'm rushing you. I didn't mean to.

MR. McCLURE: So moving onto the next steps. Following Regional Board approval, all the Regional Board Integrated Reports go to State Board for inclusion in the statewide Integrated Report that will also go out for comment in late 2009, probably, and go for adoption before the State Water Board in early 2010. State Water Board will consider all contested 303(d) list changes appealed to them and can consider others on their own initiative.

The statewide 303(d) list will be adopted by

State Board and sent to EPA probably in early 2010. One thing to know is that the State Board can change individual recommendations from the Regional Board. They wouldn't remand the whole list back to the regions as they can with permits or Basin Plan amendments. They simply make the final decision on what to send to EPA.

Ultimately, EPA has the finally authority over the 303(d) list. They can fully or partially approve the state's 303(d) list. If they partially approve it, but make changes, such as adding additional listings, which they have done in the past, EPA will solicit comment on those changes. And then after that, we are done and we start again. It's like painting the Golden Gate Bridge. Sometime in 2010, we will begin getting data for the next Integrated Report.

CHAIRMAN LONGLEY: Vice Chair indicates that she counted 23, which means I can't count.

MR. McCLURE: Thank you.

CHAIRMAN LONGLEY: Thank you.

MR. McCLURE: Just a quick review of what I presented. First, I went over the background on the 303(d) and the 305(b) report. The Integrated Report included both of them. I discussed how staff

prepared the Integrated Report by applying the listing policy and comparing the available data to water quality standards. I discussed the results, which is the Integrated Report. Then I summarized how staff had responded to comments, including one resulting -- three resulting late changes. Finally, I talked about what happens in the process following Regional Board approval.

In conclusion, based on what I presented, staff is recommending that the Board adopt the Integrated Report for the Central Valley Region, including late revisions, and instruct staff to forward it to State Board to inclusion in the statewide report. That concludes my presentation unless there are any questions.

CHAIRMAN LONGLEY: Questions?

Thank you very much.

At this point in time we are already to go to the public. Mr. Lenwood Hall.

Lenwood, I know you want about an hour and a half, but I think I am going to restrict you to five minutes. We will determine at that point how much more we want to hear.

DR. HALL: If you give me five minutes, I will be grateful.

CHAIRMAN LONGLEY: You're a professor. Talk fast.

DR. HALL: The title of this presentation is Public Hearing for 303(d) Listing of Pleasant Grove Creek for Pyrethroids.

Now Pleasant Grove Creek, for your information, is a residential stream located in Roseville, California. And pyrethroids are insecticides that are used in the urban environment for structural pest control, landscape maintenance, as well as home and garden use.

Now, just by way of introduction, my name is Lenwood Hall, Jr. I am an aquatic toxicologist with the University of Maryland. I am here representing the Pyrethroid Working Group. My areas of expertise are aquatic toxicology, bioassessments and ecological risk assessment. I have conducted various water quality related studies in the state of California since 1994.

Now the issues of concerns that I would like to talk about today are listed with these four bullets. The first one is that Pleasant Grove Creek and its tributaries have been listed as impaired waterbodies based on the presence of pyrethroids. Now this proposed 303(d) listing is based on results

from what we call a single species sediment toxicity test, along with concurrent chemical measurements, and this particular work was done in 2004.

Now I believe that this proposed listing is inappropriate due to data that we have collected at the University of Maryland during a two-year bioassessment, multiple stressor study in Pleasant Grove Creek and its tributaries in 2006 and 2007.

My final issue of concern is: I believe that the regional staff determination that no one line of evidence takes priority over others can also be challenged. Now, really the point of concern here is which type of assessment tool provides you with the best information for determining impairment in a warterbody. I believe there is advantages in using bioassessment data versus single species toxicity data.

For your information, bioassessments are essentially the science of determining the condition of a warterbody based on the presence of the organisms that actually live in that warterbody. In other words, it is a biological monitoring type approach. Bioassessments provide what we call time integrated observed response on the condition of resident communities in the aquatic system.

Bioassessments also provide a way to determine attainment of designated use of the beneficial use of the warterbody, such as warm and cold fresh water habitat. Bioassessments also are very closely aligned with the goals of the Clean Water Act, which are to protect and restore biological integrity in the environment.

In contrast, the single species toxicity data approach is what we call a predictive tool. This is a tool that is used to estimate the response of a resident community based on single measurements. Finally, I think that the Regional Board staff has fairly wide discretion in establishing how data is used and how information is interpreted in order to make the 303(d) listings.

Now, very briefly, I would like to talk about what we did in our two year study in Pleasant Grove Creek. The goals of this study were to characterize benthic communities and physical habitat at 21 sites during 2006 and 2007. Now, benthic communities are organisms that live in or on the sediment of a stream, such as aquatic worms, different types of insects. Snails, for example.

Physical habitat is essentially where these organisms live. We have a way to evaluate different

components of the habitat in the environment where you would find these organisms.

Now, concurrently with this benthic community and physical habitat work, we also measured what aquatic conditions, sediment parameters. We evaluated eight different pyrethroids and a number of different trace metals. Our final goal was to look at the relationship between what we call benthic community metrics. These are the various characteristics of these communities and how they are related to the various stressors. And the stressors were pyrethroids, metals and physical habitat.

Essentially what we found, the major results, were that we found ten different significant relationships with all of these benthic community metrics or characteristics of the benthic communities with various stressors. The most important stressor that we found was physical habitat. The second most important stressor was mercury. But the most significant point is we found no significant relationship between any of the benthic metrics and the eight different pyrethroids. The results of this study have been accepted in the peer review literature, and they have been published

this month in the *Journal of Human and Ecological Risk Assessment*.

Finally, three points. Impaired physical habitat is a critical stressor influencing benthic communities in Pleasant Grove Creek and its tributaries. Pyrethroids did not show a statistically significant relationship with benthic community metrics. And, finally, Pleasant Grove Creek should not be listed as an impaired warterbody based on the presence of pyrethroids.

Thank you.

CHAIRMAN LONGLEY: Thank you very much, Dr. Hall.

DR. HALL: Thank you.

MS. HART: I have a quick question regarding your first bullet point, impaired physical habitat is the critical stressor. When you say physical habitat, are you talking about the physical state of the stream?

DR. HALL: Yes, I am. In other words, physical habitat in this instance deals with different types of flow regimes in the stream, different types of environments where you can have benthic organisms, such as structures, different types of characteristics such as riparian areas.

All of those were important. They were really a primary stressor influencing the communities in these streams. It is not pyrethroids.

CHAIRMAN LONGLEY: Any further questions? Thank you very much.

MS. HART: I have for staff a quick question. Were you provided with a copy of the biological assessment, and did you have an opportunity to review it?

MR. McCLURE: Yes. That was provided during the comment period and responded to in our response to comments.

MS. HART: I think what you has indicated was that their biological assessment does, in fact, show that the pyrethroids are not a major impairment, but that you have toxicity data from 2004 which does indicate pyrethroids might have an impact. Is that what staff's argument is?

MR. McCLURE: No, not exactly.

MS. HART: Maybe you can specify it for me.

MR. McCLURE: The staff response was that we are required, primarily required, to list due to the showing that there is toxicity. The fact that there may be other things, such as physical habitat, impacting the streams indicates that there are

potentially multiple problems, not that there is only one.

CHAIRMAN LONGLEY: Well, is listed for pyrethroids; is that correct.

MR. McCLURE: Proposed for listing for pyrethroids, yes.

CHAIRMAN LONGLEY: Is that the correct proposed listing, then?

MR. McCLURE: Yes.

CHAIRMAN LONGLEY: Based on this data -- in other words, you challenge this data?

MR. McCLURE: No. I don't challenge the study. 'Cause they found essentially the same thing that Dr. Weston and Robert Holmes of our staff found when they did it in 2004, that there was toxicity, I believe, and that there were pyrethroids related to that toxicity. It is more really in the interpretation and the use of benthic community metrics.

So there is no -- I don't believe there is any debate that there are pyrethroid concentrations in these waterbodies that are in Pleasant Grove Creek that are in high enough levels that kill sensitive aquatic invertebrates. So that's --

CHAIRMAN LONGLEY: That is contradictive to

this study's results?

MR. McCLURE: No.

CHAIRMAN LONGLEY: The study result says is it not the pyrethroids in the concentrations that have been encountered, but the physical habitat.

MR. McCLURE: It has to do with the end point that you looked at. So the end point that they looked at are these benthic community metrics where you take information on every bug that is in the stream, and look at it with various tools to analyze the number of species present and other kind of metrics like that. So they found correlations between that and most -- I guess the tightest correlation was with the physical habitat. But the benthic community metrics don't necessarily reflect -- I mean, there is a whole lot of variables in these biological streams, as you can imagine, in the benthic community.

And these benthic community metrics don't necessarily reflect every potential impact in there. Also, the benthic community metrics are a -- if we only use that, that would be a reactive end point. So going to his point about them being protective or being predictive, ideally, yes, we want to prevent these. If we waited until benthic communities were

so impacted that it would show up on somebody's metrics, the whole -- you would have a whole lot of harm done.

MS. HART: So if I could clarify, I'm nonscientist, nonengineer. Is what you are saying that the toxicity data you have from 2004 shows that there is, in fact, toxicity to some aquatic life or --

MR. McCLURE: Yes.

MS. HART: -- or benthic life?

MR. McCLURE: Yes.

MS. HART: At some level there is toxicity caused by pyrethroids, and your evidence specifically shows that and links it?

MR. McCLURE: Yes.

MS. HART: And is your position also that the very specific biological assessment done by the Pyrethroid Working Group folks, they're generalizing that because there isn't necessarily toxicity linked with pyrethroids -- that there is toxicity but it is mainly caused by physical habitat?

MR. BRUNS: I guess our -- without being expert in bioassessment technology, all we are saying is that apparently the tools and metrics and things they used weren't sensitive enough to show

the obvious water column toxicity that our test showed. Whatever it was they did, wasn't sensitive enough to show these kind of things.

It is toxic. The water is toxic to the species we tested, which is an invertebrate itself, Hyalella, which is not an exotic strange species. It is a species that does live in some of the creeks around here. That is our bioassay species. They are killed in the samples. So our view was that somehow the bioassessment doesn't tease that apart.

MS. HART: Is there any significance with respect to the fact that your study was done in '04 and there is more recent?

MR. McCLURE: No. The findings, the physical findings, were very similar. More has to do with the interpretation of data.

MS. HART: So you are saying that the bioassessment actually did show toxicity?

MR. McCLURE: Bioassessments don't. There are two things. There is toxicity tests. There is three things. There is tests of chemistry, tests of toxicity and then bioassessment. So that is basically counting bugs and applying various metrics to those.

MS. HART: You are saying that two separate

tests were done. They did one test and you guys did another test.

MR. McCLURE: Yeah. They did an additional test, which was the more detailed bioassessment. The 2004 study looking at the insects that Dr. Weston and Robert Holmes did looked at -- they focused on the insects, the Hyalella, that were most likely to be impacted. They did find that Hyalella was absent from the -- was largely absent relative to the upstream, in these area that were impacted by these pyrethroids. Some of that may, in fact, have been caused by physical habitat. That is why it is difficult to use bioassessment metrics. So that and the idea of being protective rather than reactive are kind of some of the basic principles that are used under the independent applicability. And ultimately, although we obviously -- ultimately this is what is -- it is not up to us either because it's set in the listing policy that we have to list when there is toxicity.

CHAIRMAN LONGLEY: Any further questions? We will go onto Jim Whitfield.

MR. WHITFIELD: Good morning. I am Jim Whitfield from the Sequoia National Forest. The Forest headquarters is located at 1899 South

Newcombe in Porterville, California.

We want to briefly discuss the 303(d) listings on the waterways within the Sequoia National Forest. For our reference, the Sequoia National Forest is about a million acres of public land in the southern Sierra Nevada. The range of that land runs from the Kings River to south of the Kern River. These are the waterbodies that are listed as proposed for 303(d) listing, other than what we heard this morning. The Lower Kern will not be.

This is a map of Deer Creek, which is one of the proposed listings, and the one I want to concentrate on this morning. These show the potential or the sample points that were taken. The point I would like to make with this map, if you look on the right, there is a bold black line that represents the western boundary of the Sequoia National Forest, which is about 17 miles upstream from the highest sample point.

This is a Google earth map that just gives another representation of the sample point locations and shows the distinction between the agricultural valley land, the grassland foothills. And then it indicates the forest boundary, which is up in the mixed confer brush type.

Quickly, I just want to show graphic points along the way where the sample points were taken. These begin at the western most point of the sampling, down in the San Joaquin Valley. And then we move upstream to sample points further, higher elevation. This point, the highest one, is the first one that, according to the data, indicated no levels of toxicity or high pH. Those were the two categories that Deer Creek was proposed for listing.

This is a photograph of a sample point that Sequoia National Forest used to do some of our stream condition inventories. We took pH samples there, according to the USGS protocols, and those indicated that the pH was not high. We also used an alternative study of looking at aquatic insects. And that test came back from Utah State University, and their conclusion was there was no apparent organic pollution.

Our suggestion for Deer Creek is that rather than listing the entire water way up in the Sequoia National Forest, that we would propose that the limit, to the extent of that listing, at the Sequoia National Forest boundary. We welcome any opportunity to provide testing in cooperation with the state to see if we can get a better sense of the

actual water quality. Our proposal is that the listing end at the forest boundary.

Thank you. That concludes my remarks for this morning.

CHAIRMAN LONGLEY: Thank you.

I think, as we did with the last speaker, we will go to staff for comments on that proposal that the listing be based on data they provided, the listing go to the boundary.

MR. McCLURE: We looked at the data they provided. It was rather sparse, the amount of data. And we didn't see in that data where there were no exceedances, but only a few data points. They didn't really show that the pH was highly different up in the national forest. And so we didn't really have any basis for proposing narrowing down the list.

We certainly would be interested in getting more monitoring, and we can revise the listing in the next cycle. And just, generally, we need some basis for segmenting the waterbody. Water quality doesn't necessarily know where the National Forest boundary is.

CHAIRMAN LONGLEY: I won't represent another Board Member, but being very familiar with

those streams. My family -- in the past my family ran cattle on the streams. The kinds of uses you have there, I have some concerns, but I'll set those aside.

Thank you.

MR. WHITFIELD: Thank you.

CHAIRMAN LONGLEY: Next speaker, Dean Marston, California Fish and Game.

MR. MARSTON: Good morning, Chairman Longley and fellow Board Members. My name is Dean Marston. I am environmental programmer manager for the Department of Fish and Game, Central Region, San Joaquin River Basin Salmon and Steelhead Restoration Program. My address is 234 East Shaw Avenue, Fresno. Zip code, 93710. I am requesting about 15 to 30 additional seconds, if possible.

CHAIRMAN LONGLEY: I will give you 21 additional seconds.

MR. MARSTON: The Department of Fish and Game continues to strongly support the listing of the Merced, Tuolumne, Stanislaus and Lower San Joaquin River as water temperature impaired for both fall-run chinook salmon and steelhead rainbow trout.

From a historical view, it is noted for the record, from a public trust perspective, that both

steelhead and various runs of salmon were abundant in the San Joaquin River Basin. However, today all of these fish are now gone. While many factors have been identified as the cause for the near total elimination of salmonid resources in the San Joaquin River Basin, it is a historic fact that consistent with these species population declines has also been the substantial reduction over time of then river habitat quantity and quality.

The recent population crash of chinook salmon along the Pacific Coast has closed all commercial and sportfishing in the past two years, resulting in significant economic loss to the communities and industries that depend upon this precious natural resource.

For the San Joaquin River Basin, the fall-run chinook salmon population crash started well before the downturn in ocean conditions in 2005, commensurate with elevated inland water temperature regimes.

Why is water temperature so important? Because, physiologically speaking, water temperature has the capacity to control every aspect of an anadromous fish's life, adult spawning to juvenile outmigration. In short, water temperature has the

ability to be a substantial population limiting factor.

Why use EPA criteria? Some have questioned why we should use EPA Region 10's water temperature criteria as standard. To digress briefly. Generally speaking, biological scientists collect data from the field or in a laboratory setting and analyze the data and compare its information found in the scientific literature. This is exactly what the Department of Fish and Game did. We collected field water temperature data, analyzed it and compared the results to criteria published in the scientific literature that are expected to adversely affect salmonids.

Water Board staff completed a different analyst of water temperature data to comply with requirements of the State Water Board's listing policy. Both analyses came to the same conclusion. High water temperatures in these rivers are likely impacting salmon and steelhead. In addition, scientific studies have thus far determined that chinook salmon occurring in the Pacific Northwest do not have different temperature tolerances than the salmon and steelhead occurring in the California's Central Valley.

Therefore, at this time applying EPA's Region 10 criteria, scientifically justified and complies with the requirements of the State Water Board listing policy.

In conclusion, the Department recommends that the Regional Board adopt the staff recommendation to place the Merced, Stanislaus, Tuolumne and Lower San Joaquin Rivers on the Section 303(d) list for high water temperature and impairment. If you have any questions, either I or my staff are here to address them.

CHAIRMAN LONGLEY: Are there any questions?

I understand your rationale. I guess what bothers me is that we go back to the natural condition of that river. It was filled with sloughs, and, certainly in the summer months, very stagnant, slow flowing water. That is part of that historical record.

Being a native here, sometime ago, I know that those, certainly not pre-dam, I know that those kind of waters tend to be very warm in the summertime, particularly in periods of drought. And I just wonder, it kind of boggles me, that we think that conditions have to be something other than what they existed under more natural conditions.

Do you have a reply to that?

MR. WHEELER: Historically, prior to the development of the series of dams that have occurred in each of the tributaries and all also the main stem of the San Joaquin River, anadromous salmonid salmon and various forms of salmon had access to hundred of miles of each of the rivers. And with the most recent series of dam construction, habitat is not constricted to the lower 50 miles. In years past, prior to dams, fish could go up past that warm water and actually hold over in the summer in cooler, colder water. Now we have forced their habitat to be in a slower 50 mile reach.

CHAIRMAN LONGLEY: So the period time you are talking about is after the migration, the historical migration period and during the summer months; is that correct?

MR. WHEELER: Yes. During the summertime we are not talking about migration. We are talking about rearing below each of the dams.

CHAIRMAN LONGLEY: Thank you. Makes sense.

Any further questions? Comments?

Next card is for Tom Wheeler.

MR. WHEELER: Thank you. I am Tom Wheeler, Madera County Supervisor, Madera County, 200 West

Fourth Street, Madera. I am also the chairman of the Coarsegold Resources Conservation District. A little different sitting out here than up there. I see what the people do when they talk to me.

One thing I would like to, for Mr. McClure, if I could get a copy of his PowerPoint for us to study, and that would be very -- I tried to make a lot of notes, but can't write that fast. I need my secretary here.

We got a lot of problems with listing in Madera County, and I don't know where to begin after seeing the PowerPoint. I have the big thick book on it. Just Madera County, about four inches thick, if you want to see it.

I am addressing you today as Madera County supervisor and president of the Coarsegold Resources Conservation District regarding the proposed addition of nine Madera County waterbodies to the 303(d) list. In particular, I am deeply concerned with the addition of the Fresno River due to low dissolved oxygen, as I disagree with either fact or logic supports such a listing. I am also concerned with the effects of listing will have on my constituents as it relates to the State Water Board's proposed septic system regulations and

Assembly Bill 885.

I respectfully request that you put off the decision on this matter for at least a year until we can complete our water study currently taking please on the Fresno River and share those results with you. We've been sharing as we go along with Mr. Mcclure on this.

Fresno River, the correct standard for cold water is seven MG per liter, and they used eight as their requirements, which is wrong. The proposed 303(d) listings is based on a 2001 RWQCV data set with an extremely small sample size and results that barely meet the standards for the 303(d) listing. And more recent water testing programs done on the river by Fresno State and the Central Sierra Watershed Committee, which I am part of, that we have over a $300,000 grant from the DWR to study this. And we've got 14 sites that we've been studying since November. And out of the 63 samples so far, only eight have exceeded that standard. That they've done their two testings in October '01 -- I mean, in August and October, and doing their listing from that.

There samples were collected eight years ago. Their samples were collected in times where mostly

stagnant and low flow waters; like I said, August and October. Our current water study finding is that the DO is closely related to flow. During November 2, '08, we obtained samples that were below DO standards, which was a month after they done their samples in 2001. However, all samples exceeded that standard. We also object to using the DO as for the listing. Low DO measures in Fresno River are not due to contaminants. They are due to low discharge and resulting stagnant high temperature water, which all of us, like our Chairman, is a native here like I am. I worked on a 4,500 acre ranch along the San Joaquin River for 41 years before I retired and decided to become a supervisor.

We have worked with water continually, and that is one of the reasons the Coarsegold Resource Conservation District in the last 15 years, we've brushed over 32,000 acres which creates a 30 percent more water flow for our residents in Madera County with that brushing. It is very important that we think they should do other type testing.

CHAIRMAN LONGLEY: Are you about ready to wrap up?

MR. WHEELER: I have about a half page. I

forgOt to ask for a little more time.

CHAIRMAN LONGLEY: Give you about 30 seconds more.

MR. WHEELER: I'll skip a bunch. Based on the list issues, we also have doubt that the validity of adding the other eight waterbodies in the 303(d) in Madera County. The listing will have serious impacts on Madera County residents. The previously proposed 885 regulations directed home owners with septic systems within 600 feet of an impaired waterbody would be required to have extensive testing and possibly more extensive retrofits, which they estimate at $45,000.

Our County is predominantly rural with approximately 20,000 property owners rely on septic systems. Our median household is 39,000. This would devastate my families. As I stated before, we are in the middle of a water quality study, which does not currently support the Water Board's conclusions. We, therefore, request that the decision on the 303(d) listing be put for another year so that the data we are collecting can be completed and analyzed and shared with the Water Board.

CHAIRMAN LONGLEY: Thank you, sir.

MR. WHEELER: Can I give you copies of this?

CHAIRMAN LONGLEY: Give it to staff.

MR. WHEELER: We sent many letters to them. And I have all the testing status and also --

MS. OKUN: Is that copy stuff?

MR. McCLURE: Am I allowed to take it?

MS. OKUN: I don't know what it is.

MS. HART: Has that already been submitted to staff?

MR. WHEELER: We give it to him before.

MS. HART: So it is in the files, in the record already?

MR. WHEELER: Not what I spoke today.

MS. HART: But the documentation you have just handed him?

MR. WHEELER: What I did today and the status of.

MS. OKUN: Would you hand that to me?

CHAIRMAN LONGLEY: It goes over here to counsel, please?

MR. WHEELER: Thank you.

MR. McCLURE: I don't believe I have seen this before. Would you like me to respond?

CHAIRMAN LONGLEY: Go ahead and respond.

MR. McCLURE: There was a correction to the fact sheet. We originally had used eight as the dissolved oxygen standard. That was corrected, but it did not result in a change to the recommendation to list based on the available data.

This kind of goes in with my reasons to the general comment on use of small data sets, that we're required to make assessments with available data. And those can be revised in future listings cycles when more data become available.

The other, there was -- there did seem to be a misunderstanding relative to -- and this is not my area of expertise, by any means. The AB 885 septic tank regulations, my understanding of those, which have not been adopted, is that the septic tank regulations in 885 that were proposed before the State Board, those requirements would kick in not upon 303(d) listing, but upon adoption of a TMDL which found septic tanks as one of the causes of the impairment.

So this 303(d) listing, I do not believe, would immediately kick in the AB 885 regulations, if and when they are adopted by the State Water Board.

CHAIRMAN LONGLEY: When they are adopted,

it would be a separate line on the list here?

MR. McCLURE: When the AB 885 regulations are adopted, then it would take -- we would actually have to do -- if they are adopted as they are proposed, we'd have to actual do a TMDL where we made a finding. So that would be an entire adoption of a TMDL, of its own regulatory process. They're a few steps away. There may be some misunderstanding.

Those AB 885 were really controversial. We are interested to see the results of the new studies, and revise the listing as appropriate. I did note that the new studies they are talking about from, my belief, November through now, so we really haven't hit the time of year when you would expect the oxygen to go low, to the critical period we would be most concerned with.

CHAIRMAN LONGLEY: For the record, I am aware of the Fresno studies. I have not read them, nor has anyone discussed them in any detail with me. But they did exist. And since they are a Fresno State study, obviously, they have to be very good.

MR. McCLURE: We are interested to get and evaluate them.

CHAIRMAN LONGLEY: Thank you. I said that last line in jest, of course.

MS. OKUN: On these documents, one of the documents is a summary of the speaker's testimony. We have his testimony; that is not necessary. There is a summary of Madera County's position on the public review draft, which I assume is a summary of something that's already been submitted. Then there is a series of letters that I haven't seen before. I don't know if they are already in the record or not. It looks like there are four or five letters.

UNIDENTIFIED AUDIENCE MEMBER: We sent a couple months ago.

MR. McCLURE: Anything that was submitted before the comment deadline, which was March 16, we would have in the record. And I believe we provided you -- some of these I haven't seen. All the comments that I received subsequent to the comment deadline we did not include a written response, but we did provide those to you. Generally, they are being responded to here.

MS. OKUN: The only letter that postdates the comment period is a letter from the Madera County Board of Supervisors to Assemblymember Ted Gaines. And I haven't read it, but there doesn't appear to be any reason to add it to the record.

CHAIRMAN LONGLEY: Thank you. We will take

your advice.

Next speaker I have is Jon Nelson.

MR. NELSON: Good morning, Chair Longley and Members of the Board. I am here to talk about the low DO at Hume Lake Camp. My name is Jon Nelson. I work for the nonprofit organization, Hume Lake Christian Camps that uses land around Hume Lake.

I did submit my comments to the Board -- or not to the Board, but to Danny McClure. And what I would like to comment on is comments that were made back in his listing. They are found on Page 16 of his long list. What it sounds like for me is that we have eight days of sample over three years. And, again, my comment would be insufficient data sampling to make any sort of assessment. It sounds like if you take one point of data sample, you have to make an assessment. I just don't understand why.

I did pass out to him eight days of sampling. It seems like there is double and triple jeopardy. There are three test sites with 24 samples total. And it seems like we have triple jeopardy on two of those sample dates. I have copies of that if you would like to see it.

CHAIRMAN LONGLEY: I don't want to see it,

but why do you say triple jeopardy?

MR. NELSON: Because when there was exceedances on a single day at the lake, they were exceedances sometimes in only two areas, sometimes in only one area. And sometimes in three areas. So of the eight says of sample, they counted those sites as a ding on the lake itself, and didn't have some sort of reasonable assessment of the lake as a whole, just the sample sites individually. So, is it triple jeopardy or double jeopardy? It just seems, like, if you had one sample site that was in noncompliance or an exceedance, didn't mean that the lake as a whole was in exceedance.

CHAIRMAN LONGLEY: Was this -- I don't have it in front of me.

Danny, could you provide a little clarification? This was for Hume Lake and the exceedances, was this for a period for Hume Lake itself? What were the exceedances for?

MR. NELSON: For low dissolved oxygen.

MR. McCLURE: So Hume Lake was proposed for listing for low dissolved oxygen. In doing the assessment, we followed the listing policy, which actually requires us to propose a change to the 303(d) listing based on whatever existing data there

are. If it meets those satistical tests, we're required to propose a listing.

In looking as long as these sites were under the listing policy, if there are three sites and they are independent, each of those, each sample, each of those samples is looked at independently. So each time -- each sample, like each day at each site, would be one sample. That is the total number of samples. That would be taken and compared to the total number of times the dissolved oxygen was below the standard. So that provided the frequency which provided the basis for the proposed listing.

CHAIRMAN LONGLEY: Thank you.

Any further questions by Members of the Board?

Thank you for testimony, sir.

Richard McHenry. Following Richard will be Art O'Brien.

MR. McHENRY: Good morning, Mr. Chairman, Board Members. I am Richard McHenry, a civil engineer representing California Sportfishing Protection Alliance. CSPA appreciates Regional Board staff's monumental effort in collecting and analyzing a significant amount of data to prepare revisions to the 303(d) list.

CSPA has long been an advocate of treating

temperature as all other pollutants under the existing regulatory framework.

My principal reason for being here before you today is to express CSPA's strong support for the proposed inclusion of the temperature impairment for the San Joaquin, Merced, Tuolumne, Pit, Yuba and the North Fork of the Feather Rivers. Temperature is clearly a major limiting factor to renewable fisheries in these waterways. The data supports the proposed listing.

CSPA has submitted written comments where we question the elimination of selenium impairment from Salt Slough in the San Joaquin River. We realize that our comments really address the five microgram per liter standard, and that may not be an issue here. But we did submit a presentation by Dr. William Beckham of the U.S. Fish & Wildlife Service which supports that view.

CSPA's written comments also detail problems in both delisting of electrical conductivity on the San Joaquin River below Stanislaus, and with the diazinon in the Feather River below Oroville.

Thank you very much.

CHAIRMAN LONGLEY: Questions?

Thank you very much.

Art O'Brien. Following Art O'brien will be Ken Petruzzelli.

MR. O'BRIEN: Chairman Longley, Members of the Board. Thank you very much. My name is Art O'Brine. I'm wastewater utility manager for the City of Roseville. I am here representing the City of Roseville.

Two short items. We want to thank staff for considering the great amount of data that went into this whole 303(d) listing and, specifically, the additional data that we sent to staff during the comment review period. They considered that data and addressed it appropriately. Thank you very much for that.

Second, we also want to thank staff for the late revision clarifying Appendix F on Pleasant Grove Creek. We want to support that late revision.

Thank you very much.

CHAIRMAN LONGLEY: Thank you very much.

Any questions?

Ken Petruzzelli. Following Mr. Petruzzelli will be Eric Athorp.

MR. PETRUZZELLI: Chairman Longley, Members of the Board. I am Ken Petruzzelli. I am here for the San Joaquin River Group. We submitted some very

extensive comments. In light of time limitations I will focus on temperature. Perhaps five minutes will be sufficient time.

The 303(d) asks whether --

CHAIRMAN LONGLEY: Let's consider five minutes. You will get five minutes.

MR. PETRUZZELLI: Thank you, Mr. Chairman. The question with 303(d), it starts with whether or not objectives are met. And that's the Basin Plan. And the temperature objective in the Basin Plan and I'm addressing temperature specifically with respect to the Stanislaus, Tuolumne and Merced Rivers. We are recommending not listing those rivers for temperatures, or at least changing the 305(b) classification.

The Basin Plan objective doesn't include access to upstream spawning habitats. Doesn't talk about dams. It asks whether natural receiving water temperature has changed. The listing policy has guidelines for interpreting what that means, but it can't interpret that objective in a manner that would have an affect of changing the objective. There is an Eleventh Circuit case in Florida about that.

And we had some disagreement as to what the

objective is. Essentially, it says natural receiving water temperature should not change in a manner that harms beneficial uses. And then it says for warm and cold interstate waters natural receiving water temperature shouldn't change more than five degrees. Really, the question is what is natural receiving water temperature. Because you don't know if it's changed unless you know what it is to start with. That question is not asked in the staff report. In fact, staff doesn't even address the question of what natural receiving water temperature is or what the definition of the term is.

The term is defined in the thermal plan. And the State Water Board has used that definition for interstate waters; and, essentially, it includes everything except agri terms and point sources. So if the natural temperature is hot, then the objective could be met even if the temperature is hot and fish aren't necessarily doing very well.

Historically, from what we now, the natural stream temperatures in those streams were always hot, or often hot in summers. And much of the historical commentary submitted by Fish and Game suggest that the fisheries didn't always have it

easy, that they were often stressed.

And the point there was that not just whether fish were abundant or that the fishery was once healthy. But how abundant were the fish or how healthy was the fishery?

So the staff needs to look at whether, specifically, the objective, as written in the Basin Plan, has or has not been met. And that's not been done. And because it has not been done, we do not recommend listing the Merced, Tuolumne or Stanislaus Rivers for temperature.

I will take questions from the Board.

CHAIRMAN LONGLEY: Any questions? Questions from Board Members?

Thank you for your testimony.

MR. PETRUZZELLI: Thank you.

CHAIRMAN LONGLEY: Eric Athorp.

Would you like your response from staff? We have a request for response. Sorry, Mr. Athorp.

MR. McCLURE: Well, first of all, the question of the 303(d) list, also, is not just limited to objectives. Is our water quality standards met? And water quality standards include the beneficial uses of those waterbodies. So they're designated as for migration and spawning of

salmonids. And we followed the listing policy provisions for how to assess the data.

The example, with some improvement of what State Water Board did in the previous listing cycle and came to the conclusion that we did.

CHAIRMAN LONGLEY: Thank you.

MS. HART: With respect to his comments on the natural receiving water temperatures, do you have a response?

MR. McCLURE: There is probably endless debate potentially on what these rivers used to be like.

CHAIRMAN LONGLEY: The data is sparse.

MR. McCLURE: So it's kind of a legal issue. It would be rather odd, I think, to consider downstream of a dam as natural receiving water temperature.

CHAIRMAN LONGLEY: Any further comments?

MS. OKUN: The listing policy includes guidance on how to determine water temperature. Basically, when the data on natural background are unavailable or inclusive. And my recollection is that is the procedure staff used. It is directly applicable to this situation, as opposed to a borrowed definition of another policy of natural

background.

CHAIRMAN LONGLEY: Thank you.

That was somewhat fortunate. Mr. Athorp was having computer problems. We solved that, too.

Tess, you will be the next speaker up.

Go ahead, sir.

MR. ATHORP: Thank you very much, Dr. Longley, Members of the Board. My name is Eric Athorp. I am a resource analyst for the Kings River Conservation District, Fresno. I am here to discuss the 303(d) listing for unknown toxicity on the Kings River.

There were three lines of evidence presented in the documentation. The first line was the water flea, which one incident in 50 samples was noted. According to Table 3.1 in the listing policy, this does not qualify.

Line of evidence number two was fathead minnow. In which case there were two incidences of statistical mortality within 50 samples. Again, this does not meet the requirement of Table 3.1.

The basic problem here with the listing is due to the algae results compiled under the ILRP. Algae has been a continual issue in the Kings since the inception of the program, in that we continually get

results that say there is a statistical difference between the sample and the control, even though all the samples collected show a positive growth rate. They just do not match the rate of growth in the control solution.

We have been cooperating with the Regional Board office in Fresno to conduct a parallel study in which samples were collected, and they ran it through the Fish and Game lab. And they failed to find a significant difference in growth rate. Whereas, the sample submitted to the primary lab used by KRCD for the ILRP continued to show the significant differences. After the data cutoff date in 2007, which we weren't aware that that was the cutoff date, we repeated the split sample and used -- sent samples to Fruit Growers Laboratory, which is the other lab used by our coalition for their column toxicity testing. Their samples came back at no significant difference. Whereas, ours continued to show differences.

Discussing the situation with Sierra Foothill and Pacific Eco Risk -- I'm afraid I am going to need a few more minutes.

CHAIRMAN LONGLEY: Try to hold it to another minute, if you can.

MR. ATHORP: It is their opinion there is considerable leeway within the method. We are not aware that we could use water of lower hardness than what is present or in the control solution.

I draw your attention to the table here. SFL is Sierra Foothill, and that is the chemical constituents of their control water. The four samples to the right of that are -- says samples run by Apple Laboratories in Fresno. And you can see the difference in EC, TDS and hardness. The differences are quite significant. We have always run a second study using softer water to test the algae growth. And we actually found that the rivers out performed the control in this study.

What I would like as a result of this presentation is I would like to have the 303(d) listing for unknown toxicity rejected or at least delayed for one year while we accumulate additional data to support the position that it is the clean nature of the Kings River water that and the incompatibility with the laboratory method, or the fact that we were using high salinity water versus low salinity water, which ways available to us in order to prove that no condition exists.

CHAIRMAN LONGLEY: Thank you.

Mr. McClure.

MR. McCLURE: Just to note, we have already responded to these comments in writing.

CHAIRMAN LONGLEY: Seems to be a laboratory problem.

MR. McCLURE: I mean, one thing is that in our responses that we would like to work with the coalitions to help ensure that the laboratory data that we generate is useful and especially helpful to determine what the causes of the potential toxicity.

So our general response was that the test is an accepted method for freshwater with a wide range of physical properties, including waters of low salinity, which is the Kings River. In fact, that not all samples, several samples, from the waterbody did not exhibit toxicity. Indicates that the algal toxicity was not due to any inherent property of the Kings River water. And the evidence provided didn't clearly show that the laboratory results were invalid and/or due to properties of the Kings River water. Laboratory manipulations could have determined the -- easily determined the realm of these physical properties, but that was not done. What we do have is evidence that there is algal toxicity and, therefore --

CHAIRMAN LONGLEY: Based on what? I don't understand. I am quite aware that while this may be an accepted test, it is a very -- from everything I know, it is not a very exact test. It is -- it needs standardization. And such things as the quality of dilution water is not something that has been specified in the past. It seems to me the test has some inherent flaws in it. Basing conclusions on tests of that nature causes me some concern.

MR. McCLURE: We also have to be careful because otherwise we would end up -- potentially, if don't accept any algal toxicity data because of inherent flaws of tests, that is why we had some caution where we are recommended leaving it on the list. But, certainly, we would be interested in helping to follow up on this, to see if it is some kind of problem with the test or if there is some way it can be refined.

But staff recommendation remains to list it, based on available evidence.

CHAIRMAN LONGLEY: Thank you.

MR. ATHORP: Thank you very much.

CHAIRMAN LONGLEY: Any further questions or comments?

Thank you.

Tess, before you start, we are going to take a two-minute stand-up break. I have been told if I don't do it, I am in big problem.

Following Tess, will Karna Harrigfeld.

(Break taken.)

CHAIRMAN LONGLEY: Let's come back into session, please. Just a note to all the speakers, that I have been asked to make this announcement. Please stay close to the microphone. We seem to be having some issues with recording, and we need to be able to have an accurate recording. So I request that everybody speak squarely into the microphone.

Thank you, Tess. I know you never have a problem.

MS. DUNHAM: Tess Dunham here today on behalf of Sacramento Valley Water Quality Coalition. And you know, Mr. Chair, I do want to note that it was the lawyer that counted right on the earlier counting.

CHAIRMAN LONGLEY: Yes. Your time is up.

MS. DUNHAM: Anyway, what I want to talk about today is kind of a policy interpretation issue that's occurred that is affecting a number of listings within the policy. In particular, it has to do with the staff's use of going to the weight of

evidence provisions within the policy to bring in maximum frequency exceedances from criteria, even when the binomial distribution, which showed that it is not eligible for listing.

We are very concerned that this is inconsistent with the policy as it was adopted by the State Water Board. I was very involved in the policy adoption at the time that it was done and have been a member of the TMDL PAG. So what has happened is where, in a couple of instances, or actually more than a couple, where there are a number of exceedances that don't qualify under by binomial, they have gone to the weight of the evidence and said, "Well, the CTR says one in three, so we're going to say under the weight of evidence that it should still be listed even though there are not enough number of exceedances."

They qualify this as saying that the binomial methodology is the default methodology and the weight of evidence is the alternative. That is not a correct reading of the listing policy. The binomial methodology is the primary methodology within the listing policy to make listing and delisting decisions. The weight of evidence alternative is a backstop. It is not an equal

weight alternative to the other methodologies. It is clearly a backstop. And when you read the weight of evidence factors that must be considered, if you are going to list under that, you have to consider data, sufficient information, provide your justification.

The whole issue of maximum criteria exceedances was debated heavily in the development of the listing policy. The environmental community put forward many, many comments arguing that the binomial distribution should reflect those criteria exceedances of one in three years. It was specifically rejected by the State Water Board when it adopted the policy. It is inappropriate now to bring that through the backdoor by using weight of evidence provisions.

We would suggest that any listing that uses the weight of evidence to bring in listings when it doesn't meet the binomial is inconsistent with the TMDL listing policy and should be corrected.

CHAIRMAN LONGLEY: Well, Mr. McClure, do you agree, first of all, with the events and the decisions stated by Tess Dunham?

MR. McCLURE: No. One thing that Tess stated was that if it didn't exceed, there are not

enough standards to list under the default binomial distribution. This is a set frequency for all things; that it's not eligible listing for listing, that is not the case. If it exceeded that, the binomial test frequency, it would have to be listed. But just because it doesn't meet that, doesn't mean that it is not eligible.

Staff's general position is that we have these exceedance frequencies that are established in, for instance, our Basin Plan or the California Toxics Rule, and to just -- so in those cases, it is appropriate to see whether we are meeting standards to use the exceedance frequency that is in those standards. And that is --

CHAIRMAN LONGLEY: Just a second.

Do you have a question?

MS. HART: To clarify. So you are saying that where something doesn't meet the binomial methodology, doesn't meet the limit, but there are, say, three data points that show that there was something that occurred, but it didn't meet the limit, under the weight of evidence scenario the, quote, backstop scenario in the listing policy, you guys are having us list the rivers based on those data points?

MR. McCLURE: I don't think there is any proposed under weight of evidence for three data points, but the -- and I also disagree with the weight of evidence being a backstop, necessarily. It says when -- we shall list if the weight of evidence shows to list. So if, like, for instance the --

CHAIRMAN LONGLEY: It appears we have a fundamental disagreement on that point.

MR. McCLURE: Yeah.

MS. HART: Lori.

MS. OKUN: On the weight of evidence, what the policy is, it gives various tests for placing things on the 303(d) list. The binomial test is one. The weight of evidence factor is the last factor. But it says, if the weight of evidence shows that there is an impairment, the pollutant shall be or the waterbody segment shall be listed.

In terms of there being legislative intent or history of the State Board that that was supposed to have some other meaning, it is not apparent from reading the policy. I am sure that once this gets to the State Board, if there's another way they want the weight of evidence test interpreted, we will hear about it. The way staff is reading it is

consistent with what the document says.

MS. HART: If the toxicity data point is one one-millionth of the toxicity, or however it gets measured, then that falls under the weight, and you are saying --

MR. McCLURE: No. We are talking about things that have established criterion standards. This wasn't used for toxicity data. Mostly used for pesticide and metals data that have in the criteria, when the criteria was derived, it is based upon a specific exceedance frequency. Some of those are established in the regulation.

And just to note that, you know, some of these metals that were not listed, because only the binomial method was used, were then listed by USEPA in the last listing cycle. Because they said when we adopted CTR, no more than once every three years. So it makes sense to look at that.

MS. OKUN: Also, in response to your question, it is a weight of evidence test. So if there is one in one-millionth percent possibility, it is probably not the weight of the evidence that it is toxic.

CHAIRMAN LONGLEY: What I am hearing Tess say is that she is claiming that the weight of

evidence is a backdoor. That was, if I remember correctly, really not endorsed by the State Board. But what you are saying is the policy, as we have it in front of us and as we have to use it, points to weight of evidence as the last of the criteria when you get to that point.

Is that correct?

MS. OKUN: Right. There is a factual determination for you to make, whether the weight of evidence supports it. If you conclude that the weight of the evidence supports impairment, then you have to list it. And there is necessary justification, which I am sure is in the fact sheets, that it is scientifically defensible, explaining why this approach was used et cetera, et cetera. If the weight of evidence shows impairment it must be listed.

MR. McCLURE: I should add, I believe the legislation requiring the listing policy asked for a weight of evidence approach.

MS. HART: So back to, say, for instance the pyrethroids issue on Pleasant Grove. We get to employ the weight of evidence issue or standard?

MR. McCLURE: That listing was not based on the weight of evidence provision. That was based on

the --

MS. HART: Binomial?

MR. McCLURE: Yeah. The frequency of toxicity was above the binomial test. Because there is no currentlt criteria for pyrethroids with any kind of exceedance frequency. It is based on the frequency of toxicity. And that was the pyrethroids were the cause of the toxicity, using the binomial method.

CHAIRMAN LONGLEY: Nicole.

MS. BELL: Tess -- I am assuming I can ask Tess questions.

CHAIRMAN LONGLEY: Sure. Go ahead.

MS. BELL: Can you clarify for me if there is specifically something you're concerned with as using the method that you don't agree with?

MS. DUNHAM: There were a couple. The one that I recall off the top of my head was, I believe, there is a listing for Ulatis Creek where the binomial distribution, there were not enough exceedances with the sample size, the data sample size was 50 or something, and there were not enough exceedances to trigger listing, using the binomial methodology for, I think, it was a pesticide, I believe, was a couple constituents.

So then you would not be listed. And then they went to the weight of evidence and said, "However, these are California Toxics Rule constituents that have a maximum exceedance frequency of one in three years. We are going to list it there, anyway."

When you look at the weight of evidence provision in 3.11, it really specifies what types of evidence you are supposed to be looking at. It is evidence. It is not a maximum exceedance criteria. So I think it is important to evaluate when you are listing under weight of evidence what they mean by that.

One other clarification.

CHAIRMAN LONGLEY: Before you go any further.

Lori.

MS. OKUN: The criteria is evidence.

CHAIRMAN LONGLEY: As simple as that.

MS. DUNHAM: It is one element of evidence. There is a weight of evidence approach.

I think the other thing, too, on the pyrethroid issue, I think that if the weight of evidence approach is going to be an equal weight alternative, then it has to be used equally in every

circumstance. If the weight of evidence says the bioassessment study indicates that pyrethroids are appropriate, then you have to be able to use it there, too. You can't use it in one situation and then say that it doesn't apply here. It's got to then be used equally in all situations.

CHAIRMAN LONGLEY: Nicole.

MS. BELL: Does staff have a response to that?

MR. McCLURE: The way the listing policy works is that if the preliminary test, the binomial test, says to list, you must list. And then subsequent to that, if the weight of evidence says you must list, you should list. But in the case of, like, the pyrethroid listings for Pleasant Grove Creek, the pyrethroid listing there, the preliminarily binomial test said we have a frequency of toxicity that requires listing.

MS. DUNHAM: You can delist under weight of evidence, too.

MR. McCLURE: That is correct.

MS. BELL: May I have a copy of the policy in question, just for my own benefit?

MS. DUNHAM: I have it here.

MS. OKUN: I got it.

CHAIRMAN LONGLEY: Any further questions for Tess?

MS. CREEDON: If I could clarify for the record what Danny was saying, and what is important here. Apparently, in a previous week, we kind of did not list because of criteria and EPA corrected that oversight on ours or their -- they did list the material based on criteria frequency.

Sometimes we learn from past listings how other agencies above us interpret, how we should interpret our policy.

CHAIRMAN LONGLEY: Thank you for that clarification. That is very important.

Following Karna is Arthur Godwin.

MS. HARRIGFELD: Good morning. Karna Harrigfeld on behalf of Stockton's water district. We submitted detailed comments on the 303(d) listing, and I will only be responding to the staff's responses to those.

First, I would like to thank staff for revising the segmentation on the Calaveras River. What was originally proposed in the original revision was to, basically, modify the listing to apply to the 44 mile stretch of the Calaveras River instead of the 5.8 mile stretch within the urban

areas of the city of Stockton. I appreciate the segmentation that was made.

With respect to -- there are four listings that I have issues with. The first one is the Lower Calaveras River from below that to Stockton diverting canal. This is essentially a 21-mile reach. This segment is proposed to be listed for unknown toxicities. There were three lines of evidence given. Two of the lines showed no toxicity. One line of evidence did show toxicity. There were three of the 14 samples that showed toxicity. And we don't believe the weight of the evidence supports listing that area for unknown toxicity.

The second area is the Lower Calaveras River from Stockton diverting canal to the San Joaquin River. This segment is proposed for listing for chlorpyrifos. According to the fact sheet, it is being list based on two out of 32 samples. That does not meet the 3.1 binomial listing criteria. We think that that doesn't comply with the listing policy. There is no other evidence, we feel, that is supportive of this listing.

MS. HART: Karna, I'm sorry to interrupt you. Which waterbody were you just referring to,

two of 32 samples?

MS. HARRIGFELD: Lower Calaveras, from Stockton diverting canal to the San Joaquin River. It's Decision 13109.

MS. HART: Thanks.

MS. HARRIGFELD: The next segment is Mormon, which is below the weir to the Stockton diverting canal. This is essentially an 11-mile stretch. This segment is proposed for listing based on unknown toxicity. There were three lines of evidence again here and only one of them shows toxicity. We don't believe that -- the samples were only taken at one location along that 11-mile stretch, and it shows five out of 29 samples. We don't believe that you can base a listing of an 11-mile segment on one sample spot. And so we don't believe the weight of evidence supports this listing.

Final segment is this similar segment, Mormon Slough from below the weir to the Stockton diverting canal, listing for chlorpyrifos. There are four of ten samples. We just don't believe samples taken at one location should be justification for an 11-mile stretch.

My finally comment is with respect to the

Stanislaus River and listing it for temperature. We, Stockton East Water Strict, as well as other stakeholders on the Stanislaus River participated in a CALFED project where we developed a temperature model. That temperature model, the Department of Fish and Game --

CHAIRMAN LONGLEY: Wrap up.

MS. HARRIGFELD: The Department of Fish and Game was part of that process. The Department of Fish and Game agreed with the criteria that we developed for temperature. The temperature proposed in the EPA'S 10 is guidance only and is very different from what were agreed to with respect to the temperature modeling that was done. So we don't believe that the Stanislaus River is impaired and should not be listed.

CHAIRMAN LONGLEY: Thank you.

Any questions by Members of the Board?

Thank you very much.

Arthur Godwin, and next is Victor Chan, I believe.

MR. GODWIN: Arthur Godwin on behalf of Merced Irrigation District. Merced Irrigation District is a member of the San Joaquin River Group, who also submitted comments. I want to talk about

the temperature objective.

In staff responses to the River Group, it described the temperature objective as having two parts, a narrative objective and a numeric objective. They only applied the narrative objective and never explained why they ignored the numeric objective. Last week we get an announcement from the Central Valley Regional Board that's looking at Basin Plan amendments, and they talk about the temperature objective but only describe the numeric objective. So what is the temperature objective? Is it A? Is it B? Is it A and B? Pick and choose. Appears that staff does that all the time.

The narrative objective, I think, is pretty straightforward. It says the natural receiving water of interstate waters shall not be altered unless it can be demonstrated that such alteration will not adversely affect the beneficial uses.

So I am looking at the language. It says shall not be altered. That implies that there is a change being made or about to be made. So where is the change? What change is being made here? I don't see any change. If you are talking about the dams, those were in place long before the Basin Plan

was in place. And even most of those were in place before the Clean Water Act existed. So since there is no alteration before the Board, I don't see that there is a requirement to demonstrate that beneficial uses are impaired.

The listing policy, and I know this is off topic, completely ignores reality. Chairman Longley, you described this earlier. The floor of the Merced River in summertime is not the same as a river draining Pacific Northwest, Cascade National Park. It's apples and oranges. Fish and Game says that there is evidence, it says, or studies that show that salmon don't know the difference, but there is also studies that show there are temperature differences between salmon.

Staff has responded that we don't need an objective if the beneficial uses are being impaired. The only evidence that we have that beneficial uses are impaired is that salmon numbers are down. The salmon numbers are down for a whole host of reasons. The other half of that equation is that temperature doesn't meet Washington State objectives. Well, that to me isn't proof that the use is being impaired.

That is all my comments.

CHAIRMAN LONGLEY: Thank you.

Danny, first of all, reply to this, but also specifically focus on the charges, I guess you would call, that were made regarding so-called picking and choosing between narrative and numeric standards.

MR. McCLURE: So the standard, the water quailty objective in the Basin Plan, contains all the provisions of it. So if either of those are -- you'd want to meet all of them. That is why they are all there. If either of those are not met, it is not one or the other.

MR. GODWIN: Is does say that it lists both of them.

MR. McCLURE: Exactly. So the standard includes all of those provisions that are supposed to be met to support the beneficial uses.

CHAIRMAN LONGLEY: If it doesn't meet one of them, that is sufficient for listing; is that correct?

MR. McCLURE: Correct.

CHAIRMAN LONGLEY: I think that is your answer.

MR. GODWIN: Why does your staff for the Basin Plan amendment only talk about the second half of the objective and not the first half? Does that

mean we are only talking about the second half for the amendment?

CHAIRMAN LONGLEY: I don't think this is the place to talk about the Basin Plan amendment. That is a topic that we do need to discuss.

MR. GODWIN: That is why I am bringing it to your attention.

CHAIRMAN LONGLEY: If we could make that part of the record, that we will discuss that when we're talking Basin Plan.

MS. HART: Do you have a specific example of when this occurred so we can really address the issue?

MR. GODWIN: In what way?

MS. HART: You're indicating that our staff uses whichever objective, sort of willy-nilly.

MR. GODWIN: In this process for the temperature impairment, they only used the narrative portion of the objective and never explained why they didn't use the second half of that.

CHAIRMAN LONGLEY: That is not what I heard. I heard that both were considered, from staff.

MR. GODWIN: Well, wasn't in their responses to comments.

MS. HART: Well, I just think they just responded.

Danny, do your want to supplement your response?

MR. GODWIN: That is why I brought it up.

MS. HART: There was an additional issue that you had raised regarding the TMDL process -- in the Basin Plan processing.

MR. GODWIN: Confusion on my part, as part of the regulated community, which objective is being applied.

CHAIRMAN LONGLEY: I think we have to make a note to discuss that.

MS. CREEDON: I'm not sure. Danny, was this addressing your fact sheet on why the objective -- we have two objectives in the Basin Plan. We have to consider both. If one fails, then it is listed.

Also, I'm not certain, sir, what you're talking about in terms of the notice of Basin Plan amendments. So far as I know. We don't have a notice --

MR. GODWIN: It is not a Basin Plan amendment.

MS. CREEDON: That is what you just stated.

Clarify your comment.

MR. GODWIN: The notice that went out last week regarding the revisions to the Basin Plan.

MS. CREEDON: Triennial Review. That we look at everything then. It is just not limited.

MR. GODWIN: I was looking at the staff report. Listed some specific objectives, and temperature is one of those.

MS. HART: We have a specific concern.

CHAIRMAN LONGLEY: We need to -- if there is something to be addressed there, it will be addressed.

Thank you.

MR. GODWIN: Thank you.

MS. CREEDON: I should point out in the last listing we did have some concern over temperature, how to address it with the Feather River. The State Board rejected our argument on that. Like I said before, sometimes we learn from past listings on how to proceed with this one.

CHAIRMAN LONGLEY: Victor. I have a card from Victor. I have the last name Chan, or from Solano County.

UNIDENTIFIED AUDIENCE MEMBER: I withdraw.

CHAIRMAN LONGLEY: Next is Zeke Grader, and following that will be Dave Tamayo.

MR. GRADER: Thank you, Mr. Chairman, Members of the Board. For the record, my name is Zeke Grader. I am the Executive Director for the Pacific Coast Federation of Fisherman Association. Our office is in San Francisco.

We are here to support the inclusion of the Stanislaus, the Tuolumne, the Merced and the Lower San Joaquin as temperature impaired. The San Joaquin and its tributaries, for those of you that know your history, at one time supported major salmon fisheries here along the west coast that contributed to our fishery, particularly here in California. Most notably south of San Francisco. Of course, we know what's happened to that river system over the course of the past half century or three quarters of a century.

We are now looking at rebuilding those stocks, thanks primarily to the settlement agreements that have been reached with the San Joaquin and also other efforts in those tributaries. One of the critical things that we do have to look at is going to be temperature. That is critical. We certainly know that on the North Coast, where we have a number

of rivers listed as being temperature impaired, and we also know most recently with the biological opinion for the Central Valley related to the OCAL that temperature has to be considered. That is, of course, one of the things that is being looked at right now, as far as the holdover water in Shasta, to make sure that there is an ample cold water pool. So temperature is very critical.

We also have a long history of knowing what the temperature needs are for salmon. It is not necessarily Washington State or someplace. There is some variance. There is ample history about temperature requirements in most places for salmon that give us a pretty good idea of what those fish do, in fact, require. So, that is there. I think it is going to be really proper that this Board, when it sends its recommendation to the State Board, that you do, in fact, include and list those three rivers as well as the Lower San Joaquin as being temperature impaired for the sake of protecting the beneficial uses of these streams.

Thank you.

CHAIRMAN LONGLEY: Any questions from Members of the Board?

Thank you, sir, for your comment.

Dave Tamayo. And next will be Dean Ruiz.

MR. TAMAYO: Thank you, Chairman Longley. It is Dave Tamayo. I am with the County of Sacramento storm water program. Thanks for the opportunity to speak. But at this point I am going to defer my comments to my esteemed colleague from the City of Sacramento storm water program, and she's got a card in there.

CHAIRMAN LONGLEY: Thank you.

Why don't we then go with Delia McGrath.

MS McGATH: Really, Dave shouldn't go very far, please. Good morning. Delia McGrath, and I am a senior engineer with the City of Sacramento storm water program. I am here on behalf of the Sacramento Storm Water Quality Partnership that is comprised of agencies permitted by the Board for storm water discharges, including Sacramento County and its major cities. I would like to acknowledge Regional Board staff for the really incredible attempt at analyzing massive amounts of data and going through the process. I really do. We spent a lot of efforts collecting data, and I do appreciate those efforts.

I do have three comments. First, the Board should consider legacy pollutant listing from

Category 5, which requires a TMDL, to Category 4B, which recognizes that other regulatory tools are available to drive improvements. I know there is some steps there for listing it as 4B, but the proposed impairment listing for legacy pollutants such as chloridane, dialdrin, DDT, PCBs, right now we think are premature, based on just a few fish tissue samples.

Staff's response comment on this point, Page 18, was that there is sufficient information to justify listing reaches under -- that there is insufficient to list it under Category 4B. However, there's an even greater data set that is needed for addressing impairment through TMDLs. Staff's also responded that there is no existing program or action focused on addressing the problem, but, in fact, really the only practical efficient reduction program possible has been implemented for decades, which is banning their use.

Second, while it sounds like a new comment, it really is a long-winded support. So while we recognize that pyrethroids do exceed threshold, the state permits their use in our service area. In other words, there is a regulatory program addressing pyrethroids, and it is not working. That

is why, even though we do support the TMDL, we are very concerned that TMDLs requiring load allocations or load reductions are not going to solve the problem, as long as another state agency is permitting the use of those pesticides and calling it safe.

The Board should recognize in its policy and TMDL implementations that some pollutants are best addressed by other existing regulatory mechanisms. Pesticides for us are clear examples of this, since pesticides are directly authorized by state and federal regulatory agencies to address and even prevent the impairments we are now observing that are due to currently registered pesticide products.

So here is my long-winded comment, too. We strongly encourage the Board's continued support to working with us and EPA and DPR, Department of Pesticide Regulations, in trying to get the changes needed in pesticide regulations to reduce these impairments.

And I do have one last comment. It is only ten seconds.

CHAIRMAN LONGLEY: Go ahead.

MS. McGRATH: It goes back to contested weight of evidence. The Board should consider

site-specific conditions and the weight of evidence to delist Arcade Creek for copper. As indicated in our comment letter, the partnership applied EPA's biotic ligand model. Fancy word, but it does consider other site-specific conditions to calculate site-specific toxicity thresholds for copper in Arcade Creek. This model has been successfully implemented in Southern California and elsewhere in the U.S. for this purpose.

The partnership sampling and analysis indicates that, when site-specific conditions are considered, Arcade Creek is in attainment of the more appropriate and still protective copper water quality objectives. Staff's response to this comment didn't address the use of the biotic ligand model. We would like that considered, especially since we took the effort to collect additional data, do the study, and we think we are in compliance there.

CHAIRMAN LONGLEY: Mr. McClure.

MR. McCLURE: Starting with response on the copper. We established what is equivalent to an objective in the California Toxics Rule. That is the established copper number that we are obligated to compare the data to under EPA standards. Am glad

to hear some data indicates that is okay. I don't know -- I think there is any way -- I think it would take EPA making some kind of changes in CTR to change that, or perhaps a site-specific objective at this point using existing standards we have to list, or leave it on the list, excuse me.

Did you want me to respond to the other points?

CHAIRMAN LONGLEY: Yes, sir, please.

MR. McCLURE: On the first point on being addressed by an existing program. We did not have evidence of enough of the factors to say that we, in fact, attain standards through the existing programs. The ban's decades out. We still haven't met standard. For a lot of pollutants there are ways, even though they are not being manufactured anymore, there are still things that people can do to reduce their presence in surface waters, such as erosion reduction, et cetera.

So we felt that they were appropriate to list.

Moving onto the comments on the pyrethroids and the general pesticide listing. In general, yes, we are definitely working with DPR to help to try to address some of these problems at the registration phase. There is also, just starting up an effort,

all these pesticides are also registered at the federal level at USEPA. And USEPA has just started a harmonization effort between their water quality standard people and their pesticide registration people. So there are a lot of opportunities, and we are looking forward to continuing to participate with USEPA and DPR. And we've really got a good working relationship with DPR now, and I think hopefully we can take care of it there and not have to do TMDLs.

CHAIRMAN LONGLEY: Good. Thank you.

Any questions, comments by Members of the Board?

Thank you very much.

Michael Bryan.

DR. BRYAN: Good morning, Mr. Chairman, Members of the Board. My name is Mike Bryan. I am a partner with Robertson-Bryan, Inc., located at 9888 Kent Street, Elk Grove, California.

I would like to share a technical perspective with the Board this morning pertaining to the proposed dissolved oxygen listing for low flow and ephemeral valley floor creeks, such as Pleasant Grove Creek. My credentials for addressing this matter are that I have a Ph.D. in fisheries in

biology and aquatic toxicology and over a decade of experience in monitoring dissolved oxygen and doing DO studies in Central Valley creeks.

Although a number of creeks have met the criteria of 303(d) listing, due to experiencing dissolved oxygen levels below the Basin Plan objectives, I am confident that in many of these cases it is driven more by natural factors rather than by controllable factors affecting water quality and DO levels in this case.

Low flow creeks have a natural daily DO cycle driven by plants and animals that live within them that are using oxygen through respiration and decomposition 24 hours a day. While photosynthesis by plants and algae only occur during daylight hours, the daily DO cycle is by far the most pronounced during the warm summer and fall periods when rates of respiration, decomposition, photosynthesis are at their seasonal maximums. Low DO levels below five milligrams per liter at night and super saturation at levels of 10 to 15 milligrams per liter by day are actually relatively common in Central Valley creeks. Particularly low flow and ephemeral creeks during the summertime.

I believe that you will find that the typical

TMDL approach will not be effective in resolving the regulatory issues surrounding DO in many of these creeks proposed for listing. Because in many cases, again, the natural factors of respiration and decomposition and photosynthesis would continue to cause nighttime and early morning DO levels to be below current objectives, even after implementing the best practicable treatment and control measures for nutrients and other DO demanding substances.

In Pleasant Grove Creek, as an example, it should be noted that the current DO objective of seven milligrams per liter applies because the cold beneficial use has been designated year-round through the Basin Plan Tributary Rule. In reality, the cold use for this waterbody is probably not attained year-round. It may be attained seasonally and it may be attained for reach specifically, but certainly not year-round.

Therefore, the efficient and effective means of resolving the apparent DO impairment for valley floor creeks may not lie in the implementation of a typical TMDL process, but may actually rather lie through a standard refinement process. This could take the form of either refinement of the cold beneficial use designation via addressing the

objective itself.

A modified DO objective, similar to the USEPA's national recommended DO criteria, would better accommodate the natural DO cycles in these creeks.

CHAIRMAN LONGLEY: If you can finish up in a minute.

DR. BRYAN: I'm finished up with that comment. I just had perfect timing, I guess. I just had one other comment tiering off of the discussion this morning on pyrethroids for Pleasant Grove Creek. And I certainly concur with the earlier statements of the professor from Maryland and Tess Dunham making the comment on weight of evidence.

If you look at the lines of evidence that we have here, we've talked about chemical measurements. We've talked about the predictive bioassays and rapid bioassessment. From my professional perspective, there are not equal in their weighting when you look at weight of evidence. So, certainly, if there is a criterion that you are exceeding, then the chemical measurements are very powerful because

seasonality of that use in the creeks or its reach-specific nature or refinement of the DO

you are either over or under that criteria.

In the case of pyrethroids, we have a chemical measurements that I would weight the lowest. We have the predictive bioassays, and I would weight next in line. But the rapid bioassessments I would give the most weight to. That is the scientific procedure that effectively allows you to go into the creek and ask the organisms, "Are you being effective? Are you being impaired?" The results of that, if you are talking about the weight of evidence, in my professional opinion, would outweigh the other two lines of evidence.

CHAIRMAN LONGLEY: Thank you. Thank you very much.

MS. HART: I just have a follow-up question. I just can't seem to get my arms around this particular situation which extends, I am sure, to other issues as well.

Do you think the bioassessment here and the toxicity studies, more particularly pyrethroids in the Pleasant Grove Creek, do they study the same thing?

DR. BRYAN: Effectively, yes. But it's two different techniques. So if you go into a creek and you take sediment samples and your take those

samples into the laboratory with a standard bioassay, you run a bioassay. You are asking, "Is there toxicity?" And the findings of that says, "Yes, there is." You really can't take anything away from that finding that is a solid scientific finding.

But what a rapid bioassessment does, as the professor from Maryland, again, in his testimony explained it, I think, very nicely, is with the former method you go in one day and you pull a sediment sample. You go into the lab and you test it. With a rapid bioassessment, it's an integrated assessment because those organisms had to live their entire life cycles, multiple life cycles. So you are going into the equilibrium state in that creek. And you are looking at the trophic structure, what types of organisms are there, what the relative abundances are. You are asking yourself the scientific question: Is what I see here appropriate for this creek? The reason the physical habitat is so important is you have to look at the physical habitat first. If you have sandy, silty, muddy sediments without cobbles and warm water versus cold water, there is an expected assemblage of benthic invertebrates.

You look at that and say, "Is that what I expect to see here?" If it is, then the bugs are telling you we're okay for this habitat. We are in good shape. If you didn't see what you expect, than they are being adversely affected by something. That is what the bioassessment looks at.

CHAIRMAN LONGLEY: Thank you very much. Any further questions comments?

MR. BRUNS: Just a quick one. One of questions is: What do I expect to see? Well, there is a lot of assumptions.

CHAIRMAN LONGLEY: You want to go by the microphone?

MR. BRUNS: Sorry. This is Jerry Bruns. The question is: What do you expect to see? There is a lot of assumptions that goes in about what you expect to see and what you don't expect to see, and may be how you describe that influences the results we get. So maybe it is not a fine enough tool to tease out the toxicity that we are finding when we do our toxicity test.

CHAIRMAN LONGLEY: I would like to ask the members of the audience, is anybody here who has submitted a card that I didn't call? Would you come up, sir? Your name, please.

MR. CHESLAK: Ed Cheslak.

CHAIRMAN LONGLEY: I missed you, then. I'm sorry. Go head.

MR. CHESLAK: Good morning, Members of the Central Valley Regional Water Quality Control Board. I'm Ed Cheslak, representing Pacific Gas & Electric Company from San Ramon, California. I would like to thank your staff for the opportunity to comment on the proposed revisions to the Section 305(b) listing.

PG&E provided written comments on March 16th, and I would like to summarize some of the comments here today. We want to acknowledge and appreciate the Central Valley Board staff's tremendous effort in preparing this complicated detailed document. We are concerned that the Central Valley Board staff did not have adequate time to address all the comments received in March in preparation for this revised list.

PG&E provided comments for eight different listings, some of which were originally placed on the 303(d) list by the State Board in 2006. In order to assist the Central Valley Board with this review process, PG&E requested a meeting with the Board staff. We did meet with Danny McClure's team

on April 16th and discussed the comments that we submitted. His team told PG&E at this meeting that they had been able to review many of the comments received and for some of the listings they were able to make the revised recommendations based upon those comments, largely due to segmentation.

However, the listings that we had proposed in 2006 by the State Board have not been reviewed. According to staff, they retained the original listing determinations since the State Board was most familiar with the reasons behind these temperature listings.

PG&E requests that future proposed listings include a review of prior State Board's determination as an independent check of the continued appropriateness of that determination. The 2006 listing by the State Board included water temperature for both the North Fork Feather River and Willow Creek. PG&E submitted comments for both of these listings previously in January of '06, October 19th of '06 and again on March 16 of '09. There is currently no indication that this new information was used to reevaluate these waterbodies. PG&E responded to the 303(d) call for data and submitted all available documents to the

State Board in October 2006 and intend to submit all new information during the next call for data.

We understand that the process of reviewing and making listing determinations is not easy. It is time consuming and requires attention to many details for many different bodies of water. We are concerned about the above water temperature listings because they will be, potentially, retained indefinitely without any review by the Board staff due to these complexities. And PG&E believes that these listings should be revised, based upon available data and information. Furthermore, PG&E believes that an accurate listing for water temperature cannot use a single water temperature criterion --

I just have a few more.

CHAIRMAN LONGLEY: Go ahead.

MR. CHESLAK: -- criterion for a 55- to 60-mile segment of river. A single criteria does not adequately address the complexity of the river. For example, changes in elevation, climate, species present or species of concern, warm water versus cold water species, as well environment, physical and biological differences. PG&E would like to ensure that all relevant data is reviewed by Board

staff and would be happy to meet with the staff after the 303(d) call for new data. Ongoing collaboration will ensure that the applicable data reaches the correct individuals, the information is reviewed and answers to any questions that the Board staff may have are provided in a timely fashion.

We feel that such a collaborative process will make it easier for the Board to evaluate listings more closely and enhance your understanding of available data underlining the listings and approve your assessment of those waterbodies you are considering.

Finally, thank you, again, for the opportunity to make these comments on behalf of PG&E.

CHAIRMAN LONGLEY: Thank you very much.

Any questions from Members of the Board?

Thank you, sir.

And the other gentleman.

MR. RUIZ: Good afternoon. I am Dean Ruiz on behalf of South Delta Water Agency. I think you called me earlier. Got out of order somehow. On behalf of the agency, we do not support the delisting of that portion of the San Joaquin River which is in question, from the Stanislaus River to the Delta boundary.

While we do recognize there has been recent history indicating that the Bureau of Reclamation has made sufficient releases from New Melones to meet the Vernalis salinity standard, the broader problem with respect to salts in the San Joaquin River remains to be addressed. There are hundreds of thousands of tons of salt that come down the river each year, and there are high concentrations in particular months, which are very problematic.

The State Board continues to demonstrate it does not have a plan or at least intent to enforce South Delta water quality standards. We believe it is bad policy at this time, at least in our view, to delist a portion of the river and suggest that so long as the Vernalis standard is being met, there are no salt load problems upstream of the area considered for delisting.

It is the same salt upstream, that comes in upstream in the subject area, that remains in the river and significantly contributes to EC violations in the South Delta. We do not feel you can look at this issue in isolation. We feel delisting suggests that downstream impairment is somehow not related to the upstream salt problem.

As you also are aware, the recent, very

recent, salmon biological opinion appears to place a significant burden on New Melones. The Bureau of Reclamation projects that there will be less water available for all purposes as a result of this biological opinion, which means to us that we do not know how or how they will allocate for water quality standards in the San Joaquin River. This would clearly suggest that there is no basis to conclude that the impaired water above the Delta boundary will continue to be at least partially diluted.

Finally, to the extent that the Regional Board was committed and/or directed to set upstream salinity standards, it seems clear to us that delisting of the proposed area would be used as justification and motivation not to take any action upstream.

For these reasons and other reasons, we, again, do not support delisting of the subject area on the San Joaquin River, and we thank you for your consideration of our comments.

CHAIRMAN LONGLEY: Thank you.

Any questions or comment by Members of the Board?

Thank you, sir.

MS. OKUN: I just want to make sure that

the Lower San Joaquin upstream of Vernalis is not being delisted for salts. It continues to be listed. There is actually a specific decision to maintain that listing in response to a request for this 303(d) list.

There continues to be a control program to address salts in the San Joaquin River upstream of Vernalis. And this shouldn't in any way be read to suggest that those problems have been resolved in the Lower San Joaquin.

MR. McCLURE: A minor correction on that. Lower San Joaquin River, the reach proposed for delisting is from the San Joaquin River to Vernalis.

MS. OKUN: From the Stanislaus River.

MR. McCLURE: Thank you. From the Stanislaus to Vernalis. The reaches upstream of Stanislaus River, as well as the reaches within the Delta, are not proposed for delisting. They are going to remain listed.

CHAIRMAN LONGLEY: For salinity?

MR. McCLURE: For salinity, yes.

CHAIRMAN LONGLEY: And that stretch remains listed for other constituents.

MR. McCLURE: Correct.

CHAIRMAN LONGLEY: We will take closing statements from staff.

MR. BRUNS: So I'll provide a closing remark, and then if any of you have additional things to add, chime in.

In general, I think the recommendation to adopt the list as proposed still stands. We didn't hear anything that was different than what we responded to in written comments already. Ostensive written responses. I don't think we heard anything today that would change our mind on any of these issues.

I don't know if the Board Members want to hear particularly more on any one of the particular issues or not. I can address that gives you particular concern.

CHAIRMAN LONGLEY: Does any Board Member have any further concerns that can be addressed?

Guess not. Jerry, go ahead.

MR. BRUNS: My recommendation would be to approve the recommendation for adopting the resolution as proposed with the late revisions and anything else and forward to State Board.

CHAIRMAN LONGLEY: I think in reply to your asking for questions or clarification, we would just

quite fully in discussion as it went along.

Thank you.

I would like recommendation from the Executive Officer.

MS. CREEDON: Well, I ditto staff's recommendation. I just -- if I may, can I ask Jerry to clarify a couple things? There was some issues, and I know you and I had this extensive about the controllable factors in addressing Dr. Bryan's comments about it not being controllable. That doesn't have any bearing on whether it is listed. It was whether a TMDL or something is done in the future.

Is that correct?

MR. BRUNS: You are talking about his comments on dissolved oxygen?

MS. CREEDON: Yes.

MR. BRUNS: In the valley floor creeks, I would agree. It's pretty straightforward that you have to list based on exceedances of water quality objectives, which are pretty clearly stated in the Basin Plan in the dissolved oxygen.

When we would go about trying to do a TMDL, though, or figure out what kind of regulatory approach to take in those waterbodies, we need to

look at all the stuff he talked about. The DO cycle, the natural warming, the natural cycle of DO production by algae and the use by fish. I don't think we just launch into a Basin Plan amendment process without looking into that first. We don't -- the only -- so far the only dissolved oxygen TMDL that we have developed is the one that deals with the ship channel, the Stockton Ship Channel. That is a pretty unique situation.

CHAIRMAN LONGLEY: Manmade structure, so to speak. Mabye follow up on that.

Let's say that -- the situation is now that there is a TMDL -- a 303(d) listing for DO in those streams that were referenced, and it was determined that this was due to natural occurrences, so to speak, wouldn't that trigger, then, a Basin Plan amendment?

MR. McCLURE: Yes. The appropriate response would be to revise the standards. Make it correct.

CHAIRMAN LONGLEY: Thank you.

MR. BRUNS: There is the other question you brought up about controllable factors. We would have to do an analysis and determine whether this was just a natural condition, which -- or whether

there was actually some controllable factor that we could influence. It's not always obvious. A controllable factor can be flow. It can be riparian vegetation. It can be water management. It can be a lot of things. It is not restricted to us regulating the discharge of pollutants. Other things could be considered.

CHAIRMAN LONGLEY: Thank you.

Any questions from Members of the Board?

MS. HART: I just have one comment with respect to the bioassessment. They are clearly extremely expensive, and it is unfortunate that it appears the State Board listing policy really discourages people from going forward and actually funding really significant helpful studies, because we end up considering the most simplistic, one point data sample piece of evidence. It is really unfortunate because while toxicity may technically be there in one small moment of time in a tiny bacteria, whatever it is, it is not potentially caused by, in this instance, bioassessment related to pyrethroids.

I don't know if there is something we can do in terms of responding to the State Board and indicating that they may want to very well consider

that when people are willing to fund bioassessments, and our staff has reviewed those bioassessments and agree with the science in the bioassessments, that that bioassessment takes weight or precedence over other stated here data toxicity points.

MS. CREEDON: I agree with that. I was going to ask Jerry to comment about that. There is a huge -- what we see with chemical water column testing versus, if that is the real indicator of overall health of the waterbody. It is an issue. I know they are addressing in the nonpoint source program and others. As we move into -- as we evolve in the Water Board, I am sure these discussions will come to play in a bigger arena in our policy making. That is just the next evolution, hopefully, of our policy setting. Right now the policy weighs heavily on chemical analysis.

MR. BRUNS: I want to point out the toxicity testing that is done is typically not being done with just one sample here and there. Usually there is quite a bit of information to support some of these listings. The toxicity testing we have done for years have been really helpful at getting at some of our bigger water quality problems. That is how we got onto working with chlorpyrifos and

diazinon over the years. Toxicity testing in the rivers.

I think these are real useful. I wouldn't downgrade chemistry or toxicity. All three of the legs of information are important. I think we need to evaluate all of them. I don't think the bioassessment stuff is inherently, wildly more valuable than the other pieces. But you have to have a reasonable amount of information on all the legs. It's not just two samples from one. From, say, two samples from bioassays and then you do a million dollar study. Those obviously don't have the same weight. You can't just equate two samples to those studies. I think all three of the legs are important.

MS. HART: But, Jerry, that is what we have done here.

MR. BRUNS: It is not quite as slight amount of data as is characterized in most cases. In some cases we had -- we just have to follow the policy, and we had to use what data was available, and it is not very much. But a lot of them, like, the pyrethroid listings in Pleasant Grove Creek. That is not based on just a few little data points. There is a significant amount of data for that.

MS. HART: The question is pyrethroids are linked to causing toxicity?

MR. BRUNS: They are in terms of killing the test organisms and organisms like that that would live in that waterbody. As to whether the bioassessment captures that, that is a different story.

CHAIRMAN LONGLEY: Thank you.

So your recommendation is?

MS. CREEDON: It is the same. To approve.

CHAIRMAN LONGLEY: Just for the record.

MS. BELL: I have a question.

CHAIRMAN LONGLEY: Yes.

MS. BELL: This goes back to the first speaker, Mr. Hall. I am having a hard time wrapping my brain around it, and it kind of goes to what we are talking about now as well. Just for my clarity, if an organization has done testing and it is scientifically based, is staff able to use that testing?

CHAIRMAN LONGLEY: Dr. Hall, come to the mike, please.

MS. BELL: This is a question to staff, please. When there is scientific based testing done

by other groups, is it being considered by staff when making your decisions?

MR. McCLURE: Yes. The majority of stuff we looked at were not from internal programs. So we did include everything that was submitted and looked at that.

MS. BELL: Mr. Hall, your testing was from when? I thought on this topic staff's testing was from to 2001 and your comment -- excuse me, 2004 and your comment was that your bioassessment, that the newer bioassessment had different results and it was not any better than the old results. What I am wondering is, is there a possibility that because you didn't also have -- well, please answer that question.

MR. McCLURE: There is a little bit of confusion, first of all. There is a number of tests that were done here, and so there is toxicity testing and there are bioassessments. Those are two different things. One is whether a test organism dies when it is in the sediment. That is instream. And one is whether, when you look at all the bugs that are in the stream, including sensitive and insensitive, whether certain metrics apply to that, indicate that the steam is impacted. And there are

two different things to look at.

The difference between staff's conclusion and the proposal with Pyrethroid Working Group's conclusion on looking at what they looked at, is more to do with how the data are interpreted and looking at three lines of evidence.

DR. HALL: Can I answer?

CHAIRMAN LONGLEY: You can answer.

DR. HALL: There are a couple questions that were asked about. Really the rub in all of this is the use of two different tools. The single species toxicity test, which is what was used by the Regional Board to make this decision based on work done in 2004, is a single species toxicity test with one test organism that was used at various sites in Pleasant Grove Creek. Results of that study showed that there was toxicity, and also linked that toxicity from that one test species to pyrethroids. The work that we did in 2006 and 2007 is a bioassessment study, which is a lot broader type of approach for trying to get a handle on impairment, because you are not using one species. You are using biological data from organisms that actually live in that system. And what we did is we collected data over a two-year period for 21 sites

each year, which is a very strong data set, to enable us to look at the conditions of the organisms in that stream to see how they responded to stressors. The three stressors we were interested in were pyrethroids, trace metals and physical habitat.

What we found from our robust data set was that pyrethroids were not an important factor in influencing those communities, while physical habitat was an important factor, and there were some minor effects from metals. So, basically, the bottom line, in my view, is when you've got biological data that is of this kind of spatial and temporal scale, it should take precedent over any kind of single species toxicity test. That is really the bottom line for my argument.

MS. CREEDON: He may have a valid point. We have a policy we are bound by. The policy is clear that if we show toxicity, and we clearly can identify with the pollutant, we shall list it on the 303(d). There is the rub. We have a policy versus possible science and/or that this policy doesn't allow one to trump the other. So that is why we are today.

MR. BRUNS: There is another part of the

review cycle, and all this goes to State Board. This can all be debated again.

CHAIRMAN LONGLEY: We don't need to go there. We realize that.

MS. CREEDON: I did want to make our clarifying stateme if you're done with Dr. Hall, I would like to make a point about the delisting of the San Joaquin River for salt, or that segment of it. The fact by our proposing to delist it is based simply on using the policy and applying the policy for delisting. The fact that we have had significant years of data, including one critical year period, and we still did not observe exceedances, this is not a statement on whether the use of New Melones or not is appropriate. It is not clearly a statement that we do not intend to further regulate salts or impose other requirements upstream of that area or within the Delta.

So it is not a statement of what we are not going to do. It is simply a statement that it clear meets the defined system, defined in the policy for delisting that particular segment of the river.

CHAIRMAN LONGLEY: Thank you.

Any further questions from Members of the Board of anybody?

Let's consider whether or not we are going to approve this resolution adopting the recommendations for 303(d) listing and delisting.

Any comments? Thoughts?

MS. HART: Well, I'll start. I don't -- I am going to go ahead and move approval based on the recent discussions we have, but want to make a very clear point about two of the issues that were discussed.

One is with respect to the bioassessments. I find it very contrary to common sense that we use simple data toxicity points, and we are absolutely required by a policy to move forward on listing something for a TMDL where the TMDL might not even help and probably won't even help the toxicity situation because we have a larger picture of what is really happening in that creek, which is that it needs restoration. It needs a lot of different things, including probably more flow. And that is not going to happen, based on any TMDL that we are doing, but based on a technicality we have throw in there.

So I am not going to make any proposed revisions with respect to the Pleasant Grove Creek. Same thing with the dissolved oxygen problem.

Secondly, on Vernalis, I couldn't agree more with the gentleman's comment that salinity is a severe problem in this area. Well, in most of the Delta and a lot of our rivers. And wholeheartedly concur with our EO's and our counsel's comments that this is not -- this vote by the Board to delist this very small segment of the river near Vernalis is not any indication or a signal to anyone, any party, any group that we believe salinity is not a problem. It is, again, a technicality. Every single aspect of the requirement for delisting has been met.

In my mind, that means it is my job to comply with the policy that has been set by the State Board. If every objective has been met, it is my job to approve it, even if I disagree or think it is problematic.

And the State Board should be on notice they might want to reconsider certain policies with respect to this area, and contemplating the control programs on both the upper and lower parts of the San Joaquin.

So with that, I will move approval of the proposed list. And I thank staff for very hard work, as well as the dischargers and folks who have commented today.

CHAIRMAN LONGLEY: Thank you.

Do I have a second?

MS. BELL: I will second the motion.

CHAIRMAN LONGLEY: Moved and seconded.

Before we vote, I have to say that I concur with the Vice Chair's statement. I would like to add in the issue of dissolved oxygen, our funding for Basin Planning efforts are coming from the general fund. If somebody would like for, in their area, if they think they have a valid case for a Basin Plan amendment, we would very much like to talk with you. And we'd appreciate it if you would bring your checkbook along, and we can have those discussions.

With that said, are there any further discussions?

We will go to voting.

All in favor of the motion, state so by saying aye.

Opposed say no.

MR. ODENWELLER: No.

CHAIRMAN LONGLEY: Abstain.

With that, the motion carries.

Thank you.

(Hearing concluded at 12:25 p.m.)

REPORTER'S CERTIFICATE

STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

I, ESTHER F. SCHWARTZ, certify that I was the official Court Reporter for the proceedings named herein, and that as such reporter, I reported in verbatim shorthand writing those proceedings;

That I thereafter caused my shorthand writing to be reduced to printed format, and the pages numbered 3 through 136 herein constitute a complete, true and correct record of the proceedings.

IN WITNESS WHEREOF, I have subscribed this certificate at Sacramento, California, on this 16th day of June, 2009.

ESTHER F. SCHWARTZ
CSR NO. 1564