They have funding and have a time schedule for construction. So they're limited on how much time they can wait to end.

I can assure you a Basin Plan amendment will not be done in time for them to not have to consider the limits that are being imposed.

So we can put together a time schedule and a work plan. Colusa, it's been over two years now, and we're not -- we're getting closer, but not that close. It takes about -- depending on the complexity and the size of the Basin Plan amendment anywhere from two to five years to have one put through. It takes a lot of information gathering. It takes the CEQA analysis, and it's a very time-intensive, resource-intensive action on the Board. And we do -- on top of what we do on a daily basis, we'd have to work that into staff working on that.

And also, the staff that would work on it would be the same ones who would be working on permits and everything else that other dischargers need. So we have to balance that.

So that's why it's a two- to five-year process. So there is no instantaneous resolution for this issue right now the way it stands.

CHAIRPERSON HART: Well, and if for some reason the Board felt it was appropriate to remove the MUN

designation, there's still no guarantee for the discharger that --

EXECUTIVE OFFICER CREEDON: It wouldn't come back at them in a couple years once the remand. Because I'm certain -- whatever action you take, it would be appealed to the Board -- to the State Board. And so if you remove it and take it to the State Board, from what I'm hearing from David, they most likely will remand it back to us telling us we have to do a Basin Plan amendment and that doesn't save the discharger anything whatsoever. They're bound by these limits until a Basin Plan amendment is done.

And David pointed out to me this is involving the list of permittees that Diane a put up earlier in the presentation. Those are the only facilities with this issue. And it was this Board that adopted the permit in the past that didn't apply the MUN and now we're fixing that. We have other facilities in Fresno and Redding that applied it appropriately. So we're just dealing with a handful of facilities and permits that will be coming back to you with this issue.

BOARD MEMBER ODENWELLER: Pamela, I presume there's no Executive Officer's discretionary fund pot that's available.

EXECUTIVE OFFICER CREEDON: I wish there was.

I'm afraid not. Every time I turn around, our budget keeps getting smaller and smaller.

CHAIRPERSON HART: Lyle.

BOARD MEMBER HOAG: But it would take the same two years, plus $10 million for them to attempt to meet these requirements. And there is just no way they're going to stop their or alter their construction project in the middle and spend two years and $10 million more to try to meet these requirements.

So they would simply -- I'm guessing they would simply proceed in an orderly way to complete the contract that they have entered into. And then they would simply sit there until something forces them to do something different.

CHAIRPERSON HART: No. They'd incur -- are you saying we wouldn't adopt the permit as proposed, or we would?

BOARD MEMBER HOAG: If they must meet these requirements, they can't do it with the current project, which is under contract. So it would take them in round numbers two more years and $10 more million to meet these requirements and a major revision to their improvement plan. So they're caught in the middle, either way.

CHAIRPERSON HART: Yes, they are. That's why all of us are having serious, serious problems with this.

EXECUTIVE OFFICER CREEDON: And I share your concern. I know I had an issue -- I felt very upset when we lost the regionalization plan. But I'd hope they don't honestly don't think this is happening because of that. They're unrelated actions.

And when staff brought this forward, it was -- I just knew how you would react. And I wished I had something to offer you better than no. This Board -- you can direct us and I guess David can try his best to craft language for you, but we sort of know the outcome. And this Board has a burden to implement a permit that is in compliance with our Basin Plan. And this approach puts us into compliance with the Basin Plan.

And you can say then how did it come to be that we adopted a permit a few years ago that did not comply with the Basin plan and it made it through all these years? And the world is a little different right now and we may not be so lucky to have the permit go through. We have a current permit. They are operating under a current permit with a MUN that has not been designated. And it wasn't challenged. But we're not in that world anymore. These permits are challenged, and CSPA is a designated party. And I'm certain it will be challenged, if you were to not designate it MUN.

BOARD MEMBER LONGLEY: Madam Chair?

CHAIRPERSON HART: Yes.

BOARD MEMBER LONGLEY: I'm concerned about the municipal designation. I do think we have to continue a discussion in the near future on that. I think there needs to be some action taken.

At the same time, I'd like to return this question that I had for the discharger. I think it was dismissed. The land disposal or use for ag irrigation was dismissed out of hand. 1,600 acre feet ain't much water. And I thought that was rather dismissive.

I'm an engineer. I do have design projects like that. I was just dismayed at the answer I got.

So I think there are other solutions that they can take to stay out of the ag drain. They have a storage problem. But that ain't much water to store either. It's not for a total year. It would be roughly half of that amount they have to store.

CHAIRPERSON HART: Okay. I think we very unfortunately need to move on. And so maybe we can get a closing statement from -- we don't have any other interested parties. And I think we should take -- do you have something to say right now, Dan?

BOARD MEMBER ODENWELLER: Yeah, Carl. You woke up a thought. Butte County has been marking water to Los Angeles last couple of years.

CHAIRPERSON HART: I'm sure MET wants your water. Not a bad idea.

BOARD MEMBER ODENWELLER: Just a thought.

CHAIRPERSON HART: Okay. So let's just take closing statements by Live Oak.

MS. LARSON: Thank you, Madam Chair and members of the Board. And thank you for your patience and all of your engaged discussion on this issue. It's a challenging once for us all. And I think we all have mutual respect. I respect Ms. Creedon and your staff and your attorneys very much. And these issues are thorny ones.

But I just want to address a couple of issues here on our closing. The first is not the most significant, but I just want to address it quickly. And that is this notion of whether the THMs need to be expressed as a daily and monthly limit. And unfortunately, I did not bring the entire copy of the SIP with me.

But just two points. The total THM is not a CTR criteria. And there are four components that make up THMs. Two of them are CTR criteria. The other two are not. There is no CTR criteria for chloroform or one of the bromos, which I get mixed up all the time. I don't think you can argue it's a CTR criterion, because only half of it is.

Secondly, even if it is, I think if you look at the SIP -- and I believe it would be on page 11 of the SIP. And I apologize I don't have the full SIP with me. But the provision that requires daily limits for POTWs is only in the section dealing with aquatic life, not with human health. So anyway, I think you have the discretion to apply that as an annual limit.

That said, that along with all of the other issues in Mr. Lewis' chart that you saw earlier that are compliance issues for the discharger would not exist but for this questionable MUN designation.

And again, I understand the legal constraints that your staff perceives they're under. But I guess I can't use the word "fixing" it by the action that's being taken today. It seems to me it's going in the opposite direction.

And so I know that the Board is struggling with what to do, and it may not be possible for you to take our first option today, which is to actually just not apply the MUN designation.

But I would say that to the extent a Basin Plan option is one that's being considered, there are examples where sort of group Basin Plan de-designations have occurred. It was done in the San Francisco Bay Board with regard to implementing the groundwater provisions of the

sources of drinking water policy. It was done with Lahonton region to the small isolated surface waters. It was done in the state of Kansas, by the way, to de-designate a whole laundry list of waters that were designated MUN.

So I don't want you -- yes, it's a lot of work. Yes, there is an investment of resources, all the more reason to do it once. To do it once and to do it for all of these affected entities and get it right.

So I would really urge you strongly to encourage your staff, to direct your staff to take that course of action, and not just pick off these small communities one by one as they come before you and try to figure out how they're going to comply.

Thank you all very much for your time and attention. I know the City and Mayor really appreciate it. And I hope that whatever you decide today, we are all committed going forward to working this out to reverse this absurd result. Thank you.

CHAIRPERSON HART: Thank you, Bobbie.

CSPA is not present.

Closing statements by staff.

NPDES PROGRAM MANAGER MESSINA: So I was trying to take notes of the issues we need to address. If I missed one, please let me know.

First of all, I'd like to address the total THMs. So we have come to the conclusion that even though the four constituents which make up the total are CTR constituents, that total THMs are not officially a CTR constituent.

At this time, we think it is practical to regulate total THMs on a monthly average basis. We do not find that it's practical to regulate it on a daily basis.

So in the tentative permit, you have effluent limits for total THMs, which include monthly average and maximum daily. So at this time, we're recommending that we remove the -- we're not proposing the maximum daily effluent limit, but we are still proposing to regulate it on a monthly average basis since it's a primary MCL.

Are there any questions on that?

CHAIRPERSON HART: No. That's another late revision.

BOARD MEMBER MULHOLLAND: That's a late revision you're making right now.

NPDES PROGRAM MANAGER MESSINA: It would be a late, late revision. Yes.

Let me know when you're ready, and I'll move onto comment on chloroform and bromoform.

CHAIRPERSON HART: Go ahead.

NPDES PROGRAM MANAGER MESSINA: Both chloroform

and bromoform are listed in the CTR as CTR constituents.

First, I'll address bromoform. It's a little easier. We found no reasonable potential for bromoform. There is a numeric criteria in the CTR for bromoform, but we found no reasonable potential. Therefore, we are not placing a bromoform limit.

For chloroform --

BOARD MEMBER LONGLEY: You're not doing what?

NPDES PROGRAM MANAGER MESSINA: There is no bromoform limit.

For chloroform, we ran across this issue with other permits back in September. It is listed in the CTR. So we still recommend that we regulate as the CTR constituent. It does not have a numeric criteria in the CTR, so we look to other standards. And for this permit, we're looking to the MCL to implement this.

As we went through the regional potential analysis, we did not find reasonable potential alone for chloroform. But we did -- as we added up the effluent concentrations for the four, we are regulating chloroform through our proposed monthly average limit for total trihalomethanes. So there is no chloroform limit in the tentative plan.

MS. PERREIRA: This is Gayleen Perreira, Board staff.

And chloroform did exceed the primary MCL. So we did find reasonable potential under the drinking water standard and implemented -- to implement the CTR constituent based upon the standard State implementation policy. We used total trihalomethanes to establish a limit, but it did demonstrate reasonable potential and it exceeded.

NPDES PROGRAM MANAGER MESSINA: So we are recommending that we regulate chloroform through the total THMs?

BOARD MEMBER LONGLEY: Recommending chloroform to the --

CHAIRPERSON HART: Chloroform to the total THMs.

NPDES PROGRAM MANAGER MESSINA: Yes.

CHAIRPERSON HART: Are you finished?

NPDES PROGRAM MANAGER MESSINA: I'm so sorry. I think we still stand unfortunately on the staff recommendation for the MUN designation in order to comply with our Basin Plan.

We did present all the other late revisions. So with that one late, late revision on total trihalomethanes removing the daily maximum, our recommendation is to adopt this permit with all these late revisions and the proposed Cease and Desist Order amendment with the late revisions.

CHAIRPERSON HART: Thank you. We have a staff

recommendation.

And I'm going to go ahead and close the hearing. And I will -- we can have discussion. We can deliberate. We can -- someone can throw up a motion.

There was a lot of discussion here about -- I guess I have one question for legal counsel. Is there a -- I don't think there is a direct State Board determination and/or court case determining specifically this issue of the blanket MUN designation. I know we're legally arguing that in the Vacaville case. But do we have the State Board has said to us this is exactly how you have to interpret it in cases just like this?

STAFF COUNSEL COUPE: Certainly not in cases exactly like this.

CHAIRPERSON HART: So we could make Live Oak a test case if we wanted to? Not that they'd appreciate it.

STAFF COUNSEL COUPE: If you chose to make Live Oak a test case, that's certainly within your discretion. I do think it would be a difficult road to hoe.

CHAIRPERSON HART: We definitely understand that. So I just want to throw that -- yes, Sandra.

BOARD MEMBER MERAZ: Didn't Mr. Longley have a motion on the table?

BOARD MEMBER LONGLEY: No. I was talking about speculating about one.

CHAIRPERSON HART: Yes. So just that I ask that question of counsel so the Board members are aware that we can, in fact, determine with all due respect to our staff and to our legal counsel that, in fact, the actions we took in 2004 -- 1994, whenever we last adopted the NPDES permit, the MUN designation should not apply and that we're interpreting as we had previously discussed. And then that would have to get hashed out at the State Board and through litigation. And then we'd have an opinion directly on point with respect to these specific issues.

STAFF COUNSEL COUPE: With that said, I do think there is sufficient direction that was provided by State Board, albeit in an arguably more general context that in order to remove a municipal beneficial use as it pertains to -- in this particular case, you need to go to a Basin Plan amendment process and that it cannot be self-implemented through a permitting action.

CHAIRPERSON HART: Yes, Carl.

BOARD MEMBER LONGLEY: I feel that unfortunately that our hands are tied. I'd like to find some way -- maybe not for this one, but maybe we don't have the time.

What concerns me also is if we don't get things moving, they're going to be losing money. So catch 22 if I've ever seen one.

Well, I think this is really a catch 22 any way

you look at it. If we go one direction, I'm hearing that this is may be remanded to us. At the same time that all this is going on, the clock is running in as far as their money is concerned. And in the end, they have to do it, and then they've lost money because we can't figure out how to do it. That's a catch 22 if I've ever seen one.

It's not with any pleasure. I'm going to go ahead and make a motion that we start with the NPDES permit. I think the cease and desist is a roll call vote; am I correct?

CHAIRPERSON HART: It is.

BOARD MEMBER LONGLEY: So I'll do them separately. I'll move that we adopt the NPDES with late revisions and the late, late revisions that were just given to us. And after we vote on that, I -- of course, we need a motion. And -- I mean a second I should say.

And then I would like to when we finish with this to talk about what our next steps should be in so far as the Basin Plan.

CHAIRPERSON HART: Okay.

BOARD MEMBER MULHOLLAND: Can I ask a question before? In terms of Live Oak, if we were to decide to challenge this and take it to the State Board, I'm hearing that their hands are tied. But if they're in the process of building a tertiary treatment, why can they not do

that? I don't understand. This is one implement -- I know certain parts of the tertiary treatment will be effected on whether they have to come out with drinkable water or not. But --

CHAIRPERSON HART: No, they can. They'll make an internal policy decision on how to proceed. And they'll -- if the State Board says -- if we decided to go contrary to staff recommendation and legal counsel's recommendation, Live Oak would have to -- I mean, assuming it got appealed to the State Board by CSPA or anybody else, Live Oak would have to make an internal decision on whether they would proceed with upgrading their plant to come into compliance with a permit that essentially is before us today or whether they proceed with the existing plans, which would be in accordance with what you might propose. And that would be their issue.

BOARD MEMBER MULHOLLAND: But we would be at that point challenging the existence of this insanity; is that right?

CHAIRPERSON HART: Correct. I mean, we wouldn't be challenging it, per se. We'd be --

BOARD MEMBER MULHOLLAND: Saying we're not going along with it.

CHAIRPERSON HART: Yes.

Lyle.

BOARD MEMBER LONGLEY: I have another question.

CHAIRPERSON HART: Hold on.

BOARD MEMBER LONGLEY: If you don't mind, Lyle. That question is: What is the difference in the permit if the municipal designation is removed?

CHAIRPERSON HART: I think it's really, really significant. It's like millions of dollars significant. They have to do a whole nitrification system.

CHAIRPERSON HART: I'll reopen the hearing. Yes, you may answer. I'm re-opening the public hearing so that the City may respond to Dr. Longley's question.

MR. LEWIS: Dr. Longley, in response to your question, the plant was designed to nitrify remove ammonia, but not designed to de-nitrify. So the nitrate concentration we estimate will be at least double what's in the drinking water standard. So the plant will not meet the nitrate standard. So -- and that cost is about $4.1 million. And pushes us up to over three-and-a-half percent of the median household income.

CHAIRPERSON HART: Thank you very much for your testimony, sir.

Now with that said, back to Soapy's question. If we went contrary to staff determination, we adopted the permit as not proposed today and they chose not to do the denitrification and lost and the State Board told us we

were wrong, then they send it back to us, remand it, and we'd have to go through this process again. Of course, we'd know all the issue at this point.

Lyle, you were going to say something.

BOARD MEMBER HOAG: Well, I'm just to the latter point momentarily. The City would likely do nothing different, whether or not we adopt it. But they're not going to interfere with their construction contract very likely, because it could take too much time and cost too much money to try to do that. They would probably finish what they're building and then as required over time they would enter into an additional construction contract. That's my speculation.

What the main point I wanted to make is with all that's been said, the universal acknowledgement of the importance of this matter and of the essentially irrationality of this designation, aside from the legal requirements, I don't think I can bring myself to vote yes on the motion as it has been made. I don't think I can act to approve this order as written when we have at the same time asked for the study of alternatives, the work plan for revision of the Basin Plan. I can't do that.

And that's why I asked a while back for some guidance on what are the alternatives. Do I vote no and let it stand? Or do -- what do we do? What are the

alternatives to my voting yes on this thing?

CHAIRPERSON HART: Well, you can make a counter motion; right? I think you can make a counter motion. Or if Soapy makes a counter motion and we can take votes on that. Or if Carl's motion gets a second, then you can vote no.

BOARD MEMBER LONGLEY: You've got to deal with my motion.

CHAIRPERSON HART: We do have to deal with your motion.

BOARD MEMBER LONGLEY: But the other thing you might do is suggest an amendment to my motion. Accept this, and then amend it but drop out the municipal designation.

BOARD MEMBER HOAG: You're suggesting I amend the motion so our action would be to interpret the exception clause?

CHAIRPERSON HART: Yes.

BOARD MEMBER HOAG: And we declare an exception. Oh, novel idea.

CHAIRPERSON HART: We're going to take a ten minute break.

(Thereupon a recess was taken.)

CHAIRPERSON HART: We're going to come back into session. We have a motion on Carl's motion on the floor,

which is to adopt the permit as proposed with the late and late, late revisions.

Do I have a second for that motion?

BOARD MEMBER MERAZ: I second that.

CHAIRPERSON HART: Sandra seconds. This is a voice vote for the NPDES -- just for the NPDES permit.

All those in favor, say aye.

(Ayes)

BOARD MEMBER MULHOLLAND: Is this taking off --

CHAIRPERSON HART: This is just for the NPDES permit and as proposed with the late and late, late revisions, not with any amendment that would remove the NUM designation.

BOARD MEMBER HOAG: This document --

CHAIRPERSON HART: The document as you're looking at it in your binder with late revisions.

BOARD MEMBER MULHOLLAND: The MUN would stand?

BOARD MEMBER LONGLEY: Yes.

CHAIRPERSON HART: The MUN applies with respect to this permit and the motion that's on the floor. And if the motion doesn't pass, you have an opportunity to put another motion or the floor or whatever it is.

So we have -- yes, Lyle.

BOARD MEMBER HOAG: Then this document will just sit pending future action?

CHAIRPERSON HART: Correct. So we have three votes for. Any opposed?

BOARD MEMBER MULHOLLAND: Opposed.

CHAIRPERSON HART: Any opposed? We have Soapy and I have voted no.

BOARD MEMBER HOAG: No.

CHAIRPERSON HART: Lyle votes no. So we have a tie.

STAFF COUNSEL COUPE: Motion does not pass.

CHAIRPERSON HART: Is there an alternative motion?

BOARD MEMBER LONGLEY: At this point, I'd like to ask counsel and their Executive Officer what their recommendation would be.

EXECUTIVE OFFICER CREEDON: What's my recommendation? Well, I can't recommend to you anything that is not compliant with the Basin Plan. Regardless of my opinion of it, I can't recommend something that for you to do that's not legal. And I believe the MUN applies. So that's my only recommendation is this permit.

I can commit to you that we will look at putting a plan together for Basin Plan amendment, but that's all I can offer in terms of any recommendation. But I cannot recommend to this Board to not include MUN in this permit.

BOARD MEMBER LONGLEY: I then make a motion that

we table this and that we give direction to staff. Those directions being to pursue other solutions to the MUN, legal remedies if they do exist.

BOARD MEMBER HOAG: Second.

CHAIRPERSON HART: Lyle seconds that.

But Pamela doesn't understand the direction.

EXECUTIVE OFFICER CREEDON: I don't understand the motion. I don't know how I can pursue legal remedies.

BOARD MEMBER LONGLEY: It may well be you come back and tell us there are no other legal remedies. There have been a number of things said today that I would hope that that could be looked into a little more exhaustively.

BOARD MEMBER HOAG: When I seconded the motion, I assumed it was to table this document and direct staff to explore, as counsel had offered to do earlier, alternative approaches to removing the MUN designation. That doesn't mean we're asking for any specific action, except to study it and give us a memorandum report.

STAFF COUNSEL COUPE: The only option I'm aware of at this particular time would be through a formal Basin Plan amendment process.

EXECUTIVE OFFICER CREEDON: I don't know exactly --

BOARD MEMBER LONGLEY: You interpreted it correctly, Lyle.

CHAIRPERSON HART: He's confirming your interpretation of his motion.

Yes, Pamela.

EXECUTIVE OFFICER CREEDON: First, I think we need to ask the discharger if there's anything that's going to hold them up from moving forward if they don't have a permit today. This could hurt them. If it's not, I'm not going to worry too much about it. I think it's the Chair's discretion. I can't tell you to come up to the podium.

CHAIRPERSON HART: For clarification, please. I'm not sure I re-closed the hearing. So I apologize. So I don't need to reopen.

MR. LEWIS: Madam Chair, this is Bill Lewis.

As far as delaying the permit, one of the benefits that we saw was the City's accumulating mandatory minimum penalties currently. We are upwards of $800,000 in mandatory minimum penalties that have been accumulated.

Those penalties are being applied towards the project that we are constructing. This permit, the CDO, would have stopped -- essentially stopped those MMPs. If we are talking about delaying the MMPs a matter of months or even possibly a year because it's been clear that the letter that we received, the ACL -- is that the proper term -- was that all of the penalties are being applied to

the project up to the City's commitment for the project. The City has committed upwards of ten million dollars towards this project. So as long as that continues, that the fines would be applied towards the City's commitment of the project, I don't think that we have an objection with delaying this permit.

CHAIRPERSON HART: Right. So there's two different actions we're taking today: The NPDES permit and the Cease and Desist Order. So we haven't voted on the Cease and Desist Order yet. But your point is well taken. It looks like you need it and looks like you would like this Board to vote for the Cease and Desist Order.

EXECUTIVE OFFICER CREEDON: The Cease and Desist Order isn't set from the permit. They're linked.

MR. LEWIS: In the short term, I think the City is okay with delaying this if this you're talking -- our new project is going to come online within a year. Hopefully within a year. And the MMP would stop at that point in time.

EXECUTIVE OFFICER CREEDON: The issue.

MR. LEWIS: We would be in compliance with the current permit.

EXECUTIVE OFFICER CREEDON: The only option we have, what we would come back with to you, is the same permit with a plan for a Basin Plan amendment. You can

adopt the order today, and we could still come back with a plan to you on how we will proceed with the Basin Plan amendment. It will have the same effect.

The one thing we can do is delay adopting this permit until we have the Basin Plan amendment in place, because that's too long of a time period for this discharger. And I don't think U.S. EPA would agree with us having that on our backlog. So it's up to the Board to decide to delay, but we'll come back with a permit that looks almost identical to what you have right now.

BOARD MEMBER MULHOLLAND: There was another option that we were talking about, which was to go ahead and say that we're going to chose -- the Board is going to choose to say this is not a municipal water. And then it would be sent -- it could be challenged and go to the State Board and come back possibly again. And we might have to institute it. But we could make a statement that -- I don't think that effects them at all; is that correct? That's not correct?

Wasn't that one of the other options that we had out here? I know you said we probably would be challenged by CSPA. It probably would go to the State Board. The State Board very possibly would send it back to us and say we had to do it. But we'd be saying we don't think this makes any sense; is that correct?

STAFF COUNSEL COUPE: My understanding -- staff can correct me if I'm wrong -- that if, in fact, the Board was to approve the permit without the MUN designation, I think there would be a lot of -- we need to continue the hearing and staff would have to rework the permit. It sounds like there are quite a few things they'd have to consider.

ASSISTANT EXECUTIVE OFFICER LANDAU: We'd have to craft new findings, and all of the effluent limits dealing with MUN would have to be removed. I think this would probably be significant enough we'd probably have to re-circulate the permit.

EXECUTIVE OFFICER CREEDON: Our basic finding is that this permit is in compliance with the basin plan. As an Executive Officer, we could not make that finding. And that's problematic for a permit. I can't advise you to do something that's not in compliance with the Basin Plan. I would love to, but I can't.

CHAIRPERSON HART: Well, it looks like the only other option I can think of is we can adopt the permit, adopt the CDO, and the discharger can appeal it.

BOARD MEMBER MULHOLLAND: Or we can say to the staff they need to go back and start working on a Basin Plan amendment that would involve more water bodies than just this one.

CHAIRPERSON HART: We can have them do a basin plan amendment that would include all of the following -- all of the five or six similarly situated sites and see if we can do a group Basin Plan amendment type thing if the water bodies are similar enough. Or we can just table it and --

EXECUTIVE OFFICER CREEDON: I'm not the basin planning expert here. But if we could combine them and do one major Basin Plan amendment, it's always best. But I don't know. I would have to ask staff how they think we could proceed with that.

BOARD MEMBER LONGLEY: I suggest the discussion needs to continue between now and the next meeting and we get an update where we should go at the next meeting.

CHAIRPERSON HART: We need to table it then and --

BOARD MEMBER LONGLEY: We have a motion and a second.

BOARD MEMBER HOAG: The motion works for that?

CHAIRPERSON HART: There is a motion and a second to table the permit and direct staff to come back to --

STAFF COUNSEL COUPE: And the CDO.

CHAIRPERSON HART: So all those in favor say aye.

(Ayes)

CHAIRPERSON HART: Any opposed? Any abstentions?

EXECUTIVE OFFICER CREEDON: Could I -- we're tabling it for what reason? What do you want back from me other than we're going to bring back a permit that pretty much --

BOARD MEMBER LONGLEY: Oh, my good engineer friend over here, Lyle, stated it much more eloquently than I did.

BOARD MEMBER HOAG: Well, counsel had earlier I think offered to give us more detail on the procedure, the steps, the work plan, the time schedules on for a revision, and so that's what we're asking. Give us a memo that lays out the process for revision of the basin plan.

Now, I would have liked to see more discussion of the option that Soapy just reiterated, and that is the Board's determination that an exemption is valid and in effect. If the staff refuses to do that or to discuss it, I don't know where we go with that. But I would have liked the same memo to discuss that kind of an option.

STAFF COUNSEL COUPE: I can Certainly provide a memo to the Board concerning what steps the Board would have to go through in adopting a Basin Plan amendment. It sounds like the basin plan amendment the Board would be interested in specifically pertains to the similarly situated dischargers that were identified in staff's presentation.

BOARD MEMBER HOAG: Or maybe others --

STAFF COUNSEL COUPE: I could spin out another scenario for others. I could give the Board a range of options.

CHAIRPERSON HART: Okay. Thank you. And I didn't again close the public hearing. But we've taken a vote, and now I'll close the public hearing on that item I guess.

Thank you to the discharger and to our staff for that very interesting issue.

(Whereupon Agenda Item 13 concluded.)

CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 19th day of May, 2011.

Tiffany Kraft

TIFFANY C. KRAFT, CSR
Certified Shorthand Reporter
License No. 12277

MEETING

STATE OF CALIFORNIA

CENTRAL VALLEY REGIONAL

WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGIONAL

WATER QUALITY CONTROL BOARD

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SACRAMENTO, CALIFORNIA

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EXHIBIT 2

APPEARANCES

BOARD MEMBERS

Ms. Kate Hart, Chairperson

Mr. Lyle Hoag

Mr. Karl Longley

Ms. Sandra Meraz

Mr. Dan Odenweller

STAFF

Ms. Pamela Creedon, Executive Officer

Mr. Ken Landau, Assistant Executive Officer

Mr. Fredrick Moss, Assistant Executive Officer

Mr. David Coupe, Legal Counsel

Mr. Alex Mayer, Legal Counsel

Ms. Lori Okun, Office of Chief Counsel

Mr. Patrick Pulupa, Legal Counsel

Ms. Kiran Lanfranchi, Executive Assistant

Ms. Heidi Bauer, Sanitary Engineering Associate

Mr. Greg Cash, Senior Engineering Geologist

Mr. David Kern, Staff Engineer, NPDES Program

Ms. Diana Messina, NPDES Permit Program Manager

Mr. Joshua Palmer, Staff Engineer

Mr. Doug Patterson, Supervising Engineer

Ms. Betty Yee, Senior Engineer

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Gary Baylon, City of Live Oak

Mr. Dale Cleaver, City of Colusa

Mr. David Cory, Central Valley Salinity Coalition, San Joaquin Drainage Authority

Ms. Tess Dunham, Somach Simms and Dunn

Mr. William Lewis, City of Live Oak

Mr. Art O'Brien, Robertson Brien, Inc.

Mr. Greg Tyhurst, Public Works Director, City of Willows

Ms. Debbie Webster, CVCWA

Ms. Elizabeth Wells, El Dorado Irrigation District

Mr. Dennis Wescott, San Joaquin River Group

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PROCEEDINGS

CHAIRPERSON HART: This is the time and place for a public hearing to consider of adoption of Items 24 through 30, however, on the uncontested calendar items, but excluding 24 and 28c.

Is it 27 or 28? Are you here on the Von Bargen item?

EXECUTIVE OFFICER CREEDON: Yes, he is.

ASSISTANT EXECUTIVE OFFICER LANDAU: It is 27c. on his copy. I have no idea why.

CHAIRPERSON HART: So excluding 24 and 28c. This includes adoption, amendment, and recission of NPDES permits, waste discharge requirements, enforcement orders, Cease and Desist Order recission, and other business as listed in the agenda.

We know there are people wishing to contest or discuss 24 and 28c. However, are there any late revisions on the uncontested items?

ASSISTANT EXECUTIVE OFFICER LANDAU: There are no late revisions.

CHAIRPERSON HART: Thank you. I will now close the hearing and ask for a motion and a second.

BOARD MEMBER LONGLEY: Do we need to do 25 separately? That's the Cease and Desist Order.

EXECUTIVE OFFICER CREEDON: We can do it in one

action.

ASSISTANT EXECUTIVE OFFICER LANDAU: We can do them all with a roll call vote.

BOARD MEMBER ODENWELLER: Move approval.

BOARD MEMBER LONGLEY: Second.

CHAIRPERSON HART: I have a motion by Dan and a second by Carl. This is a roll call vote.

BOARD CLERK LANFRANCHI: Mr. Odenweller?

BOARD MEMBER ODENWELLER: Aye.

BOARD CLERK LANFRANCHI: Dr. Longley?

VICE CHAIRPERSON LONGLEY: Aye

BOARD CLERK LANFRANCHI: Mr. Hoag?

BOARD MEMBER HOAG: Aye.

BOARD CLERK LANFRANCHI: Ms. Meraz?

BOARD MEMBER MERAZ: Aye.

BOARD CLERK LANFRANCHI: Ms. Hart?

CHAIRPERSON HART: Aye.

BOARD CLERK LANFRANCHI: Motion carries.

CHAIRPERSON HART: Moving onto Agenda Item 24, general waste discharge requirement for dairies and manure anaerobic digesters.

This is the time and place for a public hearing to consider general waste discharge requirements for general waste discharge requirements for the dairy manure and anaerobic digesters.

This hearing will be conducted in accordance with the meeting procedures published with the meeting agenda. At this time, evidence should be introduced on whether the proposed actions had should be taken.

All persons expecting to testify, please stand at this time, raise your right hand, and take the following oath.

(Whereupon all prospective witnesses were sworn.)

CHAIRPERSON HART: The total time allowed for testimony and cross-examination is as follows: Regional Board staff, five minutes. All of the parties are interested persons and shall limit their testimony to three minutes.

Please state your name, address, affiliation, and whether you've taken the oath before testifying.

Does Board counsel have any legal issues?

STAFF COUNSEL MAYER: No, I do not

CHAIRPERSON HART: Thank you so much. We will now have staff testimony.

(Thereupon an overhead presentation was presented as follows.)

SUPERVISING ENGINEER PATTERSON: Good morning, Chair Hart and members of the Board.

My name is Doug Patterson. I'm a Supervising Engineer in the Fresno office and also the Dairy Program

Manager. And I have taken the oath.

This morning, we're presenting a Resolution for a General Order for centralized dairy manure anaerobic digester or centralized dairy manure co-digester facilities as part of the waste discharge requirement regulatory program for dairy manure digester, and co-digester facilities.

The program began in December last year with the Board's certification of a programmatic environmental impact report and adoption of the on-site dairy digester General Order.

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SUPERVISING ENGINEER PATTERSON: Anaerobic digesters use microorganisms to break down biodegradable material in the absence of oxygen to produce biogas, which is methane, which can then be captured and used as an energy source.

A manure digester uses manure as a feedstock. And a co-digester is a digester that uses other digestible material in addition to manure. And digestate is the residual left after digestion.

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SUPERVISING ENGINEER PATTERSON: The General Order for consideration today would apply to centralized digesters that receive manure or feed stocks from multiple

sources. It has the same basic requirements as the on-site dairy digester General Order. The different is it has provisions to allow for digesters not located on the dairy. They accept feed stocks from multiple sources.

The proposed Centralized Digester General Order is within the scope of the programmatic EIR that the Board certified in December.

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SUPERVISING ENGINEER PATTERSON: To seek coverage under the Centralized Digester General Order, a developer would submit a Notice of Intent and facility information report. Many of the requested items in the Notice of Intent are components of the CEQA required mitigation, monitoring, and reporting program. The facilities information report includes information on local conditions and hydrogeology and a description of the digester facility.

A Notice of Applicability would be issued by the Executive Officer once staff determines that the Notice of Intent and Facility Information Report are complete and the discharger has demonstrated that the facility can comply with the General Order. A Notice of Applicability is the mechanism by which a centralized digester facility is covered by the terms of the General Order.

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SUPERVISING ENGINEER PATTERSON: The resolution before you adopts the Centralized Digester General Order and finds that the mitigation, monitoring, and reporting program has been incorporated into the General Order in accordance with CEQA.

The Resolution also contains Findings of Fact and a Statement of Overriding Considerations, which are required by the CEQA guidelines as part of the project approval process.

The programmatic EIR identified significant and unavoidable cumulative impacts for water quality and criteria air pollutants, which the Resolution recognizes. And the Statement of Overriding Consideration contains the same economic, legal, social, and technological benefits that were identified in the Environmental Impact Report.

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SUPERVISING ENGINEER PATTERSON: This table contrasts the way manure is handled under different orders available for dairies and dairy digesters. But they have many similarities: All the General Orders require a Nutrient Management Plan, a Waste Management Plan, a Salt Minimization Plan, and Monitoring and Reporting Program.

The General Order and the general NPDES permit for dairies provide permanent coverage for dairies that handle only manure generated on site.

The on-site dairy digester General Order permits digesters that use on-site manure and that receive imported substrates, including manure, from other dairies.

The proposed Centralized Dairy Digester General Order permits digester facilitates not situated on a dairy that receive imported substrates, including manure.

Individual waste discharge requirements for dairy or dairy digester would need to be prepared if a facility does not meet the applicability requirements for coverage under one of the General Orders. All the permits shown on the table allow the export of manure, except if the characteristics or volume change due to co-digestion, in which case the person receiving the material would need to be named on the Notice of Applicability or otherwise covered under waste discharge requirements.

And that concludes my presentation. I would like to recommend the Board adopt the Resolution and would like to enter my testimony, the Regional Board file, the Program EIR, the Environmental Impact Report, and this presentation into the record.

I would be happy to answer any questions.

CHAIRPERSON HART: Thank you very much.

Do we have any Board questions? Yes, we do.

BOARD MEMBER HOAG: Two reasons that I asked this item to be pulled from the uncontested calendar, consent

calendar.

One is I don't think a program of this importance and magnitude should be on the consent calendar. It needs to get recognition and some public exposure.

And the second was that since I came on the Board after most of the background work had been done on developing these things, I wanted a clearer picture of exactly what you showed on the last slide, the relationship among the different pieces of the puzzle. And Doug's presentation has done that very well. So that essentially answers my question and concern.

Just a quicky. I think one of the slides was defining co-digestion, and it listed the other materials as food processing and other ag material. What happens if someone wants to co-digest other kinds of material? Is it covered by this order?

SUPERVISING ENGINEER PATTERSON: Yes, it would be allowed.

BOARD MEMBER HOAG: So it's not limiting it to ag waste or food waste?

SUPERVISING ENGINEER PATTERSON: No, sir. Those were examples.

BOARD MEMBER HOAG: Thank you.

SUPERVISING ENGINEER PATTERSON: Thank you.

EXECUTIVE OFFICER CREEDON: I think there are

some restrictions.

SUPERVISING ENGINEER PATTERSON: There are restrictions on what can be taken in for -- it has to be biodegradable and has to contribute to the digester process.

EXECUTIVE OFFICER CREEDON: I don't think it can contribute biosalts.

SUPERVISING ENGINEER PATTERSON: Right. Hazardous waste, high salinity waste.

CHAIRPERSON HART: Yes, Carl.

BOARD MEMBER LONGLEY: You can accept; is that correct?

SUPERVISING ENGINEER PATTERSON: Yes.

BOARD MEMBER LONGLEY: Fats, oils, and greases, which used to be a commodity, by the way, that people had to pay to get rid of. And today, it's a hot item.

This is important. And since you gave the presentation and likewise, I thank you for a very enlightening presentation.

The centralized digester facilities I think are an important component as we go forward trying to address this issue of how to make digester operations something that is one of the important tools in handling dairy biosolids. We have to look at scale. And, oftentimes, the individual dairy, we don't have the scale we need to

be able to make the operation something that's functioning in an acceptable manner both from an economic standpoint and from a water quality standpoint.

So thank you for a good job. And I think this, as I said, is going to be an important tool as we proceed down the road.

I mentioned earlier in my statement about the Department of Food and Ag, Karen Ross, to be specific, Secretary there, and others pushing this issue now, and I think we're going to see a lot more action in the near future.

CHAIRPERSON HART: Thank you so much.

SUPERVISING ENGINEER PATTERSON: Thank you.

CHAIRPERSON HART: I will now -- I don't believe you guys have a closing statement; correct? Do you need to make a closing statement?

EXECUTIVE OFFICER CREEDON: We didn't receive a card.

CHAIRPERSON HART: There's no cards on this item.

EXECUTIVE OFFICER CREEDON: I just would like to point out, because I know Member Hoag asked this to be pulled. And when we were developing the Programmatic EIR and really actively engaged in developing the initial order, we had multiple staff presentations on it, which you were obviously not here to have.

CHAIRPERSON HART: Extensive.

EXECUTIVE OFFICER CREEDON: I didn't feel there was a need to have a special hearing on this item since the Board had heard so much about digesters previously.

So I apologize. But I would hope that your comment on uncontested calendars, if we were to pull everything to contest it, we'd have a week Board meeting. So -- a week-long Board meeting just to hear all the items.

So I would hope somehow I can get an indication from the Board when you feel an item is important enough that we need to -- because luckily Doug and Clay and David were able to pull together this presentation yesterday basically for the Board. And so that's -- it's not that we can't do that, but we do like to put a little more thought into our presentations than last minute like that.

CHAIRPERSON HART: And that was an excellent presentation.

I think Member Hoag is new. And so from a functional perspective of the rest of the Board members, we're well aware that if we have concerns regarding a consent item, we try to give staff a heads-up immediately upon receipt of our agenda packets, which is usually a week-and-a-half to two weeks out, which we appreciate. We typically have that handled. Not a concern, I don't

think.

BOARD MEMBER LONGLEY: Are you going to ask for a motion?

CHAIRPERSON HART: Yes. I'm going to close the hearing and ask for a motion.

BOARD MEMBER LONGLEY: I move approval.

CHAIRPERSON HART: And a second?

BOARD MEMBER HOAG: Second.

CHAIRPERSON HART: And this is a voice vote. All those in favor say aye.

(Ayes)

CHAIRPERSON HART: Any opposed?

Any abstentions?

The motion carries. Thank you very much.

We will now move on to agenda -- uncontested, now pulled Item 28c regarding the Von Bargen Ranch septage disposal facility in Glenn County.

This is the time and place for a public hearing to consider this matter. This hearing will be conducted in accordance with the meeting procedures published with the meeting agenda.

At this time, evidence should be introduced on whether the proposed actions should be taken. All persons expecting to testify, please stand at this time, raise your right hand, and take the following oath.

(Whereupon all prospective witnesses were sworn.)

CHAIRPERSON HART: The total time allowed for testimony and cross-examination is as follows: Regional Board staff, five minutes. And all other parties are interested persons and will be permitted to speak for three minutes.

Please state your name, address, affiliation, and whether you've taken the oath before testifying.

Does Board counsel have any issues at this time?

STAFF COUNSEL COUPE: None at this time.

CHAIRPERSON HART: Thank you. You're done, sir, swearing in. Thank you.

We will now have testimony by staff.

SENIOR ENGINEERING GEOLOGIST CASH: Good morning, Madam Chair, members of the Board. My name is Greg Cash. I'm Senior Engineering Geologist in the Redding office. I have taken the oath.

I don't have a presentation for this, but I will provide you some background information.

This proposed facility is a 40-acre seepage facility in Glenn County. This item -- or this facility is unregulated, so we propose this permit, which we have discharge prohibitions, specifications, limitations, and along with the monitoring, groundwater monitoring, effluent monitoring, and land application monitoring.

This order contains a very fast-paced groundwater monitoring program. We have a three-month window for the plan -- submittal of a plan six months to get the wells in and nine months to provide us information.

We do have information from the on-site groundwater wells, and we don't see impact from them. But we need a little bit more information. And so this order we're proposing this very fast-tracked groundwater monitoring to give us more information than what we have in the record.

CHAIRPERSON HART: Why do we need it so quickly?

SENIOR ENGINEERING GEOLOGIST CASH: We're not wanting to put groundwater monitoring two, four, five years down the road. This facility has been operating over 50 years. We can't wait to get the information. We have some information from, like, two samples, but we need a lot more information. And we don't want to wait three or four years down the road to get it. So we're going -- and the discharger has no problem with the fast tracking the groundwater monitoring.

EXECUTIVE OFFICER CREEDON: I'm sorry. If we could have a two-minute break. I need to consult with Bob and Greg on how this item got to the uncontested calendar in the first place.

CHAIRPERSON HART: I was asking the same

question. Thank you. Let's take two minutes.

(Whereupon a recess was taken.)

EXECUTIVE OFFICER CREEDON: Ms. Hart, it appears that when this permit was issued for consideration, we did receive timely comments from Norcal Environmental Solutions, which I believe this gentleman is part of, in contesting this permit. Apparently, this site is a competitor or something of his.

We responded to comments and notified them that we were moving forward with this item. It was put on the uncontested calendar. The Board has not had a chance -- we don't put hard copies in your agenda package on many of these. And you haven't had a chance to see the comments in response to comments. So I'm going to recommend that we just hold this over to the next meeting so we can do the proper -- allow the Board proper time to review the document for this item.

CHAIRPERSON HART: Thank you. Okay. So the Norcal septic folks are clear on this issue, this item will be placed for a hearing at the next meeting for the August meeting. And we apologize for any inconvenience. And so this item will be continued. Thank you.

MR. CUTSHALL: Thank you for your time.

CHAIRPERSON HART: We will move on to agenda Item 18 regarding non-representative cyanide laboratory

results.

At this time we will receive a presentation from -- we'll receive a presentation on the non-representative cyanide laboratory analysis results. This is an information item only. No action will be taken, although Board may ask questions of staff and provide guidance or direction as it sees fit.

Following the presentation, interested parties will be allowed three minutes to address the Board. And we will now hear from Ken.

ASSISTANT EXECUTIVE OFFICER LANDAU: Good morning. For the record, Ken Landau, Assistant Executive Officer with the Board's Rancho Cordova office.

(Thereupon an overhead presentation was presented as follows.)

ASSISTANT EXECUTIVE OFFICER LANDAU: This is an informational item. It's really here for two reasons. We have been working with the dischargers and most recently CVCWA on dealing with some laboratory analysis issues regarding cyanide. It's coming to you at this point both to alert you of the issues.

We have essentially completed our technical work up to this point. And this will be an issue in a number of future NPDES permits and potentially enforcement actions. So we wanted to let you know of the technical

issues, although the specifics will come with each individual action.

We also had this to solicit any comments from the public on the issue, and we received none. I'd sent things out earlier and received informal comments, but nothing specific on this.

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ASSISTANT EXECUTIVE OFFICER LANDAU: Cyanide is a naturally-occurring compound. It's in our bodies. If you go to a peach tree, take peaches off, suck on the peach pits, you may get sick or die from cyanide poisoning. It's out in the environment.

It is also a commonly-used manufacturing chemical. It's toxic to humans.

There is a drinking water standard, among other standards. And it is also toxic to aquatic life. And the CTR contains chronic and acute limitations. I just put a couple limits up here.

Since it is a CTR compound and is toxic to human and aquatic life, it is a compound that is included in routine screens for NPDES facilitates. So we get a lot of cyanide data.

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ASSISTANT EXECUTIVE OFFICER LANDAU: There is a U.S. EPA-approved test method under the regulations. We

should only be using EPA-approved test methods for NPDES permit use.

Because some forms of cyanide break down readily, if the analysis is not started within 15 minutes of collection of the sample, it must be preserved by increasing the pH to greater than twelve.

Cyanide is reported in a lot of treatment plant effluents that has resulted in effluent limits in NPDES permits for some treatment plants. In some cases, the concentrations of the cyanide are high enough that there are compliance schedules in the permit. And there is the potential for enforcement action against permit violations.

So because we were putting cyanide standards and time schedules in permits, a number of treatment plants started studies trying to find out why they have cyanide in their effluents, where it was coming from to look at source control treatment or basically the standard procedure for dealing with a new chemical..

But as they started to do those studies, they started to find some very odd results coming out of their analyses. And that's what I'm going to talk to you about briefly.

The dischargers, again, fairly routinely when there is a new chemical. They were coordinating with the

Regional Board staff. I was working with Vacaville a number of years ago. In some cases, they actually set up at their treatment plants the equipment to conduct cyanide analysis. This is not something normally done at a wastewater treatment plant lab. In at least one case in this region, the lab was certified.

I'm really only going to be talking about Region 5 labs and treatment plants, but there is a number of other treatment plants in southern California and elsewhere that have been involved in this equivalent work. And it's part of the data set we're looking at.

What the labs, treatments plants, basically did was to split samples. You take a sample. You run it at your lab within the 15-minute test period to see what the unpreserved sample results are. And then you preserve the sample and run that split sample and compare the results.

CVCWA has coordinated the technical papers on this, one of which is in your agenda. And the bottom line is that it was found that for some of the samples the preservation increases the reported concentrations of cyanide.

EXECUTIVE OFFICER CREEDON: Can I clarify something? You don't take the sample, run the analysis, and then preserve it. You split the sample, and one is preserved and one --

ASSISTANT EXECUTIVE OFFICER LANDAU: Correct.

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ASSISTANT EXECUTIVE OFFICER LANDAU: This is part of one of the pieces of paper that's in your agenda. The data from the Roseville treatment plant is on the top. On the left are the unpreserved samples. And on the right are the equivalent samples. The split samples run with preserve. You can see that many, but not all of them, are raised.

And for Vacaville, it's even more dramatic. On the left, the unpreserved samples. And on the right, the samples that were preserved coming with much higher reported values. Makes a large difference as to whether you're in compliance or not and whether we're taking enforcement or not.

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ASSISTANT EXECUTIVE OFFICER LANDAU: We can't ignore this issue, because there is a problem with the technique. Cyanide is toxic to human and aquatic life. It is out there and can be present in toxic concentrations. And so it is a serious issue if it is actually there. The analyses being submitted to us are in accordance with legally approved test methods. However, we can't tell you necessarily which particular analysis is right and which one is wrong.

On the flip side, if we just accept all the data, we may be requesting dischargers to do studies, looking for something that may not be there, construct treatment facilitates or do source control for something that isn't there, which is a lot of time and money for the discharger and a lot of time for staff and Board members.

CHAIRPERSON HART: And which, of course, this Board would not support if it makes no scientific sense.

ASSISTANT EXECUTIVE OFFICER LANDAU: This Board would not be happy with that situation. And that's one of the reasons we're telling you this is it will probably be coming up in future permitting issues. A lot of the permits with cyanide limits had five-year time schedules in them, and the period of the five-year time schedule is running. So it's likely to be an issue for some permits, not all by any means. But some permits and enforcement actions coming before you.

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ASSISTANT EXECUTIVE OFFICER LANDAU: So there are some alternatives. Under existing regulation -- U.S. EPA regulations, there is an alternative test procedure, which can be approved that would resolve this. However, basically, you need a nearby laboratory and do a comparative study, which in most cases there is not a lab nearby within 15 minutes.

CHAIRPERSON HART: This is like a pH temperature problem.

ASSISTANT EXECUTIVE OFFICER LANDAU: Same type of issue we'll be talking about later today. And it's an expensive process, one that is really out of resources, both technical and economic, for most of our dischargers. And that's a big reason CVCWA has been working on a coordinated effort. We have a number of coordinated studies of progress with CVCWA.

Nationally, U.S. EPA for cyanide lab procedure is being revised. However, it is part of -- and that revision will probably take care of the problem. However, it is part of a packet of lab analysis changes. That's been moving along slowly. So I can't tell you whether it's going to pop out fairly soon or ever. That is not -- we talked with EPA and they're aware of the issue. It's a national, not just a Region 5 issue.

What we have been doing and what we will continue to do until we get some better resolution is a case-by-case evaluation for each permit and enforcement action. Looking at the data, all the QA/QC we normally look at and frankly looking at the likelihood of a cyanide problem at that location. But that will be a case-by-case determination, best professional judgment that we'll have to be making recommendations for you.

And that, frankly, is the end of the presentation. Just to let you know what's going on.

CHAIRPERSON HART: Thank you, Ken.

So it sounds like Vacaville was studying -- is completely separate and apart from most other wastewater treatment plants, because they have an on-site lab certified to deal with this issue or to address it.

ASSISTANT EXECUTIVE OFFICER LANDAU: Roseville also set up a lab, and there are people here who know vastly more about the details about these studies than I.

CHAIRPERSON HART: It's not just a function of us saying to those POTWs that don't have on-site labs and they are technically I guess preserving their cyanide and then testing their samples and then testing it for cyanide?

ASSISTANT EXECUTIVE OFFICER LANDAU: Sending it to an off-site lab.

CHAIRPERSON HART: We can't just say there is no cyanide here because it was preserved; that's your point.

ASSISTANT EXECUTIVE OFFICER LANDAU: Yes.

CHAIRPERSON HART: We don't know and we can't just sluff it off.

ASSISTANT EXECUTIVE OFFICER LANDAU: Correct. Even as you saw on the slides earlier that even the unpreserved samples were showing cyanide concentrations.

So lower and perhaps not a problem. But again, it's not an easy situation we are in.

CHAIRPERSON HART: Okay. Does anyone have questions for Ken right now?

Seeing none, I do have a card from Debbie Webster for CVCWA.

MS. WEBSTER: Thank you. Good morning, Chair Hart and members of the Board.

Debbie Webster, Executive Officer for the Central Valley Clean Water Association.

I do want to thank staff for working with us on this issue as we try to move forward to address -- to find that balance or that true information as to whether or not this is an artificial problem or if it is a true problem.

And just to let you know if you have questions, we do have our technical exports in the audience so they can answer a lot of those.

I first wanted to stay thank you for working on that. And it is very important that the information be considered as we move forward so that we're not making POTWs build expensive treatment options for something that doesn't exist and is not a real problem. And we realize the difficulty of this situation right now. We also realize that there is not a lot of options.

And I did want to add one thing to what Mr.

Landau said is there are a lot of treatment plants that cannot do the 15 minutes, even if they could certify their labs. For example, our largest treatment facility in the region, it takes 20 minutes for them to get from their collection point to their lab.

CHAIRPERSON HART: Is that Sac Regional?

MS. WEBSTER: Sac Regional.

There is other agencies within the state that are barely able to make it in 15 minutes. And one that I know of in Santa Rosa that is trying to change it because they had personnel that got into an accident. So it's a safety issue also. It's just logistically we don't know where it is.

So we're hoping that EPA is going to move on this. We don't know how and when it is something that is probably less than a page worth of changes in a 130, 150 page document on laboratory changes.

But in the mean time, we appreciate staff working with us and appreciate you using best professional judgment in order not to force unnecessary changes.

So I'd be happy to answer any questions or have our technical experts to answer any questions you may have.

CHAIRPERSON HART: Thank you, Debbie.

Does anyone have questions right now?

EXECUTIVE OFFICER CREEDON: I have a question, because I'm not as familiar with EPA's methodology or approach for alternative methods. I do know the federal regs say use these, unless otherwise approved by the director.

So is there anything we can work with Alexis on in the interim to try to get a letter acknowledging this issue so we can do something in our permits about it, or not? I don't know how rigid the approval process is.

MS. WEBSTER: We've spent a lot of time talking about that is what can we do and didn't really see a good out on this at this point.

EXECUTIVE OFFICER CREEDON: So there's specific protocol that has to be followed to have an alternative method approved, and there is no variance away from that? Have we engaged EPA on this at all? Have they been in our meetings?

ASSISTANT EXECUTIVE OFFICER LANDAU: EPA has been in meetings and I received informal comments from them.

EXECUTIVE OFFICER CREEDON: Okay. I don't know how much I can help.

CHAIRPERSON HART: Yeah, Carl

BOARD MEMBER LONGLEY: Probably very little, although a letter to EPA would be good method. For a number of years have even -- it seems completely obvious

on what changes should be made. I'm very much aware there is all kinds of opinions and it's very difficult to move those actions quickly.

CHAIRPERSON HART: And, Ken, you said this was a function of a number of other potential changes to the regulations that cyanide is going -- it's not just a cyanide issue or the testing method for cyanide and that's maybe what's bogging things down?

ASSISTANT EXECUTIVE OFFICER LANDAU: It's included in a number of changes. I can't tell you which particular one may be bogging them down. You've probably watched the news, as we have. They are certain budgetary issues at the federal level too, so they probably won't have an abundance of staff to do these things.

EXECUTIVE OFFICER CREEDON: It's a rule-making for them. If you would like, we could at least draft a letter to Alexis on behalf of the Board

CHAIRPERSON HART: I think that's a good idea. Thank you.

MS. WEBSTER: Thank you.

CHAIRPERSON HART: We don't have any specific technical questions right now. But thank you to the consultants for coming.

If there is any additional discussion, Board members, or questions -- seeing none, we're going to move

on to Agenda Item 19, municipal and domestic water supply beneficial use in ag drains. This is an informational item.

At this time, we will receive a presentation on this issue. Board may ask questions and provide guidance to staff as necessary. Any comments on beneficial uses that are specific to either Live Oak or the Williams item should be held until those hearings later in the agenda.

Following the staff presentation, if there are any interested parties who wish to speak, please submit a card and you'll be given three minutes.

And we'll now hear from Ms. Diana.

BOARD MEMBER ODENWELLER: Kate, before we gone on, if we are going to draft a letter, can we consider putting nine signature line on it and having five signatures attached?

EXECUTIVE OFFICER CREEDON: That's up to the Board.

CHAIRPERSON HART: If you want Pamela to do it that way, then sure.

EXECUTIVE OFFICER CREEDON: Do I put five or just one?

CHAIRPERSON HART: Is that what you want?

BOARD MEMBER ODENWELLER: If we had four blanks --

EXECUTIVE OFFICER CREEDON: Oh, I see what you're saying. I don't know if Alexis has any sway over Governor Brown.

CHAIRPERSON HART: No, Alexis doesn't care.

BOARD MEMBER LONGLEY: I can sympathize with Dan, but I don't see the benefit.

CHAIRPERSON HART: Go ahead, Diana.

(Thereupon an overhead presentation was presented as follows.)

NPDES PERMIT PROGRAM MANAGER MESSINA: Good morning, Chair Hart and members of the Board. I'm Diana Messina. I'm the NPDES Permit Program Manager for the Central Valley region.

And this item is here before you per your request from the last February Board meeting for additional Basin Planning information to address requirements and NPDES permits regarding the protection of the municipal and domestic supply use in receiving waters within the region, and in particular, within the Sacramento-San Joaquin River basins.

Our intention is to provide general information for future permitting actions. We hope this quick overview will address many of your questions. A detailed staff report has been provided in your agenda package.

We also have Betty Yee here. Betty is our Basin

Planning expert for our region --

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NPDES PERMIT PROGRAM MANAGER MESSINA: -- and is available to answer any questions.

We use the acronym MUN for the municipal domestic supply beneficial use, which is formally defined as the uses of water for community, military, and individual water supply systems.

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NPDES PERMIT PROGRAM MANAGER MESSINA: MUN is not limited to only drinking water. It includes use of water for showering and bathing, cooking, and other household uses, such as cleaning and washing.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The MUN designations to receiving waters in our permits is per the Basin Plan. The Sacramento-San Joaquin River Basin Plan spells out three avenues for how MUN is applied to our surface waters.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The first avenue is through the identified water bodies listed in Table 2-1 of the plan. Table 2-1 specifically identifies the larger water bodies in these basins and their uses.

There are water bodies in the table that are

identified to have the MUN use, and there are water bodies specifically identified to not have the MUN use.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The second AVENUE in which MUN is designated to our waters is through the tributary rule. The Basin Plan reads, "The beneficial uses of any specifically identified water body listed in Table 2-1 applies to all the non-identified water bodies that are tributary streams."

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NPDES PERMIT PROGRAM MANAGER MESSINA: The third avenue is through the Basin Plan's incorporation of the State Water Board's Resolution 88-63, the sources of Drinking Water Policy, which applies the MUN use to all water bodies within the basins that are not specifically identified in Table 2-1.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The reason this is an issue is because we have a number of permits for small communities which prescribe or will propose to prescribe effluent limits to protect the MUN use in the receiving waters that include agricultural drains or water bodies modified for ag operation purposes. These include the City of Colusa and the City of Williams permits, which were both adopted in 2008; the City of Live Oak and the

City of Willows permits, which are both on today's agenda package for renewal; and the City of Biggs permit, which we will have a proposed renewal to you in the near future.

All the existing permits require tertiary treatment and nitrification for protection of direct human bodily contact and aquatic life in the waters, since we must maintain these waters to be fishable and swimable in accordance to the Clean Water Act.

Unfortunately, these permits did not all consistently apply the MUN use as directed by our Basin Plan.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Now as we are renewing these permits, to include protection for the MUN use, the dischargers are having compliance issues. And they're looking at further upgrades in order to comply with new effluent limits for nitrate, arsenic, trihalomethane, aluminum, iron, manganese, and methylene blue active substance, which is a long word for basically detergents.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Here's a map of the Sacramento watershed where these communities are located. The communities are shown in yellow and the yellow stars are their location of discharge.

This is a busy slide and intentionally used to show how there is a combination of MUN and non-MUN water bodies in one discharge flow path. In the middle of the slide is the Sacramento River, which is listed on Table 2-1 to have MUN.

We also have two major ag drains, the Colusa Basin Drain and the Sutter Bypass shown in orange. And these two water bodies are specifically identified in Table 2-1 to not have MUN.

All these communities discharge into small ag drains or natural water bodies that are tributary to these major ag drains. However, due to the sources of Drinking Water Policy, they have the MUN use.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The Drinking Water Policy contains exceptions. There are exceptions for surface and groundwater bodies that are:

High in salinity, which is indicated by a high total dissolved solids concentration in the water;

Water bodies that have contamination to a level that is not reasonably treatable;

And water bodies that do not have enough flow to supply a well with an average yield of 200 gallons per day.

We also have exceptions for surface water bodies

that collect or treat wastewater or storm water, and of most importance for this discussion, that have a primary purpose of conveying agricultural drainage.

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NPDES PERMIT PROGRAM MANAGER MESSINA: I'll show you a few pictures here so you're not just looking at print.

Here's an example of a water body that may fit one of the exceptions. This is the constructed ditch that receives the City of Williams wastewater. The ditch proceeds to drain into a natural stream that then drains into the Colusa Basin Drain.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Here's another example. This constructed ag drain receives the City of Live Oak wastewater treatment plant effluent which proceeds to flow through further downstream canals prior to flowing into the Sutter Bypass.

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NPDES PERMIT PROGRAM MANAGER MESSINA: And this is the ag drain that receives the City of Biggs wastewater treatment plant discharge. This discharge also ultimately flows into the Sutter Bypass.

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NPDES PERMIT PROGRAM MANAGER MESSINA: When

adopting the Drinking Water Policy in 1988, the State Water Board anticipated that the Regional Boards would identify the specific water bodies that meet the exceptions in their Basin Plans.

The Central Valley Water Board incorporated the policy into their 1989 second edition of the Basin Plan. At this time, the Regional Board did not identify specific smaller water bodies that should be excepted from the policy.

Therefore, the Basin Plan implements the Drinking Water Policy using a blanket approach for any water bodies not specifically identified in Table 2-1. We do not have an option of not protecting these small water bodies for MUN in our permits, even if the use may not be taken place. It is a use that has been designated, and we must go through a Basin Planning process prior to removing that protection from our permits.

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NPDES PERMIT PROGRAM MANAGER MESSINA: We have a recent example of an exception to the Drinking Water Policy per a 2002 State Board Order referred to as the "Vacaville Order."

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NPDES PERMIT PROGRAM MANAGER MESSINA: In 2001, the Regional Board adopted an NPDES permit for the City of

Vacaville's municipal treatment facility that discharges into Old Alamo Creek, a water body solely conveying wastewater and stormwater, the tributary to New Alamo Creek, Ulatis Creek and the delta, which have the MUN use designation.

Although the Regional Board then had similar concerns, as you do now, in applying MUN to receiving waters that clearly fit the criteria of an exception, the Vacaville permit was adopted to include effluent limits protecting the MUN use in Old Alamo Creek.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The permit was appealed to the State Board and the State Board adopted the Vacaville Order, in which it found that the Regional Board had designated MUN through a blanket approach for these unidentified water bodies in its Basin Plan. Now that the water bodies are designated MUN, the Regional Board must amend the Basin Plan to address changes to that designation.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Before continuing, I'm going to give a quick crash course on basin planning, the same crash course that Betty here has been giving me for the last two months.

There are basically three steps that must be

taken for a Basin Plan Amendment. And as I explained this, I will be specific to addressing the MUN use in ag drains or smaller water bodies.

The first step is to demonstrate through water quality and flow monitoring and other historical information that these water bodies were designed or modified for the primary purpose of conveying or holding agricultural drainage or any of the other exceptions in the policy.

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NPDES PERMIT PROGRAM MANAGER MESSINA: With this information, it's been possible for this Regional Board to request the State Board to grant an exception to their policy for the identified water bodies.

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NPDES PERMIT PROGRAM MANAGER MESSINA: After addressing the State Board's requirements, the next step is to address federal requirements. Federal regulations allow removing a designated use that is not an existing use. The term "existing" is defined in the regulations as uses that were attained on or after November 28th, 1975.

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NPDES PERMIT PROGRAM MANAGER MESSINA: A use has been attained if the use actually occurred or if the water quality necessary to support the use has occurred since

November of 1975. If the is existing, then it cannot be de-designated.

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BOARD MEMBER LONGLEY: On the last slide, that last line was interesting.

NPDES PERMIT PROGRAM MANAGER MESSINA: Do you want me to go back to it?

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NPDES PERMIT PROGRAM MANAGER MESSINA: What's the last line? Water quality to support.

BOARD MEMBER LONGLEY: In essence, if the water quality did support MUN use since '75, I would presume it could not be de-designated; is that correct?

NPDES PERMIT PROGRAM MANAGER MESSINA: Yes. I think I'll address that with an example in some of our options in coming-up slides.

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NPDES PERMIT PROGRAM MANAGER MESSINA: If you're able to demonstrate that the MUN use is not existing, then you move on to step three, which is also a federal requirement. Regulations require that a structured scientific assessment be conducted to show that it's not feasible to attain the MUN use in a water body per at least one of these following factors from the federal regulations.

The first is that there is naturally occurring pollutant concentrations that prevent the attainment of the use.

The second is that there is natural ephemeral, intermittent, or low-flow conditions that prevent the attainment.

BOARD MEMBER LONGLEY: When we say "natural pollution," this is not anthropogenic; is that correct?

CHAIRPERSON HART: Not effluent.

NPDES PERMIT PROGRAM MANAGER MESSINA: Excuse me? I didn't understand what you said.

BOARD MEMBER LONGLEY: It's not caused by man; is that correct?

NPDES PERMIT PROGRAM MANAGER MESSINA: Correct. When it's natural, it's caused by our natural elements.

The third is that there is a human cause condition or sources of pollution that cannot be remedied or would cause more environmental damage to correct than to leave in place.

The fourth is that there are dams, diversions, or other type of hydrological modifications that preclude the attainment of the use, and it's not feasible to restore the water body or operate the modification to attain the use.

And the last one is because there would be more

stringent controls that would result in substantial, wide-spread, economic, and social impact.

BOARD MEMBER LONGLEY: It would seem to me that number three there is fairly subjective. Unless there's more substantial criteria identifying what that really is saying than we see here. Is there? Or is that somewhat left to judgment?

ASSISTANT EXECUTIVE OFFICER LANDAU: Dr. Longley, for the record, Ken Landau, Assistant Executive Officer.

A lot of these have a lot of subjectivity; natural under the current conditions of the valley, natural under 400 years ago, what's low-flow depends on what's going on. Cannot be remedied. Many things can be remedied for millions or billions of dollars. And some of these things don't have a lot of precedent as to how to evaluate them.

BOARD MEMBER LONGLEY: Thank you.

BOARD MEMBER HOAG: Diana, would you define sub-item 5, please?

NPDES PERMIT PROGRAM MANAGER MESSINA: Item 5, yes, I will.

Well, basically, it would mean, for example, probably might be a good example for a later agenda item. But it would mean that if to maintain the MUN use it would cause just substantial amounts of dollars, economically or

it would economically impact the community or the people of the state.

CHAIRPERSON HART: So in particular, on certain small communities, we see a lot of major negative economic impacts and them having to upgrade their treatment plans to deal with these situations. And they don't have to same ability to recoup the fees.

EXECUTIVE OFFICER CREEDON: Ken, it's really site-specific. And there aren't any guidelines.

SENIOR ENGINEER YEE: Actually, I'm Betty Yee, Senior Engineer.

EPA has guidance on how you do the substantial wide-spread economic and social impact. Of course, it's just guidance, which means that they can turn -- disapprove an amendment or approve an amendment based on it.

The guidance has a very high bar, and it requires certain types of demonstrations based on the economic -- the economics of how much it would cost to achieve the water quality objectives versus the ability of communities to pay. And that's not never a single discharger. Usually, you have to look across a number of communities to come up with this particular justification.

But it has not -- we have not done this in California. This is what I've been telling Diana the

whole time is a lot this has not been tried in California. So we don't know how to do it so that it will succeed going through EPA.

EXECUTIVE OFFICER CREEDON: Just based on Item 5, Betty or just on factor five?

SENIOR ENGINEER YEE: Just on Item 5. And on the previous question about the human cause conditions, you only need to meet one of these factors. But because of the lack of information, a lot of times we'll do put together the justification for removing a use. We will use a number of these factors, not because we have to, but just to reinforce a particular one of these factors. And I think one of the examples that Diana will give you will go over that.

CHAIRPERSON HART: But just so we're all clear, what you're talking about now is how we would go about amending the Basin Plan to remove these ag drains from the MUN use or to remove the MUN from the ag drain application, right. Okay.

EXECUTIVE OFFICER CREEDON: It's the steps we would go to to ask EPA's -- seek EPA's approval to remove it. There is no promise we go through all of this that it would happen.

BOARD MEMBER ODENWELLER: The first thing we have to do is find a water body that has good water quality

that's not being used by any skinny dippers, fly fishermen, or jet skiers and --

EXECUTIVE OFFICER CREEDON: Well, actually, we do have -- the current permit protects for that type of use. It doesn't protect for the drinking water. But it does for contact recreation; is that correct?

NPDES PERMIT PROGRAM MANAGER MESSINA: Which permit?

EXECUTIVE OFFICER CREEDON: Some of our current permits.

NPDES PERMIT PROGRAM MANAGER MESSINA: Yes.

BOARD MEMBER ODENWELLER: But I mean, the test as it was laid out essentially is you have to prove non-use.

EXECUTIVE OFFICER CREEDON: For drinking water, yeah.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Vacaville is an example of a successful Basin Plan Amendment.

In 2005, the Regional Board adopted an order which de-designated the MUN use from Old Alamo Creek and provided site-specific objectives for New Alamo Creek. As previously mentioned, this was completed after the State Board allowed the exception to their Drinking Water Policy through the Vacaville Order, which was step one. And then we proceeded with step two and three to complete and

fulfill the federal requirements.

We had lots of data and information already collected on these two water bodies entering this Basin Planning process. Also in addition to a significant amount of resources provided by the City of Vacaville, we also had resources from the State Water Board and U.S. EPA.

BOARD MEMBER LONGLEY: Just out of curiosity, what was our cost? Do you have any idea?

CHAIRPERSON HART: Vacaville paid for it. We didn't.

ASSISTANT EXECUTIVE OFFICER LANDAU: Yeah. What we did on Vacaville -- I don't have a staff cost. We spent a lot of meetings working with them. But essentially Vacaville provided contractor support. We would meet and then they would go out and do the sampling, do the statistics, do the surveys of where people drinking the water or ultimate water supplies and things.

BOARD MEMBER LONGLEY: So they had a huge investment in it.

ASSISTANT EXECUTIVE OFFICER LANDAU: It was millions of dollars I believe.

CHAIRPERSON HART: That's the problem.

SENIOR ENGINEER YEE: I'll weigh in on the staff costs. We had a reimbursement contract with the City of

Vacaville for these amendments. And actually, these are two separate amendments that spanned roughly seven years. And it cost Vacaville $383,000 of reimbursement costs.

CHAIRPERSON HART: That doesn't include all of their consultant time, their attorneys --

SENIOR ENGINEER YEE: Right. Actually, in the initial amendment, EPA provided a contractor that did the initial technical work. So we're not including that cost either. And State Board also provide us some staff assistance on the first amendment.

CHAIRPERSON HART: This is probably not going to be a popular statement from -- in terms of, like, from a Board perspective, but I think that in adopting the State Board's Drinking Water Policy without excepting out these ag drains, we should accept responsibility for that. It's our fault that we didn't catch that, that we didn't except these drains out, and we should fix it.

NPDES PERMIT PROGRAM MANAGER MESSINA: Because of our discussion, I'm going to go forward to a back pocket slide that I prepared.

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NPDES PERMIT PROGRAM MANAGER MESSINA: I took it out because of a matter of time, but I'm going to go ahead and go through it now.

This is a second example of a successful Basin

Plan Amendment for the MUN de-designation. And it comes with the Board's adoption of a 2007 order for Sulphur Creek, which is tributary to Bear Creek and Cache Creek. Sulphur Creek receives natural runoff and discharges from springs. The creek is naturally high in total dissolved solids and mercury so it met the first two exceptions in the Drinking Water Policy and the first federal factors in the federal regulations of pollutant being naturally occurring.

So, Dr. Longley, this is kind of an example that addresses your question.

This amendment was completed with resources from our TMDL program.

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NPDES PERMIT PROGRAM MANAGER MESSINA: Now I'll go back to where I left off.

So with the City of Vacaville Basin Plan Amendment, we had lots of data and information as we entered the process.

EXECUTIVE OFFICER CREEDON: Can you go back to the Vacaville item?

One thing I want to point out to the Board, there were two specific actions this Board took. One was to de-designate from Old Alamo Creek. That was one that was quite obvious to everyone, including EPA and the State

Board it needed to be de-designated. No argument there. As much as it cost, it still was -- it was obvious it needed to be.

Second one was downstream the New Alamo Creek that replaced. And that was where Vacaville initially wanted to continue on with de-designation, and that was a harder sell. It wasn't going to be easily accepted. And that's why they went on the site-specific objective path as opposed to de-designation.

Those options are clearly available to this Board for these agriculture drains that we're dealing with now. But sometimes based on the information and what's happening in the particular watershed, de-designation just simply is not going to happen. So the Board has to consider that.

But we do have other options. So Vacaville had to do a two paths in order to have some relief under the requirements.

So I just want the Board to know that -- and she'll continue on with Colusa and you can understand some of the concerns we're having. Even though they don't look pretty, some of them, their water quality is not that bad. And then we have problems in trying to try to go to de-designation.

CHAIRPERSON HART: It sounds like there may also

be issues then in trying to just kill all these birds with one stone in that we may have -- since we have different site-specific scenarios, we may not be able to --

EXECUTIVE OFFICER CREEDON: We can't do just a blanket de-designation. Maybe back in '88 we could have. But today is 2011 and things are significantly different. And I have a feeling back in '88 the Board felt it could be done maybe on a permit-by-permit basis. I don't know what they were thinking in '88. But life has changed since 1988.

ASSISTANT EXECUTIVE OFFICER LANDAU: I'd like to add in here -- never let Diana actually complete her presentation. This presentation is focused on MUN and ag drains in that particular part of the valley.

One of the issues in the irrigated lands program and for CV Salts is the same issue but on a broader basis. And we are absolutely looking at how can we bundle a variety of drains together. There's -- I don't remember the number. There's thousands of drains. We couldn't possibly do a drain by drain, you know, Basin Plan Amendment, but you equally can't just say everything.

But you might be able to take east side San Joaquin Valley from San Joaquin County through Merced County, do an evaluation that these are all similar. We've got the water quality information. The uses are

equivalent for a lot of them, and do, you know, sort of a broader Basin Plan Amendment.

And we've done similar types of broader amendments for numeric standards and things in the Basin Plan. But it requires evaluation of how to group them.

And for the treatment plants we're talking about here, one of the things we're thinking about is can we group these. And again as you'll see through this presentation and the next two hearings, the details are quite different as to what flows to what and things. So we may or may not be able to get an economy of scale by grouping them.

BOARD MEMBER HOAG: Thank you, Ken, for that definition. That's very important.

In fact, I think it's critically important because, in my opinion, the ag discharge ramifications of this issue are many, many times larger than the NPDES ramifications. And in fact, are probably the biggest issue that this Board has considered in many, many years, much bigger than the Sac Regional issue and so on in terms of economic impact.

There is an estimate in some of the recent materials that have come to the Board that there is 10,000 ag drains in our area serving 35,000 growers. And not all of them will hit this head on, but a large portion of them

will.

So it isn't enough to just nibble away at a few little towns that are helpless. It's a huge issue which has multi-billion dollar consequences to agriculture and to the state. I think we have to view it in the larger context.

As Kate said, we have an obligation to find a reasonable -- that word has been used prevalently here -- reasonable and effective solution to this before we launch into the implementation of the Irrigated Lands Regulatory Program.

Because my belief is, one person, that this issue has the potential for blowing up the Irrigated Lands Regulatory Program it is so huge. And I don't think this discussion can be limited to NPDES circumstances. When I read the agenda packet, I didn't see that there was a limit in the scope of this discussion. So unless constrained to do otherwise, I will expand this discussion to include all ag drains and all dischargers that are to be regulated by this Board.

EXECUTIVE OFFICER CREEDON: Member Hoag, I do want to point out, we do have CV Salts, which we still have to get that briefing for you. We'll have to find time.

That's the venue by which we are addressing the

MUN designation for not just ag, but municipalities as well. So we are in that process right now. That is a Basin Planning project and the ag community and the POTW groups are involved in that right now.

That may be a venue that we use to address some of the concerns of the Board on dealing with the MUN designation is through that Basin Planning approach. We are in discussions right now with CV Salts and I guess Debbie Webster can speak to because I didn't participate in the meeting to see I can't move -- because of the urgency for the NPDES group, which puts them in a different enforcement and compliance mechanism that, you know, the urgency to address it for them is probably more important. Not saying that it's not important for ag, but we do have some time on the ag end to deal with the issue and to let that process take place through CV Salts.

So we do have a Basin Planning process going on today. It's just moving for the POTW and the NPDES dischargers trying to move that up because of the time constraints we have with compliance schedules and Clean Water Act enforcement provisions.

BOARD MEMBER HOAG: Thank you for that.

CHAIRPERSON HART: Which more specifically, so you know, Lyle, is a third-party citizen suit enforcement provision, which changes the whole ball game from an

economic perspective.

BOARD MEMBER HOAG: In ways, many of which I don't understand.

But apparently the potential magnitude of the issue is substantially as I described it and fits my concern.

So what we're being asked to do is lay this unreasonable requirement on a few towns who are essentially defenseless while we take whatever time it takes to resolve the broader issue. And I don't know that that's a reasonable thing for this Board to do. I think I would -- my conscious would rather tell me to hold off on these cases, wait until there is a better resolution of the ag drain MUN issue to be done as a the part of CV Salts and the ILRP.

SENIOR ENGINEER YEE: Can I add a comment the that?

This is Betty Yee.

In some of our Basin Plan Amendments, we've done site-specific amendments to get information that informs our larger amendments that can be more regional. So even though that is very important to deal with all of these water bodies, just to do one or two and learn from that could be really beneficial for our bigger project.

BOARD MEMBER ODENWELLER: As long as we are

outlining potential study requirements, I think somebody better spend some time on developing and briefing us on a study that demonstrates non-use and a statistically significant level of certainty for the waters that we want to de-designate.

NPDES PERMIT PROGRAM MANAGER MESSINA: I do want to let you know in the individual hearings for the individual permits, we will go into how the timing of any potential amendment would fit into a compliance schedule and so forth. That was a good discussion. Actually makes the rest of my presentation easier.

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NPDES PERMIT PROGRAM MANAGER MESSINA: So this next slide, as I was saying, we had lots of information going into the Basin Planning process for the city of Vacaville.

In 2009, we began looking into a preliminary assessment for a potential Basin Plan Amendment for the receiving waters in which the City of Colusa wastewater treatment plant discharges into.

We didn't have much staff, so we were looking at the use of just existing information. However, the little information that was out there was not conclusive for us. We have begun gathering preliminary water quality information, but the results are not really supportive of

a de-designation effort, because it's showing those waters have pretty good quality.

So we need to go out and gather further information and now basically focus on flow as well as water quality before we come to any preliminary assessment conclusion on what avenue we may want to take or if a Basin Plan Amendment is actually feasible for these water bodies.

And I wanted to note for that effort it took about half of a person year out of our NPDES Program, one of our permit writers over a duration of two years to get to this point for Colusa.

EXECUTIVE OFFICER CREEDON: So, Diana, you made a statement if a Basin Plan is possible, you meant at least a de-designation possible.

NPDES PERMIT PROGRAM MANAGER MESSINA: No. I'll go into -- my later slides, I'll show different options. We are not only looking at just a clear de-designation.

EXECUTIVE OFFICER CREEDON: I know. But you said if a Basin Plan Amendment is possible. You meant de-designation was possible.

NPDES PERMIT PROGRAM MANAGER MESSINA: No. I meant with any amendment, it would be possible. There's different options.

EXECUTIVE OFFICER CREEDON: Go ahead.

NPDES PERMIT PROGRAM MANAGER MESSINA: I'll go through that.

Sorry Pamela, I don't mean to say no to you.

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NPDES PERMIT PROGRAM MANAGER MESSINA: And basically, it's just this. It's not until the end of the information gathering stage that we know what options are available to us and what strategies we may want to pursue.

But I do want to lay out some potential options to consider, and this is what I was getting at.

The first option that we could pursue is a Basin Plan Amendment that removes the MUN use in its entirety. This means the removal of water quality protection for an entire group of constituents, many of which are not of issue to these municipalities or that are not in their wastewater discharges.

The second approach is to leave the MUN use and establish site-specific objectives for the constituents of issues for these municipalities, which would include nitrates, arsenic, trihalomethane, aluminum, iron, and manganese.

Paying careful attention to protect the drinking water use, but for a reduced rate of consumption in which we would expect out of these type of water bodies. So this would still be a Basin Plan Amendment, but it would

not be a de-designation of the MUN use.

Another option is to re-define the existing MUN use and establish a non-drinking use also probably through site-specific objectives.

And yet another option under that category of redefining the existing MUN use is to establish a seasonal use in which the MUN use only applies during a certain season, such as when there is higher flows.

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NPDES PERMIT PROGRAM MANAGER MESSINA: We would also want to strategize on whether any Basin Plan Amendment effort could be conducted or should be conducted on a water body by water body basis or on a category of water bodies basis such as ag drains that have the same features and the same characteristics, and most importantly, would meet the same State and federal criteria to address the MUN use. This is similar to the effort that we were talking about which is starting up with CV Salts.

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NPDES PERMIT PROGRAM MANAGER MESSINA: From experience with other Basin Plan Amendments, we've laid out this somewhat optimistic time frame here of 42 months to complete a Basin Plan Amendment from start to finish. We're assuming here that we do not have much existing data

and information on our subject water bodies. And we're projecting 18 months to gather flow and water quality data and research historical information necessary.

With this information, we can strategize on our approach as we pull in the stakeholders for public participation and a CEQA scoping meeting.

With the information and public input, a staff report and the scientific assessment would be developed. The scientific elements of the proposed amendment must go through an independent scientific peer review, which takes approximately six months. And so this stage would be where we're starting at the two-year mark.

Staff will then fold in the comments from the peer review into a tentative amendment and report which then proceeds through our agenda and hearing process.

The tentative amendment and report must go through a 45-day public comment period prior to being considered by this Board.

After Regional Board adoption, the adopted amendment must go through subsequent approvals from State Water Board, the Office of Administrative Law, and ultimately U.S. EPA before the amendment is effective. That means before we can actually implement that in an NPDES permit.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The estimated staff level for this effort. Between Betty and I, we estimated 1.5 person years over this 42 months of the amendment development process.

There's also a need to conduct monitoring and compile data. We also have to have an anti-degradation analysis conducted, as well as the environmental analysis and the CEQA documents. And so with these requirements, we're estimating a need for around 200,000 to $500,000 in contract funds.

I cannot emphasize enough that to accomplish this we must put an experienced Basin Planning staff or an experienced consultant on this assignment.

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NPDES PERMIT PROGRAM MANAGER MESSINA: The Regional Board's Basin Planning Program has minimal staff which are currently working on the triennial review of the Basin Plans and helping other programs with Basin Plan Amendments.

Also, our Basin Planning program does not have the contract dollars for this specific effort. We acknowledge that we're working with disadvantaged small communities in which we may not be able to expect a contribution of resources as we saw with the City of Vacaville or any other larger dischargers. However, if

these type of Basin Plan efforts are to go forward, we must somehow leverage resources from external parties.

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NPDES PERMIT PROGRAM MANAGER MESSINA: So that's basically the end of my presentation.

I want to let you know that in October of this year, our Basin Planning staff is tentatively scheduling to present to you the triennial review of our Basin Plan. And with that, they will be presenting to you the Basin Planning priorities.

This may be a good time to get feedback from you on this. We are all here available to answer any questions.

CHAIRPERSON HART: Thank you, Diana.

Do we have specific additional Board member questions?

I want to really compliment you on this, the summary that you included in the agenda packet and the staff report, it was really fantastic. Very clear and very helpful.

So Lyle, I think you have some questions, and then Carl.

BOARD MEMBER HOAG: Yes. I have a couple. Thank you for the presentation.

You've shown that the mechanics of going through

a Basin Plan Amendment costs somewhere in the range of a million dollars, outside fees, in-house costs. If you did half a dozen concurrent amendments addressed at the same issue, would it cost six million dollars instead of one for one million dollars?

ASSISTANT EXECUTIVE OFFICER LANDAU: You could probably hypothesize anything. If you had twelve ag drains that were essentially identical, the incremental costs for doing six of them would probably be very small. It would be the information gathering stage. And then, you know, your description is just a little bit longer. Everything else would be pretty much the same.

If you took six totally dissimilar situations that shouldn't be bundled together anyway and stuck them in one document, it's probably whatever the cost is times six. There would be some savings and postage and meetings and things like that. But the ultimate work of characterizing would be quite different for each of them and the issues we'd have to go through.

So the amount of economy of scale of bundling these could be either very little or very substantial. Our intent for bundling things together -- and that's one of the things we're looking at in CV Salts is how to bundle them together so that we get the best economy of scale of bundling them together. If you take things that

are just too different, it just gets things very confused and you wind up --

CHAIRPERSON HART: Making a mess.

ASSISTANT EXECUTIVE OFFICER LANDAU: Making a mess and not getting anywhere. We're in the midst of trying to figure that out.

BOARD MEMBER HOAG: Given that I don't have the background to understand all this, what about these 10,000 ag drains? If ten percent of those pose the same kind of issues, they could not be dealt with -- or could they be delta with in a package deal by some magic that I don't understand so that we didn't get into the situation that every one of those thousands of ag drains?

ASSISTANT EXECUTIVE OFFICER LANDAU: Absolutely. Again, an ag drain in Kern County and an ag drain in Shasta County, I wouldn't see a way to bundle those together.

But I worked a lot in the San Joaquin valley, in particular, many, many of those ag drains we're talking about are, in fact, constructed, which is one of the issues. Are they -- in fact, some drainage are natural. Others are totally human made. Others used to be a creek and are now reconstructed so no one would recognize them. It makes a difference in terms of whether it fits into a policy. We actually, however -- into the Drinking Water

Policy.

A couple decades ago, under a State Board -- the equivalent of the California Toxics Rules the State Board adopted, there were some alternatives for dealing and setting special standards for ag drains that wound up being overturned by the courts. And parts of this never got approved by EPA. We actually went through at that time an evaluation and categorization of ag drains. So we've got a document with very long lists of ag drains, whether they're constructed or modified or just what and some similarities.

I would expect that -- and I don't have a good number of 30 percent or 60 percent. But I think there is a great opportunity for bundling large numbers of those together. It will take some work to get there, but far less work than trying to do them one at a time.

VICE CHAIRPERSON LONGLEY: In fact, are you looking at doing this under the CV Salts?

ASSISTANT EXECUTIVE OFFICER LANDAU: Yes. That is an ongoing effort.

BOARD MEMBER HOAG: Is there some definition of the approach and the probable cost of the designation process and the probable resulting treatment cost on the part of ag dischargers? Are those numbers included in the irrigated lands program EIR? Where can I go to find a

definition of the magnitude and cost of this potential problem?

ASSISTANT EXECUTIVE OFFICER LANDAU: I'm not sure we have a single document -- Pamela -- in the CV Salts. I don't think we're to that stage yet. So it's recognized as a problem, and we're trying to figure out the magnitude.

One of the things that we ran into on Colusa, our expectation was, gee, they're discharging into an ag drain. We didn't have an irrigated lands monitoring site on that specific drain, but it's part of a network out there. So we went out and looked at the water quality for the ag drains in the area. And darn it all, it met water quality standards, which is good. But if you're trying to do a de-designation, that is a --

CHAIRPERSON HART: Bad.

ASSISTANT EXECUTIVE OFFICER LANDAU: I don't know if it's a bad outcome to say it meets water quality standards. But when you are going down the path of can we do this or this or that, if you bump into, it meets water quality standards, that's a major show stopper. That's why we have now initiated some more site-specific monitoring, which may -- I don't know the outcome of that. We've sort of been iterating this trying to do --

EXECUTIVE OFFICER CREEDON: The outcome will be

the options that Diana argued with me over. If you go back to that sheet of options for basing planning --

ASSISTANT EXECUTIVE OFFICER LANDAU: I don't know where we will end up.

EXECUTIVE OFFICER CREEDON: You can do site-specific objectives or do some categorization of MUN. Those are all Basin Plan options for you, as opposed to simply just de-designation.

BOARD MEMBER HOAG: One reason I ask the cost about the definition of scope magnitude and cost is I believe that any program -- multi-billion dollar program, which this will become, deserves, requires an attempt to define these things at the outset, just as it does for California high-speed rail system or a regional wastewater system or any other huge magnitude public program.

So at some point, this has to be done. And I'm surprised that it wasn't done to a preliminary degree.

EXECUTIVE OFFICER CREEDON: It's very recognized. In the CV Salts initiative for the ag drains, it's a significant issue for us. It's not like it hasn't been recognized or identified as an issue by this Board. It's also been on the triennial review priority list dealing with ag drains and effluent-dominated streams as an item that needs some attention by this Board.

BOARD MEMBER LONGLEY: Madam Chair.

EXECUTIVE OFFICER CREEDON: So it has been. It's just that -- it's not like we can in one month's time change the tide. We have to deal with it in a process that Diana just laid out for you. And it's given you a best-case scenario for Basin Plan Amendment of 42 months.

BOARD MEMBER LONGLEY: Mr. Hoag, I do share your concern, but I guess I have a different outlook on it.

This Basin Planning process is a requirement under CV Salts. That is an outcome of the CV Salts mandate put on us by the State Board back in 2009, I think it was.

EXECUTIVE OFFICER CREEDON: Six.

BOARD MEMBER LONGLEY: 2006. Whenever. Okay.

CHAIRPERSON HART: Time flies when you're having fun.

BOARD MEMBER LONGLEY: No. It wasn't 2006. It was 2006 we really kicked off the effort. That mandate I think was February something or other more like -- regardless. We can go on from there.

We have to have turned out in a couple of years -- in a few years a Basin Plan Amendment.

EXECUTIVE OFFICER CREEDON: Recycled water policy.

BOARD MEMBER LONGLEY: The recycled water policy is what I'm talking about. And we have to have basin

planning amendments turned out in a few years. Five years from that date, which is 2014. They may give us two more years if extraordinary circumstances. And that's where the focus is now.

Some of the people in the audience have been working very hard on that. And I think in our October meeting when I'm looking forward to seeing is how we're integrating the rest of this into the CV Salts process. Pamela and others on the staff together with some folks in the audience have been spending unbelievable amounts of time. And I don't want to change the direction that we're going at this point to go chasing this, when I think it's being dealt with -- I hope it's being dealt with -- at least in part by the CV Salts process.

EXECUTIVE OFFICER CREEDON: It is being developed and addressed through CV Salts. The ag drains, it has been an ongoing issue.

And in terms of the irrigated lands regulatory program, the Board has a lot more discretion and a lot more ability to give compliance schedules than under the NPDES program. That's why the urgency is on NPDES right now.

CHAIRPERSON HART: Based on statutory requirements under the Clean Water Act.

Go ahead, Lyle.

BOARD MEMBER HOAG: Thank you for that. I'm comforted, in the part.

One techie question. I gather from the discussion and the documentation that once the designation -- the MUN designation or any other beneficial use occurs, that the we are obliged by law, by regulation, to require complete compliance with the details of that beneficial use, unless we go through one of these processes. And I think that's where sort of the pocketbook hits the road, if you will.

In the case of drinking water, we're saying you must produce an effluent of -- let's take chloroform -- 2.2 before you dump the effluent into an ag slough or drain, which is a bird habitat, which may have MUN of 10,000. Or turbidity; although it's dealt with differently in the requirements, it's there.

You must produce essentially a near-zero turbidity water before you dump it into a turbidity slough. Is there no other way to deal with those kinds of obvious problems in nature? Are we, in fact, by carrying the designation MUN, are we, indeed, obliged to prescribe and enforce every single technical requirement?

EXECUTIVE OFFICER CREEDON: Yes, we are.

ASSISTANT EXECUTIVE OFFICER LANDAU: The bottom line, yes. The Basin Plan -- not every drinking water

number for everything is included in the Basin Plan. It includes certain specific tables out of the drinking water standards. And those are the ones that have the arsenic and the trihalomethanes and things in them. And some of these are also in the California Toxics Rule, which gives us far less flexibility.

Some of the things you were talking about actually relate to -- not to municipal protection. The tertiary filtration for pathogen removal and the turbidity standards are usually related to contact recreation and particularly ag use of that water where they're putting it on crops.

So a lot of the things we have in our permits, tertiary filtration, like that, are actually not driven by drinking water. And if we de-designated MUN for some of these communities, there are certain things, like trihalomethanes and nitrates, that would not necessarily be an issue for that initial body of water. But many of the advanced treatments that we're requiring would be required to protect other uses, including aquatic life and things.

BOARD MEMBER HOAG: Let's see if I understand that. It may not be a logical extension of the requirement. But, in fact, if it's in the Basin Plan listing and then eventually use is designated, we are

obliged to apply each and every technical requirement, whether the rationale is that requirement or whether it's some other related rationale. If it's in the book, it has to be applied, but whether it makes natural common sense or not.

ASSISTANT EXECUTIVE OFFICER LANDAU: It has to be applied until you change the book.

EXECUTIVE OFFICER CREEDON: The Board's charge is you to have to have full compliance with the Basin Plan. And our Basin Plan establishes the standards by which we develop our permits by. So we have uses, and then we have associated objectives that define when those uses are protected. And that's what we're talking about right now.

We have specifically identified the MCLs and other items as objectives that have to be met to meet MUN. It's the application, the blanket application of the Drinking Water Policy that's causing some problems with the application of MUN to some of these ag drains and other water bodies that are of concern to the Board. And we cannot not implement that until a Basin Plan Amendment occurs.

BOARD MEMBER HOAG: Diana showed a procedural option for site-specific changes on things like what I mentioned, that total chloroform, pathogen, turbidity, nitrate the obvious list. Is our ability to make changes

on those kinds of unreasonable requirements significantly easier than changing the designated use?

NPDES PERMIT PROGRAM MANAGER MESSINA: For all of our water bodies that are surface waters, we have to meet the requirements of the Clean Water Act in which those water bodies are fishable and swimable. So many of these requirements, treatment, and controls that I believe you're identifying here are necessary. And they're identified as the best practicable treatment for control to protect the water bodies to be fishable and swimable.

And also as you're discussing this, we're hitting on some like anti-degradation issues that also have to be addressed for if these treatment controls are to be reduced or if we are not to put these requirements in our permits. But basically, we do have to meet the minimum federal requirements of the Clean Water Act.

Also, I wanted to address a previous comment you made on economics. A lot of the economics information would come forward as we do an anti-deg analysis, which would have to be conducted both for the Basin Planning process and then again for an NPDES permitting action, which would maybe reduce the stringency. And it's through that anti-deg analysis in which you would quantify how much degradation this Board would accept because -- or based on the social and economic impacts, that not taking

that action would have on the people of the state.

So all that information would come forward as you collect the information to do the studies.

CHAIRPERSON HART: Thank you, Diana.

Do you have something to add?

SENIOR ENGINEER YEE: Board Member Hoag had this exact question about whether doing site-specific objectives would be easier. In the staff report, there is a discussion -- I think it's still in there. Okay. There is a discussion about the individual constituents of concern and some possible ideas for doing the site-specific objectives. Some constituents have a lot of flexibility and some don't. The ones with flexibility I believe would be easy to do, but Basin Plan Amendments are never easy. But they look like they would be easier than doing a beneficial use de-designation.

CHAIRPERSON HART: Thank you, Betty.

BOARD MEMBER HOAG: You are agreeing that it does require the Basin Plan Amendment process?

EXECUTIVE OFFICER CREEDON: All of these do. All the options require Basin Plan Amendment.

And I do want to point out, because you point out something really important here, because I know this Board gets frustrated when we say we're asking you to implement an effluent -- water quality based effluent limit and you

can't consider cost.

The costs for the state are considered during the standard development or the objective development. So that is the time when the state -- the Board here has to weigh the evidence on the cost. And that's why those numbers will be really important when it comes back to the Board that you know there is -- that information is adequate and appropriate in your mind and as we present it to you so that once we adopt a Basin Plan Amendment, we have site-specific objective or whatever, that you're saying, you know, you can't then later come back and say --

CHAIRPERSON HART: We want to discuss costs.

EXECUTIVE OFFICER CREEDON: Right.

CHAIRPERSON HART: You do it at the amendment stage.

EXECUTIVE OFFICER CREEDON: That is very important at this phase to look at that.

CHAIRPERSON HART: I have a number -- well, I have about five cards on this item. So we're going to take a five-minute break. And I do mean five minutes. Debbie is up first for public comment. We'll be back at 10:40.

CHAIRPERSON HART: We're going to come back into session.

(Whereupon a recess was taken.)

CHAIRPERSON HART: Okay, Ms. Debbie, have at it.

MS. WEBSTER: Debbie Webster, Executive Officer for the Central Valley Clean Water Association.

I appreciate the time to talk about this, because, yes, in the staff report we're talking about a little bit more than a handful of POTWs. I do believe this affects a lot more on even the POTW side than is portrayed.

But I want to go back to last Board meeting because that's where we started. And it had to do with whether the blanket designation of the sources of Drinking Water Policy, the exceptions were adopted at the time, and whether you even had to go through a Basin Plan Amendment in order to do this.

And we didn't really talk about that today. CVCWA still firmly believes that those exceptions were adopted in the Basin Plan and therefore are effective and that the Board can go forward and would urge the Board to go forward with that course of action that was discussed at the last Board meeting.

STAFF COUNSEL COUPE: Madam Chair, it sounds like the comments that Ms. Webster is making are more specific to the specific hearing on the specific Live Oak matter.

CHAIRPERSON HART: She's talking about both

items, but I think she's going to move off of those.

MS. WEBSTER: I actually am talking about as the blanket, not as specific.

CHAIRPERSON HART: For ag drains you're talking about?

MS. WEBSTER: Yes. Yes. Yes, it came up in that permit. And it actually has come up in other permits and those were briefly discussed, too.

I will say we will agree to disagree with staff on this part.

CHAIRPERSON HART: But Debbie, let's talk about Vacaville, because it's not a pending item and they had to go through a de-designation and the State Board essentially went -- the Board reluctantly said that MUN applied, State Board upheld that. And then they went through a whole rigamarole about Basin Plan amending; right?

MS. WEBSTER: Yes. I think I'd be happy to pull up an attorney here, too. And we have evaluated actually have some experts that worked on Vacaville and that worked on other things that can really specifically talk about that, because I came towards the end of that process. That's not my most familiar.

But I also know there's some differences in situation. And now I know for sure I'm going to get over

my time frame. There's some difference.

I'm sorry. On your question about Vacaville, just in talking with them, that was a two million dollar project. Took seven years. The impacts other than those de-designation and site-specific objectives would have been about a $40 million upgrade. So significant, significant cost on that.

The other thing that I'd like to address that was brought up is that -- and I think Diana touched on this -- is that with this new -- you know, new interpretation of the Basin Plan and this new designation, the second thing that that goes into these permits, most of these POTWs are out of compliance the first day. They are violating the first day you put that in the permit. And whether or not they get a TSO -- unless they get an in-schedule compliance order, they are racking up violations.

Now, there's some protection against minimum mandatory penalties, but you have to realize they are considered violations by the state. They go into number of violations in the Central Valley on public reports, even though you've taken some enforcement action for a new interpretation of that MUN. We take that very, very seriously.

So going back to the point where we agree to disagree about this. And you know, I do encourage the

Board to be very -- if you decide to take the course of action and saying that, yes, the MUN was a blanket, we're going to apply it everywhere, unless we specifically name that water body within the Basin Plan, we do really encourage you to fund, to be part of the process.

I know our POTWs would be able to supply some, but I think you hit it on the nose. Most of them are very small. They can probably give you some monitoring data, but they don't have those resources. And this is a much bigger issue. It is something we're discussing in CV Salts. We're trying to deal with this. But it will take your full cooperation and a lot of time and effort just to get there. And we're not even sure if we are going to be able to get there.

In the mean time, we do have several agencies that might be even added to the list that will be in non-compliance. So big issue. And I appreciate the opportunity to talk about it. And again, if you'd like to ask any questions about that --

CHAIRPERSON HART: I'm sure we're going to hear from legal counsel at least on the two agenda items that come before us. For right now, I think -- Tess, you don't have a card generally on this item, do you?

MS. DUNHAM: I do not.

CHAIRPERSON HART: We're going to hold off on

that for right now. Does the rest of the Board want to have the legal discussion now or do you want to wait for the agenda items?

BOARD MEMBER LONGLEY: I would rather wait until we talk about specifics.

CHAIRPERSON HART: Carl wants to wait to talk about specifics.

BOARD MEMBER HOAG: I'll just state my preference. I think because of the magnitude of the issue and its overriding importance in several cases, I'd rather gain the best possible understanding of the issues and the approaches in a general context before delving into specific orders and deciding how to act on them. So my preference would be to do it under this item.

CHAIRPERSON HART: Okay. Dan, do you have a preference?

BOARD MEMBER ODENWELLER: I guess my preference would be to -- if we are interested in a specific topic is to get a briefing paper on it first and then --

CHAIRPERSON HART: Well, it's in your Board packet, for one.

Tess, if you could come up and do a very, very brief, general non-agenda item specific rundown of what your legal perspective is for Member Hoag and the rest of the Board members.

MS. DUNHAM: Sure. Tess Dunham with Somach Simms and Dunn. I'm here with CVCWA and others.

Just first I want to make a clarification. Madam Chair, you mentioned Vacaville. And I think it's important to understand in the State Board Order for Vacaville, they did specifically state that Old Alamo Creek did not fall within the ag drain exception. I think it's important to understand that Old Alamo Creek was found to not be within the exceptions that currently exist in 8863, which is why the State Board ultimately did a Basin Plan Amendment.

And actually, the State Board amended 8863 to except Old Alamo Creek specifically from its policy because it didn't fall within the categorical exception for ag drains.

So just an important clarification so we don't get Old Alamo Creek get mixed up with the ag drains we're talking about. So in general we're talking about the ag drains that we believe would fall would in the current exception within 8863.

CHAIRPERSON HART: You're saying because it was a creek, per se, and not a technical ag drain, but then the Board amended their policy to say but even though it's named a creek, it's more like an ag drain?

MS. DUNHAM: I don't even think they went that

far. They just basically said the MUN was inappropriate, but they specifically said in the Vacaville order it didn't fall within the exception as identified in 8863. So what we're then talking about I think in general here today when we talk about ag drains, Member Hoag, there is within 8863 a categorical exception for ag drains. And the question has been is that exception self-executing as it was adopted into the Basin Plan, or do you have to go through and de-designate through a Basin Plan Amendment.

And the State Board, you could have a little bit of different interpretation under the Vacaville order because Old Alamo Creek didn't fall within that, what the State Board was saying. But I think the State Board since then and the Regional Board has said we don't believe they're self-executing and that you do need to do these Basin Plan Amendments in order to de-designate.

I have gone back. I've spent pretty extensive time looking at the record for 8863 and the Regional Board's incorporation thereof to try to figure out what was the intent at the time of adoption. And the problem you have is in your Basin Plan and the implementation program, you have some language that basically says, no, you have to go through and do a Basin Plan Amendment to de-designate. It's fairly clear language in the Basin Plan.

But I've got back and looked at the Basin Plan administrative record, and there is nothing to explain why that was put in there. The best I can do, it came in in 1994 when you amended the Basin Plan. In that staff report, there is absolutely zero explanation as to why that provision was actually added into the Basin Plan itself. It had --

CHAIRPERSON HART: Let me stop you right there though. Isn't that our main problem? If you don't have an ambiguity, you don't get to jump to intent, even if we could find the intent. I think someone was really not on the ball --

MS. DUNHAM: And there is memo from before that time. But I think that based upon the existing language in the Basin Plan and where the State Board has come down on Vacaville, I think your Regional Board Counsel is giving you conservative direction you need to do a Basin Plan Amendment. And that's probably the safest course of action for you to take, just to be honest.

CHAIRPERSON HART: I greatly appreciate your honesty, as I'm sure this Board does.

Yes, Carl.

BOARD MEMBER LONGLEY: I don't know if, Tess, you could weigh in obviously. But I'd also like to hear from staff. It appears a good part of the problem is 8863.

MS. DUNHAM: Well, as you know, there is pending litigation in the appellate court on the validity of 8863 and to its entirety as to whether when it was adopted by the State Board whether it was legal or valid.

So you also have to understand that that appellate process will continue to go forward. And there's always the potential -- as my husband says, every now and then even a blind squirrel finds a nut -- that we, the petitioners, will be successful. And, you know, we, of course, believe firmly in our arguments before the appellate court. But we will have to weight to see if the appellate court agrees with us on not.

BOARD MEMBER LONGLEY: Well, I guess is there a merit in asking -- of course, probably won't touch it with the appellate process going on now. But it would appear that there may be some remedy by re-addressing 8863?

CHAIRPERSON HART: Yeah.

MS. DUNHAM: As far as the State Board would have to.

BOARD MEMBER LONGLEY: I realize that.

CHAIRPERSON HART: Well, you can't ask the court now. Their remedies have been requested, and you can't add to the record.

But the court may very well say if you want to fix this problem, tell the State Board to fix it.

MS. DUNHAM: It's a writ of mandate. So it would be a writ back to the State Water Board saying you have to fix 8863. It would be under a writ by the judge, should we actually be successful.

CHAIRPERSON HART: Okay. Thank you, Ms. Dunham.

David Cory.

EXECUTIVE OFFICER CREEDON: If I can -- just in the Vacaville order, Ms. Dunham is correct. The State Board did make the statement that it doesn't appear that the Old Alamo Creek even meets the definition of an ag drain. But that was after the discussion where they found that the Board had act appropriately in applying it in that there was a need to have a Basin Plan Amendment to de-designate, regardless of the fact that when the Board adopted 8863, there was possibly an intent that the regional boards would then do what the necessary work to de-designate. But because we didn't, we still had to do the Basin Plan Amendment to de-designate.

That's language directly out of the order. It's pretty clear -- and it wasn't whether Old Alamo was an ag drain or not. It just said they were not self-implementing. These were the idea that you did need a Basin Plan Amendment was an issue raised by the Vacaville and others in response to the order. And State Board said no, that Regional Board acted appropriately.

CHAIRPERSON HART: Yes, David.

STAFF COUNSEL COUPE: I just had one clarifying comment. There's been a lot of discussion about "ag drains" or "constructed ag drains." I just wanted the Board to be particularly cognizant of when we're throwing around that shorthand term, what we're really talking about for purposes of trying to seek any possible future de-designation under 8863 is the provision in 2B which says -- I think Diane touched this in here her presentation, but I think it bears repeating again.

The specific provision that we would be relying on, at least in the ag drain context, is that the water is in systems designed or modified for the primary purpose of conveying or holding ag drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.

So I think that term "primary purpose" is particularly important.

CHAIRPERSON HART: What about the term "relevant water quality standards"? Is that somewhat subjective?

STAFF COUNSEL COUPE: That's something we're going to have to evaluate on a case-by-case basis.

BOARD MEMBER LONGLEY: It's somewhat subjective.

STAFF COUNSEL COUPE: I wouldn't use the term

subjective. I would say it has to be analyzed --

BOARD MEMBER LONGLEY: You have your terms. I have my terms.

CHAIRPERSON HART: Now really, Dave. Really, really.

MR. CORY: I don't want to slow down the discussion at all. I think it's fascinating and some of the best use of time we've spent sitting here listening to the Board in a long time. So I do appreciate it.

Chair Hart and members of the Board, David Cory representing the Central Valley Salinity Coalition as well as the San Joaquin Drainage Authority.

Member Hoag, I appreciated your comments earlier and wanted to let you know at least from my perspective and from the west side's perspective this is the most important issue in front of the agricultural community.

Yesterday, we spent a long time talking about the regulatory structure under which agriculture is going to be regulated. This is the heart of how the requirements that are going to be imposed upon us and the long-term ramifications of what the Board does with this issue is going to haunt us for a long time as we're sort of dealing with the decisions that were made decades ago in trying to come out of these shackles that we're sort of tied up with, being forced the apply unreasonable regulations to

protect non-existent beneficial uses. And I really think this discussion is really important and we need to focus on it and really resolve it.

Again, can't stress how much I appreciate you to tackle this difficult issues and long needed to look at it.

It's much bigger than just NPDES permits. It's much bigger than just ag drains. This issue is broader than all of that. If 8863 is applied to every water body -- look at the West Side Coalition. Bill Jennings got up and talked about how many exceedances of water bodies and threw out his statistics of how many exceedances. And basically you listen to his discussion, and you think that the waters are burning across the street. But when you look at the west side's exceedance reports that we send in, I think something like 75 percent of our exceedances under the Irrigated Lands Program are for EC and TDS. And those are both, you know, an ag-induced and a drinking water municipal designation exceedances.

These drains that we're talking about, Salt Slough, we exceed the EC in Salt Slough. Surprise. We've got to deal with this. When these -- agriculture has a lot of things to deal with that we can focus on. But these things I think start to really weigh on the

regulated community when unreasonable regulations are imposed upon us.

So we need to work through this, try to resolve these issues, and not require individual dischargers to waste their resources on addressing issues that really aren't impacting actual beneficial uses.

So I applaud your approach to address this, and I think we have to keep up the work. CV Salts is looking at it. It's a main focus of what we're talking about. I think a lot of these presentations that we got from staff --

EXECUTIVE OFFICER CREEDON: I just want to correct you. It's not the main. It is a key critical point.

MR. CORY: It's one of --

EXECUTIVE OFFICER CREEDON: The purpose is to actually address the nitrate and salt issues in the valley. And by the way, we're going to fix these other things. But we can't site we have drinking water supplies that are impacted.

MR. CORY: There's certainly issues -- what I'm trying to say is that when you apply drinking water standards and require dischargers to spend a bunch of money fixing a problem that doesn't exist, it makes it much harder to fix problems that really do exist.

I think the Board losses some credibility with the discharging community and makes it harder for us to embrace the really difficult tasks that we do have to address real problems.

CHAIRPERSON HART: Right. And despite that, I mean, our job is to really focus on the water quality problems that need immediate addressing, not technical minutia.

MR. CORY: And Pamela, I appreciate your clarification, because you're right. That isn't the only problem.

CHAIRPERSON HART: Thank you, David. Any question for David? Nope.

Seeing none, Dennis Wescott.

EXECUTIVE OFFICER CREEDON: I should point out, because we keep talking about can't we group, can't we do economies of scale and whatnot. I have a feeling we're living with that approach from 1988. And so I want to be careful that we just don't start talking about these easy fixes.

CHAIRPERSON HART: I think we're all very clear there's no easy fix here.

EXECUTIVE OFFICER CREEDON: I think they were doing the economies of scale back in 1988 and it backfired.

CHAIRPERSON HART: We know there are site-specific issues. But I think the Board is really urging folks to find ways that we can bundle these drains.

MR. WESCOTT: Thank you very much. Dennis Wescott, San Joaquin River Group.

I want to compliment Diane an her staff presentation and also her summarizing really a complex issue. I understand the frustration on the permitting issue.

I think we need to go back in history on the Drinking Water Policy. Because when the State Board adopted the Drinking Water Policy, they said the thing is very complex. And we're going to leave it up to the Regional Boards to designate what needs to be done on what water body.

But immediately, they took out the ag drains by putting that exception in there. But also they recognized that there were other ag facilities. And that includes some of the conveyance canals and other things. They said this was a complex issue that will be covered in surface waters plan. And Ken Landau alluded to that. They presented to the Board a set of guidance. The Board staff put together a report for the Board following that guidance. It was considered by the Board at a meeting I think in 1995. And it defined five different categories

of these facilitates, and it covered about 6500 facilitates that covered 26,000 miles.

And that exists. That record exists within the Board on how you're going to classify these. And he classified them all the way from natural water bodies that were reconstructed all the way down to constructed ag drains and had different categories.

And I urge you to go back and use that as a starting point for this discussion. Because this impact -- as Dave Cory was saying -- goes far beyond municipal dischargers. Because right now, this Board and the State of California invested millions of dollars in recycling efforts that could go out the window if we can't recycle this water back into our own canals.

The State is pushing for water conservation and water conservation means increased concentrations and recycling. We have to be able to do that within our facilitates. It also impacts our maintenance operations in our agricultural facilitates. And that includes not just drains, but the irrigation canals themselves.

I've spoken with the managers about this issue. The managers in the San Joaquin River Group are ready to work with the Board. They're ready to pull that report back out that they filed with you because you had I think 162 reports -- or was it 362 reports -- filed by districts

in this valley with the Board. And those are in the Board's files. We're ready to take our report and update it. Because I'll be very honest with you. We do have a couple of our facilitates now that convey municipal water. We convey it to treatment plants in the city of Modesto. There is a new plant for Turlock and other cities are in the planning process. And we need to modify that.

But I think we need to find a way to move back, to take a look at what was originally intended with the sources of the Drinking Water Policy. And we're set to work with you on that. And whatever is needed, we're working through the CV Salts program. Hopefully, that's where it's taken care of.

CHAIRPERSON HART: Thank you, Dennis. I would just urge having -- I know, Pamela, you want to say something. And I know I think Dr. Longley would agree with these comments that the more folks that we have participating in the CV salt program and assisting us with the monetary aspect of our mission, the quicker and perhaps more efficient and better the process will be.

And we do struggle right now to get folks to kind of chime in. And some people think it doesn't really affect them, but I think you've well summarized how it deeply effects the agriculture community.

MR. WESCOTT: Oh, absolutely.

EXECUTIVE OFFICER CREEDON: I just want to say Jeannie Tilcott, that report is resurfacing, and it is part of the CV Salts discussion right now. It's not being ignored.

MR. WESCOTT: Yeah. I brought it up in the CV Salts and wrote a background paper.

EXECUTIVE OFFICER CREEDON: That was a lot of good work. It won't be lost. It needs to be updated.

CHAIRPERSON HART: Excellent.

Yes, Carl.

BOARD MEMBER LONGLEY: I think my question was just answered. For Mr. Hoag's benefit, you may know Dennis Wescott. If you don't, he's retired from this Board and was heavily involved in going all back to --

MR. WESCOTT: My staff were responsible for putting it together.

BOARD MEMBER LONGLEY: He's an invaluable resource on what happened back when the basin plans first came into existence and from that point on.

CHAIRPERSON HART: I have two remaining cards, Dale Cleaver, city of Colusa.

MR. CLEAVER: Good morning. Dale Cleaver, Director of Public Works, city of Colusa.

And I want to thank the Board and the staff for working with Colusa right now toward a Basin Plan

Amendment, if necessary, because we first discharge into a constructed ditch. And then from there, it goes into Powell Slough, because it gets in the way before it reaches the Colusa Basin Drain. And the ditch is ag water and stormwater that dries up. So clearly not suitable for drinking water supply. So Powell Slough is the question and none of the current staff in Colusa have seen Powell Slough go dry.

And we have had opportunity to talk with local farmers. And recently -- as recently as in the last week, have spoken to a farmer that said this his brother actually modified Powell Slough because it would dry up all the time. And the farming in Colusa is rice. The regular practice is to recycle the water when they're flooding the rice fields. So they modified Powell Slough with weirs, structures, to take water from the Colusa basin drain and recirculate it through Powell Slough.

So it's recent information, and we're going to have to do more investigation and study. And I wasn't sure how pertinent that would be. But clearly, I wasn't aware of what I was wading into this morning. Thank you.

CHAIRPERSON HART: Nor might that farmer with respect to permitting issues. Okay. Thank you so much.

Do we have any questions? No. Okay.

One last card, Gary Baylon, city of Life Oak.

And Mr. Baylon, you're speaking generally and not with regard to any permit issues; is that correct?

MR. BAYLON: I'll assure you I'm not a techy. And I admire the intelligence of water quality in this room. I'm here just speak very generally.

CHAIRPERSON HART: Okay. Excellent. I'm sure we'll just stop you if you're not.

MR. BAYLON: Thank you very much.

Madam Chair, members of the Board, my name is Gary Baylon. I'm the mayor of the City of Live Oak.

Your staff has done a good job framing the issue before us today. Appreciate it.

Years before any of you were on the Board, Resolution 8863 was incorporated into the Basin Plan. On its face, 8863 seems to make sense, which is to protect drinking water supplies. The Resolution even includes exceptions that make sense.

For many years, the Regional Board did not consider agricultural drains to be water supply sources and wrote permits accordingly. Unfortunately, the Regional Board staff has now determined that ag drains should be protected as drinking water sources.

The Basin Plan identifies only about ten percent of the Central Valley waterways. In the absence of a specific designation in the plan for a waterway, Regional

Board staff now makes the presumption that the waterway is suitable for drinking water. This means that for communities that have historically discharged to manmade ag drains, their treated wastewater must now meet drinking water quality standards before it is then discharged into the ag drain. This makes no sense.

To avoid this unreasonable result, we encourage the Regional Board to direct staff to proceed forward with a Basin Plan Amendment to implement the exceptions contained in Resolution 8863. It is especially important that you understand that the dischargers affected by this are small, distressed, rural communities like the one I represent. Unemployment rates typically double to triple the straight average -- unemployed rates are typically double to triple the state average and rate payers cannot afford to and should not be required to help finance the Basin Plan Amendment.

Further, the financial burden for undertaking the cost to pay for the Basin Plan Amendment is not warranted when these communities have already spent millions of dollars on upgrades for real quality issues. Please do not further burden each one of us with additional cost of conducting individual Basin Plan Amendments that your staff estimates could take up to three-and-a-half years. Utilizing one-and-a-half fully qualified positions, our

communities do not have the staff qualified to perform these studies and would have to hire consulting engineers at a $500,000 estimated cost for each community to reach an obvious conclusion.

It is not likely that loans or grants will be available for this work, thus causing significant cash flow problems for our communities, with a total operating budget around one to $2 million. Please apply common sense and fairness to your decision. And I thank you for your time and your consideration.

CHAIRPERSON HART: Thank you, Mr. Baylon.

Do we have any questions?

No. Thank you so much.

So I believe that concludes this informational item, unless there is additional discussion by this Board at this time.

Seeing none, what I will attempt -- I think we're going to go ahead and start Live Oak. Maybe even finish it prior to lunch, but we're going to break at noon. So if I will read the hearing procedures.

This is the time and place for a continuation of a public hearing to consider renewal of an NPDES permit and adoption of the CDO for the City of Live Oak Wastewater Treatment Plant in Sutter County.

This hearing will be conducted in accordance with

the meeting procedures published with the agenda and the applicable Notice of Public Hearing.

At this time, evidence should be introduced on whether the proposed actions should be taken.

All persons expecting to testify, please stand at this time, raise your right hand, and take the following oath.

(Whereupon all prospective witnesses were sworn.)

CHAIRPERSON HART: Thank you.

Designated parties are the City of Live Oak and CSPA. The total time allotted for testimony and cross-examination is as follows: Regional Board staff will have 20 minutes. The City will have five minutes. CSPA will have five minutes. All other parties are interested persons and shall limit their testimony to three minutes. A timer will be used.

Please state your name, address, affiliation, and whether you've taken the oath before testifying.

Do we have any legal issues at this time?

STAFF COUNSEL COUPE: None at this time, Madam Chair.

CHAIRPERSON HART: Thank you Mr. Coupe.

We will now take testimony from staff.

(Thereupon an overhead presentation was presented as follows.)

MR. KERN: Good morning, Chair and members of the Board.

My name is David Kern. I'm a staff engineer in the NPDES Program in the Sacramento office. I have taken the oath.

This next item for your consideration is the NPDES permit renewal and amendment to the existing Cease and Desist Order for the City of Live Oak Wastewater Treatment Plant.

This item was presented to you at the February Board meeting earlier this year. After hearing testimony, the Board continued the item and directed staff to report back to the Board with further information regarding the application of the municipal and domestic supply, or MUN, beneficial use to the receiving waters as it applies to Live Oak.

Because this item was continued from the February Board meeting with no changes, we did not re-issue the tentative orders for public comment. So today I will briefly give you an overview regarding the Live Oak facility and the proposed orders that include the late and the late, late revisions the Board verbally accepted at the February Board meeting.

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MR. KERN: As a refresher, the City of Live Oak,

as shown circled in red, is located in Sutter County about 52 miles north of the city of Sacramento.

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MR. KERN: Here is a large scale aerial view of the drainage path for the Live Oak effluent. You may be familiar with some of the large landmarks. The Sacramento River runs along the left side of the picture and the Feather River is on the right. And then there is a circular light color areas, the Sutter Buttes. Live Oak's Treatment Plant is indicated by the white star. And the effluent drainage generally flows from north to south.

The receiving waters are the lateral drain number one as depicted in red. The short dark blue segment is the east interceptor canal And the green segment is Wadsworth canal. All of these three agricultural waterways are designated as having the MUN beneficial use according to the Basin Plan as it implements the sources of Drinking Water Policy.

These waterways flow into the Sutter Bypass shown in yellow, which is specifically listed in Table 2-1 of the Basin Plan as not having the MUN use. The Sutter Bypass then flows all the way down to the Sacramento River, which is specifically listed in Table 2-1 of the Basin Plan as having the MUN use.

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MR. KERN: As presented in February, the Live Oak treatment facility serves a population of about 800 -- 8,000. Live Oak is a disadvantaged community with a medium household of income of approximately $32,000. The sewage fee for a single family resident is currently $55 per month and is scheduled to increase to $60 per month July 1st of this year and then $69 the following year.

The Live Oak facility is currently under construction to replace the existing secondary pond system with a new tertiary treatment system that is expected to be completed in early 2013.

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MR. KERN: The proposed permit in your agenda package includes the late and the late, late revisions that were discussed during the February Board meeting. It includes the proposed effluent limits for arsenic, nitrate, iron, manganese, chlorine byproducts, ammonia, copper, and cadmium.

The city is not able to immediately comply with several of the new limits, some of which are newly applied due to the MUN use designation of the receiving waters. The proposed orders include compliance schedules for the discharger to comply with the final effluent limits from implementation of the MUN beneficial use.

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MR. KERN: Now I will summarize the late, and late, late revisions the Board verbally accepted February Board meeting. These revisions are incorporated into the proposed orders in your agenda package and are also included separately in the back of your agenda package.

The late revisions from February modified the copper and cadmium effluent limits based on using a different hardness value. As a result, the compliance schedule for copper was removed from the amended Cease and Desist Order, because the discharger can now comply with the proposed copper effluent limits.

In addition, the compliance schedules and the interim effluent limits for arsenic and total trihalomethanes were moved from the Cease and Desist Order to the proposed permit.

The late, late revision removed the final maximum daily effluent limit for total trihalomethanes from the proposed permit. The proposed permit, however, still includes the average monthly effluent limit for total trihalomethanes.

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MR. KERN: The only issues that remains subsequent to the February Board meeting is the issue of whether to apply the MUN beneficial use to the receiving waters. This is a picture of Live Oak's receiving water,

lateral drain number one. The proposed permit does implement MUN as a beneficial use for the receiving water, even though the receiving waters are constructed for agricultural drainage purposes. The proposed permit implements our Basin Plan and how it has incorporated the State Board's sources of Drinking Water Policy.

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MR. KERN: We know from our experience with the city of Vacaville's NPDES permit that our Basin Plan applies the State Board's sources of Drinking Water Policy to these ag drains. The State Board's decision was clear that we must protect the MUN use in the NPDES permit. The discharger may pursue a Basin Plan Amendment.

We also know from the State Board's Vacaville order that a State Board exception to this sources of Drinking Water Policy is required in the federal requirements for a Basin Plan Amendment must be fulfilled. A successful Basin Planning effort that involves the MUN use must satisfy both the State and federal requirements.

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MR. KERN: There are potential options that the discharger and this Board may choose to address the MUN use for these ag drains, but it is important to understand that with any option it is necessary to gather information and water quality and flow data to determine the best

option to pursue. These options involve the discharger conducting a Basin Plan Amendment.

The first option would be to remove the MUN use designation in its entirety from the receiving waters, which would remove the water quality protection for an entire group of constituents, of which some are not an issue to this discharger.

Second, establishing site-specific objectives that would protect the receiving waters for the MUN uses, but still allow higher levels of some drinking water constituents.

To address these compliance issues for Live Oak, site-specific objectives would be necessary for, at a minimum, nitrates, arsenic, trihalomethanes, iron, and manganese.

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MR. KERN: If a Basin Plan Amendment is part of the discharger's chosen method of compliance, we estimate the process for our Board to complete the amendment will take at least 42 months.

BOARD MEMBER LONGLEY: Your previous showed limited non-MUN use.

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MR. KERN: Back one.

The last option -- and that one would be to

determine to make a whole new beneficial use that would be like --

EXECUTIVE OFFICER CREEDON: It's a category of MUN, a sub-category of MUN where it would not apply drink -- so it would meet for contact and everything, those types of requirements, but just not drinking. So some of the MCLs would not apply. In this case, it's the nitrate one.

BOARD MEMBER LONGLEY: What are the implications of doing that in so far as --

EXECUTIVE OFFICER CREEDON: It may be more palatable to EPA if we go that route as opposed to full de-designation. It might be able to get us some relieve for the discharger.

We've in consultation. We've met with the discharger and the State Board on the different options you have available. What you have here are the options the Board has available. We can't tell you which option to pursue right now. We really need to do more before we can determine what's the best approach that is most likely to succeed with EPA approval.

BOARD MEMBER LONGLEY: But we're being expected to make a decision today.

EXECUTIVE OFFICER CREEDON: Well, the decision today is to apply MUN and with the time schedule to

address some of these issues. You can't direct us to pursue one of these options. We don't have enough to ask you to tell us which particular option. Before you today, we have a permit before you that applies MUN. And contrary to what some -- this is not a staff wish. It's something that's legally required.

BOARD MEMBER LONGLEY: Understand.

EXECUTIVE OFFICER CREEDON: And so I'm sensitive to that because of the Board's previous concerns.

But I brought -- as promised, the permit we brought back to you with some minor revisions is exactly what you had the last Board meeting or two meetings ago. I can't remember when it was, with still applying the MUN designation. And you wanted to know more about MUN.

BOARD MEMBER LONGLEY: Understand. So that option that's in there, if this Board were to adopt that, you go through your investigation, does it come back for the Board's consideration again?

EXECUTIVE OFFICER CREEDON: Well, when the Basin Plan Amendment comes back, or we come back with information on the status of how we're proceeding to address the Board's concern that we're applying MUN and how we're going to resolve the issue.

BOARD MEMBER LONGLEY: Thank you.

CHAIRPERSON HART: And, Carl, those are good

questions.

I guess this is for purposes of the discharger/consultant, whoever comes up to speak on behalf of the discharger, I think it would be helpful for the Board to know if doing the site-specific objectives and/or limited non-drinking MUN use would help solve their problem in terms of costs of upgrades versus designating the MUN.

EXECUTIVE OFFICER CREEDON: De-designating.

BOARD MEMBER LONGLEY: That's right on. Very useful information.

EXECUTIVE OFFICER CREEDON: I don't think any of us want to go through a Basin Plan Amendment if it's not going to be realize of savings or benefit to the discharger. That's senseless.

BOARD MEMBER LONGLEY: Is there some possibility that, in fact, this drain and others like it that are on that list would be addressed during the CV Salts process?

EXECUTIVE OFFICER CREEDON: They would. It's just the timing.

And like I said, we have entered into discussions with the CV Salts group to see if this is something that can be done with some of those dollars assigned to CV Salts.

BOARD MEMBER LONGLEY: Thank you.

EXECUTIVE OFFICER CREEDON: I think Ms. Webster can speak to that. I was not able to attend that meeting.

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MR. KERN: Back to the time frame. If a Basin Plan Amendment is a part of the discharger's chosen method of compliance, we estimate the process for our Board to complete the amendment will take us 42 months. We estimate the effort will require 1.5 PYs of staff time and a minimum of approximately 200,000 contract dollars for monitoring and information gathering.

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MR. KERN: An important part of the proposed orders are the compliance schedules. The proposed permit has new or more stringents limits for arsenic, nitrate, iron, manganese, and total trihalomethanes for protection of MUN use.

Since the City is not able to immediately comply with the new limits, we have proposed five-year compliance schedules in the proposed orders for arsenic, iron, and manganese that provide MMP protection. As I mentioned, if the compliance method chosen by the City is to pursue the Basin Plan Amendment, it will take three-and-a-half to four years. If successful, the discharger will meet its compliance requirements in the proposed five years.

If not, then the City must request this Board to

provide an extension of up to an additional five years for MPP protection. The discharger must demonstrate to the Regional Board that its set forth due diligence to comply with the permit prior to any extension being granted.

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MR. KERN: With all the discussion regarding the MUN issue and how it is applied, we discovered a few necessary changes to the findings and the fact sheet in the proposed permit. These changes resulted in a late revision to the proposed permit in your agenda package. The late revision has been given to you and provided to interested parties. The late revision further clarifies and explains how the MUN is applied.

Reference to the MUN beneficial use in the findings and the fact sheet of the proposed permit indicates that the MUN is an existing use. However, the MUN use is designated by the Basin Plan through sources of Drinking Water Policy, and as such, is determined to be suitable or potentially suitable. But whether or not the use is existing would have to be determined.

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MR. KERN: So with that, we recommend adoption of the proposed NPDES permit in your agenda package that includes the late revision and the late, late revisions from the February Board meeting and with the late revision

presented to you today.

We also recommend the adoption of the proposed Cease and Desist Order amendment with late revisions discussed at the February Board meeting.

We would like to enter into the record this staff presentation, the agenda package, the late revisions, and the late, late revisions and the case files for the facility into the record.

This concludes my staff presentation. I'd be happy to answer any questions you may have. Thank you.

CHAIRPERSON HART: Thank you. Do we have any --

EXECUTIVE OFFICER CREEDON: I want to make it clear that this Board is also not finding whether it's suitable or potentially suitable. This's still to be determined.

So David said that in his statement and that's not correct. We are not making adjustments to the revisions to say that this Board is finding it suitable or potentially suitable. It's not that yet. We still have the work to do to determine if that's the case. So we're not finding it's existing or that it's suitable or potentially suitable.

STAFF COUNSEL COUPE: Madam Chair, I know you've had a bunch of late revisions in front of you. I have one very small one I also want to make on page 3 of the late

revisions. If you're looking at the first full paragraph that begins the Basin Plan 2-2.00, the underlined language there in that paragraph that begins after the word, "thus," my suggestion is to strike that underlying language and replace it with "thus, pursuant to the Basin Plan and State Water Board plans and policies, including Resolution Number 8863, and consistent with the federal Clean Water Act, beneficial uses applicable to Reclamation Districts 777 Lateral Drain Number 1 and Lateral Drain Number 2 are as follows." So that's how that particular sentence would read.

CHAIRPERSON HART: Okay. Thank you, David.

I don't see any questions for staff at this time. So we will take testimony -- does Live Oak have any cross-examination of staff? No.

So we will now take testimony of Live Oak.

MR. LEWIS: Good morning, Madam Chair and members of the Board.

My name is William Lewis. I'm the Public Works Director for the City of Live Oak. And I have taken the oath.

I want to thank the staff for the time they've taken since the February hearing to meet with us to discuss the MUN designation. One item that became apparent is if a water body is identified as having

existing beneficial use, they'll be much more difficult to de-designate that use. Staff has recommended that all references MUN as being existing use being removed from the permit and City of Live Oak wholeheartedly supports the removal of these references. That's what we just spoke about a moment ago.

During the February hearing and today, it was clear that all of you agreed that the designation of ag drains as a water supply made no sense. There was spirited discussion about various options. After reviewing all available information, the Regional Board staff firmly believes that the only possible way to not apply the MUN designation to a constructed ag drain is through a Basin Plan Amendment. For the sake of discussion today, we will accept that position in order to move forward.

Thus, if the Board adopts the permit today with MUN designation, the City respectfully requests that the Board direct staff to expeditiously and with priority begin the process of preparing a Basin Plan Amendment for de-designation of the MUN.

We fully understand that the direction is not a guarantee of the Regional Board agreeing to ultimately adopt a de-designation.

We also ask that the direction be included in the

permit with compliance dates and milestones when the Regional Board staff should return a draft Basin Plan Amendment for consideration, just as we would be given a compliance schedule in our permit with dates and milestones for actions that are expected of us. The concern is that there is the City of Biggs permit has a statement in there that the Regional Board will conduct a Basin Plan Amendment. And as far as I know, speaking with the staff of the City of Biggs, that has not yet begun.

The Regional Board staff has already begun the Basin Plan Amendment for the City of Colusa and the City of Biggs permit states that the staff will conduct the amendment. So it will be consistent with what's being done for two other communities.

The City of Live Oak is committed to protecting the water quality as nearly complete with the $20 million project. That's only serving 8,000 people, $20 million.

Please do not adopt a permit with MUN designation without specifically allowing for a Basin Plan Amendment for de-designation of MUN. If forced to meet effluent limits associated with MUN designation, it will cost the rate payers of Live Oak another $4.2 million to comply, which will result in sewer rates that will be 50 percent higher than that recommended by the EPA, with no beneficial water quality benefits.

So in conclusion, the City asks the following: To adopt the late revisions related to remove of existing use. In the very least, add language to the permit directing staff -- the Board staff to prepare the Basin Plan Amendment and add dates in the permit the Board staff must meet for preparing the Basin Plan Amendment.

The other option that came to us actually late yesterday and today would be to not adopt the permit; adopt the CDO, and we would probably have to come back -- and recommend coming back to another Board meeting to adopt the CDO to protect the City of Live Oak from mandatory minimum penalties and also possibly adopt some of the other protections for aluminum and copper that were resolved in the permit.

But that is an option. It probably too much to go into detail and resolve that during a meeting. But I think it is an option that the Board does have is to just not adopt the permit.

So with that, I'd be glad to entertain any questions from staff from the Board.

CHAIRPERSON HART: Thank you, Mr. Lewis.

Any questions?

EXECUTIVE OFFICER CREEDON: I have a question because of his recommendation. Are you suggesting the Board be named as a party to your permit? Because you're

asking for requirements on the Board.

MR. LEWIS: In some way, Ms. Creedon, that there's some -- maybe that's not the proper way to do it. But in some way that the Board give direction to staff with dates for coming up with a priority.

BOARD MEMBER LONGLEY: I think it's improper to do it within the permit. I'm not even sure it would get past State Board.

Certainly, this Board can give direction to staff. And I think you've heard some of the options that we've been looking at. I don't know if the de-designation is the way to go. I think we need more information before we do that.

And the other ways would give certainly Live Oak some relief. And certainly these Basin Planning efforts take a long time.

I've noticed if we go through the Basin Planning efforts now, we would start it today and steam off a bit. We're not -- we're not going to arrive at a decision much before CV Salts has to come out with their proposed Basin Plan Amendments and bring them before this Board.

Once again, I'm against dividing efforts, pulling resources away from what I think is the main effluent that takes care of not only hopefully Live Oak, but a lot of other communities as well.

And I think -- and I certainly understand; you represent Live Oak. You have to be here pushing hard for Live Oak. I fully understand that.

But I think looking at the bigger picture the direction we're going and the advise that we conceivably might give to staff it would be a much more beneficial approach than for the total basin and Live Oak included.

MR. LEWIS: The issue of that, of course, is that we're out of control of that time frame. So a permit would be adopted with compliance schedules. And so something that we're fully out of control of.

BOARD MEMBER LONGLEY: I understand. And if we don't adopt a permit, there is implications of that, too, that can be fairly dyer. So it's not a good situation. It's too bad it is as it is. But we have to deal with what we have today.

CHAIRPERSON HART: Yes, Ms. Dunham.

MS. DUNHAM: Tess Dunham on behalf of the special counsel to the City of Live Oak.

I did want to address a question that you had that you had asked the discharger to address as far as the three different options as potential Basin Plan Amendments. And not prejudging as to what could happen into the future, but just, you know, from experience and perspective, the site-specific objective route is still a

Basin Plan Amendment. You still have all that process associated with it.

I think there is a belief that it might be easier to have EPA approve site-specific objectives than a de-designation. You know, we don't know that one way or the other.

I think the other thing is to remember that for some of those constituents, I don't that a site-specific objective is going to be any easier than a de-designation, especially like for nitrate. We've had discussions and really looked at whether you can do a site-specific objective for nitrate, and I'm not so certain you could based on the drinking water standards and how it was derived. It's not a ten to the minus six type of objective like the THMs are. There is some major difficulties with that.

And that is what would be causing the four million dollar cost to the City of Live Oak. So site-specific objective is not going to give them any financial relief potentially on nitrate.

CHAIRPERSON HART: Right. So thank you for very directly answering my question. My concern is if we either postpone adoption of the permit and, say, go back and deal with the situation that, if and when we do that, the compliance would still be required at some point in

time.

So the question is do they have to spend $4.2 million now to deal with nitrates or can they -- will they not have to spend that money at all if we do the Basin Plan Amendment. That's really what I'm getting at.

Yes, Diana. NPDES Permit Program Manager.

NPDES PERMIT PROGRAM MANAGER MESSINA: I wanted to add more information here.

During the information study stage of this effort, we would also probably need a dilution study conducted in the downstream water bodies that may not -- that we may not be successful with the Basin Plan Amendment. So when it comes to things like nitrates, if we are successful, for example, in de-designating the MUN use from the constructed ag drain, we can see if there is enough dilution in the downstream water body to where in the NPDES permit we can account for dilution for nitrates and give a higher effluent limitation.

But that in itself is kind of, you know, clarifying the large effort that it's going to take. And we have to look specifically at what will it take to get this discharger into compliance.

CHAIRPERSON HART: I guess the only question I would have for the City of Live Oak is whether it would be able to provide some portion of the funding necessary to

do the Basin Plan Amendment.

MR. LEWIS: As reported, it's a million-dollar study. And talking with Ms. Creedon, we talked about a possibility of SRF loans for those types of studies, and she did not believe that it would qualify for SRF type funding for studies.

So it's a strict cash flow issue. And we're talking about an entity that if we remove our debt service that we have, we talk about just operating expenses, we're talking about a million dollars a year to operate the facility. So in order to a million-dollar study, it is probably not possible.

Now, as far as doing conducting some monitoring, doing some instream monitoring for municipal-type criteria that we're discussing, iron, manganese, those types of things, I'm sure we could be doing some monitoring.

But as far as paying consultants and all of that, it becomes essentially impossible, without significantly raising rates.

CHAIRPERSON HART: Thank you.

Do we have cross-examination for Live Oak?

No, but Pamela is dying to make a clarification.

EXECUTIVE OFFICER CREEDON: Not clarification. It just -- I want to make it clear to the Board we don't -- except for staff, I have no contracting dollars

or moneys for this. So if you are expecting any immediate response, I don't think that's going to remedy the problem here for the Water Board. Because we do need to do the studies and research needed to do a Basin Plan Amendment. And absent any funding, I'm not going to be able to meet any charge by the Board, because I don't have it.

And I don't control the purse strings. We can certainly ask State Board to give us money, but that's up to the State Board. And they're strapped for cash right now, too. So I just want to point that out to the Board. Because I know you've made comments that we as the Board need to fix it, but it takes money to fix things.

CHAIRPERSON HART: Okay. I don't see a representative of CSPA here. So there is no testimony from CSPA.

I do have one additional card, Debbie Webster from CVCWA.

MS. WEBSTER: Thank you again. Debbie Webster, Executive Officer for the Central Valley Clean Water Association.

I do appreciate the discussion that is going on with this and really appreciate that the Board is seeing that this course of action is tying the hands and creating an impossible situation that we don't want to go into.

You know, we stick with the position to the

extent that, you know, that you do have the option to not do MUN. Ms. Dunham suggested yes, designating it is a conservative action. We think you do have options.

Regarding CV Salts, I'll address that issue. Yes, CVCWA is talking with the other stakeholders in CV Salts about putting these as test case. Putting them up towards the front of what might be a de-designation process. But we're all in the money crutch situation. And so it's a yes, but it is going to need to be a corroborative effluent.

On the second thing, the City suggested the potentially not adopting the permit. And I know there is pressures to adopt permits from EPA and keep them on a schedule. Yet, at the same time, as I mentioned earlier is that the second this goes into the permit, there is compliance issues and the time clock starts. And whether you're on a SIP and CTR stuff, those expire. They have to be out of permit compliance option.

But basically, ten years is the most. And, you know, we talked about three-and-a half months. I think it is optimistic. But we need to be moving forward.

I ask that you get behind our small agencies and look for options out there. Be creative. Because this is a huge economic burden to them. And we from CVCWA will look at ways that we can help the process. We certainly

also don't have the funds, because we get our funds from public agencies, on carrying it. But to the extent that we can look for cooperative and ways of streamlining things, we will be there and be an active participant. Thank you.

CHAIRPERSON HART: Thank you, Debbie.

Do we have any questions for Debbie?

EXECUTIVE OFFICER CREEDON: Debbie, could you kind of summarize the meeting with CV Salts? Was there any discussion around CV Salts and using some of that resource?

MS. WEBSTER: We started a discussion with the other stakeholders, which includes a lot of agriculture. This has been through the Central Valley Salinity Coalition. And Dave Cory is behind me.

We started the conversation. We have another meeting -- is it next week -- on Thursday. And so part of our lunchtime -- we either meet over the phone or during lunch. But we will spend more time within the Coalition talking about how we might do this and how we might move forward and then also bring it to the Executive Committee of CV Salts. So there's it's not the best streamline, but we're trying to move it forward.

EXECUTIVE OFFICER CREEDON: Then just in terms of this process, Ms. Webster and I and Tess Dunham met with

Rick Rassmusen at the State Board who is the manager over the Basin Planning or standard setting to discuss this. And, you know, based on the discussions with him -- of course, he had nothing in front of him to look at -- he actually expressed that he thought de-designation could possibly happen. But I'm not going to sit there and tell you that's the absolute end result of our efforts. But at least that gave me some hope. I didn't have that much hope before. I didn't think, given some of the other conditions we've gone through with Region 9. But if he's optimistic and we can make that case with him and EPA, it may be possible to de-designate that water body.

CHAIRPERSON HART: Thank you. Thanks, Debbie.

David Cory.

MR. CORY: David Cory representing the San Joaquin Valley Drainage Authority.

I mean, from my perspective, I would support in the CV Salts process putting Live Oak on a fast track and trying to figure out how we could use them as a template to figure out how we can address some of these broader issues. So we will look at that and hopefully we can get some remedy on that.

EXECUTIVE OFFICER CREEDON: I actually think we're trying to do more than just Live Oak.

MR. CORY: But Live Oak and that -- yeah. Again,

she clarifies very well.

EXECUTIVE OFFICER CREEDON: According to Diana, I argue.

MR. CORY: Notice I don't argue back. Well, sometimes I do.

I kind of want to address a broader issue here, which I think it's easy for me to speak to it sitting here and much more difficult for you folks sitting up there on the Board making the big bucks to deal with these broad issues.

But when I look at this from -- I don't really have a dog in this fight in Live Oak in the long run. I Certainly do with the issue. But in this particular permit, I live through Live Oak from time to time. I don't utilize their wastewater treatment facility ever, I don't think. But I really sort of an innocent bystander here.

BOARD MEMBER LONGLEY: The graphic there is just too much.

MR. CORY: I just couldn't pass it up.

My concern is that you sort of conflicting rules and regulations from the State, prior acts from the Regional Board, prior acts from the State Board, Federal Clean Water Act, State laws, and then you have this basic tenant of the Porter-Cologne of being reasonable and this

reasonableness concept which we talked about earlier in some of the staff presentations of this is sort of the overlying idea.

And you're sort of caught between a rock and a hard place. You're going to either -- at least according to what staff is saying -- comply with the rules and the regulations and the laws and what you're required to do, but you're going to fly in the face of the overall tenant of implementing reasonable regulations that actually improve water quality.

And when you're balancing those two, I don't know how you make that decision. I would hope that you could go toward the overarching concept of reasonableness and addressing real water quality problems. I mean, when you go the other way and sort of stick to the letter of law and don't basically say, "Look, this is broken. We have to fix it." It undermines I think the credibility of the Board and it deflates those folks who are being regulated and makes us feel defeated that we can't -- there is no reason in this thing. And it makes it -- just makes it hard to sort of do my job, which is trying to facilitate folks who are just being regulated that, look, we can address water quality in a reasonable way. And I don't know how you balance that, but I just encourage you to balance toward the reasonableness concept.

CHAIRPERSON HART: Thank you, Dan.

Does anyone have comments or questions for David?

Seeing none, CSPA is not present. Do we have a closing statement by Live Oak?

MR. LEWIS: I guess just in closing might be just to strongly consider just not adopting the permit. Of course, there's certain risk associated with that for the city. Because this would have resolved a lot of the current MMP issues we have. But currently all of the MPPs are being applied to our $20 million project. So as long as that continues, we're investing those funds into the project. But I would strongly encourage you just to not adopt the permit.

CHAIRPERSON HART: Thank you.

Do we have a closing statement by staff?

NPDES PERMIT PROGRAM MANAGER MESSINA: Thank you.

I think with several of these issues I have to put my program manager hat on. And I'll address Mr. Lewis's recommendation when it comes to not adopting a permit.

David Coup and I did have that conversation, and I believe legally you have that avenue. You do not have to adopt this permit. We can keep the existing 2005 permit in place. We will need to do -- re-look at the CDO that is existing, and we're proposing amendments, and just

identify the amendments that pertain to the existing permit. So you do have that option.

CHAIRPERSON HART: And they are spending $20 million on a new plant.

NPDES PERMIT PROGRAM MANAGER MESSINA: Correct. To meet the requirements of the existing permit.

CHAIRPERSON HART: Correct.

NPDES PERMIT PROGRAM MANAGER MESSINA: Correct. Now, how long you allow them to discharge on the existing permit will be your decision. However, we do -- our work in the NPDES program is basically to get these permits off the backlog lists. So if you don't adopt this permit -- and I don't know what your choice will be for other similar type permits -- those permits will remain on the backlog list. I'd like to kind of just let --

CHAIRPERSON HART: And perhaps incentive for U.S. EPA.

NPDES PERMIT PROGRAM MANAGER MESSINA: Very good. Smart lady.

EXECUTIVE OFFICER CREEDON: Or the courts if CSPA sues us for not adopting it.

NPDES PERMIT PROGRAM MANAGER MESSINA: In the last couple years, this region has lost 25 staff all together, all three offices. And we are under a hiring freeze.

I understand where the City of Live Oak is coming from in wanting to have our staff conduct this work. But if you can understand that even with the work that we had a permit writer do for the City of Colusa, that equates to like one permit renewal that did not come to you.

And so with more Basin Planning work that either falls within the staff of the NPDES program or a Basin Planning staff, it will bump other priority work. And so we just need to make sure that you understand that.

We accept the city's offer to conduct monitoring. But I do not want it to be overlooked that we need a dilution study on downstream water bodies in order to get them into full compliance with the requirements in the permit, especially the permit that we're proposing.

So with that, I believe we fulfilled your request to bring forward what options you have. We still believe this permit must protect the municipal use for these receiving waters.

And at this time, I just stand behind David's recommendation that you adopt this permit. It would be with all the late revisions and late, late revisions from the February Board meeting and this Board meeting. And it would include the late, late revision David Coup had brought forth on page 3 of the late revisions. David's about to speak. No? He looked like he was.

STAFF COUNSEL COUPE: Not yet.

CHAIRPERSON HART: He's working up to it.

NPDES PERMIT PROGRAM MANAGER MESSINA: So that concludes our staff recommendations. Thank you.

CHAIRPERSON HART: Thank you, Diana.

Do we have any questions for Diana right now? No. Pamela or David?

EXECUTIVE OFFICER CREEDON: I don't know what he needs to talk about. He just gets antsy like me.

In terms of a recommendation, obviously, I'm going to recommend adoption of the permit, because it contains the time schedules that will allow us to move forward with the work the Board wants us to do. It's very clear the Board wants us to move forward with looking at Basin Plan options to provide relief and to provide the reasonableness that's the charge of the Board, as well as the fact that the Board is charged with implementing -- ensuring that all orders are compliant with the Basin Plan.

And I can't undo the Basin Plan without a Basin Plan Amendment. We don't have CSPA here, but I'm certain they'll petition this permit to the Board. And I'm certain even if the State Board agrees -- but even the inaction of this Board to adopt this order is a petitionable item that can be pursued. And the State

Board could remand it back, demanding that we adopt the order. So it's not a given just because you don't act today we're not going to be back here in a couple of months bringing the permit back because of an inaction -- a petition by CSPA for inaction on the part of this Board.

I mean, the staff, we're not in general disagreement that we need to look at this water body further. And we're not in disagreement that possibly some relief can be provided through a Basin Plan Amendment. But we need to start doing that. In the mean time, we have this permit that's before you that's legally correct and implements the Basin Plan as it's written today and that the Board is obligated to implement by its charge.

So I really ask and recommend the Board adopt this order with all the recommended late revisions with a direction to us to make it clear to the discharger and everyone to immediately begin processing and working towards Basin Plan Amendment, whether it's through CV Salts or other mechanisms, if there is going to be a delay through the using CV Salts as the mechanism to obtain the Basin Plan Amendment in a timely manner.

CHAIRPERSON HART: Thank you, Pamela.

Lyle.

BOARD MEMBER HOAG: I've been reminded properly several times that I don't have the background and

involvement in these issues to be able to judge some of the questions that have been raised or to have the insight into what's happening in the foreseeable future. And that would cause me to abstain from this proposed action.

But I'm wondering if it wouldn't be more constructive and more better recognition of the ongoing work and the appellate court decision and all to simply continue this item.

So let me ask staff or legal counsel, what's the down side of a motion by the Board to continue the item and simply ask for status report back before the end of this calendar year, for example?

STAFF COUNSEL COUPE: I guess there are a couple of outstanding issues associated with that course of action that, quite frankly, I don't have a very good answer to.

Number one, we don't have any sense of when the appellate court is going to take up the issues concerning Vacaville. I think as I mentioned at two Board meetings ago that the briefing had very recently been completed. But we don't have any schedule from the appellate court concerning when it's specifically going to take up the case for oral argument. So that leaves us a bit in limbo.

As it pertains to continuing the item, certainly the Board has the discretion to do that. But I think I

have to agree with the staff recommendation and the additional comments that Pamela made that, you know, the Board in the Vacaville decision -- I was back in 2002 but I think as alluded to by Chair Hart, the Board had a lot of exactly the same concerns at the Regional Board level in applying the municipal use in the context of that permit proceeding. They went ahead and did it anyway. And despite the fact that State Board came back and said you guys need to look into doing a Basin Plan Amendment and we're going to provide you some resources to do that, and in fact, we're going to issue a stay of the limits in the permit in order to allow you to pursue that course of action.

The bottom line is the State Board held that it was legally appropriate for the Board to apply the MUN use designation. And I can't underscore that point enough as a basis for moving forward today and going ahead and adopting a permit with the late revisions.

On the flip side, you know, Diana is exactly right. Certainly, the Board always has the discretion to decide that it chooses that it doesn't want to take a particular action in this particular case. But as your counsel, it's probably going to be very difficult for me to ever make a recommendation to the Board not to adopt a permit in that context.

EXECUTIVE OFFICER CREEDON: If I could just point out, David makes a good point. Moving forward, even though the Board adopts the order, which I'm sure then would be petitioned by the City of Live Oak to the State Board, the outcome maybe could be the same as in the Vacaville case and possibly could result in resources coming from the State Board to help us move forward with the Basin Plan Amendment. That's an up side of doing that.

But also the fact that you want immediacy, we need some support and assistance from the community to do this. And what better incentive to get things done quickly by all parties would be to have them on a time schedule with an order that it could have significant detriment to them if they don't help us.

Otherwise, it could be looked at as just a mechanism of extending a permit and avoiding compliance, which I don't think the Board has any legal -- could stand up in front of a judge and say, "We didn't want to do it because we didn't agree with the Basin Plan." It's just in the a legal justification for an action on the part of the Board. And that would be our only real argument is that the Board didn't agree with the Basin Plan as it stands. And I don't know if this Board wants to have that argument in front of either the State Board or the court

that --

CHAIRPERSON HART: I would love to. Actually, I would welcome that. Because our job here as policy makers is to say, you know what? That makes zero common sense. Not an iota of common sense.

And the fact that we are here to not only say you all help us with the science and tell us what we need to do, because there is X limit for this constituent. And you tell us, yes, you have to do that under the Clean Water Act, under the CTR, all these other things. And David is very helpful with saying here's what the legal interpretation is. And our job is to say that's completely whacked.

BOARD MEMBER LONGLEY: Chair Hart, I have to disagree with you. I would feel good to do that. But I think the down side of that, it would hurt this Board. It would hurt this Board's credibility, certainly in the face of EPA. And the long-term implications of this Board would not be good.

EXECUTIVE OFFICER CREEDON: We actually have actually adopted orders with letters with your direction to us to write letters to the State Board asking to allow a stay or other things where the Board is making a statement they're doing this, but not -- within agreement it needs to happen. And we've done that before to support

the fact that we need time to make changes to the order.

I think there is other ways to go about that to show you're questioning the reasonableness of what a previous Board action had done to present-day conditions. But that doesn't negate the fact that we have a previous Board that took an action that we're now paying the consequences for. And it's still a legally enforceable document, whether we agree with it or not.

So I just it -- and it does come to the ability -- and you certainly have the discretion to do whatever you decide to do. There is down sides to many ways that you move forward.

CHAIRPERSON HART: I think it would be one thing if there was no science behind any of this. There was no -- if there was a really good rationale for moving forward with it. But this appears to me a purely technical error on our part in terms of not exempting out these ag drains. And I just cannot in good conscious go forward.

And I have a much greater understanding than I did when I dealt with the Vacaville issue, because I was a very new Board member. And I have a whole new concept of how this works.

And if we have an opportunity as a Board to indicate to any other agencies, whether it be U.S. EPA or

the State Board or the Legislature, that these are serious errors that conflict with science and make zero sense, I believe it is -- I firmly believe it is our job to do that.

EXECUTIVE OFFICER CREEDON: I don't know if we can say we have the science to make that determination yet. It may not seem reasonable by appearances, but in terms of what we're finding with Colusa and others, those water body that don't look like much actually are meeting standards. So we do have federal requirements to comply with.

BOARD MEMBER ODENWELLER: And to segue off of what you just said, Pamela, I'll remind everybody the whole discussion has been premised on a finding that there is no use of the water body in the category that's been designated.

Therefore, we're going to proceed forward and change the designation. We haven't even talked about how we establish and what it's going to take to prove there is no existing use of a standing water body so we can go on and look at the rest of this.

CHAIRPERSON HART: Which, to me, is another reason why I don't know if we have enough information before us. I mean, shouldn't that be a question -- information that's provided to us before we make a

determination on the permit?

EXECUTIVE OFFICER CREEDON: Well, what --

CHAIRPERSON HART: This is a city of 8,000 people who have a medium income of $32,000 and just spent $20 million on a wastewater treatment plant.

EXECUTIVE OFFICER CREEDON: I can understand your anger. I don't know how to characterize the tone.

But it's not an issue -- we're not asking you to do this based on staff's finding that it is MUN. We are saying it has to be applied because of this blanket application of drinking water sources in our Basin Plan has made it clear -- the Vacaville order from State Board has made it clear because the same issues by the dischargers were brought up. At the time that we can use these exceptions, we don't need a Basin Plan Amendment, and State Board said no, the Regional Board acted appropriately. They had to apply them. And a Basin Plan Amendment is needed to remove it.

And so it's not because we've made a finding that it meets those. We still have to do the work and the science to say it doesn't apply. We haven't done that work. We cannot just arbitrarily remove it without doing the work to remove it. It should have been applied all these years in their permits. It wasn't. And the error is being corrected now.

It's unfortunate that it wasn't done years ago. I can't change that. I can't undo the history. But now that it's noted and acknowledged, we can't continue on with the error.

CHAIRPERSON HART: And I understand that. But then I think we should fix it. It's our job to fix it.

EXECUTIVE OFFICER CREEDON: There is no argument there.

BOARD MEMBER ODENWELLER: Just for the record, I think there is another issue that's going to come up, which is whether it's a channel that was constructed for the transfer of the effluent or whether it's a natural feature.

And I pointed out if you go back to the historical GS topo maps, the blue line rule, there are tremendous body of waters that are blue lines on the 1860 quads that are today encompassed within concrete. And how are we going to deal with those?

EXECUTIVE OFFICER CREEDON: You're right. That's all part of a much-needed work this needs to be done. And a lot of that work will be done currently in CV Salts or as a plan within CV Salts to address.

BOARD MEMBER ODENWELLER: Delta Islands are a particular problem in that regard, and it's something that's facing us as we go down the road.

CHAIRPERSON HART: Are there other questions or comments right now for staff?

STAFF COUNSEL COUPE: Madam Chair, I just want to add one additional comment for context.

I know there's been a lot of frustration on behalf of Board members as it pertains to the application of the Drinking Water Policy in this context.

Again, I wasn't around back in 1988 or '89 when those provisions were specifically incorporated into the Basin Plan.

But I think it would at least be fair to say that one of the factors that probably went into the calculous by the Board at that time to incorporate that policy the way it did is quite frankly -- they probably felt that that kind of blanket designation was certainly more in the spirit of compliance with the Federal Clean Water Act than to provide no protection or arguably no protection for those water bodies whatsoever.

CHAIRPERSON HART: But I haven't seen that -- any intimation of that in the documentation. So I can't say.

EXECUTIVE OFFICER CREEDON: No. What was it? Prop. 65 compliance. And the intent was that the Regional Boards would go through the effort needed to de-designate. For whatever reason, we didn't do it. I'm sorry, but we didn't do it.

CHAIRPERSON HART: You weren't here.

EXECUTIVE OFFICER CREEDON: That doesn't mean we continue now that the error has been caught and we're applying it as we're supposed to do, we do need to do the fixing. But that doesn't fix the need to implement it through our permits until the Basin Plan is amended appropriately.

CHAIRPERSON HART: Okay. So I think if we don't have any other Board member questions or comments, I'm going to close the hearing. And I'll entertain deliberation and/or a motion.

BOARD MEMBER LONGLEY: Well, Madam Chair, I think that staff has pointed out that they will work diligently towards I think the best path to resolve this with coming up with the particular way to proceed. Certainly, CV Salts is on a course also. We're heard from David Cory, who's leader within CV Salts, that they're dedicated towards going that direction.

And I think to not adopt this permit today in the end will have some consequences that are more dyer than certainly adopting it. I recognize the shortcomings, but I think the better direction to go is to adopt the permit.

With that, I move we adopt the permit with all the late and late, late revisions and with the assurances of the Executive Officer that this issue will continue to

be pursued and heard testimony and heard testimony of staff of their direction that they plan to go.

STAFF COUNSEL COUPE: Dr. Longley, with inclusion of the amended Cease and Desist Order as well?

BOARD MEMBER LONGLEY: Definitely. I would include your late comments.

CHAIRPERSON HART: Is there a second?

BOARD MEMBER ODENWELLER: I second.

CHAIRPERSON HART: Okay. For the NPDES permit, it's a voice vote.

All those in favor say aye.

(Ayes)

CHAIRPERSON HART: Any -- yes, Lyle.

BOARD MEMBER HOAG: I think the operating rules are such that I can offer an internal motion to this motion; right?

CHAIRPERSON HART: An internal -- an amendment? Yes.

BOARD MEMBER HOAG: I would offer an amendment to the motion which directs the continuation of this item and directs staff to return to the Board with the status report on all the related things we've been discussing later than the end of this calendar year and periodically thereafter and continues the action on Dr. Longley's motion to some future time at the discretion of the Board.

BOARD MEMBER LONGLEY: Madam Chair, I'd like parliamentary decision. I could be wrong, but I think that the motion would have to be defeated and then the continuation motion made.

CHAIRPERSON HART: I think you're separately offering that we continue this hearing and a vote on the permit?

BOARD MEMBER HOAG: And the vote, yes. Continue both.

CHAIRPERSON HART: That's a different -- I think that's a different motion, because Carl is suggesting now that we vote to approve the NPDES permit. So if you don't want to do that and you want to offer a separate motion, we have to first vote on Carl's motion. And then you would -- if his motion fails, then you would be able to offer your motion.

BOARD MEMBER HOAG: Okay. Why can't the motion be amended?

CHAIRPERSON HART: You can't amended it to be contrary to what he's --

BOARD MEMBER HOAG: It's a continuation. It's not contrary.

CHAIRPERSON HART: You want to vote on the permit and say yes on the permit, but then continue it?

BOARD MEMBER HOAG: No. I want --

CHAIRPERSON HART: You want staff to come back?

BOARD MEMBER HOAG: I'll take your advise on what the rules are. It's been my experience that you can amend a motion within the motion before actually --

BOARD MEMBER LONGLEY: Let's ask David for an opinion.

BOARD MEMBER HOAG: An amendment which calls for --

STAFF COUNSEL COUPE: Madam Chair, the way I understand the amendment that was being provided that it's, in fact, contrary to the motion that Dr. Longley made.

So I don't -- the way I'm understanding the motion or the proposed amendment made by Board Member Hoag, it sounds like it's a separate motion because he's asking for the Board to continue the matter instead of to adopt the proposed staff recommendation.

BOARD MEMBER HOAG: Right.

CHAIRPERSON HART: Thank you. Okay.

So is your advise to Member Hoag, David, that he offer up a separate -- David? So I don't know if you're double-checking or not. Is your advise to him that he can only offer his motion if Carl's fails or --

STAFF COUNSEL COUPE: My suggestion is take a vote on Carl's motion. If Carl's motion passes, then the

Board's taken an action. If the motion fails and the Board chooses to take up Mr. Hoag's motion, it may do so at that time.

CHAIRPERSON HART: Okay. So there is no amendment to Carl's motion and Dan's second. It is for the adoption of the NPDES permit. And that is only a voice vote. I will take the call at this time.

BOARD MEMBER HOAG: I have another question.

CHAIRPERSON HART: There is another legal question by Member Hoag.

BOARD MEMBER HOAG: In deciding the outcome of this motion, what is the impact if I abstain versus voting no?

STAFF COUNSEL COUPE: If you abstain, it counts as part of the majority. You will have deemed to have acquiesced in the vote.

STAFF COUNSEL COUPE: Whichever way the majority goes?

CHAIRPERSON HART: Correct.

STAFF COUNSEL COUPE: Correct.

BOARD MEMBER HOAG: If there is a numeric majority. If there is a numeric draw?

CHAIRPERSON HART: I think it passes.

STAFF COUNSEL COUPE: Say two Board members vote yes and two Board members vote no and you abstain, you go

towards the -- I believe the motion passes.

CHAIRPERSON HART: Correct.

BOARD MEMBER HOAG: Well, I had just -- sorry about this, folks.

I had earlier explained briefly why my inclination was to abstain because of the lack of background and knowledge. But given that interpretation, whether I agree with it or not, that causes me to change and to vote no, which I'll do in due course here.

BOARD MEMBER LONGLEY: Madam Chair, this is normally a voice vote -- I ask for a roll call vote.

STAFF COUNSEL COUPE: And again, because of the associated Cease and Desist Order, if we get a no vote on the Cease and Desist Order, then the vote -- obviously, the Board will have approved the permit but not the accompanying Cease and Desist Order.

CHAIRPERSON HART: Right. You can vote no on the permit and say yes on the Cease and Desist Order.

STAFF COUNSEL COUPE: Absolutely.

EXECUTIVE OFFICER CREEDON: You're taking separate votes for each item.

CHAIRPERSON HART: Yes, we are going to take separate votes for each item, but we are going to take roll call votes for the NPDES, even though it's not required so everyone's vote is very clear.

So Kiran, if you would do that, please. Take a roll call vote on the NPDES permit.

BOARD CLERK LANFRANCHI: Dr. Longley?

BOARD MEMBER LONGLEY: Yes.

BOARD CLERK LANFRANCHI: Mr. Odenweller?

BOARD MEMBER ODENWELLER: Yes.

BOARD CLERK LANFRANCHI: Mr. Hoag?

BOARD MEMBER HOAG: No.

BOARD CLERK LANFRANCHI: Ms. Meraz?

BOARD MEMBER MERAZ: Yes.

BOARD CLERK LANFRANCHI: Ms. Hart?

CHAIRPERSON HART: No.

The motion passes. This is a roll call vote for the Cease and Desist Order. And as Pamela indicated, unless we all vote yes, the Cease and Desist Order is not adopted.

So Kiran, would you take the roll call vote?

BOARD CLERK LANFRANCHI: Dr. Longley?

BOARD MEMBER LONGLEY: Yes.

BOARD CLERK LANFRANCHI: Mr. Odenweller?

BOARD MEMBER ODENWELLER: Yes.

BOARD CLERK LANFRANCHI: Mr. Hoag?

BOARD MEMBER HOAG: Yes.

BOARD CLERK LANFRANCHI: Ms. Meraz?

BOARD MEMBER MERAZ: Yes.

BOARD CLERK LANFRANCHI: Ms. Hart?

CHAIRPERSON HART: Yes.

BOARD CLERK LANFRANCHI: Motion carries.

CHAIRPERSON HART: Thank you.

That concludes Item 20. We will now break for lunch.

STAFF COUNSEL COUPE: Really quickly, closed session announcement, page 4 of the agenda announcement, Item E, the El Dorado Irrigation District NPDES permit litigation.

CHAIRPERSON HART: Thank you. We will return at 1:15.

(Whereupon a lunch recess was taken at 12:14 p.m.)

CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of July, 2011.

_____

TIFFANY C. KRAFT, CSR
Certified Shorthand Reporter
License No. 12277

SUPERIOR COURT OF CALIFORNIA

COUNTY OF SACRAMENTO

CITY OF MANTECA,

Petitioner and Plaintiff,

v.

STATE WATER RESOURCES CONTROL BOARD,

Respondent and Defendant.

Case No. 34-2010-80000492-CU-WM-GDS

RULING ON SUBMITTED MATTER: ORDER GRANTING IN PART AND DENYING IN PART PETITIONER CITY OF MANTECA'S PETITION FOR WRIT OF MANDATE AND REQUEST FOR STAY

On March 26, 2010, Petitioner and Plaintiff City of Manteca ("Manteca") filed its Petition for Writ of Mandate and Request for Stay ("Petition") pursuant to Water Code §§ 13321(c) and 13330 and Civil Procedure Code § 1094.5. Manteca challenges Respondent and Defendant State Water Resources Control Board's (the "State Board") denial of Manteca's November 9, 2009 Stay Request pursuant to Section 2053 of Title 27 of the California Code of Regulations ("CCR"). Manteca seeks a stay of a certain effluent limitation requirement and related time schedule order imposed on Manteca by the Regional Water Quality Control Board, Central Valley Region ("Regional Board"). [1]

On August 12, 2010, the Court issued a Tentative Ruling ordering the parties to appear before the Court on August 13, 2010, to address certain issues related to the merits of Manteca's

[1] The Regional Board, originally a party to the action, was dismissed from the action on May 26, 2010.

EXHIBIT 3

Petition. After oral argument, at which both parties appeared, the Court took the matter under submission. The Court, having heard oral argument, read and considered the written argument of all parties, and read and considered the documents and pleadings in the above-entitled action, now rules on the Manteca's Petition as follows:

I. FACTUAL AND PROCEDURAL BACKGROUND

On October 8, 2009, the Regional Board adopted *Waste Discharge Requirements Order No. R5-2009-0095, NPDES Permit No. CA0081558, and Time Schedule Order for City of Manteca Wastewater Quality Control Facility, San Joaquin County*, ("WDRs") to govern discharges from the Manteca Wastewater Quality Control Facility ("WQCF"). (Administrative Record ("AR") at 41-232.) The WDRs impose an effluent limitation requirement of 700 µmhos/cm EC to control salinity in the WQCF's discharge. (AR at 46, 49.) The time schedule order ("TSO") requires Manteca to achieve the 700 µmhos/cm EC effluent limitation requirement in accordance with the following deadlines:

Task:	Date Due:
Submit Method of Compliance Workplan/Schedule	Within 6 months of adoption of this Order
Submit and implement a Pollution Prevention Plan (PPP) pursuant to CWC section 13263.3	Within 6 months of adoption of this Order
Annual Progress Reports, which must "detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date")	1 December, annually, after approval of workplan until final compliance
Full compliance with the effluent limitations for electrical conductivity	1 October 2014

(AR at 49.)

Manteca alleges that in order to comply with the WDRs, it must plan, design, and install microfiltration and reverse osmosis facilities at a substantial cost to Manteca. (Memorandum at

2:12-14.) More specifically, Manteca alleges that compliance with the WDRs would cost approximately $38.4 million for initial construction and an additional cost of approximately $3.7 million for capital improvements and operation and maintenance, exclusive of costs Manteca will have to incur to properly dispose of the 0.5 mgd of saline brine the new treatment facilities would generate. (Memorandum at 2:14-19; 9:17-19; AR at 409 (Declaration of Phil Govea in Support of Manteca's Stay Request ("Govea Decl.") at ¶ 9).) Installation of the new treatment facilities would likely require preparation and public review of an environmental impact report pursuant to the California Environmental Quality Act ("CEQA"). (Memorandum at 2:19-2; AR at 409 (Govea Decl. at ¶ 11.) Manteca estimates the planning, pre-design, and CEQA-compliance costs will approach $1.6 million. (Memorandum at 9:20-22; AR at 410 (Govea Decl. at ¶ 11).) Once expended, these costs are irretrievable. (AR at 410 (Govea Decl. at ¶ 11).) Compliance with the WDRs will "essentially double the sewer rates" paid by Manteca residents. (AR at 362 (Transcript at 35:3-4).)

Prior to the issuance of the WDRs, Manteca was complying with Regional Board Order No. R5-2004-0028, as modified by State Board Order No. WQ 2005-0005. (AR at 234-345; see, *e.g.*, Declaration of Roberta L. Larson in Support of Petition for Writ of Mandate and Request for Stay ("Larson Decl.") at Exh. "A" (*In the Matter of the Petition of City of Manteca* (Mar. 16, 2005), Order WQ 2005-0005).) In State Board Order No. WQ 2005-0005, the State Board found the limitation of 1,000 µmhos/cm EC appropriate to control salinity in the WQCF's discharge. (Memorandum at 10-7-9; Larson Decl. at Exh. "A" (*In the Matter of the Petition of City of Manteca* (Mar. 16, 2005), Order WQ 2005-0005 at 14, 22.) In response to these orders, Manteca upgraded the WQCF and pursued alternative supplies of water, resulting in a reduction of salinity in the WQCF's effluent of nearly 30%. (Memorandum at 4:1-9, 10:5-17; AR at 9; *see also* AR at 182 (WDRs, Exh. "F" (Fact Sheet) at F-50).)

On November 9, 2009, Manteca filed a Petition for Review and Statement of Points Authorities in Support thereof ("Petition for Review") with the State Board challenging, in relevant part, the 700 µmhos/cm EC effluent limitation requirement and the corresponding TSO imposed by the Regional Board. (*See*, *e.g.*, AR at 1-40.) The State Board acknowledged receipt

of Manteca's Petition for Review in a letter dated November 10, 2010. (AR at 423-426.)

In connection with its Petition for Review, Manteca filed a Stay Request pursuant to Water Code § 13321 and 23 CCR § 2053. (*See, e.g.*, AR at 31-40.) Manteca sought a stay of the 700 µmhos/cm EC effluent limitation requirement and the TSO pending the State Board's resolution of Manteca's Petition for Review. (AR at 31.) In its Stay Request, Manteca argued each of the three preconditions for a stay pursuant to 23 CCR § 2053: (1) the Regional Board's adoption of the WDRs raised substantial questions of fact and law; (2) Manteca and the public interest would suffer substantial harm of the State Board did not grant Manteca's Stay Request; and (3) neither interest persons nor the public interest would suffer substantial harm if the State Board granted Manteca's Stay Request.

Also on November 9, 2009, Manteca wrote to the State Board requesting that the parties enter into a stipulation staying the TSO and the 700 µmhos/cm EC effluent limitation requirement challenged by Manteca pursuant to its Petition for Review. (AR at 417-19.) In a letter dated December 14, 2009, the State Board declined Manteca's offer to enter into a stipulation, stating it was inappropriate for the State Board, as the adjudicating body, to enter into such a stipulation. Instead, Manteca should propose a similar stipulation to the interested parties for consideration by the State Board. (AR at 431-34.)

In a letter dated February 26, 2009, the State Board notified Manteca that the State Board had denied Manteca's Stay Request. (AR at 447-49.) Enclosed was a February 18, 2010 memorandum outlining the basis for the State Board's denial ("Stay Denial"). (AR at 457-61.) In the Stay Denial, the State Board reiterated the legal standard applicable to stay requests pursuant to 23 CCR § 2053:

> The State [] Board has recognized the extraordinary nature of a stay remedy and places a heavy burden on a petitioner seeking a stay. [Footnote omitted.] The State [] Board's regulations provide that a stay may be granted only if a petitioner alleges facts and produces proof of *all* of the following:
>
> (1) substantial harm to Petitioner or to the public interest if a stay is not granted;
> (2) a lack of substantial harm to other interested persons and to the public interest is a stay is granted; and
> (3) substantial questions of fact or law regarding the disputed action.

(AR at 458-59 (footnote omitted).)

The Stay Denial was predicated only on Manteca's perceived failure to establish the substantial harm Manteca would suffer if its Stay Request was denied. (AR at 459-460.) The State Board's finding in this regard was based on three conclusions. First, the State Board determined that "mere expense, even if relatively substantial, does not justify the granting of a stay." (AR at 459 (footnote omitted).) "In this instance, the threatened harm consists entirely in planning expenditures while the petition is pending, and a speculative claim of future penalties if Petitioner fails to meet the five-year deadline." (AR at 459.)

Second, the State Board found Manteca's claim of harm deficient in light of recent precedential orders issued by the State Board holding that similar permits should contain the same effluent limitations that Manteca challenged. (AR at 459.) In those precedential orders, the State Board "discussed several practical ways of meeting the limitations or of providing a basis for changing them." (AR at 459.)

Third, the State Board concluded that Manteca misunderstood the nature of a stay pursuant to 23 CCR § 2053. (AR at 459-460.) According to the State Board, "[a] stay does not extend the deadlines in permits or even in a TSO; it removes the necessity to comply with given requirements during the period of the stay." (AR at 460.) Accordingly, "[o]nce the petition is reviewed, if the underlying order is upheld, the stay is dissolved and the requirements remain in place." (AR at 460.) Thus, Manteca would be required to comply with any and all deadlines that were previously in place prior to implementation of the stay. (*See also* AR at 3 ("A stay is not designed to apply beyond the determination of the petition itself . . .").)

With respect to the other two requirements, the State Board declined to address the merits of Manteca's arguments in detail because "Petitioner has failed to satisfy the first stay requirement . . . ."[2] (AR at 460.)

Subsequently, Manteca filed its Petition seeking a peremptory writ of mandate directing

[2] With respect to the third requirement – substantial questions of law or fact – the State Board also stated: "However, as discussed above, the State [] Board has considered similar legal arguments in two recent, precedential conclusions and rejected arguments similar to Petitioner's." (AR at 460 (Stay Denial at 4).)

the State Board to grant Manteca's Stay Request and/or a Court order staying the 700 µmhos/cm EC effluent limitation and the TSO pending the State Board's resolution of Manteca's Petition for Review.

II. DISCUSSION

A. The State Board abused its discretion in denying Manteca's Stay Request.

Pursuant to Code of Civil Procedure § 1094.5, a court's review "extend[s] to the questions whether the respondent has proceeded without, or in excess of jurisdiction; whether there was a fair trial; and whether there was any prejudicial abuse of discretion." (*Duncan v. Dept. of Personnel Admin.* (2000) 77 Cal.App.4th 1166, 1173; Civ. Proc. Code § 1094.5(b).) Abuse of discretion is established if the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence." (*Duncan, supra*, 77 Cal.App.4th at 1173.)

The parties disagree regarding the standard of review applicable to the Court's review of the State Board's Stay Denial. While Manteca contends the independent judgment standard of review applies, the State Board contends the substantial evidence standard of review applies.

Numerous factors lend confusion to the landscape related to the State Board's authority to stay a regional board's waste discharge requirements. For instance, the titles of both Water Code §§ 13320 and 13321 seemingly authorize the State Board to act on Manteca's Stay Request. Water Code § 13320 is titled "Review by state board; Evidence; Findings; Submission of disagreement between regional boards; Action on request for stay." Water Code § 13321 is titled "Stay of decision and order of regional or state board; Duration on petition to court."

Additionally, the language of both Water Code §§ 13320 and 13321 appear to authorize the State Board to act on Manteca's Stay Request. Water Code §13320(e) provides:

> If a petition for state board review of a regional board action on waste discharge requirements includes a request for a stay of the waste discharge requirements, the state board shall act on the requested stay portion of the petition within 60 days of accepting the petition. The board may order any stay to be in effect from the effective date of the waste discharge requirements.

///

Water Code § 13321(a) provides:

> In the case of a review by the state board under Section 13320, the state board, upon notice and hearing, if a hearing is requested, may stay in whole or in part the effect of the decision and order of a regional board or of the state board.

Finally, 23 CCR § 2053, outlining the requirements for the issuance of a stay by the State Board, cites both Water Code §§ 13320 and 13321 as the authorities for the regulation.

Despite this confusion, the Court agrees with the State Board that the substantial evidence standard of review appropriately governs this Court's review of the State Board's Stay Denial.

The primary purpose of Water Code § 13320 relates to the State Board's authorization to review "any action or failure to act by a regional board" pursuant to enumerated sections and /or chapters of the Water Code.[3] In reviewing a regional board's action, the State Board:

> [M]ay find that the action of the regional board, or the failure of the regional board to act, was appropriate and proper. Upon finding that the action of the regional board, or failure of the regional board to act, was inappropriate or improper, the state board may direct the appropriate action be taken by the regional board, refer the matter to any other state agency having jurisdiction, take the appropriate action itself, or take any combination of those actions. In taking any such action, the state board is vested with all of the powers of the regional boards under this division.

(Water Code § 13320(c).) Although Water Code § 13320(e) relates to a stay of a regional board's waste discharge requirements, the Court agrees with the State Board that this subsection merely provides for the timing of the State Board's stay decision and the permissible effective date of the State Board's decision if a stay is granted. The true authority of the State Board to rule on a stay request lies in Water Code § 13321(a), which expressly provides that the State Board "may stay in whole or in part the effect of the decision and order of a regional board."[4] (*See City of Huntington Beach v. Bd. of Admin.* (1992) 4 Cal.4th 462, 468 ("In this regard, all parts of a statute

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[3] These sections and/or chapters include Water Code § 13225(c) (authorizing a regional board to "require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water"); Article 4 of Chapter 4 (relating to a regional board's authority with respect to waste discharge requirements); Chapter 5 (administrative enforcement and remedies by regional boards); Chapter 5.5 (compliance with the Federal Water Pollution Control Act); Chapter 5.9 (the Storm Water Enforcement Act of 1998); and Chapter 7 (the Water Recycling Law).

[4] The argument now set forth by Manteca in connection with its Petition appears to contradict the position set forth in its Stay Request. Although the introductory paragraph indicates that Manteca submitted its Stay Request "[p]ursuant to Water Code sections 13320 and 13321 (Stay Request at 3:2), Manteca goes on to quote only Water Code § 13321 and 23 CCR § 2053 for the "Standards for Issuance of a Stay" (*id.* at Section B).

should be read together and construed in a manner that gives effect to each, yet does not lead to disharmony with the others") (citation omitted).)

If a petitioning party is unsatisfied with the State Board's decision regarding a regional board's actions, Water Code § 13330 allows that party to file a petition for writ of mandate with the court, requesting that the court review the State Board's decision. (Water Code §§ 13330(a), (b).) Water Code § 13330(d) delineates the standard of review to be employed by the Court in reviewing the State Board's decision and provides in relevant part:

> For purposes of subdivision (c) of Section 1094.5 of the Code of Civil Procedure, the court shall exercise its independent judgment on the evidence in any case involving the judicial review of a decision or order of the state board issued under Section 13320 . . . .

(Water Code § 13320(d).)

Here, there is no evidence that Manteca presented (or was authorized to present) its Stay Request to the Regional Board. Thus, no Regional Board decision regarding Manteca's Stay Request exists for the State Board to review. Instead, Manteca's Stay Request was appropriately presented to the State Board for consideration, which subsequently issued its Stay Denial. In issuing its Stay Denial, the State Board was not reviewing an "action or failure to act by a regional board" in accordance with Water Code § 13320 and, accordingly, Manteca is not seeking review of a State Board decision or order issued pursuant to Water Code § 13320.

However, regardless of whether the independent judgment or substantial evidence standard of review applies, the Court finds that the State Board abused its discretion in denying Manteca's Stay Request. The State Board's Stay Denial is unsupported by the evidence, thereby constituting an abuse of discretion under both the independent judgment and substantial evidence standards of review. Neither the weight of the evidence nor substantial evidence supports the State Board's Stay Denial.

///

B. Manteca is entitled to a stay of the WDRs and TSO pending the State Board's review of Manteca's Petition for Review.

In order to obtain a stay of the TSO and the 700 µmhos/cm EC effluent limitation requirement pursuant to 23 CCR § 2053, Manteca must establish:

1. Substantial harm to Manteca or to the public interest if a stay is not granted;
2. A lack of substantial harm to other interested persons and to the public interest if a stay is granted; and
3. Substantial questions of fact or law regarding the disputed action.

(23 CCR § 2053(a)(1)-(3).)

As discussed further below, the Court finds that Manteca sustained its burden of demonstrating that it and/or the public interest would suffer substantial harm if its Stay Request is not granted and a lack of substantial harm to other interested persons and to the public interest if a stay is granted. The Court additionally finds that substantial questions or fact or law exist regarding the disputed action.

1. Denial of Manteca's Stay Request results in substantial harm to Manteca and the public interest, including its ratepayer citizens.

The State Board contends that Manteca fails to establish that substantial harm to Manteca or the public interest will result if the stay is not granted because: (1) Manteca failed to establish that reverse osmosis was the only method through which Manteca could achieve compliance with the salinity effluent limitation requirements; and (2) compliance costs, without more, do not constitute substantial harm. (Opposition at 7:11-13:10.)

a. Manteca demonstrates that reverse osmosis is the only feasible alternative available to achieve compliance with the WDRs within five years.

Manteca presented the testimony and declaration of Phil Govea in support of its Stay Request.[5] Mr. Govea declared that "Manteca has no other certain alternative beside [reverse

[5] In support of its Stay Request, Manteca submitted the Declaration of Phil Govea establishing that he is qualified to testify regarding the impact of the WDRs and TSO. (*See, e.g.*, AR at 408-410.) Mr. Govea attested that he is the Deputy Director of Public Works – Utility Engineering for Manteca. Although he had only held the position for over two years as of November 2009, he held other engineering positions with Manteca for ten years prior to his tenure as Deputy Director. Mr. Govea attested that he had personally managed and been responsible for significant

osmosis] to comply with the final effluent limitations of 700 µmhos/cm for EC." (AR at 409 (Govea Decl. at ¶ 10).) In his testimony before the Regional Board, Mr. Govea further explained that in light of previous improvements to the WQCF and actions by Manteca designed to reduce the salinity in the WQCF's effluent,[6] reverse osmosis is the only certain alternative Manteca can implement to achieve the 700 µmhos/cm EC effluent limitation requirement. (AR at 359 (Transcript at 32:6-33:4).) Mr. Govea testified:

> So with that in mind, this – we also are looking at other measures for reducing EC. Unfortunately, there isn't a smoking gun, an industrial discharger, left in our system to regulate, to take more EC out, to achieve the 700 limit. All that is left was the Eckert Industry, and they are no longer in our system. We are in the initial stages of looking at water softener reduction or elimination, but some of our preliminary analysis doesn't show that will be a promising solution.
>
> So we believe that all that is left, really, for us to achieve, consistently achieve, compliance, with an EC limit of 700 is to go to advanced treatment microfiltration and reverse osmosis.

(AR at 360-36 (Transcript at 33:16-34:5).)

Weighing heavily in Manteca's favor are comments by the State Board itself, which concede, contrary to the State Board's Opposition, that reverse osmosis is the only feasible option to achieve compliance with the WDRs. In Order No. WQ 2005-0005, the State Board states: "assuring compliance with the 700 µmhos/cm EC effluent limitation in the City's permit for April through August would probably require construction and operation of a reverse osmosis treatment plant for at least a portion of the City's effluent at a very large cost." (Larsen Decl. at Exh. "A" (*In the Matter of the Petition of City of Manteca* (Mar. 16, 2005), Order No. WQ 2005-0005 at 12).) The State Board more conclusively stated:

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modifications to the Manteca WQCF, was personally involved in reviewing the Report of Waste Discharge for the Manteca WQCF to the Regional Board and more, and directed and oversaw work performed by consultants and staff for activities directly and indirectly related to compliance with the WDRs and TSO.

[6] In its Petition for Review submitted to the State Board, Manteca asserts that, in response to Order No. R5-2004-0028, Manteca already obtained higher quality surface water from the South County Water Supply Program to blend with Manteca's existing groundwater drinking water supply to improve the water supply source; added biological nitrification-denitrification to the secondary treatment process; added a secondary effluent equalization pond, tertiary filters, an ultraviolet light pathogen deactivation system, and recycled water pumping station; and modified the WQCF to separate fully the food-processing wastes from the municipal effluent. (AR at 9.) The Regional Board confirms that Manteca "has replaced a portion of its groundwater supplies with lower salinity surface water from the South San Joaquin Irrigation District" and "removed the food processing wastewater from Eckhart Cold Storage from its waste-stream that is discharged to the San Joaquin River." (AR at 182 (WDRs, Exh. "F" (Fact Sheet) at F-50).)

> The record indicates, however, that compliance with the permit effluent limitation of 700 µmhos/cm EC scheduled to become effective on April 1, 2005, *could not be assured without construction and use of reverse osmosis facilities.* Construction and operation of reverse osmosis facilities to treat discharges from the City's WQCF, prior to implementation of other measures to reduce the salt load in the southern Delta, would not be a reasonable approach.

(Larsen Decl. at Exh. "A" (*In the Matter of the Petition of City of Manteca* (Mar. 16, 2005), Order No. WQ 2005-0005 at 12 (emphasis added)).) As recently as October 2009, the Regional Board confirmed that [t]he facts regarding the need to construct reverse osmosis to meet the 700 µmhos/cm EC standard have not changed."[7] (AR at 182.)

In light of the State Board's own statements regarding the necessity of reverse osmosis to achieve the 700 µmhos/cm EC limit, the State Board's statements regarding other alternatives available to Manteca carry little weight (in addition to being refuted by evidence in the record). This is especially true when one of the State Board's suggested alternatives is non-compliance. Non-compliance is not a credible alternative for Manteca for numerous reasons, the most obvious being that non-compliance does nothing to achieve the 700 µmhos/cm EC limit and directly violates the WDRs and TSO.

b. Substantial harm to Manteca and the public interest will result if Manteca's Stay Request is denied.

The State Board nebulously contends that compliance costs, *without more*, do not constitute substantial harm. However, the State Board fails to provide any information on precisely what "more" a petitioner is required to demonstrate in order to establish substantial harm when exorbitant compliance costs constitute the brunt of the harm suffered by that petitioner. Here, however, the Court finds that Manteca has demonstrated substantial harm in accordance with the standards articulated (albeit somewhat inconsistently) by the State Board in prior decisions.

In *In the Matter of the Petition of International Business Machines*, the State Board

[7] About one month after adoption of the WDRs, the Regional Board acknowledged that "compliance with the 700 µmhos/cm effluent limitation may not be feasible without use of expensive and energy-intensive salt removal technologies." (AR at 429.)

addressed International Business Machines' ("IBM") request for a stay, which was predicated in part on the contention that "IBM will suffer substantial harm if it is required to submit a technical report regarding a continuously pumping monitoring well and groundwater reuse plan for the well, by December 15, 1988." (*In the Matter of the Petition of International Business Machines* (Dec. 15, 1988), Order No. WQ 88-15 at 4.) IBM disputed the necessity and technical effectiveness of the well and alleged that it was not reasonably feasible to provide a groundwater reuse plan by the timeframe established by the Regional Board. (*Id.* at 5.) IBM contended, "requiring such a well now will necessitate the re-evaluation of other aspects of the long term plan . . ."; IBM previously demonstrated the technical effectiveness of the requested well; "[e]valuation of reuse options would require detailed analyses of water quality cost, and liability, duration of pumping and other factors, involving extensive discussion with many parties"; and that IBM would "be substantially prejudiced by having to expend this effort in evaluating reuse options while the State Board is considering the petition which may render the issue moot." (*Id.* at 5-6.) The State Board agreed "that IBM could be substantially prejudiced by preparing the extensive technical report and groundwater reuse plan adequate to meet the Regional Board's order by December 15, 1988." (*Id.* at 6.)

Implicit in the State Board's decision is the State Board's understanding of the potentially unnecessary effort and expenditure of costs related to a Regional Board requirement that could potentially be reversed by the State Board. In granting IBM's stay request, the State Board did not require IBM to establish anything "more" as it purports to require of Manteca. Manteca's Stay Request is predicated on similar contentions. Even the Regional Board conceded: "We agree with Manteca that funds should not be expended on design and construction of salinity removal technologies that could prove to be unnecessary, depending on the outcome of current planning efforts." (AR at 429.)

Although unclear from the State Board's Opposition, the State Board appears to have previously required other aggrieved parties to demonstrate that "the costs of compliance with the Regional Board order are disproportionate to the benefit to be gained by the required water quality monitoring." (*See In the Matter of the Petition of County of Sacramento Sanitation*

District No. 1 (Aug. 22, 2003), Order WQO 2003-0010 at 4; *In the Matter of the Petition of Pacific Lumber Company* (May 17, 2001), Order WQ 2001-09 at 3.) Manteca estimates that the planning, pre-design, and CEQA-compliance costs required to be expended in order to prepare to comply with the WDRs and TSO approach $1.6 million. (Memorandum at 9:20-22; AR at 410.) Actual compliance with the WDRs would cost approximately $38.4 million for initial construction and an additional cost of approximately $3.7 million for capital improvements and operation and maintenance. (Memorandum at 2:14-19; 9-17-19; AR at 409.) Importantly, once expended, these costs are irretrievable and will result in significant rate increases for Manteca residents. (AR at 410 (Govea Decl. at ¶¶ 9, 11); AR at 362 (Transcript at 35:3-4).)

Given the Court's conclusions regarding the lack of substantial harm to interested parties and the public interest if Manteca's Stay Request is granted (which are discussed by the Court in detail below), the Court finds that Manteca has established that these compliance costs "are disproportionate to the benefit to be gained by the required water quality monitoring."

2. Manteca demonstrates a lack of substantial harm to other interested persons and to the public interest if its Stay Request is granted.

In arguing that Manteca failed to demonstrate a lack of substantial harm to interested persons or to the public if the stay is granted, the State Board focuses entirely on Manteca's perceived sole reliance on the testimony of Mr. Govea in the underlying proceedings. (Opposition at 14:14-17.) In doing so, the State Board ignores the vast majority of evidence in the record establishing the lack of substantial harm to interested persons or to the public if Manteca's Stay Request is granted.

Prior to issuance of the TSO and WDRs at issue here, Manteca had complied and continues to comply with Regional Board Order No. R5-2004-0028, as modified by State Board Order No. WQ 2005-0005. (AR at 233-345; Larson Decl., Exh. "A.") In State Board Order No. WQ 2005-0005, the State Board found the limitation of 1,000 µmhos/cm EC appropriate to control salinity in the WQCF's discharge. (Memorandum at 10:7-9; Larson Decl., Exh. "A" at 14, 22.) In response to these orders, Manteca spent approximately $65 million upgrading the WQCF and related facilities and pursued alternative supplies of water, resulting in a reduction of

salinity in the WQCF's effluent of nearly 30%. (Memorandum at 4:1-9, 10:5-17; AR at 5, 9.)

As a result of the upgrades, the WQCF's discharge now averages 735 µmhos/cm EC on a monthly basis, which closely approximates the 700 µmhos/cm EC effluent limitation requirement required by the WDRs. (Memorandum at 13:11-12, n.11; AR at 359, 362 (Transcript of Regional Board Hearing (Oct. 8, 2009) 32:2-5, 35:15-36:5).)

In correspondence dated December 9, 2009, the Regional Board expressed its support of Manteca's Stay Request, confirming Manteca's minimal contribution to the salinity in the San Joaquin River:

> Manteca's discharge is not a significant source of salt to the San Joaquin River, so the environmental benefits from reduced effluent salinity are minimal, although not insignificant.
>
> * * *
>
> Manteca's current irrigation-season salinity level of 745 µmhos/cm is already fairly close to the existing 700 µmhos/cm irrigation season receiving water quality objective, and is within the ranges that are being discussed as potential new south Delta water quality objections.

(AR at 429-430.)

During oral argument, the State Board relied on the Regional Board's statement that the environmental benefits of Manteca's compliance with the WDRs, although minimal, are "not insignificant" in support of the State Board's argument that Manteca failed to demonstrate a lack of substantial harm if a stay is granted. The State Board's reliance on this statement, however, is undermined by the State Board's own comments in Order No. WQ 2005-0005, which concede the limited impact that Manteca's compliance with the WDRs will have on salinity levels.

In revising upward the original effluent limitation for EC imposed by the Regional Board in Order No. R5-2004-0028, the State Board acknowledged that the existing record supported the conclusion that "because of the relatively high salinity of the receiving water and the relatively small portion of flow provided by the City's discharge, the City's use of reverse osmosis would have relatively little effect on the EC of water in the river." (Larsen Decl. at Exh. "A" (Order No. WQ 2005-0005 at 12.) The State Board continued:

> The causes and potential solutions to the salinity problems in the southern Delta are highly complex subjects that have received and are continuing to receive an unprecedented amount of attention from the State Board in the exercise of its

> coordinated authority over water rights and water quality. The southern Delta water quality objectives for EC referenced by the Regional Board were established in the State Board's 1995 Delta Plan. Although the ultimate solutions to southern Delta salinity problems have not yet been determined, *previous actions establish that the State Board intended for permit effluent limitations to play a limited role with respect to achieving compliance with the EC water quality objectives in the southern Delta*.

(Larsen Decl. at Exh. "A" (Order No. WQ 2005-0005 at 13-14 (emphasis added).)

Mr. Govea's testimony corroborates the Regional Board's and State Board's conclusions and confirms that the impact of Manteca's compliance with the WDRs would have a minimal impact on the salinity of the water:

> Looking at it, at this issue, another perspective put in context, the two left bars are Manteca treatment plant is putting out, as I said, about 735 micromhos per centimeter right now. The river concentration is about 594 micromhos per centimeter. The two right most bars, if the plant were to achieve 700 through microfiltration and reverse osmosis, the river would drop from 594.13 to 594.01; a .02 per cent reduction in salinity.
>
> To put this into context even further. If you think about loading in the San Joaquin River, the amount of EC, salinity, that is there now and put it in terms of height, there is the equivalent of the Empire State Building in terms of loading in the river; and the amount of contribution that the City has is equivalent of a six-foot-six person.

(AR at 361-62 (Transcript of Regional Board Hearing (Oct. 8, 2009) at 35:15-36:5).)

3. Substantial questions of fact and law support the issuance of a stay.

In the Matter of the Petition of International Business Machines also is instructive with respect to whether substantial questions of fact and law support the issuance of a stay. There, the State Board held that "there are substantial questions of fact as to whether the Gap well as required by the Regional Board is needed at all. We will be addressing these in greater detail as part of our review of the petition as a whole." (*In the Matter of the Petition of International Business Machines* (Dec. 15, 1988), Order No. WQ 88-15 at 4.)

Similarly, substantial questions of fact and law exist as to whether Manteca will need to comply with the 700 µmhos/cm EC effluent limitation requirement – an issue the State Board will address as part of its review of Manteca's Petition for Review. The Regional Board confirms:

> The [State Board] is reexamining the salinity standards in the Bay Delta Plan, which might ultimately change the receiving water standards with which Manteca must comply. CVSALTS may provide other regulatory options to the City, and

> should ultimately reduce salinity in the San Joaquin River. Either of these efforts may resolve Manteca's salinity issues without the need for litigation. . . . The planning efforts, and not the courts, are the appropriate venue to resolve these issues. We agree with Manteca that funds should not be expended on design and construction of salinity removal technologies that could prove to be unnecessary, depending on the outcome of the current planning efforts.

(AR at 429-30.)

The State Board relies on *In the Matter of the Petitions of Stockton, et al.* (Oct. 6, 2009), Order WQ 2009-0012, and *In the Matter of the Petition of Environmental Law Foundation* (MAY 19, 2009), Order WQ 2009-0003, in contending that no substantial questions of fact or law exist. "In these orders, the State [] Board held, unequivocally, that the water quality objectives of the Bay-Delta Plan apply to municipal treatment facilities, and that salinity limitations of 700 µmhos/cm are appropriate." (Opposition at 16:8-10.)

The Court agrees with Manteca, however, that the State Board's decisions in these other matters are not determinative of whether substantial questions of law or fact exist with respect to Manteca. The State Board previously went out of its way to distinguish the "unique background and facts" related to Manteca from those related to the Cities of Tracy and Stockton. (Larsen Decl. at Exh. "A" (Order No. WQ 2005-0005 at 15.) The Court also notes that the very decisions on which the State Board relies are being challenged by the Cities of Stockton and Tracy in separate judicial proceedings, the outcome of which could impact the validity of the State Board's actions with respect to these other municipalities, as well as Manteca. (*See* Declaration of Roberta Larson in Support of Manteca's Reply Brief ("Larson Reply Decl.") at ¶¶ 8, 9, Exhs. "G," "H.") Additionally, as Manteca notes – and the State Board does not refute – the "EC objectives for the southern Delta are in a state of flux." (*See* Memorandum at 16:23-17:12.)

Accordingly, the Court finds that Manteca is entitled to a stay of the 700 µmhos/cm EC effluent limitation requirement and TSO pending the State Board's review of Manteca's Petition for Review. However, as further discussed below, the Court finds that Manteca fails to establish that it is entitled to an extension or tolling of the TSO deadlines.

///

C. **Manteca fails to establish that it is entitled to an extension or tolling of the TSO deadlines.**

Through its Petition, Manteca seeks more than just a stay of the TSO deadlines. Manteca actually seeks a tolling or an extension of the TSO deadlines as they relates to 700 µmhos/cm EC effluent limitation requirement:

> Manteca requests that the Court grant the stay and make it effective as of November 27, 2009, when the Permit and TSO took effect. [Citations.] With respect to the provisions that would be subject to the stay, its effect would be to commence the schedule for the various compliance deadlines upon the final disposition of the Petition for review. By virtue of the stay, the total period for compliance would not change, but each deadline would shift by a period equal to the time between November 27, 2009, and the date of the disposition.

(Memorandum at 7:3-9.) The State Board objects to Manteca's request, arguing that "[a] stay, as authorized by Water Code section 13321, would not provide the tolling relief sought by Petitioner." (Opposition at 1:23-25; 4:14-5:18.) The Court agrees.

Manteca relies in part on 23 CCR § 2053 for its argument that a stay can include a "shifting" of the TSO deadlines. 23 CCR § 2053 provides that a stay extends to the "effect" of an action of a regional board. Because the effect of the TSO is to impose compliance deadlines, Manteca argues that a stay can be granted to relieve Manteca of these deadlines by essentially modifying the TSO deadlines.

In making this argument, Manteca ignores the fact that a stay is intended to preserve the status quo. "A stay is meant to provide a brief period of relief from a Regional Board's order pending resolution on the merits." (*In the Matter of the Petitioners of Boeing Company* (June 21, 2006), Order WQ 2006-0007 at 8; *See also In the Matter of Tahoe-Truckee Sanitation Agency Request for Stay* (Feb. 2, 1978), Order No. 78-3 at 4 ("It is appropriate to note here that the general purpose of granting a stay is to provide that the 'status quo', or existing situation, will be maintained pending resolution of the matters under review").) The State Board has interpreted 23 CCR § 2053 as authorizing a stay only until the State Board issues a decision on Manteca's Petition for Review. "'The interpretation of a regulation, like the interpretation of a statute, is, of course, a question of law, and while an administrative agency's interpretation of its own regulation obviously deserves great weight, the ultimate resolution of such legal questions rests

with the courts.' [Citation.] However, the court generally will not depart from the agency's interpretation unless it is clearly erroneous or unauthorized." (*Physicians and Surgeons Labs., Inc. v. Dept. of Health Servs.* (1992) 6 Cal.App.4th 968, 986-87 (citation omitted).)

Manteca does not allege that the Department's interpretation of 23 CCR § 2053 is clearly erroneous or unauthorized. Instead, Manteca argues that the Department has previously granted such extensions of TSO deadlines in other matters and should essentially exercise its discretion to do so with respect to Manteca. Manteca relies on *In the Matter of Cease and Desist Order against the Department of Water Resources and the United States Bureau of Reclamation*, *In the Matter of the Review on Own Motion of Waste Discharge Requirements for Vacaville's Easterly Wastewater Treatment Plant*, and *In the Matter of the Petition of City of Stockton*[8] in support of its argument. The authorities cited by Manteca are distinguishable and/or fail to support Manteca's argument that the Court is authorized to toll or extend the TSO deadlines pursuant to 23 CCR § 2053.

The State Board distinguishes the controlling legal authority in the *Department of Water Resources and the United States Bureau of Reclamation* matter, arguing that it allowed the State Board to stay and extend the compliance deadlines at issue. There, the State Board modified a

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[8] The State Board objects to the introduction of *In the Matter of the Petition of City of Stockton* (Oct. 17, 2002), Order WQ 2002-00018, because it is a non-precedential decision. Although, the State Board's objection to the decision is sustained, the Court notes that the *Stockton* matter offers little assistance to Manteca in support of its argument that it is entitled to a tolling and/or extension of the TSO deadlines. In the *Stockton* matter, the Regional Board and the City of Stockton entered into a stipulation staying certain compliance deadlines and expressly providing:

> With respect to the stay of compliance periods as provided above, the effect of the stay shall be to commence the schedule for the compliance periods, and the periods for interim steps toward compliance, upon the date the State Board issues a dispositive order on the Petition, if the State Board untimely upholds the challenged provision or on the date the State Board dismisses the Petition. The total period for compliance, and the periods for interim steps toward compliance, will equal the period or periods provided in the applicable provision, unless ultimately enlarged by the State Board.

(Larson Reply Decl. at ¶ 2, Exh. "B.")

This stipulation was ultimately approved by the State Board. Manteca fails to provide an explanation for why, if the Regional Board previously supported its Stay Request, Manteca and the Regional Board did not enter into a similar stipulation for approval by the State Board. This is particularly interesting given that Manteca originally proposed to the State Board that the parties enter into a similar stipulation. (AR at 417-19.) The State Board declined, stating that as the adjudicating authority, it was inappropriate for the State Board to enter into such a stipulation. (AR at 431-34.) However, the State Board informed Manteca that municipalities had entered into such agreements with regional boards that were then submitted to the State Board for approval.

cease and desist order issued against the Department of Water Resources ("DWR") and the United States Bureau of Reclamation ("USBR") in response to the threatened violation of DWR's water rights permits for the State Water Project and USBR's water right license and permits for the Central Valley Project. (*In the Matter of Cease and Desist Order against the Department of Water Resources and the United States Bureau of Reclamation* (Jan. 5, 2010), Order WR 2010-0002 at 2.) The purpose of the proceeding was to "determine whether to modify the compliance schedule contained in Order WR 2006-0006, and whether to impose any interim protective measures." (*Ibid.*)

The State Board decided:

> We will extend the compliance deadline until after we have completed our current review of the salinity objectives and associated program of implementation contained in the [2006 Bay-Delta Plan] and any subsequent water right proceeding so that, in developing a revised compliance plan, DWR and USBR can take into account any change to their responsibility for meeting the objective that may occur as a result of our review."

(*Ibid*)

Importantly, Water Code § 1832, not 23 CCR § 2053, authorized the State Board to modify, not simply stay, the cease and desist order:

> Cease and desist orders of the board shall be effective upon the issuance thereof. The board may, after notice and opportunity for hearing, upon its own motion or upon receipt of an application from an aggrieved person, modify, revoke, or stay in whole or in part any cease and desist order issued pursuant to this chapter.

(*Id.* at 3.) Accordingly, the Court finds that the *DWR* matter does not support Manteca's argument in support of a tolling or extension of the TSO deadlines.

The *Vacaville* matter also is of no assistance to Manteca.[9] There, the State Board stayed various waste discharge requirements and compliance deadlines until the Regional Board dealt with the matter on remand. In issuing the stay, the State Board stated: "By staying these schedules, the Board intends that the schedules not run during the stay period. This means that

[9] Manteca attaches only four pages of a 77-page decision to the Declaration of Ms. Larson in support of its Reply. (*See* Larson Reply Decl. at ¶ 2, Exh. "A.") The State Board's objection to this evidence is sustained on this basis. However, because the State Board attaches a complete copy of the State Board's decision in the *Vacaville* matter, the Court will address the decision in its ruling.

the effective date of the relevant final limits will be delayed beyond their existing effective date by a period of time equal to the stay period." (*In the Matter of the Review on Own Motion of Waste Discharge Requirements Order No. 5-01-044 for Vacaville's Easterly Wastewater Treatment Plant* (Oct. 3, 2002), WQO 2002-0015 at 75.)

Upon review of the State Board's decision in the *Vacaville* matter, the Court finds no indication that that the stay issued by the State Board was issued pursuant to 23 CCR § 2053 or was based on the same or similar criteria outlined in 23 CCR § 2053. In fact, the State Board contends that the State Board stayed a compliance schedule as part of the final relief granted by the State Board on Vacaville's petition for review – a contention undisputed by Manteca and supported by the Court's review of the decision.

D. The Parties' Requests for Judicial Notice.

Manteca's Request for Judicial Notice, which is unopposed by the State Board, is GRANTED.

Manteca's Request for Judicial Notice in Support of Reply, which also is unopposed by the State Board, is GRANTED in part and DENIED in part as follows: Requests for Judicial Notice Nos. 1, 3, and 4, which consist only of partial sections of various State Board orders, are DENIED. The remaining Requests for Judicial Notice are GRANTED.

The State Board's first Request for Judicial Notice, which is unopposed by Manteca, is GRANTED.

The State Board's Second Request for Judicial Notice, which also is unopposed by Manteca, is GRANTED.

E. The State Board's Objections to Manteca's Evidence.

The State Board objects to Exhibit "A" of the Larson Declaration on the ground that Manteca fails to attach a complete copy of the State Board's Order WQO-00015, *In the Matter of the Review of Own Motion of Waste Discharge Requirements Order No. 5-01-044 for Vacaville's Easterly Wastewater Treatment Plant* (Oct. 3, 2002). The State Board's objection is SUSTAINED. The Court instead will consider the complete copy of State Board Order WQO-00015 attached as Exhibit "F" to the State Board's Second Request for Judicial Notice.

The State Board also objects to Exhibit "B" of the Larson Declaration on the ground that Manteca cites to and relies on a non-precedential State Board decision, State Board Order WQo-2002-0018, *In the Matter of the Petition of City of Stockton*, and a related stipulation. The State Board's objection is SUSTAINED.

III. DISPOSITION

. A judgment shall be issued in favor of Manteca, and against the State Board, GRANTING in part and DENYING in part Manteca's Petition. A peremptory writ shall issue from this Court to the State Board, commanding the State Board to vacate its Stay Denial, grant Manteca's Stay Request in accordance with this Court's ruling, and to take any further action especially enjoined on it by law. The writ shall further command the State Board to make and file a return within 30 days after issuance of the writ, setting forth what it has done to comply with the writ. The Court reserves jurisdiction in this action until there has been full compliance with the writ.

In accordance with Local Rule 9.16, Manteca is directed to prepare a judgment, incorporating this Court's ruling as an exhibit, and a peremptory writ of mandamus; submit them to opposing counsel for approval as to form in accordance with Rule of Court 3.1312(a); and thereafter submit them to the Court for signature and entry of judgment in accordance with Rule of Court 3.1312(b).

DATED: October 8, 2010

MICHAEL KENNY

Judge MICHAEL P. KENNY
Superior Court of California,
County of Sacramento

CERTIFICATE OF SERVICE BY MAILING
(C.C.P. Sec. 1013a(4))

I, the undersigned deputy clerk of the Superior Court of California, County of Sacramento, do declare under penalty of perjury that I did this date place a copy of the above-entitled **RULING ON SUBMITTED MATTER** in envelopes addressed to each of the parties, or their counsel of record as stated below, with sufficient postage affixed thereto and deposited the same in the United States Post Office at 720 9th Street, Sacramento, California.

Theresa A. Dunham, Esq.
SOMACH SIMMONS & DUNN
500 Capitol Mall, Suite 1000
Sacramento, CA 95814

Jeffrey P. Reusch
Deputy Attorney General
Office of the Attorney General
1300 I Street
Sacramento, CA 94244-2550

Superior Court of California,
County of Sacramento

Dated: October 8, 2010

By: S. LEE
Deputy Clerk

State of California

Memorandum

To : Dennis W. Westcot
RWQCB, Central Valley Region

Date: MAR - 3 1994

Elizabeth M. Jennings

Elizabeth Miller Jennings
Senior Staff Counsel
From : OFFICE OF THE CHIEF COUNSEL
STATE WATER RESOURCES CONTROL BOARD
901 P Street Sacramento, CA 95814
Mail Code G-8

Subject: APPLICATION OF THE TRIBUTARY FOOTNOTE IN THE WATER QUALITY CONTROL PLAN FOR THE RWQCB, CENTRAL VALLEY REGION, BASINS 5A, 5B, AND 5C

ISSUE

How should the RWQCB apply the tributary footnote which appears in its Water Quality Control Plan for Basins 5A, 5B, and 5C (Basin Plan)?

CONCLUSION

The tributary footnote provides that, where watercourses have been designated to have specified beneficial uses, tributaries to such watercourses shall have the same beneficial uses. Waterccurses include streams and do not include constructed agricultural drains. Where the RWQCB seeks to replace the "de facto" designation in the tributary footnote with a specific designation for the tributary in the Basin Plan, the RWQCB may perform a survey and assessment of all past, present, and probable future beneficial uses, and amend the Basin Plan to insert the appropriate beneficial uses.

DISCUSSION

The California Water Code (Water Code) and the federal Clean Water Act (CWA) both have provisions requiring the RWQCB to develop beneficial use designations for surface waters throughout the region. Water Code Section 13240 requires the RWQCB to adopt Basin Plans. Basin Plans consist of beneficial use designation, water quality objectives and programs of

EXHIBIT 4

implementation. Water Code Section 13050(j). Water Code Section 13241 requires the establishment of water quality objectives in water quality control plans which will "ensure the reasonable protection of beneficial uses". In establishing water quality objectives, the RWQCB must consider "[p]ast, present, and probable future beneficial uses of water". Water Code Section 13241(a). CWA Section 303 requires states to adopt water quality standards for all surface waters. Adoption of these standards includes "designating the uses to be made of the water". 40 Code of Federal Regulations (CFR) Section 131.2. Designated uses are defined as "those uses specified in water quality standards for each water body or segment whether or not they are being obtained". 40 CFR Section 131.3(f).

In many of the water quality control plans adopted by RWQCBs, the plans do not specifically identify all tributaries and designate beneficial uses for them. Instead, the plans contain a statement that the beneficial uses of listed waterbodies also apply to their unnamed tributaries. The Basin Plan for 5A, 5B, and 5C has a footnote which accomplishes this purpose. The footnote states: "Those streams not listed have the same beneficial uses as the streams, lakes and reservoirs to which they are tributary." (Basin Plan, Table II-1, footnote (1).) This footnote is limited to "streams", and there is no indication that the Basin Plan should be read to include other tributaries, such as constructed agricultural drains. Thus, the footnote should be used to identify beneficial uses for tributary streams which are not specifically designated in the Basin Plan.

One other consideration in determining beneficial uses for tributaries is the SWRCB's "Sources of Drinking Water Policy", Resolution No. 88-63, which has been incorporated into the Basin Plan. (See, Basin Plan, at page IV-7.) This policy acts to designate MUN as a beneficial use for all waterbodies for which beneficial uses have not been designated. Thus, tributaries, excepting constructed agricultural drains, and certain other collection and treatment systems which are described in the Policy, will have the MUN designation unless they have otherwise assigned beneficial uses.

Should the RWQCB decide to establish specific beneficial use designations for a stream tributary, instead of relying on the tributary footnote and the Sources of Drinking Water Policy, it must adopt a Basin Plan amendment. This procedure is required by Water Code Sections 13240, 13241, and 13050(j), which require the establishment of water quality objectives and beneficial uses in water quality control plans.

In establishing specific uses for surface waters, which will then become part of water quality standards under the CWA, the RWQCB must comply with 40 CFR Section 131.10. Generally, this regulation provides that states may remove a designated use which is not an existing use[1] if the state can demonstrate that attainment is not feasible, and that states may not remove designated uses if either they are existing uses, or they are attainable. (40 CFR Section 131.10(g) and (h).) The state must conduct a use attainability analysis (UAA) whenever the state designates uses that do not include those specified in CWA Section 101(a)(2),[2] or the state removes a designated use listed in Section 101(a)(2). (40 CFR Section 131.10(j).) A UAA is not required where the designated uses include those specified in CWA Section 101(a)(2). (40 CFR Section 131.10(k).)

The process which you have described to me, of conducting a survey and assessment for specific designation of beneficial uses of stream tributaries which are currently subject to the tributary footnote, should be adequate to meet the requirements in the Water Code and the federal law and regulations for adoption of water quality objectives and water quality standards. After conducting the survey and assessment, the Basin Plan would be amended. You have stated that the survey and assessment would be "equivalent" to a UAA. If the conditions described in 40 CFR Section 131.10(j) are present, the EPA regulations require a UAA. I suggest you work with EPA to receive advance agreement on the documentation which will be required.

The designation of beneficial uses in constructed agricultural drains is not covered by either the tributary footnote or the Sources of Drinking Water Policy. Thus, beneficial uses of these waterbodies have not been designated in the Basin Plan. Some constructed agricultural drains may be waters of the United States and may have some beneficial uses. However, at this time these have not been designated. Should the RWQCB choose to designate these uses in the future, the provisions in the Water Code, and the federal statute and regulations must be followed.

---

[1] *"Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40 CFR Section 131.3(e).*

[2] *These uses are protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water.*

THE

WATER QUALITY CONTROL PLAN

(BASIN PLAN)

FOR THE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

THE SACRAMENTO RIVER BASIN (BASIN 5A)

THE SACRAMENTO-SAN JOAQUIN DELTA BASIN (BASIN 5B)

THE SAN JOAQUIN RIVER BASIN (BASIN 5C)

SECOND EDITION

Third Printing 1992

CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
Central Valley Region
3443 Routier Road
Sacramento, California 95827

EXHIBIT 5

THE WATER QUALITY CONTROL PLAN (BASIN PLAN)
FOR THE
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

SECOND EDITION
(Third Printing, 1992)

THE SACRAMENTO RIVER BASIN (BASIN 5A)
THE SACRAMENTO-SAN JOAQUIN DELTA BASIN (BASIN 5B)
THE SAN JOAQUIN RIVER BASIN (BASIN 5C)

REGIONAL BOARD STAFF

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CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
Central Valley Region
3443 Routier Road
Sacramento, California 95827

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 90-28

APPROVAL OF REVISION (EDITING AND UPDATING) OF THE WATER QUALITY CONTROL PLAN FOR THE SACRAMENTO RIVER BASIN (BASIN 5A), SACRAMENTO-SAN JOAQUIN DELTA BASIN (BASIN 5B), AND SAN JOAQUIN RIVER BASIN (BASIN 5C)

WHEREAS:

1. The California Regional Water Quality Control Board, Central Valley Region (Central Valley Regional Board), adopted and the State Water Resources Control Board (State Board) approved the Water Quality Control Plan (Basin Plan) for the Sacramento River Basin (Basin 5A), Sacramento-San Joaquin Delta Basin (Basin 5B), and San Joaquin River Basin (Basin 5C) in 1975.

2. Division 7 of the California Water Code states that Basin Plans shall be periodically reviewed and, if appropriate, revised.

3. The Central Valley Regional Board revised and updated the Basin Plan to produce a new edition of the Basin Plan, which was considered at a public meeting on March 31, 1989.

4. The new edition of the Basin Plan deletes Chapter 1, Historical Beneficial Uses, and replaces it with Chapter I, Introduction; retains Chapter II, Present and Potential Beneficial Uses; deletes Chapter 3, Historical Water Quality Objectives, and replaces it with Chapter III, Water Quality Objectives; deletes Chapter 4, Water Quality Objectives, and replaces it with Chapter IV, Implementation; deletes Chapter 5, Implementation Plan, and replaces it with Chapter V, Surveillance and Monitoring; and deletes Chapter 6, Assessment of the Plan and Chapter 7, Surveillance and Monitoring.

5. Proposed changes to the existing Chapter 2 include adoption, by reference, of State Board Resolution No. 88-63, Sources of Drinking Water. This amendment was considered and approved in conjunction with Sources of Drinking Water Policy Basin Plan amendments of all Regional Water Quality Control Boards by Resolution No. 89-88, on August 17, 1989.

6. The Basin Plan revision is consistent with the requirements of Public Resources Code 21000 et seq. (California Environmental Quality Act).

7. The Central Valley Regional Board Resolution No. 89-056 was adopted in accordance with State laws and regulations.

8. Basin Plan amendments do not become effective until approved by the State Board.

THEREFORE BE IT RESOLVED:

That the State Board:

1. Approves the Basin Plan revision adopted by the Central Valley Regional Board under Resolution No. 89-056 with the exceptions and provisions stipulated in Item Nos. 2 through 6 below.

2. Disapproves the deletion of Marsh Creek and Marsh Creek Reservoir and their beneficial uses. These waterbodies and their beneficial uses are incorporated into Chapter II, Present and Potential Beneficial Uses. Where beneficial use designations are not consistent with those used by the Central Valley Regional Board, the inconsistencies shall be addressed in the next Triennial Review or Statewide Basin Plan Update processes.

3. Directs the Central Valley Regional Board during either its next Triennial Review or Statewide Basin Plan Update processes to:

   A. Delete or otherwise address the phrase on Page III-4 of the Basin Plan revision which reads: "...or where the fishery is not important as a beneficial use".

   B. Review and revise the beneficial use designations of the Delta for appropriateness and consistency with other State Water Quality Control Plans.

   C. Review and revise as appropriate, the statement on Page III-2 of the Basin Plan revision which reads: "The **fourth point** is that in cases where WQOs [water quality objectives] are formulated to preserve historic conditions, there may be insufficient data to determine completely the temporal and hydrologic variability representative of historic water quality. When violations of such objectives occur, the Regional Board judges the reasonableness of achieving those objectives through regulation of the controllable factors in the areas of concern."

   D. Designate site-specific beneficial uses and water quality objectives for the waterways in the Sacramento-San Joaquin Delta.

4. Approves the amendment with the understanding that in the future, the Water Quality Assessment, jointly developed by the Central Valley Regional Board and the State Board, will satisfy obligations to rank water quality limited segments pursuant to Section 303(d) of the federal Clean Water Act.

5. Approves with the understanding that the Basin Plan amendment for the control of agricultural subsurface drainage, adopted by the Central Valley Regional Board on December 8, 1988 under Resolution No. 88-195 and approved by the State Board on September 21, 1989 under Resolution No. 89-88 is incorporated into this Basin Plan revision.

6. Approves with the understanding that the Basin Plan amendment revising water quality objectives for pesticides and incorporating an implementation plan for the control of nonpoint source discharges of pesticides adopted by the Central Valley Regional Board on January 26, 1990 under Resolution No. 90-028 and approved by the State Board on February 15, 1990 under Resolution No. 90-20 is incorporated into this Basin Plan revision.

7. Requests the Central Valley Regional Board to correct all typographical errors during the printing process.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a policy duly and regularly adopted at a meeting of the State Water Resources Control Board held on March 22, 1990.

Maureen Marche'
Administrative Assistant to the Board

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FOREWORD TO THE SECOND EDITION

The preparation of water quality control plans, i.e., basin plans, is supported by the Federal Clean Water Act and required by the State's Porter-Cologne Water Quality Control Act. Section 303 of the federal law requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." State law defines water quality control plans to consist "...of a designation or establishment for the waters within a specified area of: (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives."[1/] State law also requires that basin plans conform to the policies set forth in the Water Code beginning with Section 13000 and any State policy for water quality control. In California, each of the nine Regional Boards has at least one basin plan. Since beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the basin plans are regulatory references for meeting the State and federal requirements for water quality control in California.[2/]

This revision is the first rewriting of the text of the Central Valley Regional Water Quality Control Board's Basin Plan for the northern portion of the Region. The northern portion includes three hydrologic sub-basins which are referred to as 5A (the Sacramento River Basin), 5B (the Sacramento-San Joaquin Delta Basin), and 5C (the San Joaquin River Basin). (The southernmost hydrologic basin in the Region is 5D, the Tulare Lake Basin, which is covered by the Central Valley Regional Board's other Basin Plan prepared by the Fresno office.)

The first edition of the Basin Plan for 5A, 5B, and 5C was adopted by the Regional Board on 25 July 1975 and approved by the State Board on 21 August 1975. U.S. Environmental Protection Agency (*EPA*) approval followed in June 1976.

This second edition of the Central Valley Board's Water Quality Control Plan Report incorporates all the changes or amendments which were adopted and approved after the first edition's publication. The chapters of the 1975 Basin Plan which have been affected by this revision are Present and Potential Beneficial Uses (Chapter 2 in the old plan, Chapter II in this edition), Water Quality Objectives (Chapter 4 in the old plan, Chapter III in this edition), Implementation Plan (Chapter 5 in the old plan, Chapter IV in this edition), and Surveillance and Monitoring (Chapter 7 of the old plan, Chapter V in this edition).

BASIN DESCRIPTION

Basin boundaries and key features are identified in Figure I-1. Geographic, climatic, geologic, and hydrologic characteristics are presented in Table I-1 to facilitate comparisons between basins.

The Sacramento River, Sacramento-San Joaquin Delta, and San Joaquin River basins are among the more important agricultural areas of the world. They occupy about one-fourth of the total area of the State and contain over 30 percent of the State's irrigable land. These basins also have extensive forest, mineral, and recreational resources.

The basins are bound by the crests of the Sierra Nevada on the east and the Coast Range and Klamath Mountains on the west. San Francisco Bay provides the only outlet to the ocean. The basins extend some 400 miles from the California- Oregon border southward to the headwaters of the San Joaquin River.

Sacramento River Basin

The Sacramento River Basin includes the entire Sacramento River drainage upstream from the I Street Bridge in the City of Sacramento. It also includes the closed basin of Goose Lake and the drainage sub-basins of Cache and Putah Creeks.

The basin encompasses about 26,500 square miles within California. The principal streams are the Sacramento River and its larger tributaries: the Pit, Feather, Yuba, Bear, and American Rivers to the east, and Cottonwood, Stony, Cache, and Putah Creeks to the west. There are more than 400 square miles of water area in the basin.

Sacramento-San Joaquin Delta Basin

The Sacramento-San Joaquin Delta Basin extends from the headwaters of the Mokelumne River westward to the confluence of the Sacramento and San Joaquin Rivers, a distance of about 120 miles. It extends south about 60 miles from the City of Sacramento to the community of Vernalis on the San Joaquin River. The total area encompasses 4,950 square miles, including about 90 square miles of water area.

The principal streams in the basin are the lower reaches of the Sacramento and San Joaquin Rivers and the many interconnected channels in the Delta. Other important streams are the Calaveras, Mokelumne, and Consumnes Rivers, which drain a significant portion of the western slopes of the Sierra Nevada. The largest of the streams in the western part of the basin are Corral Hollow, Marsh, and Ulatis Creeks. They all have their headwaters in the Coast Range.

San Joaquin River Basin

The San Joaquin River Basin extends westerly from the crest of the Sierra Nevada to the crest of the Coast Range, and southerly from the Sacramento-San Joaquin Delta to the drainage divide between the San Joaquin and Kings Rivers. The basin encompasses over 11,000 square miles, including about 100 square miles of water area.

The principal streams are the San Joaquin River and the larger of its tributaries: the Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers. Prominent creeks include Bear, Owens, and Mariposa Creeks on the east; Los Banos, Orestimba, and Del Puerto Creeks on the west.

LOCATION MAP
SACRAMENTO RIVER BASIN 5A
SACRAMENTO-SAN JOAQUIN DELTA BASIN 5B
SAN JOAQUIN RIVER BASIN 5C

FIGURE I-1

*PLANNING SUBAREAS USED AS A BASIS FOR THE COLLECTION AND TABULATION AND ANALYSIS OF DATA.

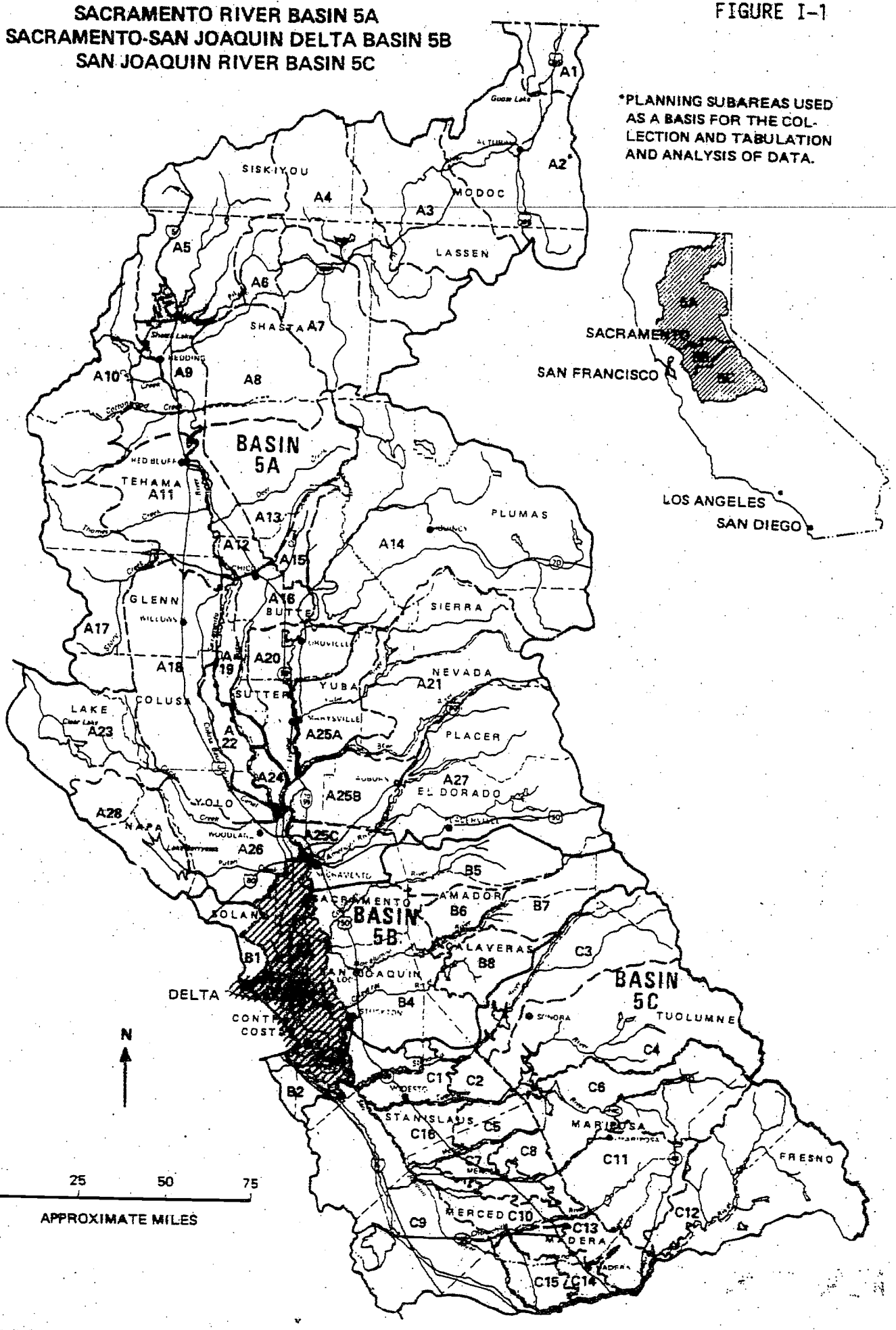


TABLE I-1

PHYSICAL AND HYDROLOGIC CHARACTERISTICS

Basin	Area	General Description	Climate	Geographical Boundaries	Topography	Geology/Soils	Surface Waters	Surface Water Development	Groundwaters
5A Sacramento River Basin	Total 27,215 sq mi (720 sq mi in Oregon) Land 26,781 sq mi Water 434 sq mi	Study area lies in Central Valley Basin, an important agricultural, mineral, and recreational resource. Basin ringed by Sierra Nevada and Cascades to the east, Coast ranges and Klamath Mountains to the west; Tehachapi Mountains to the south, San Francisco Bay provides the only outlet to the ocean. Valley floor extends 460 miles in north-south direction, width averages 50 miles. Valley floor is mostly flat plain below 400 feet, sloping toward SF Bay. Central Valley Basin includes 4 hydrologic units, northern 3 constitute the study area: Sacramento River, Sacramento San Joaquin Delta, and San Joaquin River Basins	Valley: Two-season climate with hot summers, mild winters. Light precipitation decreasing inward the south. Average temperature ranges from 44° F (January) to 80° F (July). Frostfree 7-to-8 month growing season, with mean seasonal precipitation of 23 in. Mountains: Elevations above 5000 ft experience heavy winter snowfall and mild summers. Average temperature ranges from 24° F (January) to 68° F (July).	Cascade Range and Klamath Mountains to the north; American River and Putah Creek basins to the south; Sierra Nevada crests to the east, North Coast Range crests to the west.	Valley: Width ranges from 5 mi in the north to 45 mi in the south. 34% of the basin is valley floor, including low hills, alluvial plains and fans, flood basins, and natural levees. Valley floor elevation ranges from sea level in the south to 300 ft in the northern foothills. Mountains: Mt. Shasta, 14,161 ft in the north; Sierra Nevada crests range from 8000 to 10,000 ft in the east; Coast Range crests 2000 to 8000 ft in the west.	Sacramento Valley occupies part of the Great Structural Trough between the Sierra Nevada and the Coast Range. Valley is underlain by sedimentary material of marine origin and sediment carried from surrounding mountains by the Sacramento River System. Coast Range is complex, folded, and faulted, subject to excessive erosion. Sierra region is mainly crystalline, older, and resistant to erosion.	The principal stream is the Sacramento River. Also important are the larger of its tributaries, including McCloud, Pit, Feather, Yuba, Bear, and American Rivers, Battle and Mill Creeks.	Surface waters are extensively developed. Surface water storage exceeds 10.5 million ac ft in Berryessa, Folsom, Oroville, and Shasta Lakes. Developed supplies exceed foreseeable demands in the southwestern areas as far as 2020.	Groundwater is acquired from 21 principal sources, a majority of these underlying Sacramento Valley.
5B Sacramento San Joaquin Delta Basin	Total 4,947 sq mi Land 4,858 sq mi Water 89 sq mi		Valley: Hot, dry summers; cool, wet winters. Precipitation increases to the east. Average Annual Precipitation, 15 in. in Delta, 55+ in. at extreme elevation. Average January temperature 45° F, average July temperature 74° F. Mountains: Moderate summers, cold winters in foothills. High Sierras experience long, severe winters with heavy snowfalls. Average temperature ranges from 27° F (January) to 67° F (July).	Sierra Nevada crests to the east, Coast Range crests to the Southwest; Sacramento River Basin boundary to the north.	Valley: About 50% of the basin is valley floor, which is mainly flat tule lands and delta area. Average delta elevation is sea level; elevation increases to the east. Mountains: Low rolling foothills ascend to the rocky Sierra Nevada, Mokelumne Peak of 9,371 ft.	Basin filled with sedimentary materials. Sierra Nevada is block-formed wedge which dips below valley to the Coast Range. Unconsolidated alluvium is chief groundwater source. Sierra Nevada is old volcanic rock and sediment of marine origin.	Principal streams are lower Sacramento and San Joaquin Rivers and the larger of their tributaries, including Cosumnes, Mokelumne, and Calaveras Rivers. Delta contains about 700 mi tidal waterways. Annual runoff is about 1.4 million ac-ft.	Surface waters are extensively developed. There are about 50 reservoirs in the region, with storage capacity of about 1.5 million ac-ft.	Principal groundwater source is northern part of San Joaquin-Tulare Valley Aquifer System.
5C San Joaquin River Basin	Total 11,081 sq mi Land 10,964 sq mi Water 97 sq mi		Valley: Warm, two season climate, 90% of total rainfall occurs between November and March. Rainfall decreases to the south. Average January temperature is 44° F, average July temperature 78° F. Average Annual Precipitation: 25 in. Mountains: Short, mild summers; cold, long winters. Heavy snowfall at elevations above 5000 ft. Precipitation increases with elevation, averaging 20 in. to 30 in. in foothills and mountains, respectively. Average temperatures ranges from 22° F (January) to 80° F (July).	Sierra Nevada crests to the east; Coast Range crests to the west; San Joaquin River to the south.	Valley: About 30% of the basin is valley floor, 100 mi. wide and 120 miles long, lying between Coast Range and Sierra Nevada. Mountains: Sierra Nevada often reaches 10,000 ft; in many places 13,480 ft. Coast Range in the west is lower, about 500 to 4000 ft, with highest elevation 5000 ft.	The Sierra Nevada, Coast Range, and Central Valley contain mainly metamorphic and igneous rocks. Non-water-bearing crystalline rock predominates. Coast Range is made of sandstone and shale. Valley floor is filled with non-marine sediments.	The principal streams are the San Joaquin River and the larger of its tributaries, including Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers and Bear, Owens, and Mariposa Creeks on the east; and Panoche, Los Banos, San Luis, Orestimba, and Del Puerto Creeks on the west.	Surface waters extensively developed, and serve about two thirds of the basin. Nearly 3 million ac ft surface water storage.	Principal source is the San Joaquin-Tulare Valley Aquifer System.

II. PRESENT AND POTENTIAL BENEFICIAL USES

Beneficial uses are critical to water quality management in California. State law defines beneficial uses of California's waters that may be protected against quality degradation to include (and not be limited to) "...domestic; municipal; agricultural and industrial supply; power generation; recreation; esthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves."[3/] Protection and enhancement of present and potential beneficial uses are primary goals of water quality planning.

Significant points concerning the concept of beneficial uses are:

1. All water quality problems can be stated in terms of whether there is water of sufficient quantity or quality to protect or enhance beneficial uses.

2. Beneficial uses do not include all of the reasonable uses of water. For example, disposal of wastewaters is not included as a beneficial use. This is not to say that disposal of wastewaters is a prohibited use of waters of the state; it is merely a use which cannot be satisfied to the detriment of beneficial uses. Similarly, the use of water for the dilution of salts is not a beneficial use although it may, in some cases, be a reasonable and desirable use of water.

3. The protection and enhancement of beneficial uses require that certain quality and quantity objectives be met for surface and ground waters.

4. Fish, plants, and other wildlife, as well as humans, use water beneficially.

Existing and potential beneficial uses which currently apply to surface and ground waters of the basins are presented in Figures and Tables II-1 and II-2. NOTE: Water Bodies within the basins that do not have beneficial uses designated in Tables II-1 and II-2 are assigned MUN designations in accordance with the provisions of State Water Resources Control Board Resolution No. 88-63 (Appendix Item 8) which is, by reference, a part of this Basin Plan. These MUN designations in no way affect the presence or absence of other beneficial use designations in these water bodies.

Beneficial use designation (and water quality objectives, see Chapter III) must be reviewed at least once during each three-year period for the purpose of modification as appropriate.[4/]

The beneficial uses, and abbreviations, listed below are standard basin plan designations.

Municipal and Domestic Supply (MUN) - includes usual uses in community or military water systems and domestic uses from individual water supply systems.

Agricultural Supply (AGR) - includes crop, orchard, and pasture irrigation, stock watering, support of vegetation for range grazing, and all uses in support of farming and ranching operations.

Industrial Service Supply (IND) - includes uses which do not depend primarily on water quality such as mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil-well repressurization.

Industrial Process Supply (PROC) - includes process water supply and all uses related to the manufacturing of products.

Ground Water Recharge (GWR) - includes natural or artificial recharge for future extraction for beneficial uses and to maintain salt balance or halt saltwater intrusion into freshwater aquifers.

Freshwater Replenishment (FRSH) - provides a source of fresh water for replenishment of inland lakes and streams of varying salinities.

Navigation (NAV) - includes commercial and naval shipping.

Hydroelectric Power Generation (POW) - is that supply used for hydropower generation.

Water-Contact Recreation (REC 1) - includes all recreational uses involving actual body contact with water, such as swimming, wading, waterskiing, surfing, sport fishing, uses in therapeutic spas, and

other uses where ingestion of water is reasonably possible.

Nonwater-Contact Recreation (REC 2) - covers recreational uses which involve the presence of water but do not require contact with water, such as picnicking, sunbathing, hiking, beachcombing, camping, pleasure boating, tidepool and marine life study, hunting and aesthetic enjoyment in conjunction with the above activities as well as sightseeing.

Warm Freshwater Habitat (WARM) - provides a warm water habitat to sustain aquatic resources associated with a warm water environment.

Cold Freshwater Habitat (COLD) - provides a cold water habitat to sustain aquatic resources associated with a cold water environment.

Wildlife Habitat (WILD) - provides a water supply and vegetative habitat for the maintenance of wildlife.

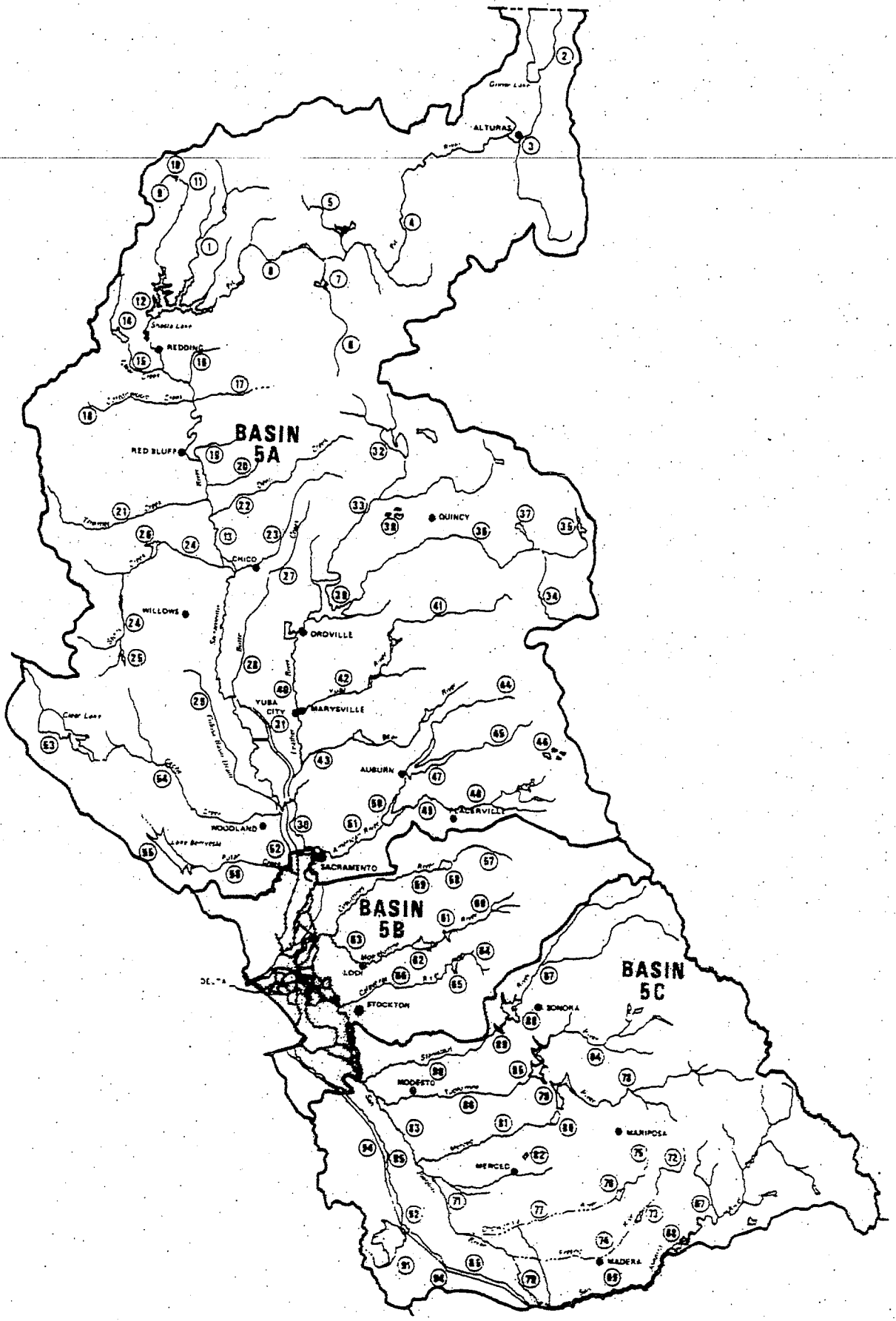
Preservation of Rare and Endangered Species (RARE) - provides an aquatic habitat necessary, at least in part, for the survival of certain species established as being rare and endangered species.

Fish Migration (MIGR) - provides a migration route and temporary aquatic environment for anadromous or other fish species.

Fish Spawning (SPWN) - provides a high-quality aquatic habitat especially suitable for fish spawning.

FIGURE II-1

SURFACE WATER BODIES AND BENEFICIAL USES



SURFACE WATER BODIES AND BENEFICIAL USES

	SURFACE WATER BODIES[1]	MUN	AGRI-CULTURE		INDUSTRY			RECREATION			FRESHWATER HABITAT[3]		MIGRATION		SPAWNING		WILD	NAV
			AGR		PROC	IND	POW	REC 1		REC 2	WARM	COLD	MIGR		SPWN			
		MUNICIPAL AND DOMESTIC SUPPLY	IRRIGATION	STOCK WATERING	PROCESS	SERVICE SUPPLY	POWER	CONTACT	CANOEING AND RAFTING [2]	OTHER NONCONTACT	WARM	COLD	WARM[4]	COLD[5]	WARM[4]	COLD[5]	WILDLIFE HABITAT	NAVIGATION
1	McCLOUD RIVER	•					•	•	○	•		•				•	•	
2	GOOSE LAKE		•	•				•		•	•	•					•	
	PIT RIVER																	
3	NORTH FORK, SOUTH FORK, PIT RIVER	•	•	•				•	○	•	•	•			•	•	•	
4	CONFLUENCE OF FORKS TO HAT CREEK	•	•	•			•	•	•	•	•	•			•	•	•	
5	FALL RIVER	•	•	•			•	•	•	•	•	•					•	
6	HAT CREEK		•				•	•		•	•	•					•	
7	BAUM LAKE						•	•		•		•				•	•	
8	MOUTH OF HAT CREEK TO SHASTA LAKE	•	•	•			•	•	•	•	○	•			•	○	•	
	SACRAMENTO RIVER																	
9	SOURCE TO BOX CANYON RESERVOIR		•	•				•		•		•					•	
10	LAKE SISKIYOU							•		•							•	
11	BOX CANYON DAM TO SHASTA LAKE		•	•				•	•	•	•	•				○	•	
12	SHASTA LAKE	•	•				•	•		•		•			•	•	•	
13	SHASTA DAM TO COLUSA BASIN DRAIN	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
14	WHISKEYTOWN RESERVOIR	•	•	•			•	•		•	•	•			•		•	
15	CLEAR CREEK BELOW WHISKEYTOWN RESERVOIR	•	•	•				•	•	•	•	•			•	•	•	
16	COW CREEK	○	•	•			•	•	○	•		•		•	•	•	•	
17	BATTLE CREEK		•	•			•	•	•	•		•		•	•	•	•	
18	COTTONWOOD CREEK	•	•	•	○	○	○	•	•	•	•	•		•	•	•	•	
19	ANTELOPE CREEK	•	•	•				•		•	•	•		•	•	•	•	
20	MILL CREEK	•	•	•				•		•	•	•		•	•	•	•	
21	THOMES CREEK		•	•			○	•		•	•	•		•	•	•	•	
22	DEER CREEK	•	•	•				•	•	•	•	•		•	•	•	•	
23	BIG CHICO CREEK		•	•				•	•	•	•	•		•	•	•	•	
24	STONY CREEK		•	•				•	•	•	•	○		•	•	•	•	
25	EAST PARK RESERVOIR							•		•	•						•	
26	BLACK BUTTE RESERVOIR		•	•				•		•	•	○			•		•	
	BUTTE CREEK																	
27	SOURCES TO CHICO	•	•	•			•	•			•	•		•	•	•	•	
28	BELOW CHICO, INCLUDING BUTTE SLOUGH		•	•				•	•		•	•		•	•		•	
29	COLUSA BASIN DRAIN		•	•				•	•		•	○	•		•		•	
30	COLUSA BASIN DRAIN TO I EYE STREET BRIDGE	•	•					•	•	•	•	•	•	•	•		•	•
31	SUTTER BYPASS		•					•			•			•		•		
	FEATHER RIVER																	
32	LAKE ALMANOR						•	•			•	•			•			
33	NORTH FORK, FEATHER RIVER	•					•	•	•	•						•	•	
	MIDDLE FORK, FEATHER RIVER																	
34	SOURCE TO LITTLE LAST CHANCE CREEK		•	•				•	•	•	•	•				•	•	
35	FRENCHMAN RESERVOIR							•		•	○	•				•	•	
36	LITTLE LAST CHANCE CREEK TO LAKE OROVILLE	•						•	•	•	•	•				•	•	
37	LAKE DAVIS							•		•	○	•				•	•	
38	LAKES BASIN LAKES							•		•		•				•	•	
39	LAKE OROVILLE	•	•				•	•		•	•	•				•	•	
40	FISH BARRIER DAM TO SACRAMENTO RIVER	•	•					•	•	•	•	•	•	•	•	•	•	
	YUBA RIVER																	
41	SOURCES TO ENGLEBRIGHT RESERVOIR	•	•	•			•	•		•		•				•	•	
42	ENGLEBRIGHT DAM TO FEATHER RIVER		•	•			•	•	•	•	•	•				•	•	
43	BEAR RIVER	•	•	•			•	•	•	•	•	•	•	•	•	•	•	
	AMERICAN RIVER																	
44	NORTH FORK, SOURCE TO FOLSOM LAKE	•	•					•		•	○	•				•	•	
45	MIDDLE FORK, SOURCE TO FOLSOM LAKE	•	•	•			•	•	•	•	○	•				•	•	
46	DESOLATION VALLEY LAKES							•		•		•				•	•	
47	AUBURN RESERVOIR (UNDER CONSTRUCTION)	○	○				○	○		○		○				○	○	
	SOUTH FORK																	
48	SOURCE TO PLACERVILLE	•					•	•	•	•	○	•				•		
49	PLACERVILLE TO FOLSOM LAKE	•	•				•	•		•	•	•					•	
50	FOLSOM LAKE	•	•			○	•	•		•	•	•					•	
51	FOLSOM DAM TO SACRAMENTO RIVER	•	•			•	•	•	•	•	•	•	•	•	•	•	•	

LEGEND

● EXISTING BENEFICIAL USES

○ POTENTIAL BENEFICIAL USES

NOTE:

Surface waters with the beneficial uses of Groundwater Recharge (GWR), Freshwater Replenishment (FRSH), and Preservation of Rare and Endangered Species (RARE) have not been identified in this plan. Surface waters of Basins 5A, 5B, and 5C falling within these beneficial use categories will be identified in the future as part of the continuous planning process to be conducted by the State Water Resources Control Board.

SURFACE WATER BODIES AND BENEFICIAL USES

	SURFACE WATER BODIES[1]	MUN	AGRI-CULTURE		INDUSTRY			RECREATION			FRESHWATER HABITAT[3]		MIGRATION		SPAWNING		WILD	NAV
		MUN	AGR		PROC	IND	POW	REC 1	[2]	REC 2	WARM	COLD	MIGR		SPWN		WILD	NAV
		MUNICIPAL AND DOMESTIC SUPPLY	IRRIGATION	STOCK WATERING	PROCESS	SERVICE SUPPLY	POWER	CONTACT	CANOEING AND RAFTING	OTHER NONCONTACT	WARM	COLD	WARM[4]	COLD[5]	WARM[4]	COLD[5]	WILDLIFE HABITAT	NAVIGATION
52	YOLO BYPASS		•	•				•		•	•	○	•	•	•		•	
	CACHE CREEK																	
53	CLEAR LAKE	•	•	•				•		•	•	○			•		•	
54	CLEAR LAKE TO YOLO BYPASS		•	•	•	•		•	•	•	•	○			•	•	•	
	PUTAH CREEK																	
55	LAKE BERRYESSA	•	•	•			○	•		•	•	•			•		•	
56	LAKE BERRYESSA TO YOLO BYPASS	•	•	•				•	•	•	•	○			•		•	
	OTHER LAKES AND RESERVOIRS IN BASIN 5A[7]	•	•	•	•		•	•		•	•	•				•	•	
	COSUMNES RIVER																	
57	SOURCES TO NASHVILLE RESERVOIR (PROPOSED)	•	•					•		•		•				•	•	
58	NASHVILLE RESERVOIR (PROPOSED)	○					○	○		○	○	○	○		○	○	○	
59	PROPOSED NASHVILLE RESERVOIR TO DELTA	•	•	•				•	•	•	•	•	•	•	•	•	•	
	MOKELUMNE RIVER																	
60	SOURCES TO PARDEE RESERVOIR	•					•	•	•	•	•	•	•		•	•	•	
61	PARDEE RESERVOIR [8]	•					•	•		•	•	•			•	•	•	
62	CAMANCHE RESERVOIR	•	•	•				•		•	•	•	•		•	•	•	
63	CAMANCHE RESERVOIR TO DELTA		•	•				•	•	•	•	•	•	•	•	•	•	
	CALAVERAS RIVER																	
64	SOURCE TO NEW HOGAN RESERVOIR							•	•	•	•	•	•		•	•	•	
65	NEW HOGAN RESERVOIR							•		•	•	•	•		•	•	•	
66	NEW HOGAN RESERVOIR TO DELTA	•	•	•	○	○		•	•	•	•	•	•	•	•	•	•	
	OTHER LAKES AND RESERVOIRS IN BASIN 5B[7]	•	•	•	•		•	•		•	•	•				•	•	
	SAN JOAQUIN RIVER																	
67	SOURCES TO MILLERTON LAKE	•	•	•			•	•	•	•	•	•					•	
68	MILLERTON LAKE	○	•	•				•		•	•	○					•	
69	FRIANT DAM TO MENDOTA POOL	•	•	•	•			•	•	•	•	•	•	•	•	○	•	
70	MENDOTA DAM TO SACK DAM	○	•	•	•			•	•	•	•		•	•	•	○	•	
71	SACK DAM TO MOUTH OF MERCED RIVER	○	•	•	•			•	•	•	•		•	•	•	○	•	
	FRESNO RIVER																	
72	SOURCE TO HIDDEN RESERVOIR A	•	•	•				•		•	•	•					•	
73	HIDDEN RESERVOIR (PROPOSED) A	•		•				•		•	•						•	
74	HIDDEN RESERVOIR TO SAN JOAQUIN RIVER	○	•	•				•	○	•	•						•	
	CHOWCHILLA RIVER																	
75	SOURCE TO BUCHANAN RESERVOIR B							•		•	•	•					•	
76	BUCHANAN RESERVOIR B	•	•	•				•		•	•						•	
77	BUCHANAN DAM TO SAN JOAQUIN RIVER	○	•		•			•	○	•	•						•	
	MERCED RIVER																	
78	SOURCE TO McCLURE LAKE	○	•				•	•	•	•	•	•					•	
79	McCLURE LAKE	○	•				•	•		•	•	•					•	
80	McSWAIN RESERVOIR	○	•				•	•		•	•	•					•	
81	McSWAIN RESERVOIR TO SAN JOAQUIN RIVER	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
82	YOSEMITE LAKE							•		•	•	•					•	
83	MOUTH OF MERCED RIVER TO VERNALIS	○	•	•	•			•	•	•	•		•	•	•		•	
	TUOLUMNE RIVER																	
84	SOURCE TO DON PEDRO RESERVOIR	•	•	•			•	•	•	•	•	•					•	
85	DON PEDRO RESERVOIR	○					•	•		•	•	•					•	
86	DON PEDRO DAM TO SAN JOAQUIN RIVER	○	•	•				•	•	•	•	•		•	•	•	•	
	STANISLAUS RIVER																	
87	SOURCE TO NEW MELONES RESERVOIR (PROPOSED)	•	•	•			•	•	•	•	•	•					•	
88	NEW MELONES RESERVOIR	•	•	•			•	•		•		•					•	
89	TULLOCH RESERVOIR	○	•	•			•	•		•	•						•	
90	GOODWIN DAM TO SAN JOAQUIN RIVER	○	•	•	•	•	•	•	•	•	•	•		•	•	•	•	
91	SAN LUIS RESERVOIR	•	•	•		•	•	•		•	•						•	
92	O'NEILL RESERVOIR	•	•	•				•		•	•							
93	OTHER LAKES AND RESERVOIRS IN BASIN 5C[7]	•					•	•		•	•	•				•	•	
94	CALIFORNIA AQUEDUCT	•	•	•	•	•	•	•		•							•	
95	DELTA-MENDOTA CANAL	•	•	•				•		•	•						•	
(Δ)	SACRAMENTO-SAN JOAQUIN DELTA[9] (10)	•	•	•	•	•		•		•	•	•	•	•	•		•	•

(1) Those streams not listed have the same beneficial uses as the streams lakes reservoirs to which they are tributary.

(2) Shown for streams and rivers only with the implication that certain flows are required for this beneficial use.

(3) Resident does not include anadromous. Any Segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.

(4) Striped bass, sturgeon, and shad.

(5) Salmon and steelhead.

(6) As a primary beneficial use

(7) The indicated beneficial uses are to be protected for all waters except in specific cases where evidence indicates the appropriateness of additional or alternative beneficial use designations.

(8) Sport fishing is the only recreation activity permitted.

(9) Beneficial uses vary throughout the Delta and will be evaluated on a case-by-case basis.

(10) Per State Board Resolution No. 90-26, Marsh Creek and Marsh Creek Reservoir in Contra Costa County are assigned the following beneficial uses: REC1 and REC2 (potential uses), WARM, WILD, and RARE.

A/ Hidden Reservoir =Eastman Lake
B/ Buchanan Reservoir =Hensley Lake

FIGURE II-2

GROUNDWATER BODIES AND BENEFICIAL USES

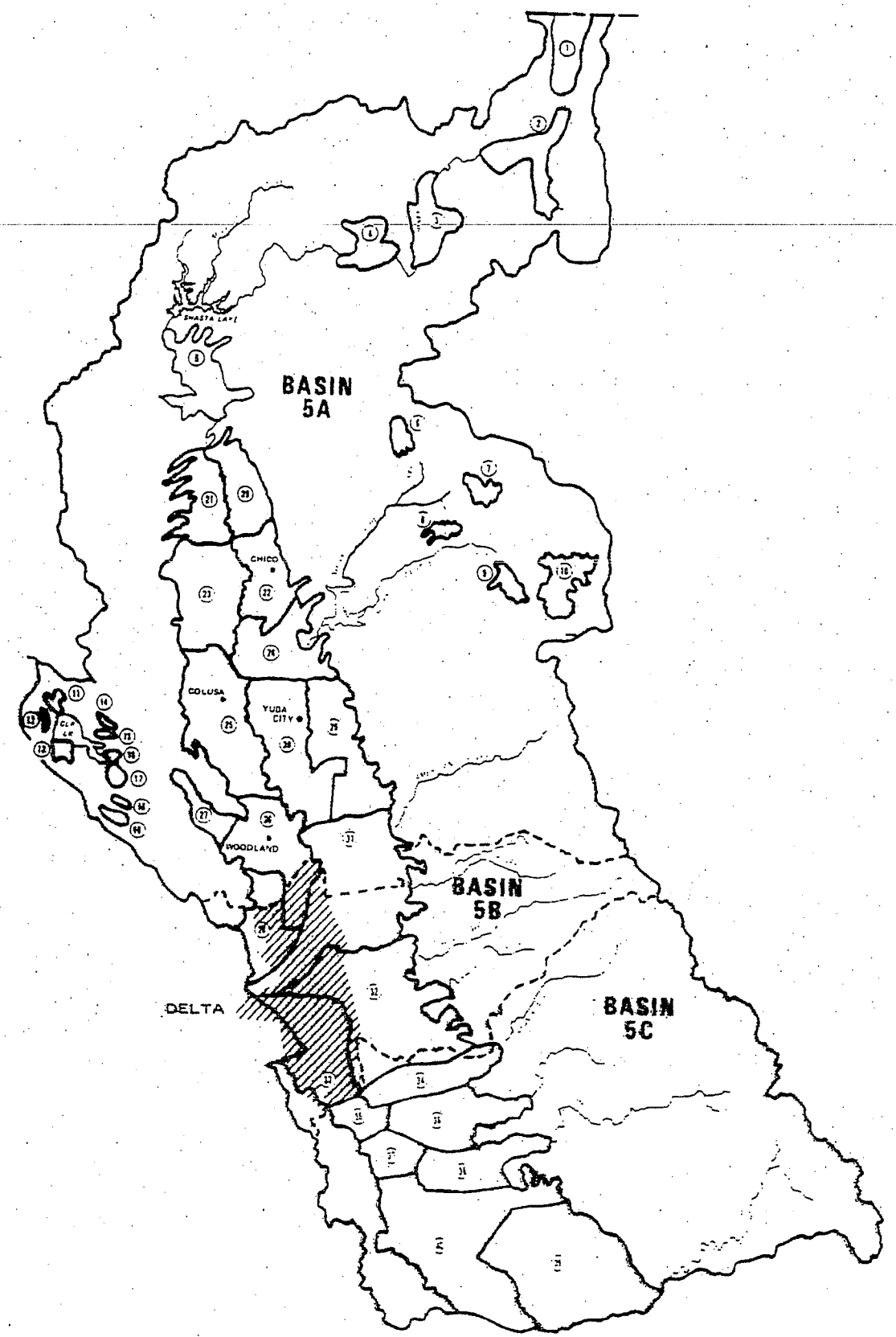


TABLE II-2

GROUND WATER BODIES AND BENEFICIAL USES

	MUNICIPAL AND DOMESTIC	IRRIGATION	STOCK WATERING	PROCESS	SERVICE SUPPLY
1. GOOSE LAKE VALLEY	●	●	●		
2. ALTURAS BASIN	●	●	●		
3. BIG VALLEY	●	●	●		
4. FALL RIVER VALLEY	●	●	●		
5. REDDING BASIN	●	●	●	●	
6. LAKE ALMANOR VALLEY	●	●			
7. INDIAN VALLEY	●	●			
8. AMERICAN VALLEY	●	●	●		
9. MOHAWK VALLEY	●	●	●		
10. SIERRA VALLEY	●	●	●		
11. UPPER LAKE VALLEY	●	●	●		
12. SCOTT VALLEY	●	●	●		
13. KELSEYVILLE VALLEY	●	●	●	●	
14. LONG VALLEY	●	●	●		
15. HIGH VALLEY	●	●	●		
16. BURNS VALLEY	●	●	●		
17. LOWER LAKE VALLEY	●	●	●		
18. COYOTE VALLEY	●	●	●		
19. COLLAYOMI VALLEY	●	●	●		
20. EAST TEHAMA CO. & NW CORNER OF BUTTE CO.	●	●	●		
21. TEHAMA CO. WEST OF SACRAMENTO RIVER	●	●	●		
22. NORTH BUTTE CO.	●	●	●		
23. GLENN CO.	●	●	●		
24. SOUTH BUTTE CO.	●	●	●		
25. COLUSA CO. & NORTH YOLO CO.	●	●	●		
26. SOUTH YOLO CO.	●	●	●	●	
27. CAPAY VALLEY	●	●	●		
28. SOLANO CO.	●	●	●	●	
29. PLACER CO. & YUBA CO.	●	●	●	●	
30. SUTTER CO.	●	●	●		
31. SACRAMENTO CO.	●	●	●	●	●
32. SAN JOAQUIN CO.	●	●	●	●	●
33. CONTRA COSTA CO.	●	●	●	●	●
34. H*	●	●	●	●	●
35. I & G	●	●	●		
36. F	●	●	●	●	
37. E	●	●	●	●	
38. D	●	●	●		
39. A & B	●	●	●	●	●
40. C	●	●	●	●	

*RECENT DWR DESIGNATION OF GROUNDWATER BODIES IN SAN JOAQUIN BASIN (31-37)

III. WATER QUALITY OBJECTIVES

The Porter-Cologne Water Quality Control Act defines water quality objectives *(WQOs)* as "...the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."[5/] It also requires the Regional Board to establish water quality objectives, while acknowledging that it is possible for water quality to be changed to some degree without unreasonably affecting beneficial uses. In establishing WQOs, the Regional Board must consider, among other things, the following factors:

- Past, present, and probable future beneficial uses;
- Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
- Economic considerations;
- The need for developing housing within the region.[6/]

The Federal Clean Water Act requires a state to submit for approval of the Administrator of the U.S. Environmental Protection Agency *(EPA)* all new or revised water quality standards which are established for surface and ocean waters. As noted earlier, California water quality standards consist of both beneficial uses (identified in Chapter II) and the WQOs based on those use.

There are **six important points** that apply to WQOs. The **first point** is that WQOs can be revised through the basin plan amendment process. As indicated previously, federal regulations call for each state to review its water quality standards at least every three years. These Triennial Reviews provide one opportunity to evaluate changing water quality objectives, because they begin with an identification of potential and actual water quality problems, i.e., beneficial use impairments. Since impairments may be associated with an exceedence of water quality objectives, the Regional Board uses the results of the Triennial Review to implement actions to assess, remedy, monitor, or otherwise address the impairments, as appropriate, in order to achieve objectives and protect beneficial uses. If a problem is found to occur because, for example, a WQO is too weak to protect beneficial uses, the Basin Plan should be amended to make the objective more stringent. (Better enforcement of the WQOs or adoption of certain policies or redirection of staff and resources may also be proper responses to water quality problems. See the Implementation chapter for further discussion.)

Changes to the objectives can also occur because of new scientific information on the effects of water contaminants. A major source of information is the EPA which develops data on the effects of chemical and other constituent concentrations on particular aquatic species and human health. Other information sources for data on protection of beneficial uses include the National Academy of Science which has published data on bioaccumulation and the federal Food and Drug Administration which has issued criteria for unacceptable levels of chemicals in fish and shellfish used for human consumption. The Regional Board may make use of those and other State agency information sources in assessing the need for new WQOs.

The **second point** is that objectives are to be achieved primarily through the establishment of waste discharge requirements (including permits). In setting these, the Regional Board considers the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate WQOs. It can then make a finding as to the beneficial uses to be protected within the area of influence of the discharge and establish waste discharge requirements to protect those uses and to meet water quality objectives. The objectives are intended to govern the levels of constituents and

characteristics in the main water mass unless otherwise designated. They may not apply at or in the immediate vicinity of effluent discharges, but at the edge of the *mixing zone* if areas of dilution or criteria for diffusion or dispersion are defined in the waste discharge specifications.

The **third point** is that achievement of the objectives depends on applying them to controllable water quality factors. *Controllable water quality factors* are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the State, that are subject to the authority of the State Board or the Regional Board, and that may be reasonably controlled. Controllable factors are not allowed to cause further degradation of water quality in instances where other factors have already resulted in exceedence of the WQOs.

The **fourth point** is that in cases where WQOs are formulated to preserve historic conditions, there may be insufficient data to determine completely the temporal and hydrologic variability representative of historic water quality. When violations of such objectives occur, the Regional Board judges the reasonableness of achieving those objectives through regulation of the controllable factors in the areas of concern.

The **fifth point** is that the State Board adopts policies and plans for water quality control which can specify WQOs or affect their implementation. Chief among the State Board's policies for water quality control is State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California). It requires that wherever the existing quality of surface or ground waters is better than the quality of those waters established in a basin plan as objectives, the existing quality will be maintained unless as otherwise provided by Resolution No. 68-16 or any revisions thereto. This policy and others establish *general objectives*. The State Board's water quality control plans applicable to sub-basins 5A, 5B, and 5C are the Thermal Plan and the Delta Plan. The Thermal Plan and its WQOs are in the Appendix. The Delta Plan WQOs are listed as Table III-5. The State Board's plans and policies that the Basin Plan must conform to are addressed in Chapter IV, Implementation.

The **sixth point** is that WQOs may be in numerical or narrative form. The enumerated milligram-per-liter (mg/l) limit for copper is an example of a numerical objective; the objective for color is an example of a narrative form.

WATER QUALITY OBJECTIVES FOR INLAND SURFACE WATERS

The objectives below are presented by categories which, like the Beneficial Uses of Chapter II, were standardized for uniformity among the Regional Boards when basin planning was first underway. The WQOs apply to all surface waters in sub-basins 5A, 5B, and 5C including the Delta, or as noted. *(The boundaries of the Delta are identified in Figure III-1.)* The numbers in parentheses following specific water bodies are keyed to Figure II-1.

Bacteria

In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

For Folsom Lake (50), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 100/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 200/100 ml.

Biostimulatory Substances

Water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

Chemical Constituents

Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in the California Code of Regulations, Title 22, Division 4, Chapter 15.

The limits described there will be reviewed on a case-by-case basis in order to assure protection of beneficial uses other than MUN, as appropriate. To the extent of any conflict with the above, the more stringent objective applies.

The chemical constituent objectives in Table III-1 apply to the water bodies specified.

TABLE III-1

TRACE ELEMENT WATER QUALITY OBJECTIVES

CONSTITUENT	MAXIMUM CONCENTRATION (mg/l)	APPLICABLE WATER BODIES
Copper	0.0056*	Sacramento River and its tributaries above State Hwy 32 bridge at Hamilton City.
Zinc	0.016*	As noted above for Copper.
Cadmium	0.00022*	As noted above for Copper.
Arsenic	0.01	Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento (13, 30); American River from Folsom Dam to the Sacramento River (51); Folsom Lake (50); and the Sacramento-San Joaquin Delta.
Barium	0.1	As noted above for Arsenic.
Copper	0.01**	As noted above for Arsenic.**
Cyanide	0.01	As noted above for Arsenic.
Iron	0.3	As noted above for Arsenic.
Manganese	0.05	As noted above for Arsenic.
Silver	0.01	As noted above for Arsenic.
Zinc	0.1**	As noted above for Arsenic.**
Selenium	0.012 0.005 (monthly mean) 0.008 (monthly mean, critical year***)	San Joaquin River, mouth of the Merced River to Vernalis
Molybdenum	0.015 0.010 (monthly mean)	San Joaquin River, mouth of the Merced River to Vernalis

TABLE III-1 TRACE ELEMENT
WATER QUALITY OBJECTIVES (Continued)

CONSTITUENT	MAXIMUM CONCENTRATION (mg/l)	APPLICABLE WATER BODIES
Boron	2.0 (15 March through 15 September) 0.8 (monthly mean, 15 March through 15 September)	San Joaquin River, mouth of the Merced River to Vernalis
	2.6 (16 September through 14 March) 1.0 (monthly mean, 16 September through 14 March)	
	1.3 (monthly mean, critical year***)	
Selenium	0.026**** 0.010 (monthly mean)****	Salt Slough, Mud Slough (north), San Joaquin River from Sack Dam to the mouth of Merced River
Molybdenum	0.050**** 0.019 (monthly mean)****	Salt Slough, Mud Slough (north), San Joaquin River from Sack Dam to the mouth of Merced River
Boron	5.8**** 2.0 (monthly mean, 15 March through 15 September)****	Salt Slough, Mud Slough (north), San Joaquin River from Sack Dam to the mouth of Merced River
Selenium	0.002 (monthly mean)	Any water supplies used for waterfowl habitat in the Grassland Water District, San Luis National Wildlife Refuge, and Los Banos State Wildlife Area.

* The effects of these concentrations were measured by exposing test organisms to dissolved aqueous solutions of 40 mg/l hardness that had been filtered through a 0.45 micron membrane filter. Where deviations from 40 mg/l of water hardness occur, the objectives, in mg/l, shall be determined using the following formulas:

$$Cu = e^{(0.905)(\ln \text{hardness}) - 1.612} \times 10^{-3}$$

$$Zn = e^{(0.830)(\ln \text{hardness}) - 0.289} \times 10^{-3}$$

$$Cd = e^{(1.160)(\ln \text{hardness}) - 5.777} \times 10^{-3}$$

** Does not apply to Sacramento River above State Hwy. 32 bridge at Hamilton City. See relevant objectives (*) above.

*** See Table IV-3 or as updated by the Delta Hearings.

**** An alternate set of objectives is proposed to go into effect if the plan to use the San Luis Drain is implemented. The alternate set of objectives provide for better water quality in Salt Slough and the San Joaquin River, Sack Dam to the mouth of Mud Slough (north) and a longer compliance period for Mud Slough (north) and the San Joaquin River, mouth of Mud Slough (north) to mouth of the Merced River.

Color

Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses.

Dissolved Oxygen

The monthly median of the mean daily dissolved oxygen *(DO)* concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time:

Waters designated WARM 5.0 mg/l
Waters designated COLD 7.0 mg/l
Waters designated SPWN 7.0 mg/l

DO--Special Cases in 5A, 5B, and 5C Other Than the Delta

DO shall be equal to or greater than the amounts in Table III-2 for the water bodies specified. To the extent of any conflict with the above, the more stringent objective applies.

TABLE III-2
SPECIFIC DISSOLVED OXYGEN WATER QUALITY OBJECTIVES

AMOUNT	TIME	PLACE
9.0 mg/l*	1 June to 31 August	Sacramento River from Keswick Dam to Hamilton City (13)
7.0 mg/l	1 June to 31 August	Sacramento River from Hamilton City to I Street Bridge (30
7.0 mg/l	all year	Lake Natoma (51)
8.0 mg/l	1 September to 31 May	Feather River from Fish Barrier Dam at Oroville to Honcut Creek (40)
8.0 mg/l	all year	Merced River from Cressy to New Exchequer Dam (78)
8.0 mg/l	15 October to 15 June	Tuolumne River from Waterford to La Grange (86)
established seasonal levels	all year	Sacramento River from Keswick Dam to I Street Bridge (13,30)

*When natural conditions lower dissolved oxygen below this level, the concentrations shall be maintained at or above 95 percent of saturation.

Delta Waters

In addition to the general objective previously described, the dissolved oxygen concentration for the Delta also shall not be reduced below:

7.0 mg/l in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge; and 5.0 mg/l in all other Delta waters except for those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.

Floating Material

Water shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses.

Oil and Grease

Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

pH

The pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.

For Goose Lake (2), pH shall be less than 9.5 and greater than 7.5 at all times.

Pesticides

--No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.

--Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.

--Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.

--Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.).

--Pesticide concentrations shall not exceed the lowest levels technically and economically achievable.

--Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

--Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of thiobencarb in excess of 1.0 µg/l.

Where more than one objective may be applicable, the most stringent objective applies.

For the purposes of this objective, the term pesticide shall include (1) any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever, or (2) any spray adjuvant, or (3) any breakdown products of these materials that threaten beneficial uses. Note that discharges of "inert" ingredients included in pesticide formulations must comply with all applicable water quality objectives.

Radioactivity

Radionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.

Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels specified in the California Code of Regulations, Title 22, Division 4, Chapter 15.

Salinity

Electrical Conductivity and Total Dissolved Solids--Special Cases in 5A, 5B, and 5C Other Than the Delta

The objectives for electrical conductivity and total dissolved solids in Table III-3 apply to the water bodies specified. To the extent of any conflict with the general Chemical Constituents water quality objectives, the more stringent shall apply.

Electrical Conductivity, Total Dissolved Solids, and Chloride--Delta Waters

Per State Board adoption of the Delta Plan and Water Rights Decision 1485 in August 1978, the objectives for salinity (electrical conductivity, total dissolved solids, and chloride) and flow which apply to the Delta are listed in Table III-5 at the chapter's end. See Figure III-2 for an explanation of year types.

Table III-3
ELECTRICAL CONDUCTIVITY AND TOTAL DISSOLVED SOLIDS

PARAMETER	WATER QUALITY OBJECTIVES	APPLICABLE WATER BODIES
Electrical Conductivity (at 25°C)	Shall not exceed 230 micromhos/cm (50 percentile) or 235 micromhos/cm (90 percentile) at Knights Landing above Colusa Basin Drain; or 240 micromhos/cm (50 percentile) or 340 micromhos/cm (90 percentile) at I Street Bridge, based upon previous moving 10 years of record.	Sacramento River (13, 30)
	Shall not exceed 150 micromhos/cm (90 percentile) in well-mixed waters of the Feather River.	North Fork of the Feather River (33); Middle Fork of the Feather River from Little Last Chance Creek to Lake Oroville (36); Feather River from the Fish Barrier Dam at Oroville to Sacramento River (40)
	Shall not exceed 150 micromhos/cm from Friant Dam to Gravelly Ford (90 percentile).	San Joaquin River, Friant Dam to Mendota Pool (69)
Total Dissolved Solids	Shall not exceed 125 mg/l (90 percentile)	North Fork of the American River from the source to Folsom Lake (44); Middle Fork of the American River from the source to Folsom Lake (45); South Fork of the American River from the source to Folsom Lake (48, 49); American River from Folsom Dam to Sacramento River (51)
	Shall not exceed 100 mg/l (90 percentile)	Folsom Lake (50)
	Shall not exceed 1,300,000 tons	Goose Lake (2)

Sediment

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Settleable Material

Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

Suspended Material

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

Tastes and Odors

Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

Temperature

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.

Temperature objectives for COLD interstate waters, WARM interstate waters, and Enclosed Bays and Estuaries are as specified in the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California" including any revisions.

At no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature.

Temperature changes due to controllable factors shall be limited for the water bodies specified as described in Table III-4. To the extent of any conflict with the above, the more stringent objective applies.

TABLE III-4
SPECIFIC TEMPERATURE OBJECTIVES

DATES	APPLICABLE WATER BODY
From 1 December to 15 March, the maximum temperature shall be 55°F.	Sacramento River from its source to Box Canyon Reservoir (9); Sacramento River from Box Canyon Dam to Shasta Lake (11)
From 16 March to 15 April, the maximum temperature shall be 60°F.	
From 16 April to 15 May, the maximum temperature shall be 65°F.	
From 16 May to 15 October, the maximum temperature shall be 70°F.	
From 16 October to 15 November, the maximum temperature shall be 65°F.	
From 16 November to 30 November, the maximum temperature shall be 60°F.	
The temperature in the epilimnion shall be less than or equal to 75°F or mean daily ambient air temperature, whichever is greater.	Lake Siskiyou (10)
The temperature shall not be elevated above 56°F in the reach from Keswick Dam to Hamilton City nor above 68°F in the reach from Hamilton City to the I Street Bridge during periods when temperature increases will be detrimental to the fishery.	Sacramento River from Shasta Dam to I Street Bridge (13, 30)

Toxicity

All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Board. The Regional Board may also refer to criteria for toxic substances developed by the State Water Resources Control Board, the U.S. Food and Drug Administration, the National Academy of Sciences, the Environmental Protection Agency, and other organizations to evaluate conformity with this objective.

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors shall not be less than that for the same water body in areas unaffected by the waste discharge, or, when necessary, for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater, latest edition. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate; additional numerical receiving water quality objectives for specific toxicants will be established as sufficient data become available; and source control of toxic substances will be encouraged.

Turbidity

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:

- Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTUs), increases shall not exceed 20 percent.
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

Exceptions to the above limits will be considered when a dredging operation can cause an increase in turbidity. In those cases, an allowable zone of dilution within which turbidity in excess of the limits may be tolerated will be defined for the operation and prescribed in a discharge permit.

For Folsom Lake (50) and American River (Folsom Dam to Sacramento River) (51), except for periods of storm runoff, the turbidity shall be less than or equal 10 NTUs. To the extent of any conflict with the general turbidity objective, the more stringent applies.

For Delta waters, the general objectives for turbidity apply subject to the following: except for periods of storm runoff, the turbidity of Delta waters shall not exceed 50 NTUs in the waters of the Central Delta and 150 NTUs in other Delta waters. Exceptions to the Delta specific objectives will be considered when a dredging operation can cause an increase in turbidity. In this case, an allowable zone of dilution within which turbidity in excess of limits can be tolerated will be defined for the operation and prescribed in a discharge permit.

WATER QUALITY OBJECTIVES FOR GROUND WATERS

The following objectives apply to all ground waters of 5A, 5B, and 5C.

Bacteria

In ground waters used for domestic or municipal supply (MUN) the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 ml.

Chemical Constituents

Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.

Ground waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Division 4, Chapter 15.

Ground waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

Radioactivity

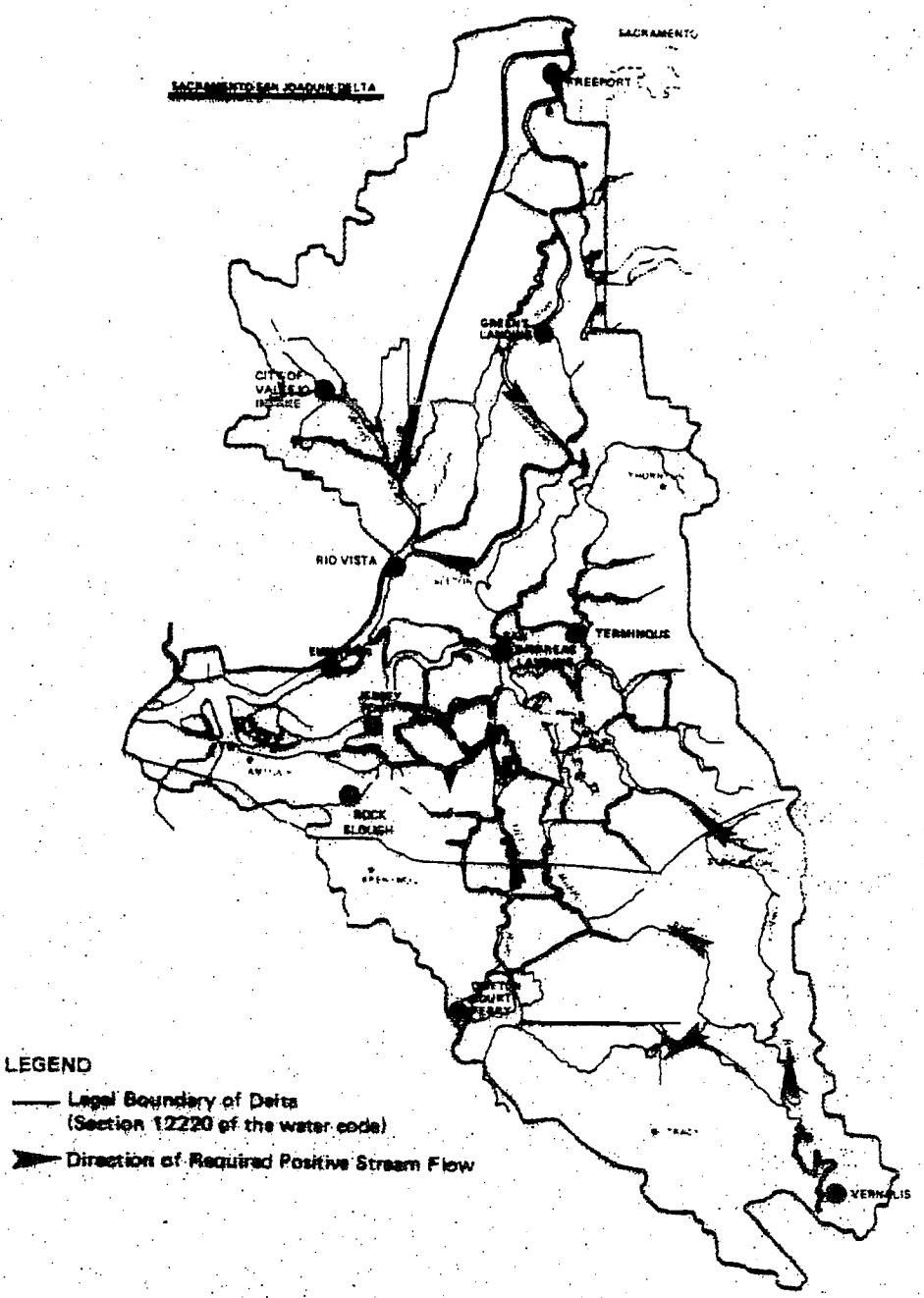
Ground waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Division 4, Chapter 15.

Tastes and Odors

Ground waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

FIGURE III-1

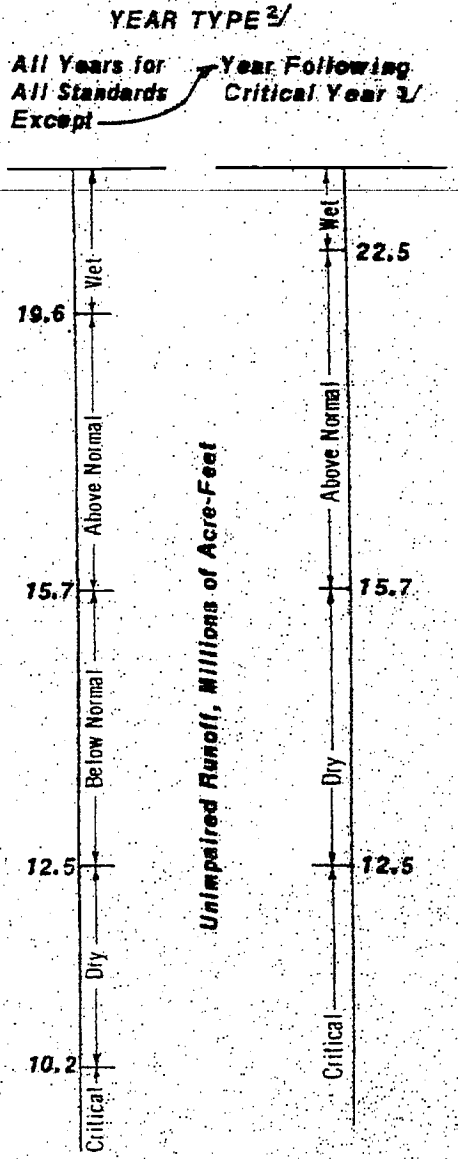
BOUNDARIES AND WATER QUALITY STATIONS



YEAR CLASSIFICATION

Year classification shall be determined by the forecast of Sacramento Valley unimpaired runoff for the current water year *(October 1 of the preceding calendar year through September 30 of the current calendar year)* as published in California Department of Water Resources Bulletin 120 for the sum of the following locations: Sacramento River above Bend Bridge, near Red Bluff; Feather River, total inflow to Oroville Reservoir; Yuba River at Smartville; American River, total inflow to Folsom Reservoir. Preliminary determinations of year classification shall be made in February, March and April with final determination in May. These preliminary determinations shall be based on hydrologic conditions to date plus forecasts of future runoff assuming normal precipitation for the remainder of the water year.

YEAR TYPE	RUNOFF, MILLIONS OF ACRE-FEET
Wet 1/	equal to or greater than 19.6 (except equal to or greater than 22.5 in a year following a critical year). 3/
Above Normal 1/	greater than 15.7 and less than 19.6 (except greater than 15.7 and less than 22.5 in a year following a critical year). 3/
Below Normal 1/	equal to or less than 15.7 and greater than 12.5 (except in a year following a critical year). 3/
Dry	equal to or less than 12.5 and greater than 10.2 (except equal to or less than 15.7 and greater than 12.5 in a year following a critical year). 3/
Critical	equal to or less than 10.2 (except equal to or less than 12.5 in a year following a critical year). 3/



1/ *Any otherwise wet, above normal, or below normal year may be designated a subnormal snowmelt year whenever the forecast of April through July unimpaired runoff reported in the May issue of Bulletin 120 is less than 5.9 million acre-feet.*

2/ *The year type for the preceding water year will remain in effect until the initial forecast of unimpaired runoff for the current water year is available.*

3/ *"Year following critical year" classification does not apply to Agricultural, Municipal and Industrial standards.*

TABLE III-5

WATER QUALITY STANDARDS
FOR THE SACRAMENTO–SAN JOAQUIN DELTA AND SUISUN MARSH [1]

BENEFICIAL USE PROTECTED and LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE [2]	VALUES	
MUNICIPAL and INDUSTRIAL					
Contra Costa Canal Intake at Pumping Plant No. 1	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250	
Contra Costa Canal Intake at Pumping Plant No. 1 or Antioch Water Works Intake on San Joaquin River	Chloride	Maximum Mean Daily 150 mg/l Chloride for at least the number of days shown during the Calendar Year. Must be provided in intervals of not less than two weeks duration. (% of Year shown in parenthesis)		Number of Days Each Calendar Year Less than 150 mg/l Chloride	
			Wet	240 (66%)	
			Ab. Normal	190 (52%)	
			Bl. Normal	175 (48%)	
			Dry	165 (45%)	
			Critical	155 (42%)	
City of Vallejo Intake at Cache Slough	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250	
Clifton Court Forebay Intake at West Canal	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250	
Delta Mendota Canal at Tracy Pumping Plant	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250	
AGRICULTURE				0.45 EC April 1 to Date Shown	EC from Date Shown 3/ to Aug. 15
WESTERN DELTA					
Emmaton on the Sacramento River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	July 1	0.63
			Bl. Normal	June 20	1.14
			Dry	June 15	1.67
			Critical	—	2.78
Jersey Point on the San Joaquin River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	June 20	0.74
			Dry	June 15	1.35
			Critical	—	2.20
INTERIOR DELTA					
Terminous on the Mokelumne River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	Aug. 15	—
			Dry	Aug. 15	—
			Critical	—	0.54
San Andreas Landing on the San Joaquin River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	Aug. 15	—
			Dry	June 25	0.58
			Critical	—	0.87
SOUTHERN DELTA					
Vernalis on the San Joaquin River	Total Dissolved Solids	Maximum 30-day Running Average of Mean Daily TDS in mg/l	All (after New Melones Reservoir becomes operational and until the standards below become effective)	500	
				Apr. 1 to Aug. 31	Sept. 1 to March 31
Tracy Road Bridge on Old River Old River near Middle River Brandt Bridge on San Joaquin River Vernalis on San Joaquin River	Electrical Conductivity	Maximum 30-day Running Average of Mean Daily EC in mmhos	All (to become effective only upon the completion of suitable circulation and water supply facilities) [4]	0.7	1.0

WATER QUALITY STANDARDS
FOR THE SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH [1]

BENEFICIAL USE PROTECTED and LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE [2]	VALUES
FISH AND WILDLIFE				
• *STRIPED BASS SPAWNING*				
Prisoners Point on the San Joaquin River	*Electrical Conductivity*	*Average of mean daily EC for the period not to exceed*	*All*	*April 1 to May 5: 0.550 mmhos*
Chipps Island	*Delta Outflow Index in cfs*	*Average of the daily Delta outflow index for the period, not less than*	*All*	*April 1 to April 14: 8700 cfs*
Antioch Waterworks Intake on the San Joaquin River	*Electrical Conductivity*	*Average of mean daily EC for the period, not more than*	*All*	*April 15 to May 5: 1.5 mmhos*
Antioch Waterworks Intake	*Electrical Conductivity (Relaxation Provision – replaces the above Antioch and Chipps Island Standard whenever the projects impose deficiencies in firm supplies [5]*	*Average of mean daily EC for the period, not more than the values corresponding to the deficiencies taken (linear interpolation to be used to determine values between those shown)*	*All – whenever the projects impose deficiencies in firm supplies [5]*	*Total Annual Imposed Deficiency MAF* / *April 1 to May 5 EC in mmhos*: 0 → 1.5; 0.5 → 1.9; 1.0 → 2.5; 1.5 → 3.4; 2.0 → 4.4; 3.0 → 10.3; 4.0 or more → 25.2
• *STRIPED BASS SURVIVAL*				
Chipps Island	*Delta Outflow Index in cfs*	*Average of the daily Delta outflow index for each period shown not less than*		*May 6–31 / June / July*
			Wet	14,000 / 14,000 / 10,000
			Ab. Normal	14,000 / 10,700 / 7,700
			Bl. Normal	11,400 / 9,500 / 6,500
			Subnormal Snowmelt	6,500 / 5,400 / 3,600
			Dry [6]	4,300 / 3,600 / 3,200
			Dry [7] or Critical	3,300 / 3,100 / 2,900
• *SALMON MIGRATIONS*				
Rio Vista on the Sacramento River	*Computed net stream flow in cfs*	*Minimum 30-day running average of mean daily net flow*		*Jan. / Feb. 1–Mar. 15 / Mar. 16–June 30*
			Wet	2,500 / 3,000 / 5,000
			Ab. Normal	2,500 / 2,000 / 3,000
			Bl. Normal	2,500 / 2,000 / 3,000
			Dry or Critical	1,500 / 1,000 / 2,000
				July / Aug. / Sept. 1–Dec. 31
			Wet	3,000 / 1,000 / 5,000
			Ab. Normal	2,000 / 1,000 / 2,500
			Bl. Normal	2,000 / 1,000 / 2,500
			Dry or Critical	1,000 / 1,000 / 1,500
• *SUISUN MARSH*				
Chipps Island at D&A Ferry Landing	*Electrical Conductivity*	*Maximum 28-day running average of mean daily EC*		*Jan.–May / Oct.–Dec.*
			Wet	12.5 mmhos / 12.5 mmhos
			Ab. Normal	12.5 mmhos / 12.5 mmhos
			Bl. Normal	12.5 mmhos / 12.5 mmhos
			Dry or Critical	12.5 mmhos / 15.6 mmhos
		(The 15.6 mmhos EC Standard applies only when project water users are taking deficiencies in scheduled water supplies [8] otherwise the 12.6 mmhos EC remains in effect.)		
Chipps Island	*Delta Outflow Index in cfs*	*Average of the daily Delta outflow index for each month, not less than values shown*	*Wet*	*February–May: 10,000 cfs*
			Subnormal Snowmelt	*February–April: 10,500 cfs*
		Minimum daily Delta outflow index for 60 consecutive days in the period	*Ab. Norm. and Bl. Norm.*	*January–April: 12,000 cfs*

WATER QUALITY STANDARDS
FOR THE SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH [1]

BENEFICIAL USE PROTECTED and LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE [2]	VALUES
FISH AND WILDLIFE				
• *SUISUN MARSH*				
Chipps Island (continued)	*Delta Outflow Index in cfs*	*Average of the daily Delta outflow index for each month, not less than values shown*	*All (if greater flow not required by above standard)—whenever storage is at or above the minimum level in the flood control reservation envelope at two out of three of the following: Shasta Reservoir, Oroville Reservoir, and CVP storage on the American River*	*Jan.–May 6,800 cfs*
Collinsville on Sacramento River (C–2) *Mirms Landing on Montezuma Slough (S–64)* *Montezuma Slough at Cutoff Slough (S–48)* *Montezuma Slough near mouth* *Suisun Slough near Volanti Slough (S–42)* *Suisun Slough near mouth (S–31)* *Goodyear Slough south of Pierce Harbor (S–35)* *Cordelia Slough above S. P. R.R. (S–32)*	*Electrical Conductivity*	*The monthly average of both daily high tide values not to exceed the values shown (or demonstrate that equivalent or better protection will be provided at the location)*	*All – To become effective Oct. 1, 1984*	Month / EC in mmhos Oct. 19.0 Nov. 15.5 Dec. 15.5 Jan. 12.5 Feb. 8.0 Mar. 8.0 Apr. 11.0 May 11.0
• *OPERATIONAL CONSTRAINTS*				
Minimize diversion of young striped bass from the Delta	*Diversions in cfs*	*The mean monthly diversions from the Delta by the State Water Project (Department) not to exceed the values shown.*	*All*	*May 3,000 / June 3,000 / July 4,600*
		The mean monthly diversions from the Delta by the Central Valley Project (Bureau), not to exceed the values shown	*All*	*May 3,000 / June 3,000*
Minimize diversion of young striped bass into Central Delta		*Closure of Delta cross channel gates for up to 20 days but no more than five out of four consecutive days at the discretion of the Department of Fish and Game upon 12 hours notice*	*All – whenever the daily Delta outflow index is greater than 12,000 cfs*	*April 16–May 31*
Minimize cross Delta movement of Salmon		*Closure of Delta Cross Channel gates (whenever the daily Delta outflow index is greater than 12,000 cfs)*	*All*	*Jan. 1–April 15*

WATER QUALITY STANDARDS FOR THE SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH 1/

FISH PROTECTIVE FACILITIES

Maintain appropriate records of the numbers, sizes, kinds of fish salvaged and of water export rates and fish facility operations.

STATE FISH PROTECTIVE FACILITY

The facility is to be operated to meet the following standards to the extent that they are compatible with water export rates:

(a) King Salmon – from November through May 14, standards shall be as follows:
- (1) Approach Velocity – 3.0 to 3.5 feet per second
- (2) Bypass Ratio – maintain 1.2:1.0 to 1.6:1.0 ratios in both primary and secondary channels
- (3) Primary Bay – not critical but use Bay B as first choice
- (4) Screened Water System – the velocity of water exiting from the screened water system is not to exceed the secondary channel approach velocity. The system may be turned off at the discretion of the operators.

(b) Striped Bass and White Catfish – from May 15 through October, standards shall be as follows:
- (1) Approach Velocity – in both the primary and secondary channels, maintain a velocity as close to 1.0 feet per second as is possible
- (2) Bypass Ratio
  - (i) When only Bay A (with center wall) is in operation maintain a 1.2:1.0 ratio
  - (ii) When both primary bays are in operation and the approach velocity is less than 2.5 feet per second, the bypass ratio should be 1.5:1.0
  - (iii) When only Bay B is operating the bypass ratio should be 1.2:1.0
  - (iv) Secondary channel bypass ratio should be 1.2:1.0 for all approach velocities.
- (3) Primary Channel – use Bay A (with center wall) in preference to Bay B
- (4) Screened Water Ratio – if the use of screened water is necessary, the velocity of water exiting the screened water system is not to exceed the secondary channel approach velocity
- (5) Clifton Court Forebay Water Level – maintain at the highest practical level.

TRACY FISH PROTECTIVE FACILITY

The secondary system is to be operated to meet the following standards, to the extent that they are compatible with water export rates:

(a) The secondary velocity should be maintained at 3.0 to 3.5 feet per second whenever possible from February through May while salmon are present

(b) To the extent possible, the secondary velocity should not exceed 2.5 feet per second and preferably 1.5 feet per second between June 1 and August 31, to increase the efficiency for striped bass, catfish, shad, and other fish. Secondary velocities should be reduced even at the expense of bypass ratios in the primary, but the ratio should not be reduced below 1:1.0

(c) The screened water discharge should be kept at the lowest possible level consistent with its purpose of minimizing debris in the holding tanks

(d) The bypass ratio in the secondary should be operated to prevent excessive velocities in the holding tanks, but in no case should the bypass velocity be less than the secondary approach velocity.

FOOTNOTES

1/ Except for flow, all values are for surface zone measurements. Except for flow, all mean daily values are based on at least hourly measurements. All dates are inclusive.

2/ See Figure III-2.

3/ When no date is shown in the adjacent column, EC limit in this column begins on April 1.

4/ If contracts to ensure such facilities and water supplies are not executed by January 1, 1980, the Board will take appropriate enforcement actions to prevent encroachment on riparian rights in the southern Delta.

5/ For the purpose of this provision firm supplies of the Bureau shall be any water the Bureau is legally obligated to deliver under any CVP contract of 10 years or more duration, excluding the Friant Division of the CVP, subject only to dry and critical year deficiencies. Firm supplies of the Department shall be any water the Department would have delivered under Table A entitlements of water supply contracts and under prior right settlements had deficiencies not been imposed in that dry or critical year.

6/ Dry year following a wet, above normal or below normal year.

7/ Dry year following a dry or critical year.

8/ Scheduled water supplies shall be firm supplies for USBR and DWR plus additional water ordered from DWR by a contractor the previous September, and which does not exceed the ultimate annual entitlement for said contractor.

NOTE: EC values are mmhos/cm at 25°C.

IV. IMPLEMENTATION

The Porter-Cologne Water Quality Control Act states that basin plans consist of beneficial uses, water quality objectives and a program of implementation for achieving their water quality objectives.[7] The implementation program shall include, but is not limited to:

1. A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private;

2. A time schedule for the actions to be taken; and,

3. A description of surveillance to be undertaken to determine compliance with the objectives.[8]

In addition, State law requires that basin plans indicate estimates of the total cost and identify potential sources of funding of any agricultural water quality control program prior to its implementation.[9] This chapter of the Basin Plan responds to all but the surveillance requirement. That is described in Chapter V.

This chapter is organized as follows: The first section is a general description of typical water quality concerns and control considerations. The second section describes the nature of State and Regional Board control actions which are necessary to achieve the water quality objectives of Chapter III. The third section contains recommendations for appropriate action by other entities. The fourth section describes the continuous planning program that the Regional Board uses to maintain water quality control. The fifth section identifies the current actions and schedule for the actions to be taken by the Regional Board. The last section lists the estimated costs and funding sources for agricultural water quality control programs that are implemented by the Regional Board.

TYPICAL WATER QUALITY CONCERNS

Water quality concerns are potential water quality problems, i.e., impairments of beneficial uses or degradations of water quality. At any given time, water quality problems generally reflect the intensity of activities of key discharge sources and the volume, quality, and uses of the receiving waters affected by the discharges. Major discharge categories in sub-basins 5A, 5B, and 5C are agriculture, municipalities and industries, and mineral exploration and extraction.

The amounts and types of problems associated with discharge activities change over time. Early federal and State control efforts tended to focus on the most understood or visible problems such as the discharge of raw sewage to rivers and streams. As these problems were controlled and as pollutant detection and measurement methods improved, regulatory emphasis shifted. For example, control of toxic discharges is now a major concern. Toxicity can be associated with many discharge activities. Its effects may be first expressed as acute or chronic reductions in the number of organisms in receiving waters. Minute amounts of toxic materials may also impair beneficial uses from accumulation in tissues or sediments.

Discharges are sometimes sorted into *point source* and *nonpoint source* categories. A point source discharge usually refers to waste emanating from a single, identifiable place. A nonpoint source discharge usually refers to waste emanating from diffused locations. The Regional Board may control either type of discharge, but the control approaches may differ.

What follows is a brief description of the water quality impacts associated with basin discharge activities and the Regional Board's control considerations.

Agriculture

Agricultural activities affect water quality in a number of ways. There are unique problems associated with irrigated agriculture, agricultural support activities, and animal confinement operations because of the volume of water used and the diffused nature of many of the discharges.

Irrigated Agriculture

Irrigated agriculture accounts for most water use in the three sub-basins. Both the San Joaquin and the

Sacramento Rivers carry substantial amounts of agricultural return water or drainage. Agricultural drainage contributes salts, nutrients, pesticides, trace elements, sediments, and other by-products that affect the water quality of the rivers and the Delta.

Salt management is critical to agriculture in the Central Valley. Evaporation and crop transpiration remove water from soils which can result in an accumulation of salts in the root zone of the soils at levels that retard or inhibit plant growth. Additional amounts of water often are applied to leach the salts below the root zones. The leached salts can reach ground or surface water. The movement of the salts to surface waters may be a natural occurrence of subsurface flows or it can result from the surface water discharge of subsurface collection systems (often called tile drains) which are routinely employed in areas of the Central Valley where farm lands have poor drainage capabilities. The tile drainage practice consists of installing collection systems below the root zone of the crops to drain soils that would otherwise stay saturated because of subsurface conditions that restrict drainage. Tile drain installation may result in TDS concentrations in drainage water many times greater than in the irrigation water that was applied to the crops. Tile drain water can also contain pesticides, trace elements, and nutrients.

Pesticides and nutrients are also major ingredients of surface agricultural drainage. They have found their way to ground and surface waters in many areas of the basins. Fish and aquatic wildlife deaths attributable to pesticide contamination of surface water occur periodically. Nitrate levels exceeding the State drinking water standards occur in ground water in the basins and there has been closure of domestic supply wells because of nitrates in several locations.

Discharge of sediment is another problem encountered with agriculture. Sedimentation impairs fisheries and, by virtue of the characteristics of many organic and inorganic compounds to bind to soil particles, it serves to distribute and circulate toxic substances through the riparian, estuarine, and marine systems. Sedimentation also increases the costs of pumping and treating water for municipal and industrial use.

The Regional Board approaches problems related to irrigated agriculture as it does other categories of problems. Staff are assigned to identify and evaluate beneficial use impairments associated with agricultural discharges. Control actions are developed and implemented as appropriate per the schedules identified through the continuous planning process (see Chapter IV).

Agricultural Support Activities

These are the activities associated with the application of pesticides, disposal of pesticide rinse waters, and formulation of pesticides and fertilizers. Major water quality problems connected with all of these operations stem from the discharge of waters used to clean equipment or work areas. The Region has confirmed cases of ground water contamination as a result of improper containment and disposal of rinse water.

Many of the application facilities fall under other Regional Board regulatory programs. When appropriate, best management practices are recommended. Regional Board staff also inspects high risk sites to evaluate compliance. Enforcement strategies are implemented as warranted.

Animal Confinement Operations

Runoff from animal confinement facilities (e.g., stockyards, dairies, poultry ranches) can impair both surface and ground water beneficial uses. The animal wastes may produce significant amounts of coliform, ammonia, nitrate, and TDS contamination. The greatest potential for water quality problems has historically stemmed from the overloading of the facilities' waste containment and treatment ponds during the rainy season. Many of the facilities are regulated under the requirements of other Regional Board programs. Otherwise, site specific best management practices are implemented at problem sites.

Silviculture

Forest management activities, principally timber harvesting and application of herbicides, have the potential to impact beneficial uses. Timber harvest activities annually take place on tens of thousands of acres of private and federal land in the Central Valley Region and they may affect water quality throughout the area being harvested. Erosion can result from road construction, logging, and post-logging operations. Logging debris may be deposited in streams. Landslides and other mass

soil movements can also occur as a result of timber operations.

Herbicides may be used in silviculture to reduce commercial timber competition from weeds, grasses, and other plants or to prepare a site for planting of commercial species by eliminating existing vegetation. Use of herbicides has caused concern among regulatory agencies and the public because of the possibility of transport from target sites to streams by wind and water runoff.

The State and Regional Boards entered into agreements with both the U.S. Forest Service and the California Department of Forestry and Fire Protection which require these agencies to control nonpoint source discharges by implementing control actions certified by the State Board as best management practices (*BMPs*). The Regional Board enforces compliance with BMP implementation and may impose control actions above and beyond what is specified in the agreements if the practices are not applied correctly or do not protect water quality. Point source discharges on federal and State and private forest lands are regulated through waste discharge limits.

Municipalities and Industries

Municipal and industrial point source discharges to surface waters are generally controlled through National Pollutant Discharge Elimination System (*NPDES*) permits. Although the NPDES program was established by the Clean Water Act, the permits are prepared and enforced by the Regional Boards per California's authority for the Act. The number of cases of ground water pollution attributable to industrial or municipal sources has increased steadily. For example, results of the Region's inventory of underground storage tanks indicate that the number of leaking tanks is likely to be very high. Ground water contamination from other industrial sources generally occurs from practices of disposing of fluids or other materials used in production processes. Waste compounds have been discharged directly to unlined sumps, pits, or depressions and spread on soils. In some cases, these disposal practices went on many years before they were discovered or discontinued.

Runoff from residential and industrial areas also contributes to water quality degradation. Urban storm water runoff contains pesticides, oil, grease, and heavy metals. Because these pollutants accumulate during the dry summer months, the first major autumn storm can flush a highly concentrated load to receiving waters and catch basins. Combined storm and sanitary systems may result in some runoff to sewage treatment plants. In other cases, storm water collection wells can produce direct discharges to ground water. Impacts of storm water contaminants on surface and ground waters are an important concern.

Mineral Exploration and Extraction

Mineral exploration and extraction discharges are associated with several ore, geothermal, and petroleum/natural gas activities. The discharge of greatest concern in sub-basins 5A, 5B, and 5C is the result of ore exploration and extraction.

Ore mining water quality problems stem from both drainage and sedimentation. Mine drainage is commonly acidic and high in heavy metals that can have severe effects on aquatic life. Acid drainage is of most concern with inactive or abandoned mines because control may be hindered by questions about mine ownership and operating history. Along much of the east side of the Coast Range, runoff, drainage, and erosion from old mercury mines is a problem that has resulted in high levels of mercury in aquatic environments and fish tissue. There are also major metal and acid discharges associated with abandoned copper mines in the Sierra/ Cascades drainages. Sedimentation can be a problem in the construction and operation of many mines.

Geothermal operations in the basins are centered in the Geysers Area of Lake County. Potential impacts to water quality are caused by soil erosion from road construction and site preparation, high pressure steam blowouts, and accidental spills of materials from drilling operations, power plants, steam condensate lines, and waste transport accidents. Bentonite clay, boron, ammonia, sodium hydroxide, sulfur compounds, heavy metals, and petroleum products are found in various concentrations in mud sumps, steam condensate lines, and sulfide abatement sludge. Operational failures can release these substances into waterways.

Drainage from active and inactive mines remains a significant problem for the Regional Board. Efforts to control drainage have gradually expanded

over the years. A staff assessment of mine water quality problems done in 1979 helped direct the Regional Board approach to the problems (see Guidelines section of this chapter). Sedimentation caused by mining can be addressed by discharge requirements for existing mines, but the Regional Board does not have a specific program for controlling erosion from abandoned or inactive mines.

Other Discharge Activities

Some remaining discharges of major concern include sedimentation from land development activities in the foothills and mountains, leachate from septic tank/individual wastewater disposal systems, and dredging and dredging spoils runoff.

Many of the foothill/mountain counties in the sub-basins face high growth rates. Sedimentation from the land disturbances associated with residential and commercial development is an increasing problem that, when added to the sedimentation resulting from farming and silvicultural operation, may require establishment of a region-wide erosion control program. The Regional Board's current practice is to emphasize local government control of erosion caused by residential development. Erosion control guidelines are included in the erosion/sedimentation action plan which is in the Appendix.

Improperly located, designed, constructed and/or maintained on-site wastewater treatment and disposal systems can result in ground and surface water degradation and public health hazards. The Regional Board's approach is that the control of individual wastewater treatment and disposal systems is best accomplished by local environmental health departments enforcing county ordinances designed to provide protection to ground and surface waters. To help the counties with enforcement, the Regional Board adopted guidelines which contain criteria for proper installation of conventional systems (see Guidelines section of this chapter and Appendix). Although the Regional Board has also prohibited septic tank usage in certain areas, it has formal and informal agreements with counties to evaluate field performance of alternative and special design systems.

The energy crisis of the 1970s resulted in a surge of small hydroelectric facility development in the mountains and foothills. Impairments to beneficial uses may occur because of erosion from construction and changes in water temperature. The Regional Board has published guidelines for small hydro-electric facilities (see Guidelines section of this chapter and Appendix) to help address some of the problems associated with small hydroelectric plants.

Dredging is a problem because the process can result in turbidity and the reintroduction and resuspension of harmful metal or organic materials. This latter effect occurs directly as a result of the displacement of sediment at the dredging site and indirectly as a result of erosion of dredge spoil to surface waters at the deposition site. There is much dredging of the Sacramento and San Joaquin Rivers and the Delta because of the need to maintain the ship channels to the Ports of Sacramento and Stockton. The Regional Board regulates dredging operations on a case-by-case basis. Operational criteria may result from permits or the water quality certification requirements stemming from Section 401(a) of the Clean Water Act.

In addition to the problems described above, the Regional Board responds to spontaneous discharges such as spills, leaks and overflows. These can have cumulatively or individually significant effects on beneficial uses of ground and surface waters.

Water Bodies with Special Water Quality Problems

Water quality management may require the identification and ranking of water bodies with regard to certain quality parameters. Water Quality Limited Segments (*WQLSs*) are one example of expressing water quality problems by water bodies. WQLSs are those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate effluent limitations for point sources.[19]

Additional treatment beyond minimum federal requirements will be imposed on dischargers to Water Quality Limited Segments. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.

The Regional Board's current list of WQLSs is Appendix Item 21.

THE NATURE OF CONTROL ACTIONS IMPLEMENTED BY THE REGIONAL BOARD

The nature of actions to achieve water quality objectives consists of Regional Board efforts:

1. to identify potential water quality problems;

2. to confirm and characterize water quality problems through assessments for source, frequency, duration, extent, fate, and severity;

3. to remedy water quality problems through imposing or enforcing appropriate measures;

4. to monitor problem areas to assess effectiveness of the remedial measures.

Generally, the actions associated with the first step consist of surveys or reviews of survey information and other data sources to isolate possible impairments of beneficial uses or water quality.

The characterization step usually involves studies that attempt to answer questions about a water quality problem's source, extent, duration, frequency, and severity. Information on these parameters is essential to confirm a problem and prepare for remedy. The Regional Board may gain this information through its own work or through data submittals requested of actual or potential dischargers under Section 13267 of the California Water Code.

Problem remedy calls for the Regional Board to prevent or cleanup problems. A common means of prevention is through the issuance of National Pollutant Discharge Elimination System (NPDES) permits, waste discharge requirements (*WDRs*), discharge prohibitions, and other discharge restrictions. Cleanup is implemented through enforcement measures such as Cease and Desist (*C&D*) and Cleanup and Abatement (*C&A*) orders. The NPDES is a requirement of the Federal Clean Water Act (Section 402) and California has implementing responsibility. The national permit system only applies to certain surface water discharges. WDRs, which encompass permits, are called for by State law, Water Code Section 13260, et seq. The WDRs system is not as restricted as the Federal NPDES. As practical, WDRs may be used to control any type of discharge to ground or surface waters. C&D and C&A orders are two of the enforcement tools available to the Regional Board to correct actual or potential violations of WDRs, NPDES permits, prohibitions, and other water quality control obligations.

The details of the monitoring step are explained in Chapter V. In general, the Regional Board has wide latitude to require actual and potential dischargers to submit monitoring and surveillance information, in addition to using State Board data or collecting its own.

Whatever actions that the Regional Board implements must be consistent with the Basin Plan's beneficial uses and water quality objectives, as well as certain State and Regional Boards' policies, plans, agreements, prohibitions, guidance, and other restrictions or requirements. These considerations are described below and included in the Appendix when noted.

Control Action Considerations of the State Water Resources Control Board

Policies and Plans

There are eight State Board water quality control policies and four State Board water quality control plans to which Regional Board actions must conform. Two of the plans, the Ocean Plan and the Tahoe Plan, do not affect Basins 5A, 5B, and 5C. The policies and plans that are applicable are described below.

1. The State Policy for Water Quality Control

   This policy declares the State Board's intent to protect water quality through the implementation of water resources management programs and serves as the general basis for subsequent water quality control policies. It was adopted by the State Board in 1972. It is Appendix Item 1.

2. State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Water in California

   The State Board adopted this policy on 28 October 1968. Essentially, it generally restricts the Regional Board and dischargers from reducing the water quality of surface or ground waters even though such a reduction in water quality might still allow the protection of the beneficial uses associated with the water prior to the quality reduction. The goal of the policy is to maintain high quality waters and the Regional Board must enforce it.

   Changes in water quality are allowed only if the change is consistent with maximum benefit to the people of the State; does not unreasonably affect present and anticipated beneficial uses; and, does not result in water quality less than that prescribed in water quality control plans or policies. EPA water quality standards regulations require each state to adopt an "antidegradation" policy and specify the minimum requirements for it.[11/] Resolution No. 68-16 preceded the federal policy and applies to both ground and surface waters. The State Board has interpreted State Board Resolution No. 68-16 to incorporate the federal antidegradation policy. Therefore, the federal antidegradation policy must be followed where it is applicable. The federal antidegradation policy applies if a discharge or other activity, which began after November 28, 1975, will lower surface water quality. Application of the federal policy may be triggered by water quality impacts or mass loading impacts to receiving waters. Resolution No. 68-16 is Appendix Item 2; the federal policy is Appendix Item 23.

3. State Board Resolution No. 74-43, The Water Quality Control Policy for the Enclosed Bays and Estuaries of California

   This policy was adopted by the State Board on 16 May 1974 and provides water quality principles and guidelines for the prevention of water quality degradation in enclosed bays and estuaries to protect the beneficial uses of such waters. The Regional Board must enforce the policy and take actions consistent with its provisions. (This policy does not apply to wastes from boats or land runoff except as specifically indicated for siltation and combined sewer flows.) It is Appendix Item 3.

4. State Board Resolution No. 75-58, Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling

   This policy was adopted by the State Board in June 1975. Its purpose is to provide consistent principles and guidance for supplementary waste discharge requirements or other water quality control actions for thermal powerplants using inland waters for cooling. The Regional Board is responsible for its enforcement. It is Appendix Item 4.

5. State Board Resolution No. 77-1, Policy and Action Plan for Water Reclamation in California

   The policy was adopted 6 January 1977. Among other things, it requires the Regional Boards to conduct reclamation surveys and specifies reclamation actions to be implemented by the State and Regional Boards and other agencies. The policy and action plan are contained in the State Board report entitled Policy and Action Plan for Water Reclamation in California. Resolution No. 77-1 is Appendix Item 5.

6. State Board Resolution No. 87-22, Policy on the Disposal of Shredder Waste

   This State Board Resolution, adopted 19 March 1987, permits the disposal into certain landfills of wastes, produced by the mechanical destruction of car bodies, old appliances and similar castoffs, under specific conditions designated and enforced by the Regional Boards. It is Appendix Item 6.

7. State Board Resolution No. 88-23, Policy Regarding the Underground Storage Tanks Pilot Program

   The State Board adopted this policy on 18 February 1988. It implements a pilot program to fund oversight of remedial action at leaking underground storage tank sites, in cooperation with the California Department of Health Services. Oversight may be deferred to the Regional Boards. It is Appendix Item 7.

8. State Board Resolution No. 88-63, Sources of Drinking Water Policy

   This policy was adopted on 19 May 1988. It specifies which ground and surface waters are considered to be suitable or potentially suitable for the beneficial use of water supply (MUN). It allows the Regional Board some discretion in making MUN determinations. It is Appendix Item 8.

9. The Thermal Plan

   The Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California was adopted by the State Board on 18 May 1972 and amended 18 September 1975. It specifies water quality objectives, effluent quality limits, and discharge prohibitions related to thermal characteristics of interstate waters and waste discharges. It is Appendix Item 9.

10. The Delta Plan and Water Right Decision 1485

    In August 1978, the State Water Resources Control Board adopted two documents which set water quality standards for the Sacramento-San Joaquin Delta and Suisun Marsh. These two documents are the Delta Plan and Water Right Decision 1485.

    The Delta Plan consists of three elements: designation of beneficial uses to be protected; establishment of water quality objectives for reasonable protection of the beneficial uses; and establishment of a program of implementation for achieving these water quality standards. (The implementation program for the Delta provides specific measures which must be taken to satisfy water quality standards during the effective period of the plan and sets forth broad policy guidance to assist local, State and federal agencies in finalizing plans for additional project facilities.)

    In Decision 1485, the State Board set specific Delta water quality standards for flow and salinity as conditions in the water rights permits for the Federal Central Valley Project and the State Water Project. Decision 1485 also requires monitoring to determine compliance with Delta standards.

    The Delta flow and salinity standards are identified in Table III-5 of Chapter III.

State Board Management Agency Agreements (MAAs) and Memorandum of Agreement (MOA)

The Regional Board abides by one State Board agreement with a federal agency and two agreements with State agencies which have been formalized with either an MAA or an MOA signed by the State Board.

1. U. S. Forest Service Agreement

   On 26 February 1981 the State Board Executive Director signed an MAA with the U.S. Forest Service (*USFS*) which waives discharge requirements for certain USFS nonpoint source discharges provided that the Forest Service implements State Board approved best management practices (*BMPs*) and procedures and the provisions of the MAA. The MAA covers all USFS lands in California. Implementation of the BMPs, in conjunction with monitoring and performance review requirements approved by the State and Regional Boards, is the primary method of meeting the Basin Plan's water quality objectives for the activities to which the BMPs apply. The MAA does not include USFS point source discharges and in no way limits the authority of the Regional Board to carry out its legal responsibilities for management or regulation of water quality. It is Appendix Item 10.

2. California Department of Forestry Agreement

   In February 1988, the State Board signed an MAA with the California Department of Forestry and Fire Protection (*CDFFP*) and the California Board of Forestry (*BOF*), for the purpose of carrying out, pursuant to Section 208 of the Federal Clean Water Act, those portions of the State's Water Quality Management Plan (*WQMP*) related to controlling water quality impacts caused by silvicultural activities on nonfederal forest lands. As with the USFS MAA, the CDFFP agreement requires the Department to implement certain BMPs to protect water quality from timber harvest and associated activities. Approval of the MAA as a WQMP component by the EPA results in the Regional Boards relinquishing some authority to

issue WDRs for State timber operations.[12] However, CDF and the Regional and State Boards must still ensure that the operations incorporate BMPs and comply with applicable water quality standards. Appendix F of the MAA also calls for the preparation of a Memorandum of Understanding (*MOU*) for the Regional Boards, the State Board, and the CDFFP to prescribe interagency procedures for implementing BMPs. The MAA is Appendix Item 11.

3. Department of Conservation Agreement

In March 1988, the State Board amended a February 1982 MOA with the State Department of Conservation, Division of Oil and Gas (*CDOG*), to regulate oil, gas, and geothermal fields' discharges. The agreement requires CDOG to notify the Regional Boards of all new operators, all pollution problems associated with operators, and proposed discharges. CDOG and Regional Boards must also work together, within certain time-lines, to review and prepare discharge permits. It is Appendix Item 12.

Control Action Considerations of the Central Valley Regional Water Quality Control Board

Policies and Plans

1. Urban Runoff Policy

   a. Subregional municipal and industrial plans are required to assess the impact of urban runoff on receiving water quality and consider abatement measures if a problem exists.

   b. Effluent limitations for storm water runoff are to be included in NPDES permits where it results in water quality problems.

2. Disposal of Wastewater on Land Policy

The Regional Board encourages the disposal of wastewaters on land where practicable, and requires applicants for waste discharge requirements and discharge permits to evaluate land disposal as an alternative. Where studies show that year-round land disposal is not practicable, the Regional Board will require dischargers to evaluate dry season land disposal as an alternative.

3. Controllable Factors Policy

Controllable water quality factors are not allowed to cause further degradation of water quality in instances where other factors have already resulted in exceedence of the water quality objectives. Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the State, that are subject to the authority of the State Board or Regional Board, and that may be reasonably controlled.

4. The Water Quality Limited Segment Policy

Additional treatment beyond minimum federal requirements will be imposed on dischargers to Water Quality Limited Segments. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.

5. San Joaquin River Agricultural Subsurface Drainage Policy

   a. The control of toxic trace elements in agriculture subsurface drainage, especially selenium, is the first priority.

   b. Of the two major options for disposal of salts produced by agricultural irrigation, export out of the basin has less potential for environmental impacts and, therefore, is the favored option. The San Joaquin River may continue to be used to remove salts from the basin so long as water quality objectives are met.

   c. The valleywide drain to carry the salts generated by agricultural irrigation out of the valley remains the best technical solution to the water quality problems of the San Joaquin River and Tulare Lake Basin.

The Regional Board, at this time, feels that a valleywide drain will be the only feasible, long-range solution for achieving a salt balance in the Central Valley. The Regional

Board favors the construction of a valleywide drain under the following conditions:

All toxicants would be reduced to a level which would not harm beneficial uses of receiving waters.

The discharge would be governed by specific discharge and receiving water limits in an NPDES permit.

Long-term, continuous biological monitoring would be required.

d. Activities that increase the discharge of poor quality agricultural subsurface drainage are prohibited.

e. The control of agricultural subsurface drainage will be pursued on a regional basis.

f. The reuse of agricultural subsurface drainage will be encouraged, and action that would limit or prohibit it discouraged.

Regional Board Memorandum of Understanding (MOU) and Memorandum of Agreement (MOA)

1. U.S. Bureau of Land Management

In September 1985, the Regional Board Executive Officer signed MOUs with the three U.S. Bureau of Land Management Districts in the Central Valley (i.e., the Ukiah District, the Susanville District, and the Bakersfield District). The MOUs, which are identical for each District, aim at improving coordination between the two agencies for the control of water quality problems resulting from mineral extraction activities on BLM administered lands. The MOUs are Appendix Items 13 through 15.

2. U. S. Bureau of Reclamation Agreement

On 2 July 1969, the Regional Board signed an MOA with the Bureau of Reclamation to schedule water releases from the New Melones Unit of the Central Valley Project to maintain an oxygen level at or above 5 mg/l in the Stanislaus River downstream of the unit and to not exceed a mean monthly TDS concentration of 500 mg/l in the San Joaquin River immediately below the mouth of the Stanislaus River. The MOA's water quality requirements are subject to some conditions. The MOA is Appendix Item 22.

Waivers

State law allows Regional Boards to waive waste discharge requirements (WDRs) for a specific discharge or types of discharges where it is not against the public interest.[13/]

On 26 March 1982, the Regional Board adopted Resolution No. 82-036 to waive WDRs for certain discharges. The types of discharges and the limitations on the discharges which must be maintained if the waivers are to apply are shown in Table IV-1. These waivers are conditional and may be terminated at any time.

TABLE IV-1

WASTE DISCHARGE REQUIREMENT WAIVER AND LIMITATIONS

TYPE OF WASTE DISCHARGE	LIMITATIONS
Air conditioner, cooling and elevated temperature waters	Small volumes which will not change temperature of receiving water more than 1 degree C.
Drilling muds	Discharged to a sump with two feet of freeboard. Sump must be dried by evaporation or pumping. Drilling-mud may remain in sump only if discharger demonstrates that it is nontoxic. Sump area shall be restored to pre-construction state within 60 days of completion or abandonment of well.
Clean oil containing no toxic materials	Used for beneficial purposes such as dust control, weed control and mosquito abatement where it cannot reach state waters.

TABLE IV-1 WASTE DISCHARGE REQUIREMENT WAIVER AND LIMITATIONS (continued)

TYPE OF WASTE DISCHARGE	LIMITATIONS
Minor dredger operations	When soil is nontoxic and discharged to land.
Inert solid wastes (per California Code of Regulations, Section 2524)	Good disposal practices.
Test pumpings of fresh water wells.	When assurances are provided that pollutants are neither present nor added.
Storm water runoff	Where no water quality problems are contemplated and no federal NPDES permit is required.
Erosion from development	Where BMP plans have been formulated and implemented.
Pesticide rinse waters from applicators	Where discharger complies with Regional Board guidance.
Confined animal wastes	Where discharger complies with Regional Board guidance.
Minor stream channel alterations and suction dredging	Where regulated by Department of Fish and Game agreements.
Small, short-term sand and gravel operations	All operations and wash waters confined to land.
Small, metal mining operations	All operations confined to land, no toxic materials utilized in recovery operations.
Swimming pool discharges	Where adequate dilution exists or where beneficial uses are not affected.
Food processing wastes spread on land	Where an operating/maintenance plan has been approved.
Construction	Where BMPs are used.
Agricultural commodity wastes	Small, seasonal and confined to land.
Industrial wastes utilized for soil amendments	Where industry certifies its nontoxic content and BMPs are used for application.
Timber harvesting	Operating under an approved timber harvest plan.
Minor hydro projects	Operating under water rights permit from State Water Resources Control Board or Department of Fish and Game agreement and no water quality impacts anticipated.
Irrigation return water (tail-water)	Operating to minimize sediment to meet Basin Plan turbidity objectives and to prevent concentrations of materials toxic to fish or wildlife.
Projects where application for Water Quality Certification is required	Where project (normally minor construction) is not expected to have a significant water quality effect and project complies with Dept. of Fish and Game agreements.
Septic tank/leachfield systems	Where project has county permit and county uses Board Guidelines.

Prohibitions

The Porter-Cologne Water Quality Control Act allows the Regional Board to prohibit certain discharges.[14] Prohibitions may be revised, rescinded, or adopted as necessary. The prohibitions applicable to 5A, 5B, and 5C are identified and described below. [NOTE: Costs incurred by any unit of local government for a new program or increased level of service for compliance with discharge prohibitions in the Basin Plan do not require reimbursement by the State per Section 2231 of the Revenue and Taxation Code, because the Basin Plan implements a mandate previously enacted by statute, Chapter 482, Statutes of 1969.]

1. Water Bodies

Water bodies for which the Regional Board has held that the direct discharge of wastes is inappropriate as a permanent disposal method include sloughs and streams with intermittent flow or limited dilution capacity. The direct discharge of municipal and industrial wastes into the following specific water bodies also has been prohibited, as noted:

American River, including Lake Natoma (from Folsom Dam to mouth)

Clear Lake

Folsom Lake

Fourteen Mile Slough at Stockton N.W. and Lincoln Village

Lake Berryessa

Middle Fork, Feather River (from Dellecker to Lake Oroville)

Lake Oroville

Sacramento Ship Channel and Turning Basin

Shasta Lake

Sugar Cut at Tracy

Thermalito Forebay and Afterbay

Tulloch Reservoir

Whiskeytown Reservoir

Willow Creek-Bass Lake in Madera County (the prohibition is for sewage effluent only)

In addition, discharge of municipal waste into the Sacramento River from its confluence with the Feather River to the Freeport Bridge shall be prohibited after 1 July 1978. Existing untreated discharges of combined waste from the City of Sacramento must be controlled by 1 January 1980. They will not be subject to the above prohibition but will be controlled by waste discharge requirements.

2. Leaching Systems

Discharge of wastes from new and existing leaching and percolation systems has been prohibited by the Regional Board in the following areas:

Amador City, Amador County (Adopted by Regional Board Order No. 73-129; effective as of 12/15/72)

Martell Area, Amador County (73-129; 12/15/72)

Shasta Dam Area Public Utilities District, Shasta County (73-129; 12/15/72)

Vallecito Area, Calaveras County (73-129; 12/15/72)

West Point Area, Calaveras County (73-129; 12/15/72)

Celeste Subdivision Area, Merced County (73-129; 12/15/72)

Snelling Area, Merced County (73-129; 12/15/72, and amended 74-126; 12/14/73)

North San Juan, Nevada County (74-123; 12/14/73)

Arnold Area, Calaveras County (74-124, 75-180; 12/14/73, 6/25/75)

Contra Costa County Sanitation District No. 15, Contra Costa County (74-125; 12/14/73)

Madera County Service Area No. 2, Bass Lake (74-127; 12/14/73)

Madera County Service Area No. 3, Parksdale (74-128; 12/14/73)

Coulterville County Service Area No. 1, Mariposa County (75-070; 3/21/75)

Midway Community Services District, Merced County (75-072; 3/21/75)

Adin Community Services District, Modoc County (75-272 11/21/75)

Fall River Mills, Community Services District, Shasta County (75-273; 11/21/75)

Bell Road Community, including Panorama and Pearl, Placer County (75-274; 11/21/75)

Nice and Lucerne, Lake County (76-58; 2/27/76)

Courtland Sanitation District, Sacramento County (76-59; 2/27/76)

Six-Mile Village, Calaveras County (76-60; 2/27/76)

Communities of Clearlake Highlands and Clearlake Park, Lake County (76-89; 3/26/76)

Taylorsville County Service Area, Plumas County (76-129; 5/28/76)

Community of South Lakeshore Assessment District, Lake County (76-215; 9/24/76)

Community of South Lakeshore Assessment District, Lake County (76-215; 9/24/76)

Anderson-Cottonwood Irrigation District, Community of Cottonwood, Shasta County (76-230; 10/22/76)

Daphnedale Area, Modoc County (76-231; 10/22/76)

Chico Urban Area, Butte County (90-126; 4/27/90)

3. Petroleum

The Regional Board has prohibited the discharge of oil or any residuary product of petroleum to the waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7, California Water Code.

4. Vessel Wastes

The Regional Board has prohibited the discharge of toilet wastes from the vessels of all houseboat rental businesses on Shasta Lake, Clear Lake, and the Delta.

5. Pesticides

Effective immediately for molinate and thiobencarb and on 1 January 1991 for carbofuran, malathion and methyl parathion, the discharge of irrigation return flows containing these pesticides is prohibited unless the discharger is following a management practice approved by the Board. Proposed management practices for these pesticides will not be approved unless they are expected to meet the performance goals contained in the following table. Also, the management practices must ensure that discharges of thiobencarb to waters designated as municipal or domestic water supplies will comply with the 1.0 $\mu g/l$ water quality objective for this pesticide. It is important to note that the performance goals in this timetable are interim in nature and while they are based on the best available information, they are not to be equated with concentrations that meet the water quality objectives. The intent of the performance goals is to bring concentrations being found in surface waters down to levels that approach compliance with the objectives. Future performance goals and numerical objectives will be set using the results of ongoing evaluations of the risks posed by these pesticides. Future performance goals may also be site-specific to take into consideration the additive impacts of more than one pesticide being present in a water body at the same time. The Board will reexamine the progress of the control effort for these pesticides in 1993 and will set performance goals intended to bring concentrations of these five pesticides into full compliance with all objectives by 1995.

Performance Goals[1] for Management Practices in $\mu g/l$

Pesticide	YEAR 1990	1991	1992	1993
Carbofuran	D	0.4	0.4	R
Malathion	I	0.1	R	R
Molinate	30.0	20.0	10.0	R
Methyl parathion	D	0.26	0.13	R
Thiobencarb	3.0	1.5	R	R

[1] Performance goals are daily maxima and apply to all waters designated as freshwater habitat.

D = No numerical goal - control practices under development

I = No numerical goal - sources of discharge to be identified by special study

R = The Regional Board will review the latest technical and economic information determine if the performance goal should be adjusted

6. San Joaquin River Subsurface Agricultural Drainage

Activities that increase the discharge of poor quality agricultural subsurface drainage are prohibited. (This is part of the San Joaquin River Subsurface Agricultural Drainage Policy discussed on pages IV-8 and IV-9)

Guidelines

The Regional Board has adopted guidance for certain types of dischargers which is designed to reduce the possibility that water quality will be impaired. The Regional Board may still impose discharge requirements. Currently, the following Guidelines apply to sub-basins 5A, 5B, and 5C:

1. Wineries

This Guideline contains criteria for protecting beneficial uses and preventing nuisance from the disposal to land of stillage wastes.

2. Erosion and Sedimentation

This Guideline identifies practices to be implemented by local government to reduce erosion and sedimentation from construction activities.

3. Small Hydroelectric Facilities

This Guideline specifies measures to protect water quality from temperature, turbidity, and dissolved oxygen effects from the construction and operation of small hydroelectric facilities.

4. Disposal from Land Developments

This Guideline contains criteria for the siting of septic tanks, sewer lines, leach fields, and seepage pits to protect water quality.

5. Mining

This Guideline identifies actions that the Regional Board takes to address the water quality problems associated with mining. It requires owners and operators of active mines to prepare plans for closure and reclamation, but it does not specify any practices or criteria for mine operators.

All of the Guidelines are in the Appendix.

Nonpoint Source Action Plans

Section 208 of the 1972 Amendments to the federal Clean Water Act resulted in monies being made available to states to address nonpoint source problems. The Regional Board used 208 grant funds to develop its mining and erosion/sedimentation guidelines, among other things. It also encouraged local governments to make use of the 208 program. As a result, several counties in the sub-basins developed action plans to control nonpoint source problems which affected them. The Regional Board action plans are described in Table IV-2.

TABLE IV-2
NONPOINT SOURCE ACTION PLANS

LOCATION	RECOMMENDED ACTION
Shasta County	Best Management Practices (BMPs) for control of erosion from land development (adopted 1980)
Nevada County	BMPs for erosion and individual wastewater disposal systems (adopted 1980)
Placer County	BMPs for erosion and installation of individual wastewater disposal systems (adopted 1980)
Lake County	BMPs for erosion and creek bed management (adopted 1979)
Communities of Paradise and Magalia (Butte County)	BMPs for wastewater management (adopted 1979)
Solano County	BMPs for surface water runoff (adopted 1979)
Upper Putah Creek Watershed (Lake, Napa Counties)	Strategies and recommendations for addressing problems from geothermal development, abandoned mines, and individual wastewater disposal systems (adopted 1981)
Fall River (Shasta County)	BMPs for livestock grazing and individual wastewater disposal systems (adopted 1982)
Plumas County	BMPs for erosion control (adopted 1980)
Mariposa County	BMPs for individual wastewater disposal systems for area north of the community of Mariposa; BMPs for erosion and sedimentation in the Stockton Creek Watershed (adopted 1979)
	Lake Yosemite Area (Merced County) -- BMPs for individual wastewater disposal systems (adopted 1979)

ACTIONS RECOMMENDED FOR IMPLEMENTATION BY OTHER ENTITIES

Consistent with the Porter-Cologne Water Quality Control Act, the Basin Plan may identify control actions recommended for implementation by agencies other than the Regional Board.[15/]

Recommended for Implementation by the State Water Resources Control Board

Interbasin Transfer of Water

Before granting new permits for water storage or diversion which involves interbasin transfer of water, the State Board should require the applicant to evaluate the alternatives listed below. Permits should not be approved unless the alternatives have been thoroughly investigated and ruled out for social, environmental, or economic reasons.

1. In situations where wastewater is discharged to marine waters without intervening beneficial use (for example, the San Francisco Bay Area and most of Southern California), increase the efficiency of municipal, industrial, and agricultural water use.

2. Make optimum use of existing water resource facilities.

3. Store what would otherwise be surplus wet-weather Delta outflows in off-stream reservoirs.

4. Conjunctively use surface and ground waters.

5. Give careful consideration to the impact on basin water quality of inland siting of power plants.

6. Make maximum use of reclaimed water while protecting public health and avoiding severe economic penalties to a particular user or class of users.

Trans-Delta Water Conveyance

The State Board should adopt the position that those proposing trans-Delta water conveyance facilities must clearly demonstrate the following, if such a facility is constructed:

1. Protection of all beneficial uses in the Delta that may be affected by such a facility;

2. Protection of all established water quality objectives that may be affected by such a facility; and,

3. Adherence to the six alternatives previously identified for Interbasin Transfer of Water.

Water Quality Planning

A core planning group should be established within the staff of the State Board, which has the responsibility to integrate the statewide planning of water quality and water resources management.

Water Intake Studies

The State Board should coordinate studies to assess the costs and benefits of moving planned diversions from the eastern side of the Central Valley to points further west, probably to the Delta, to allow east side waters to flow downstream for uses of fishery enhancement, recreation, and quality control. Specific study items should include:

1. Possible intake relocations;

2. Conveyance and treatment required to accommodate such relocations;

3. Direct and indirect (including consumer and environmental) costs and benefits of relocation; and,

4. Institutional problems.

The State Board should request voluntary participation in the studies by agencies planning diversions, but should take appropriate action through its water rights authority if such participation cannot be obtained. At a minimum, participation would be required of the San Francisco Water Department and East Bay Municipal Utility District.

Subsurface Agricultural Drainage

1. As a last resort and where the withholding of irrigation water is the only means of achieving significant improvements in water quality, the Regional Board will consider requesting that the State Water Resources Control Board (SWRCB) use its water rights authority to preclude the supplying of water to specific lands

2. The SWRCB should require all water agencies in the San Joaquin Basin, regardless of size, to submit an "informational" report on water conservation.

3. The SWRCB should work jointly with the Regional Board in securing compliance with the 2 μg/l selenium objective for managed-wetlands in the Grassland area.

4. The SWRCB give first priority to the use of the Water Conservation and Water Quality Bond Law of 1986 funds for subsurface drainage pollutant control projects in the San Joaquin Basin, especially in those areas that contribute selenium to the San Joaquin River.

5. The SWRCB should also consider utilizing State Assistance Program Grant funds to implement a cost share program to install a number of flow monitoring stations within the Grassland area to assist in better defining the movement of pollutants through the area.

6. The SWRCB should also consider declaring the drainage problem area in the San Joaquin Basin a priority nonpoint source problem in order to make US Environmental Protection Agency nonpoint source control funding available to the area.

Recommended for Implementation by Other Agencies

Water Resources Facilities

1. Consideration should be given to the construction of a storage facility to store surplus wet-weather Delta outflows. Construction should be contingent on studies demonstrating that some portion of wet-weather Delta outflow is truly surplus to the Bay-Delta system.

2. Consideration should be given to the use of excess capacity in west San Joaquin Valley conveyances, or of using a new east valley conveyance to:
   a. Augment flows and improve water quality in the San Joaquin River and southern Delta with the goal of achieving water quality as described in Table IV-3.

TABLE IV-3

	TYPE OF YEAR[1]			
TDS MG/L	CRITICAL[2]	DRY[3]	NORMAL	WET[4]
Maximum 3-day (arith. avg.)	500	500	500	500
Maximum (annual avg.)	385	385	385	285
Maximum May-Sep (arith. avg.)	300	250	250	250
Maximum 3-day May-Sep (arith. avg.)	450	350	350	350

1 Relative to unimpaired runoff to Delta based on 1922-1971 period. See definitions in Figure III-2.
2 Less than 57%, or less than 70% when preceding year critical.
3 Less than 70%, or less than 90% when preceding year critical.
4 Greater than 125%.

   b. Prevent further ground water overdrafts and associated quality problems.

Agricultural Drainage Facilities

Facilities should be constructed to convey agricultural drain water from the San Joaquin and Tulare Basins. It is the policy of the Regional Board to encourage construction. The discharge must comply with water quality objectives of the receiving water body.

Subsurface Agricultural Drainage

1. If fragmentation of the parties that generate, handle and discharge agricultural subsurface drainage jeopardizes the achievement of water quality objectives, the Regional Board will consider petitioning the Legislature for the formation of a regional drainage district.

2. The Legislature should consider putting additional bond issues before the voters to provide low interest loans for agricultural water conservation and water quality projects and incorporating provisions that would allow recipients to be private landowners, and that would allow irrigation efficiency improvement projects that reduce drainage discharges to be eligible for both water conservation funds and water quality facilities funds.

3. The San Joaquin Valley Drainage Program should investigate the alternative of a local San Joaquin Basin drain to move the existing discharge point for poor quality agricultural subsurface drainage to a location where its impact on water quality is less. The San Joaquin Valley Drainage Program should also investigate the plan to use the San Luis Drain (the Zahm-Sansoni Plan) as the first phase of this alternative.

4. The US Bureau of Reclamation should give the districts and growers subject to this program first priority in their water conservation loan program.

CONTINUOUS PLANNING FOR IMPLEMENTATION OF WATER QUALITY CONTROL

Knowledge of water quality problems changes constantly. Because of this, the control actions and the water quality objectives that implementation of the actions attempts to achieve must be regularly evaluated for their effectiveness in protecting beneficial uses. As warranted, the actions, water quality objectives, or designated beneficial uses may be changed to ensure the proper protection and enhancement of the appropriate beneficial uses. The Regional Board has a continuous planning

process to serve these functions and maintain its water quality regulatory program.

The Regional Board is periodically apprised of water quality problems in Basins 5A, 5B, and 5C, but the major review of water quality is done every three years as part of the Triennial Review (*TR*) of water quality standards.

During the TR, the Regional Board holds a public hearing to receive comments on actual and potential water quality problems. A workplan is prepared which identifies the control actions that will be implemented over the succeeding three years to address the problems. The actions may include or result in revision of the Basin Plan's water quality standards if that is an appropriate problem remedy. Until such time that a basin plan is revised, the TR also serves to reaffirm existing standards.

The control actions that are identified through the TR process are incorporated into the Basin Plan to meet requirements to describe actions (to achieve objectives) and a time schedule of their implementation as called for in the Water Code, Section 13242(a) and (b). The actions recommended in the most recent TR are described in the following section.

ACTIONS AND SCHEDULE TO ACHIEVE WATER QUALITY OBJECTIVES

The actions identified below are what the Regional Board currently expects to implement over the fiscal year (FY) period 1987/1988 through 1989/1990. The problems that the actions respond to were identified as a result of the Regional Board's 1987 Triennial Review. The actions and schedules assume that the Regional Board has available to it a close approximation of the mix and level of resources it had in FY 1987/1988. The actions are identified by major water quality problem categories.

Agricultural Drainage Discharges in the San Joaquin River Basin

Water quality in the San Joaquin River has degraded greatly since the late 1940s. Salt concentrations in the River near Vernalis have doubled since that time. Two main causes have been reservoir development on the east side tributaries and upper basin for agricultural development. This has greatly increased the concentration of salt, boron, selenium, molybdenum and other trace elements in the River. This water quality degradation was recognized in the 1975 Basin Plan and the Lower San Joaquin River was classified as a Water Quality Limited Segment. At that time, it was envisioned that a Valley-wide Drain would be developed and these subsurface drainage water flows would then be discharged outside the Basin, thus improving River water quality. However, present day development is looking more toward a regional solution to the drainage water discharge problem rather than a valley-wide drain.

Because of the need to manage salt and other pollutants in the River, the Regional Board will begin developing a Regional Drainage Water Disposal Plan for the Basin. The development began in FY 87/88 with Basin Plan amendments to be considered by the Board in FY 88/89. The amendment development process will include review of beneficial uses, establishment of water quality objectives, and preparation of a regulatory plan, including a full implementation plan. The regulatory plan will emphasize achieving objectives through reductions in drainage volumes and pollutant loads through best management practices and other on-farm methods. Additional regulatory steps will be considered based on achievements of water quality goals and securing of adequate resources.

Per the amendment to the Basin Plan for San Joaquin River subsurface agricultural drainage, approved by the State Board in Resolution No. 89-88 and incorporated herein, the following actions will be implemented.

1. Upslope irrigations and water facility operators whose actions contribute to subsurface drainage flows will participate in the program to control discharges beginning in January 1989.

2. The Regional Board will reconsider water quality objectives for selenium and boron for Mud Slough (north), Salt Slough and the San Joaquin River, Sack Dam to Vernalis and water quality objectives for salinity for the San Joaquin River in 1992.

3. Annual submittal and approval of drainage operations plans (DOP) will be required from all those discharging or contributing to the generation of agricultural subsurface drainage beginning in 1989.

4. Best management practices, principally water conservation measures, are applicable to the control of agricultural subsurface drainage.

5. Waste discharge requirements may be used to control agricultural subsurface drainage discharges containing toxic trace elements, if water quality objectives are not achieved by the following compliance dates:

   January 1989 -- Molybdenum

   October 1989 -- Selenium:
   Water supply channels for Grassland Water District and state and federal refuges.

   October 1991 -- Selenium and boron:
   San Joaquin River, mouth of the Merced River to Vernalis

   October 1993 -- Selenium and boron:
   Salt Slough, Mud Slough (north), San Joaquin River from Sack Dam to the mouth of the Merced River.

6. Milestones to the achievement of water quality objectives for selenium will be used.

7. Public and private managed-wetlands will participate in the program to achieve water quality objectives.

8. Evaporation basins in the San Joaquin Basin will be required to meet minimum design standards, have waste discharge requirements and be part of a regional plan to control agricultural subsurface drainage.

9. The Regional Board staff will prepare a study plan by 1 March 1989 that will identify the information needed to reconsider selenium and boron objectives in 1992.

Assessmentof Biotoxicity of Major Point and Nonpoint Source Dischargesin the Sacramento River and San JoaquinRiver Basins

In addition to numerical water quality objectives for toxicity, the Basin Plan contains a narrative water quality objective that requires all surface waters to "...be maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological responses to human, plant, animal, and aquatic life." To check for compliance with this objective, the Regional Board initiated a biotoxicity monitoring program to assess toxic impacts from point and nonpoint sources in FY 86-87.

The Regional Board will continue to assess compliance with the narrative water quality objective by imposing the monitoring requirement on dischargers, as appropriate. In addition, an EPA grant has been obtained to define toxicity inputs from NPDES permittees discharging to the Sacramento and American Rivers between Walnut Grove and Nimbus Dam. The use of biotoxicity tests will be expanded in FY 88/89, with a contract with the University of California at Davis as part of an ambient monitoring program to assess point and nonpoint source toxicity. The Regional Board will continue to try to obtain program funding beyond FY 88/89.

Acid Mine Drainagefrom Abandoned Mines in the SacramentoRiver Basin

Available information suggests that mines are by far the largest contributors of copper, zinc, and cadmium to the Sacramento River Basin. These metals have been implicated as causing problems in Delta biota, although the cause and effect relationship remains unclear. Copper has been shown to be a problem in the Bay. Problems in the Bay/Delta may be related to total loadings and dissolved concentration effects because the Delta tends to act as a sink for these pollutants. Upstream discharges of these metals from mines cause severe impairments in receiving waters.

Under present projected funding levels for the next three years, the Board can expect to continue to address problems at Iron Mountain Mine, Walker Mine, Mammoth Mine, Keystone Mine, Afterthought Mine, Greenhorn Mine, and others. Data will also be collected to refine the present loading estimates in the Basins. Additional biotoxicity testing will be done in the Sacramento River and in the Delta to help assess the appropriateness of existing water quality objectives in the River and to begin to assess whether the Delta is affected by these metals.

Mercury Discharges in the Sacramento River and San Joaquin River Basins

Mercury problems are evident region-wide. The main concern with mercury is that, like selenium, it bioaccumulates in aquatic systems to levels that are harmful to fish and their predators. Health advisories have been issued which recommend limiting consumption of fish taken from the Bay/Delta, Clear Lake, Lake Berryessa, and Marsh Creek Reservoir. Other water bodies approach or exceed National Academy of Science (NAS) and/or U.S. Food and Drug Administration (FDA) guidelines for wildlife and human protection, respectively. In addition to these concerns, fish eating birds taken from some bodies of water in the Basins have levels of mercury that can be expected to result in toxic effects. Bird kills from mercury also have been documented in Lake Berryessa. (There is also concern for birds in the Delta, but no studies have been completed.) The Regional Board has done a preliminary assessment of the mercury situation in the Central Valley Region and concluded that the problem is serious and remedies will be complex and expensive.

The short-term strategy is to concentrate on correcting problems at upstream sites while monitoring the Delta to see whether upstream control activities measurably benefit the Delta. Staff will support efforts to fund the detailed studies necessary to define assimilative capacity and to fully define uptake mechanisms in the biota.

Under present projected resource levels for the next three years, staff will complete an abatement study on Clear Lake and take steps to implement recommendations. A few sites around Lake Berryessa and Davis Creek Reservoir will be investigated for potential source control activities. Abatement remedies will continue to be sought at Mt. Diablo Mine and other sites receiving regulatory attention. A minimum effort will continue to define problem areas in the Sierra Nevada Range. Staff will also pursue characterization efforts in the Delta.

Pesticide Discharges from Nonpoint Sources

The control of pesticide discharges to surface waters from nonpoint sources will be achieved primarily by the development and implementation of management practices that minimize or eliminate the amount discharged. The Board will use water quality monitoring results to evaluate the effectiveness of control efforts and to help prioritize control efforts.

Regional Board monitoring will consist primarily of chemical analysis and biotoxicity testing of major water bodies receiving irrigation return flows. The focus will be on pesticides with use patterns and chemical characteristics that indicate a high probability of entering surface waters at levels that may impact beneficial uses. Board staff will advise other agencies that conduct water quality and aquatic biota monitoring of high priority chemicals, and will review monitoring data developed by these agencies. Review of the impacts of "inert" ingredients contained in pesticide formulations will be integrated into the Board's pesticide monitoring program.

When a pesticide is detected more than once in surface waters, investigations will be conducted to identify sources. Priority for investigation will be determined through consideration of the following factors: toxicity of the compound, use patterns and the number of detections. These investigations may be limited to specific watersheds where the pesticide is heavily used or local practices result in unusually high discharges. Special studies will also be conducted to determine pesticide content of sediment and aquatic life when conditions warrant. Other agencies will be consulted regarding prioritization of monitoring projects, protocol, and interpretation of results.

To ensure that new pesticides do not create a threat to water quality, the Board, either directly or through the State Water Resources Control Board,

will review the pesticides that are processed through the Department of Food and Agriculture's (DFA) registration program. Where use of the pesticide may result in a discharge to surface waters, the Board staff will make efforts to ensure that label instructions or use restrictions require management practices that will result in compliance with water quality objectives. When the Board determines that despite any actions taken by DFA, use of the pesticide may result in discharge to surface waters in violation of the objectives, the Board will take regulatory action, such as adoption of a prohibition of discharge or issuance of waste discharge requirements to control discharges of the pesticide. Monitoring may be required to verify that management practices are effective in protecting water quality.

The Board will notify pesticide dischargers through public notices, educational programs and the Department of Food and Agriculture's pesticide regulatory program of the water quality objectives related to pesticide discharges. Dischargers will be advised to implement management practices that result in full compliance with these objectives by 1 January 1993, unless required to do so earlier. (Dischargers of carbofuran, malathion, methyl parathion, molinate and thiobencarb must meet the requirements detailed in the Prohibitions section.) During this time period, dischargers will remain legally responsible for the impacts caused by their discharges.

The Board will conduct reviews of the management practices being followed to verify that they produce discharges that comply with water quality objectives. It is anticipated that practices associated with one or two pesticides can be reviewed each year. Since criteria, control methods and other factors are subject to change, it is also anticipated that allowable management practices will change over time, and control practices for individual pesticides will have to be reevaluated periodically.

Public hearings will be held at least once every two years to review the progress of the pesticide control program. At these hearings, the Board will

- review monitoring results and identify pesticides of greatest concern,
- review changes or trends in pesticide use that may impact water quality,
- consider approval of proposed management practices for the control of pesticide discharges,
- set the schedule for reviewing management practices for specific pesticides, and
- consider enforcement action.

After reviewing the testimony, the Board will place the pesticides into one of the following three classifications. When compliance with water quality objectives and performance goals is not obtained within the timeframes allowed, the Board will consider alternate control options, such as prohibition of discharge or issuance of waste discharge requirements.

1. Where the Board finds that pesticide discharges pose a significant threat to drinking water supplies or other beneficial uses, it will request DFA to act to prevent further impacts. If DFA does not proceed with such action(s) within six months of the Board's request, the Board will act within a reasonable time period to place restrictions on the discharges.

2. Where the Board finds that currently used discharge management practices are resulting in violations of water quality objectives, but the impacts of the discharge are not so severe as to require immediate changes, dischargers will be given three years, with a possibility of three one year time extensions depending on the circumstances involved, to develop and implement practices that will meet the objectives. During this period of time, dischargers may be required to take interim steps, such as meeting Board established performance goals to reduce impacts of the discharges. Monitoring will be required to show that the interim steps and proposed management practices are effective.

3. The Board may approve the management practices as adequate to meet water quality objectives. After the Board has approved specific

management practices for the use and discharge of a pesticide, no other management practice may be used until it has been reviewed by the Board and found to be equivalent to or better than previously approved practices. Waste discharge requirements will be waived for irrigation return water per Resolution No. 82-036 if the Board determines that the management practices are adequate to meet water quality objectives and meet the conditions of the waiver policy. Enforcement action may be taken against those who do not follow management practices approved by the Board.

Carbofuran, malathion, methyl parathion, molinate and thiobencarb have been detected in surface waters at levels that impact aquatic organisms. Review of management practices associated with these materials is under way and is expected to continue for at least another two years. A timetable of activities related to these pesticides is at the end of the Prohibitions section. A detailed assessment of the impacts of these pesticides on aquatic organisms is also being conducted and water quality objectives will be adopted for these materials by the State or Regional Board by the end of 1993.

In conducting a review of pesticide monitoring data, the Board will consider the cumulative impact if more than one pesticide is present in the water body. This will be done by initially assuming that the toxicities of pesticides are additive. This will be evaluated separately for each beneficial use using the following formula:

$$\frac{C_1}{O_1} + \frac{C_2}{O_2} + \cdots + \frac{C_i}{O_i} = S$$

Where:

C = The concentration of each pesticide .

O = The water quality objective or criterion for the specific beneficial use for each pesticide present, based on the best available information. Note that the numbers must be acceptable to the Board and performance goals are not to be used in this equation.

S = The sum. A sum exceeding one (1.0) indicates that the beneficial use may be impacted.

The above formula will not be used if it is determined that it does not apply to the pesticides being evaluated. When more than one pesticide is present, the impacts may not be cumulative or they may be additive, synergistic or antagonistic. A detailed assessment of the pesticides involved must be conducted to determine the exact nature of the impacts.

For most pesticides, numerical water quality objectives have not been adopted. EPA criteria and other guidance are also extremely limited. Since this situation is not likely to change in the near future, the Board will use the best available technical information to evaluate compliance with the narrative objectives. Where valid testing has developed 96 hour LC50 values for aquatic organisms (the concentration that kills one half of the test organisms in 96 hours), the Board will consider one tenth of this value for the most sensitive species tested as the upper limit (daily maximum) for the protection of aquatic life. Other available technical information on the pesticide (such as Lowest Observed Effect Concentrations and No Observed Effect Levels), the water bodies and the organisms involved will be evaluated to determine if lower concentrations are required to meet the narrative objectives.

To ensure the best possible program, the Board will coordinate its pesticide control efforts with other agencies and organizations. Wherever possible, the burdens on pesticide dischargers will be reduced by working through the DFA or other appropriate regulatory processes. The Board may also designate another agency or organization as the responsible party for the development and/or implementation of management practices, but it will retain overall review and control authority. The Board will work with water agencies and others whose activities may influence pesticide levels to minimize concentrations in surface waters.

Since the discharge of pesticides into surface waters will be allowed under certain conditions, the Board will take steps to ensure that this control program is

conducted in compliance with the federal and state antidegradation policies. This will primarily be done as pesticide discharges are evaluated on a case by case basis.

Dredging in the Sacramento River and San Joaquin River Basins

Large volumes of sediment are transported in the waters of the Sacramento and San Joaquin Rivers which drain the Central Valley. The average annual sediment load to San Francisco Bay from these two rivers is estimated to be 8 million cubic yards. Dredging and riverbank protection projects are ongoing, continuing activities necessary to keep ship channels open, prevent flooding, and control riverbank erosion. The Delta, with over 700 miles of waterways, is a major area of activity. At present, the Corps is overseeing the conduct and planning of rehabilitation work along 165 miles of levees surrounding 15 Delta islands. In addition, virtually all of the Delta levees have been upgraded by island owners or reclamation districts. The magnitude of recent operations, such as the Stockton and Sacramento Ship Channel Deepening Projects and Sacramento River Bank Protection Project, is discussed in recent U.S. Army Corps of Engineers Reports. For example, the Corps removes over 10 million cubic yards of sediment yearly from the Sacramento River. If the Sacramento River Deep Water Ship Channel is widened and deepened as proposed currently, 25 million cubic yards of bottom material will be removed from the river during the 5-year project.

Environmental impacts of dredging operations and materials disposal include temporary dissolved oxygen reduction, increased turbidity and, under certain conditions, the mobilization of toxic chemicals and release of biostimulatory substances from the sediments. The direct destruction and burial of spawning gravels and alteration of benthic habitat may be the most severe impacts. The existing regulatory process must be consistently implemented to assure protection of water quality and compliance with the certification requirements of Section 401 of the Federal Clean Water Act.

In FY 88/89, staff will produce a set of guidelines for regulation of dredging and riverbank protection projects.

Nitrate Pollution of Ground Water in the Sacramento River and San Joaquin River Basins

Since 1980, over 200 municipal supply wells have been closed in the Central Valley because of nitrate levels exceeding the State's 45 mg/l drinking water standard. Staff has submitted proposals to assess the extent of the problem and explore possible regulatory responses, but without success. The increasing population growth in the Valley is expected to accelerate the problem's occurrence in the years ahead. Staff will continue efforts to obtain study funds.

Temperature and Turbidity Increases Below Large Water Storage and Diversion Projects in the Sacramento River Basin

The storage and diversion of water for hydroelectric and other purposes can impact downstream beneficial uses because of changes in temperature and the introduction of turbidity. There are several large facilities in the Basin which have had a history of documented or suspected downstream impairments.

Where problems have been identified, the staff will work with operators to prepare management agency agreements or, if necessary, waste discharge requirements to remedy the problems. Where problems are suspected, the staff will seek additional monitoring.

Beneficial Use Impairments from Logging, Construction, and Associated Activities

The Board has regulatory responsibility to prevent adverse water quality impacts from timber harvest activities. Impacts usually consist of temperature and turbidity effects caused by logging and associated activities in or next to streams. The staff participates on an interagency review team and performs a limited number of field inspections, both before and after harvest, in an attempt to obtain compliance with and enforce best management practices. The Board may initiate enforcement action where water quality is degraded or threatened, but the volume of harvest plans annually submitted for review (i.e., approximately

500) and the geographical spread (logging occurs in more than 20 counties in the Region) results in high probability of staff not being aware of timber operations which cause problems. Limited staff time also precludes substantive interchange with Department of Forestry and timber industry personnel during the planning phase of a timber operation. This interchange would lead to more timely identification of water quality concerns and development of appropriate mitigations.

The Regional Board will consider adoption of a Basin Plan prohibition on the discharge of soil, silt, debris, and other materials from logging in quantities deleterious to beneficial uses. This prohibition would improve access to sites where water quality deterioration (from logging) is likely. It would also give the Regional Board the flexibility of using the administrative civil liability enforcement option.

ESTIMATED COSTS OF AGRICULTURALWATER QUALITY CONTROL PROGRAMS AND POTENTIAL SOURCES OF FINANCING

SAN JOAQUIN RIVER SUBSURFACE AGRICULTURAL DRAINAGE CONTROL PROGRAM

The estimates of capital and operational costs to achieve the selenium objective for the San Joaquin River and wildlife areas range from approximately four to nine million dollars per year (1988 dollars). A more detailed estimate is given in Table 6, Exhibit A, of Resolution No. 88-195.

Potential funding sources include:

1. Private financing by individual sources.
2. Bonded indebtedness or loans from governmental institutions.
3. Surcharge on water deliveries to lands contributing to the drainage problem.
4. Ad Valorem tax on lands contributing to the drainage problem.
5. Taxes and fees levied by a district created for the purpose of drainage management.
6. State or federal grants or low-interest loan programs.
7. Single-purpose appropriations from federal or State legislative bodies.

PESTICIDE CONTROL PROGRAM

Based on an average of $15 per acre per year for 500,000 acres of land planted to rice and an average of $5 per acre per year for the remaining 3,500,000 acres of irrigated agriculture in Basins 5A, 5B, and 5C, the total annual cost to agriculture is estimated at $25,000,000. Financial assistance in complying with this program may be obtainable through the U.S.D.A. Agricultural Stabilization and Conservation Service and technical assistance is available from the University of California Cooperative Extension Service and the U.S.D.A. Soil Conservation Service.

V. SURVEILLANCE AND MONITORING

This chapter describes the methods and programs that the Regional Board uses to acquire water quality information. Accumulation of data is a basic need of a water quality control program and is required by both the Clean Water Act and the Porter-Cologne Water Quality Control Act.

As discussed previously, the protection, attainment, and maintenance of beneficial uses occurs as part of a continuing cycle of identifying beneficial use impairments, applying control measures, and assessing program effectiveness. The Regional Board surveillance and monitoring program provides for the collection, analysis, and distribution of the water quality data it needs to sustain its control program. Generally, surveillance refers to the acquisition or use of data for purposes of identification or characterization of impairments; monitoring refers to the acquisition or use of data for purposes of determining compliance or assessing control effectiveness. Under ideal circumstances, the Regional Board surveillance and monitoring program would produce information on the frequency, duration, source, extent, and severity of beneficial use impairments. In attempting to meet this goal, the Regional Board relies upon a variety of measures to obtain information. The current surveillance and monitoring program consists primarily of seven elements:

Surface Water

The major surface water quality information network for Sub-basins 5A, 5B, and 5C is made up of existing ambient fresh and estuarine water column sampling stations selected from those used by the California Department of Water Resources in their surface water quality monitoring program. Areas not covered are supplemented by other federal, state or local data on water column sampling.

The State Water Resources Control Board manages its own Toxic Substances Monitoring (*TSM*) program to collect and analyze fish tissue for the presence of bioaccumulative chemicals. The Regional Board participates in the selection of sampling sites for its basins and annually is provided with a report of the testing results.

Ground Water

Ground water monitoring is conducted at points that are representative of ground water pollution and in areas of high use of ground water. The effort also relies upon information generated as part of state and federal programs' ground water surveillance efforts.

Self-Monitoring

Self-monitoring reports are normally submitted by the discharger on a monthly or quarterly basis as required by the permit conditions. They are routinely reviewed by Regional Board staff.

Compliance Monitoring

Compliance monitoring determines permit compliance, validates self-monitoring reports, and provides support for enforcement actions. Discharger compliance monitoring and enforcement actions are the responsibility of the Regional Board staff.

Complaint Investigation

Complaints from the public or governmental agencies regarding the discharge of pollutants or creation of nuisance conditions are investigated and pertinent information collected.

Intensive Surveys

Intensive water quality surveys provide detailed data to locate and evaluate violations of receiving water standards and to make waste load allocations. They usually involve localized, frequent and/or continuous sampling. These surveys are specially designed to evaluate problems in potential water quality limited segments, areas of special biological significance or hydrologic units requiring sampling in addition to the routine collection efforts.

Aerial Surveillance

Low-altitude flights are conducted primarily to observe variations in field conditions, gather

photographic records of discharges, and document variations in water quality.

San Joaquin River Subsurface Agricultural Drainage Monitoring

1. The dischargers will monitor discharge points and receiving waters for constituents of concern and flow (discharge points only).

2. The Regional Board will continue to monitor the major discharges, tributaries and the San Joaquin River.

3. The Regional Board will continue its investigations into pollutant transport mechanisms and sinks.

4. The Regional Board will inspect discharger monitoring and treatment facilities.

5. The Regional Board, in cooperation with other agencies, will regularly assess water conservation achievements and compile cost and drainage reduction effectiveness information.

The Regional Board's surveillance and monitoring efforts include different types of sample collection and analysis. Surface water surveillance may involve analyses of water, sediment, or tissue samples and ground water surveillance often incudes collection and analysis of soil samples. Soil, water, and sediment samples are analyzed via standard, EPA approved, laboratory methods. The Regional Board addresses quality assurance through bid specifications and individual sampling actions such as submittal of split, duplicate, or spiked samples and lab inspections.

Although surveillance and monitoring efforts have traditionally relied upon measurement of key chemical/physical parameters (e.g., metals, organic and inorganic compounds, bacteria, temperature, and dissolved oxygen) as indicators of water quality, there is increasing recognition that close approximation of water quality impacts requires the use of biological indicators. This is particularly true for regulation of toxic compounds in surface waters where standard physical/chemical measurement may be inadequate to indicate the wide range of substances and circumstances able to cause toxicity to aquatic organisms. The use of biological indicators to identify or measure toxic discharges is often referred to as *biotoxicity testing*. EPA has issued guidelines and technical support materials for biotoxicity testing. A key use of the method is to monitor for compliance with narrative water quality objectives or permit requirements that specify that there is to be no discharge of toxic materials in toxic amounts. The Regional Board will continue to use biotoxicity procedures and testing in its surveillance and monitoring program.

FOOTNOTES

1. Water Code Section 13050(j)
2. 40 CFR 130, 131
3. Water Code Section 13050(f)
4. 40 CFR 131.20
5. Water Code Section 13050(h)
6. Water Code Section 13241
7. Water Code Section 13050(j)
8. Water Code Section 13242
9. Water Code Section 13141
10. 40 CFR 130, et seq.
11. 40 CFR 131.12
12. Public Resources Code Section 4514.3
13. Water Code Section 13269
14. Water Code Section 13243
15. Water Code Section 13242(a)

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APPENDIX

APPENDIX DIRECTORY

ITEM*	DESCRIPTION
1	State Board Policy for Water Quality Control
2	State Board Policy No. 68-16
3	State Board Policy for Bays and Estuaries
4	State Board Policy for Powerplant Cooling
5	State Board Policy for Water Reclamation
6	State Board Policy for Shredder Waste
7	State Board Policy for Underground Tank Pilot Program
8	State Board Policy for Sources of Drinking Water
9	State Board Water Quality Control Plan for Temperature (Thermal Plan)
10	State Board Management Agreement with the U.S. Forest Service
11	State Board Management Agreement with the California Department of Forestry
12	State Board Memorandum of Agreement with the California Department of Conservation, Division of Oil and Gas
13	Regional Board Memorandum of Understanding with the U.S. Bureau of Land Management (Ukiah District)
14	Regional Board Memorandum of Understanding with the U.S. Bureau of Land Management (Susanville District)
15	Regional Board Memorandum of Understanding with the U.S. Bureau of Land Management (Bakersfield District)
16	Regional Board Winery Waste Guidelines
17	Regional Board Erosion Guidelines
18	Regional Board Small Hydro Guidelines
19	Regional Board Septic Waste Guidelines
20	Regional Board Mining Action Plan
21	Regional Board List of Water Quality Limited Segments
22	Regional Board Agreement with the U.S. Bureau of Reclamation
23	Federal Antidegradation Policy (40 CFR 131.12)

*Appendix items are paginated by: item number/item page/item total pages.

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

STATE POLICY FOR WATER QUALITY CONTROL

I. FOREWORD

To assure a comprehensive statewide program of water quality control, the California Legislature by its adoption of the Porter-Cologne Water Quality Control Act in 1969 set forth the following statewide policy:

> The people of the state have a primary interest in the conservation, control, and utilization of the water resources, and the quality of all the waters shall be protected for use and enjoyment.
>
> Activities and factors which may affect the quality of the waters shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.
>
> The health, safety, and welfare of the people requires that there be a statewide program for the control of the quality of all the waters of the state. The state must be prepared to exercise its full power and jurisdiction to protect the quality of waters from degradation.
>
> The waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations. Factors of precipitation, topography, population, recreation, agriculture, industry, and economic development vary from region to region. The statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.

To carry out this policy, the Legislature established the State Water Resources Control Board and nine California Regional Water Quality Control Boards as the principal state agencies with primary responsibilities for the coordination and control of water quality. The State Board is required pursuant to legislative directives set forth in the California Water Code (Division 7, Chapter 3, Article 3, Sections 13140 Ibid) to formulate and adopt state policy for water quality control consisting of all or any of the following:

Adopted by the State Water Resources Control Board by motion of July 6, 1972.

I. (continued)

Water quality principles and guidelines for long-range resource planning, including groundwater and surface water management programs and control and use of reclaimed water.

Water quality objectives at key locations for planning and operation of water resource development projects and for water quality control activities.

Other principles and guidelines deemed essential by the State Board for water quality control.

II. GENERAL PRINCIPLES

The State Water Resources Control Board hereby finds and declares that protection of the quality of the waters of the State for use and enjoyment by the people of the State requires implementation of water resources management programs which will conform to the following general principles:

1. Water rights and water quality control decisions must assure protection of available fresh water and marine water resources for maximum beneficial use.

2. Municipal, agricultural, and industrial wastewaters must be considered as a potential integral part of the total available fresh water resource.

3. Coordinated management of water supplies and wastewaters on a regional basis must be promoted to achieve efficient utilization of water.

4. Efficient wastewater management is dependent upon a balanced program of source control of environmentally hazardous substances[1/], treatment of wastewaters, reuse of reclaimed water, and proper disposal of effluents and residuals.

5. Substances not amenable to removal by treatment systems presently available or planned for the immediate future must be prevented from entering sewer systems

1/ Those substances which are harmful or potentially harmful even in extremely small concentration to man, animals, or plants because of biological concentration, acute or chronic toxicity, or other phenomenon.

II. 5. (continued)

in quantities which would be harmful to the aquatic environment, adversely affect beneficial uses of water, or affect treatment plant operation. Persons responsible for the management of waste collection, treatment, and disposal systems must actively pursue the implementation of their objective of source control for environmentally hazardous substances. Such substances must be disposed of such that environmental damage does not result.

6. Wastewater treatment systems must provide sufficient removal of environmentally hazardous substances which cannot be controlled at the source to assure against adverse effects on beneficial uses and aquatic communities.

7. Wastewater collection and treatment facilities must be consolidated in all cases where feasible and desirable to implement sound water quality management programs based upon long-range economic and water quality benefits to an entire basin.

8. Institutional and financial programs for implementation of consolidated wastewater management systems must be tailored to serve each particular area in an equitable manner.

9. Wastewater reclamation and reuse systems which assure maximum benefit from available fresh water resources shall be encouraged. Reclamation systems must be an appropriate integral part of the long-range solution to the water resources needs of an area and incorporate provisions for salinity control and disposal of nonreclaimable residues.

10. Wastewater management systems must be designed and operated to achieve maximum long-term benefit from the funds expended.

11. Water quality control must be based upon latest scientific findings. Criteria must be continually refined as additional knowledge becomes available.

12. Monitoring programs must be provided to determine the effects of discharges on all beneficial water uses including effects on aquatic life and its diversity and seasonal fluctuations.

III. PROGRAM OF IMPLEMENTATION

Water quality control plans and waste discharge requirements hereafter adopted by the State and Regional Boards under Division 7 of the California Water Code shall conform to this policy.

This policy and subsequent State plans will guide the regulatory, planning, and financial assistance programs of the State and Regional Boards. Specifically, they will (1) supersede any regional water quality control plans for the same waters to the extent of any conflict, (2) provide a basis for establishing or revising waste discharge requirements when such action is indicated, and (3) provide general guidance for the development of basin plans.

Water quality control plans adopted by the State Board will include minimum requirements for effluent quality and may specifically define the maximum constituent levels acceptable for discharge to various waters of the State. The minimum effluent requirements will allow discretion in the application of the latest available technology in the design and operation of wastewater treatment systems. Any treatment system which provides secondary treatment, as defined by the specific minimum requirements for effluent quality, will be considered as providing the minimum acceptable level of treatment. Advanced treatment systems will be required where necessary to meet water quality objectives.

Departures from this policy and water quality control plans adopted by the State Board may be desirable for certain individual cases. Exceptions to the specific provisions may be permitted within the broad framework of well established goals and water quality objectives.

STATE WATER RESOURCES CONTROL BOARD

RESOLUTION NO. 68-16

STATEMENT OF POLICY WITH RESPECT TO
MAINTAINING HIGH QUALITY OF WATERS IN CALIFORNIA

WHEREAS the California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the waters of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, safety and welfare of the people of the State; and

WHEREAS water quality control policies have been and are being adopted for waters of the State; and

WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;

NOW, THEREFORE, BE IT RESOLVED:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

3. In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.

BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the Secretary of the Interior as part of California's water quality control policy submission.

CERTIFICATION

The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 24, 1968.

Dated: October 28, 1968

Kerry W. Mulligan
Executive Officer
State Water Resources
Control Board

State of California
The Resources Agency

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY CONTROL POLICY

FOR THE

ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA

MAY 1974

3/1/16

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* To be furnished upon request.