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The Lower Sacramento Valley and Foothill Region's Consumptive Demand Upon Western Slope Sierra Nevada Watersheds

Senate Select Committee on the Sierra/Cascade/Klamath Watershed

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CALIFORNIA LEGISLATURE
THE SENATE SELECT COMMITTEE
ON
THE SIERRA/CASCADE/KLAMATH WATERSHED
SENATOR JOHN T. DOOLITTLE, CHAIRMAN

Transcript of Hearing on

**“The Lower Sacramento Valley and
Foothill Region’s Consumptive Demand
Upon West Slope Sierra Nevada Watersheds”**



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California State Legislature

The Senate Select Committee

on

The Sierra/Cascade/Klamath Watershed

JOHN T. DOOLITTLE

Chairman

July 22, 1987

To: All Concerned with Northern California's Water Issues
From: Senator John Doolittle, Chairman
Select Committee on the Sierra/Cascade/Klamath Watershed

On May 15, 1987, the Senate Select Committee on the Sierra/Cascade/Klamath Watershed conducted a formal hearing investigating the causes and implications of increasing water shortages in the Sacramento metropolitan area and neighboring foothill regions. We wanted to help assess the demand for domestic water upon "west slope Sierra Nevada watersheds," particularly the American River watershed. Both oral and written testimony were elicited from water districts and local governments as well as from the state's Department of Water Resources and the U.S. Bureau of Reclamation. Representatives from foothill communities such as Foresthill, Placerville, and Grass Valley joined witnesses from San Juan Suburban Water District, the Cities of Roseville and Folsom, the County of Sacramento, Rancho Murieta Community Services District, and other Valley entities in clarifying their water resources and needs.

The testimony is still being reviewed by committee staff and correlated with new data. A formal analysis will be issued with copies of all written testimony and a transcript of the oral testimony. For public review in the interim, I am providing this rough draft copy of the hearing's oral transcript. I trust the testimony will help local decision-makers manage the region's water resources during this summer of 1987. Should there be questions about this transcript or the upcoming analysis, please contact committee consultant Richard C. Staats at (916) 783-8232 or (916) 969-8232.

CHAIRMAN JOHN DOOLITTLE:this morning. We appreciate those of you who have come. Friday, it's a busy day. There's a big water conference in the Orange County area, the ACWA conference, so we know that many have made sacrifices to attend. This committee is comprised of three members. All of them have been involved with water issues. Senators Nielsen and Keene have both demonstrated leadership in this area. Senator Keene is out of town, as I believe Senator Nielsen is.

We're going to address the topic this morning, the demand upon the watersheds in the foothill areas and the West Slope - the Sierra Nevada watershed, and what the situation is. We've read a lot about the concern over lack of available water this year. We do have one of the driest water years in history, certainly since the last drought in 1976-77. I understand this is one of the driest years in the last one hundred years and we're beginning to see measures being instituted in certain parts of the area, mandatory conservation measures. I think the question has been raised as to what the future really holds for water in our area. Perhaps for too long it's taken a back seat or has been ignored, or taken for granted. We want to find out today what is the situation with reference to water, and what does the future hold? Are we going to be okay in a non-dry year or are the things that we're seeing this year going to get worse as time goes on just due to the increasing demands being made upon the watershed. If you will this is the flip side of the issue that's been so much in discussion recently, which is the flooding issue. And it seems extremely ironic in California. We go from one extreme to the other. Last year is a year of extreme flooding in the State and this year is potentially a drought year.

We'd like to begin our hearing this morning -- we'll move as quickly along as possible and see just how much ground we can cover before lunch time. Mr. Pete Rogers will be the first witness representing the California Department of Health Services.

MR. HARVEY COLLINS: Good morning. My name is Harvey Collins. Mr. Rogers is here with me in the audience to answer technical questions.

CHAIRMAN DOOLITTLE: Mr. Collins, why don't you identify the position that you hold and....

MR. COLLINS: I am chief of the Environmental Health Division within the department. The sanitary engineering branch, which Mr. Rogers heads, reports to me as chief of that division.

I have been asked to address several questions by your staff for -- in the interest of clarity I will read those questions and then give you the department's response.

CHAIRMAN DOOLITTLE: Thank you.

MR. COLLINS: The first question is: What is the public health concern in terms of water shortages? Inadequate water supply is a violation of Section 4017 (c) of the Health and Safety Code which requires water to be served in adequate and reliable quantities. The specific health concerns that are associated with water shortages are: of course, public safety; fire suppression, if the water supply is inadequate in quantity and you get a fire, you can create actual low pressures or negative pressures in the system which can result in back flow through cross connections and then subsequent health hazards from a health point of view also; also, if people have unapproved water sources such as their private wells normally used for irrigation, there will be a tendency to use those wells. The quality may leave much to be desired, and also there's another potential for cross connection there if adequate cross connection protection devices are not installed.

The second question is: Why would we place a building moratorium on the districts this summer? I would like to clarify that. The department has not made a decision that a moratorium will be necessary. This would only be made after additional discussions with the involved agencies and following public hearings. The decision would be made at that time as to the timing of any possible moratorium. So it would be sort of a last step.

The third question is: San Juan Suburban Water District has indicated that the Bureau of Reclamation will allow one-time emergency water for this summer's water needs. With a 23 to 25% shortage for 1988, what are the chances of a moratorium for next year as well? It is likely that the use of the emergency water from the Bureau combined with the additional mitigation measures would get the districts through this summer. And when we're talking about mitigation measures we're talking primarily mitigation through water conservation. One could install some mitigating measures in the short term, whereas long mitigation measures like meters would require much longer time and expense. Unless other measures are taken, however, additional growth will exacerbate the problem in 1988. The issue of a moratorium, therefore, would still be a possibility in 1988 unless adequate measures were taken.

The fourth question: What would there be -- when would there be public hearings on the moratorium? Over the next couple of weeks, our staff will continue to analyze the situation and will be holding further discussions with the affected agencies, including the County of Sacramento. At that time the department will decide whether a hearing is needed. Should a hearing be necessary we would issue a public notice and allow a 30 day period before holding the hearing. It is our hope that the effective agencies will be able to identify and be willing to undertake mitigation measures which would preclude the need for the hearing or further action on our part.

The fifth question: Are there any concerns of groundwater overdraft and quality of groundwater? Would this help the department ask for a moratorium? The department is concerned with the quality of any water used for drinking whether it be surface or ground water. We are obviously concerned with the quality of the groundwater in the area of discussion. However, the quality in that area is generally quite good. The issue of groundwater overdraft is the responsibility of other agencies. If use of groundwater was proposed as a mitigation measure, our concern would be primarily the quality of that groundwater. The availability of groundwater would preclude the need for a moratorium.

That concludes the prepared answers to the questions that the department was asked. If I could answer more specific questions or if Mr. Rogers could address specific questions, we would be glad to do so.

CHAIRMAN DOOLITTLE: I appreciate your testimony. Maybe Mr. Rogers would just like to come up here and have a seat beside you in the event that we wish to draw on his expertise. When was the last time, to your knowledge, the State Department of Health went in and imposed some kind of a moratorium like this in the State of California?

MR. COLLINS: I believe such a moratorium is in place right now in the County of Plumas. Mr. Rogers can clarify that.

MR. PETE ROGERS: We've probably got roughly, maybe, half a dozen such moratoriums that we have imposed over the last couple of years. I think the most recent one was probably about six months ago, and that would be in the City of Quincy.

CHAIRMAN DOOLITTLE: Do you have some system for monitoring this situation yourself before you get into the need to hold a hearing on a moratorium, or do you wait until you learn about it through the press, or how do you become aware that there's a problem? Do you do some independent system of monitoring or do you respond basically to what's brought to your attention?

MR. ROGERS: First of all, there are several reasons why a moratorium could be imposed. Lack of water is just one of those. It could also be imposed if the water is of such a quality that it fails to meet the drinking water standards as well. And most of the moratoriums that we have imposed to date have been for quality reasons rather than quantity. Most of the quantity problems we've run into have been as a temporary thing such as a drought or while a new treatment plant or new well is being drilled, and so it's a temporary thing and in those situations we do not impose moratoriums. The reason we're considering it in this case is because, one, it is not drought related; and secondly, there does not appear to be a solution in the immediate offing. We do monitor the systems, both from a quality and quantity standpoint, and when we reach a point where there is insufficient water to meet the requirements and the regulations, that would be the time we would consider various actions.

CHAIRMAN DOOLITTLE: I appreciate that information. When was the last time a

moratorium was imposed in this state for reasons of lack of available water?

MR. ROGERS: I'm sorry I do not have that information at my fingertips...

CHAIRMAN DOOLITTLE: To your recollection has there been a time in recent history?

MR. ROGERS: I would say within the last two years, yes, but specifically the dates or the systems I'd be glad to look that up for you, but I don't have that at my fingertips.

CHAIRMAN DOOLITTLE: But that's a fairly unusual occurrence?

MR. ROGERS: It's unusual, yes.

CHAIRMAN DOOLITTLE: You said that the consideration for the moratorium here was taking place because it is not drought-related. Could you elaborate upon that?

MR. ROGERS: All right. The amount of water used, according to the information we've received from the San Juan Water District, exceeds that which is available to it under its contracts with the Bureau of Reclamation and through its water rights. It's our understanding that they've been able to get through the last two years primarily because they were extremely wet years and this large amount of surplus water was available which is not currently the case. Their deficit then is a result of what appears to be of growth and normal type usage exceeding their rights that they have, rather than one specifically of drought. So we don't look on it as a strictly one year type of deal. If we did, we wouldn't be considering a moratorium.

CHAIRMAN DOOLITTLE: We'll hear later on, I think, from a representative from that district and some of the other districts. Do you have an idea as to the extent of the excessive demand for the available water?

MR. ROGERS: Again, the districts can verify the figures, but it's my understanding they have a right to approximately 44,200 acre-feet of water and the usage this past year was more in the range of 48,000 acre-feet. So it looks like that shortage plus the additional -- and it's been estimated to be about a 5% growth factor in that area -- amounts to something in the range of 18 to 20% for this summer.

CHAIRMAN DOOLITTLE: Are you familiar with -- it's my understanding that some -- quite a few additional permits were just issued within the County of Sacramento for this Antelope area, and I guess that would be one of the prime considerations for the moratorium. Is that right?

MR. ROGERS: I can't answer that specifically. Let me indicate though how the moratorium works, and that is we don't, we cannot by law prevent the issuance of building permits. Our authority extends only over the water districts, and we would issue a compliance order to the districts indicating that they could not issue any additional "will-serve" letters, or back additional water hookups. Also, by the way the moratorium works, anyone that has applied for or has received a building permit, would be allowed to continue to construct that facility or those operations. It would only be for future

ones that are not currently already in the permit process.

CHAIRMAN DOOLITTLE: Okay, so if you have your building permit you can go ahead and take care of it?

MR. ROGERS: Yes, that's correct.

CHAIRMAN DOOLITTLE: So the 5,000 permits that were just issued presumably will place an extra burden upon the amount of water available, but they're going to go ahead and take care of that anyway.

MR. ROGERS: That's right.

CHAIRMAN DOOLITTLE: Okay. Well, I appreciate your testimony from both of you and I'm sure we'll be meeting together and talking together in the future about what we'd do to address this problem.

MR. ROGERS: We would hope so.

CHAIRMAN DOOLITTLE: Thank you.

MR. COLLINS: Senator, I'd like to make one last point. I realize water meters are not popular, but it certainly is a mitigating measure and it's my understanding that water use is cut approximately 50% when water meters are installed. So it is quite a deterrent to excessive water use.

CHAIRMAN DOOLITTLE: Did you say 50 or 15?

MR. COLLINS: 50.

CHAIRMAN DOOLITTLE: 50. Just as a matter of interest, I was meeting with some officials from the City of Lincoln and they, on their own, have installed water meters throughout the city, and this was accomplished a while ago. It took about 18 months. I guess it isn't something you can do to address an immediate or temporary problem, but for the long-range it may be something that certainly needs to be considered.

MR. COLLINS: That's right.

CHAIRMAN DOOLITTLE: Thank you.

Our next witness is Mr. Larry Hancock representing the Mid-Pacific Region of the U.S. Bureau of Reclamation.

MR. LARRY HANCOCK: Good morning.

CHAIRMAN DOOLITTLE: Good morning.

MR. HANCOCK: My name is Lawrence Hancock, although everyone calls me Larry Hancock and my title is Assistant Regional Director for the Bureau of Reclamation. Dave Houston* would have liked to have been here today, but unfortunately he was delegated to testify before the House Water and Power Subcommittee which is chaired by Congressman George Miller in Madera today and cannot attend.

*Committee Staff Note: David Houston is Western Regional Director for the U.S. Bureau of Reclamation.

We also received some prepared questions from you and your staff. I have submitted those answers to those questions in the Bureau. I will not go through those questions and answers to those specific questions. What I would like to do is to summarize that testimony that answers those particular questions, and maybe then anticipate some questions that we would like to answer irrespective of whether you ask those questions or not.

In terms of summarizing, the questions dealt with a 5 to 10 year time frame. And it's the Bureau's position that there is no water shortage in the American River Water Basin over a 5 to 10 year time frame in normal and wet years. In critical dry years or dry years, there will be shortages which will have to be allocated across the various functions that the water is used for in the American River basin.

CHAIRMAN DOOLITTLE: This year you would consider as a dry year, right?

MR. HANCOCK: This year we would consider as a dry year but with somewhat of a normal water supply in the whole system.

CHAIRMAN DOOLITTLE: Yes.

MR. HANCOCK: But there are isolated portions of the system, and Folsom (Reservoir) in the American River watershed happens to be one which would not have an appropriate water supply available.

CHAIRMAN DOOLITTLE: I guess we should clarify too, you might, when you're speaking of the region or the area, what is the area that you are speaking of?

LARRY HANCOCK: This entire Central Valley, starting from Shasta and going all the way down to Kern County. So the real problem occurs in the dry and critical years of trying to allocate shortages across the various uses of the water. Of course, we know that we have lake recreation in Folsom. It's one of the, if not the highest used lake in the area. I think in the state park system it is the highest used area. We have use of the American Parkway downstream both for fishery resources and also for recreation, rafting and other kinds of activities; also we would be providing water to farms, cities, towns and industries; and also trying to meet water quality standards both in the river and meeting those standards that we are required to meet in the Delta with some of the water from the American River as well as other areas of the Central Valley Project. It is a classic example of how you'd have to go through in water short years and try to allocate shortages. The American River Basin is that kind of system. So what we would -- in terms of allocating shortages, certainly we do not want to let anyone whose drinking water's drinking water taps go dry, and we'll do everything within our powers to deliver the water to the towns and municipalities that we have. We also have to try to balance the reservoirs so that we can keep recreation in the reservoir as long as possible without hurting any other beneficial uses that would be made of it.

CHAIRMAN DOOLITTLE: On that point, what is the projection about -- we've read in the

paper that the boats may be coming out of Folsom Lake by the Fourth of July. Is that, in fact, accurate?

MR. HANCOCK: We are working very hard to try to make sure that the boats do not have to come out of the lake prior to July 4th.

CHAIRMAN DOOLITTLE: But, is it reasonably possible, that shortly thereafter -- I mean, are we looking at some point in July, are they going to have to come out?

MR. HANCOCK: Yes, it's reasonably -- it's possible that they could have to come out shortly after the Fourth of July.

CHAIRMAN DOOLITTLE: And that's just due to the excessive demands upon the reservoir?

MR. HANCOCK: That's correct, and (there is) the amount of water that was in the watershed this year. There was very little water in the watershed.

The area that I would like to -- so that's kind of a summary of the answers to the questions dealing with the 10 to 20 year forecast. I would like to project your questions that you asked into 20 to 25 year time frame. And the reason for wanting to do that is that if you have to build a major water facility for additional supply or for flood protection, or whatever the purposes of that, it takes about 10 years to construct that project and get it approved at a minimum. If you're working through the federal system with the budgetary constraints and things that we have now, it could take anywhere from 20 to 25 years from the date of a water project is thought about until it actually goes on line and can provide services to the areas that need the water supply. So when we're looking at water shortages in the system we are trying to project what those water shortages may be in the future and plan and design facilities so that we will not have those water shortages in the future. Also, one thing is that normally in an agricultural environment, which the CVP was primarily authorized for in supplying water, you accommodate shortages in critical dry years, and allocate shortages across that. We do not design M and I systems,* but I'm assuming that an M and I system you would not want to design to accommodate critical dry years and dry years. You would want to have a water supply available all the time for those people, although you can implement some conservation methods that may, if the conservation methods are not currently being used, that may get you through critical dry and dry years. But from the Bureau's perspective it's impractical to design a system and tell people 7 out of 30 years you will not have an ample water supply to drink or do the things that you need to do that are essential to your household. So if we were designing an M and I system we would try to take in the dry and critical dry year time frame.

I think one of the things you might want to ask is if we are projecting that there

*Municipal and Industrial System (excludes storing water for agricultural applications).

will be a water shortage in 20 to 25 years. We are projecting that there will be a water supply problem in the American River basin in 20 to 25 years if we're going to meet all of the requirements that have been projected for that system due in that time frame, and if those requirements become reality. There is some areas in that system that are very controversial and haven't been resolved at this time, and that is the -- what is the -- or what will be the requirement in the Lower American River for instream flow uses, and that is probably the one that would be the determining factor in terms of whether additional storage facilities would be needed on the American River side to meet local demands there. If the current decision from the State Water Resources Control Board were applicable, which everyone says is unsatisfactory to date, D-893, then there would be no water supply problems in the American River basin, even 20 to 25 years in the future. If D-1400 requirements which other flows that are required in the Lower American River, if Auburn Dam were constructed then there would be no problem meeting all the demands in the system. If some flows higher than D-1400 are required in the Lower American River by state and consumptive uses requirements, then clearly we would need additional storage on the American River system to satisfy the requirements in the 20 to 25 year time frame.

CHAIRMAN DOOLITTLE: May I interrupt just to ask now -- was it D-893? Is that what you first mentioned?

MR. HANCOCK: Let me check. I think that's correct. Yes.

CHAIRMAN DOOLITTLE: Why don't you just elaborate a little bit upon what that is and how many second-feet we're talking about. That's the one that presently is in force, is it not?

MR. HANCOCK: Well, that is the one that is, yes, that is presently in force by the State Water Resources Control Board.

CHAIRMAN DOOLITTLE: And that requires how many second-feet to be released through the American River?

MR. HANCOCK: Okay, the table in the chart, it varies from -- if you look at the table saying Lower American River Flows...

CHAIRMAN DOOLITTLE: Okay, I've got that.

MR. HANCOCK: And it varies from month to month, so it runs from around 500 cfs down to as low as 300 cfs in the river, the Lower American River.

CHAIRMAN DOOLITTLE: 300 cfs, all right, now -- and D-1400 is a standard which would require in the summer months 1500 cubic feet per second to be released, is that right?

MR. HANCOCK: That's correct.

CHAIRMAN DOOLITTLE: And, but, D-893 -- 1400's only in effect if the Auburn Dam is built, is that right?

MR. HANCOCK: That's correct.

CHAIRMAN DOOLITTLE: So it's merely a contingent decision. The 893 is in effect now,

and that requires 300, it looks like, cubic second feet.

MR. HANCOCK: That's correct.

CHAIRMAN DOOLITTLE: What is the amount of water, if you know now, that's being released in the month of -- we're in the month of May now. Now under 1500, it looks like they'd be required to release -- I mean, under 1400 they'd be required to release the 1500 cubic feet per second right now, and how many are being released now. Do you know?

MR. HANCOCK: We currently try to operate the system to meet the D-1400 requirements currently, although they're not mandated by the State Water Resources Control Board. We also believe that the D-893 releases are unrealistic for Lower American River, so we are trying to meet the D-1400 releases. Now whether we are currently releasing that amount of water, I really don't have that figure...

CHAIRMAN DOOLITTLE: What are your projections this summer? Do you think you're going to be able to keep meeting the D-1400 releases?

MR. HANCOCK: Yes, at this particular time we think we will probably meet them or come very close to meeting them.

CHAIRMAN DOOLITTLE: What do you suppose, in the event the trend continues, I think we're beginning to hear that there's going to be more depending upon this system. What are your future projections? Assuming no additional water is made available, what are the future projections for the impact upon the Lower American River as, well as for example, these 5000 new homes to be built out in the Antelope area, and as more growth occurs, what do you see happening there?

MR. HANCOCK: Okay, without additional storage facilities on the American River, if you're only talking about Folsom Dam and Nimbus Dam, there's no doubt that some shortage is going to have to be allocated. In my estimation, you would definitely take shortages either in recreation or in fisheries before you would take shortages in terms of dealing with people.

CHAIRMAN DOOLITTLE: So, is what you're saying, are we shortly facing a choice as to whether we have drinking water or rafting on the Lower American River? I mean, is it going to get to that?

MR. HANCOCK: Yes, we are facing that choice, but -- that's -- it depends on how you want to look at the system. In normal and wet years, the system will meet all of the needs over a 5 to 10 year period that are required. It's years like this and 1976 and 1977 where you're going to have to allocate those shortages. So the shortages are really only going to occur in dry and critical dry years in terms of allocating those shortages. So, yes, you have to allocate the shortages and you have to determine what your priority is going to be for allocating those shortages.

CHAIRMAN DOOLITTLE: And whose responsibility is it to allocate those shortages? Is that the Bureau's?

MR. HANCOCK: It's the Bureau of Reclamation's responsibility.

CHAIRMAN DOOLITTLE: So at some point, the Bureau may have to make that decision...

MR. HANCOCK: That's correct.

CHAIRMAN DOOLITTLE: ...whether it's drinking water that goes or whether it's rafting that is eliminated.

MR. HANCOCK: Right. But we try to meet all of their contractual commitments as well. And in most of the contracts we have shortage allocations for dry and critical years, probably with the exception of some M and I contracts. So we already have a process for trying to allocate the shortages, at least to contracting entities that we would be providing water to.

CHAIRMAN DOOLITTLE: You mentioned additional water facilities. I guess if we were to try and project as to what we'd be doing in the future in order to really do something about making more water available, some sort of a new reservoir or an expanded reservoir would have to be made available. Is that a correct conclusion?

MR. HANCOCK: Yes, that's one way of actually making additional water supply available -- not making additional -- I shouldn't say that, that's an incorrect statement -- of storing more water in times of excess for usage during times of shortages. We really don't generate any more rainfall or snowpack in the mountains. All we do is try to store that water on the American River at a time when it needs to be used. And as you know, most of the rainfall and snow occurs in the fall and the heavy use of the rain, I mean the water supply, is in the spring and the summer months. And if that water does not come off of the system in a proper sequence, then it's even difficult to store that water as it comes off of the watershed. We could have a normal year and without appropriate storage facilities, we could end up with a water short year because the facilities were inadequate to store the water when we received it, because you also have to take into consideration flood protection for the people living down below that area as well.

CHAIRMAN DOOLITTLE: Some seem to have the impression that the dams along the American River are an impediment to recreation on the river, and from talking to people that have grown up in this area and listening to what they've had to say about it, apparently the river, if it were completely in its natural state, would have extremely heavy winter flows and, I guess, virtually disappears, or practically disappears during the driest summer months. Do additional dams or additional reservoirs -- I guess you can't have a reservoir without a dam -- enhance the flows in the river, or do they somehow negatively impact those flows?

MR. HANCOCK: They would enhance the flows below the structures and depending on your perspective, they could inundate white water rapids above the structures. So from that perspective, depending on where your recreation is occurring, if you raft upstream, then

a dam could destroy the white water area, but if you rafted down the stream while using the lake itself, then it enhances that. So it just depends on what your form of recreation is in terms of how, or what recreation you think is most desirable in terms of how you would place your values on that.

CHAIRMAN DOOLITTLE: In terms of the Lower American at least, below Nimbus Dam, additional reservoirs would enhance, or additional water capacity from somewhere, would enhance the flows in the Lower American.

MR. HANCOCK: That's correct.

CHAIRMAN DOOLITTLE: Okay.

MR. HANCOCK: That's all I have.

CHAIRMAN DOOLITTLE: I appreciate very much your appearing here. Mr. Houston was very kind to send you, and we know that -- I believe he's testifying some other place today. Thank you.

MR. HANCOCK: Thank you.

CHAIRMAN DOOLITTLE: Our next witness is Mr. Bob Potter with the California Department of Water Resources.

MR. BOB POTTER: Is this all right here, Senator?

CHAIRMAN DOOLITTLE: It's just fine, or you can sit down wherever you'd prefer.

MR. POTTER: I'll try it here. Thank you for the opportunity to be here today. Dave Kennedy* would be here, except that he, too, was called to the congressional hearing in Madera where Dave Houston is.

My comments are in response to your letter of the 28th in which you posed five different questions of the department. I did provide written statement and as you requested in your letter, I won't go into the first of that, but rather concentrate on the last two questions which dealt with the impact of the Coordinated Operation Agreement on this issue, and on potential solutions to water supply needs on the American River.

The COA is our bureaucratic shorthand for the Coordinated Operation Agreement. It's an agreement between the state and federal governments on how we'll operate the state water project and the federal Central Valley Project. That agreement goes into issues of sharing surpluses and shortages that occur in the two systems -- the common system in which the two projects operate. It provides exactly how the Bureau and the Department will split shortages in a situation like we're in this year, and it also provides ways in which we will share surpluses in a wet year when we're trying to put water into storage in our two systems, or move water through the systems. The COA has strong advantages to both projects. It certainly provides a surety of supply and a more certain future for the State Water Project in that we can look ahead to a drought situation like we're

*David Kennedy, Director of California Department of Water Resources.

confronting this year and know how the two projects will coordinate with each other.

CHAIRMAN DOOLITTLE: That COA, I might just mention, appears from what I know about it, to be one of the -- if not the most -- significant development in water policy in a number of years.

MR. POTTER: It is extremely significant and valuable, I think, to everyone in the State, and it was a long time coming. We spent probably 25 years negotiating on the provisions in the agreement.

CHAIRMAN DOOLITTLE: And that was just -- that was concluded within last year, was it not?

MR. POTTER: I think it was November that we signed the agreement. It had to be and it has been ratified by Congress. The agreement also provides for exchanges, wheeling and potential water sales between the two systems, and I assume that that's the primary concern relating to the American River and the reason for your question on the COA. Within the COA itself there is no provision for a change in either supplies or demands specific to the American River system. And the department, in trying to implement the provisions of the COA which may allow us to buy interim water from the federal system, is certainly not interested in competing with present or future uses of CVP customers. The COA allows us and we're interested in acquiring interim water that's already been developed, may have been committed in a long-term contract, but isn't needed within the provisos of that contract yet today. There will be a hearing on Monday in the Resources Building, a joint hearing between the Bureau and the Department on the COA. We're going to take public input, see what people's concerns are. I suppose my remarks might be a little more focused if that hearing was behind us. But there is a hearing Monday over in the Resources Building on that agreement.

As to solutions to the American River dilemma, the department's work in this area have primarily been in macro, large long-term kinds of approaches. And there are several things that could be done, and clearly a reservoir at Auburn is one of the more logical solutions to water supply needs there. It's clear from the information that's been developed over the last year, since the disastrous or nearly disastrous floods of February 1986, that there is a need for additional flood control storage on the American River System. It's not clear and hasn't been clear for a long time exactly what size Auburn Reservoir is needed or affordable. The department, the Bureau of Reclamation and the Corps of Engineers* all have studies underway now that should bring some of that into focus by the end of this year. The Bureau is displaying, will display more information on Auburn alternatives, the Corps is -- by September will lay out flood control alternatives on the river system, and the department has been working with both of those

*U.S. Army Corps of Engineers

two agencies to see if we can help to define and identify an affordable project on the American.

There are other projects that are either actively under study or have been studied in the past that could yield water that could be contributed -- that'd make a contribution to the needs here. There's an active project under pursuit by the department and local water users in the San Joaquin County area -- the idea of taking water that was developed by the new federal New Melones Project, developing a conjunctive use operation with groundwater basins in the San Joaquin area and in that way generating more system yield for both the local operators and the State Water Project.

There are other ideas we've looked at over the years...

CHAIRMAN DOOLITTLE: May I interrupt, and just ask on that point, if they were to do that, would that water -- would that make more water available somehow for us up here?

MR. POTTER: It puts more water in the system in total and would make it possible for exchanges to be made within the CVP system itself so that more water would be available here.

CHAIRMAN DOOLITTLE: Okay.

MR. POTTER: Over the years there have been studies at the Marysville site on the Yuba River; the Garden Bar Project on the -- generated some excitement just recently and to my knowledge nothing or not much is happening on it right now; there have been proposals on the Cosumnes River. Most of those are -- dormant might be too strong a word -- but there's no intensive activity on them that I'm aware of today.

CHAIRMAN DOOLITTLE: Do you know what amount of water we are talking about if that New Melones agreement were reached? How much...

MR. POTTER: Well, there's an order of magnitude - 150,000 acre-feet of potential supply there. Now it's got a lot of competing users and I would assume only a small percentage of that could feed back into meeting needs in the American (River) area, and I haven't seen anybody really work through that yet, but the Bureau has developed a rather sophisticated computerized model system for looking at future exchanges all along that east side. And it's an idea that has merit and certainly wouldn't -- it's not a mutually exclusive sort of thing. There'd be no reason not to go -- to move ahead with both a small Auburn (Dam) and a New Melones. I don't want to give the impression that these are alternatives. They may be alternatives from a "needs" perspective, but it's not the kind of thing where, if you did one, you wouldn't do the other.

I guess I should close by reminding you that my statement does attach a statement that Dave Kennedy made before Congressman Fazio's -- we had a hearing sponsored by Congressman Fazio -- on the American River Flood Control problem and after carefully reviewing the works at the Corps and the Bureau had done, the department pretty much has come to the conclusion that there isn't any really durable alternative to Auburn from a

flood control perspective. That it just appears that we need some storage there at that site in this system.

CHAIRMAN DOOLITTLE: Would it be your conclusion, based upon what you know with reference to the water availability crisis, that Auburn also would be necessary?

MR. POTTER: Auburn could -- if -- it's the sort of thing where, I think, that flood control is what's going to motivate and drive the thinking on the project. When you begin to look at a project there, it's hard not to think in terms of adding some energy because there's some real energy benefits -- potential energy benefits -- there, that leads to the next logical step when you have people seeking water and you're going to build a development anyway, usually a multi-purpose development pans out to be the more economic and affordable thing.

CHAIRMAN DOOLITTLE: I guess the reason I raised the question, some have advocated that if an Auburn is built, it should only be for flood control and (the American River) should be basically allowed to run dry during the summer months. I'm just wondering, from the perspective of the State Department of Water Resources, you mentioned this New Melones agreement but have indicated that -- not an agreement, but a potential project...

MR. POTTER: Potential.

CHAIRMAN DOOLITTLE: ...involving an agreement, but you indicated at the same time that that would only make a small percentage of that 150,000 acre-feet available for water use up here. Now I guess my question is, I think we're all pretty well becoming aware at last of the flood danger that's posed to this region from the American River, but we're also beginning to identify today -- we've heard from the Bureau -- that we're going to have with our growth. We are foreseeing regular shortages in the future. It's a few years away, but it's foreseeable and the trade-off's going to come. We're seeing potentially the trade-off may come somewhat even this year between what we cut back on in order to meet, you know, other needs, but it seems like with the growth that's going on that we're going to find more and more the pressure to make those kinds of trade-offs with certain needs going unmet, and I'm just wondering does the Department of Water Resources view the construction of additional reservoirs north of the Delta as being something that is necessary in order to insure our continued water supply?

MR. POTTER: I've almost got to go through a little bit of history, I think, to answer that question in a meaningful way. The Department, to meet all of its contractual commitments in the State Water Project system, will undoubtedly someday need to be sponsor or cosponsor in storage developments north of the Delta. On the other hand, over the last ten years or so, whenever we have brought a development of that nature to the point where we could get serious about the cost, the costs have been something that our contractors have not been either able or willing to commit themselves to, so -- and there tend to be within the system other kinds of refinements that the increasing costs have

caused our customers in the Department to look internally and we've found cheaper ways to develop water supplies. Sooner or later most engineers in the game think that that process will run its course. We will have squeezed what we can squeeze out of the system by way of efficiency and will be back to serious talk about storage north of the Delta, but I would caution that our thoughts on that matter have proven erroneous in terms of timing in the past. We've always thought we were right there and it's turned out that we haven't been. It gets down for us where our customers pay the bill. It gets down to what's affordable and are there alternatives they'd rather go to? I think in the case of the Auburn project, the flood control's going to drive and the community has to decide and I recognize that there are values up there that would cause people to think about flow through systems and they've got to come to grips with that. If they do that, they will have foregone the opportunity to develop other kinds of benefits at the site, water supply and power.

CHAIRMAN DOOLITTLE: When you speak of your contractors, those people who have negotiated contracts to buy water, and I guess for the most part, maybe totally exclusively, would those be water districts, is that right?

MR. POTTER: Yes.

CHAIRMAN DOOLITTLE: Do you have, you don't have contracts with cities or counties, per se?

MR. POTTER: There are a couple of situations where we have counties as contractors because when we were ready to go in the early 60's the county was the most logical contracting agency, but by and large our contractors are large water districts. Sometime -- usual -- the larger ones tend to be mid-level wholesalers, if you will. They purchase from us and sell to a retailer that's actually in the delivery business. That's the typical equation, but you could find every end of the spectrum within the 30 contracts that we hold.

CHAIRMAN DOOLITTLE: The push, at least in the legislation that I've seen, seems to be on for additional water storage south of the Delta, rather than north of the Delta. Is cost a factor there? Are we talking about a much cheaper way of storing the water if its done south?

MR. POTTER: Cost may prove to be a factor, but I don't think it's been the major motivating factor in that kind of thinking. Over the last 10, maybe 15 years, controversy over our impacts on delta fisheries and delta water quality have caused many people in the environmental community to come to believe that if we took more water out of the system -- the Delta system -- in the winter and less during summer periods, it would help to alleviate the stress that we put that system under. That's the kind of thinking that leads you to storage south of the Delta. It's also true that there are a couple of pretty good physical opportunities south of the Delta, so the economics are not

bad, but I really think that the motivating factor was environmental impacts in the Delta water quality and fisheries.

CHAIRMAN DOOLITTLE: Doesn't the State have an interest even though from the environmental impact? Don't you need water available north of the Delta to assure sufficient flow to flush out the Delta and keep the saltwater back?

MR. POTTER: Certainly we do and that's probably one of the key reasons we started with Oroville Reservoir. It's a development that potentially benefits everybody along the system, northern Californians and southern Californians, and that would be true of northern storage today as well. It's simply that combination of cost factors and focus on delta fisheries that sort of shifted our thinking around to the south of Delta.

CHAIRMAN DOOLITTLE: That means even from an environmental standpoint, the Auburn Dam would make sense, wouldn't it?

MR. POTTER: If your focus is on Lower American River flows, that's certainly true.

CHAIRMAN DOOLITTLE: Well, even whether it's Low -- well, Lower American which leads into the Delta, but I mean it's more (cross-talking) to release...

MR. POTTER: Yes, in the Delta itself. Auburn has the potential to provide benefits in the Delta, no question about that.

CHAIRMAN DOOLITTLE: So would the State have an interest in becoming involved for some portion of sharing the cost of Auburn Dam?

MR. POTTER: I guess I'd want to separate my remarks into two -- the department's a little schizophrenic, you know. We own -- more or less own and operate State Water Project for our contractors and we also have a statewide obligation to meet everybody's water needs and supplies. Putting on my State Water contractor's hat for a minute and speaking to Auburn, I think our position would be we'd really like to participate up to the point that's economically competitive with other alternatives. Looking at it from a statewide perspective, there may well be good reason for the State of California in general, as opposed to State Water Project contractors, to seek involvement in Auburn to provide those benefits along the Lower American River. We can see a proviso wherein there might be some source of funding that recognize the benefits on flows along the Lower American provides for those and then our contractors pay for what benefit they get from it in terms of increased yield in our system. But they would be two different numbers. You can show an early large benefit in terms of water supply along the Lower American River that doesn't necessarily translate into a large benefit in terms of yield to our State Water Project. I think some of the numbers the Bureau's shown have revealed that.

CHAIRMAN DOOLITTLE: Well, on that point, how do you -- who presently pays for these efforts to keep the deltas free of saltwater as possible? I mean, you've mentioned sort of two different interests there, the State Water contractors....

MR. POTTER: Yes, I did.

CHAIRMAN DOOLITTLE: versus the State in general. Do the water contractors, are they expected to pay for all of these environmental mitigation measures? Doesn't that relate to this lawsuit that...?

MR. POTTER: In some ways that's an evolving kind of thing. Certainly in terms of requirements that the State Water Resources Control Board places upon us in our project operations that we meet, that translates back into higher water costs, and in that sense our contractors pay for those environmental benefits. It's recognized, however, in the Delta that we're one impact, the Bureau's another, and everybody else who draws water from the system is yet a third user. And there are moves afoot to somehow give recognition of that and to lay some of those costs of preserving the Delta estuary off on people who have thus far not been reachable. The reason that they're not reachable is simply that we're one large system. It's easy for the people who are in business of protecting the Delta to see what our- -- to see our impacts, to measure it and have an entity to deal with. The same is true of the Bureau. When you start talking about all of those users in the system who -- we may be talking about -- I don't know, thousands of diverters, it becomes much more complicated deciding how you're going to reach them in allocating costs of preserving the Delta. But there are many fronts in which you can see that trend coming. You can see it in the courts; you can see it in negotiations we've had underway with the Bureau on the Suisun Marsh, for instance. We've pretty much reached core in the Bureau that we will pay 40% of the facilities needed in the Marsh, the Bureau will pay 40% and we will try to allocate 20% of those facilities to what we deem to be the other users in the Delta that have had impacts on the Marsh.

CHAIRMAN DOOLITTLE: The Rackanelly (?) decision deals with these other diverters, doesn't it?

MR. POTTER: Yes, the Rackanelly (?) decision basically -- I'm an engineer, not an attorney but...as I see the Rackanelly (?) decision it said everybody's in the pot and you've got to treat them all when you allocate costs and benefits. And the State Board is grappling with that in how to implement that. First there's a question of how do you assign responsibilities and once you did, then there's a question of, all right if that party's responsible, how do we enforce? So there are two complicated questions in that process for the Board, but I think the courts have been fairly explicit in terms of what the law is.

CHAIRMAN DOOLITTLE: All right, I appreciate very much your appearing today and your testimony.

MR. POTTER: Thank you.

CHAIRMAN DOOLITTLE: Thank you.

Let's see, we have as our next witness Mr. Joe Alessandri representing the Water

Resources Department for Sacramento County. Mr. Alessandri is returning from southern California in order to testify for this hearing, and I want him to know we recognize this is an inconvenience and we appreciate his coming.

MR. JOE ALESSANDRI: Not at all, I came back yesterday and was planning on being here for the hearing.

In response to your letter I prepared some -- prepared answers to the questions in your letter and rather than get into that, the questions basically dealt with water demands within Sacramento County over a period of time and the nature of those demands and water entitlements and how those would be met in the future. What I would like to do this morning is give you a picture of the water situation, the overall water situation in the County. We have a situation in Sacramento County where the supply of water is shared or distributed among 25, 24 or 25 major water purveyors. The County's role has been in the last 20 years in planning to meet water requirements of the County, and we've developed plans to do so in cooperation with those water purveyors with the City of Sacramento. The basis of that planning is to make use of available groundwater supplies, but to supplement them with surface water supplies. We have a problem in the County where we have been depending very heavily on groundwater use and that's caused overdraft in certain areas and we need supplemental surface water to correct that current groundwater overdraft and to meet future needs.

CHAIRMAN DOOLITTLE: Could you comment, sir, on the extent of the overdraft?

MR. ALESSANDRI: In parts of the County, the groundwater has declined historically at the rate of, overall in the rate of 1 to 1- feet per year. It's a little bit less in the north area, and a little more in the south. So we have plans to do that and the need is for additional surface water supply which we intend to obtain basically, primarily from the American River. The City of Sacramento has a substantial supply from both the Sacramento and the American. In connection with the current problem we're having in the northeast area of the County, we believe that the problem is not lack of available supplies because there's water physically and technically available to meet the needs. It's a matter of political ability to get that or may be legally -- a legal problem in getting it, but there's some question, difference of opinion with regard to that among the attorneys. As a Bureau representative has stated, the need for the water in the American River system will not materialize for decades, and the Bureau has indicated its intention to contract with Sacramento County Water purveyors and they've included these requirements in their studies. We feel that they need to loosen up their policies, for example, to make water available during that interim period, as demands build up and until the time that a permanent supply is available. The only reason we're having a shortage, in other words, is because the district involved does not have a contract to cover that amount of water. The water's there that could be made available. That's our

position.

The question had been asked about the Antelope area and that is a little bit different problem because while that area is in an area where we've been experiencing groundwater overdraft, the water is available for development from groundwater that will extend the groundwater problem but over the long term our planning proposes to obtain additional surface water supply to use in that area, but in the meantime development could be taken care of by groundwater in that area up to a point. And the Board of Supervisors has recognized that in their conditions placed on the development in that area.

As far as the limitation of supplies in Lower American River over time, we feel that there are certain potential contractors for that water which would take their water at a lower point in the system. Our position is that those contractors, potential contractors which can take their supply lower in the system should do so. There are certain water purveyors that cannot, they're limited by location, and so forth, but there are others that can. I'm thinking mainly about the East Bay Municipal Utility District who has a contract for water from the Folsom South Canal and portions of Sacramento County's requirement in the southern part of the County could be taken from the Lower American River in the vicinity of the City of Sacramento's treatment plant. The southern part of Sacramento County -- as I indicated in the letter, and I wanted to be sure to highlight that -- will require some 240,000 acre-feet of water for municipal and industrial and agricultural use. And in that area we intend to implement a conjunctive use operation where more surface water would be used in times of abundant supplies and then we would be more dependent on groundwater in years of short supply, dry years.

CHAIRMAN DOOLITTLE: And the conjunctive use would be in conjunction with...?

MR. ALESSANDRI: Groundwater, surface and groundwater used together.

CHAIRMAN DOOLITTLE: Okay.

MR. ALESSANDRI: I think that covers the points that I wanted to make this morning. I'd be happy to answer any questions you might have.

CHAIRMAN DOOLITTLE: Back in the groundwater, for a moment, out in the Antelope area, you know there's an overdraft going on now and basically, I guess, the position of the County is that we're just going to keep overdrafting until somehow we get additional surface water.

MR. ALESSANDRI: I didn't mean to leave you with that impression. The plan that the County has developed has always been to use groundwater supplies and then supplement them with surface water supplies to balance those uses somewhere around the turn of the century, or within 5 or 10 years of that time. The problem with groundwater in Sacramento County is not insufficient supplies. It's the fact that when you continue to overdraft the supply, you tend to cause the quality of the groundwater to deteriorate.

You experience increased costs of pumping that groundwater out of the ground. There are other problems which can happen in very severe overdraft situations and they've happened in San Joaquin Valley, for example, where the surface levels of the ground have subsided. We're not in that kind of a critical situation now. We feel that we have enough supplies to get us over the next 15 years or so, but we need at the same time to be planning and working toward bringing in the surface supplies to balance those two sources of supply and to arrest the groundwater decline.

CHAIRMAN DOOLITTLE: I guess I'm just concerned. It seems like let's project a -- and figure you've used the groundwater and it's dropped a foot or a foot and a half a year for the next 15 years and then you begin to get your surface supply, but what amount of time then are we talking about that it takes to recharge those groundwater basins? Will they ever be recharged?

MR. ALESSANDRI: Well, yes, you can do two things. You can recharge the basin and bring it up to historical levels or you can stabilize them at a lower level, and that's a function of how much surface water you are either able to get or want to bring in.

CHAIRMAN DOOLITTLE: Your discussion of additional surface water, what or how do you see that being made available and then what would be the time frame that you see?

MR. ALESSANDRI: The Bureau of Reclamation is in the process of preparing an environmental impact marketing EIS on the Lower American River. Their target for completion of that is in '88, mid-88, August-September, and we're hopeful that shortly thereafter we'll be able to execute contracts for our water supply.

CHAIRMAN DOOLITTLE: And those contracts would be executed by the different water districts, I guess, who (cross talking)

MR. ALESSANDRI: Some would be executed by individual water districts and the large block for the south area of the County would be through our Sacramento County Water Agency.

CHAIRMAN DOOLITTLE: And then in order to -- once you -- do you have some delivery system? Is the water agency then to get it into the south area of the County? How does that work?

MR. ALESSANDRI: We have planned a delivery system for the municipal and industrial uses south of the City of Sacramento, outside the city's water rights place of use, but we have not gone into any detail planning on the agricultural supply, which would be a large block of water in the south area.

CHAIRMAN DOOLITTLE: We heard in testimony, I'm sure you were listening to that, from the Bureau of Reclamation, Mr. Hancock, that they feel that within 25 years we will be unable to meet the various demands upon the American River system. What is the position of the County of Sacramento with reference to that? What planning is the County undertaking to look toward the future in that regard?

MR. ALESSANDRI: Well, as I indicated, we're looking toward implementing conjunctive use water supply program where -- Mr. Hancock also indicated that in critically dry years there's a problem, dry years and other years, not so, and we would take advantage of that particularly with agricultural use to make more use of surface water when it is available and then in drier years depend more on groundwater supplies to make up the difference.

CHAIRMAN DOOLITTLE: Now, as I understood his testimony, that would perhaps be the case now, but in -- I think -- at least I understood the testimony to indicate there'd be sort of an ongoing bases, within 25 years we could count on there being inadequate supply of water. It wouldn't just be in the dry and critically dry years.

MR. ALESSANDRI: As indicated before, there are some things that can be done in terms of looking at where contractors take their supplies. For example, SMUD has unused supplies. They've got a contract for 75,000 acre-feet of which they've used 25,000. The likelihood of their using the remaining 50,000 is questionable because that was for power plant cooling use. That 75,000 could be available to another user. These things -- the utility district which has looked at taking its supply out of the Folsom South Canal, which in turn comes out of Lake Natomas behind Nimbus Dam, could be taken farther down in the river closer to the mouth of the American River without any appreciable difference in quality of water supply. So those kind of things need to be looked at to see how far the supply can be stretched in those times.

CHAIRMAN DOOLITTLE: Of course, I think, wouldn't East Bay MUD argue with you over that point about the difference in water quality?

MR. ALESSANDRI: They have been, yes.

CHAIRMAN DOOLITTLE: I think -- I don't know, my own personal experience on the American River, we've confirmed it would be better up near Nimbus Dam than it would be down at the confluence.

MR. ALESSANDRI: But the question is whether that's enough difference to -- in overall water management, whether that would make enough difference in meeting their needs.

CHAIRMAN DOOLITTLE: I think, what that controversy illustrates, though, there are a number of rights, you've eluded them, that are held on the Lower American, which could be exercised but are not presently being exercised and I think the Bureau looks at it from the standpoint of what is potentially capable of happening. That's how they plan for it. If all of those rights were exercised, we'd have a severe impairment of what we're accustomed to enjoying in the Lower American River. I'm just wondering, is the County of Sacramento looking at some pro active measures to make more surface water available? Mention of the Auburn Dam has been made. The County really -- I'm not aware of having taken too active a role in expressing support for that, or doing anything about it. I'm just wondering, would there be an interest in terms of dealing with a severe groundwater

overdraft which we're facing in terms of -- I mean we're hearing talk of possible moratoriums on new water hookups because of the inadequate supply that may not come to pass, but it's being discussed at least and looked at? Is the County seriously considering the need to have more upstream storage that would be available for its use?

MR. ALESSANDRI: Yes. The County has gone on record many times over the past 20 years in support of Auburn Dam for its flood control benefits to Sacramento, additional water supply, enhancement of downstream flows. In this current investigation of the flood control situation along the Lower American River, we're waiting for the next report which the Bureau will issue on costs and of various alternatives, advantages and disadvantages. A look at the information to date indicates -- staff level indicates and I have to agree with Bob Potter, that the only way to provide additional flood control on the American River is to hold the water back, to provide some kind of storage upstream and the logical place, of course, is the Auburn Dam site. Whether it's the full size dam of 2.3 million or an intermediate size will be determined on the basis of cost benefits.

CHAIRMAN DOOLITTLE: Given the multi-uses which relate to the Auburn Dam, what would be the position of the County on the issue of whether we build an Auburn Dam solely for flood control or whether we build one that's capable of storing water to be made available during the dry months?

MR. ALESSANDRI: Well, I have to tell you what my opinion or the Department of Public Works -- the Board of Supervisors has not taken a position on that and will not until we review the information and make a recommendation, but I think that from a standpoint as an engineer involved in water supply and flood control that it makes sense to -- if you're going to build a dam, to provide -- crank in some water supply and power generation because whether you need it today or not, you're going to need it in the near future.

CHAIRMAN DOOLITTLE: Do you anticipate the County will take a position on this?

MR. ALESSANDRI: Oh, yes. As soon as the information is available and we have an opportunity to analyze it, we will make a recommendation to the Board.

CHAIRMAN DOOLITTLE: Do you think the County of Sacramento would be willing to, in your opinion, establish a flood control assessment district and float bonds in order to help build upstream flood control and water storage facilities?

MR. ALESSANDRI: I think that's the only way it can be accomplished. The federal law, and if that comes to apply to Auburn Dam, where the flood control allocation is requires 25% share by nonfederal agencies, that a part of that share would come from the area benefited by that additional flood control. We would also hope that there would be state participation of those costs also, because there are benefits downstream as well to other than just Sacramento County residents.

CHAIRMAN DOOLITTLE: Benefits such as you mean the _____ water?

MR. ALESSANDRI: Just general benefits, there's a -- would hold back a portion of the flood waters that are heading toward the Delta and the whole Sacramento flood control system. There, I think, would be some increment of benefit to that entire system.

CHAIRMAN DOOLITTLE: Looking at the flood control things, that's certainly a major element of all of this and that's been the focus, really. This hearing is kind of looking at the other side of the problem, which is what happens is we run out of water. We're beginning to experience a taste of it this year perhaps. What is the cost, if you've assessed it? I've heard a figure and I just wanted -- I'd be curious to hear your figure. Since the federal government has found -- I think it's found, maybe it's still in the process of finding -- that we are in a situation where we don't meet the federal standards for flood control and that triggers a requirement, I believe, that either -- I guess for residences, you either -- you have to take out flood insurance before you can have money from a lending institution that's federally insured. Isn't that the way that works?

MR. ALESSANDRI: That's right.

CHAIRMAN DOOLITTLE: And that, I guess, is going to end up costing what, I've heard the figure, about \$300 per household for flood insurance.

MR. ALESSANDRI: That may be on the low end. Depending on the value of the home, it could be as much as double that.

CHAIRMAN DOOLITTLE: Okay, and that's per year and do you have some sort of preliminary assessment to show what the cost per household would be, household within the flood zone to pay off this bond assessment?

MR. ALESSANDRI: That assessment spread is going to be very complicated because you would have to consider the immediate dangers of flooding of that particular residence or business. It's the depth of potential flooding distant from the point where the flooding might occur. You have general benefits to the community by keeping the freeway and the streets open, preventing them from flooding, and allowing -- keeping the transportation system open, so there are general benefits to the community. But if you took a very simple kind of thing and spread that portion nonfederal share of the allocated cost of flood control to the 100,000 acres that would flood -- be prevented from flooding from a 200 year storm that an Auburn Dam would prevent, you come up with a very reasonable number for an average residence of say, \$40-50 a year, \$60 (cross talking)

CHAIRMAN DOOLITTLE: So, \$40 to \$80 per household would be the estimated....

MR. ALESSANDRI: For obtaining flood protection rather than merely having insurance in case your house did flood...

CHAIRMAN DOOLITTLE: And except for those who don't have -- except for those who completely own their own homes or who have loans from nonlending institutions or private loans, everybody else will be forced, will they not, if we don't have some additional

protection, to pay -- to lay out the money each year and arrange a \$300 to \$400 to \$500 for flood insurance? Is that correct?

MR. ALESSANDRI: That's right.

CHAIRMAN DOOLITTLE: So really it's, it's going to be, in most cases, it's going to be a choice of paying the assessment which would be \$40 to \$80 per household per year; or failing to participate in some sort of a dam project upstream we will be faced -- the alternative is to pay \$300 to \$400 to \$500 per household per year. Is that a fair assessment?

MR. ALESSANDRI: Right, that's right, but there's another point, too. Even those who are not required to pay flood insurance get -- do not get the flood protection that we feel that they need. The Corps of Engineers has stated, and then I have to agree with them, that a metropolitan area such as Sacramento should have at least 200 year flood protection.

CHAIRMAN DOOLITTLE: In fact I think I've read, aren't we the only major metropolitan area in the nation that presently is without such protection?

MR. ALESSANDRI: I don't know if that's a true statement or not.

CHAIRMAN DOOLITTLE: I've heard that, I don't know if that's completely accurate, but in any event, we are in an extremely unusual situation to be a metropolitan area of this size and yet still to be subject to the kind of devastation that can be wrought by flooding and which is completely foreseeable at some point in the future.

MR. ALESSANDRI: Right.

CHAIRMAN DOOLITTLE: Well, I appreciate very much your testimony. It sounds like the County of Sacramento is going to be having a great deal to say in the months ahead about building additional storage facilities north of us.

MR. ALESSANDRI: We hope to.

CHAIRMAN DOOLITTLE: Thank you, sir, for appearing.

Our next witness is Mr. C. W. Snyder representing the San Juan Suburban Water District.

MR. C. W. SNYDER: Good morning. I'm Floyd Snyder from -- a director of San Juan Suburban Water District, and like Mr. Alessandri, I just got back from the Aqua Convention also.

As I understand it, I was to read into the record answers to the questions 3 and 4 posed in your letter of the latter part of April. Is that...?

CHAIRMAN DOOLITTLE: If you, if you would answer those, we'd appreciate it and maybe if you'd be available to the extent of your knowledge to answer any additional questions, well, I'd appreciate that.

MR. SNYDER: The question 3 directed to us was: At the present time, San Juan Suburban Water District -- what environmental, economic and social consequences are you

experiencing, or expecting to experience, from any present or anticipated water shortage? At the present time San Juan is using annually all of its allocated water supply in Folsom Lake. As a matter of fact, during this 1987 water year, the district is anticipating a water availability shortfall of some 18%, which is of course, due first to a dry winter and spring. The Bureau of Reclamation has informed the district that surplus water of 5,000 to 7,000 acre-feet, which was purchased in the spring of '86 to supplement district requirements, is not available this year. In addition, over the past 12 months there have been approximately a 5% to 6% rate of new construction growth in the district. We don't expect much that would environmental impact during 1987. We're experiencing social consequences as two of the district's retailers, Citrus Heights and Fair Oaks water districts are now implementing mandatory water conservation programs. Should 1988 follow as another dry year, and the district is unable to obtain long sought after water contracts with the Bureau of Reclamation, we anticipate a water shortage of some 11,000 acre-feet. There is presently an economic consequence development. The California Department of Health is very concerned that new construction within the district is continuing and a firm water supply to provide services has not been firmly set. They are discussing and looking into the possibility of declaring a building moratorium in that part of the San Juan Suburban Water District lying within Sacramento County. Such a moratorium would have a tremendous economic negative impact not only in San Juan District, but would be felt in the counties of Sacramento, El Dorado and Placer as well.

In your question number 4: What possible solutions do you offer to provide additional water to the growing communities in the Lower Sacramento Valley region? As we see it, the solution to provide additional water for growth in the Sacramento County region, more particularly in the Sacramento County area, would be to complete the construction of Auburn Dam. By doing so, there would be sufficient water for Sacramento municipal and industrial use, a more firm stable flow in the American River for recreational uses, and left over water to address water quality in the Delta, and ensure an adequate supply for the Sacramento and the San Joaquin farming interest. There is presently strong competition for water in the American River. We at San Juan Suburban District feel strongly that the Central Valley Project should be completed as originally designed in the 1950's. To do so would ensure future generations the availability of water for their needs.

And that completes our written reply to your questions and if I can be of any further help I'd be happy to do so. If you'll excuse me, I have a breathing problem.

CHAIRMAN DOOLITTLE: Oh, certainly. I appreciate your testimony. Would the San Juan Suburban District, being a water contractor, be willing to participate in some cost sharing with reference to the Auburn Dam, say?

MR. SNYDER: Yes, Senator, I think we've indicated that prior to this.

CHAIRMAN DOOLITTLE: And that sentiment remains then?

MR. SNYDER: Yes.

CHAIRMAN DOOLITTLE: Could you describe the manner -- the relationship between you and Sacramento County? How do you report to the County your projected water needs and the surpluses and the shortages?

MR. SNYDER: Well, we're, I won't say continually meeting, but regularly meeting with the County Department of Water Resources people, other districts -- other water districts, and not only in our area, but throughout Sacramento County, at least in the northern part. And I think it's very well known that we've been trying to negotiate some firm water contracts with the Bureau since about 1977. We realize, of course, that they are somewhat restricted in how they have to go about releasing some of that water to us. As I've said before, they release some 5,000 acre-feet in 1986 because they had additional water from the wet winter. They've also indicated to us that by strict conservation methods and with us trying to save all the water we possibly can, that's in Fair Oaks and Citrus Heights, as well as our retail area, that they wouldn't let us go dry, but they also state that they don't like to give this emergency supplies to municipal and industrial areas because you have no way to know what _____ supply is in order to plan for growth, etc. So we're hoping that as soon as this environmental impact statement is completed that we'll be able to get a firm supply to support this growing district.

CHAIRMAN DOOLITTLE: That's the purpose of this study they're doing. It's a water marketing study and this environmental impact assessment, I guess is to...

MR. SNYDER: Right.

CHAIRMAN DOOLITTLE:and once they do that, I suppose that's what's behind Mr. Hancock's statement with the Bureau, that they feel they have enough water to meet the needs for the next 20 years.

MR. SNYDER: I would -- that's probably right and I certainly don't want to get into a debate with Mr. Hancock. However, you mentioned the Antelope area.

CHAIRMAN DOOLITTLE: Yes.

MR. SNYDER: San Juan Suburban Water District has proposed a multi-district concept that would reach from our district to supply treated water all the way to Pio Linda, growth in the north part of the County. Of course, there are several people interested in that because it will help the groundwater recharge. Our treatment plant would provide the treated water. However, that would require a larger, much larger contract to take care of that, of course. And as you know, there's a lot of competition for the water presently in Folsom Lake. So there again, we perceive the need for more upstream storage to help with that project in order for us to get firm contracts to go ahead with that

project.

CHAIRMAN DOOLITTLE: Given the 5,000 housing permits which were issued last week for the Antelope area and the fact that there is no apparent way of getting the water, other than through continuing to overdraft the groundwater supply, was there a miscommunication between the County and your district which lead to this? It seems like, it seems like things were going along great in Sacramento County and all of a sudden we've discovered we have a water shortage.

MR. SNYDER: Well, there again, that's the purpose of our _____ district project was to try to look down the road and cover that possibility. And of course, we also realize that it's going to be tough to get that -- those kind of contracts (cross talking)

CHAIRMAN DOOLITTLE: That's because of the magnitude of the contract will exceed what may be available (cross talking)

MR. SNYDER: I think we're talking about, in order for that project, another contract of about another 70-80,000 acre-feet.

CHAIRMAN DOOLITTLE: And do you look to see that kind of extra water being made available as a result of this marketing?

MR. SNYDER: That's the problem. We don't feel that it's available in Folsom, or it may be available, I don't -- I'm not going to say that, but trying to get it is going to be the problem.

CHAIRMAN DOOLITTLE: Because of the competition from others?

MR. SNYDER: Right, competition for the water out of Folsom.

CHAIRMAN DOOLITTLE: So in fact, it may be in your opinion -- I don't want to put words in your mouth -- but it may be unrealistic to assume that that amount of water is going to be available for your use as a result of this marketing survey.

MR. SNYDER: Well, at least as far as the _____ service district plant it would go, I'm afraid it wouldn't be. It may be, I don't want...

CHAIRMAN DOOLITTLE: It's open for question, I realize, you can't say for sure. What then, if that's not -- let's say it's not available, what then is the alternative?

MR. SNYDER: Well, I think it was stated before, that the Auburn Dam is the long-term solution to many things, including the flood control problem.

CHAIRMAN DOOLITTLE: I'm just wondering given the fact that if Auburn Dam, if they started today on it, I understand it would be ten years before you'd actually receive the benefit of additional water. What do you see from your perspective as a Director, what do we do until such time as the Auburn Dam can be built, that's assuming it could be started today?

MR. SNYDER: One thing would be to -- could be any speed up in the EIS and marketing studies to release some of that water from contracts -- would certainly help.

CHAIRMAN DOOLITTLE: I guess, I didn't ask when those are to be completed, but I think that's an....

MR. SNYDER: It's about August or September of '88, as I understand it.

CHAIRMAN DOOLITTLE: Okay. And once those are complete, some relief will be available, that's true, but perhaps not enough to meet the projected growth needs of this County.

MR. SNYDER: I think that's a fair statement.

CHAIRMAN DOOLITTLE: Is there -- then short of the marketing survey, making more water available, if that doesn't meet our needs, what else will you do? How else are you going to get water?

MR. SNYDER: There's got -- without some changes in the Bureau of Regulations, we're having a -- I don't see where -- I don't understand it, how we'd do it.

CHAIRMAN DOOLITTLE: So in other words.....

MR. SNYDER: Unless, they say, of course, that there is available water there. And taken away the multi-district portion of it, supposedly there is enough water for us to sustain some normal growth and take care of the needs. It may be necessary, as pointed out, that we may have to, the County may have to take some action to limit permits. In other words, the water agencies don't have that authority at all.

CHAIRMAN DOOLITTLE: You would only -- well, I guess the Department of Health would issue an order to you and then -- and then it would be -- you wouldn't be able to make new hookups. Is that how that would work?

MR. SNYDER: I'm sure if they went through with their hearings and so forth, and it was decided, well, that'd be the end of it.

CHAIRMAN DOOLITTLE: I guess the concern is, though, if that marketing study is not going to be completed until August of next year, and in this coming year we have a lesser amount of rainfall, we may be looking at a moratorium for a few months.

MR. SNYDER: Well, there again, the Bureau seems to be able -- in other words, on an emergency basis, I'm sure they wouldn't let us go dry in the next year, say if it was a dry year. At least that's all I can do is hope they would and about several thousand other people out there are doing the same.

CHAIRMAN DOOLITTLE: Well, I appreciate very much your coming back from the Aqua Conference and offering this testimony. I think it's been enlightening to everybody. It has to me, I know, to realize the extent of influence of your particular district. It seems like you're the ones that make the water available to most people in this County, at least in the northern part of it.

MR. SNYDER: Of course, we're also in South Placer part of the district and Placer County Water Agency has been very generous with us on taking care of the people in Placer County, but their water rights won't let us use any of their water below the County line.

CHAIRMAN DOOLITTLE: So, if you happen to live in Placer County these days, you can feel a little bit better about the supply of water that's available.

MR. SNYDER: Yes, sir, unless the lake goes dry, well, they're going to still get some up there.

CHAIRMAN DOOLITTLE: Could you describe briefly the types of conservation measures that are being taken? There's water rationing, I understand, in some parts.

MR. SNYDER: Well, Fair Oaks and Citrus Heights have implemented odd-even watering days and we've got patrols out day and night looking for gutter flutters. We're in the process of a conservation program to include the schools in the San Juan District, to get the children interested in the water problem because there's only so much water and it looks like we're getting more people all the time. We're all for water conservation, and of course, we implemented an ordinance to install water meters in our retail area, and that's on a moratorium itself right now while the constituents study our reasoning.

CHAIRMAN DOOLITTLE: How long will that take, once the...?

MR. SNYDER: We've got a very good advisory panel by the way, and they're really doing a good job, and we expect a final report in November.

CHAIRMAN DOOLITTLE: And then once approval is given, if approval is given, to do that, how long would it take to actually install those water meters?

MR. SNYDER: Well, by that time hopefully it will be raining, and we'll have to shut the water off too long, and we can go along with installing the rest of the meters. We've got about 1400 meters installed now out there which are giving us tremendous data on this water use. The reason for the meters, we felt was that it was a conservation measure and an equity measure, as well as to finance a deficit. The conservation is, of course, as somebody has already testified, we feel it will conserve 20 to 40% over the long run.

CHAIRMAN DOOLITTLE: All right sir, I appreciate very much the time you took. Thank you.

MR. SNYDER: Thank you very much. Happy to be able to come by.

CHAIRMAN DOOLITTLE: Our next witness will be Mr. Robert Churchill representing the Citrus Heights Irrigation District.

MR. ROBERT CHURCHILL: Good morning, Senator. I'll enter some additional comments subsequent to my letter into the record if I might, please?

CHAIRMAN DOOLITTLE: Certainly.

MR. CHURCHILL: Start with a little history here. My name is Robert Churchill. I'm a general manager and engineer of Citrus Heights Irrigation District in suburban Sacramento. I've had the pleasure of calling Citrus Heights home for 25 years and been with the Irrigation District since 1976, eight months in my current capacity. I can recall the days in the late 1960's when the Sunrise Mall area was all open fields. That

was more or less the outskirts of Citrus Heights, beyond San Juan High School. And since the mall construction, our area, as you know, has grown considerably. Since 1976 the district has grown in population by 95%, with the increase in water consumption of 25%. In 1977 our wholesale water supplier, San Juan Suburban, requested an additional 28,800 acre-feet from the Bureau of Reclamation on behalf of the San Juan group which includes Citrus Heights, Orangevale Mutual Water, a little part of the City of Folsom and Fair Oaks Water District to meet our future growth. Today a contract with the Bureau is in the Environmental Impact statement phase, expected to be completely in late 1988. The word is the water is there, just a contractual problem, a bureaucratic problem in getting it to us. But we currently have no contractual guarantees for sufficient water to meet our ultimate growth. In 1986 the San Juan group exceeded the Bureau contract by about 5-6%, and our current use in Citrus Heights Irrigation District this year is 18% above last year's growth. This is due primarily to weather conditions and the project growth we've had. Today as I speak we have 41 residential and commercial projects under construction which we anticipate will increase our consumption by another 6-% once they're completed; 24 additional projects have been approved and 78 are proposed, which project another 10% increase in water use. We are currently looking toward additional wells to supply our growth to offset the surface water consumption and have expanded our water conservation program in hopes of reducing the per capita use. As you are aware from Mr. Rogers testimony earlier, the Department of Health Services is contemplating a public hearing to discuss the building moratorium issue. We applaud their efforts to hold a hearing to consider this. We hope that a moratorium is not warranted. We feel that the impact to the building industry and the satellite suppliers around that will have significant impact on the Sacramento, El Dorado and Placer Counties areas. We also feel that if the building comes to a halt in our area, a rate increase for our current users is quite probable. We have not had a rate increase in 8 years due primarily to the additional growth we've had. Drilling wells would also have an effect on our rates due to the rising electrical costs and the associated of operating the wells. We currently purchase water from San Juan at a rate of \$23 per acre-foot. Our electrical costs alone for the seven wells we operated for peaking last year, were \$60 an acre-foot. We do feel the construction of Auburn Dam would allow the Bureau to improve its flexibility and operating Folsom and significantly affect their ability to enter into and supply water by contract without adverse impact to the Lower American River.

CHAIRMAN DOOLITTLE: So you pay \$60 in acre-foot now for your well water that's pumped.

MR. CHURCHILL: That's the electrical cost per acre-foot. We have some maintenance costs associated in there also. Our pumps are fairly old. We're looking into rehabilitating them, putting in new motors, so that we can possibly reduce the electrical

costs if we do go to pumping. Approximately 97% of our water last year came from San Juan, surface water from San Juan.

CHAIRMAN DOOLITTLE: 97, you said?

MR. CHURCHILL: 97. We pumped the other 3% from the ground primarily during daylight hours on hot summer days for peaking purposes in low pressure areas.

CHAIRMAN DOOLITTLE: Is your district willing to pay for new water, say from an Auburn Dam or some -- well, from the Auburn Dam if that's -- let me just say, are you willing to pay for that?

MR. CHURCHILL: It would be worth considering whether those costs would be in line with what it would cost to drill wells. I don't know. We have the overdraft problem as Mr. Alessandri referred to. We are supportive and have gone on record of being supportive of San Juan and their efforts to obtain additional surface water supplies, whether it be through the bureau at Folsom or with the construction of Auburn.

CHAIRMAN DOOLITTLE: Would you describe the sorts of water conservation measures that you are taking?

MR. CHURCHILL: Oh, if I could backtrack just a little bit to the drought year of 1977, that's the first year that we had a water conservation program. We were able to conserve 29% over the prior year's use. Of course, it was a drought year, people were much more aware from 1976 and the carryover in 1977 that there was a problem. We mandated the odd-even watering based on street address; we had a water patrol working daylight hours only issuing citations, warnings, etc., for the gutter flutters for the flagrant wasters of water, and we were very satisfied with that program. It kind of fell by the wayside when water conservation wasn't quite an issue and we had a sufficient supply. This year we've gone pretty much back to those same requirements, eliminating the use of hose -- open flowing hoses for washing of cars, just requiring they be permitted or use a shutoff nozzle; no fillings of ponds and troughs with open hoses; just basically trying to get rid of the actual flagrant waste of water going down the gutter or down the roadside ditch. We have reinstated the odd-even day watering and our patrol took to the street last Monday -- Monday of this week to try to curtail the waste.

CHAIRMAN DOOLITTLE: So if you live in your district you can't wash your car out on the driveway then, uh?

MR. CHURCHILL: Well, you can wash your car on your driveway just as long as you put a shutoff nozzle on the hose. We just don't want the open flowing hose running down the driveway while you're scrubbing the car.

CHAIRMAN DOOLITTLE: How about -- can you wash -- can you hose down the driveway or the gutter in front of your house or not?

MR. CHURCHILL: That is pretty tough to control. We are recommending that that not be done, but that is not part of our mandatory ordinance. We are requesting that or

requiring that people with automatic timers set their systems to run during off peak hours for additional pressure at those times to reduce evaporation, trying to get people not to come home from work and immediately turn their sprinklers on to water their lawns. That, in addition to the peak time for our water system, is also a peak electrical use time and does put additional strain on SMUD's ability to provide power to our pumping sites which we're operating more these days.

CHAIRMAN DOOLITTLE: What about the regulation for swamp coolers which a lot of the older homes have? Are they.....

MR. CHURCHILL: That gets back to the open hose affair, just not to let an open hose run, whether it be into a swamp cooler, a trough. We don't mind them using a swamp cooler as long as the hose is -- the swamp cooler is filled routinely, but not left to run.

CHAIRMAN DOOLITTLE: Okay. Have you reached a point in your district where you feel you must refuse to issue "will-serve" letters or refuse to accept connections for new developments?

MR. CHURCHILL: We don't feel that we can do that to the property that is currently within our district. We have undeveloped parcels that have been in the district since its inception in 1920. Those people have been paying their land assessment fees to us all along and we don't feel that we can refuse to provide them water service. It would have to be a mandate from the State through the County, I would assume.

CHAIRMAN DOOLITTLE: All right. Thank you very much for your testimony, sir.

MR. CHURCHILL: Thank you.

CHAIRMAN DOOLITTLE: The next witness is Mr. Fred Barnett representing the Department of Public Works in the City of Roseville.

MR. JERRY JACKSON: Mr. Chairman, I'm Jerry Jackson, the assistant director of Public Works in Roseville. Mr. Barnett could not be here this morning, unfortunately.

I believe you wanted me to address two questions, one being: What environmental economic and social consequences are expected from the shortages of water? The City of Roseville adopted a general plan this past November that calls for a population of 90,000. But in that general plan we have quite a large area of urban and industrial reserve. Right now we have sufficient water rights to cover the 90,000 population.

CHAIRMAN DOOLITTLE: Is that 90,000 you said?

MR. JACKSON: 90,000 is the ultimate in the general plan as adopted now. But if we should decide -- the city fathers in later years -- decide to develop the urban and industrial reserve, then we're going to have a problem. We will have a problem at that point in time just as Citrus Heights and Fair Oaks and San Juan have now. And of course, as things go, just like Antelope, those areas will -- well, someone will want to develop those areas 20 to 30 years in the future. But that's where our problem will exist --

into the future about 20 to 30 years.

CHAIRMAN DOOLITTLE: So you have large tracts of land in your general plan that you call an urban reserve or industrial reserve that will some day be developed?

MR. JACKSON: Exactly, and I think it was put there primarily because we knew we had the water rights for 90,000.

CHAIRMAN DOOLITTLE: Yes.

MR. JACKSON: And it was somewhat developed around our water system and our water rights, the general....

CHAIRMAN DOOLITTLE: So your water rights really don't contemplate the development of those areas, then?

MR. JACKSON: Exactly.

CHAIRMAN DOOLITTLE: And if those areas were developed, what's the estimate in terms of the additional demand?

MR. JACKSON: We would need at least 18 to 20,000 acre-feet per year additional water....

CHAIRMAN DOOLITTLE: Are you seeking an additional allocation from Folsom Reservoir?

MR. JACKSON: We have not made an official request to the Bureau. We are talking with Placer County Water Agency, not to any great detail, but we are looking to them. They may not know it that much right now, but to them for water in the future.

CHAIRMAN DOOLITTLE: Okay. Now has -- how do you get your water right now? Are they the wholesaler to you, or do you get it yourselves?

MR. JACKSON: No, we have our own water rights out of Folsom Lake, 32,000 acre-feet. We have a water treatment plant very near the lake, so we have our own water utility in the City of Roseville.

CHAIRMAN DOOLITTLE: But for that future urban and industrial reserve, then you'd buy it from Placer County Water Agency?

MR. JACKSON: We would have to buy those rights from Placer County Water Agency or the Bureau of Reclamation.

CHAIRMAN DOOLITTLE: Okay.

MR. JACKSON: In the second question that you asked me to address was possible solutions to providing additional water. The groundwater concerns us in Roseville for two reasons. First of all, we've heard the drafting problem. But secondly, we've had two water wells -- we have five water wells that we use for emergency backup right now in Roseville. Two years ago, two of those wells became contaminated with a cleaning solvent. So we're very concerned about groundwater as any additional source of water. We could not rely on it. And we honestly think Auburn Dam is the solution.

CHAIRMAN DOOLITTLE: That's interesting. The County of Sacramento obviously feels they still can rely upon it, but you in Roseville feel that you cannot. Is there

something -- is there a difference?

MR. JACKSON: Well, principally once we found the contamination under two water wells we don't know how extensive that contamination is. It could be in years to come affecting the other three water wells. It could affect that whole area up there. We just don't know.

CHAIRMAN DOOLITTLE: When you say the area up there, you mean the Antelope area.

MR. JACKSON: Well, they're just to the southwest of us, that's true.

CHAIRMAN DOOLITTLE: And is that to your knowledge, is that the same groundwater basin as what Roseville is over?

MR. JACKSON: We're fairly certain water flows from the north northeast to the southwest, in that general direction, which would be through Roseville out towards the Antelope area.

CHAIRMAN DOOLITTLE: Okay, that's interesting. I appreciate your offering that insight. So the City of Roseville would not look to additional groundwater to meet its immediate needs then?

MR. JACKSON: I don't think so. I don't think we would. We wouldn't develop the urban and industrial reserve relying on groundwater. If we couldn't get surface water, I'm sure it would just never be developed.

CHAIRMAN DOOLITTLE: Are you or is the City prepared to participate financially in bearing the cost of taking water, say, from an Auburn Dam?

MR. JACKSON: Again, that would be an economic decision if the cost were such that it would make development of that urban and industrial area not feasible, then I'm sure, no. If the cost were of a level that it would make development of those areas feasible, sure.

CHAIRMAN DOOLITTLE: Have you had the chance yet to investigate the issue of the cost, say, from Auburn Dam water? Have you had any -- in other words, we know there's going to have to be some local funding to make the Auburn Dam a reality. Are you aware of any discussions entered into by the City of Roseville concerning that?

MR. JACKSON: No, I am not. I have heard comments about what the cost of water from Auburn Dam would be and I'm thinking in terms of \$120 per acre-foot. We're paying \$9 an acre-foot now, so you can imagine the impact that would have on our water rights.

CHAIRMAN DOOLITTLE: And does the figure \$120 seem -- how do you evaluate that in terms of -- obviously it's a lot more than what you're paying now, but I mean, are you regarding that as something you could possibly live with or do you see that as totally unrealistic?

MR. JACKSON: We haven't looked at it that closely. I know it would have a significant impact on the water rights, but maybe not to the extent that it would be prohibitive. It's hard to say without doing a pretty indepth economic study. I really didn't prepare for that question.

CHAIRMAN DOOLITTLE: No, I realize that, and I appreciate your just answering to the extent of your ability without benefit of any additional research that you might do. I presume that when you say \$9 a foot, part of that low cost is due to decisions that were made years ago.

MR. JACKSON: Way back, yes, that's true.

CHAIRMAN DOOLITTLE: And if we're talking about, as we ultimately must talk about when we're facing growth, building new water facilities, we are talking about significantly higher costs, I would imagine, aren't we?

MR. JACKSON: You mean, even in the existing water right....

CHAIRMAN DOOLITTLE: Well, I -- no, I'm sure you could buy water rights if they'd sell them to you, say from Placer County Water Agency for less than that. What would you pay if you had to buy new water rights from them? Do you have any idea?

MR. JACKSON: \$18 to \$27 an acre-foot would not have a great impact....

CHAIRMAN DOOLITTLE: Okay.

MR. JACKSON:on our water rights. Perhaps all the way up to \$50 an acre-foot would not have a serious impact. But anything beyond that, then it would have a serious impact on the water rights in the City.

CHAIRMAN DOOLITTLE: I guess my point is, we're still taking advantage of water that was made available by the construction, say, of Folsom Dam. \$120 a foot may be very expensive today, but 20 years from now may not seem -- may seem more like \$9 seems today.

MR. JACKSON: That's very true, it probably will. But then looking at it from the City's standpoint, with the urban and industrial area, would it be economical to develop it? And we would have to study that in some great detail before we would want to make a commitment, but right now I would say we're certainly in favor of the Auburn Dam. No doubt about it, unless the cost just becomes outrages.

CHAIRMAN DOOLITTLE: What do we need to have in order to be able to really begin to get down and make some calculations? What are we waiting for? Do we need to have the study completed first before we can make that decision? In other words, what is it going to take for our local people to seriously pencil out the figures and begin negotiating to share a portion of the cost?

MR. JACKSON: Basically, just come up with an estimated cost per acre-foot that it would cost to reimburse for construction of the dam, plus the other sources of reimbursement to the dam. Of course, there's a flood control benefit, there's a power benefit, as well as a water benefit. So I think you would have to look at all three sources of benefits, value those and then cost it out.

CHAIRMAN DOOLITTLE: And you've got to know, I guess, the nature of the dam as sort of an investment that we'll make initially there.

MR. JACKSON: Exactly.

CHAIRMAN DOOLITTLE: Do you see that coming together in the next six months?

MR. JACKSON: Not in the next six months, I really don't.

CHAIRMAN DOOLITTLE: Do you have a feeling for when it might?

MR. JACKSON: Perhaps a couple of years, but I know a city like Roseville, we could present to Council an economic evaluation very quickly if we just knew a cost range of the acre-feet, the cost per acre-foot of water out of the Auburn Dam, if the cost for the Dam had already been established and distributed to the different benefit areas.

CHAIRMAN DOOLITTLE: Isn't the Bureau of Reclamation, we should have asked them this, the study is under way to sort of pin down some of these things, isn't it?

MR. JACKSON: I think so. I only know what I read in the paper.

CHAIRMAN DOOLITTLE: Yes. I think that study is due out shortly and will enable us then to have the facts we need to begin to make some of these calculations and hard decisions about what we're going to do for our water future.

MR. JACKSON: But they would be very useful to us so we could start planning, of course, regarding support for the dam.

CHAIRMAN DOOLITTLE: Is there anything else you wish to offer by way of testimony?

MR. JACKSON: Nothing that I can think of. I do appreciate the opportunity to appear.

CHAIRMAN DOOLITTLE: Well, I appreciate your coming and offering the thoughts that you have and we thank you for making your testimony available.

MR. JACKSON: Thank you very much.

CHAIRMAN DOOLITTLE: Our next witness will be Mr. Einar Maisch representing the Placer County Water Agency. When he's finished, we're going to take a 10 minute break and then I think I'd propose that we continue on and we may be able to finish up this hearing by around 1:00. Is that going to cause a problem for anyone if we do not take a lunch break? Well, I understand we may not have witnesses until 1:00, so we may still have to come back, but I think we'll go for a while longer, so let's hear from Mr. Maisch.

MR. EINAR MAISCH: Senator, good morning. My name is Einar Maisch and I'm the agency engineer with Placer County Water Agency. We also submitted written testimony in answer to your questions. I'd like to hit a few highlights. We have three sources of water supply. We have a contract with PG&E for water which they bring down through their Bear River system which is Lake Spaulding and Rollins. That is our principle source of water right now. It's 100,000 acre-feet. We're currently using about 90,000 of it. We also have water...

CHAIRMAN DOOLITTLE: You said 90 of that?

MR. MAISCH: 90 of the 100. We also have water rights for 120,000 acre-feet in the American River by virtue of our Middle Fork projects, which are Hell Hole and French

Meadows. Currently we're selling -- we have a contract with San Juan Suburban to divide them up to 25,000 acre-feet of that water for service to their customers within Placer County. Our water rights, apparently, I'm told by my attorney, prohibit the use of that water down in Sacramento County.

CHAIRMAN DOOLITTLE: What do you with the -- do you use yourselves the rest of that water?

MR. MAISCH: Well, the water rights escalate over time, and we don't have the entire 120,000 at this time. We're utilizing about 80% of our current allocation. It builds up to the year 2007 before we have the full 120,000 acre-feet.

CHAIRMAN DOOLITTLE: How many do you presently have right now?

MR. MAISCH: I believe 30,000 acre-feet right now.

CHAIRMAN DOOLITTLE: So you have quite a capacity for growth still.

MR. MAISCH: Yes, yes, we've got 10,000 acre-feet of reserve in our PG&E supply and we've got about 10,000 acre-feet of reserve in our Middle Fork water right water in the American River. We also have a contract with the Bureau for water from the CVP project which is to be delivered at Auburn for 117,000 acre-feet. Currently, we're discussing with them whether or not that water will be available. The agency feels that we have a firm contract. It should be available. There's some question about the ability of the Bureau to deliver the water if Auburn Dam is not constructed, however.

CHAIRMAN DOOLITTLE: Now that was for 117?

MR. MAISCH: 117,000 acre-feet, yes.

CHAIRMAN DOOLITTLE: Does that involve that -- doesn't -- isn't there a tunnel that was built...

MR. MAISCH: Yes.

CHAIRMAN DOOLITTLE:that would have connected to the Auburn Reservoir?

MR. MAISCH: It would have connected out into Auburn Ravine which serves out through Lincoln and to quite a large area of agricultural users out near Lincoln. As a matter of fact, on the list of potential demands, we have a group of those ag users, I think it's about 18,000 acres, which have gone through the County and made an official request for 130,000 acre-feet from the Water Agency for agricultural water. Studies are currently being done on several fronts for the Agency. We're doing a master plan on how we're going to meet our projected demands, and we're also looking at how we could economically develop our water supplies to meet those agricultural requests.

As you know, Placer County is one of the fastest growing areas in the State. Preliminary reports from our master plan indicate that by 1995 we expect a 70% increase in our municipal and industrial use, and by the year 2011 which is 25 year planned range, we expect a 450% increase in our municipal and industrial uses. I'd like to add that the PG&E for the 100,000 acre-feet, that's not -- that's an agricultural supply which means

it's not really a firm yield, and in a drought situation -- in the '76-'77 drought we only received 50% of that water, so our customers basically took a 40% cut in water supplies. Most of the 90,000 acre-feet we're using -- matter of fact, all but about 15,000 -- is currently being used for agricultural uses.

We believe that the solution to the problem, the solution that we would recommend would be the construction of Auburn Dam. With the construction of Auburn Dam and the Bureau's ability to fulfill their commitment to the Agency to supply the 117,000 acre-feet we have contract for, we believe that we have adequate water supplies to serve the areas that we serve in Placer County. Basically, that extends from Auburn down to Rocklin.

CHAIRMAN DOOLITTLE: What's the contract price? How does that work?

MR. MAISCH: The contract price for the CVP water, I don't know what it is. I'm not sure that it's set. I think that may be subject to negotiation at the time that we start taking delivery. The soonest we could take delivery under the contract would be 1992 for that water.

CHAIRMAN DOOLITTLE: Well, if the Auburn Dam is not built, is it physically possible to take that water?

MR. MAISCH: Well, the agency has a pump station located at the base of that tunnel which was constructed along with our Middle Fork project, so we have the ability to divert up to 50 SCF at the present time into the tunnel and to get that into our system, so yes, there is a way to divert it. Presently facilities aren't sized to divert all of it. The problem becomes storage. You know, if it's physically not in the river, it becomes real difficult to get it out.

CHAIRMAN DOOLITTLE: Well, is the -- I've never actually been to see this tunnel, but is there water going through it right now?

MR. MAISCH: No, not right now. As a matter of fact, I think in '76-'77 was the last time we actually pumped water. Normally we try to meet all of our demands in our PG&E water -- number one it's cheap, and number two it's at a higher elevation and all flows by gravity.

CHAIRMAN DOOLITTLE: But you would pump the water out of the river then through the tunnel which you've done, apparently in the past, in the last drought. How big is the tunnel anyway?

MR. MAISCH: Twelve foot diameter.

CHAIRMAN DOOLITTLE: Twelve foot diameter, and so what's the carrying capacity of that tunnel? You said you have the pumping capacity for 50 cfs.

MR. MAISCH: I don't have an exact answer. I'd guess 300 to 500 cfs.

CHAIRMAN DOOLITTLE: But you don't feel that the Bureau would let you begin to take that water out in 1992 without an Auburn Dam?

MR. MAISCH: I'm not sure what they're going to do, and it's currently a point of discussion between our attorney and the Bureau. So I'm not sure what's going to happen with our CVP contract water when and if we have the need for it. In other words, we have the agricultural users that are requesting the water and currently we can't take it because it's also an escalating amount of water, and so we're trying to resolve that question before we get there.

CHAIRMAN DOOLITTLE: I'm just curious, was your contract dependent upon, legally dependent upon the construction of the Auburn Dam, or was that year of 1992 simply the way of -- I guess they assumed it would have been built?

MR. MAISCH: Again, I'd have to let my attorney answer the question. I don't know.

CHAIRMAN DOOLITTLE: Okay. Are you willing to -- I guess you'd have to answer yes, you were willing to pay for the Auburn Dam water.

MR. MAISCH: Yes.

CHAIRMAN DOOLITTLE: Are you still assuming -- I don't know what they do with you -- are you the only ones that have a contract like that?

MR. MAISCH: I'm not certain whether we are or not. I don't know.

CHAIRMAN DOOLITTLE: But presumably would you be willing to foot your share of the bill to make the Auburn Dam a reality?

MR. MAISCH: I know that our Board has been a loud and long advocate of the Auburn Dam and we support the American River authority, and I can't speak for the Board when it comes to appropriating funds, but I would assume that they will support the Auburn Dam in any way that's reasonable.

CHAIRMAN DOOLITTLE: Is there anything else that you'd like to offer by way of testimony?

MR. MAISCH: No, sir.

CHAIRMAN DOOLITTLE: Well, thank you very much for coming. I appreciate your being here.

Is Mr. Singleton here from the Nevada Irrigation District?

MR. _____: Yes.

CHAIRMAN DOOLITTLE: Good. Let's take a ten minute break. We'll reconvene at about 11:30 and we'll have Mr. Singleton testify and proceed as far as we can down the list until we run out of our witnesses.

(10 minute recess)

Let's resume our hearing. We'll ask Mr. Singleton if he would please come forward.

MR. ROBERT SINGLETON: Good morning.

CHAIRMAN DOOLITTLE: Good morning, sir. You represent the Nevada Irrigation District.

MR. SINGLETON: Yes, I'm Bob Singleton. I'm the chief engineer for Nevada Irrigation

District. Maybe I can give a little background on the district. We're a little further away from the Sacramento area than most of the water _____ you've heard from this morning, although we are not in the State of Nevada as a lot of people seem to think. Our district encompasses 272,500 acres. We're actually the second largest irrigation district in the State of California. We serve portions of Placer and Nevada Counties which, of course, you've heard earlier are two of the fastest growing counties in the State of California. Currently we have 17,000 customers. The name irrigation district, I think, is possibly a misnomer right now because 14,000 of those are receiving treated water. The district has had a growth of almost 3,000 customers in the last five years, most of that has been in our treated water area. The district recently hired a consulting engineer to determine if current water supply would meet the anticipated needs of the district over the next 20 years. The completed study concluded that by the year 2005 the district must be ready to serve a population of about 130,000 as compared to our current of about 39,000. Most of that growth is anticipated to occur in the unincorporated areas of Placer and Nevada Counties along what we call the State Highway 49 Corridor, which is between north Auburn and the Grass Valley-Nevada City area. Also we expect demand for additional farm land and large lot acreage, especially east of the City of Lincoln, getting an impact from some of the growth in the Rocklin and Roseville areas. And that would increase our need for irrigated acreage from the current 23,000 acres to about 39,000 acres, again in the next 20 years according to the study.

To put this in a summary, we're anticipating the need for an additional 50,000 acre-feet of water over the next 20 years which currently we do not have. Our current water supply is, in fact, being utilized to its maximum ability. In order to meet this future demand, the Nevada Irrigation District will need to more intensely develop its current watershed which includes the Middle and South Fork of the Yuba River, Canyon Creek, Bear River and Deer Creek, which are all of course tributaries to the Feather and then the American. We anticipate the need of an additional 100,000 acre-feet of storage. We recently took the first step towards increasing our storage by filing for a water right on our existing Rollins Reservoir on the Bear River in order to enlarge that particular reservoir.

Other potential projects in the study stage include the proposed Parker Reservoir which is located between Rollins and Columbia Reservoirs on the Bear River; enlargement of the existing Jackson Meadows Reservoir, which is located in the Middle Fork of the Yuba River; also a possible new reservoir up above Jackson Meadows called English Meadows Reservoir, which back in the mining days actually had a dam which, according to local rumor, was blasted away by the valley people that didn't like all the mining that was going on up in that area; also we're looking at enlarging the existing French Lake which is above Bowman Reservoir on Canyon Creek; and of course we also have been looking at the

American River and the proposed Auburn Dam for some possible water for a portion of Placer County. Now that particular water, because of elevations, can only benefit a certain portion of the service area, but we're certainly interested in Auburn Dam also. If the district is not allowed to more fully develop its watershed to meet future demands, water supply shortages will occur by the early part of the next century. Of course, inadequate water supplies would impact the economic growth of the counties involved as well as reduce the quality of life for all the residents within those service areas. As far as any solutions to providing additional water to the lower Sacramento Valley region, of course, the district itself is not in a position of -- maybe one of the agencies you heard of earlier -- in terms of having excess water rights -- we're looking ourselves to increase our water supply. I certainly think that Auburn Dam will go a long way to satisfy some of your lower Sacramento Valley region water demands as well as have some benefit to the district in maybe some of its lower elevation agricultural lands.

CHAIRMAN DOOLITTLE: What do you presently pay for acre-foot of water?

MR. SINGLETON: That's a complicated question. Most of our water right now comes through a PG&E contract and we call it the Upper Yuba Bear Project. Based on that contract the water that we currently have -- the 250,000 acre-feet -- I guess you could say is free because based on the contract that was signed in the mid-1960's, PG&E basically now takes care of the _____ of our Upper Yuba Bear Project. In turn, of course, they have power generation. They're using our water to generate power as it comes down from the mountains to the foothills. Therefore, until the year 2013 when our contract is up we basically have 250,000 acre-feet of storage that at that point in storage does not cost the district anything at all. Obviously there are costs to transport and treat, and so forth from that point down. So I guess you could say in a way, it's not costing us anything in terms of looking at the actual cost out of the district's pocket. On the other hand, I guess we would love to have the value of the power now like some of the other agencies do. Maybe we'd even have a better situation than we currently have. The year 2013 our contract is up and at that point in time it's a new ball game and our water supply, in fact, could be affected one way or the other. Currently like PCWA, we do get some purchase water from PCW -- or excuse me -- from PG&E, and it's an all new ball game in the year 2013. Our studies have not gone beyond that point yet to try to anticipate what is going to happen after the PG&E contract is up.

CHAIRMAN DOOLITTLE: But the water is yours. The contract with them just gave away the power, is that right?

MR. SINGLETON: Yes, the water is ours, but the water goes through some PG&E facilities.

CHAIRMAN DOOLITTLE: Okay.

MR. SINGLETON: We utilize, for example, the Bear River Canal, a portion of the Bear River Canal. Again in the year 2013 all that is up...

CHAIRMAN DOOLITTLE: Okay.

MR. SINGLETON:so we do have some water. We may have to find new ways bring the water down into our service area based on the negotiations that I assume will go on with PG&E about the time that that contract is up.

CHAIRMAN DOOLITTLE: It sounds like you and PG&E are pretty inabstrictably linked.

MR. SINGLETON: Yes, very much so.

CHAIRMAN DOOLITTLE: You said that you had in the next 20 years the need for 50,000 acre-feet of water which you don't presently have, but you wanted an extra 100,000 feet of storage, is that right?

MR. SINGLETON: Yes.

CHAIRMAN DOOLITTLE: Is that to deal with the fluctuations?

MR. SINGLETON: Yes, that basically is to give you some safe yield. Actually, our studies would indicate that 100,000 acre-foot reservoir would give us in most years an average of about 50,000 acre-feet. Now that's not safe yield however. A safe yield from 100,000 acre-feet reservoir would probably only give us about 25,000 acre-feet of safe yield. The district is willing to take a shortage on our agricultural customers if necessary, taking a risk of course that we don't have too many more 1977 periods, and unfortunately this year has been a start of one. In fact at the end of this year our carryover storage will probably be about what it was in the first year of the '77 drought. So in other words, if we have a second dry year in a row we'd be looking at 50% shortages in our agricultural community come next irrigation season.

CHAIRMAN DOOLITTLE: The water -- the cost figures you gave me in your water, I mean I think you'd have to look at the -- that is a complicated answer, but...

MR. SINGLETON: Yes. When you say it doesn't cost us something, I guess it does in a way, but not out of our own pocket right now. Some of the new sources that we're looking at in terms of developing, for example, a higher Rollins, we're looking at anywhere from \$30 to \$50 an acre-foot on that Rollins project. The range has to do with negotiations with PG&E again on power values. We have a Rollins Power Project that's already in place that we'll be able to utilize some of this additional water. Also some of that water could be utilized in PG&E's system. So there has to be some negotiations in terms of what the cost of that project would be. Some of the other projects we're looking at range anywhere from \$100 an acre-foot to up to \$400-\$500 an acre-foot, which of course is getting up to the excessive range on some of the reservoir sites we've studied.

CHAIRMAN DOOLITTLE: Rollins is an existing reservoir. What would you do, just raise the....

MR. SINGLETON: Rollins is built as part of the 1965 agreement with PG&E.

CHAIRMAN DOOLITTLE: And you're just going to enlarge that, is that the plan? Or build a new reservoir?

MR. SINGLETON: Yes, that particular project -- yes, it is our reservoir and the -- that particular project is now in vision. We're looking at a very small raise in its height and we're going to put what's called a labyrinth weir on the spillway which will allow us to raise and store an additional 6- feet elevation of water which represents about 6,000 acre-feet. We have already made application for water right with the Water Rights Board on that and we're also going through some environmental documentation on that particular project now.

CHAIRMAN DOOLITTLE: Does the NID have any cooperative operative agreements -- operations agreement with PCWA or the South Sutter Water Districts?

MR. SINGLETON: South Sutter Water District we sell water to. PCWA we have no agreement at this point in terms of sale of water. During the drought PCWA was gracious enough to allow us to use some of that water you heard earlier that was pumped through the Auburn tunnel. That is a possibility in the future, as I say, that we may be able to work with PCWA. We had a study done in 1983 on use of the American River water. The consultant contacted the Bureau of Reclamation at that time and was kind of told that if there going to be any water used by NID out of the American River Project would have to be done through PCWA since they had the agreements with the Bureau. We have not done that yet. If the dam is not built, the study indicated that with that 250 foot lift they would have to get it from the river through the Auburn Ravine Canal alone would cost over \$30 an acre-foot in pumping costs. Well, right now we're selling water probably for about \$15 to \$20 an acre-foot to our bigger farmers. So that's going to be quite an impact and beyond, of course, the energy cost, you've got other costs that would be involved also, of course, the maintenance of the facilities, the agreement with PCWA in terms of what costs they might be willing to allow the district to pay, that type of thing.

CHAIRMAN DOOLITTLE: If your district has looked at the Auburn Dam, I guess, have they committed themselves to share a portion of the cost of getting that water?

MR. SINGLETON: Not at this point because it looked like there were a couple more viable options that the district could develop prior to the time when it looks like Auburn Dam would become a reality.

CHAIRMAN DOOLITTLE: It sounds like you have a little more flexibility as to what....

MR. SINGLETON: Well, we have a couple opportunities for more intensely developing our current watershed. I don't think any project we have really looked at other than possibly the minor raise in the dam at Rollins. It's going to be cheap. I think we're looking at much higher water bills in the future to develop this water. So I guess it's a matter of supply and demand and how much the farmer's willing to pay for some of this

water that's going to be developed.

CHAIRMAN DOOLITTLE: How does the Yuba River figure in your plans for the future?

MR. SINGLETON: As far as a self _____ it does not. Our development is on the Middle Fork of the Yuba River and that's where Jack's Meadows Reservoir is now, and I mentioned also the possibility of English Meadows Reservoir which would be located upstream. The Yuba River also crosses where Spaulding Reservoir is, and in Spaulding we do not have any rights in Spaulding, but we do transport water through Spaulding as part of our interlinked facilities with PG&E. So I would say probably the Middle Fork of the Yuba is the only place we're looking at right now for maybe some potential increased reservoir storage.

CHAIRMAN DOOLITTLE: Okay. Well, thank you very much for your testimony.

MR. SINGLETON: Thank you.

CHAIRMAN DOOLITTLE: Is Mr. -- I hope I'm pronouncing this right -- is Mr. Jung available, Warren Jung from the Northridge Water District? He may be one who's here at 1:00. How about Mr. -- oh, Mr. Elazer? He's not here either. Mr. Dunlop, the Rancho Murieta Community Service District. I see Ms. Holm here. Why don't you come forward please, representing the El Dorado Irrigation District.

MS. TERRY HOLM: I'm Terry Holm, Director, El Dorado Irrigation District in El Dorado County, and first of all, on behalf of my agency, the El Dorado Irrigation District, we would like to express great appreciation for this opportunity to talk about our water problems. Normally it's the Bay Delta, the MET Southern California, and we feel it's nice to have a day in the sun.

I did not mail the written testimony in prior to today. There are copies, I gave them to Wade. If you don't mind I'll run through it rapidly.

CHAIRMAN DOOLITTLE: Okay.

MS. HOLM: On your first question you're talking about the acre-feet we deliver and the acre-feet we have. We have approximately 48,582 acre-feet of water.

Did anybody hand John the thing to copy down and look at while I'm talking?

CHAIRMAN DOOLITTLE: What would you like from us?

MS. HOLM: Do you want one of these?

CHAIRMAN DOOLITTLE: Yes, we have one, thank you.

MS. HOLM: Okay, okay.

And presently we are using 40,000 acre-feet out of that 48,582 figure. We do have the two contracts with the Bureau, one out of the Upper Reservoir -- Sly Park, the other one out of the Lower Reservoir, that little one called Folsom. Unfortunately, Folsom is a pumpable source for us, and as such causes probably \$800,000 power bill annually. So we are more in favor of upstream water storage. We are hoping to find that.

On the second question, you are asking about our growth pattern in five years and in

ten years. The ratio of approximately one acre-foot per household annually, we feel we're going to need 47,000 acre-feet by 1990 simply due to the population increase. The figure I'm using is one drawn up by the Department of Finance for the State of California. So we are looking at a growth that's going to be a severe problem when you figure by 1995 we will have almost 150,000 residents. There again, the district will pick up most of that increase. The El Dorado Hills area, Cameron Park, Shingle Springs, Diamond Springs seems to be the area that is rapidly growing and as a consequence we're going to need approximately 60,000 acre-feet in ten years time, in 1998. When you include additional ag water, and our people have been very cooperative, they're going for the low water crops, they are trying to minimize the use of the water, but all told between our consumptive domestic customer and our ag customers we're going to need 65,000 acre-feet of consumptive water in 1998. And again we now have 48,582 acre-feet. So somewhere we're going to have to find additional water. Now we have been in contact with the Water Resources Control Board. We have explained that our water rights on the Cosumnes River Forks, North and Middle, are going to be either released if the Cosumnes project is dissolved or we're going to have to go in and battle with the Cosumnes Joint Power authority because the Cosumnes watershed that feeds our main reservoir, Sly Park. And I think you know, Rick probably has told you that the Cosumnes watershed is not a snow melt facility, it is a hard rain facility. So once that rainy season, say April 15th is ended, if the reservoir isn't full we just have to forget about it. What we have done in the past during these drought conditions is co-mingle water from the American River watershed. We have permission from the Water Rights Board to do this. And that is what we will be starting to do if I can con you out of some money.

Item three, you want to know what a shortage of water could do to El Dorado County. Well, the first thing it could do, it would be, cause tremendous economic hardship on the County. The agricultural component, particularly the Apple Hill area, is a very strong factor in our revenue base in El Dorado County. We do not have industry. Our commercial endeavors are small, nothing large, so we are again dependent upon the tourist dollar and the ag receipt. The tourist dollar comes up in the form of people visiting in the fall; they come back to buy their Christmas trees at our Christmas tree farms; they come up to fish, swim and water-ski. The lowness of the water level in Sly Park has more or less washed out the tourist dollar over there. We're getting cancellations from those people who had reserved camping sites a year ago. So a low water situation in El Dorado County is a very severe economic hardship. In addition to that, I think you're very much aware, that we are still rural enough with our five acre parcels to have a lot of shaperal wild grass, burnable fuel all around these little homes. If we do not have water, we do not have fire suppression of any kind. So there again, you're talking about a tragedy waiting to happen if we are not able to keep some type of

MS. HOLM: (Omission due to tape change)...rancher who has three acres and has a cooperative agreement with four of the neighbors. They each have two or three acres. Every one of those little plots is put into some type of crop. These people then share and they are very proud. I have a lot of little Italians down in Diamond Springs who will not go to the free senior lunch. They are too proud to do that. But they will try to keep their little garden going. They would be impacted if we had to foretail -- or curtail the water use. I had the farm report going every morning about 6:00 for two weeks. They were calling me to ask what crops they should plant. I'm from Chicago but I did a good job anyway.

Item four: What is our solution? And I'd just as soon read this if you don't mind rather than ad lib it.

CHAIRMAN DCOLITTLE: Okay, that's fine.

MS. HOLM: The only solution to provide additional water, when it is needed, is to capture it when there is a surplus. The small reservoirs that are needed by my district -- and we have at least three -- they have been on the drawing board. They are not emergency facilities. They are something that we had planned on. The large federal and state dams that are needed to farm, flush and play in are all costly projects. The low cost reservoirs have been constructed. The lack of these dams, however, costs more. Let us build Auburn, let us cooperate with the Bureau on the Folsom South Canal and let us take another look at the Cottonwood area in terms of a reservoir. The longer we dottle the closer we come to economic loss, tragedy by fire and the unnecessary worry to our residents about the availability or unavailability of water. Again let us store the water when it is surplus to use it when it is needed. Now is the time for reality and common sense. There would not be an environment if we didn't have reservoirs like Shasta, Folsom. Those of us who remember back a few years know that it dried up and the Sacramento River, the American River became wadable. You could walk across them at some particular times. So I do not hold with any of this nonsense about not building dams.

On my own, I want to tell you that we are going down hill fast this year. On a normal year we use -- we lose 1600 acre-feet out of our main reservoir, Sly Park, to evaporation. This year the figure is higher. We have not been able to put a handle on it yet, but we know it is in excess of 1600 acre-feet and it is going to, I think, become more severe as the water gets lower and lower and lower. You will have a heat factor up in the Sly Park area that I think is going to take too much of our water, and we can't cover it, it's too big. We have a lot of small water companies up there. Two of them have asked to join the EID. We have hesitated in accepting them simply because the logistics would be overwhelming. They are, oh maybe, an hour or an hour and a half distance from our O and M yard. But on behalf of the small private water companies, some of them have pre-1914 rights, some of them have wells, but they are all experiencing a

growth pattern, almost like the one that you see at FID. The difference is their growth will encompass a lot of summertime use which, of course, will represent a bigger use of water out of the American River. The only area that I think will not be needing more water from the American River is Outingdale, and that of course, is of the Middle Fork of the Cosumnes. They do have their pre-1914's. We have a little reservoir out there. It's about to collapse, but we're afraid to clean it out because we're afraid if we clean it out it will collapse. However, they, too, are experiencing some growth.

So whatever part of the western slope of El Dorado County you're looking at, figure we're going to need more water and the water rights applications in the past have been a thing of torture. I understand now the Board is more amiable and we can look forward to some assistance from their staff. We do have an application in now, as I mentioned, for Cosumnes water rights. The water rights on the American River have turned out to be quite an embarrassment. We have a 30,000 application acceptance, however, there are so many conditions on it relating to the construction of the SOFAR project that I don't know if the district will ever see the 30,000 acre-feet from that particular permit. In addition to that we have been notified that the bankers do not want to construct the Texas Hill component of SOFAR. This means that the SOFAR project will become a power generating project, not a water project. There is talk of starting 30,000 acre-feet in the upper reservoir, the proposed Alder Reservoir, but getting it down to our customers is going to be an absolute nightmare. So we now are caught between a rock and a hard place. We cannot go in and request additional water rights on the American River because we have supposedly 30,000 acre-feet. But we don't have the 30,000 acre-feet. So this we will have to clear up, but no matter how it is resolved we will need additional water out of the American River, particularly the South Fork and we will need additional water, probably 7,000 acre-feet out of the North and Middle Forks of the Cosumnes.

You're on. Do you want to ask me questions?

CHAIRMAN DCOLITTLE: Do you have -- given the pumping costs, I guess you try to avoid taking the water out of Folsom, is that right?

MS. HOLM: If we could we would like to change the point of diversion from Folsom to upstream. Even if we took it out at Whiterock we would have to pump. The only area that we could feasibly divert at, would be the Kyburz area. As it is now, we are in a very nice position with PG&E. We have a contract and perpetuity for 15,000 acre-feet at about \$2.56 an acre-foot. And we do not step on their toes at all. We have a very fine relationship. We do divert from their source at Kyburz. We have asked if they would mind expanding their tunnel and their ditch and because they are a private sector company, we don't get a lot of cooperation. They always remind us that the cost would be prohibitive and their tax are so -- or share or whatever they are, they couldn't justify doing it for us. But we do have to find a means of diverting upstream because as it is

we started pumping out of Folsom in January of this year. Our O and M man said he had talked to the squirrels and the squirrels told him it was going to be a rough year. So we have not been drawing out of Sly Park. We have been trying to save that for our ag users, but we have been pumping since January from Folsom all through the El Dorado Hills, up into Cameron Park. Because of elevation I do not think we can feed the Shingle Springs area. But we have saved Sly Park for the heavy use when our ag people come on. In that particular area, some of the PG&E water is used for ag, we pump some of it from Sly Park, but basically our ag water is gravity. So the biggest part of our pumping is out of Folsom. We're not going to criticize Folsom because if we didn't have Folsom right now, we would be absolutely destroyed. We have taken the water out of there and saved it elsewhere.

CHAIRMAN DOOLITTLE: Is the EID hoping to increase its rights out of Folsom once this marketing study is complete?

MS. HOLM: Not out of the Folsom Reservoir, but out of the American River that feeds Folsom, yes.

CHAIRMAN DOOLITTLE: Is that dependent as well upon the marketing study? I presume it must be.

MS. HOLM: It's dependent upon the people moving into our County who are asking us for water. We will have to supply them with water and the American River seems to be the best source simply because of the reliability of the American River watershed. If you have a snowpack in that watershed then you have water at a later date. As far as the Cosumnes watershed, the snowpack is marginal so you can't rely on it.

CHAIRMAN DOOLITTLE: Well, you already have water rights at the American, you're just talking about beginning to exercise them then, is that right?

MS. HOLM: Yes.

CHAIRMAN DOOLITTLE: Okay.

MS. HOLM: Yes, and then there is a contract that the El Dorado County Water Agency has with SMUD. It was to stop the County from interceding when SMUD put in Union Valley and Ice House Reservoirs. And SMUD has stated that the County can purchase a certain number of acre-feet for the power lost price. However, SMUD does not have water rights. So prior to being able to use any of that water, the County or EID would have to go before the Water Rights Board to see if we would be able to pick up some of that water. We might be able to gravity from one of the upper reservoirs, probably Union Valley, but the cost again would be very, very high.

CHAIRMAN DOOLITTLE: Well, is the El Dorado Irrigation District, if you're looking at Auburn, willing to pay for a portion of that facility?

MS. HOLM: The customers and the residents of EID are the same as the customers and residents of the County Supervisors and we have been putting the funds aside all along

for the joint power authority. As far as a cash outlay, I don't think FID can put any money out because we have borrowed almost to the point of no additional borrowing and we must find two reservoir sites within our own system particularly down in the Cameron Park area. So we have probably \$24 million that we have to find in order to meet our current responsibilities.

CHAIRMAN DOOLITTLE: Thank you very much for appearing and for testifying today.

MS. HOLM: Thank you.

CHAIRMAN DOOLITTLE: We may have run out of witnesses, ladies and gentlemen, before lunch. Let's see if anyone's here. I don't see Joe Flynn. Jack Hanaford. Hello, Mr. Hanaford, why don't you come forward please.

MR. JACK HANAFORD: My name is Jack Hanaford, engineer for the Georgetown Divide Public Utility District, and with me is Marie Davis who is an employee of the district, and she may be able to fill in some of the answers that I can't. The district has taken the opportunity to submit exhibits that describe most of the answers to Items 1, 2 and 3 in your letter. So I'll try not to go over that material.

The district is located in El Dorado County on the divide between the South Fork of the American River and on the north side is the North Fork and Middle Fork. The district itself is about 72,000 acres, about half of which is served water from district sources. There are about 5-6,000 residents in the area receiving water from the district. The annual budget is about \$1.2 million, not including debt retirement. Perhaps the chief issue in the foothill area and particularly in the Georgetown area, I believe, is lifestyle, which has been eluded to earlier this morning. The people that live in the area like the type of lifestyle that they're involved with and it's the philosophy of the Board to try to continue that type of lifestyle in the area through Board decisions. The majority of people live on parcels from two to ten acres with perhaps a home garden, a home orchard, maybe a few animals, and water use is high in the area as a result of this and the key issue as far as we're concerned is to try to maintain that same type of lifestyle. It's a type of use that we call suburban agricultural, really. It's not commercial agriculture, although we do have some commercial. The people in the area moved to that area because they like that type of thing and it's within commuting distant of the city here and we're going to do everything we can to try to maintain the situation for that type of use.

The water supply in the area is primarily from Stumpy Meadows Reservoir, a Project 980 -- or a Public Law 894 Project that was built in the early 1960's. It's a 20,000 acre-foot reservoir. The estimated deliverable safe yield is 9,180 acre-feet annually. I hope we don't get an opportunity to test that in the next two years. The current use is about 7500 acre-feet. About 1200 acre-feet of that is treated water in the domestic system serving the town of Georgetown and local developments. Approximately 6300

acre-feet falls in the agricultural area. Perhaps 30% of that is used in commercial type agriculture, and about 70% falls in the sub-ag or the suburban agricultural usage.

In terms of growth of use, we anticipate that prior to the end of the century we'll have run out of water from our existing source. As a consequence of this, Georgetown has had a long record of long-range planning in order to develop a water supply that would provide for continuing growth. I believe it was mentioned earlier this morning that, by the Bureau, that we need perhaps 20 or 25 years lead time for water supply, and Georgetown took that action. However, there's a few problems involved with it. In 1980 Georgetown filed for and received a preliminary permit for the Lower South Fork American River Project, a permit — preliminary permit from FERC. This was a combined pumping and power project, the power being generated to pump the water into the district area of use. In 1981 Assembly Bill 1354 was introduced by Berman, specifically to preclude Georgetown from using the local water supply or local resources in order to meet future water requirements. In 1982 Assembly Bill 2887 was introduced by our Assemblyman Norm Waters to permit the State to assist Georgetown in finding an alternate, even if a more costly water supply, and we are currently working with the State of California Department of Water Resources on studies to select and evaluate certain alternative supplies.

CHAIRMAN DOOLITTLE: What were those supplies alternative to?

MR. HANAFORD: Alternative to the project that we filed on, on the South Fork of the American River. We filed, in 1980 we filed on a project which included a dam, reservoir, a power plant and pumping.

CHAIRMAN DOOLITTLE: The SOFAR Project?

MR. HANAFORD: No.

CHAIRMAN DOOLITTLE: No.

MR. HANAFORD: No, this was filed by Georgetown.

CHAIRMAN DOOLITTLE: Okay. Why was — I'm not familiar with the background on this bill. Why was Assemblyman Berman getting involved up there?

MR. HANAFORD: Well, there was concern that the project might flood out some of the rafting area. Berman is from Orange County, I believe, and introduced a bill that prevented Georgetown from utilizing the head to generate power and pump water.

CHAIRMAN DOOLITTLE: And the Waters' legislation the following year is going to have the State pick up the tab for the difference in cost?

MR. HANAFORD: Well, the first item on the legislation was to provide assistance cooperation with the Department of Water Resources on finding an alternate supply. In the event that that alternate supply should turn out to be more costly, then there would be consideration for subsidy of the alternate supply, more costly than the original pumping project.

CHAIRMAN DOOLITTLE: Okay.

MR. HANAFORD: Does that answer the question?

CHAIRMAN DOOLITTLE: That answers it, thank you.

MR. HANAFORD: I think that probably takes care of the Items 1, 2 and 3 as far as I'm going to cover them today unless there's more questions. I'd like to go on to Items 4 and 5 in your letter regarding the hearing.

First, Item 4: the big problem that we see is that the established lifestyle and water use in the area will be threatened unless we are able to provide additional local supply.

CHAIRMAN DOOLITTLE: How much additional local supply are you looking for?

MR. HANAFORD: We're looking at perhaps 10,000 acre-feet right now.

CHAIRMAN DOOLITTLE: And that will meet your needs for how many years into the future?

MR. HANAFORD: Perhaps out to 2020.

CHAIRMAN DOOLITTLE: Okay.

MR. HANAFORD: The Berman bill has made us seriously question the adequacy of the area of origin concept in protecting our water rights.

CHAIRMAN DOOLITTLE: One would think you'd have sufficient reason in the Berman bill to be concerned about that.

MR. HANAFORD: Well, if the concept can be challenged, then we're anxious to make certain that somebody's looking out for mountain counties' interest in water supply providing for the area of origin.

CHAIRMAN DOOLITTLE: Well, by the way, let me ask, what became of the Ferman bill? Did it -- it was introduced...

MR. HANAFORD: It was passed.

CHAIRMAN DOOLITTLE: It was passed, signed into law by Governor Brown, is that right?

MR. HANAFORD: By -- was Brown the...

CHAIRMAN DOOLITTLE: It would have been Brown, so the Ferman bill became law.

MR. HANAFORD: That's right.

CHAIRMAN DOOLITTLE: That's an interesting illustration. There have been various efforts to place into the State Constitution a requirement that area of origin statutes can't be changed except by a 2/3 vote of the Legislature. I gather in that instance it was changed, I presume by a majority vote of the Legislature and concurred in by the Governor. And so you've been precluded by State statute from utilizing that as a source.

MR. HANAFORD: From actually constructing the project to do the work, yes.

CHAIRMAN DOOLITTLE: Are you aware of any other -- any other similar piece of legislation that's been passed like that?

MR. HANAFORD: No, I'm not.

CHAIRMAN DOOLITTLE: Because this isn't -- is this a Wild and Scenic River kind of

thing or...

MR. HANAFORD: Does that fall in the Wild and Scenic Rivers right now?

MS. MARIE DAVIS: Not to my knowledge.

MR. HANAFORD: There was an attempt to put it in, but I don't think...

CHAIRMAN DOOLITTLE: But it's not in, so this was a special bill passed to prevent you from developing that as a source of water?

MR. HANAFORD: Right.

CHAIRMAN DOOLITTLE: All right. I...

MR. HANAFORD: The basic objective was that we would flood out a couple miles of river depending on how high the dam was that would flood out different lengths of river channel downstream from Folsom, or from Coloma.

CHAIRMAN DOOLITTLE: Yes.

MR. HANAFORD: Actually, the area around Coloma is protected by State law to preserve the gold discovery site, so that has been protected for a long time. It would be possible to build a project either above or below Coloma to generate power and pump.

CHAIRMAN DOOLITTLE: There's another bill that's been introduced this year by Assemblyman Connelly to do a similar kind of thing on the South Fork of the Yuba River. I don't think that bill will move too far, but it's interesting to see what happens when certain interests take an interest in the areas of origin.

MR. HANAFORD: Right. With regard to Item 5, the solution as we see it from a mountain county point of view, the protection -- or the supplement for the Sacramento Valley Water supply could well be the result of storage during surplus. That has been brought out repeatedly this morning, too. And we're in full agreement with that. Of course, we feel that the basic cost for development of that storage for the downstream areas should probably be borne by the downstream areas, or by general -- by overall projects with federal subsidy and so forth. And we're not adverse to developing our own supplies with our own resources for our upstream use as long as we're protected and have that water available to us. We're not anxious to see our water supply that's available on local watersheds lost for downstream use even for a short period of time, because once we've lost that supply it may be irretrievably lost. One possibility is the construction of Auburn Reservoir. We believe that Auburn should probably be built to its maximum design capacity of 2.3 million acre-feet. This would not only provide for the flood control that is being looked for in the Central Valley area, but it would also provide the maximum amount for conservation storage to supply the downstream users in the lower Sacramento valley. There's another aspect though, and that would be upstream storage which could also benefit downstream users. This should not -- this possibility should not be overlooked. Upstream reservoirs, although probably not as grand in size and capacity as the proposed Auburn, would provide the same net effect downstream by

regulating the flows on an annual and multi-year basis.

CHAIRMAN DOOLITTLE: So you're talking about the facilities upstream of Auburn Dam?

MR. HANAFORD: As well as Auburn.

CHAIRMAN DOOLITTLE: Or an addition to, okay.

MR. HANAFORD: The American River has less storage than any of the -- in proportion to its annual runoff than any of the major streams of the Sierra. There's only about 1 million acre-feet at the downstream Folsom Reservoir as opposed to 2.7 million acre-feet average annual runoff on the American, whereas a stream like the Feather with 4 million acre-feet has 3 million acre-feet of storage at Oroville. And this is pretty true of most of the streams, most of the other streams in the Sierra.

CHAIRMAN DOOLITTLE: It's an interesting observation.

MR. HANAFORD: Well, the streams on which the Bureau has built fairly big projects -- the Tuolumne, the Stanislaus -- they have capacities well in excess of the average annual flow.

CHAIRMAN DOOLITTLE: Does your district have an interest in participating say, in the -- in Auburn financially?

MR. HANAFORD: We possibly do. We submitted a letter to that effect previously on this. The lower part of the district could be served from water pumped out of Auburn. It would have to be pumped and it's a question of how attractive the pumping is out of the North Fork versus pumping out of the South Fork, I think.

CHAIRMAN DOOLITTLE: I recognize the costs have not been pinned down, but what in your mind, would be the range of water from an Auburn, say?

MR. HANAFORD: The cost per acre-foot?

CHAIRMAN DOOLITTLE: Yes.

MR. HANAFORD: I don't think I can place a figure on that right now, but we've attended a number of meetings in which different costs have been discussed and the cost that we're looking at for the water itself looked within the realm of reason, including the pumping cost.

CHAIRMAN DOOLITTLE: Including the pumping? Okay. And within the realm of reason would be -- what would you say?

MR. HANAFORD: We're looking at \$100 an acre-foot or better.

CHAIRMAN DOOLITTLE: Okay.

MR. HANAFORD: So obviously it's not commercial agricultural water.

CHAIRMAN DOOLITTLE: No.

MR. HANAFORD: There's no way in the world we can get commercial agricultural water up to the elevations we need, and be competitive.

CHAIRMAN DOOLITTLE: I guess the reality is any new project is going to produce water costs far in excess of what's being presently paid out to some of these older projects.

Well, thank you for appearing. Did you have anything further you wished to add?

MARIE DAVIS: Well, I might amplify

MARIE DAVIS: Well, I might amplify a little on the mountain counties' perspective on what we've heard today.

CHAIRMAN DOOLITTLE: We'd like to have that.

MS. DAVIS: Well, I've heard concerns about flood control and concerns about water supply and concerns about enhance flow to the Lower American River and the Delta. And the solutions we're looking to capturing surplus winter flows and redistributing during times of need in the dry summer months. And we've looked as far as Auburn in general, but the concept applies above Auburn. The concept applies to the small drainages within the tributaries of the American River. What worries us in the mountain counties is there seems to be a misconception that if somehow the mountain counties' rights of origin to develop local watersheds are rescinded, more water will be available downstream. And in fact, the opposite is true. If the water is not developed, captured, stored when it's in surplus upstream, it will not be available downstream when it's needed. And we'd like to take this opportunity to give you that perspective and hope that when it does come up, as it has for us in the past, you might be able to pass it on or express it for us.

CHAIRMAN DOOLITTLE: Well, I appreciate having that. That Berman bill's outrageous. I don't know how that got through. But, that's the sort of thing we have to watch out for in the future. Are you seriously contemplating projects for the future, say above Auburn, some on some of these tributaries, for example?

MS. DAVIS: Yes, we are.

MR. HANAFORD: We're looking at one project on a local stream, Canyon Creek, that would supply our required increase and demand through 2020 or better. We're also looking at the possibility of pumping out of either the North Fork or the South Fork. The North Fork would be from Auburn probably. The South Fork would be out of the river itself. The basic problem is that with the pumping we'd have no power revenues to offset pumping costs.

CHAIRMAN DOOLITTLE: Yes. You presently have the rights to the water, I guess, now.

MR. HANAFORD: No, we don't have the rights to that water, but presumably we'd be able to acquire rights for the additional water under the county, under the area of origin.

CHAIRMAN DOOLITTLE: And who do you go to acquire rights like...?

MR. HANAFORD: Pardon.

CHAIRMAN DOOLITTLE: Who do you go to to acquire rights, additional rights, say, out of the American?

MR. HANAFORD: Well, we'd go through the Water Resources Control Board.

CHAIRMAN DOOLITTLE: Okay.

MR. HANAFORD: The same way as we obtained our original rights. You'll note that we have our original rights pretty well spelled out in the exhibit A, or in one of the exhibits. The rights there indicate -- suggest a lot more water than we really have in safe yield.

CHAIRMAN DOOLITTLE: Right.

MR. HANAFORD: We have a 20,000 acre-foot storage right on Pilot Creek and some additional diversion rights, but when it comes to a dry year like 1977 those rights don't mean too much in terms of the amount of water you have available.

CHAIRMAN DOOLITTLE: You've indicated -- you've alluded to this, if we have another dry year, I guess, a lot of your customers are going to be going without water. Is that the impression you have?

MR. HANAFORD: This year?

CHAIRMAN DOOLITTLE: Next year. Assuming next year...

MR. HANAFORD: If we should get a second dry year the reservoirs will be down. There will be the need conserve. We did get through 1977 without depleting the reservoir.

CHAIRMAN DOOLITTLE: Oh, you did?

MR. HANAFORD: Yes, entirely. But the people in the area were very cooperative in their conservation.

CHAIRMAN DOOLITTLE: So you haven't had to institute the kinds of measures that we've heard discussed...

MS. DAVIS: Well, I may add that we are metered...

CHAIRMAN DOOLITTLE: You are metered.

MS. DAVIS: We are metered and we reversed our rate structure to enhance conservation and it was very effective.

CHAIRMAN DOOLITTLE: Now did that remain in effect after...

MS. DAVIS: Yes.

CHAIRMAN DOOLITTLE: Oh, so you still have it reversed...?

MS. DAVIS: Still in effect

CHAIRMAN DOOLITTLE: So the more you use, the more expensive per unit?

MS. DAVIS: Right.

CHAIRMAN DOOLITTLE: My goodness.

MS. DAVIS: That was a very effective measure.

CHAIRMAN DOOLITTLE: Well, it sounds like, although you're way up there and small, you folks are in pretty good shape. Sounds like you've taken care of your...

MS. DAVIS: Well, we are if we can get our other storage facility okayed and that's what we're worried about.

CHAIRMAN DOOLITTLE: Well, I hope you'll keep us posted on the development of that.

MS. DAVIS: Thank you.

MR. HANAFORD: Thank you, we sure will.

CHAIRMAN DOOLITTLE: Thank you both very much for appearing.

We asked before and they weren't present, maybe Mr. Warren Jung or Bob Flaser or Harry Dunlop, if you're here? If not, is Kurt Reed here? Foresthill. Well, ladies and gentlemen, I think at this point we're forced to take a brief lunch break. At 1:00 we can resume and continue with the hearing. At that point we should be able to hear from Mr. Jung from the Northridge Water District. So we'll recess for half an hour.

(half an hour lunch recess)

CHAIRMAN DOOLITTLE: The next one we'd like to hear from, if he's present, is Mr. Warren Jung of the Northridge Water District. Did I pronounce your name correctly?

MR. WARREN JUNG: Right.

CHAIRMAN DOOLITTLE: Okay, good.

MR. JUNG: I have a question first. According to this letter that we received, I guess we're suppose to give oral testimony on just those two items there?

CHAIRMAN DOOLITTLE: That's what we'd like. If you'd like to comment on some other area, you're welcome to that.

MR. JUNG: Or are you going to ask me questions?

CHAIRMAN DOOLITTLE: I'd like to ask questions depending upon what you tell us...

MR. JUNG: Okay.

CHAIRMAN DOOLITTLE: You, of course, can only answer to the best of your ability.

MR. JUNG: Okay. Basically Northridge Water is a water district that's solely on water wells at this time.

CHAIRMAN DOOLITTLE: On water wells, okay.

MR. JUNG: Water wells. We do not receive any type of service water currently. We are forecast to receive some in the future. At this time, we aren't experiencing any type of water shortage in the district, low pressure, but not really water shortage.

CHAIRMAN DOOLITTLE: How big an area do you encompass?

MR. JUNG: I don't have the exact figures, but roughly 15-16 acres, something like that.

CHAIRMAN DOOLITTLE: 15 or 16 acres?

MR. JUNG: Roughly, or a little larger. I don't....

CHAIRMAN DOOLITTLE: Okay, you're pretty small....

MR. JUNG: Well, we're small to start with. We're getting a little bigger now. We cover areas bounded by Watt Avenue, down to Whitney, then Manzanita and Dewey, and up in the Antelope Reserve area. Currently, we're obtaining areas in the Antelope Reserve area. We've been approached by McClellan Air Force Base and its K-part housing to serve proposed water serve to them. We have some 400 acres in the Antelope Reserve area and possibly more as soon as other developers move in.

CHAIRMAN DOOLITTLE: Well, did I misunderstand you? I thought you said 15 or 16.

MR. JUNG: Well, I'm probably a little off on that. It's probably more than that. I just -- roughly -- I can't deal with those numbers right now. (cross talking)

CHAIRMAN DOOLITTLE: But I mean, you said 400 acres.

MR. JUNG: We're annexing 400 acres in the Antelope area, so I'm probably -- I'm off, let's put it that way.

CHAIRMAN DOOLITTLE: Okay.

MR. JUNG: Per your questions, the district foresees some consequences in the future in water shortage. For one thing, the Antelope Reserve area and our district is destined to have surface water in the future. Currently there's a problem getting it. The water is available, but going through environmental impact studies it's not quite ready to let contracts out. There'll be environmental consequences as environmental groups will probably question if it's feasible to service surface water, you know, for instance, diverting water to water districts from other watershed areas; socially there would be some impacts; economically their cost of bringing the water down, how to impose it on the customers as to the amounts that they should be payable.

CHAIRMAN DOOLITTLE: Did you tell us, Mr. Jung, just for the record, your position with the Northridge Water District?

MR. JUNG: District engineer.

CHAIRMAN DOOLITTLE: District engineer.

MR. JUNG: The district feels, and has taken the standpoint that they feel that the solution -- they have two possible solutions. First solution is: we've been on record with the Bureau of Reclamation for a certain amount of water with the multi-district and it's being held up. We feel that that should be pushed along as fast as possible. There's an environmental impact study being done on that and it's typically -- we've understood it's supposed to be done this summer, but now it's been forecast for next year and possibly maybe a little later than that. But we feel that should be moved along as fast as possible so that the studies can be done, the contracts can be let for surface water and that the design for a transmission and distribution systems can be designed for all the water districts that are affected by this.

The next item is the Auburn Dam. We feel at Northridge that Auburn Dam should be put on the drawing board and installed as soon as possible. Basic reasons -- the Auburn Dam would create a watershed area that would be able to contain additional water that could be used. Currently, Folsom Dam is down and it's down because of opposition from last year, last two years because of the flooding. Environmentalists have said, well you hold too much water in the Dam and it caused all that trouble we had last year. So the government released more than they should have this summer, and now we're in a drought year. Well, if Auburn Dam was built it would contain an additional watershed which would

leave alleviate both problems that we had this year and last year, plus there's also the problem with declining water tables in the area. Currently, Northridge is monitoring their water tables and they're dropping between a foot and a foot and a half a year. In the upper Antelope area, we're -- this water is supposed to go. A lot of people have shallow wells up there and if a development goes in, those wells will be gone. They just won't pump any more water out of the ground.

CHAIRMAN DOOLITTLE: I think in the case of the lowering of the level that's been controversial. I don't believe the authorities felt that the levees along the American could handle the same amount of water being released if it had to be done again as was done the last time. So that's totally unpredictable what the rainfall's going to be...

MR. JUNG: That's true, too.

CHAIRMAN DOOLITTLE: ...and obviously it didn't turn out like they thought.

MR. JUNG: That's true, but if there was a provision to capture some more additional rainfall or snowpack, then it would have been captured by now and the releases from Folsom Dam would not have been as great as they should be to help in the future alleviate some sort of problem like that.

CHAIRMAN DOOLITTLE: Would your district participate financially in the Auburn Dam Project?

MR. JUNG: I couldn't answer that. I'd have to discuss that with the Board of Directors.

CHAIRMAN DOOLITTLE: But they do support having the additional water (cross talking)

MR. JUNG: They do support -- we're in an area right now where we're solely wells.

CHAIRMAN DOOLITTLE: Yes, and you're applying for surface for Folsom Lake water?

MR. JUNG: We're applying for surface....yes.

CHAIRMAN DOOLITTLE: How much are you asking for?

MR. JUNG: We currently have on file with the Department of Recreation -- Reclamation about 10,000 acre-feet.

CHAIRMAN DOOLITTLE: 10,000 and that will meet your needs for how many years into the future?

MR. JUNG: Well, that was for future build-out of Northridge water, but since we have added an additional 4,000 more customers the possibility of serving water to the Antelope Reserve area, plus the possible insertion of McClellan Air Force Base and their K-part housing development, that total for future built out in the year 2000 would be about 20,000 acre-feet now. But that's only a 70% -- well, it's 62% to 70% surface water and the remaining balance on well water. That's currently the way that the plan was made. In the future, we don't know, maybe there won't be any well water. We might not be able to pump more water, so there should be available additional water just in case that happens.

CHAIRMAN DOOLITTLE: Are you overdrafting on your well water?

MR. JUNG: Not at this time.

CHAIRMAN DOOLITTLE: So the level isn't dropping in your area?

MR. JUNG: It isn't dropping. It's been slowing down in the last couple of years due basically to -- we have a stringent water conservation plan. The customers in our district are quite aware of the water situation. We supply the customers an insert once in our billing a month explaining how the district situation is, what the water conservation package should do and how you should save water. Basically 95% of the district is that way. We also have zero scape landscaping at our office which customers, quite a few customers have come by to review it. We've got a little brochure file for them. We're trying to persuade new homeowners to put in some sort of water conservation landscaping at their house to conserve as much water as possible and it seems to be working out in the last few years, since the '74-'75 drought.

CHAIRMAN DOOLITTLE: Do you have any mandatory conservation measures?

MR. JUNG: Currently, the only mandatory conservation -- we do have a water conservation plan filed with the State, okay? Currently, what we do is we -- it's odd-even watering, no washing cars -- if you do wash your car, you're talking about three buckets of water, basic small stuff like that. The water conservation plan went into greater detail though, what we thought would've been a better conservation plan.

CHAIRMAN DOOLITTLE: Are those provisions in effect all the time? Or are those recently instituted to deal with...

MR. JUNG: With provisions.

CHAIRMAN DOOLITTLE: ...of odd-even watering?

MR. JUNG: Those have been in effect since 1978 when the new set of regulations were adopted. We monitor it every year.

CHAIRMAN DOOLITTLE: What's your cost of water per acre-foot?

MR. JUNG: I couldn't answer that right now. I'd have to check with the figures.

CHAIRMAN DOOLITTLE: It's interesting, there appears to be -- well, are you on a different groundwater, are you in a different aquifer, is there something different about where you are than the other...

MR. JUNG: No.

CHAIRMAN DOOLITTLE:Sacramento County, because we heard earlier testimony the groundwater every year has been dropping a foot to a foot and a half.

MR. JUNG: Okay, that's basically the same information that we have, a foot to a foot and a half, but currently we -- I guess, we would say that our conservation efforts and the way we maintain our system is -- might be a little better than some other areas. We rehabilitate our wells once every three, four years. We go in and clean them out, scrub them clean, improve the system so that it pumps at its optimum efficiency; we institute

pressure zones to keep the pressures up in areas; we run pumps -- we have a -- our pump crew goes out and turns pumps on and off when needed and if it has to come in the middle of the night they'll go out and do the same situation. They don't just -- we just don't turn them on and let them run. We use them when they're needed and we don't use them when they're not needed. We monitor the pressure very efficiently in our district.

CHAIRMAN DOOLITTLE: Are your pumping costs fairly high?

MR. JUNG: The pumping costs are high because of the electrical SMUD. That will never change.

CHAIRMAN DOOLITTLE: What are the costs?

MR. JUNG: I believe last year we spent \$300,000-\$400,000 for electrical costs. All our wells are on electric.

CHAIRMAN DOOLITTLE: How many wells did you say you had?

MR. JUNG: Northridge has 23 and then when we purchase _____ Water there's an additional five more, so we have 28 current.

CHAIRMAN DOOLITTLE: All right. Thank you very much.

MR. JUNG: Okay.

CHAIRMAN DOOLITTLE: Let's see. Is Mr. Bla.... Yes, sir.

MR. JOE SPILLAGE: Could I make a comment? I'm Vice President of the Board of Directors of Northridge?

CHAIRMAN DOOLITTLE: Please come forward.

MR. SPILLAGE: Senator, you asked a couple of questions. Namely, we have about 20,000 customers in Northridge. The other question....

CHAIRMAN DOOLITTLE: Would you tell us your name and just so we can get it on the record.

MR. SPILLAGE: Okay. Joe Spillage, Vice-president, Board of Directors, Northridge Water.

The other questions you asked that I think was real pertinent was -- would the district be willing to participate financially in the building of Auburn Dam? I think I can safely speak for the other directors, that, yes we would. Of course, contingent on providing water to us, we'd come up with x-amount of money for x-amount of water down through the ensuing years. But I think there's other concerns. I've sat in previous meetings with the Bureau. There's some districts outside of the immediate Sacramento County that even offered to put in the electrical turbines providing they would get the power. I think Auburn Dam is needed. They speak so much about flood control, but the way California is growing and the big hassle even over Antelope, we need the water. And I've sat in the Senate years ago where it was promised that the counties of origin would have the first call on the water. Well, here we are in Sacramento County and we've been trying for 10 years to get water out of Folsom Dam and some say there's plenty of water

and others say they can't, they can't give us any water. Put I'm for Auburn Dam and I think it should be built. It should have been built a long time ago to provide water at the rate of growth that Northern California is having. And being a native son of Sacramento I have a vast interest in the County.

CHAIRMAN DOOLITTLE: I very much appreciate your coming forward to clarify those points. Earlier today we heard from the Bureau that this water marketing study will be completed. I didn't ask them when, but it seems to me, I recall, that that will be within about a year. Somebody thought it was a year, and I think that's about right. They did testify that the water, they believe, is available to meet our needs for the next 20 years, but that after that, we would no longer be able to meet the needs of this region, and we'd start having to cut back on somebody, whether it's either drinking water or water available for recreation, one or the other. And of course, in a dry year, like this year, why it causes special problems, especially since they're not free on a short-term basis really to release some of that extra water that they might have.

MR. SPILLAGE: We've been really planning for approximately 10 years for surface water. We have rights to 1500 acre-feet through the City of Sacramento, but being where we are, it's a little tough to get to the river and we had planned to go in with San Juan on the _____ pipeline and they'd take it out of the dam and through their filtration places there and then we would participate in the pipeline and take it that way. But when they say -- as I say -- they talk out of both sides of the mouth, some say there is water and some say there isn't water.

CHAIRMAN DOOLITTLE: Well, that's the purpose of the hearing really, is to find out where we stand. I think we're getting a pretty good idea of what the present situation is, which is serious, I think, particularly in Sacramento County and of what the future holds. And the future should be of concern to everyone as it becomes very apparent that we are not going to have sufficient water to meet our needs in the foreseeable future.

MR. SPILLAGE: That's right.

CHAIRMAN DOOLITTLE: I thank you for coming up and offering that viewpoint.

MR. SPILLAGE: Thank you, Senator, for allowing me.

CHAIRMAN DOOLITTLE: Thank you.

The next person we had on our witness list was Bob Elaser. Is he in the audience? Harry Dunlop with Rancho; then we have Joe Flynn, I think is here. Come on up, Joe.

MR. JOE FLYNN: Good afternoon.

CHAIRMAN DOOLITTLE: Welcome.

JOE FLYNN: Senator, I have a prepared statement and I furnished you copies (cross talking)

CHAIRMAN DOOLITTLE: Yes, we've got copies of that and (cross talking)

JOE FLYNN: I'd like to have them highlighted for the record. My name is Joseph V.

Flynn. I live near Camino in El Dorado County and I've been asked by the directors of the El Dorado County Water Agency to represent them here at this hearing.

The water for El Dorado County, for the most part, comes from stream diversions and surface storage in reservoirs. Only in the Lake Tahoe Basin are the underground aquifers as significant as a water supply source. Our principal sources are the streams in the Middle and South Forks of the American River and those in the entire Cosumnes River Basin within the County.

Thanks to some far-seeing legislation a long time ago, the State made filings in 1927 and again in the 50's for water rights to protect counties of origin to water needed in the future. And to the extent needed at this time those filings have been used. The danger we recognize is that the State having acted so wisely so long ago, will give in to some political expediency and expend those reserved rights for a host of other uses, including instream uses, delta flow enhancement, San Francisco Bay flushing, and export from the County for the use of other downstream users or export to other parts of the state. We have long advocated that these county of origin uses should be protected by a constitutional amendment. We would like the support from this committee for that purpose, and I don't need to tell you that we've been working on that for a long time.

Protection of water rights is only part of the problem. Even with water rights, water development is a long and expensive and difficult process for those of us residing in the mountain counties where topography and remoteness make water development extremely difficult. Assemblyman Waters has introduced AB 2314 in this session and it's an attempt to help areas all over the State to develop water by providing grants or loans for feasibility studies and then some help actually for the construction itself for agencies that are unable to accomplish it on their own. And we'd urge your support for this legislation, even though it may require some amendments to make it acceptable to other water people throughout the State.

I've heard a lot of talk about Auburn Dam here and I'd like to say something about Auburn Dam. When constructed it will provide water to an important water short area of our county in the Pilot Hill-Cool area. And this has been long planned and the diversion is actually -- the diversion piped to serve this water is actually in place at this time in the present foundations that were built for this structure. This may come as a surprise to you, but it has -- the plumbing has started anyway. We need this water now and fully support the Auburn Dam construction even to the extent of making it a State project, or a joint State-Local Agency venture. Our county has fully supported the Auburn Dam, even to the extent of joining with Placer County in establishing and financing the American River Authority, a Joint Powers Agency. Of course, you people who live and work here in Sacramento have only to look around this building and many of the fine old homes in this area to know, as those who built knew, where the water levels

could be. Time has obliterated what was painfully evident then, and that's the high water mark of the floods of the 1860's, over a hundred years ago. Flood protection will save lives and property and it should be supported now.

Auburn Dam and the proposed Cosumnes River project, as well as the SOFAR project, which hopefully we get started here very soon, can provide the storage for use during our long dry summers and in addition, provide carry-over water for the inevitable less than normal rainfall years. Planning for water use should be done on a fifty and a hundred year periods, not the fashionable "Woolworth" 5 & dime, 5 & 10 year periods. I've been associated with the SOFAR project for over 13 years and it had been planned for at least 20 years before I became associated with it and hopefully, we'll get started soon. Water development shouldn't be subject to the whims of administrators and legislation, but should be grounded on good hydrology, sound engineering and long-range planning.

The Department of Water Resources -- and this is an answer to your question -- is presently in the process of developing the water needs of El Dorado County. The objectives of this study are to identify water problems and issues, inventory surface and groundwater resources, estimate existing and projected water demands and identify water management alternatives. The Department now expects that the draft report will be out for review soon, with the final report due in June of this year. Preliminary figures, subject to correction after review, show that the water requirements in the County are expected to increase from about 57,000 acre-feet in 1983 to over 88,000 acre-feet in 2020. And somewhat like the population projections for El Dorado County, we have a little concern with those figures. Population projections by the Department of Finance have been notoriously inaccurate for El Dorado County. In our own kind of a summary of the various districts and areas we think that we need, rather than the 88,000 acre-feet, about 130,000 acre-feet of water, but we're in the process of reviewing the State's figures and we'll present some revisions to them for their final draft. It's not too soon to begin the task of preparing plans for new water developments that will be needed early in the next century.

And we appreciate the opportunity to appear here. Do you have any questions? I'll be glad to answer.

CHAIRMAN DOOLITTLE: Thank you. I appreciate your coming and offering that testimony. You mentioned the SOFAR project. Is that on track you think for this summer?

MR. FLYNN: As far as I know we have planned to break ground some time next month.

CHAIRMAN DOOLITTLE: So at long last....

MR. FLYNN: At long last, yes.

CHAIRMAN DOOLITTLE:the thing will begin. Well, that...

MR. FLYNN: There's an important meeting in New York today and I'd hope that we'd get that decision to go ahead and start ordering the machinery and generators and what-not.

CHAIRMAN DOOLITTLE: You've been behind that for a long time. It will be rewarding to finally see the fruits of your efforts come to pass. I suppose, given the fact that you -- as you've indicated have already supported the Auburn Dam through this authority, but just for the record, let me ask, would El Dorado County participate financially in the Auburn Dam project?

MR. FLYNN: I think probably as a joint partner with Placer County through the American River Authority, I think the answer is in the affirmative. We've already put a good many thousand dollars into that already and I'm sure we'd continue that effort.

CHAIRMAN DOOLITTLE: All right, sir. Thank you very much for your coming today.

MR. FLYNN: Thank you.

CHAIRMAN DOOLITTLE: I don't see Mr. Elaser or Mr. Dunlop, if they're here. Okay, and Mr. Reed. Oh, good, all right.

MR. KURT W. REED: Good afternoon, Senator.

CHAIRMAN DOOLITTLE: Hi.

MR. REED: Hi.

CHAIRMAN DOOLITTLE: Tell us your position with the Foresthill Public Utilities District.

MR. REED: My name is Kurt Reed. I'm district manager.

CHAIRMAN DOOLITTLE: We, I believe, sent you a letter asking you to respond to a couple of the questions. Do you have that?

MR. REED: Yes.

CHAIRMAN DOOLITTLE: Yes, go ahead. Tell us what you think we should know about.

MR. REED: Basically a little bit about the Foresthill Public Utility District. We are probably, or if not the only, project works that were completed on the Auburn-Folsom south unit CVP, in other words, Sugar Pine Dam, Sugar Pine pipeline and the Foresthill pipeline. The facilities were negotiated in the early 60's by the then board of directors to alleviate a critical water shortage on the divide. The district relies and still has spring sources, in other words Mill Creek watershed, Temperance Springs and Nix Springs which it used at that point and still does. However, growth was seriously curtailed. The former Placer County general plan for the Foresthill Divide in 1964 kind of pinpointed certain areas of growth agriculturally as well as for domestic use. Those needs were, of course, not met or could not possibly be met by the then existing water source. The drought of 1976-1977 and actually on the Divide, affected the Foresthill residents for three years, 1975, 1976 and 1977. Supplies were augmented from local mining companies or property owners that had some old mines and mine tunnels and water was purchased from them, pumped up and co-mingled with current district facilities. The Bureau of Reclamation who we have a forty-year amendatory contract with, the Bureau of Reclamation owns Sugar Pine. They own all the facilities. The Foresthill PUD simply

operates and maintains the facilities. Our allocations of waters in Sugar Pine was based on the newly prepared or the latest update, 1980 Foresthill general plan, which basically looked at a total growth projection of 12,000 individuals on the Foresthill Divide. Therefore, the water -- our water allocation, our maximum, is 2500 acre-feet at the end of the contract year which is up for negotiation at the end of 40 years or 39 years and a total of 300 acre-foot of agricultural water. Our district encompasses currently right now approximately 13,200 acres of which 26% is actually inhabited.

CHAIRMAN DOOLITTLE: How are you going to do this year? Are you going to meet the water needs of the people you serve this year?

MR. REED: Yes, ever since Sugar Pine, our first water delivery year, the starting of our contract was January 1 of '84. Since that time Sugar Pine has been on line or in use by the PUD. It's operated by the method of filling and spilling. We've had sustained rainfall yields which have, you know, gone over the spillway, and then hence in Shirttail Canyon ultimately it finds its way to the North Fork of the American River and on into Folsom. This year at our gauging station at Sugar Pine we recorded approximately 35 inches of rainfall. We are the only user currently right now for M and I and agricultural water off of Sugar Pine and the reservoir right now is fairly full.

CHAIRMAN DOOLITTLE: How large is that reservoir?

MR. REED: 7,000 acre-feet maximum.

CHAIRMAN DOOLITTLE: What happens next year if we -- say next year is a year about like this one. You still okay?

MR. REED: Well, we're going to have to -- we, of course, concurrently with our billing, being on the Foresthill Divide in timber intense area, fire, of course, is always a problem. We have with our billing procedures sent out notification of "please conserve water, fuel areas, breaks around your home," so on and so forth. If, who's to say, as you say, it's an act of God, rainfall-who can plot it. If we enter into another year or several years of low precipitation we will have to install certain conservation measures eliminating the agricultural. We, of course, the Foresthill Divide, the primary economy there is forest products and we will have to curtail certain operations which has a definite adverse affect on the local economy and as well the environment for sure.

CHAIRMAN DOOLITTLE: But for now, it's voluntary conservation measures and you feel you have adequate water supply.

MR. REED: Yes. I believe that Foresthill Public Utility District, all accounts are metered, each and every account is metered.

CHAIRMAN DOOLITTLE: Okay, all right.

MR. REED: Our water rates, which are -- come under scrutiny from -- there's an awful lot of influx of population moving from the Sacramento Valley area, Citrus Heights, Fair Oaks, Folsom area to the Foresthill Divide, namely Todd Valley and points farther up.

The office staff hears it quite frequently: "Well, how come your water rates are so expensive, you're closer to the source; in the valley areas I either came from an area that was not metered, is on flat rates, and my rates were \$3.50, \$5-\$6 a month." And they complain considerably about our rates.

CHAIRMAN DOOLITTLE: What are your rates?

MR. REED: Our rates are \$12 per month minimum, which includes 8,000 gallons of water a month. Anything over that is \$1 per thousand. And we pay for our water from Sugar Pine, \$85 an acre-foot. That's raw water costs non-treated. We have to treat it on top of that. And we co-mingle our current district sources with the Sugar Pine water and it is all treated water. We have no separate raw water pipelines. And agricultural rate, of course, we settle a little differently to coincide with the Bureau's ag policies. However, we feel and quite a few of our cohorts basically are in the foothill communities also feel that conservation, one of the best ways to augment an alleged supply deficiency, is the pricing index conservation. In other words, meter your services and charge an adequate price for it and that way you basically have an ongoing conservation program.

CHAIRMAN DOOLITTLE: So you pay \$85 an acre-foot for water out of Sugar Pine?

MR. REED: That's correct.

CHAIRMAN DOOLITTLE: And what percentage of your total water supply comes from Sugar Pine, would you say?

MR. REED: Right now, approximately 70%.

CHAIRMAN DOOLITTLE: 70%, and when was Sugar Pine completed?

MR. REED: Our first delivery was January 1 of 1984.

CHAIRMAN DOOLITTLE: Okay, so of everybody who's testified today, you probably have the most recent figures on the cost of a new water facility. We've heard testimony -- nobody really knows exactly what the price of water would be from Auburn Dam. We heard one figure of \$100 an acre-foot and another of \$120, but you're getting up there in the Sugar Pine thing.

MR. REED: Well, our contract, as stipulated, is a 40 year amendatory contract with the U. S. Bureau of Reclamation. Agricultural water rates have been increased twice since then, since the inception of our contract.

CHAIRMAN DOOLITTLE: A 40 year amendatory contract you said?

MR. REED: Yes.

CHAIRMAN DOOLITTLE: Now how does that work?

MR. REED: Strangely. I wish I had a definitive answer for you, but basically we are a very unique feature with the Bureau of Reclamation. Most of the contracts that the Bureau has, as I understand it, are a repurchase or government loans to an individual that construct project works and then thereby over a period of time, the entity

repurchase those works. We do not. Foresthill Public Utility District or the Foresthill Divide, the resources that were available at the time that the project was in its final stages of the contract, there was no way that the Divide could repurchase nor borrow that type of money. The overall project cost for Sugar Pine Dam, Sugar Pine pipeline, Foresthill water treatment facility and the Foresthill pipeline, is approximately \$47 million, which was spent by the United States Government. We simply are an O and M contractor. We operate and maintain the project facilities and pay for the raw water and all the resulting costs.

CHAIRMAN DOOLITTLE: For how many years will your existing water allotment meet your needs?

MR. REED: Projections, based again on the 1980 study, the Foresthill general plan prepared by the County of Placer, hopefully we can augment our needs up for another 20 years. We have a firm water supply from the Bureau of Reclamation as per our contract for M and I use of 2500 acre-feet and at that point in time 300 acre-feet of agricultural water. In the event we need the M and I water or the ag -- the 300 acre-foot of ag for municipal and industrial use, then we can get a total allocation of 2800 acre-feet from the Bureau of Reclamation to our facility, plus our other water rates, water rights excuse me, from Mill Creek, Temperance and _____ Spring, one of them has to be pumped. However, that total augmentation is approximately 300 acre-feet. So what we're projecting at ultimate capacity or system yield is approximately 3100 acre-feet annual total with no other supplies. That is it.

CHAIRMAN DOOLITTLE: But that meets your needs for at least 20 years apparently.

MR. REED: We hope so. We're experiencing accelerated growth in our area -- this last year 8.7%. Already this year it's not the close of the fiscal year, we're right now, this is by how we gauge it -- is within the public utility district boundaries the number of new hookups, the new meters set, based on the average population of 3.36 individuals per household in our area, we're right now at a target rate of 10.6% this last year.

CHAIRMAN DOOLITTLE: You really are growing.

MR. REED: Yes, we are.

CHAIRMAN DOOLITTLE: In view of that, are you inclined to revise projects? Are you looking around for future sources?

MR. REED: That has not come up. The Board of Directors of our agency feel right now that we're adequate. They want to take a look projection down the road of 5 years, to see where we are in 5 years and then make a long-range plan of the following 15, and then in that period in time, hopefully, things will subside or stabilize. If it does not and we continue in an accelerated rate, then we're going to have to look elsewhere.

CHAIRMAN DOOLITTLE: Do your agricultural -- now, let's see, you do have agricultural

users?

MR. REED: Yes, we have the large mill in our area which according to the Bureau standards is not eligible for agricultural water because it is industry. We have our own separate rate. In other words, being blessed with the other water rights that we have that are approximately 300 acre-feet per year, we have what we call an agri-business rate that we can augment certain industry. However, from the Bureau of Reclamation currently we are using 35 acre-feet per year of agricultural water spread amongst four users.

CHAIRMAN DOOLITTLE: Okay. Thank you very much.

MR. REED: Thank you.

CHAIRMAN DOOLITTLE: Let's see, is Mr. Blaser out there from Folsom? Mr. Dunlop's here, I believe, from the Rancho Murieta Community Service District.

MR. HARRY DUNLOP: Senator.

CHAIRMAN DOOLITTLE: Hi.

MR. HARRY DUNLOP: Senator.

CHAIRMAN DOOLITTLE: Hi.

MR. DUNLOP: My name is Harry Dunlop and I'm the past manager of the Rancho Murieta Community Services District, now serving as a consultant to the district. You previously received a statement submitted by Mrs. Marian Cravens, manager of the district, addressing the issues on which you invited testimony today. And she expresses her regrets in not being able personally to appear before you today.

I should like to briefly address several issues that are of concern to the district. The Cosumnes River is the source of water for this unique community. There are no underlying groundwater aquifers and there are no major snow storage areas in the watershed and as a result, we are completely at the mercy of the natural flow of the river. This year is being reported as a dry year with flows in the Cosumnes at about 15% of normal. If you examine the runoff rates from the major stream systems to the -- in northern and central California you will find that that's perhaps the lowest percentage rate of any of the stream systems. The river has its origins in El Dorado and Amador Counties below the 7,000 foot level and as such is extremely sensitive to rainfall conditions. There are no snow storage areas in that watershed. In the 1976-77 drought, flows in the river were reported at 4-6% of normal. Alternatively, in years of high rainfall there's been flooding and flows of up to 200% of normal. Flows in the river during the flood of 1986 approached the total annual runoff in just the month of the floods and the heavy rains. Can you imagine what fun you would have managing your finances if your paycheck varied like that? The community has spent about \$5 million for onsite storage to provide a reasonable measure of reliability to the annual water supply. For the maximum allowed development of 5,000 lots, that's \$1,000 per lot just for onsite storage. If you were to suggest that other areas, like the Sacramento area for example,

make a like investment with an estimated 250,000 customers in the area, that would be an investment of \$250 million. And if parenthetically, if you coupled that with the power benefits, you could probably build Auburn. In a drought like 1976-77, Rancho Murieta would be faced with a serious problem. But with prudent water management and the reuse of reclaimed waste water, which we're required to do, the community will be able to survive in a much better condition than most other local communities.

The kinds of environmental, social and economic problems that grow out of shortages of water could be the drying up of the championship golf courses and the landscaping throughout the area. Should the shortage be so severe as to require replacement of the tees and the greens, you could see a bill of \$40,000 per hole and with 36 holes in the two championship courses, that's \$1.4 million. But that's cheap compared to the residential landscaping costs which would be more dramatic. It's not that difficult to invest \$15,000 in landscaping each residential unit. Should this landscaping require replacement, you'd be looking at least at \$15 million for just a 1,000 lots out of the 5,000 lots that are within the development. So it doesn't become difficult at all to add up rather large size dollar costs should the drought be so severe as to require replacement of those facilities.

Now what are some of our solutions? Rancho Murieta is, of course, most fortunate to have a substantial amount of onsite storage -- there's about 3900 acre-feet onsite -- which provides substantial reliability to that local water supply. But when the river's down to 4% of normal runoff you're bound to be in trouble. The irony to this situation is that there's about 60 times the amount of water needed by Rancho Murieta that flows right through the community in a normal runoff year. Now obviously a solution is to store more of the water runoff for summer use. That's a nice, neat solution. Only federal, state and local agencies have been actively trying to do this for the past 30 years without any appreciable success. You no doubt have read within the last month of Sacramento County withdrawing from a four county joint powers authority -- El Dorado, Amador, Sacramento and San Joaquin -- and that authority is dedicated to conservation and use of the water resources of the Cosumnes River. With the addition of new requirements each year, that is, in the water development process, the task keeps getting bigger. The local areas need help from a broader base to support costs of the necessary environmental engineering and financial studies required for any kind of water conservation features in the Cosumnes basin. Perhaps a revitalized local water development program, like the Davis-Crunsky program, could provide such assistance. Such a water conservation program in the Cosumnes basin could provide more stored water than that needed locally at Rancho Murieta. It would provide additional supplies to the lower Sacramento Valley region and the delta.

Now the second opportunity for Rancho Murieta would be to obtain water from the

Folsom south canal, an already developed supply, by means of a pipeline and pumping plant running eastwardly from the Folsom south canal. The continuing long-term requirements for energy to pump this water to the service area and the escalating energy costs make this alternative less desirable on a long-term basis. The district has in the past and continues to examine some four or five other local alternatives for increased storage of winter runoff in an effort to provide improved reliability to the local water supply.

We appreciate the opportunity of appearing before you this afternoon.

CHAIRMAN DOOLITTLE: I appreciate your coming. Now as I listen to you discuss the situation in the Cosumnes, that may reflect what it would be like perhaps if the American were in its undeveloped state. It sounds like you have enormous fluctuation. Are there any dams on the Cosumnes River at all?

MR. DUNLOP: The only dam of any substance on the Cosumnes River is the Sly Park unit of the Central Valley Project which is located on a tributary to the north fork of the Cosumnes in El Dorado County, some 40,000 acre-feet of storage on a river that runs about 350,000 acre-feet a year. So you see, you have for practical purposes -- nothing. And when you speak of the American River itself, it was my privilege to do some survey work down on the bottom of that river before they constructed Folsom. I recall going in and walking across the river in a November, and I recall coming back in February and finding a new four foot diameter, about 40 foot log, located on a rock ledge about 40 feet higher than where we had been. So when you speak about the variations in flow in the natural state of the rivers, I surely understand that. And nature in the raw gets to be cruel.

CHAIRMAN DOOLITTLE: I guess 4% of its annual flow is really...and then swinging up to, what, 200% sometimes...

MR. DUNLOP: Yes.

CHAIRMAN DOOLITTLE: I understand, I guess in that high state of what -- 77,000 cubic feet per second?

MR. DUNLOP: In that neighborhood.

CHAIRMAN DOOLITTLE: That's amazing. Well, thank you very much for your testimony. I appreciate having that update. Rancho Murieta sounds like it's kind of in a special situation.

MR. DUNLOP: The county and the developer in the initial proposals, with respect to the community, were very critical of seeing to it that there was an adequate water supply under most adverse conditions, and yes, we're fortunate. Thank you.

CHAIRMAN DOOLITTLE: Thank you very much.

Mr. Elaser came in. I saw him. There he is, representing the...

MR. BOB ELASER: It's a long time one month. Sure is a lot I don't know. I am here this afternoon -- I don't have a prepared text. I thought I'd cover briefly some of the main points and try and cover any questions you might have in regards to the requests on

items 5 and 6 that you sent forward.

It's a pleasure to be with you this afternoon. As I mentioned I've only been with Folsom for about four or five weeks.

CHAIRMAN DOOLITTLE: You were formerly with the City of Sacramento.

MR. BLASER: That is correct. Basically, covering the development here in Sac City. The City of Folsom basically is served by the city on the south of the American River and a portion of the city on the north side is served by the San Juan Suburban Water District. And of course, I'm sure you've heard testimony or will hear testimony about the impacts in that district. We currently have some developments that are under way that have been told there we'll have no problems with water supply. That should, in fact, build out or should to the...to major...any major impact build out the city on the north side of the river. On the south side of the river we have a large area in the city limits that is undeveloped. We currently have 22,000 acre-feet of riparian right supplied to us by the Bureau from Folsom Lake at the present time. We are currently using about 4,300 acre-feet a year of treated water and about 7,000 acre-feet is untreated water sent down to Aerojet. There is a portion of the city, the present city limits, that we call the East Annexation area. It was annexed to the city within the past year and one half of which water is a major concern. The previous city limit -- which incorporates Willow Creek area, the Scott Road area down to Highway 50, westward to the river -- that area is anticipated to be served. We have studied it. We should have no problems in serving that area by the current allotment from the riparian right that we do have. We have a request to the Bureau of Reclamation dating back about a year and one half, I don't have the specific date for you, that requested about 25,000 acre-feet additional water to serve what we call the East Annexation area. I believe the paper spoke somewhat to that this morning. Also, we have as recently as a few months ago requested an additional 25,000 acre-feet from the Bureau making our total request 50,000 acre-feet. This second request of 25,000 acre-feet was to cover the city's fear of influence in anticipation of eventual growth south of Highway 50. However, we do not anticipate needing that for some period of time.

CHAIRMAN DOOLITTLE: And those combined requests of 50,000 are dependent upon the water marketing study being conducted by the Bureau?

MR. BLASER: That is correct. They would be under contractual services with the Bureau. As you know, the City of Folsom is experiencing tremendous growth pressure. We have applications that would take the city's current population of about 24,000 -- and that includes the prison population -- to about 60,000 if all applications were approved as submitted.

CHAIRMAN DOOLITTLE: And over what period of time would that be?

MR. BLASER: These are current applications, Senator, we just have not acted on.

It's just a matter of economics and the ability of the development community to handle that kind of growth. I would anticipate we're looking at probably a 10 year period. The city is updating its general plan which is in many ways outdated. It's looking at the transportation issues; the entire zoning issues; of course, the whole growth of the city in general.

We, at the present time, under present circumstances need additional water to serve the eastern area of the city. We're experiencing tremendous pressure to develop that area. It is a prime development area -- residential -- and we have requested that of the Bureau. It would take its -- if we had that additional allotment we would have no trouble in serving all of the city limits for the next 25 years.

CHAIRMAN DOOLITTLE: If you get the additional....

MR. BLASER: If we get the additional 25,000. Now we can serve the old city and I wish I had a map to demonstrate that to you. We could serve probably the development pressures for the next 10 years under the current allotment. But it would have to be under the old city limit line. We have made it, of course, quite clear in our studies and in our conditions on the applications that the new eastern area would not have the water. We'd appreciate, of course, any help we can get in that regard.

CHAIRMAN DOOLITTLE: Well, you don't anticipate any problem once the marketing survey is completed, I guess.

MR. BLASER: No, I don't anticipate any problem in getting that. The problem is, as I understand -- let me go back a little bit. As I understand it, the City of Folsom was the first to request additional allotments from the Bureau, and as I say, that was some time back, a year and a half to two years. As other water purveyors began to apply we were brought into that whole picture and lumped into the current application. It's my understanding that the Bureau is currently going through an EIS procedure, anticipate a draft completion in about February of next year.

CHAIRMAN DOOLITTLE: Does the presence of the high tech industries there place any additional demand for water? Don't some of those industries require quite a bit of water?

MR. BLASER: They do. Pressure in that regard has not been as keen as it might have been a few years back. I'm sure you are aware of that. There are other uses, however, manufacturing type of uses, that demand much greater water than do the high tech facilities. We don't anticipate, as I said, having any trouble.

CHAIRMAN DOOLITTLE: So they're really folded into your projections about future use.

MR. BLASER: Yes. We have industrial zones. We've incorporated all of these into the water projections.

CHAIRMAN DOOLITTLE: And if you get that allotment from the Bureau that takes care of you for 20 years,?

MR. BLASER: 20-25 years, yes, sir.

CHAIRMAN DOOLITTLE: And then beyond on, have you made projections about where you'll get your water? We had testimony today from the Bureau that existing Folsom Reservoir will handle the needs for the next 20 years, but after that they will be unable to meet all of the needs of this area.

MR. BLASER: I would say that the only way to alleviate the ultimate water supply problem would be to provide some kind of additional storage capability. Folsom, of course, is a fluctuating type of reservoir. I'm sure you've heard testimony of that. It rises and falls dramatically in terms of other facilities. It is my recommendation and opinion that some type of reservoir facility be constructed on the upper tributaries which I think would alleviate both the water supply problems as well as the flooding potential for the lower region.

CHAIRMAN DOOLITTLE: Would the City of Folsom participate financially in the construction of or in the financing of such a facility?

MR. BLASER: I don't know, Senator.

CHAIRMAN DOOLITTLE: Well, I appreciate your coming. I know you're new on the job. You seemed very well informed about the issues pertaining to Folsom. We're grateful for incorporating your testimony within the record of the committee.

MR. BLASER: Thank you.

CHAIRMAN DOOLITTLE: Thank you. Well, that completes the list of witnesses that we have today on this subject. Was there anyone else who wished to add anything? If not, we thank you for coming and providing this valuable information. As I indicated at the outset, we heard a great deal of comment about the flood potential to the Sacramento area and at the same time only one year later, we're now seeing some real concern about availability of water both in this year, but also in a long-term. The purpose of the hearing was to get an accurate assessment as to where we stand on that issue. And I think the summary of the testimony would be that once the Bureau has been able to complete its water marketing survey, then water will be made available and basically in normal years will meet the needs of the various users. However, we've also heard testimony that in the foreseeable future, beginning about 20 years from now, we're going to need additional supplies of water. The present Folsom Reservoir will not be capable of meeting all of those needs. And since the construction of any sort of major water storage facility like an Auburn Dam takes about a minimum of ten years from start to finish, it's not too early to begin looking for those additional sources of water, so that we don't find ourselves in the situation where we'll have to make trade-offs and choices, things which would be difficult. So we will take the testimony which has been provided, it will be -- it's been recorded. We've had considerable amount of written testimony. It will all be put into a written transcript form and it will be made

available. I'm hopeful that out of this hearing we might see some real serious analyses of plans to begin now to prepare for the future. I'll be very eager to see and will have to have some further hearings as we get down the road a little bit upon the cost of water, say from a new storage facility such as an Auburn Dam and begin to see who amongst the different entities will support financially such an effort and see if we can't make that work hand-in-hand with the need for additional need for flood protection to serve the interests of this entire region. So we thank you for your participation and we'll be available to distribute those reports when they're ready and that will probably be in a couple of months. This hearing is now adjourned.

WRITTEN TESTIMONY

CENTRAL VALLEY PROJECT WATER ASSOCIATION

A California Corporation

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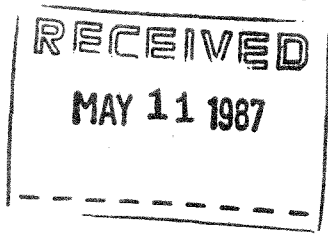
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Jerald R. Butcher
James McLeod
John Williams

SOUTHERN ZONE

Harvey S. Chase
John P. Gilbert
Rex Pursell
Loren Voht



May 8, 1987

Honorable John Doolittle
State Capitol
Sacramento, CA 95814

Dear Senator Doolittle

We have your letter dated April 22, 1987, addressed to the North Delta Water Agency relative to your May 15, 1987 hearings on projections of water demands. This office in addition to North Delta Water Agency manages the affairs of the Central Valley Project Water Association.

This latter organization conducted an inventory of water needs in the Sacramento and San Joaquin Valley for service from the Federal Central Valley Project. Some of the Districts listed in the inventory are within the geographical area cited in your letter. From the attached letters you will note the future water service requirements to CVP contractors are approximately 2.25 million acre-feet. Enclosed are:

1. Letter dated October 30, 1985, to Robert N. Broadbent, Assistant Secretary of the Interior, which provides the results of our inventory and includes a Criteria and Principles for Future Sales of Remaining CVP Water.
2. Letter dated December 10, 1986 to Commissioner C. Dale Duvall which brings the above inventory total to 2.25 million acre-feet.

We regret that attendance at your hearing cannot be completed due to a prior commitment. However, we will supply any additional information you deem necessary.

Sincerely yours,

M. A. Catino
Manager

Enclosures

CENTRAL VALLEY PROJECT WATER ASSOCIATION

A California Corporation

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October 30, 1985

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David P. Granicher

Robert N. Broadbent
Assistant Secretary of Interior
for Land and Water Resources
Interior Building
Washington, D.C. 20240

CENTRAL ZONE

Brice Bledsoe
Clois Snyder
George W. Thomas
C. Ted Way

Dear Mr. Broadbent:

WESTERN ZONE

Cecil Carey
Jerald R. Butcher
James McLeod
John Williams

On several occasions you have been apprized of this Association's interest in the proper distribution of the remaining Central Valley Project (CVP) firm water supply to the current and potential CVP contractors. This supply is equated to the partitioning of water supplies as provided for in the Coordinated Operations Agreement between the CVP and the State Water Project (SWP).

SOUTHERN ZONE

Harvey S. Chase
John P. Gilbert
Rex Pursell
Loren Voth

We are certain you realize that any available and uncontracted firm water supply in the Central Valley of California holds a high degree of interest among those in need of augmentation. With this in mind and in view of the demand requirements exceeding availability; this Association committed itself to straight-forward analysis of the current and potential irrigation and municipal and industrial water needs of its contractors. We formed several committees from our user membership to develop an equitable understanding. Meetings and correspondence with the Mid-Pacific Regional Director have aided our understandings.

The efforts of our committees were directed toward an "Inventory of Water Needs" and a "Proposed Criteria and Principles for Governing the Contracting for the Remaining CVP Firm Water Supply."

Relative to the inventory, the conclusions provide a firm water supply need of 1.9 million acre-feet. This amount when compared to the COA-CVP availability of 1.1 million acre-feet indicates a shortage of 800,000 acre-feet. When consideration is given to a CVP interim supply (water supply under contract but not being used by the contractor) of 600,000 acre-feet and a CVP intermittent supply of 500,000 acre-feet there is the possibility of carrying the shortage for a period of time until new CVP facilities are constructed for firming supplies. However, this is not the present case for SWP contractors where future water needs are aligned to a quantity of

4.2 million acre-feet and an availability of 2.1 million acre-feet for a shortage of 2.1 million acre-feet.

For your information, the results of our inventory by CVP facilities and service areas are shown below. A specific amount for a district/individual contractor is omitted because this is part of the negotiating process which includes land classification, cropping patterns, availability and quality of ground water, economic benefits and other elements.

SUMMARY BY SERVICE FACILITY
(Additional Requirements)

	<u>Acre-feet</u>
Shasta Dam Area (Shasta County)	15,000
Folsom Dam Area (Exclusive of Folsom South Canal)	28,000
Sacramento River	40,000
Corning Canal (Tehama County)	64,000
Tehama-Colusa Canal (Glenn-Colusa-Yolo Counties with some service to Solano County via a completed Oat Reservoir)	393,000
Delta-Mendota Canal (Including Mendota Pool)	80,000
San Luis Canal Service Area	408,000
San Felipe Unit (Includes 20,000 reserve to Monterey and Santa Cruz Counties)	27,000
Mid-Valley Group (Chowchilla to Bakersfield)	863,000
TOTAL - CVP Contractors Firm Water Supply Requirements	1,918,000

Separate from the above is the additional water requirement of the Folsom South Canal Service Area. Completion of the Folsom-South Canal from its present Cosumnes River terminous (Sacramento County) through San Joaquin County and even without the completion of Auburn Dam could provide up to 400,000 acre-feet. This requirement will need consideration within future CVP water sales.

Generally, we feel the above amounts are realistic. The range of future requirements by Districts is from less than 1 acre-foot/acre to an aggregate of nearly the "common" 3 acre-feet/acre. In some cases the increased surface water requirements are to offset the high cost of ground-water pumping and depletions.

A significant element of this presentation is the attached criteria for Bureau of Reclamation contracting with our CVP users. The criteria deal with the priorities and associated contract elements for the augmentation of firm, interim and intermittent water supplies to the

CVP contractors. It does not exclude SWP contractors as CVP water purchasers but makes it clear that only annual interim and/or intermittent supplies be contracted to them on a recallable basis.

We conclude that the criteria represent a reasonable basis for contracting and represent a consensus of our membership. We highly recommend your approval of the criteria. Your approval and the concurrent lifting of the moratorium on CVP water sales will provide substantial betterments to the present water conditions of the Central Valley.

We will appreciate your reply to this extremely important matter.

Sincerely yours,



Ralph A. Nissen
President

Enclosure

CENTRAL VALLEY PROJECT WATER ASSOCIATION

Proposed Criteria and Principles Governing
the Contracting for the Remaining CVP Water Supply
(Firm, Interim and Intermittent)

Effective since January 1979, there has been a moratorium imposed by the Secretary of the Interior on further contracting for firm Central Valley Project (CVP) water supply. The Coordinated Operations Agreement (COA) has been agreed to by the CVP and the State Water Project (SWP) for the partitioning of the firm yield of the Projects and for sharing of water required to meet the Delta water quality standards. Upon execution of the COA by the Bureau of Reclamation (BOR) and the Department of Water Resources (DWR), it is expected that the moratorium will be lifted and that the BOR will proceed with contracting for the remaining firm CVP water supply.

A. Contracting Entity: (Qualifications)

The term "Contracting Entity" as hereinafter used means an agency authorized by law to contract for a CVP water supply, either directly with the United States or through an agency formed for that purpose.

1. Is within the Congressionally authorized CVP service area; and
2. is within the Place of Use recommended by the Central Valley Project Water Association (CVPWA) and adopted by the BOR in its petition dated September 19, 1985, to the State Water Resources Control Board (SWRCB) for consolidation and enlargement of the Place of Use under existing CVP permits and licenses. The conditions of the permits and licenses appropriately recognize the "County of Origin" and "Watershed Protection" provisions as embodied in the Water Code, Sections 10505 and 11460 et. seq., respectively; and
3. is willing to comply with the provisions of the Reclamation Reform act of 1982; and
4. agrees to use the water for the preservation of existing developed lands; and
5. agrees to accept an allocation of new or additional firm CVP water supply based upon assumed full utilization of the safe yield of its ground water and local surface supply considering quality and economics; and

6. agrees to a development period within its control for a term of not to exceed 5 years in which to execute a contract, and thereafter a build-up period of water deliveries and repayment not exceeding 5 years. (Generally a contract entity will be required to enter into a contract within a period of 5 years and fully utilize the contracted water supply within 5 years. However, if a contract is consummated within 2 years, a 5-year period will be allowed for the development period. Accordingly, the total time would be 7 years). The above build-up of 5 years is related to irrigation. A longer period will be required for municipal and industrial water contractors.

The proposed criteria for allocation of the uncontracted Firm CVP water supply, in order of priority, shall be as follows:

B. Priorities:

1. A contracting entity that is an existing long-term CVP contractor in need of water supply augmentation as a result of reduced usable ground water yield, a reduction in local surface water supply, or an acceptable inclusion and having available capacity within its existing distribution system.
2. A contracting entity that is within an overdrafted ground-water basin and has previously held a "short-term" or "temporary" CVP water service contract with the BOR.
3. A contracting entity that has a pending application with the BOR for a CVP allocation and has the capability of applying additional water supply to reasonable beneficial use.
4. A contracting entity that is newly formed without a previous contracting relationship with the BOR for a CVP water supply.

Interim CVP Water Supply (Water supply under contract but not being used by the contractor) shall be made available to a contracting entity subject to recall, in conformity with the same criteria and order of priority as outlined above for firm CVP water supply and with an additional priority as follows:

5. The Department of Water Resources for the SWP as envisioned under the COA.

Intermittent CVP Water Supply shall be allocated in the following order of priority:

1. A contracting entity that conforms to Items A.1. through A. 6. as listed above.
2. A contracting entity that is within an overdrafted ground-water basin and has the capability of accomplishing ground-water recharge.
3. A contracting entity that is in need of additional CVP water supply.
4. For U.S. Fish and Wildlife Service, California Department of Fish and Game, and Wildlife refuge requirements.
5. For enhancement in the Trinity River Fishway as required from factual study beyond the 120,000 acre-feet annually included in the COA yield studies.

CENTRAL VALLEY PROJECT WATER ASSOCIATION

A California Corporation

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M.A. Catino, Manager

December 10, 1986

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Loren Voth

Mr. C. Dale Duvall
Commissioner
Bureau of Reclamation
18th & C Streets, N.W.
Washington, D.C. 20240

Dear Commissioner Duvall:

At the NWRA Conference in San Diego last week, President Ralph A. Nissen of this Association discussed with you the future sales of CVP water supplies. These supplies, about 1.1 million acre-feet, are currently available from the Bureau of Reclamation, by the execution of the CVP/SWP Coordinated Operations Agreement.

To provide you with a background to the future needs of the CVP water users there is attached a copy of our letter dated April 25, 1985, to Director Houston. This letter detailed an exclusive CVP service area requirement of 1.918 million acre-feet. Since establishing this water need the following recent increases have been noted:

City of Folsom from 22,000 to 47,000 acre-feet
San Juan Suburban W.D. from 11,200 to 98,000 acre-feet
County of Sacramento from 10,000 to 230,000 acre-feet

The total increase for the three entities above approximates 332,000 acre-feet. This gives a present overall total need of 2.250 million acre-feet. The three entities above are subject to discussion with the Bureau this month on the associated scope of the Environmental Impact Statement for marketing additional water.

As explained to you by President Nissen, it is our desire to have all available CVP water supplies marketed at the earliest possible date.

Sincerely yours,

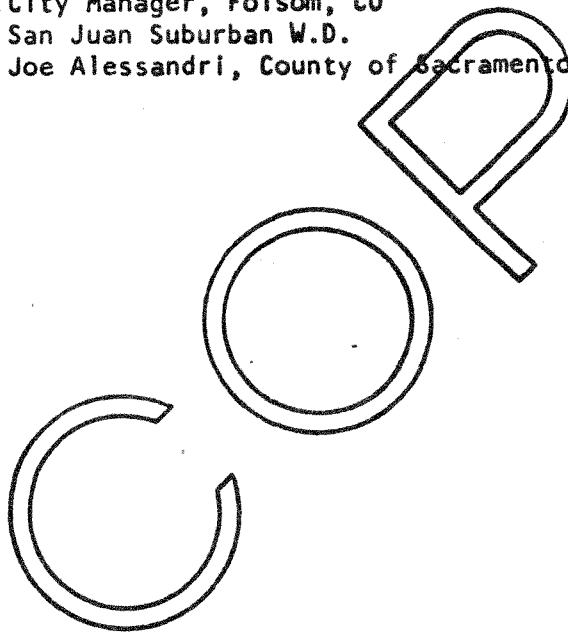


M. A. Catino
Manager

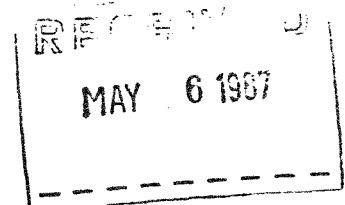
Attachment

cc: Board of Directors, w/o Attachment
R. L. Schafer " "
Regional Director Houston "

bc: City Manager, Folsom, CO
San Juan Suburban W.D.
Joe Alessandri, County of Sacramento



APPLEGATE, CALIF. 95703
P. O. BOX 91



Heather Glen Community Service District

May 2, 1987

TO: JOHN T. DOOLITTLE, CHAIRMAN
FROM: WILLIAM H. PERKINS, PRESIDENT *William H. Perkins*
SUBJECT: CONSUMPTIVE DEMAND UPON WEST SLOPE SIERRA NEVADA WATERSHEDS

1. We supply water to 83 homes with an average usage of 7,000,000 gallons per year or 11,244 cubic feet per household.
2. Water is secured from Placer Water Agency via the Boardman Canal to our Water Treatment Plant and 100,000 gallon storage tank.
3. No increase in demand anticipated for the next five or ten years.

WHP:ema



**FORESTHILL
PUBLIC UTILITY
DISTRICT**

P.O. BOX 266 5941 GOLD ST.
FORESTHILL, CA 95631
916/367-2511

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MAY 13 1987

May 11, 1987

SENATE SELECT COMMITTEE on the
SIERRA/CASCADE/KLAMATH WATERSHED
John T. Doolittle, Chairman
State Capitol Building
Room 5082
Sacramento, CA 95814

Gentlemen:

Please note the following written testimony of the Foresthill Public Utility District as per your request:

1. The Foresthill Public Utility District's 1986 water demand was 962 Acre Feet. Total available supply: M&I - 2805 AF; Ag - 300 AF.
2. Based on current growth: Five (5) year projection is 1400 (+ or -) Acre Feet; Ten (10) year projection is 2200 (+ or -) Acre Feet.
3. The District contracts with the United States Bureau of Reclamation, Amendatory 40 year contract No.14-06-200-3684A, for ultimated delivery of 2500 AF M&I and 300 AF Ag; Mill Creek water right No. 65-124 for 190 AF; Temperance Spring for 72 AF; Nick Springs for 8 AF; and Pomfret Mine Tunnel for 35 AF.

All rights, with the exception of USBR contract, have been in force since the District was formed in 1952. No changes are anticipated during the next twenty (20) years.

4. The 1976-77 draught severely effected the Foresthill Divide area. The Sugar Pine Dam (CVP - Mid-Pacific Region, USBR) was constructed to alleviate the critical water shortage on the Foresthill Divide. While our District does not currently anticipate a water shortage this year, continued low precipitation for several years would result in water restrictions.

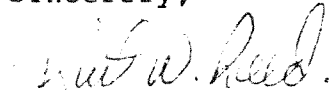
Forest products continues as the primary source of local economy and, in the event of water shortage,

May 11, 1987

log deck watering would be denied which would restrict the amount of board footage produced and consequently the number of employees in the local economy.

5. The water purveyors in the Lower Sacramento Valley region should meter all domestic services and set water rate schedules to effectively conserve water. The resultant savings in their allocations could realistically supplement additional water needs.

Sincerely,



Kurt W. Reed, Manager

NID Nevada Irrigation District

272,500 ACRES SITUATED IN NEVADA, PLACER, SIERRA & YUBA COUNTIES

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TO FILE NO.

May 6, 1987

Senator John Doolittle
Chairman Select Committee on
the Sierra/Cascade/Klamath Watershed
State Capitol, Room 5082
Sacramento, California 95814

Dear Senator Doolittle:

In response to your letter of April 15, 1987, concerning the hearing of examining "Projections of the Lower Sacramento Valley's Consumptive Demand upon West Slope Sierra Nevada Watershed", Nevada Irrigation District is pleased to present the following written testimony for the record of the hearing.

I. Treated Water

The current treated water demands from the District's customers (1986) are as follows:

CUSTOMER TYPE	SERVICES		WATER SALES	
	NUMBER	PERCENT	ACRE-FEET	PERCENT
Treated	12,118	71.3	5,873	4.8
Municipal Raw Water*	5	0.0	1,743	1.4

*This water is sold to municipal water agencies, who in turn treat the water for resale to their customers.

Directors:
David E. Southern, Division 1
Ernst L. Bierwagen, Division 2
Robert L. Pierce, Division 3
R. Paul Williams, Division 4
Victor H. Beisswinger, Division 5

General Manager: James P. Chatigny
Secretary: Dorothy P. Miller
Treasurer: Teresita T. Andrews
Attorneys: Minasian, Minasian,
Minasian, Spruance,
Baber, Meith & Soares

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COLFAX: DIAL OPERATOR, ASK FOR ENTERPRISE 14293

II. Irrigation Water Current Usage

<u>TYPE OF SERVICE</u>	<u>NUMBER OF CUSTOMERS</u>	<u>PERCENTAGE OF CUSTOMERS</u>	<u>WATER SALES</u>	
			<u>ACRE-FEET</u>	<u>PERCENTAGE OF WATER USE</u>
Seasonal Irrigation	3,261	19.2	101,477	83.4
Annual Raw	1,615	9.5	12,624	10.4

The District owns and operates 10 storage reservoirs containing a capacity of 250,280 acre feet. Raw water facilities include approximately 500 miles of canals and conduits to distribute this natural resource throughout the District. Treated water facilities include 12 treatment plants, 26 storage tanks and 300 miles of pipelines.

The principal water supply of the District is the upper watersheds of the Middle and South Yuba Rivers and Canyon Creek, supplemented by the natural flow of the Bear River, Deer Creek, and various tributary streams. District's water rights include pre-1914 rights which were acquired from mining companies along with post-1914 rights filed with the State of California.

III. Projected future demands are as follows:

a. Treated Water

<u>YEAR</u>	<u>NON-COMMERCIAL ACRE FEET</u>	<u>COMMERCIAL ACRE FEET</u>	<u>TOTAL WATER ACRE FEET</u>
1990	5,690	2,180	7,870
1995	7,460	2,860	10,320
2000	9,250	3,550	12,800
2005	10,840	4,160	15,000

IV. Irrigation Water Projected Needs

By the year 2005, on an inclined annual increase, the District is projecting irrigation water deliveries of 155,000 acre feet, an increase of 25 percent above today's current usage.

V. Further demands by the areas within Southwest Placer and annual sales to South Sutter Water District will increase the District's total water needs to 288,000 acre feet annually for both treated and irrigation waters.

(NOTE: All water usage/demand is shown without loss factors which can be estimated at approximately 20 percent.)

VI. Water Rights

The District currently has water right licenses and permits for the storage of approximately 250,000 acre feet annually. An ongoing program is deeply involved in licensing its water right permit on all waters being utilized by the District. Due to the complexity of District water rights filings, this process is very demanding in order to accurately define watersheds, water flows, water usage, and prior rights that the District obtained by purchases from mining and agricultural interest and corporations and individuals who previously owned water rights.

It is expected that this process, while working through state agencies, will consume the better part of the next 10-12 years. The District is also actively engaged in identifying additional waters that have not yet been filed upon, in order to meet future demands. However, because the District is located in the upper reaches of the watershed drainage, unappropriated water is very limited.

There are certain possibilities that the District is or can investigate in order to acquire additional water for future needs. These potential sources have been pointed out by a recently completed study by CH2M Hill. Some major options are:

- A) Purchase water from Placer County Water Agency, when Auburn Dam is completed.
- B) Exercise and develop water purchase agreements with Pacific Gas and Electric Company.
- C) Construct a storage facility on the Bear River at the Parker Dam site.
- D) Reconstruct the English Meadows dam facility.
- E) Develop additional storage facilities at a lower elevation in the vicinity of Bitney Springs.
- F) Rollins reservoir enlargement. (Water right application filed).

VII. If the projected growth patterns (Counties of Nevada and Placer planning tools) occur, the District will experience a shortfall of available water supplies by the year 2005. This could create economic and social consequences in that the choice by the residents of the state in their selection of areas to live will be greatly hampered because of a lack of sufficient water supplies. Business concerns could also be restricted to the area of choice because of inadequate water available for light industry and commercial endeavors.

Senator Doolittle
May 6, 1987
Page 4

VIII. The District has no definitive solution to provide additional water supplies to the Lower Sacramento Valley region, as the District has no excess water of its own; the water supplies that are created for Nevada Irrigation District are used for our own area (area of origin) with no export being available.

As a general comment, there is the possibility of additional storage on streams and rivers above Sacramento that, if constructed, could provide additional water for the mentioned region.

The District thanks you for the opportunity to make this submission to the Select Committee, and be assured that we are vitally concerned with the water future of California and will assist by means within our ability and expertise.

Sincerely,

NEVADA IRRIGATION DISTRICT


James P. Chatigny
General Manager

JPC:gcb



COUNTY OF SACRAMENTO

DEPARTMENT OF PUBLIC WORKS

827 - SEVENTH STREET • ROOM 301 • PHONE 440-6851
SACRAMENTO, CALIFORNIA 95814

WATER RESOURCES DIVISION . . . J. P. ALESSANDRI, Chief

May 5, 1987

Senator John T. Doolittle
California State Senate
State Capitol, Room 5082
Sacramento, CA 95814

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MAY 12 1987

Dear Senator Doolittle:

This is in response to your letter of April 19 requesting written testimony in regard to water supply needs of Sacramento County.

Questions 1 through 4 can, in large part, be answered by referring to Tables 1 through 9, attached. These tabulations describe the water demand and supply in ten year increments from the present through 2020 and cover primarily the water requirements from the American River for Placer, El Dorado and Sacramento Counties.

In further response to Question No. 4, both the San Juan Water District and City of Folsom are seeking additional water from the Bureau of Reclamation from Folsom Reservoir, and the water shortage in that area is being covered in the press.

San Juan Suburban Water District currently has 44,200 acre feet of water entitlements (33,000 of water rights, 11,200 Bureau contract). The District's original entitlement from the contract with the Bureau of Reclamation provided 40,000 acre feet of water, but because of a lack of growth in the area in the mid 1960's and the severe reduction in employment by Aerojet General Corporation, the major employer of people living in the area, the District relinquished 28,800 acre feet of their contract. The District in recent years has been negotiating a water supply contract with the Bureau of Reclamation to regain that amount of water. The District is planning to obtain an additional supply of some 76,000 acre feet to serve areas outside its present wholesale area.

The City of Folsom has presently an entitlement of 22,000 acre feet of water and requires an additional supply of 25,000 acre feet to accommodate planned growth within the City.

In addition, as shown in the attached tabulation, the Sacramento County Water Agency will require some 243,000 acre feet of new surface water supply in the

Senator John T. Doolittle
May 5, 1987
Page Two

southern and eastern portion of Sacramento County, a large portion from the Folsom South Canal. We anticipate that the remainder of the supply for municipal and industrial purposes could be treated at the City of Sacramento's American River Treatment Plant and wheeled through the City system to serve areas outside the City's service area.

In response to Question No. 5 Sacramento County is working with the water districts and City of Folsom in the northeast part of Sacramento County to develop a plan to forestall curtailment of development in that area. The decision of the Bureau of Reclamation to provide up to 7,000 acre feet of surface water supply for 1987 will give us time to develop a solution. If a solution is not developed, it may be necessary for the districts to refuse to issue "will serve" letters or approve new connections for new development. An alternative may be to allow development to continue but to restrict or ration water supplies for outdoor use.

In response to Question No. 6, under State watershed or area of origin statutes Sacramento County along with Placer or El Dorado Counties have first priority to use of water stored in Folsom Reservoir, and it is our desire to obtain our share of that water through contracts with the Bureau of Reclamation. Auburn Reservoir has been supported over the decades by the Sacramento County Board of Supervisors in recognition of its benefit to Sacramento County for flood control, water supply and additional water to provide adequate flows in the Lower American River. Auburn Dam is a key element in firming up water supply on the American River system. In connection with that supply a program of conjunctive use needs to be implemented within the American River service area where groundwater supplies are available to support such a program.

I hope the information I have supplied will be helpful to your committee, and I look forward to participating in your hearing on May 15th.

Very truly yours,



J. P. Alessandri, Chief
Water Resources Division

JPA:ayf
404.09
wrd/270

TABLE 1 †

WATER DEMAND PROJECTIONS

The estimated demands that the USBR and DWR agreed to use in their respective ongoing operation studies for year 2000 and year 2020 conditions are:

<u>Entities or Areas</u>	<u>Year 2000</u> (1,000's of acre-feet)	<u>Year 2020</u> (1,000's of acre-feet)
Placer County	107	150
El Dorado County	15	55
American River	(8)	(30)
Cosumnes River	(7)	(25)
Subtotal	122	205
North Fork and Natomas Ditches	69	69
*City of Folsom	14	22
*Northridge	5	10
San Juan Suburban (contract)	11	11
*San Juan Suburban	20	29
Roseville	26	32
*Additional North Area	20	43
Carmichael	15	15
Riparian	41	41
City of Sacramento	100	170
Subtotal	321	442
 <u>Folsom South Service Area</u>		
Sacramento County	182	218
San Joaquin County	75	225 ^a
EBMUD	20	75 ^b
SMUD	20	40 ^b
Canal losses	15	32
Subtotal	312	590
 Total American River Demands	 755	 1,237

() Non Additive.

* Proposed contracts or need.

a The total San Joaquin County water requirement is 270 TAF, of which 45 TAF is projected to be supplied from New Melones Reservoir to the Central San Joaquin Water Conservation District.

b Present USBR contracts include use of 150 TAF for EBMUD and 75 TAF for SMUD.

† This is an excerpt from the memorandum of understanding between USBR and DWR dated May 30, 1984.

TABLE 2
PLACER COUNTY
WATER DEMAND PROJECTIONS

(acre feet per year)

<u>Present</u>	<u>1990</u>	<u>2000</u>	<u>2010*</u>	<u>2020</u>
137,000	142,000	202,000	349,000	349,000

* Water demands are estimated to exceed presently available water sources

TABLE 3
PLACER COUNTY

SUMMATION OF WATER RIGHTS

	<u>Present</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>
American	25,000	30,000	90,000	237,000	237,000
Other Sources	112,000	112,000	112,000	112,000	**

** 1968 PG&E contract expires 2013 and must be renegotiated.

TABLE 4

EL DORADO COUNTY

Water Demand Form
Updated 4-85

Water Demand Projections
Acre Feet per Year

	Present		1990		2000		2010		2020	
	American River Drainage	Other Sources	American River Drainage	Other Sources	American River Drainage	Other Sources	American River Drainage	Other Sources	American River Drainage	Other Sources
Sub Area I	Georgetown Divide									
M & I	1100	0	2100	0	2700	0	3300	0	4000	0
Ag	7000	0	8000	0	9900	0	12000	0	15000	0
Total	8100	0	10100	0	12600	0	15300	0	19000	0
Sub Area II	El Dorado Irrigation District ("SOFAR Area")									
M & I	3600	12700	6000	14700	15000	15000	24100	15000	22500	25500
Ag	8400	6600	9000	8500	14000	8500	19000	8500	22500	10000
Total	12000	19300	15000	23200	29000	23500	43100	23500	45000	35500
Sub Area III	South Tahoe									
M & I	0	5800	0	6600	0	8300	0	8300	0	8300
Ag	0	0	0	0	0	0	0	0	0	0
Total	0	5800	0	6600	0	8300	0	8300	0	8300
Total M & I	4700	18500	8100	21300	17700	23300	27400	23300	26500	33800
Total Ag	15400	6600	17000	8500	23900	8500	31000	8500	37500	10000
TOTAL	20100	25100	25100	29800	41600	31800	58400	31800	64000	43800

TABLE 5

EL DORADO COUNTY SUMMARY OF WATER RIGHTS AMERICAN RIVER WATER

Purveyor	Contracting/ Permitting Agency	Contract Number	Application Number	Permit Number	Other
G.D.P.U.D.	SWRCB		5644A	11827	
			12421	11305	
			16212	11304	
			16688	11306	
					Assumed entitlement at Onion Creek: pre-1914 diversion
E.I.D. (Including SOFAR)	USBR	14-06-200-1375A			
	SWRCB	14-06-200-7312			
			1692	2184	
			6138	3711	
			11675	6999	
			15140	9467	
			5645C	18990	
			7938A	18991	
			18063A	18992	
			18065A	18993	
	18067A	18994			
	18069A	18995			
		26376	18996		
	P.G. & E.				Agreement
Lotus/Coloma Water Company: Managed by E.I.D.					Assumed entitlement pre-1914 diversion

TABLE 6
- SACRAMENTO COUNTY

SUMMARY OF PROJECTED SURFACE AND GROUNDWATER USES IN THE
AREA WITHIN THE COUNTY TO BE SERVED FROM THE AMERICAN RIVER

	<u>Groundwater</u>	<u>Surface Water</u>
1985	526,000	210,800
1990	399,900	447,300
2000	406,100	603,900
2010	415,300	668,500
2020	428,800	717,000

TABLE 7

SACRAMENTO COUNTY
WATER PLANNING STUDIES

1974	DWR Bulletin 118-3 Evaluation of Groundwater Resources- Sacramento County
1975	DWR Bulletin 104-11 Meeting Water Demands in Sacramento County
1976	CH ² M Hill-Sacramento County-wide Water Plan
1978	Sacramento County Water Agency - Policy Report Sacramento County Water Plan
1984	Clendenen & Associates - San Juan/Multidistrict Water Plan
1985	Metcalf and Eddy - Sacramento Area Water Management Plan

TABLE 8 A
SACRAMENTO COUNTY
WATER DEMAND PROJECTIONS
(ACRE FEET PER YEAR)

AGENCY	1985		1990		2000		2010		2020		
	Surface	Ground	Surface	Ground	Surface	Ground	Surface	Ground	Surface	Ground	
ARCADE WATER DISTRICT	2081	24,311*	2100	24,389	21,000	5,600	21,000	5,600	21,000	5,600	4.10
	26,393		26,489		26,600		26,600		26,600		
ARDEN-CORDOVA	1,293	9,882*	3,500	10,000	10,000	6,000	10,000	6,200	10,000	6,200	4
	11,175		13,500		16,000		16,200		16,200		
ARVIN WATER COMPANY	0	3,113*	0	3,200	3,200	0	3,200	0	3,200	0	18.10
	3,113		3,200		3,200		3,200		3,200		
CARMICHAEL WATER DISTRICT	10,727	4,464*	10,727	4,850	11,507	4,850	12,070	5,067	12,070	5,830	1.4
	15,192		15,578		16,357		17,137		17,900		
CITIZENS UTILITIES DISTRICTS (Part) Lincoln Oaks	0	13,509	0	17,576	23,666	0	24,000	5,756	24,000	11,841	1.10
	13,509		17,576		23,666		29,756		35,841		
Rosemont-Cordova	0	3,468	0	3,540	0	3,660	0	3,740	0	3,780	2.10
	3,468		3,540		3,660		3,740		3,780		
Arden Arcade	0	21,300	0	22,100	0	22,600	0	22,800	0	22,800	2.10
	21,300		22,100		22,600		22,800		22,800		
Florin Parkway	0	8,858	0	12,500	0	17,500	0	23,000	0	27,500	2.1
	8,858		12,500		17,500		23,000		27,500		
CITRUS HEIGHTS IRRIGATION DISTRICT:	21,458	491*	21,458	1,927	24,036	2,219	24,036	5,019	27,680	4,320	4
	21,949		23,385		26,255		29,055		32,000		
CITY OF FOLSOM	22,000	0	34,000	0	45,000	0	45,000	0	45,000	0	5
	22,000		34,000		45,000		45,000		45,000		
CITY OF SACRAMENTO	88,600	17,000*	136,000	43,000	180,000	99,000	219,000	91,000	237,000	91,000	4.19
	105,600		179,000		279,000		310,000		328,000		
EI. RANCHITO WATER COMPANY	0	40*	0	45	0	50	0	50	0	50	5.10
	40		45		50		50		50		

(66)

TABLE B B
SACRAMENTO COUNTY
WATER DEMAND PROJECTIONS (CON'T)

(100)

	1985		1990		2000		2010		2020		
	Surface	Ground	Surface	Ground	Surface	Ground	Surface	Ground	Surface	Ground	
FAIR OAKS WATER DISTRICT	16,183	157*	17,127	173	19,305	195	20,790	210	21,530	220	1,3,6
	16,340		17,300		19,500		21,000		21,750		
FRUITRIDGE VISTA WATER COMPANY	0	4,393*	0	4,400	0	4,400	0	4,440	0	4,400	5,10
	4,393		4,400		4,400		4,400		4,400		
DEL PÁSO MANOR WATER DISTRICT	0	1,615*	0	1,600	0	1,600	0	1,600	0	1,600	5,10
	1,615		1,600		1,600		1,600		1,600		
FLK GROVE WATER WORKS	0	3,207*	0	3,500	0	4,300	0	4,800	0	5,050	2,0,10
	3,207		3,500		4,300		4,800		5,050		
FLORIN COUNTY WATER DISTRICT	0	1,814*	0	1,920	0	2,038	0	2,038	0	2,038	5,2,10
	1,814		1,920		2,038		2,038		2,038		
GROVE WATER COMPANY	0	211	0	244	0	305	0	345	0	375	2.
	211		0		305		345		375		
NORTHRIDGE WATER DISTRICT	0	14,198*	0	14,645	11,955	3,580	11,955	4,470	11,955	5,372	1,10
	14,198		14,645		15,535		16,425		17,327		
ORANGEVALE WATER COMPANY	5,800	0	6,500	0	7,700	0	8,100	0	8,500	0	2,5
	5,800		6,500		7,700		8,100		8,500		
SAN JUAN SUBURBAN WATER DISTRICT	7,650	2000	9,864	2,000	11,003	2,000	11,965	3,000	13,500	4,000	1,5
	9,650		11,864		13,003		14,964		17,500		
RIO LINDA WATER DISTRICT	0	2,274*	0	4,224	3,900	4,224	7,800	4,224	10,980	4,939	1,10
	2,274		4,224		8,124		12,024		15,919		
TOKAY PARK WATER COMPANY	0	149*	0	150	0	150	0	150	0	150	5,10
	149		150		150		150		150		
COUNTY OF SACRAMENTO	0	5,191*	0	5,500	0	6,000	0	6,000	0	6,000	4,10
	5,191		5,500		6,000		6,000		6,000		
McCLELLAN AFB	0	3,800*	0	3,800	2,600	1,200	2,600	1,200	2,600	1,200	1,10
	3,800		3,800		3,800		3,800		3,800		
MATHIER AFB	0	3,581*	0	3,581	0	3,581	0	3,581	0	3,581	4
	3,800		3,581		3,581		3,581		3,581		
SCWA	10,000	377,000	181,000	211,000	204,000	211,000	222,000	211,000	243,000	211,000	4,11
	387,000		392,000		415,000		433,000		454,000		
SMUD	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	4
	25,000		25,000		25,000		25,000		25,000		
TOTALS	210,792	526,026	447,276	399,864	603,872	406,052	668,516	415,290	717,015	428,846	
	736,818		847,140		1,009,924		1,083,806		1,080,080		

TABLE Bc
SACRAMENTO COUNTY
FOOTNOTES TO WATER DEMAND PROJECTIONS

*Present usage values were obtained from County records, Water Resources Division.

1. Extrapolated from the Multi-district Service Area Report, Clendenen, 1984, pages III-8, III-17, and assuming the Multi-district facilities will be completed between 1990 and 2000.
- 1a A 3300 AC. FT. value was used instead of the 3000 AC. Ft. Clendenen value due to higher-than-predicted present demands.
2. Water use projections constructed from SACOG population projections.
3. Use groundwater/surface water ratio from 1985 demands for projected ratios.
4. Values obtained from company/district report.
5. Values obtained from a company representative by telephone survey.
6. Values larger than Clendenen report due to an expected service annexation into Fair Oaks Irrigation District.
7. Includes both Sacramento and American River water (American River water contributes between 60% to 80% of the surface supply).
8. Annexation of property into district is probable so these values are subject to significant changes.
9. Assumes that the City will serve all the existing place-of-use areas (Figure 9-4N, 45, 3, 5, & 8)
10. Area could eventually be supplied by the City of Sacramento (American River), Metcalf & Eddy Sacramento Area Water Resources Management Plan, 1985.
11. SCWA users include, but not limited to, Clay Water District, Omochume-Hartnell Water District, and Galt Irrigation District.

TABLE 9
SACRAMENTO COUNTY
MAJOR WATER ENTITLEMENTS

<u>WATER RIGHTS</u>	<u>SOURCE</u>	<u>A F A</u>	
		<u>CURRENT</u>	<u>EXPECTED</u>
City of Sacramento	A.R.-Sac.R.	326,800	326,800 ¹
San Juan Suburban Water District/ Multi-district	Folsom	69,200	127,800 ²
Carmichael	A.R.	23,200	23,200 ³
Arden-Cordova	A.R.	10,000	10,000
City of Folsom	A.R.	22,000	45,000
SMUD	A.R.	25,000	25,000
Folsom South Service Area	A.R.	-0-	218,000
	TOTAL	476,200	775,800

¹ Includes 26,000 AFA contracted to Arcade Water District, and 2,460 AFA to Del Paso Manor.

² From San Juan Multi-District Report, Clendenen, 1984

³ 50 cfs water right maximized = 23,200 AFA

CITRUS HEIGHTS

IRRIGATION DISTRICT

BOARD OF DIRECTORS

LAMOINE F. FIELD
RUSSELL K. HEASLEY
HENRY L. INGRAM

6230 SYLVAN ROAD • P.O. BOX 286
CITRUS HEIGHTS, CALIFORNIA 95811
PHONE (916) 725-6873

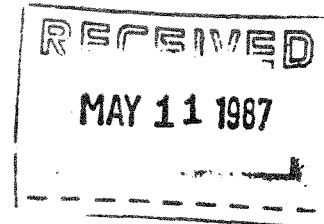
ROBERT A. CHURCHILL
GENERAL MANAGER/SECRETARY

A. P. FREEMAN
ASSESSOR/COLLECTOR

BARBARA A. GIBSON
TREASURER

May 8, 1987

Senator John T. Doolittle, Chairman
Senate Select Committee on the Sierra/
Cascade/Klamath Watershed
Room 5082, State Capitol
Sacramento, CA 95814



Dear Senator Doolittle:

In response to your April 15, 1987 letter I am pleased to offer the following written testimony:

General - Citrus Heights Irrigation District is a Special District providing water for domestic, irrigation, commercial, and fire protection uses in portions of northeast Sacramento County and south Placer County. In 1986 the District served a population of 53,349 through approximately 16,950 connections.

Item 1 - The District's 1986 consumer demand was 20,567 acre-feet. Our available supply of surface water is purchased from San Juan Suburban Water District which has current rights to 44,200 acre-feet of water from the American River and Bureau of Reclamation at Folsom Dam. These rights must also supply Fair Oaks Water District, Orangevale Mutual Water Company, a portion of the City of Folsom, and San Juan Suburban Water District's retail service area in Sacramento County.

Citrus Heights Irrigation District also operates seven groundwater wells which have supplied as much as 1,905 acre-feet of water annually.

Item 2 - Projected water use five and ten years in the future are estimated at 24,200 acre-feet in 1992 and 25,950 acre-feet in 1997. Our available supply without a new contract for more water from the Bureau of Reclamation or new groundwater wells will remain the same as in Item 1 above.

Senator Doolittle
May 8, 1987
Page two

Item 3 - The San Juan Suburban Water District service area in Sacramento County, of which Citrus Heights Irrigation District is a part, has statutory rights to 33,000 acre-feet of American River water and a contract with the Bureau of Reclamation for an additional 11,200 acre feet of surface water. San Juan's current forty year contract with the Bureau expires in 1994, but includes provisions for renewal.

San Juan is actively persuing a contract with the Bureau of Reclamation for an additional 28,800 acre-feet of American River water.

Citrus Heights Irrigation District has a current agreement with San Juan Suburban Water District to purchase a minimum of 12,000 acre-feet of surface water annually. This agreement has no expiration date.

Item 4 - The District is currently experiencing a shortage of water due to the San Juan Suburban Water District allotment from Folsom Dam being exceeded by approximately five percent in 1986. Current projections for 1987 show this excess to be near twenty percent due to the lack of rainfall and dry weather conditions.

Environmental impacts resulting from this surface water shortage include:

- additional groundwater pumping required to offset the surface water shortage will result in further depletion of the underground water basin.

Economic impacts resulting from the surface water shortage include:

- increased electrical use and resulting charges due to additional pump operation.
- increased labor costs due to employment of personell to patrol for water waste violations.
- increased incremental surface water purchase costs for use of emergency supplies beyond contract amount.

Social impacts resulting from this surface water shortage include:

- implementation of a Water Conservation Ordinance restricting time of month and time of day water use.

Senator Doolittle
May 8, 1987
Page three

Item 5 - Solutions for providing additional water for the Lower Sacramento Valley region in general and Citrus Heights Irrigation District in particular, in terms of decreasing priority include:

1. Construction of Auburn Dam to provide for additional storage of surface water for municipal and industrial uses.
2. Legislation to protect water interests in the "area of origin" prior to allowing water to be contracted to other areas of the State.
3. Changes in points of diversion for water contracted outside of the Lower Sacramento Valley region to allow for optimum use of surface water within the region.
4. Construction of additional groundwater wells to supplement the shortage of surface water.

Sincerely,

CITRUS HEIGHTS IRRIGATION DISTRICT

Robert A. Churchill

Robert A. Churchill
General Manager

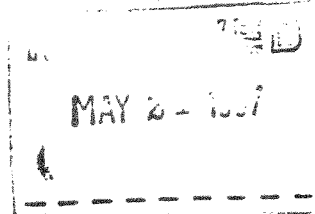
ORANGEVALE MUTUAL WATER COMPANY

POST OFFICE BOX 195
ORANGEVALE, CALIFORNIA 95662
PHONE 888-1883

May 12, 1987

MAY 13 1987

Senator John T. Doolittle, Chr.
Committee on the Sierra Watershed
State Capitol, Room 5082
Sacramento, California 95814



Dear Senator Doolittle;

The Orangevale Mutual Water Company has always contracted and paid for more water than was actually used in our service area, in an effort to secure water for future use when needed. This Company was formed by farmers who knew the value and necessity of water in the 1800's. We are the oldest and largest Mutual Water Company in California. We still have some full time farming in our area and many families with vegetable gardens and 4-H animals. Our home owners still know the value of water and are very conservation minded. Requested written testimony is as follows:

1. Last year we used 5,527 acre feet of water and paid for 7,500 acre feet.
2. We anticipate that the extra 2,000 acre feet will be adequate for the next five to ten years, based on the present projections.
3. With our sister cities in a real crisis regarding available water we realize that something must be done to assure this area adequate water for the future before considering recreational needs and the needs of areas far away from the source, (that being Folsom Dam and the American River). Without adequate water for San Juan our fire flows could be effected and our rural area zoning changed due to the surrounding areas inability to serve any further building.
4. Conservation for the entire state. (At present we are being pressured in this area to conserve but in the southern part of the state where they are on meters, there is little evidence. In Palm Springs they use twice the national average amount of water while on meters, so they are not the answer).

The Auburn Dam is the second most important solution but we must also have a JOINT POLITICAL AGREEMENT establishing the minimum flow required in the American River based on the needs of families around the water's source before recreational needs or the needs of those far away.

We appreciate your concern and anything that you or your committee can to acquire more water for this area will be most helpful.

Very truly yours,

Ruth C. Conners, Mgr.
(106)

CITY OF FOLSOM

50 Natoma Street
Folsom, California 95630

(916) 355-7200



RECEIVED

MAY 12 1987

May 12, 1987

SENATE SELECT COMMITTEE ON
SIERRA/CASCADE/KLAMATH WATERSHED
Room 5082
State Capitol
Sacramento, CA 95814

Attention: SENATOR JOHN T. DOOLITTLE

Subject: PROJECTION OF THE LOWER SACRAMENTO VALLEY'S CONSUMPTIVE DEMAND UPON
WEST SLOPE SIERRA NEVADA WATERSHEDS

Dear Honorable Members of the Committee:

The following items are in response to your letter dated April 19, 1987 requesting information on the water supply and demand of the City of Folsom. The responses correlate to the questions in your request.

1. The available supply of water is from Folsom lake. The supply is from contract with the United States Bureau of Reclamation in the amount of 22,000 acre-feet. The City is currently using about 15,000 acre-feet.
2. The water requirement for the Folsom Water System include the City of Folsom municipal and industrial demands and several major customers, such as the Aerojet Corporation and the Nimbus Water System. The municipal and industrial demands include the existing City customers and the Folsom South Assessment District (FSAD).

The current demand for water in these areas is 15,000 acre-feet. Most of this area is currently undeveloped. This area will accommodate a heavy five to ten year growth rate. At ultimate buildout the water demands will be approximately 25,900 acre-feet.

The City recently annexed approximately 3000 acres. This area and 800 acres of industrial reserve do not have water to serve them. The City of Folsom has applied for an additional 25,000 acre-feet from the Bureau. These negotiations are "on hold" until the Bureau completes an Environmental Impact Statement. The draft EIS is expected to be complete in February 1988. The City has requested an additional 25,000 acre-feet to cover the City's sphere of influence. Total requested additional allotment from the Bureau is 50,000 acre-feet.

There is one area of the City served by the San Juan Suburban Water District (SJSWD). This is the area of the City north of the American River. Please contact the SJSWD for information regarding this area.

SENATE SELECT COMMITTEE ON
SIERRA/CASCADE/KLAMATH WATERSHED
May 12, 1987
Page 2

3. The area in the City north of the American River is served by the SJSWD. The remainder of the City is served by the City of Folsom. The City's current water entitlement is for 22,000 acre-feet per year, with a maximum diversion rate of 60 CFS (38.8 MGD). The City has begun negotiations with the Bureau for approximately 50,000 acre feet per year of additional supply.

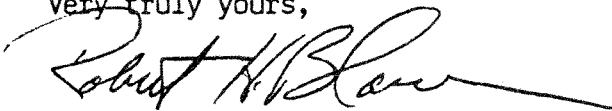
4. Please refer to number 3 above. The City of Folsom hopes to complete the negotiations with the Bureau as soon as possible. Currently there are applications for developments that would add approximately six to eight thousand dwelling units and a Community College in this area.

5. The consequence of not having enough water is that the City of Folsom cannot grow as it would like. The City needs the growth to strengthen its economic base. Without the water right there can be no development in the east annexation area unless specific conservation measures are undertaken. Without the development certain retail, commercial and industrial businesses will not locate in the City. Without the businesses, the economic base of the City cannot be substantially strengthened and of course it follows that the City cannot provide the services necessary to ensure the proper quality of life without the funds to support the service.

6. In my mind, the single most important factor in providing water to the lower Sacramento region is to provide more storage of the water from the available surface water supplies that we have. The only way I know of to do this, is to construct a dam and reservoir facility on the tributaries feeding Folsom reservoir. Construction of the Auburn Dam would seem the best available answer to solving water supply problems as well as providing flood control.

Some discussion has centered on the use of ground water as a source of water. I am opposed to the use of ground water as a consistent supply. As a conjunctive use (i.e. the use of ground water as a supplemental supply to surface waters in times of low runoff years) the use of ground water is totally appropriate. The use of ground water to supply the domestic and agriculture needs of our society is a shortsighted answer, and will have serious consequences on the long term stability of our area.

Very truly yours,



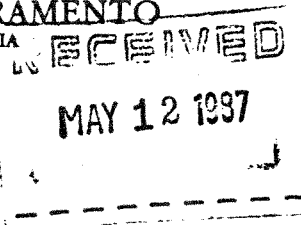
ROBERT BLASER
City Engineer

RB/mc



DEPARTMENT OF
PUBLIC WORKS
OFFICE OF THE DIRECTOR

CITY OF SACRAMENTO
CALIFORNIA



CITY HALL
ROOM 207
915 I STREET
SACRAMENTO, CA
95814-2673

916-449-5283

MELVIN H. JOHNSON
DIRECTOR
LESLIE M. FRINK
DEPUTY DIRECTOR
REGINALD YOUNG
DEPUTY DIRECTOR

May 11, 1987

Senator John T. Doolittle, Chairman
Select Committee on the Sierra/Cascade/Klamath Watershed
Room 5082, State Capitol
Sacramento, CA 95814

Dear Senator Doolittle:

This letter is in response to your letter of April 19, 1987, to Mr. Jim Sequeira, Water Division Manager, regarding "Projections of the Lower Sacramento Valley's Consumptive Demand upon West Slope Sierra Nevada Watersheds." Following are the answers to the specific questions posed in your letter.

1. Q. Please describe your residents' current demand and your available supply of water.
 - A. During the period July 1985 through June 1986, the City of Sacramento delivered a total of 106,082 acre feet of water to its customers. Of this total, 19,062 acre feet was from groundwater and 87,010 acre feet was from surface water. The surface water was diverted pursuant to City water rights on the American and Sacramento Rivers.
2. Q. Please provide the same type of information as in the above question for projections into the future of five (5) years and ten (10) years.
 - A. Our projections for water deliveries are approximately 130,000 acre feet in five years and 150,000 acre feet in ten years. We expect that the amount to be supplied from groundwater will remain relatively static and that our surface water diversions will be increased to meet the increased deliveries.
3. Q. What water district(s) serve your area? What is the nature and status of your contract with the district(s)?
 - A. The City is not served by a water district.

Senator John T. Doolittle, Chairman

May 11, 1987

Page 2

4. Q. What water rights - statutory or contractual - do you currently enjoy? If those rights will change during the next 20 years, when and how?
- A. The City currently has water rights on the Sacramento and American Rivers of 133,000 acre feet per year. These rights will increase to 214,000 acre feet per year in 20 years.
5. Q. What environmental, economic, and social consequences are you experiencing or expecting to experience from any present or anticipated shortage of water?
- A. We do not anticipate a shortage of water other than in extreme dry years. We expect to use groundwater and water conservation to prevent undesirable consequences of such shortages.
6. Q. What possible solutions do you offer to providing additional water to the Lower Sacramento Valley region?
- A. We have not conducted any studies on this matter and have no suggestions to offer. We expect Sacramento County to implement a groundwater conjunctive use program that will assist all local water supply agencies during extreme dry years.

Thank you for this opportunity to assist your Committee. I trust that this information will be useful.

Sincerely,



Melvin H. Johnson
Director of Public Works

MHJ:slb

cc: Walter J. Slipe, City Manager



SOUTHERN CALIFORNIA WATER COMPANY

3625 WEST SIXTH STREET • LOS ANGELES, CALIFORNIA 90076-0893 • TELEPHONE (213) 251-3600

May 6, 1987

Senator John T. Doolittle
Senate Select Committee on the
Sierra/Cascade/Klamath Watershed
Room 5082
State Capitol
Sacramento, California 95814

RECEIVED

MAY 12 1987

Dear Senator Doolittle:

This letter is in response to your letter of April 15, 1987 to Mr. Don Saddoris, Northern Division Manager of Arden Cordova Water Service, requesting testimony on "Projections of the Lower Sacramento Valley's Consumptive Demand upon West Slope Sierra Nevada Watersheds."

Arden-Cordova Water Service provides water to the unincorporated communities of Arden and Rancho Cordova in Sacramento County. A map of these service areas is enclosed. It is a wholly owned unit of Southern California Water Company.

The following information refers to the five points you requested testimony on.

1. In 1986 demand in the Cordova System was 10,275 acre feet. Demand in the Arden System was 1427 acre feet. The Arden System is supplied by eight wells with a combined capacity of about 4700 gpm. The Cordova System is supplied by 17 wells with a combined capacity of about 10,500 gpm and by the Coloma Water Treatment Plant which has a present capacity of 3250 gpm.
2. Estimated demands in 1991 and 1996 are as follows:

<u>System</u>	<u>1991</u>	<u>1996</u>
Arden	1450 Ac. Ft	1450 Ac. Ft
<u>Cordova</u>	<u>13,250</u> Ac. Ft	<u>16,200</u> Ac. Ft
Total	14,700 Ac. Ft	17,650 Ac. Ft

The increased demand in the Cordova System will be met by drilling additional wells and by enlarging the Coloma Water Treatment Plant.

May 6, 1987

3. As successor to the Natomas Water Company, Southern California Water Company has water rights of 10,000 acre feet per year from the Folsom South Canal for use in the Cordova System. We do not expect these rights to change during the next 20 years.
4. We believe that our surface water rights and well production are adequate to meet the needs of our service areas at full build out. We do not expect to experience any environmental, economic, or social consequences due to a shortage of water.
5. Since we do not anticipate any water shortage in this district, we have not done any studies on possible sources of additional water for the Lower Sacramento Valley

Very truly yours,

SOUTHERN CALIFORNIA WATER COMPANY



William McDonald
Chief Engineer

WD/cyp

L100/25a

FLORIN COUNTY WATER DISTRICT

7090 McCOMBER ST. • P.O. Box 28177

SACRAMENTO, CALIFORNIA 95828

TELEPHONE 383-0808

May 1, 1987

MAY 5 1987

John T. Doolittle
Senate Select Committee
Room 5082
State Capitol
Sacramento, Calif. 95814

RE: SIERRA/CASCADE/KLAMATH WATERSHED

Dear Sir:

Florin County Water District is a small Special District supplying water service to approximately 2.25 square miles in the old town of Florin area. Our water needs are increasing since we are experiencing rapid growth in the south-east area. Three new wells were added to the system last year. The 1986 calendar year showed record usage of 662.6 million gallons, as compared to 594.6 million gallons for 1985. The major cause for this increase was the fact that a commercial laundry was built and began operations during this time period.

Unless there is a major revision in the recent Sphere of Influence Study prepared by the County of Sacramento, our boundaries probably will remain fairly static. We currently serve about 3,000 connections and project that when all vacant land is fully developed our connection count could approach 3,500 plus. At the present rate of consumption, our demand would increase to about 773 million gallons per year or about 2,400 acre feet per year.

Our basic concern is the lowering water table/ground water overdraft and the economic impact 20 years in the future. It is our understanding that our district lies within the American River water rights area, and that the County of Sacramento is currently in negotiations with the City of Sacramento for the purchase of treated water to serve the Vinyard-South area. We have requested County Water Resources Division (Jim McCormack) to include our water needs in any long term negotiated contract.

Enclosed is a copy of a letter we sent to the City of Sacramento in March of 1985 Re: Metropolitan Water Plan.

FLORIN COUNTY WATER DISTRICT

7090 McCOMBER ST. • P.O. Box 28177

SACRAMENTO, CALIFORNIA 95828

TELEPHONE 383-0808

Page 2

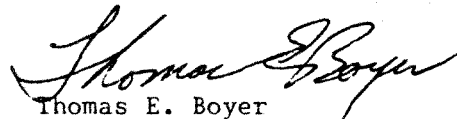
The solution to our problems are fairly simple and could be resolved quickly since our water line parallels the City's 30 inch transmission line at the Florin Reservoir on Power Inn Rd. We currently have a cross tie with the City of Sacramento for emergency use only.

Practical solutions for providing water to the Lower Sacramento Valley region have been offered in the past. As quickly as they are presented, warring factions institute litigation which is then tied up in the courts for years - and so the overdraft problem continues and gets worse.

The fate of the Orville Dam project needs to be addressed once and for all.

Sincerely,

FLORIN COUNTY WATER DISTRICT



Thomas E. Boyer
General Manager

TEB/bm

Encl: Cpy Metro Wtr Plan ltr

FLORIN COUNTY WATER DISTRICT

7090 McCOMBER ST. • P.O. BOX 28177

SACRAMENTO, CALIFORNIA 95828

TELEPHONE 383-0808

March 19, 1985

City of Sacramento
Division of Water & Sewer
927 - 10th Street
Sacramento, Ca 95814
Attn: Larry Comarsh
Manager

RE: METROPOLITAN WATER PLAN - METCALF & EDDY STUDY

Dear Sir:

On February 15, 1985, Olivia Chen of Metcalf & Eddy, presented an overview of the Metropolitan Water Plan to the members of the Sacramento Area Water Works Association.

From information gleaned at this presentation, each entity, whether county, mutual, private, or special district, would be required to negotiate a contract with the City of Sacramento for the purchase of bulk water if their location falls within the American River Water Rights area of the Metropolitan Water Plan.

The Board of Directors of the Florin County Water District would like to apprise you of their interest in participating in this Conjunctive Use Program in order to stabilize the Ground Water Overdraft Problem.

Sincerely,



Bob Fletcher
President

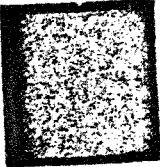
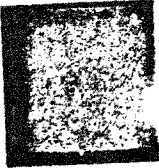
TEB/bm

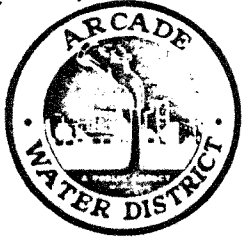


SENATOR JOHN T. DOOLITTLE
First District

22,000
users in the
Arcade domestic
water lines.

WADE C. TEASDALE
Field Coordinator
720 Sunrise Avenue, Ste. 110-D (916) 969-8232
Roseville, California 95678 (916) 783-8232





ARCADE WATER DISTRICT

2736 Auburn Blvd. P.O. Box 214317 — Sacramento, Calif. 95821

(916) 972-7171

N. B. (Dove) KELLER, President
HARRY A. BOROWSKI
LELAND C. CUTLER
KENNETH R. KEITH
LORRAINE PRESNELL

NANCY ROSS, Secretary
E. WALT LIBAL, General Manager
ROBERT W. JOHNSTON, Assistant General Manager

May 4, 1987

Senator John T. Doolittle
State Capitol, Room 5082
Sacramento, CA 95814

RE: Projections of the Lower Sacramento Valley's
Consumptive Demand Upon the West Slope
Sierra Nevada Watersheds

Dear Senator Doolittle:

This is in response to your letter of April 22 requesting written testimony on four specific points. Each point is summarized and answered as follows:

1. Current Demand and Available Supply - In 1981, Arcade Water District (AWD) received a report from Dewante & Stowell, Consulting Engineers, Sacramento, CA., in which they projected AWD's average annual demand as 8.350 billion gallons per year through the year 2005. Enclosed is Figure 4-1 from that report updated through 1986.

Available supply, or supplies, are currently the local groundwater sub-basins of Sacramento County and the American River. Additional supplies which may be obtained in the future are filtered surface waters from the City of Sacramento and/or the San Juan Suburban Water District. Both future suppliers divert American River water.

2. Five and Ten Year Projections - In addition to the response in 1. above, it should be noted that AWD's current annual groundwater/surface water ratio is 90/10. To stop steady lowering of the groundwater level, it has been calculated that a 60/40 ratio should be attained by AWD, and other local water agencies using groundwaters, by the year 2000.

In summary, AWD's demands on available water supplies will remain essentially the same, but a shift will occur to more surface water and less groundwater.

Senator John Doolittle
May 4, 1987
Page 2

3. Consequences of Shortages - AWD is not currently experiencing, nor do we expect to experience, shortages of water. AWD's surface water rights currently exist under entitlements of the City of Sacramento/U.S. Bureau of Reclamation contract and the appropriate permits therein as prorated to AWD. Higher costs of surface water, however, could require AWD water rate increases to meet higher costs of operation, capital plant and financing.

4. Possible Solutions - AWD has the necessary surface water rights as mentioned in 3. above. Electric power costs, however, have caused pumping costs to increase significantly, and bandaid solutions such as brown-outs, off-peak pumping, alternate sources of power and water metering have been suggested. In my opinion, solutions to AWD's long range water problems lie in dependable sources of reasonably priced electric power. Specifically, hydroelectric power, such as afforded by an Auburn Dam project as originally conceived, would be a preferred solution, while other solutions such as nuclear power, interstate and/or international interties warrant serious consideration.

Water quality is also a growing problem which should be called to your attention. To this point, contamination of underground basins in Sacramento County and the Sacramento River has already occurred to the extent that I am concerned that the real problems of the future may not be a shortage of water (Kesterson Reservoir is full of it) but instead a shortage of water fit for human consumption.

Good luck in your hearings.

Sincerely,



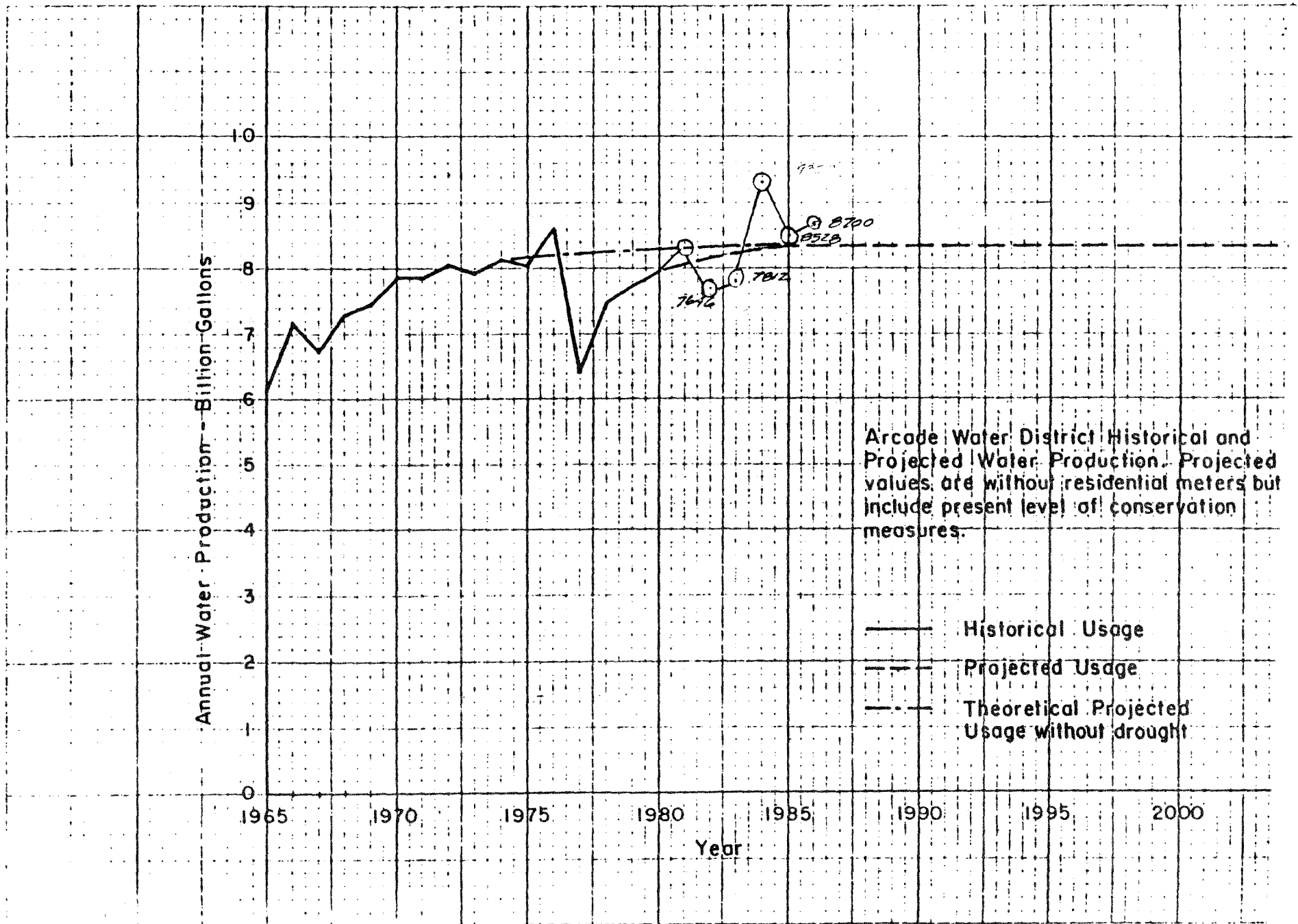
E. Walt Libal
General Manager

EWL/cc

Attachments

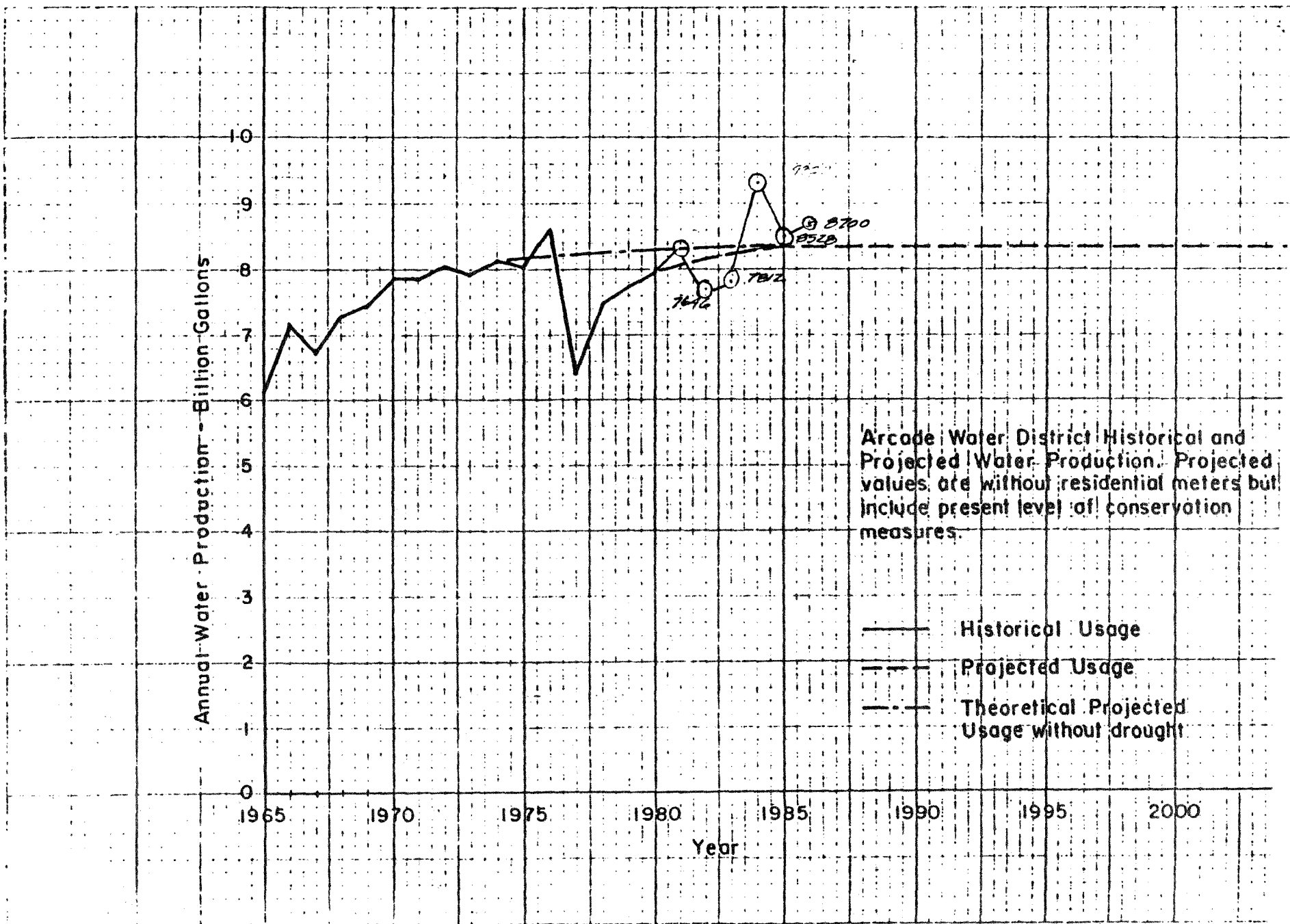
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Fig. 4-1 Annual Water Production



(120)

Fig. 4-1 Annual Water Production



(121)

Fig. 4-1 Annual Water Production

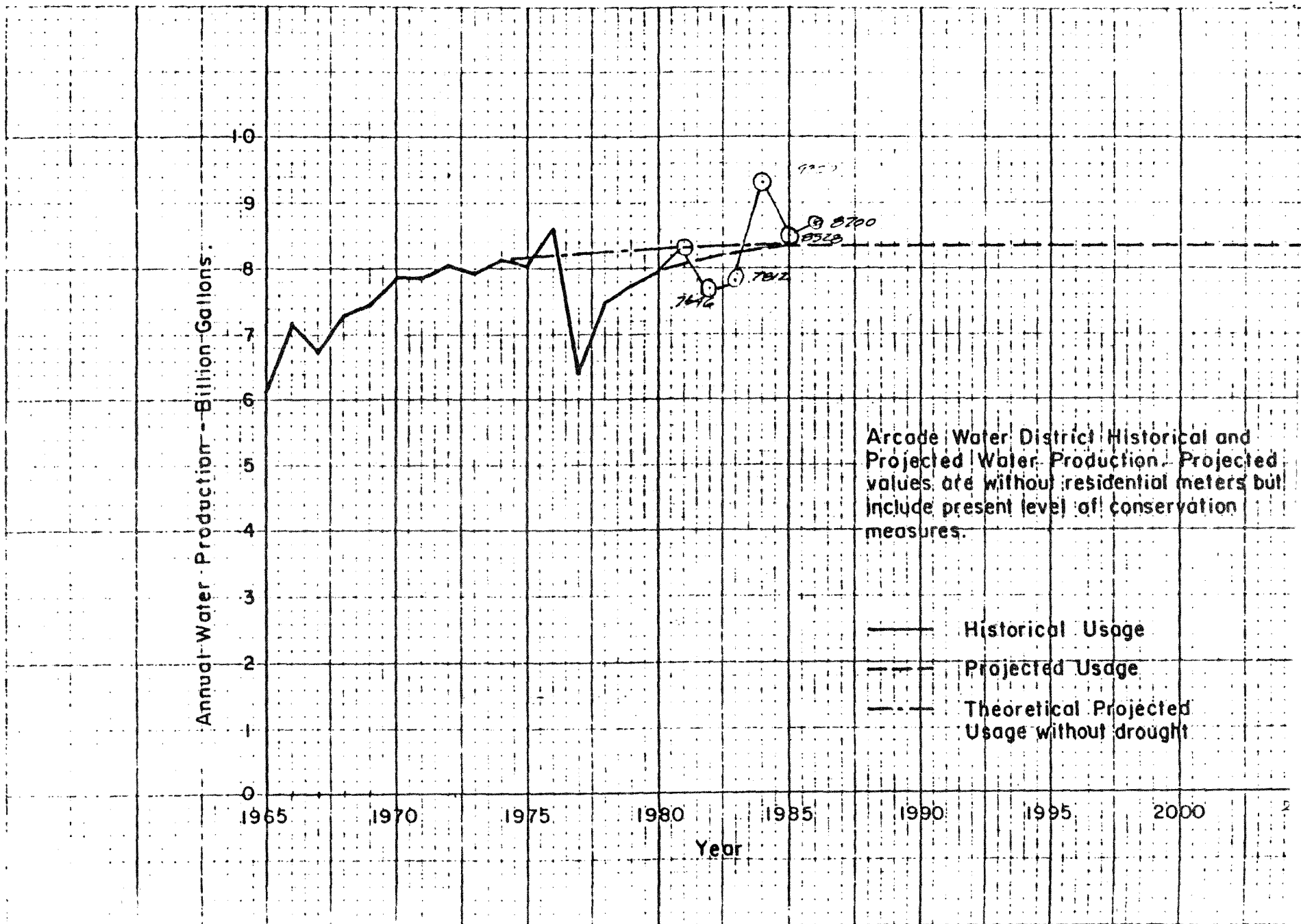
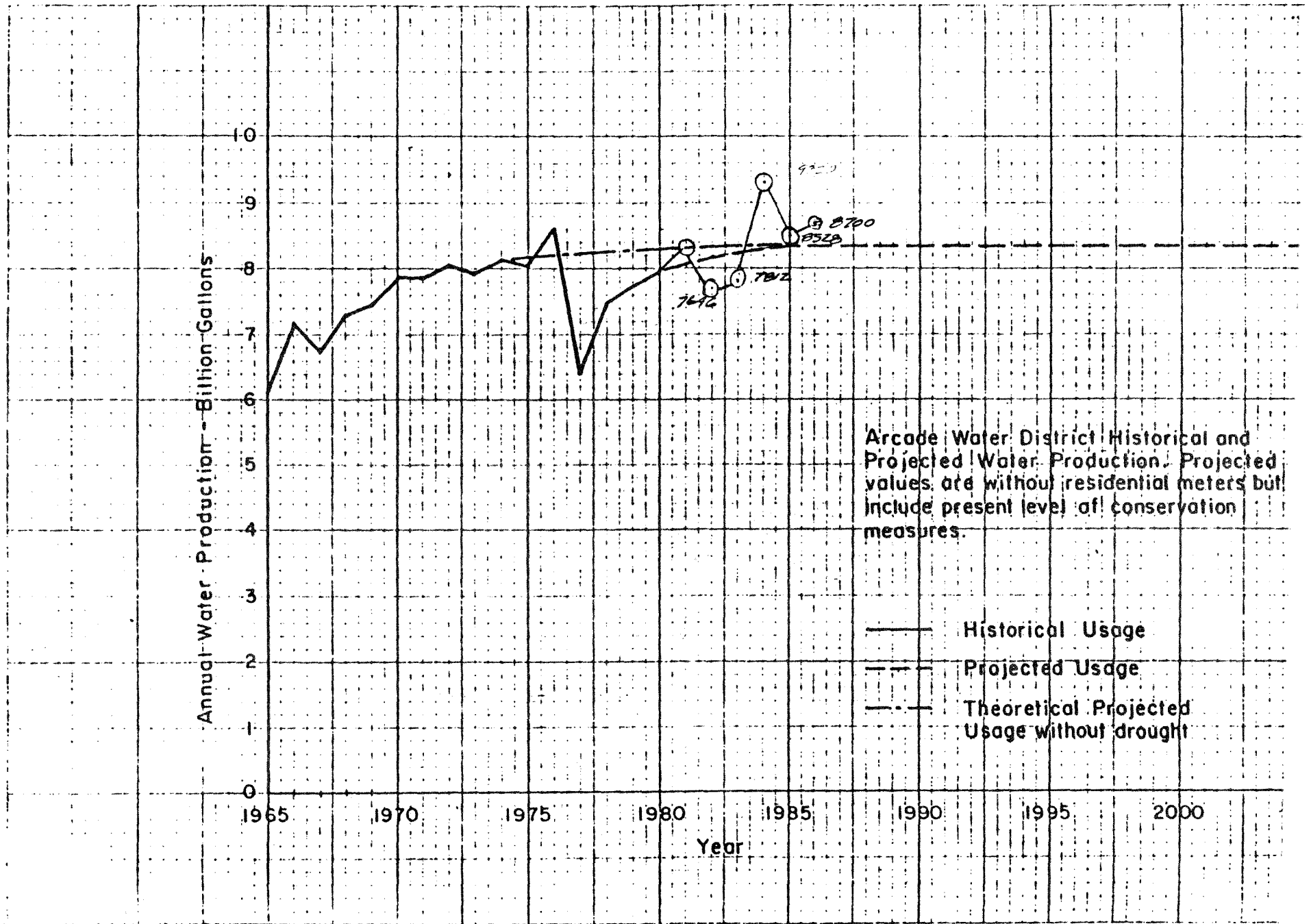


Fig. 4-1 Annual Water Production
(122)





5331 WALNUT AVENUE, P.O. BOX 41258, SACRAMENTO, CA 95841-0258, PHONE 332-4111

May 8, 1987

MAY 12 1987

The Senate
Room 5082
State Capitol
Sacramento, CA 95814

Subject: Written Testimony on, "Projection of the Lower Sacramento Valley's Consumptive Demand upon West Slope Sierra Nevada Watersheds".

Gentlemen:

In response to the above subject material, the following is written testimony to your questions as per your request:

1) Please describe your users' current demand and your available supply.

Currently the District averages more user demand in the summer months than in the winter and fall months. The demand basically has been 23 to 64 acre feet per day depending on the time of the year. Per a District test of its pumping system in 1986, it was determined by actual testing that approximately 120 acre feet of water per day can be pumped if all wells are functioning at the same time. Therefore, available at this time is about 120 acre feet per day, which can sufficiently handle the present demand of the District.

2) Please provide the same type information as in the above question for projections into the future of five (5) years and ten (10) years.

Based on future population for 5 years, it is estimated that approximately 30 to 70 acre feet per day demand would be required. Within 10 years the demand appears to be in the neighborhood of 35 to 80 acre feet per day. It is the District's long range plan to install a few new pumping stations in the next 5 to 10 years to handle possible demands and to help balance out the District. Currently the District's system can put out approximately 120 acre feet of water per day which,

theoretically, is enough to handle the demand. With the addition of other wells in the future this 120 acre feet per day will increase.

- 3) What water rights - statutory or contractual do you currently enjoy? If those rights will change during the next 20 years, when and how.

The District currently enjoys a contractual agreement of 3500 acre feet of water from the City of Sacramento in their contract with the Bureau. With the addition of 4,000 more customers from another water District purchased previously by Northridge Water and the proposed addition of other unimproved lands, the District has calculated that an increase of 16,500 acre feet of surface water would be required to handle the future demand. This increase also includes the possibility of serving domestic water to McClellan Air Force Base and its housing unit. The proposed time limit of these areas requesting service is forecasted to happen within the next 1 to 2 years for the military base and a portion of the unimproved lands with future build out within the next 4 to 5 years.

- 4) What environmental, economic, and social consequences are you experiencing or expecting to experience from any present or anticipated shortage of water?

Currently Northridge Water District is not experiencing any consequences for any shortage of water. Northridge currently keeps its customers informed with written articles in the District's monthly insert of the water situation including reminding customers to conserve throughout the year. Basically the District's customers have been very cooperative in the District's plan to save and conserve water.

Should the District experience water shortages in the future then possible environmental, economic and social consequences would most likely appear. If a shortage of water should appear environmental consequences would likely arise from social groups inquiring about the progress on what is being done to help curb this shortage or what Northridge is doing to help its customers get by this shortage. Economically, consequences would be expected as the District would be funding studies toward finding solutions of obtaining sufficient water to service and satisfy all the District's customers. The District would also face consequences as these costs could be borne by all users on the District. Socially, consequences would also appear as social opposition would undoubtedly oppose any decisions that were made or fight any plan that had to deal with funds and alternatives.

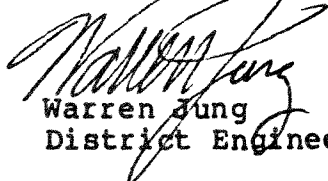
5) What possible solution do you offer to providing additional water to the Lower Sacramento Valley Region? If you offer more than one, please rank them in terms of decreasing priority.

The possible solution is twin fold. First the request of surface water that has been requested previously by other agencies, and is presently being reviewed by an environmental impact report, should be accelerated as fast as possible whereby granting and approving the request so that the planning of the distribution system for this water could be started. Next, the building of the proposed Auburn Dam should be placed in high gear. As a result of the rains of 1986 it was determined that in the 1987 year, additional releases of water would be required to insure that the problems of 1986 would not occur again. However, as stated in the news, the Dam is now vastly under its capacity and therefore has created a shortage for this time of year. If Auburn Dam had been built prior to 1985, then the additional rains which fell could have been contained thus providing sufficient water to curb its needs. At least the installation of the Dam would have provided an additional watershed area which would have decreased the flows that were released from Folsom Dam this year and thus cause far less damage in 1985.

In conclusion, the District hopes this written testimony is sufficient for your needs. Oral testimony will be provided when requested. The District does wish that 48 hours prior notice be given as to the date and time it will be required.

Should there be any more information required, please do not hesitate to call the undersigned at (916) 332-4111.

Very Truly Yours,
NORTHRIDGE WATER DISTRICT


Warren Jung
District Engineer

WJ/ch

CARMICHAEL WATER DISTRICT

BOARD OF DIRECTORS

LOUIS M. DUNCAN
PRESIDENT

CURTIS E. SPENCER
VICE PRESIDENT

RICHARD D. LAMBERT
DIRECTOR

7001 FAIR OAKS BOULEVARD
P.O. BOX 929, CARMICHAEL, CALIFORNIA 95609-0929
TELEPHONE (916) 483-2452

JAMES A. LIVINGSTON
ASSESSOR-COLLECTOR

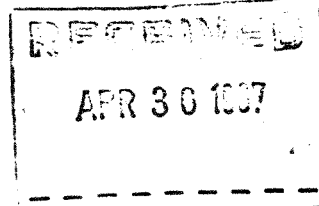
TED J. HAUPERT
TREASURER

ROGER L. MCGINTY
SECRETARY-MANAGER

ROYCE E. BOLTON
ASSISTANT MANAGER

APRIL 29, 1987

Senator John T. Doolittle
State Capitol - Room 5082
Sacramento, CA. 95814



RE: Senate Select Committee on the
Sierra/Cascade/Klamath Watershed

Dear Senator Doolittle:

In response to your letter dated April 22, 1987, I am submitting the following information:

- a. Master Water Plan - 1978 (update due 1988)
- b. Water Supply Study - 1985
- c. Urban Water Management Plan - 1985
- d. Re-cap Sheet - (current/projected demands, supply)

On paper, the District appears to have adequate supplies to meet current demands. The District, however, must continually stay aware of the fact that in order to keep abreast of the constant development and growth within the District, the available water supply must also constantly increase. Theoretically, the present available water supply to each District customer is approximately 1.2 gallons per minute. This is less than ideal!

The American River water rights that Carmichael Water District possesses are the essence of the available water supply for the District's 35,000 customers. The continued use of the American River, as a reliable source of supply, is the backbone of the Carmichael Water District. This source is essential!

Because of elevation differences within the District and also the "shotgun" development throughout the District, it has been determined that additional ground water wells must be developed in the northern part of the District to augment the surface water source from the American River. The additional water wells will also insure an adequate "backup" to the District's surface water source during an emergency such as the 1986 Flood. Presently, Carmichael Water District supplies approximately 70% surface water and 30% ground water to its customers. However, as the Flood of 1986 pointed out, this combination is not reliable. A 50% / 50% combination may be more realistic and offer the needed reliability while meeting the intent of the 1985 Sacramento County Water Agency Act.

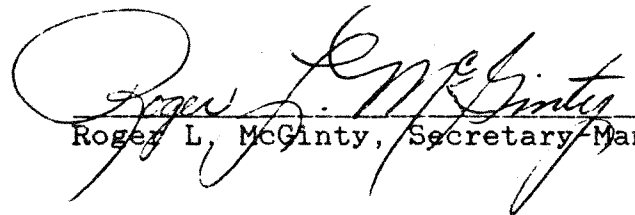
Senator John T. Doolittle
April 29, 1987
page 2

I have offered no answers or possible solutions to the problems in the Lower Sacramento Valley region. The Carmichael Water District is not numb to the water concerns for the Lower Sacramento Valley region, however, maintaining an adequate water supply for the people of Carmichael is presently our major concern. Having the American River staged at or above 1500 cfs flows and thereby making full use of the District's water rights to supply its customers is foremost in our minds.

The development of new water supply sources within the District; well-planned District growth and development by using sound water conservation measures as a guide; and possibly the Auburn Dam to insure constant American River flows for the District collectors and protection from flood damage as was experienced in 1986 are a few of the measures that should be followed to insure a continued water supply for the people living in the Carmichael area.

I sincerely hope that the information supplied is beneficial in your investigation. If you require further information or desire any clarification of the materials supplied, please contact me at the above address or call 483-2452 any weekday.

Very truly yours,


Roger L. McGinty, Secretary-Manager

CARMICHAEL WATER DISTRICT

WATER PRODUCTION - HISTORICAL DATA

I. CURRENT DEMANDS:

YEAR	PRODUCTION - GALLONS	YEAR	PRODUCTION - GALLONS
1970	4,493,591,000	1979	3,284,800,000
1971	4,327,509,000	1980	4,344,200,000
1972	4,865,220,000	1981	4,495,540,000
1973	4,581,852,000	1982	3,404,932,000
1974	4,530,440,000	1983	4,170,600,000
1975	4,010,640,000	1984	4,877,000,000
1976	4,350,000,000	1985	4,644,333,000
1977	3,815,500,000	1986	3,995,403,000
1978	3,370,820,000		

II. AVAILABLE SUPPLY:

Ground Water Wells = 13,248 gpm
Surface Water - AR = 16,585 gpm

29,833 gpm = 42.9 mgd

* Reservoir Boosters = 9,840 gpm = 14.2 mgd

39,673 gpm = 57.1 mgd (theoretical)

* (This additional supply is available from the two Reservoir Booster Systems. It is utilized primarily for "PEAKING" during high demand periods and augments production sources).

III. PROJECTED DEMANDS: (CWD Water Supply Study - August 1985)

Date	Avg. demand (mgd)	Max. day demand (mgd)	Peak hr. demand (mgd)
1985	14.0	28.0	45.0
1995	15.0	30.0	48.0
2005	15.5	31.0	50.0
2020	16.0	32.0	51.0

Placer County Water Agency

185 Ferguson Rd. • P. O. Box 6570 • Auburn, California 95604
[916] 823-4850

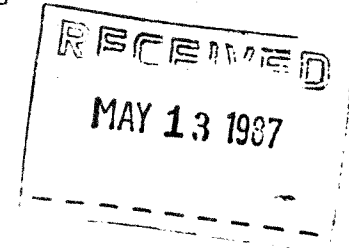


- A Public Agency -

BOARD OF DIRECTORS
R. G. Riolo • Walter Fickewirth
Edwin Koster • J. K. Norman
E. W. Horton
Ed Schnabel, General Manager

May 8, 1987
File No. 102-6/103-1E

The Honorable John T. Doolittle
Chairman, Senate Select Committee
on the Sierra/Cascade/Klamath Watershed
Room 5082, State Capitol
Sacramento, California 95814



Dear Senator Doolittle:

This letter is in response to your April 15 request for information for your forthcoming May 15, 1987, committee hearing examining "Projections of the Lower Sacramento Valley's Consumptive Demand upon West Slope Sierra Nevada Watersheds." The five points upon which you requested testimony and the response of the Placer County Water Agency are as follows:

1. Please describe your users' current demand and your available supply.

The Placer County Water Agency presently has available water from three principal sources. First, it has a contract with Pacific Gas and Electric Company to purchase up to 100,000 acre feet annually of water which comes from PGandE's facilities in the Yuba and Bear watersheds. Second, the Agency has state water right permits allowing it to divert up to 120,000 acre feet annually of American River water. This water can be diverted at Auburn and also out of

Folsom Reservoir. Third, the Agency has a contract with the United States Bureau of Reclamation to purchase up to 117,000 acre feet annually, with this water to be diverted out of the American River at Auburn into the Agency's tunnel for delivery into Western Placer County. The 100,000 acre feet of water from PGandE is presently available each year, but the Agency's rights to the permit and Bureau water are subject to a build up schedule which is set forth in the contract with the Bureau of Reclamation. This build up schedule is also set forth in a contract with PGandE governing the Agency's Middle Fork American River Project. This latter contract is different from and not to be confused with the 100,000 acre foot PGandE water supply contract mentioned above. These contracts provide for maximum diversions of the following amounts each year:

<u>Year</u>	<u>Amount</u>
1987-1991	30,000 A.F.
1992-1996	55,000 A.F.
1997-2001	90,000 A.F.
2002-2006	155,000 A.F.
2007and following	237,000 A.F.

The Agency's current use of water for meeting the needs of its customers in its various zones is 105,000 acre feet for firm deliveries. This consists of 90,000 acre feet purchased from PGandE plus 15,000 acre feet of permit water which the Agency has wholesaled to the San Juan Suburban Water District for use within that District's lands

located within Placer County. In addition to this current demand for firm water, the Agency has requests for, and for the past several years has been supplying, approximately 11,500 acre feet of surplus water for agricultural use in Western Placer County. This surplus water is purchased from PGandE pursuant to the PGandE contract.

In addition to these demands, which are currently being met, the Agency has been requested by the Placer County Board of Supervisors to take all necessary action to try to secure as much as 130,000 acre feet annually for agricultural use in Western Placer County as soon as possible. This would be water obtained from the Agency's Bureau contract and permit water. In order for the Agency to be able to do this it will be necessary to amend the Agency's present contracts with PGandE and the Bureau to permit faster build up schedules than those presently allowed in those contracts.

2. Please provide the same type information as in the above question for projections into the future of five (5) years and ten (10)years.

Western Placer County is growing at a rapid rate and all of the predictions are that it will continue to grow at this rate during the next 20 to 30 years. This growth is in urban development. The Agency is in the process of

having a master plan development study completed by Boyle Engineering and expects to have the final version of this report available within the next few weeks. Preliminary drafts have shown that the demand for municipal and industrial water in Western Placer County during the next five years will be 16,000 acre feet and 22,000 acre feet in the next 10 years. In addition to these sums, the demand for agricultural water is expected to remain constant at approximately the 130,000 acre feet amount mentioned in response to item 1 above.

3. What water rights --statutory or contractual-- do you currently enjoy? If those rights will change during the next 20 years, when and how?

As mentioned in response to item 1, the Agency currently has water right permits for up to 120,000 acre feet of water to be diverted from the American River system annually and contractual rights to buy 100,000 acre feet annually from PGandE and up to 117,000 acre feet annually from the United States Bureau of Reclamation. The Agency does not expect these rights to change during the next 20 years. However, there have been representations by some members of the staff of the Bureau of Reclamation indicating that it is their opinion the Agency's right to purchase water from the Bureau is conditioned upon the completion of Auburn Dam. While the Agency disputes that contention, if

that should prove to be the case, the Agency would need to replace that 117,000 acre feet annual supply from another source, if Auburn Dam is not constructed.

4. What environmental, economic, and social consequences are you experiencing or expecting to experience from any present or anticipated shortage of water?

Assuming the Bureau of Reclamation honors its contract with the Agency, the Agency does not anticipate any shortage of water in the next 20 years, other than what might be experienced in any similar areas in years of extreme drought. If, however, the Bureau of Reclamation does not honor its contract, there could be a shortage and the ability of Placer County to grow as predicted would be seriously affected.

5. What possible solutions do you offer to providing additional water to the Lower Sacramento Valley region? If you offer more than one, please rank them in terms of decreasing priority.

The number one solution which the Placer County Water Agency offers for providing additional water to the Lower Sacramento Valley region is the immediate construction of the Auburn Dam. This project is needed not only for water supply, but, perhaps more importantly, for flood

control. The Auburn Dam site is one of the last available sites in the Sierra Foothill Region for the construction of a major facility to provide additional supplies of needed water for the Lower Sacramento Valley region.

If you or your Committee need any further information with regard to any of these items, or would like a representative of the Agency to appear to answer questions or give oral testimony at your hearing on May 15, please let me know.

Very truly yours,



EDWARD J. SCHNABEL
General Manager

EJS:vcl



CITY OF ROSEVILLE

316 VERNON STREET • ROSEVILLE, CALIFORNIA 95678 • PHONE (916) 781-0200

MAY 4 1987

April 29, 1987

Select Committee on the Sierra/Cascade/Klamath Watershed
Room 5082
State Capital
Sacramento, California 95814

WRITTEN TESTIMONY FOR HEARING EXAMINING "PROJECTIONS ON THE LOWER SACRAMENTO VALLEY'S CONSUMPTIVE DEMAND UPON WEST SLOPE SIERRA NEVADA WATERSHED."

The following testimony is provided in accordance with your letter request of April 19, 1987.

1. Resident's current demand and available supply of water.

Roseville's average daily demand is 9.5 million gallons per day (mgd). This demand varies from 5 mgd in winter to 22 mgd in summer. Total yearly consumption in 1986 was 3,468,000,000 gallons (10,644 acre-feet). Available supply was and is 10,427,000,000 gallons (32,000 acre-feet).

2. Projections of demand in five and ten years from now.

Demand in 1992 is projected to be 4,834,000,000 gallons (14,837 acre-feet) and 6,469,000,000 gallons (19,855 acre-feet) in 1997.

3. What water district serves Roseville?

City of Roseville.

4. What water rights are currently enjoyed?

By contract with the Bureau of Reclamation, 32,000 acre-feet renewable in 2012 for another 40 years.

5. What environmental, economic, and social consequences are expected from shortage of water?

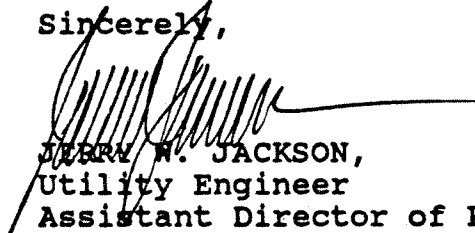
The City's general plan calls for a population of 90,000 in

2010. Water demand is expected to be 32,000 acre-feet at that time, the amount of water rights under contract to 2052; however, the general plan includes urban and agricultural reserve that would increase need to approximately 50,000 acre-feet if developed.

6. Possible solutions to providing additional water to the lower Sacramento Valley region.

More storage in reservoirs is the only significant source of additional water not already available. Auburn Dam would serve this purpose as well as provide power and flood control for Sacramento.

Sincerely,



JERRY W. JACKSON,
Utility Engineer
Assistant Director of Public Works

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