

**Water Supplies of the Cachuma Project Member Agencies
Rebuttal Testimony of Steve Mack, Water Supply Manager, City of Santa Barbara**

November 11, 2003

My rebuttal testimony focuses on the claim by a CalTrout witness, Mr. Jim Edmondson, that Alternative 3A2 from the Cachuma Contract Renewal EIR (as distinguished from the State Board EIR Alternative 3A), does not have significant impacts on Cachuma Project Member Agencies water supplies. I disagree. Even as presented in the testimony of Mr. Edmondson, Alternative 3A2 has significant impacts. When the errors of his math are corrected, those impacts are greater. However, the correct way to evaluate the impacts of Alternative 3A2 is to use the Santa Ynez River Model (SYRHM). The SYRHM analysis shows that Alternative 3A2 seriously impacts the water supplies of the Cachuma Project Member Agencies.

Table 1 and Table 2 below are in the same form as Tables 1 and 2 in my earlier testimony. I have changed the tables by replacing the values calculated by the SYRHM for Alternative 3C of the State Board EIR with values calculated by the SYRHM for Alternative 3A2 with the dry year provisions that reduce fish releases in the 20% driest years. For purposes of the SYRHM analysis, that provision was used when reservoir levels dropped below 100,000 AF. The values for all other water supplies are identical to my earlier testimony.

Alternative 3A2 requires that the Member Agencies draft the Cachuma Project at a much lower rate than the current draft of 25,714 acre feet per year (AFY). Working with Stetson Engineers, we have settled on using a draft of 16,400 AFY for this analysis. That is an annual reduction of 9,714 AF, which is 36% less than the current draft. During periods of drought, deliveries would be much less.

Table 1 shows normal year supplies, which are what could be counted on when lake storage is above 100,000 AF, with the reduced annual draft of 16,400 AF. This table shows that water supplies have little reserve even in normal years for current demand, with Santa Ynez River Water Conservation District, Improvement District #1 showing a deficit, and for all agencies except Carpinteria Valley Water District, supplies are well below planned future demand.

Alternative 3A2 would put the Cachuma Member Agencies, with the exception of Carpinteria Valley Water District, well short of planned future demand estimates.

All Cachuma Member Agencies rely on carryover supplies from the Cachuma Project to balance water production from year to year. The lower draft required by Alternative 3A2 would likely require use of the full entitlement each year.

The Member Agencies have little ability to increase other supplies:

- State Water Project deliveries are shown at approximately the long term average estimated by the Department of Water Resources. Many think that is an optimistic delivery amount.

- Groundwater pumping could be increased by some agencies, but that would leave less available for drought supplies. All Cachuma Member Agencies are counting on increased groundwater pumping for drought protection. That requires the groundwater basins to be reasonably full when dry periods begin.

Of particular note is ID#1. Table 1 shows that Alternative 3A2 will cause shortages with current demand. ID#1 may be able to increase normal year supplies through increased groundwater pumping, however, that will cause additional expenses, will likely result in less groundwater available during drought periods, and may result in impacts on neighboring groundwater pumps.

	City of SB	Goleta	Carpinteria	Montecito	ID#1	Total
Cachuma Project	5,279	5,945	1,794	1,691	1,691	16,400
State Water	2,200	4,500	1,650	2,280	525	11,155
Local Groundwater	1,104	2,350	3,000	200	2,910	9,564
Recycled	900	1,500				2,400
Other SYR&Tunnels	5,719			2,375		8,094
Total	15,202	14,295	6,444	6,546	5,126	47,613
Current Year Demand	14,342	14,000	4,300	6,073	5,792	44,507
Planned Future Demand	18,200	17,300	5,833	6,835	6,619	54,787
% Shortage (Current Year Demand)	6%	2%	50%	8%	-12%	7%
% Shortage (Planned Future Demand)	-16%	-17%	10%	-4%	-23%	-13%

Table 2 shows the Cahuma Member Agencies drought year supplies with the shortage estimated by the SYRHM for the Santa Ynez River critical year, including a reserve for continued drought. This table shows that in a severe drought the Cachuma Member Agencies, with the exception of Carpinteria Valley Water District, are well short of current demand and, of course, have much greater shortages with planned future growth.

Alternative 3A2 will cause shortage problems even during mild droughts. Cachuma Member Agencies start to take reduced deliveries from the Cachuma Project when the lake reaches 100,000 AF and the City of Santa Barbara and Montecito Water District also rely on Santa Ynez River supplies that would be affected by the same drought conditions. With the tightness of supplies even during normal years, Alternative 3A2 will make any shortage situation a serious problem with the current supplementary supplies.

	City of SB	Goleta	Carpinteria	Montecito	ID#1	Total
Cachuma Project	2,491	2,805	846	798	798	7,737
State Water	1,650	3,725	1,100	1,650	350	8,475
Local Groundwater	4,150	2,350	4,650	400	3,770	15,320
Recycled	900	1,500				2,400
Other SYR&Tunnels	800			442		1,242
Desalination	3,125					3,125
Total	13,116	10,380	6,596	3,290	4,918	38,299
Current Year Demand	14,342	14,000	4,300	6,073	5,792	44,507
Planned Future Demand	18,200	17,300	5,833	6,835	6,619	54,787
% Shortage (Current Year Demand)	-9%	-26%	53%	-46%	-15%	-14%
% Shortage (Planned Future Demand)	-28%	-40%	13%	-52%	-26%	-30%

Water conservation will not make up for the shortages caused by Alternative 3A2. Even if the water conservation saving claims by CalTrout testimony were accurate (other CCRB testimony will challenge CalTrout conservation claims) water conservation programs take years to implement. Cachuma Lake currently has storage of 115,000 AF. If the current dry trend continues, Cachuma Member Agencies may be taking shortages from the Project next year. Conservation savings of the magnitude claimed by CalTrout would take many years to take effect and will not be available if the current dry trend continues into a drought.

The reduction in Cachuma yield and impacts on supplemental supplies brought about by releases in the magnitude of Alternative 3A2 require a reevaluation of Cachuma Project Member Agencies' supplemental supplies.

- State Water will be needed more but deliveries to Bradbury Reservoir will be reduced due to blending issues between downstream releases and State Water deliveries. State Water cannot be blended into a downstream release from December to July 1 and cannot be more than 50% of a release after that time. This will cause problems during the winter and spring with passage flows at 48 cfs and in the summer with downstream targets at 10 cfs. The delivery restrictions would decrease the amount of State Water available for delivery to the South Coast, but maximum State Water deliveries would be required to keep the impacts of higher fish releases to a minimum. In Tables 1 and 2, maximum State Water deliveries are needed during droughts and to meet planned future demand during normal years, as well.

- Groundwater supply will need to be re-evaluated for each member agency because that is the only current local supply available to make up the deficits caused by Alternative 3A2 during normal years. Pumping more groundwater during normal will result in less being available during drought years.
- The City of Santa Barbara will need to evaluate its use of Gibraltar Reservoir, so that shortages from that supply can be covered by other supplies, or reduced. Montecito Water District will need to do the same with Jameson Reservoir.
- The City of Santa Barbara will need to immediately investigate activating its desalination facility. The current capacity of 3,125 AFY is not enough to cover the regional deficit .

In conclusion, the reductions in yield from the Cachuma Project caused by Alternative 3A2 will cause severe impacts on the Cachuma Project Water Agencies' water supplies as shown in Tables 1 and 2. Reductions of this magnitude will cause immediate problems for the Member Agencies and will make even mild droughts difficult situations. The reductions cannot be made up by water conservation nor by increased supply from supplemental sources.