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September 28, 2007

Ms. Diane Riddle
Division of Water Rights
State Water Resources Control Board
P.O. Box 2002
Sacramento, CA 95812-2000

Re: Comments on State Water Resources Control Board's Revised Draft Environmental Impact Report for Consideration of Modifications to United States Bureau of Reclamation's Water Rights Permits 11308 and 11310 (Applications 11331 and 11332) to Protect Public Trust Values and Downstream Water Rights of the Santa Ynez River below Bradbury Dam (Cachuma Reservoir)

Dear Ms. Riddle:

The City of Lompoc submits the following comments on the State Water Resources Control Board's ("SWRCB") Revised Draft Environmental Impact Report ("DEIR") for the Cachuma Project hearings. In addition to these comments, by letter dated October 7, 2003, the City of Lompoc provided written comments on the August 2003, Draft Environmental Impact Report for the Cachuma Project, which comments are fully incorporated herein. In addition, the City of Lompoc also submits as attachments the rebuttal testimony of Timothy Durbin (Attachment A) and comments prepared by Paul Bratovich, Surface Water Resources, Inc. (Attachment B).

## A. Preliminary Comments Regarding the Revised DEIR

The City of Lompoc's purpose and goal in this proceeding, as in previous proceedings on the Cachuma Project, is to protect the quantity and quality of its downstream water rights. Lompoc and its experts have conducted an extensive investigation of the current and past operation of the Cachuma Project and the Project's relationship with the groundwater basin which supplies Lompoc its essential water supply. Lompoc's consultants prepared a detailed groundwater model. This extensive modeling effort by Lompoc's experts evidences that the historic operation of the Cachuma Project has impacted the quality of recharge to the Lompoc groundwater basin. The modeling also concludes, that under the

current operating regime that includes the downstream water rights releases as required in Water Rights Order No. 89-18 and the commingling of water from the State Water Project ("SWP") imported by the Central Coast Water Authority ("CCWA"), the groundwater quality in the eastern portion of the Lompoc groundwater basin will return to a no Project condition within the foreseeable future. However, any change in the downstream release program under Water Right Order No. 89-18 or a change in the commingling of the CCWA's imported water will result in the ongoing adverse water quality impact noted above for a number of years or indefinitely.

The Settlement Agreement between Cachuma Conservation Release Board, Santa Ynez Water Conservation District, Santa Ynez Water Conservation District Improvement District No. 1 and the City of Lompoc, dated December 17, 2002 ("Settlement Agreement") resolves the long-standing dispute among the parties relative to operation of the Cachuma Project. The Settlement Agreement will adequately protect Lompoc's senior downstream water rights and will not significantly adversely affect water quality in the Lompoc Plain Groundwater Basin. The Settlement Agreement should form the basis of the SWRCB's proposed project and any subsequent water rights decision

## B. The Revised DEIR Fails to Provide a Stable and Finite Project Description and Objectives

"[A]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199.) "[O]nly through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives ...." (*City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1454.)" (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 654.) The CEQA Guidelines require that an EIR must set forth a project description that is sufficient to allow an adequate evaluation and review of the environmental impacts. (CEQA Guidelines, § 15124.) "Among other things, a project description must include a clear statement of 'the objectives sought by the proposed project,' which will help the lead agency 'develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary.'" (CEQA Guidelines, § 15124(b).)" (*San Joaquin Raptor Rescue Center v. County of Merced, supra,* 149 Cal.App.4th at p. 655.)

The Revised DEIR fails to provide a stable and finite project description. The Revised DEIR identifies the project as "[d]evelopment of revised release requirements and other considerations, if any, in the Reclamation water rights permits (Applications 11331 and 11332) for the Cachuma Project." (Revised DEIR at p. 1-1.) The Revised DEIR does not identify an actual Project or provide a stable and finite project description.

The Revised DEIR also fails to provide a clear statement of the project objectives sought by the proposed project. (Revised DEIR at p. 1-1.) Sufficient identification of the project objectives is necessary to evaluate the feasibility of the proposed project and the various alternatives identified in the Revised DEIR.

## C. The Revised DEIR Fails to Discuss and/or Analyze the Settlement Agreement as an Alternative

The Revised DEIR fails to discuss and/or analyze as an alternative the Settlement Agreement. The modifications provided for in the Settlement Agreement achieve Lompoc's long-term objective that the Cachuma Project be operated in such a manner so as to not adversely affect Lompoc's downstream groundwater rights, including water quality. To the extent the purpose of the proposed project is to develop a revised release regime for the protection of downstream water users, the Settlement Agreement achieves that purpose. It should not be understated that the Settlement Agreement resolves a dispute over water rights that dates back to before 1960. Yet despite this resolution of one of the primary key issues for the Cachuma Project hearings, the SWRCB's Revised DEIR all but ignores the implementation of the Settlement Agreement.

Instead of analyzing what should be the proposed project, the primary purpose of the Revised DEIR is to discuss and analyze Alternatives 5B and 5C. To the extent that Alternatives 5B and 5C are a hybrid pieced together from CalTrout's "dry" Alternative 3A2, Lompoc has testified that Alternative 3A2 would have a potentially significant impact on the groundwater quality in the Lompoc Basin. (See ¶ E. below for further discussion.)

The Revised DEIR's failure to discuss the Settlement Agreement also has implications regarding the "Modified Winter Storm Operations." The Settlement Agreement provides for the settling parties to support Reclamation's adoption and continued use of "Modified Winter Storm Operations" as described in USBR Technical Memorandum No. WR8130-RA-TM-00-2, entitled "Risk Based Evaluation, Modified Storm Operations-Bradbury Dam," dated February 2000, and the Santa Barbara County Water Agency report entitled "Report of Modified Storm Operations, Bradbury Dam, Cachuma Project, Santa Barbara County, California," dated December 29, 1998. The Modified Winter Storm Operations provide the City of Lompoc and its residents, as well as other entities and individuals downstream of Bradbury Dam, a level of protection and security from major flooding that simply did not exist before 1998. The importance of this added protection to Lompoc and its residents cannot be overstated.

Although the Cachuma Project's storm operations are not within the SWRCB's jurisdiction, it is critical for the SWRCB to understand the importance of the Modified Storm Operations contained in the Settlement Agreement. (See Settlement Agreement, ¶ 2.) Reclamation staff asserts that the Cachuma Project is a water supply project and not an authorized flood control project. No storage space is dedicated for flood control. As such,

Reclamation's has historically operated the Cachuma Project to maximize water supply and storage of water without planning for or providing for downstream flood protection.

In January/February1998, a series of powerful winter storms in Southern California brought to the forefront Reclamation's failure to operate the Cachuma Project for downstream flood control protection. These storms brought near record flows to the Santa Ynez River. These powerful winter storms resulted in Cachuma Reservoir reaching its maximum capacity to retain water and also provide downstream flood control protection. During the storm that ended on a Tuesday morning, the Santa Ynez River was at its maximum carrying capacity of 20,000 to 29, 000 cubic feet per second ("cfs"). Prior to these storms, Cachuma Reservoir had not yet filled to capacity and thus offered some limited downstream flood control protection. However, even with this flood control protection, flows in the Santa Ynez River resulted in some flooding of agricultural land downstream of Lompoc.

As more storms made their way to the California central coast, the National Weather Service forecasted that Santa Barbara County would receive up to 10 inches of rain in the mountains within 48 hours. The Santa Barbara County Flood Control District's meteorologist had predicted six inches of rain for the mountains. Based upon either of these predictions, a significant potential existed for wide-spread flooding downstream of the Cachuma Project with even another storm predicted to hit Santa Barbara County only two days later. The situation posed a grave risk to life and property of the residents of the City of Lompoc.

After intense negotiations just prior to the arrival of the storms, Reclamation's staff indicated a willingness to cooperate in avoiding or minimizing this impending disaster by making pre-releases from the reservoir in order to have reservoir capacity to capture the imminent flood flows. Clearly, if Reclamation had failed to provide immediate pre-releases from Bradbury Dam, Lompoc and its residents would have incurred severe property damage and/or loss of life.

Had Reclamation not modified its project operations and done the pre-releases at the insistence of Lompoc, the Santa Barbara Water Conservation and Flood Control District, the Santa Ynez River Water Conservation District, portions of Lompoc and the Lompoc Valley would have experienced serious flooding that threatened life and property. Reclamation's pre-release of water from Lake Cachuma allowed the peak flows to be captured by Bradbury Dam, thus preventing uncontrolled spills into the Santa Ynez River. The pre-releases of stored water allowed Reclamation to control the out-flows from the dam so that they did not exceed the downstream carrying capacity of the Santa Ynez River.

At the conclusion of 1998 storm season, the parties began discussions to implement permanent operating procedures to protect downstream life and property from flooding. In December 1999, Reclamation released a draft Technical Memorandum for modified storm

operations for Bradbury Dam. The proposed modifications identified the procedures for determining how much and when water will be released from Cachuma Reservoir in order to protect downstream interests from potential floods.

The importance to the City of Lompoc and its residents of the modified storm operations and the continued support of those operations cannot be over-emphasized. It helps ensure that the neither the City nor other parties will have to frantically negotiate with Reclamation regarding the operation of the project as powerful winter storms race across the Pacific Ocean and slam into the mountains of Santa Barbara County.

If upon completion of the water right hearing on the Santa Ynez River the SWRCB issues an order that does not require water right releases consistent with WR 89-18, as modified by the Settlement Agreement, the parties may chose to walk away from the Settlement Agreement. (Settlement Agreement, ¶ 5.2.) If Reclamation fails to maintain the Modified Winter Storm Operations as provided in the Settlement Agreement, then such change would significantly enhance the risk of flooding downstream, particularly in and near Lompoc. The Revised DEIR's discussion of Alternatives 5B and 5C fail to address the potentially significant environmental impacts with the increased flood risk associated with the implementation of either Alternative 5B or 5C.

## D. Alternative 4B Is a Not a Feasible Alternative as the City of Lompoc's Voters Have Twice Rejected State Water

The alternatives presented in an EIR must be potentially feasible. (CEQA Guidelines, § 15126.6(a).) CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." (Pub. Resources Code, § 21061.1.) The CEQA Guidelines add the term "legal" to the list of factors to be taken into consideration to determine the feasibility of an alternative. (CEQA Guidelines, § 15364.)

Alternative 4B provides for the delivery of water from the SWP to the City of Lompoc. This is not a feasible alternative from the City of Lompoc's perspective. Alternative 4B constitutes an impermissible effort to impose a new water supply on Lompoc. Implementation of Alternative 4B would require the City of Lompoc to accept the delivery of SWP water, a water supply voters having twice rejected.

The Revised DEIR states that the implementation of Alternative 4B would require cooperation by all involved agencies, completion of the project-specific environmental review and permitting, and securing funding and operation agreements. The City of Lompoc would not be agreeable to participating in the implementation, funding, or an operational agreement for Alternative 4B. The City of Lompoc's opposition to this alternative is noted in the DEIR (page 3-11) and the Revised DEIR (page 3-13) and in a letter dated June 18, 1999, from Donald B. Mooney to James Canady, which comments are incorporated herein.

Alternative 4B also fails to address the situation in which SWP water deliveries are not available or are substantially reduced. Under such a scenario, Reclamation continues to be obligated to protect downstream water rights in accordance with its water rights permits. (Revised DEIR at pp. 4-49 to 4-50.) Instead of discussing what the release regime would consist of, the Revised DEIR simply states that there would have to be agreement among the parties to account for the variability in deliveries of SWP. (Revised DEIR at p. 3-13.) While the Revised DEIR offers two scenarios, it provides no detail or analysis of what, if any, impact would occur if SWP water is not available or is substantially reduced. (Revised DEIR at pp. 3-13, 4-49, 4-50.) Therefore, if the SWRCB pursues Alternative 4B, it must contain a release schedule from Bradbury Dam to maintain downstream water rights, including water quality, to ensure compliance with its legal obligations. Simply approving Alternative 4B, without providing the operational requirements for the quantity and timing of SWP water, and without the authority to require the parties to enter into an agreement, would be an exercise in futility.

Alternative 4B fails to identify which agencies would have to approve the new water supply for the City of Lompoc and other downstream water users. Initially, it appears that the Santa Ynez River Water Conservation District ("SYRWCD"), the CCWA, and the City of Lompoc would have to approve implementation of Alternative 4B. The SWRCB, however, does not have any regulatory authority over the City of Lompoc and the SYRWCD with respect to the downstream groundwater rights and, therefore, cannot require their respective approvals.

## E. The Revised DEIR Fails to Discuss the Potentially Significant Impacts to the Lompoc Groundwater Basin Associated with Alternatives 5B and 5C

During the SWRCB's Cachuma Project Hearings in November 2003, CalTrout submitted a proposal that the Cachuma Project be operated as described in Alternative 3A2 of the Bureau of Reclamation's Cachuma Contract Renewal EIR/EIS, that formed the basis for the SWRCB's development of Alternatives 5B and 5C in the Revised DEIR. As noted in the attached Rebuttal Testimony of Timothy Durbin (November 12, 2003) (Attachment A), Alternative 3A2 "will result in significantly higher groundwater salinity within the Lompoc groundwater basin." (Attachment A at p. 2.) To the extent Alternatives 5B and 5C are based upon Alternative 3A, they too would have a significant effect on groundwater salinity. The Revised DEIR does not provide sufficient information regarding Alternatives 5B and 5C to adequately evaluate the water quality impacts to the City of Lompoc.

The City of Lompoc incorporates by reference Comments on Revised Draft Environmental Impact Report submitted by the Santa Ynez River Water Conservation District.

Very truly yours,

Sandra K. Dunn
Attorney

SKD:sb

Attachments

cc: Service List
Gary Keefe
Ron Stassi
Don Mooney

# EXHIBIT A

**Rebuttal Testimony of Timothy Durbin**

November 12, 2003

As stated in my direct testimony, I have done consulting work for the City of Lompoc since about 1990 regarding the impacts of the Cachuma Reservoir on the groundwater supply and groundwater quality available to the City. My qualifications for doing this work were described in my direct testimony.

My testimony here is in response to CalTrout's proposal that the Cachuma Project be operated as described in the Alternative 3A2 of the Bureau of Reclamation's Cachuma Contract Renewal EIR/EIS. Alternative 3A2 involves making releases from Cachuma Reservoir to provide perennial streamflow at specified seasonal rates. CalTrout also proposed a modification to Alternative 3A2, which is referred to here as Alternative 3A2 Dry. Alternative 3A2 Dry is similar to Alternative 3A2, except that the specified seasonal rates for the former are reduced during dry years.

I analyzed the impacts of the Alternatives 3A2 and 3A2 Dry on the groundwater available to the City of Lompoc. My analysis involved comparing Alternatives 3A2 and 3A2 Dry with Alternative 3C from the State Water Resources Control Board's Draft EIR for these Cachuma Project Water Rights hearings with respect to quantity and salinity of groundwater recharge to the Lompoc basin from the Santa Ynez River. Alternative 3C involves the operation of Cachuma Reservoir under WR 89-18, WR 94-5, the Biological Opinion, and a 3.0-foot reservoir surcharge. Under Alternative 3C, the recharge to the Lompoc groundwater basin is the same as would occur in the absence of the Cachuma Project, with respect to both quantity and quality. This occurs in large part because the releases include direct and mixed releases of State Water Project water and because Alternative 3C preserves essential elements of WR 89-18.

The groundwater salinity within the Lompoc groundwater basin depends significantly on the Santa Ynez River streamflow salinity at the Narrows. That streamflow salinity in turn depends on the mixing of releases from Cachuma Reservoir with tributary streamflows downstream from Bradbury Dam. Different operations of the reservoir produce different mixing patterns and corresponding different streamflow-salinity regimens at the Narrows. While Alternative 3C creates a streamflow-salinity regimen that is functionally equivalent to that which would occur with the absence of Cachuma Reservoir, Alternative 3A2 does not create that equivalency.

Alternative 3A2 will result in significantly higher groundwater salinity within the Lompoc groundwater basin. This alternative will increase the average salinity of recharged streamflow by about 100 mg/L above that which will occur with Alternative 3C. This is the increase in the volume-weighted average recharge salinity. The average recharge salinity will be 770 mg/L with Alternative 3C, 900 mg/L with Alternative 3A2, and 860 mg/L with Alternative 3A2 Dry. Alternative 3A2 represents a 17 percent increase in the average recharge salinity over Alternative 3C, and Alternative 3A2 Dry represents a 12 percent increase in the average recharge salinity.

These conclusions were derived from simulations using the Santa Ynez River Hydrology Model. That model is described in the Cachuma Project Water Rights EIR. That model simulates streamflow and streamflow salinity within the Santa Ynez River basin. A model such as the Santa Ynez River Hydrology Model is essential to the proper evaluation of any operational scheme for Cachuma Reservoir. A model is needed in order to determine how an operation scheme affects the mixing of reservoir releases with tributary streamflows downstream from Bradbury Dam.

# EXHIBIT B

CITY OF LOMPOC COMMENTS ON THE
REVISED DRAFT ENVIRONMENTAL IMPACT REPORT
CONSIDERATION OF MODIFICATIONS TO THE U.S. BUREAU OF RECLAMATION'S WATER RIGHT
PERMITS 11308 AND 11310 (APPLICATIONS 11331 AND 11332)
TO PROTECT PUBLIC TRUST VALUES AND DOWNSTREAM WATER RIGHTS ON THE SANTA YNEZ
RIVER BELOW BRADBURY DAM (CACHUMA RESERVOIR)
JULY 2007

The following comments pertain to sections in the document titled *"Revised Draft Environmental Impact Report Consideration of Modifications to the U.S. Bureau of Reclamation's Water Right Permits 11308 and 11310 (Applications 11331 and 11332) To Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir), July 2007,"* hereinafter referred to as the RDEIR, prepared by the State Water Resources Control Board (SWRCB).

## ALTERNATIVES DEVELOPMENT, DESCRIPTIONS AND BASIS OF COMPARISON

*1)* Alternative 2 is not sufficiently justified in the RDEIR as the "environmental baseline" against which potential impacts of the action alternatives are evaluated. Alternative 2 appears to be an arbitrarily constructed representation of an "environmental baseline" unsupported by defensible rationale. It would be logically defensible if the environmental baseline wholly represented conditions at the time of issuance of the NOP (May 1999), or perhaps the actual present existing conditions; however, Alternative 2 is a conglomeration of particular assumptions which represent neither condition.

The RDEIR (Page 3-8) describes Alternative 2 as the environmental baseline, with a summary of the key elements of the alternatives (including Alternative 2) presented in Table 3-2 (Page 3-8). The RDEIR (Page 3-8) states that *"...Under this alternative, the release requirements for the protection of downstream water rights specified in Order WR 89-18 would remain unchanged. Independent of the water right requirements, Reclamation would implement the interim requirements of the Biological Opinion issued by NMFS. These requirements include interim rearing target flows with no releases for fish passage." "...It includes the 0.75-foot surcharging..."* and *"...Under this alternative, releases for interim rearing target flows pursuant to the Biological Opinion are made without the benefit of the additional storage capacity created by a 1.8 or 3.0-foot surcharge."*

The RDEIR (Page 3-9) acknowledges that Alternative 2 no longer represents existing conditions yet, nonetheless, contends that Alternative 2 remains an appropriate baseline for the purpose of evaluating potential impacts of the action alternatives. The RDEIR (Page 3-9) states that *"...Alternative 2 represents the conditions that existed beginning in September 2000, when Reclamation began to*

*implement interim release requirements under the Biological Opinion. Since that time, Reclamation has increased the surcharge of Cachuma Lake from 0.75 to 2.47 feet, and has begun to implement long-term release requirements under the Biological Opinion...".*

It appears that the actual existing condition (Environmental Setting) is not used at all either as a comparative basis, or an evaluated alternative, in the RDEIR. For example, the RDEIR (Page 2-15) states that since 2005, Reclamation has been implementing the long-term rearing target flows, with the benefit of a 2.47 foot surcharge. The RDEIR (Page 2-16) further states that *"...Though the reservoir is currently surcharged at 2.47 feet, the full 3,200 af will be allocated to the Fish Passage Account as stipulated by the Biological Opinion...".* In addition, the RDEIR (Page 2-16) states *"...Though the reservoir is currently surcharged at 2.47 feet the full 500 af will be allocated to the Adaptive Management Account as stipulated by the Biological Opinion...".*

The RDEIR (Page 1-4 and Page 3-4) states that SWRCB staff provided clarification to Reclamation during November 2001 concerning the December 2000 set of alternatives, specifically that *"...the baseline operations alternative should reflect any changes in Cachuma Project operations that had occurred since NMFS issued the Biological Opinion...".* If a similar clarification were to be provided today, then the current development, description and the use of Alternative 2 as the environmental baseline is not sufficient.

The RDEIR (Page 3-9) states that *"...the use of Alternative 2 as the baseline, as opposed to using current conditions as the baseline, will result in a conservative estimate of potential environmental impacts of the alternatives...even though some of those impacts have already occurred. By contrast, if current conditions, including a 2.47-foot surcharge, were used as the baseline, only the incremental impacts associated with increasing the surcharge from 2.47 feet to 3.0 feet would be disclosed."* Similarly, however, given this explanation the argument also holds that by not using conditions that existed at the time of issuance of the NOP (May 1999), the environmental benefits of operating to the terms specified in the Settlement Agreement dated 17 December 2000, particularly for downstream aquatic resources, also are incrementalized and not appropriately evaluated in the RDEIR.

CEQA provides provisions to update the environmental setting, which serves as the basis for comparative analyses of potential impacts. The California Code of Regulations, Title 14 § 15088.5 (a) states that *"... a lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information..."* (Emphasis added).

2) The RDEIR (Page 3-6) equates the "environmental baseline" with the No Project Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (CEQA Guidelines § 15126.6 (e)(1)). After defining the No Project Alternative, the lead agency should proceed to analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (Emphasis Added) (CEQA Guidelines § 15126.6 (e)(3)(c)).

Clearly, the "environmental baseline" as represented in the RDEIR is not equivalent to the No Project Alternative. It is not reasonable to project that current operational plans and infrastructure (i.e., a 2.47 foot surcharge, a 3,200 af allocation to the Fish Passage Account, a 500 af allocation to the Adaptive Management Account, long-term rearing target flows, etc.) would revert back to conditions which existed in 2000, as assumed in the RDEIR. The No Project Alternative should be appropriately characterized and analyzed in the RDEIR, pursuant to CEQA as described above.

*3)* The RDEIR (Page ES-4) states that *"...The SWRCB evaluated CalTrout's comments and determined that new alternatives should be developed and analyzed in a revised DEIR..."*. It is not apparent in the RDEIR what served as the basis for the SWRCB's determination. Additional description of the SWRCB's determination should be provided.

4) The RDEIR (Page 2-13) states that ramping rates, which are a refinement of rates recommended by the SYRTAC, for releases made to satisfy downstream water rights to prevent stranding of steelhead in the mainstem, have been used since 2000. However, examination of table 3-2 (Page 3-8) of the key elements of the alternatives does not indicate whether ramping rates were included in any of the alternatives, let alone Alternative 2. Clarification should be provided.

5) The current description of Alternative 2 in the RDEIR is inconsistent, as described. The RDEIR (Page 3-9) states that under Alternative 2, the average annual amount of water released from Cachuma Lake to meet the Biological Opinion interim rearing target flow release requirements is estimated at 2,500 af. However, in the August 2003 DEIR (Page 3-8) it is stated that the annual amount to meet the Biological Opinion interim release requirements is estimated to be 1,300 af. This discrepancy needs to be explained in the RDEIR.

6) On Page 3-6 the RDEIR identifies Alternative 2 as the No Project Alternative, yet on Page 3-11 the RDEIR identifies Alternative 3C as the No Project Alternative. This discrepancy needs to be resolved.

## ENVIRONMENTAL ANALYSIS OF ALTERNATIVES (FLOW-RELATED ACTIONS)

7) The RDEIR (Page 4-1) states that comparison of the action alternatives with the environmental baseline *"...will indicate if there are any incidental environmental impacts associated with the new releases for fish under Alternatives 5B and 5C."* It is not clear what is meant by the phrase *"incidental environmental impacts."* The purpose is to evaluate potential environmental impacts.

8) The RDEIR (Page 4-63 though Page 4-66) describes the method of analysis using a scoring system developed for relating streamflow magnitude and duration effects on steelhead passage, spawning, fry rearing, and juvenile rearing. The RDEIR should provide additional support and justification for the identified highest weighted streamflows and duration of flow (assigned a score of 5) and the scaling between these flows and the lowest weighted flows (i.e., between 5 and 0). The use of subjectively applied scaling values to produce a net "score" by which operational scenarios are compared requires that a clear, well-defined description of the rationale, and the supporting biological bases, be provided. A more thorough discussion of the scoring criteria, application and limitations in the methodology to identify biologically meaningful differences among action alternatives would be beneficial.

9) The RDEIR (Page 4-64) states *"...The flow levels used in the scoring system for steelhead are based on the habitat and passage analysis conducted for the SYRTAC (1999a and b) and on the flow levels that were determined to result in no jeopardy to steelhead (NMFS, 2000)."* The RDEIR provides a minimal description of the biological underpinnings of the scoring procedure for spawning and rearing habitat under the various operational scenarios. The RDEIR would benefit by providing a description of the application of scaling values to specific flows, and an analysis of actual habitat area (defined by specific parameters, e.g., water depths and velocities) associated with various flows.

10) The RDEIR (Page 4-66) states that *"...Steelhead/rainbow trout need areas to seek refuge from warm summer water temperatures (NMFS 2005). Oversummering rearing habitat is an important limiting factor for steelhead/rainbow trout populations in California and in the Santa Ynez River (ENTRIX 1995)."* The RDEIR (Page 4-70) goes on to state *"...Water temperature may also be a limiting factor for steelhead/rainbow trout in the mainstem of the Santa Ynez River."* The scoring system used to evaluate action alternatives simply used changes in top-width associated with changes in flow for fry and juvenile rearing and did not include analyses of potential water temperature changes, if any, associated with the action alternatives, and therefore do not accurately represent meaningful differences in habitat suitability.

*11)* The pseudo-quantitative interpretation of the categorical scoring system over-emphasizes differences in flow among the action alternatives. The scoring system application also implies linearity in an assumed habitat response associated with

each of the categories. No substantive basis is provided to support the assumption of linearity among scoring categories. In fact, the RDEIR (Page 4-65) states that *"...The relationship in the study demonstrated that large increases in the top-width of habitat units occur at lower flows (<15 cfs) and lower rates of increase are found at higher flows (>30 cfs)."* The RDEIR (Page 4-71) further states that *"...At flows below 5 cfs, an increase in flow results in a large increase in top width. At flows from 5 cfs to 10 cfs, moderate increases in top width occur."*

12) The RDEIR states (Page 4-64), *"...A passage analysis was conducted to determine the amount of flow needed to provide passage at critical riffles in the lower mainstem of the Santa Ynez River (SYRTAC, 1999b). The results of these analyses indicate that a flow of 25 cfs at the Alisal Road Bridge is sufficient to provide passage between Bradbury Dam and the lagoon 92 percent of the time (SYRTAC 2000a)."* The RDEIR would benefit from elaborating on the passage criteria (i.e., the minimum depth and width of stream channel at critical riffles) utilized to determine whether a potential passage impediment could be passed. For example, what depth and velocity of water at the identified critical riffles does the 25 cfs at the Alisal Road Bridge provide? While the available information may be limited, a logical presentation of the decision-making factors would strengthen the assertions provided in the RDEIR.

13) A score of 5 was given for adult steelhead passage flow of 14 or more consecutive days with flows at or greater than 25 cfs at the Alisal Road Bridge (RDEIR Page 4-65). This criterion was based on the NMFS Biological Opinion (2000) which concluded, *"...it is NMFS's best professional judgment that 14 days of consecutive migration availability is likely to significantly increase the successful migration by steelhead in the Santa Ynez River..."*. It should be noted, however, that very little evidence is available, especially in the Santa Ynez River, which supports the conclusion that 14 or more consecutive days of sufficient streamflow will adequately provide improvement of adult steelhead migration in the Santa Ynez River.

14) The RDEIR (Page 4-65 to 4-66) apparently utilizes a very simplistic concept to determine the amount of spawning habitat available at a given streamflow, using top-width as a surrogate for spawning habitat. While the same methodology is used for the baseline and alternatives comparison, its simplistic nature may limit its ability to identify biologically meaningful differences in spawning habitat availability. Furthermore, the RDEIR does not analyze redd dewatering. Decreases in streamflow throughout the steelhead spawning season could potentially dewater steelhead redds that were created previously at higher flows near the stream margin. The month-to-month sequencing of streamflows can play an important role in identifying beneficial, or unfavorable, streamflow regimes. The RDEIR would benefit from a well-described evaluation of potential redd dewatering and juvenile stranding associated with the operational scenarios under comparison.

15) Similar to the spawning habitat analysis, the fry and juvenile rearing habitat analyses are very simplistic, and the RDEIR does not adequately describe the biological bases for the scoring criteria process. Indicative of the simplistic nature of the habitat model and its application, the flow scoring criteria (RDEIR Page 4-71) for resident stream fish (e.g., Arroyo chub, largemouth bass, prickly sculpin, catfish) appears to be the same as those used for rearing juvenile steelhead (RDEIR Page 4-64), although these resident fish exhibit different life histories and habitat requirements.

16) The RDEIR (Page 4-70) states that *"...In summary, Alternatives 3B-C, 4B, and 5B-C show a beneficial effect over baseline conditions, with Alternatives 5B and 5C showing the most benefits to rearing."* Given the aforementioned comments and concerns regarding the scoring system application, and particularly concerns associated with the evaluation of rearing habitat (top-width as a surrogate for habitat, lack of water temperature analyses), it is questionable whether any biologically meaningful, incremental benefit can be ascribed to Alternatives 5B and 5C relative to Alternatives 3B, 3C and 4B.

## CLIMATE CHANGE

17) Long-term water planning choices and reservoir operating rules all depend on climatic conditions. The RDEIR does not, but should, address the potential impacts of long-term climate change on water supply, availability and delivery associated with the proposed project and project alternatives. Assembly Bill 224 requires, among other things, that water suppliers that prepare urban or agricultural water management plans obtain climate change information from DWR, identify the possible effects of climate change on water supply projections, and consider such information when developing the conclusions of such plans. These requirements may be particularly pertinent to the Cachuma project because since 1997, water from the State Water Project has been delivered to Cachuma Lake at the dam outlet works, which is also used for releasing water into the river (RDEIR Page 2-9 to 2-10).

Cachuma Project Hearing
Phase-2 Hearing
Final Service List

Updated 05/10/2007

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