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EXHIBIT D

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A.A. RICH AND ASSOCIATES

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Principal

September 29, 2003

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RE: *Draft Environmental Impact Report/Environmental Impact Statement for the Lower Santa Ynez River Fish Management Plan and Cachuma Project Biological Opinion for Southern Steelhead Trout.*

On behalf of Ms. Nancy Crawford-Hall and the San Lucas Ranch, I reviewed the Draft Program and Project Specific Environmental Impact Statement for the Lower Santa Ynez River Fish Management Plan and Cachuma Project Biological Opinion for Southern Steelhead Trout (the "DEIR/DEIS") dated June 2003, and prepared jointly by the Cachuma Operations and Maintenance Board ("COMB") and the U.S. Bureau of Reclamation ("Bureau") (collectively, the "Lead Agencies").

My qualifications to review the DEIR/DEIS include over 26 years of technical and administrative project management experience in a wide range of fisheries-related projects. In addition, I have a Ph.D. in salmonid physiology and have designed and supervised hundreds of impact analyses, studies in fish physiology, toxicology, fish habitat and populations, and water temperature monitoring and modeling (See Appendix A for a complete résumé).

The proposed changes on Lower Hilton Creek and the underlying assumptions on the impact of these changes to a steelhead population are of concern. The following attachment is a review of the DEIR/DEIS based on my professional knowledge and the studies of Upper Hilton Creek undertaken by A.A. Rich and Associates.

Sincerely,

Alice A. Rich / by JPD
Alice A. Rich, Ph.D.

cc: Nancy Crawford-Hall
Andrew Sabey, Esq.
Dan Doport, Esq.
Steve Kirby, Esq.

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I. EXECUTIVE SUMMARY

The DEIR/DEIS is intended to evaluate the impacts of certain actions described in the Lower Santa Ynez River Fish Management Plan (SYRTAC, 2000) (the "FMP") and the National Marine Fisheries Service's ("NMFS") Biological Opinion for the Cachuma Project (NMFS, 2000) (the "BO"). Among the FMP and BO actions the DEIR/DEIS purports to evaluate are projects intended to create access for steelhead trout to the area of Hilton Creek which is upstream of the U.S. Bureau of Reclamation's ("Bureau") property (Upper Hilton Creek¹). It is my professional opinion that any steelhead allowed to migrate to Upper Hilton Creek will be doomed to die from either dessication or predation by mammals, and that the only option to prevent these deaths would be to rescue them on an annual basis. It is my further professional opinion that this is not good fish management, but rather that such actions would be irresponsible and tantamount to "trout murder." This is not in keeping with the Fish Management Plan's (FMP) intent, which is "to benefit steelhead." (page ES-1²)

The DEIR/DEIS states (page ES-2) that the following "management actions" on Upper Hilton Creek would be taken by COMB and the Bureau to implement the FMP and the BO:

- (1) Remove passage impediment on Lower Hilton Creek cascade and bedrock chute;
- (2) Extend Lower Hilton Creek channel to provide more habitat for fish; and,
- (3) Remove fish passage impediment at Route 154 culvert (Caltrans project).

These actions are part of the FMP and the BO. The DEIR/DEIS further states (page 2-23) that, by implementing the above actions on Lower Hilton Creek, the Bureau hoped to:

- (1) "Improve (steelhead) rearing and over-summering habitat ..." on Hilton Creek on the Bureau's property;
- (2) "Provide greater access for spawning and rearing...." from the mouth of Hilton Creek upstream to the Highway 154 culvert"; and,
- (3) "Provide access to upper Hilton Creek for potential spawning and rearing under favorable hydrologic conditions."

As indicated by the above quotes from the DEIR/DEIS, the management actions in the FMP and BO are designed to improve habitat for the steelhead along the Santa Ynez River downstream of Lake Cachuma through, among other things, habitat and passage improvements. One stated goal of the FMP is to:

"identify, evaluate, and recommend potential management actions that will benefit fish and other aquatic resources in the lower Santa Ynez River. The FMP management actions have been designed to benefit steelhead and other aquatic species directly and indirectly by: (1) creating new habitat and improving existing habitat in the lower river and tributaries; (2) improving access to spawning and rearing habitats in the lower river and tributaries; and (3) increasing public awareness and support for beneficial actions on private lands." (Page ES-1)

¹For ease of reference, the term "Upper Hilton Creek" is used to refer to that portion of Hilton Creek, upstream of the U.S. Bureau of Reclamation property, and "Lower Hilton Creek" is used to refer to that portion within the U.S. Bureau of Reclamation property.

²Unless otherwise noted, all references in this document refer to the DEIR/DEIS.

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- Priority 1: Hilton Creek (federal lands), Hilton Creek (above federal lands)
- Priority 2: Quiota Creek, El Jaro Creek, Upper Salsipuedes Creek, Lower Salsipuedes Creek
- Priority 3: Alisal Creek (below the dam), Alisal Creek (above the dam),” (Page 2-49)

“The tributaries of primary interest are Salsipuedes, El Jaro, Hilton, and Quiota creeks, since they have perennial flow in their upper reaches and thus can support spawning and rearing.” (Page 3-36 of FMP)

Response to DEIR/DEIS statement:

Our survey demonstrated that Upper Hilton Creek does not have good habitat for steelhead for the following reasons:

- Lack of water;
- Lack of rearing habitat;
- Lack of spawning habitat;
- High water temperatures; and,
- Low dissolved oxygen in the few pools which last through June.

These factors make Upper Hilton Creek unacceptable as a viable steelhead creek (see Photo Numbers 1-7).

Our surveys revealed that the only area of Hilton Creek containing any habitat for steelhead that might be considered “good quality” or “higher quality” was the reach on Lower Hilton Creek on the Bureau’s property where flows are artificially supplemented by water drawn from lake Cachuma (See Photos Numbers 8, 9). However, even this stretch of the creek would be dry throughout much of the year if the Bureau did not supplement it with flows from Lake Cachuma. This is supported by SYRTAC (2000), which “observed that the lower reach on Reclamation property goes dry in the early summer during both wet and average years (prior to the installation of the supplemental watering system).” (Page 2-22)

3. There is no scientific basis for Upper Hilton Creek being listed as a priority creek.

DEIR/DEIS statement:

“Potential tributary actions were ranked by opportunities for access and long-term maintenance of enhancement projects. ... Currently, reaches on upper Hilton Creek... are generally inaccessible for collecting data and implementing habitat enhancement actions.” (Page C-1-5 of FMP)

“In many cases, access to streams running through private property was not available. In these cases, information may be limited to roadside observations or historical records. Opportunities for implementing enhancement measures will be affected by the willingness of private landowners to

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N2-5

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participate in these activities." (Page C-2-1 of FMP)

"We evaluated the existing tributaries for habitat quantity and quality (composition) data, and data pertaining to fish utilization, prior to assessing potential enhancement actions. Since a majority of the tributary streams flow through private land, fish usage and habitat quality data are limited. Where such data are unavailable, qualitative information was provided by the SYRTAC project biologist and other working group members familiar with the lower Santa Ynez tributaries." (Page C-1-3 of FMP)

Response to DEIR/DEIS statement:

There is a profoundly good reason why there is no evidence that steelhead have used the upper reaches of Hilton Creek for spawning or rearing. Our studies from 2001-2003 demonstrated that, even when flows were present on Upper Hilton Creek, there was extremely limited spawning habitat and very little rearing habitat (See Photo Numbers 1-7). If spawning could occur, the fish would need one to two years of good quality water for rearing. As stated in the NMFS BO (Page 35), "In addition to minimum flows needed in shallow areas, flows must be available long enough for steelhead to complete their journey". Upper Hilton Creek does not provide enough water "long enough for steelhead to complete their journey."

COMB's consultants and biologists had access to other creeks in the watershed and could base their conclusions on scientifically-accurate information regarding habitat and streamflows on those creeks. Instead, they chose Hilton Creek as a "high priority" creek, based on very little qualitative (visual) information and no quantitative data for Upper Hilton Creek. Because of the Bureau's supplemental stream flows, the habitat conditions within the Bureau's property are not at all similar to those upstream. Thus, the DEIR/DEIS should not have assumed that conditions in Upper Hilton Creek were at all similar to those on the Bureau's property.

A very well-known and respected fisheries biologist, Leo Shapovalov, spent decades studying salmonids in central and southern California and studied the Santa Ynez River Watershed during the 1930's and 1940's. I find it of great significance that he, when listing the names of streams below and above what was then the "Cachuma Reservoir Site", never mentioned Hilton Creek (Shapovalov, 1944, 1940).

Because there is no flow much of the year in Upper Hilton Creek, the fish would be left stranded in the few remaining shallow pools where water temperatures would be too high and dissolved oxygen too low (See Photo Numbers 4, 5, 10, 11-20). Ultimately, the fish would die from dessication or predation by mammals or birds.

4. Hilton Creek does not contain suitable steelhead habitat.

DEIR/DEIS statement:

"The major habitat criteria for rainbow trout/steelhead in the tributaries includes stream gradient,

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N2-6

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instream cover, canopy cover, proximity to ocean, and available over-summering habitat. The presence of seed populations within each tributary is an important factor in evaluating the anticipated biological response time for each enhancement action. Seed populations are those where rainbow trout/steelhead are present and reproducing, and adequate over-summering habitat is available. We determined that tributaries with seed populations present would likely exhibit short-term biological responses associated with modifying passage impediments. Quiota, Alisal, Salsipuedes-EI Jaro, and San Miguelito creeks are tributary streams where seed populations currently exist." (Page C-1-3)

Response to DEIR/DEIS statement:

Our studies from 2001-2003 demonstrated that there was extremely limited spawning habitat and, as the creek dried up, virtually no rearing habitat for rainbow trout or steelhead. If spawning were to occur, the trout would need one to two years of good quality water for rearing. As stated in the NMFS BO (Page 35), "In addition to minimum flows needed in shallow areas, flows must be available long enough for steelhead to complete their journey." Upper Hilton Creek does not have "...flows ..available long enough for steelhead to complete their journey" or spawn another generation. Since most, if not all pools dry up by or before June, any trout using Hilton Creek for rearing purposes would be lost to dessication or predation.

Upper Hilton Creek is not a "seed stream," one of the criteria used to designate a high priority creek by COMB. The presence of seed populations within each tributary is an important factor in evaluating the anticipated biological response time for each enhancement action.

There is no evidence that steelhead have used the upper reaches of Hilton Creek area for spawning or rearing.

5. Based on the criteria in the DEIR/DEIS, Upper Hilton Creek should not have been chosen as a high priority creek.

DEIR/DEIS statement:

"The three evaluation criteria for the tributary assessments include: (1) presence or absence of rainbow trout/steelhead; (2) physical habitat conditions including spawning substrate, stream gradient, instream cover, canopy cover, and over-summering habitat; (3) opportunities to maintain or enhance fish habitat." (Page C-1-3 of FMP)

Response to DEIR/DEIS statement:

Physical habitat (i.e., spawning and rearing) conditions are poor to non-existent. During most of the year Upper Hilton Creek dries up.

There is no "...opportunity to maintain or enhance fish habitat" upstream of the Bureau's

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N2-7

N2-8

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property because the creek dries up and the fish would have no way (short of flying, but these are not flying fish) to descend to the Bureau's property where there would be water. Despite the fact that COMB knew that Upper Hilton Creek was inaccessible in the upper reaches without permission from the owner, they chose Hilton Creek as a high priority creek for habitat improvement. There are no scientific data to support the DEIR/DEIS's contention that Hilton Creek should be identified as a "high priority" creek.

N2-8

CONCLUSION: There is no scientific basis for choosing Hilton Creek, and particularly Upper Hilton Creek as a high priority stream. Further, this designation was based on incomplete information and incorrect assumptions.

B. The interchangeable use of the terms "steelhead" and "rainbow trout" is misleading, as Southern California steelhead are federally-listed as Endangered under the Endangered Species Act (ESA) and the rainbow trout is not listed

1. Special protection is legally required for the steelhead but not for the rainbow trout.

DEIR/DEIS statement:

"Steelhead and rainbow trout juveniles are indistinguishable both in appearance and in habitat use." (Page 5-37)

Response to DEIR/DEIS statement:

The DEIR/DEIS' interchangeable use of the terms "steelhead" and "rainbow trout" is misleading and improper. The steelhead is listed as an endangered species under Section 4 of the Federal Endangered Species Act. The rainbow trout is not a listed species. As such, special protection is legally required for the steelhead but not for the rainbow trout.

The DEIR/DEIS (on pages 10-89 through 10-91) discusses the problems of protecting the genetic integrity of the Southern California Steelhead. However, millions of rainbow trout have been planted in the Santa Ynez River System for over 50 years from a wide variety of egg sources throughout both this state and some other states. As a result the watershed is already "contaminated" with rainbow trout from a variety of geographical areas.

2. Care should be taken when identifying steelhead vs. rainbow trout.

DEIR/DEIS statement:

"It should be noted that the COMB biologist (Scott Engblom, pers. comm.) has observed steelhead migrating past the impediment during optimal hydraulic conditions, and that varying age

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classes of steelhead have been observed in the pool immediately downstream of Highway 154 culvert." (Page 2-24)

"Adults migrating into Hilton Creek are often large and could be anadromous steelhead from the ocean (particularly during wet years), rainbow trout that spilled over from Cachuma Lake, or fish that are resident in the river, its tributaries or the lagoon." (Page 5-40)

"Steelhead and rainbow trout juveniles are indistinguishable, both in appearance and in habitat use. Young-of-the-year often utilize riffle and run habitat during the growing season and move to deeper, slower water during the high flow months. Larger fish (yearlings or older) use heads of pools for feeding. Pools provide over-summer refugia for trout in small streams during low flow conditions. A second strategy is to rear in a lagoon." (Page 5-37)

Response to DEIR/DEIS statement:

Unless genetic studies were undertaken, there is no way to determine whether or not the fish Mr. Engblom saw downstream of the Highway 154 culvert were steelhead or rainbow trout, and certainly no way to determine the age classes of the fish.

The DEIR/DEIS, FMP, and NMFS BO repeatedly state that they don't know whether or not the fish they saw were rainbow trout or steelhead. Millions of hatchery-raised rainbow trout have been planted in the Santa Ynez River, many of its tributaries, and Lake Cachuma during the past five decades. Consequently, there is a very high probability that the trout seen in Hilton Creek were rainbow trout. The Fillmore hatchery records demonstrate that over two million rainbow trout have been planted in the Santa Ynez River watershed. Thus, any trout seen in Upper Hilton Creek are most likely "...rainbow trout that spilled over from Cachuma Lake, or fish that are resident in the river, its tributaries or the lagoon" (Page 5-40), or descendants of rainbow trout which spawned in the Santa Ynez River Watershed.

N2-11

CONCLUSION: The interchangeable use of the terms "steelhead" and "rainbow trout" is misleading because steelhead are federally-listed under the ESA and rainbow trout are not federally-listed.

C. The DEIR/DEIS' interchangeable use of the terms "steelhead" and "rainbow trout" is misleading, as the steelhead is less thermally tolerant than the rainbow trout.

N2-12

1. Steelhead have lower temperature thresholds than rainbow trout.

DEIR/DEIS statement:

"A temperature of 20°C (68°F) for daily average water temperatures has been used in central and

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