

EXHIBIT CT16

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To: Jean Baldrige/Ramona Swenson - Entrix**From:** Scott Engblom**Re:** Comments on November 7, 1997 Santa Ynez River Management Alternatives

General Comments: I agree with the ranking of the majority of the potential management alternatives. However, based on my observations and experiences in the SYR since 1994 I think some of the alternatives should be ranked higher (#2, 9, 20, 33), and others lower (#7, 8, 16, 17, 18, 23, 25, 28, 35, 37). I would be happy to discuss these with you at your convenience.

Specific Comments:

Page 2-1, Section 2.1.1 - Second paragraph: Near Bradbury Dam, the river is approximately 40 feet wide. Farther downstream, near the confluence with Alamo Pintado Creek, the river is more than 400 feet wide. This statement is not entirely correct. Habitat studies conducted by the TAC have extensively studied the area between Bradbury Dam (Except Crawford Property) and Buellton (Approximately 14.0 river miles). During WR 89-18 releases (150 cfs maximum), the channel width near Bradbury Dam is approximately 40 feet. However, the channel width for the remainder of the area downstream to Buellton is no more than 150 feet wide and averages probably less than 85 feet wide. In addition, a defined channel exists throughout this entire section (except the gravel mining section between Solvang and Buellton). Only during the high volume releases in 1995 have I observed the channel width in excess of 400 feet. Generally these greater channel widths and braided channel conditions exist in the area around Lompoc.

Page 2-3, last paragraph about Gibraltar Dam: Information about siltation decreasing the capacity of both Jameson and Cachuma Reservoirs is included in the text, but is missing for Gibraltar Reservoir.

Page 2-13, Section 2.3 - Last paragraph: Generally average and median flow is less as one moves upstream along the mainstem of the SYR. Flows in the tributaries are flashier as the watershed becomes smaller. It may be informative to include that while some of these tributaries are indeed flashy, they tend to hold water in them for the entire year (Quiota (tributary to), Nojoqui, Salsipuedes, and San Miguelito Creeks). This is important to include since these tributaries are the only source of steelhead recruitment for the lower SYR basin.

Page 2-21, Section 2.5.4: It would be informative to the reader to define what the causes of the water losses are. My observations of water losses include primarily groundwater pumping (especially evident in the Refugio reach), evaporation, and transpiration.

Page 2-22, Section 2.5.5 - Top paragraph: In the tributaries, summer temperatures sometimes exceeded these guidelines in Hilton, El Jaro, lower Salsipuedes, and Nojoqui Creeks. It would be informative to note that despite the guidelines exceeding the thermal criteria for RBT/STL, these fish were observed to survive in deeper pool habitats where thermal stratification occurred, allowing for cooler water conditions near the bottom.

Page 2-22, Section 2.5.6: Natural flow in the tributaries does not cease in the summer and fall in Salsipuedes, El Jaro, San Miguelito, but becomes intermittent. While natural flow in these tributaries usually does not quite reach the mainstem, it persists in the tributaries themselves and allows remnant populations of RBT/STL to survive.

Page 3-5, Section 3 Manage Flood Control Flows - Last paragraph: Actual mainstem migrant trapping occurred in 1996 and 1997 only. No mainstem migrant trapping occurred in 1994 or 1995. Tributary trapping has been implemented from 1994 to the present and has a much larger dataset than the mainstem.

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Page 3-5, Section 4, Ramping of Controlled Releases from Bradbury Dam Second paragraph: In the case of WR 89-18 releases, this action would result in a loss of water for groundwater recharge due to increased percolation during the ramping period. It would be informative to the decision making process to know what estimated losses to groundwater recharge would occur during any ramping period.

Page 3-6, Section 5, Additional mainstem flow releases at Bradbury Dam - First Paragraph: Historically, the mainstem of the SYR below Buellton provided poor quality STL/RBT spawning habitat and instead functioned primarily as a passage corridor. However, no information is mentioned about the historic use of the SYR from Solvang to Bradbury Dam.

Page 3-8, Second Paragraph: Studies conducted in the summer of 1997 indicated that flows of 15 cfs were inadequate to remove algae from pools in the Highway 154, Refugio, and Alisal reaches. In fact, flows did not extend downstream of the Highway 154 bridge. In addition, diurnal studies conducted in the Highway 154 reach indicate that algae is not a problem at least as far as the Long Pool.

Page 3-9, Top of page: The information being conveyed in the paragraph and bulleted items is unclear. Data presented in Table 3-5 of the Synthesis Report and the similar table presented in the 1996 Draft Compilation Report indicated water temperatures exceeded the 20 C criteria at additional thermograph locations, and for a longer period of time than indicated in the bullets.

Page 3-12, Second Paragraph: (Fine sediment deposition had been interrupted by Bradbury Dam). Several tributaries (Santa Agueda in particular) and the land use practices along the mainstem contribute significant amounts of silt downstream of Bradbury Dam. The large scour events during the winter of 1995 did indeed clean the channel essentially clear of fine sediments. However, the last two rain years have been average (no large scour events) resulting in a tremendous deposition of silt throughout the SYR downstream of Highway 154 Bridge.

Page 3-13, Top paragraph: The enhancement or expansion of streamside vegetation will likely increase transpiration loss within the stream corridor. How much transpiration loss (in acre feet) can we expect on a daily or monthly basis during various times of the year?

Page 3-19, 20. Removal of warmwater fish - Second Paragraph: The fish removal project (warmwater fish relocated into Lake Cachuma) was conducted on a short term basis and the traps were still capturing many different fish species when the trapping was halted. Any benefit these traps may have had may not have been realized. If these passive capture techniques are employed on a long term basis, they could give us tremendous insight as to movement, recruitment, and growth of both Centrarchids and Salmonids.

Page 3-28, 33. Extend channel of lower Hilton Creek - Second paragraph: How much seepage of the 4-5 cfs releases could we expect to lose and would this water end up in the spill basin or long pool?

Page 3-28, 34. Passage barrier removal: Removal or modification of the bedrock chute area could open up approximately 1500 feet of habitat upstream to the BOR property boundary (not including fish access to the Crawford Property).

Page 3-30, 37. Modify flow releases from Gibraltar Dam: Observations during the 1997 Gin Chow releases indicates that water does not reach Cachuma (average rain year). Did the release in 1997 from Gibraltar consist of the entire 617 af?

Flow Releases