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9 **STATE OF CALIFORNIA**  
 10 **STATE WATER RESOURCES CONTROL BOARD**

11 In the Matter of: )  
 12 ) TESTIMONY OF DENNIS R.  
 13 CACHUMA PROJECT HEARING, PHASE 2 ) McEWAN, SENIOR  
 14 UNITED STATES BUREAU OF ) ENVIRONMENTAL SCIENTIST  
 15 RECLAMATION APPLICATIONS 11331 AND )  
 16 11332 )  
 17 )

18 **TESTIMONY OF DENNIS R. MCEWAN**

19 I, Dennis R. McEwan, provide the following written testimony under penalty of perjury  
 20 in relation to the State Water Resources Control Board's Cachuma Project Hearing, Phase 2,  
 21 United States Bureau of Reclamation Applications 11331 and 11332.

22 **Q1: Please state your name, your position, and outline your educational and professional**  
 23 **qualifications.**

24 1. My name is Dennis R. McEwan. I am currently employed as a Senior  
 25 Environmental Scientist with the California Department of Fish and Game ("DFG"), Native  
 Anadromous Fish and Watershed Branch ("NAFWB"). As part of that position, I am the  
 supervisor/designated lead of DFG's Native Anadromous Fish Team within NAFWB, which  
 consists of one Biologist, one Environmental Scientist, five Associate Biologists and two Senior  
 Biologists. The team works within DFG's headquarters and performs a large range of activities –

1 from California Endangered Species Act (“CESA”) and federal Endangered Species Act  
2 (“ESA”) actions (eg. incidental take permitting, annual species reports, MOUs, endangered  
3 species recovery planning, review and comment on federal ESA actions, participation on  
4 technical recovery teams, and take authorization for DFG research activities) to providing  
5 technical expertise on fisheries management and habitat restoration.

6           2.       I hold a Bachelor of Science degree in Biological Conservation from California  
7 State University, Sacramento (“CSUS”). I also hold a Master of Science in Biological  
8 Conservation from CSUS. My Master’s program was focused on the ecology and recovery of a  
9 state and federally listed fish.  
10

11           3.       My career at DFG has spanned nearly 20 years. During that time, my involvement  
12 with anadromous fish species has focused mostly on recovery and conservation planning for  
13 steelhead trout, restoration of salmon and steelhead habitat, and providing technical assistance  
14 for DFG on all statewide Anadromous fish issues (e.g. water rights issues and fishery  
15 management). In 1996, DFG released its *Steelhead Restoration and Management Plan for*  
16 *California* (“Steelhead Plan”), of which I was the lead author. Excerpts of the Steelhead Plan are  
17 attached as **DFG Exhibit 2**. In addition, I have authored numerous articles, manuscripts, and  
18 technical reports, most of which relate to steelhead.  
19

20           4.       I am a current member of the American Fisheries Society (“AFS”), whose  
21 mission is to improve the conservation and sustainability of fishery resources and aquatic  
22 ecosystems by advancing fisheries and aquatic science and promoting the development of  
23 fisheries professionals. I have held the position of President in both the Sacramento-Davis and  
24 California-Nevada chapters of that organization. In addition, I was chair of the Interagency  
25

1 Ecological Program, Steelhead Project Work Team, which is a multi-agency effort to research  
2 and recover Central Valley steelhead.

3 5. In 2000, I received the DFG Director's Achievement Award for my role as an  
4 expert witness on the DFG hearing team for the SWRCB hearings on the Yuba River.

5 6. A copy of my curriculum vitae is attached as **DFG Exhibit 3**.

6 **Q2: You mentioned that you co-authored DFG's *Steelhead Restoration and Management***  
7 ***Plan for California*. Please give a general overview of this plan, highlighting the reason for**  
8 **its creation and describing its purpose.**

9 7. The Steelhead Plan was created for two reasons.

10 8. First, there was an immediate need to develop and implement a plan to restore  
11 steelhead. There has been a precipitous decline of naturally spawning populations in California.  
12 A rough estimate of the total statewide population as of 1996 was 250,000 adults, which is less  
13 than half the population that existed just thirty years before. The main factor for this abrupt  
14 decline is freshwater habitat loss and degradation. This population decline ultimately led to the  
15 Southern California Evolutionarily Significant Unit ("ESU") of steelhead being listed as  
16 "endangered" under the federal ESA in 1997, not long after DFG's Steelhead Plan was released.

17 9. The second reason for the creation of the Steelhead Plan was the passage of the  
18 *Salmon, Steelhead Trout, and Anadromous Fisheries Program Act of 1988* (Fish and Game Code  
19 Sections 6900-6924). This act declares that it is a policy of the State to significantly increase the  
20 natural production of salmon and steelhead by the end of the century. DFG was directed to  
21 develop a program that strives to double naturally-spawning anadromous fish populations by the  
22 year 2000. Several legislators, along with prominent angling organizations, urged DFG to  
23 incorporate a statewide steelhead restoration plan into the initial elements of the act's program.

24 10. Thus, as a result of the decline of steelhead populations and the mandates of the  
25 1988 act, Terry Jackson and I authored the Steelhead Plan for DFG.

1           11.     The Steelhead Plan provides guidelines for steelhead restoration and management  
2 that can be integrated into current and future planning for specific river and stream systems  
3 throughout the state. It identifies requirements specific to steelhead and is intended to augment  
4 current anadromous fish restoration plans. The Steelhead Plan also recognizes that restoration of  
5 California's steelhead populations requires a broad approach that emphasizes ecosystem  
6 restoration. It focuses on restoration of native and naturally produced (wild) stocks because they  
7 have the greatest value for maintaining genetic and biological diversity.

8           12.     Implementation of the Steelhead Plan's recommendations is designed to reverse  
9 the aforementioned decline in steelhead populations. This will provide major benefits to  
10 California's citizens, including improved angling opportunities, increased sport fishing revenue,  
11 and benefits to the California economy. Steelhead are an important component of the State's  
12 diverse wildlife heritage. They are a good indicator of the health of the aquatic environment  
13 because they require clear, clean water, and they use all portions of a river system. As such, they  
14 provide an important benefit to the quality of life for all California citizens.

15           13.     The Steelhead Plan's ultimate purposes are to: a) increase natural production, as  
16 mandated by the *Salmon, Steelhead Trout, and Anadromous Fisheries Program Act of 1988* so  
17 that steelhead populations are self-sustaining and maintained in good condition; and b) enhance  
18 angling opportunities as well as steelhead resource uses that are non-consumptive.

19           14.     The Steelhead Plan's general strategies to accomplish these purposes are to: a)  
20 restore degraded habitat; b) restore access to historical habitat that is presently blocked by dams  
21 and other obstacles; c) review angling regulations to ensure that steelhead adults and juveniles  
22 are not over-harvested; d) maintain and improve hatchery runs, where appropriate; and e)  
23 develop and facilitate research to address deficiencies in information on freshwater and ocean  
24 life history, behavior, habitat requirements, and other aspects of steelhead biology.

1           15.     The Steelhead Plan now serves as the blueprint and prime directive for our  
2 agency's efforts to restore steelhead. The current, critical population decline for steelhead makes  
3 it crucial that DFG be able to implement the Steelhead Plan's objectives and recommendations  
4 through cooperation with other governmental agencies such as the SWRCB as well as the private  
5 sector.

6 **Q3: Does the Steelhead Plan include any sections that specifically address steelhead in the**  
7 **Santa Ynez River?**

8           16.     Yes.

9 **Q4: Did you personally author that section of the Steelhead Plan?**

10          17.     Yes.

11 **Q5: Please describe the Santa Ynez River section of the Steelhead Plan, including**  
12 **management objectives and recommendations for the Santa Ynez River.**

13           18.     The section regarding the Santa Ynez River falls within the Steelhead Plan's  
14 objectives for the south coast region of California. It includes a brief history of the steelhead run  
15 in the river, a short background on the construction of Bradbury Dam and its effects on the  
16 steelhead run, a discussion of the various water right decisions by the State Water Resources  
17 Control Board ("SWRCB") regarding operation of Bradbury Dam by the United States Bureau  
18 of Reclamation ("Bureau"), a description of recent activities on the river in regards to fishery  
19 studies and the formulation of recommendations to the SWRCB regarding restoration actions.

20           19.     The centerpiece of the Santa Ynez River section of the Steelhead Plan is a list of  
21 several objectives and recommendations for restoring steelhead in the river:

- 22           • DFG will seek a permanent flow regime from Bradbury Dam to restore the steelhead  
23 resource to a reasonable level and maintain it in good condition. This includes providing  
24 adequate streamflows for adult and juvenile migration and mainstem spawning and  
25 rearing habitat.

- 1 • The feasibility of providing adult and juvenile passage around Bradbury Dam should be  
2 investigated and implemented accordingly. Nearly all historical spawning and rearing  
3 habitat is located upstream of Bradbury Dam, therefore blocked access is probably the  
4 most significant limiting factor for steelhead.
- 5 • Short-term efforts to restore Santa Ynez River steelhead should focus on the following:
- 6 ○ Restoring and enhancing spawning and rearing habitat conditions in Hilton,  
7 Alisal, and Salsipuedes creeks and other tributaries of the Santa Ynez River below  
8 Bradbury Dam.
  - 9 ○ Provide adequate interim releases from Lake Cachuma. DFG should identify and  
10 seek flows needed for fisheries investigations and to maintain steelhead habitat  
11 until more permanent restoration measures are implemented. This will be done  
12 preferably through the MOU process.
  - 13 ○ Investigate status and habitat needs.
  - 14 ○ Investigate the feasibility of modifying the release schedule of water released  
15 from Bradbury Dam to downstream users so that it provides benefits to fish and  
16 wildlife. Currently, the water is released on an as-needed basis as called for by the  
17 Santa Ynez River Water Conservation District, which provides relatively little  
18 benefit to aquatic species and habitat.

19 **Q6: How did you go about developing the aforementioned objectives and**  
20 **recommendations?**

21 20. I reviewed published accounts, reports, and other documentation regarding  
22 historical and current conditions in the lower Santa Ynez River, consulted with various experts  
23 on land and water use and biological resources of the Santa Ynez River, and then identified  
24 actions that would alleviate current resource-limiting factors based on this information and my  
25 knowledge and experience.

1 **Q7: It appears that the objectives and recommendations for steelhead in the Santa Ynez**  
2 **are separated into short and long-term goals. Is that correct?**

3 21. Yes.

4 **Q8: Please explain the difference between those short and long-term objectives and**  
5 **recommendations.**

6 22. Long-term objectives are those that restore important ecosystem functions and  
7 connectivity that allow for the full expression of life history and evolutionary potential of  
8 southern steelhead. These are intended to be more or less permanent, primary restoration actions  
9 to restore steelhead.

10 23. The short-term objectives, because they are relatively smaller in scope and scale,  
11 are those that were intended to be implemented in the immediate near future. Short-term  
12 objectives are focused on specific habitat remediation.

13 **Q9: I'd like to explore the Steelhead Plan's long-term objectives. You mentioned that DFG**  
14 **intends to seek a permanent flow regime from Bradbury Dam to restore the steelhead**  
15 **resource to a reasonable level and maintain it in good condition. Do you recall that?**

16 24. Yes, I'm familiar with that statement.

17 **Q10: This a long-term management objective, correct?**

18 25. Yes.

19 **Q11: This long-term management objective uses the phrase "good condition," correct?**

20 26. That is correct.

21 **Q12: Are you familiar with Fish and Game Code Section 5937?**

22 27. Yes. It essentially states that dam owners shall release enough water to keep fish  
23 below that dam in good condition.

1 **Q13: By thus using the phrase “good condition,” did you intend to link this long-term**  
2 **objective with achieving Fish and Game Code Section 5937 compliance for the Bureau’s**  
3 **operation of Bradbury Dam?**

4 28. Yes. It is my understanding that it is DFG’s intent to seek eventual Fish and Game  
5 Code Section 5937 compliance for all dam operations throughout the state where this section is  
6 applicable.

7 **Q14: Is it correct to say, then, that DFG’s long-term objective for steelhead in the Santa**  
8 **Ynez River – at least in part – is to achieve a permanent flow regime from Bradbury Dam**  
9 **that will achieve compliance with Fish and Game Code Section 5937?**

10 29. Yes, DFG’s ultimate goal is to bring the Bureau’s operation of Bradbury Dam  
11 into compliance with Section 5937. This objective is important not just for fish in the mainstem,  
12 but also those in tributaries by providing flows necessary for migration to and from the  
13 tributaries.

14 **Q15: I want to switch gears now and talk a little more about the short-term objectives and**  
15 **recommendations you described. Did you envision those efforts as the ultimate restoration**  
16 **goal for steelhead in the Santa Ynez River?**

17 30. No.

18 **Q16: What were they intended to accomplish?**

19 31. The short-term objectives I outlined were intended to provide smaller-scale,  
20 incremental habitat improvements that would ideally halt further degradation of steelhead habitat  
21 until larger-scale, long-term measures, such as fish passage, could be implemented.

22 **Q17: The Steelhead Plan says that trap-and-truck and smolt capture facilities are**  
23 **“probably” the only feasible means to restore access to steelhead spawning and rearing**  
24 **habitat upstream of Bradbury Dam, do you recall that?**

25 32. Yes.



1 **Q18: What was that statement based on?**

2 33. Essentially, it was based on the height of the dam, and the fact that, to my  
3 knowledge, there have been no fish ladders constructed that have provided passage over a dam of  
4 that size. This was before potential measures such as the Hilton Creek bypass were envisioned,  
5 or at least known by me. I believed at the time that it would be likely that a trap-and-truck  
6 operation, to move adults around the dam and smolts around the reservoir, would be necessary.  
7 However, I did not intend to exclude the possibility that future technology could yield other  
8 available passage methods, so I stated that trap-and-truck and smolt capture facilities were  
9 "probably" the only feasible means to restore access.

10 **Q19: Is there anything regarding the Steelhead Plan's statements on trap-and-truck**  
11 **operations that you would like to clear up?**

12 34. Yes.

13 35. First, I do not believe that trap-and-truck operations may be the only feasible  
14 means of providing passage around Bradbury Dam. Future feasibility studies or technology may  
15 reveal other, more effective means to restore steelhead access to upstream habitat. That is why I  
16 used the word "probably" in the aforementioned statement.

17 36. Second, there appears to be a misconception that the Steelhead Plan states that  
18 trap-and-truck, as a restoration or mitigation action, is against DFG policy. This is incorrect. In  
19 fact, the Steelhead Plan states on page 118:

20 "Trap-and-truck operations...will not be considered as mitigation for proposed  
21 water projects, except where already approved. For existing barriers that block  
22 access to historical spawning and rearing areas, trap-and-truck operations will  
23 only be considered if there are no other feasible alternatives."

24 This policy clearly leaves an option open for trap-and-truck in situations such as at Bradbury  
25 Dam, which may have no other feasible alternative.

1 **Q20: To the best of your knowledge, have any official, complete feasibility studies been**  
2 **undertaken to date in regards to restoring upstream access?**

3 37. To my knowledge, there has been no adequate feasibility study performed to date  
4 in regards to fish passage around Bradbury Dam.

5 I, Dennis R. McEwan, declare under penalty of perjury under the laws of the State of  
6 California that I have read the foregoing "Testimony of Dennis R. McEwan, Senior  
7 Environmental Scientist" and know its contents. The matters stated in it are true of my own  
8 knowledge except as to those matters which are stated based on information and belief, and as to  
9 those matters as I believe them to be true.

10 Executed on October 10, 2003 at Sacramento, California.

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12 

13 By: DENNIS R. McEWAN  
14 Senior Environmental Scientist  
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