

**TESTIMONY OF MICHAEL P. JACKSON
REGARDING
U.S. BUREAU OF RECLAMATION
WATER RIGHT PERMITS 11308 AND 11310**

I. INTRODUCTION

I am the Deputy Area Manager for the South Central California Area Office of the United States Bureau of Reclamation (Reclamation), Mid Pacific Region. I have worked for Reclamation since 1982. I received my Bachelor of Science degree in Civil Engineering from the University of the Pacific located in Stockton, California, and began employment with Reclamation shortly after graduation. I have held various positions with Reclamation in my career, including Hydraulic Engineer; Chief, San Joaquin Planning Branch; Bay Delta Projects Officer; Mid-Pacific Regional Liaison; and Reclamation Liaison to the Assistant Secretary for Water & Science. A true and correct copy of my statement of qualifications was submitted during the Phase 1 proceedings. (DOI-1a) The statements made in my testimony are based upon information or facts of which I have personal knowledge, or are based upon information that I believe to be true.

II. PURPOSE OF TESTIMONY

Reclamation is providing testimony to support our proposed modifications of the terms and conditions under Reclamation's water right Permits 11308 and 11310, that we believe are necessary to protect public trust resources and downstream water rights on the Santa Ynez River below Bradbury Dam. This testimony is intended to present background and other pertinent information on the Cachuma Project including but not limited to contractual obligations; operations; certain biological resources; to express Reclamation's support of the what is referred to as the "Settlement Agreement", (CCRB Exhibit 220A) which Reclamation considers to have resolved the key issues relative to the

satisfaction of downstream water rights; and on the Section 7 consultation process leading to the National Marine Fisheries Service, September 11, 2000, "*Non-Jeopardy*" Biological Opinion (BO). (SWRCB Staff Exhibit by Reference, #11) Our testimony and presentation will lend support to our belief that implementation of the measures under the BO together with the Fish Management Plan and the provisions of the Settlement Agreement protect both downstream water rights and public trust resources.

III. INTRODUCTION/BACKGROUND OF THE CACHUMA PROJECT

The Cachuma Project ("Project") in Santa Barbara County, California consists of Lake Cachuma, formed by Bradbury Dam located on the Santa Ynez River, and conveyance facilities including the Tecolote Tunnel, the South Coast Conduit system, and associated facilities. The Project was designed to provide a supplemental water supply for irrigation and municipal and industrial purposes. Reclamation constructed the Project, which was authorized in 1948 (DOI-1b). Bradbury Dam is located approximately 48 miles upstream from the Pacific Ocean. Construction began in 1950 and was completed in 1956. Principal features of the Project include five storage dams, which form reservoirs with a total capacity of about 189,240 acre-feet (af), approximately 28 miles of pipelines, 7.5 miles of tunnels and over 100 miles of laterals.

A. Project Facilities

Bradbury Dam is located on the Santa Ynez River approximately 25 miles northwest of Santa Barbara. The reservoir formed by the Bradbury Dam, called Lake Cachuma, had an original capacity of 205,000 af, but the capacity has been reduced by siltation to approximately 188,030 af. The lake

covers over 3,000 acres when full and has a 40-mile shoreline. The dam has a concrete-lined spillway on the left abutment, which is controlled by four radial gates, and has a capacity of approximately 160,000 cubic feet per second. The river outlet works, which consists of two 30-inch-diameter fixed cone valves and one 10-inch-diameter butterfly valve, have a total capacity of 150 cubic feet per second.

As discussed below, in 1998-1999 Reclamation constructed a pipeline to supply water directly from the lake to Hilton Creek, a tributary to the Santa Ynez River approximately 200 feet downstream of the dam. This system was constructed as part of the mitigation for a Safety of Dams modification made to Bradbury Dam to enhance its seismic stability. The pipeline provides a year-round source of water into Hilton Creek that assists fish survival during the summer months until natural flow resumes in the winter. The Hilton Creek Water System currently has a design capacity of approximately 5 cubic feet per second. There is also a direct connection between the Central Coast Water Authority's (CCWA) Santa Ynez Aqueduct Extension (SYAE) pipeline and the river outlet works. This allows CCWA to pump State Water Project (SWP) water supplied from the SWP through the SYAE pipeline into Lake Cachuma for temporary storage and release to the Tecolote Tunnel for delivery to the Santa Barbara area. This storage and conveyance of SWP water is covered under Contract Number 5-07-20-W1282 between the United States and CCWA. This system has the capacity to pump approximately 22 cubic feet per second into the lake. (DOI-1e).

The Tecolote Tunnel extends 6.4 miles through the Santa Ynez Mountains from Lake Cachuma to the head works of the South Conduit. The tunnel is 7 feet in diameter, concrete lined, and has a capacity of 100 cubic feet per second.

The South Coast Conduit, a high-pressure concrete pipeline, extends from the Tecolote Tunnel

outlet to the lower end of the Carpinteria service area. The pipeline is approximately 28 miles long and varies from 48 to 27 inches in diameter.

Glen Anne Dam and reservoir are located in Santa Barbara County, on the west fork of Glen Anne Canyon Creek. The dam is an earthfill structure with a crest length of 240 feet and a height of 135 feet. The reservoir has a capacity of 470 af. The spillway, located in the right abutment, is a concrete-lined, trapezoidal, uncontrolled, chute.

Lauro Dam and reservoir, located on Diablo Creek, is on the northern edge of the city of Santa Barbara. The dam is an earthfill structure with a height of 137 feet and a crest length of 540 feet. The reservoir has a capacity of 640 af. The dam has an inlet-outlet works and a spillway consisting of a square intake structure with trash racks on three sides, a buried 30-inch reinforced concrete pipe, and a vertical pipe stilling well.

Ortega Dam and reservoir are located approximately one mile north of Montecito. The dam is an earth embankment dam which is 131 feet high with a crest length of 430 feet. The reservoir is a concrete-lined basin with a capacity of 60 af. Release facilities at the dam consist of an inlet-outlet works and overflow spillway.

Carpinteria Dam and reservoir are located a few miles east of the city of Carpinteria, on a terrace approximately 200 feet above Carpinteria Creek. The dam is a four-sided earthfilled embankment with a structural height of 31 feet and a total crest length of 1,350 feet. The reservoir is a concrete-lined basin with a capacity of 40 af and acts as a terminal reservoir on the South Conduit. There is an inlet-outlet structure and an overflow spillway.

B. Project Operations

Bradbury Dam is operated by Reclamation. Our operation is governed by the terms and conditions set forth in the water right permits, the BO, and typical reservoir operations protocols and criteria for water supply management.

The Cachuma Operation and Maintenance Board (COMB), represents five Project beneficiaries: Carpinteria Valley Water District; Montecito Water District; Goleta Water District; City of Santa Barbara; and Santa Ynez River Water Conservation District, Improvement District #1 (collectively "Member Units"). The Member Units are responsible for reimbursing the United States for the majority of the costs associated with the operation and maintenance of the Project and provide a source of water to a population of approximately 275,000.

COMB operates and maintains the Tecolote Tunnel and the South Coast Conduit system for Reclamation under Contract Number 14-06-200-5222R, "The Transfer of the Operation and Maintenance of Cachuma Transferred Project Works," (DOI-24).

C. Project Contractual Obligations

The Master Contract between Santa Barbara County Water Agency and Reclamation is a water service contract that was originally entered into on September 12, 1949 and renewed on April 14, 1996 in accordance with the Reclamation Project Act of 1939 as amended and supplemented, and provides for 25,714 af per year of project water to be delivered to the five Member Units (DOI-1c). The Member Units submit an annual water delivery schedule to Reclamation for review and approval each year. The Master Contract also clearly indicates that the parties recognize that the Cachuma Project shall continue to be operated to provide for the protection of downstream interests. Before the

contractual obligation is satisfied, releases of water are made in accordance with Federal law and state law, including the Cachuma Project water right permits.

A contract between the Central Coast Water Authority (CCWA) and Reclamation provides for the storage and conveyance of SWP water into Lake Cachuma. (DOI-1e) CCWA is composed of the five Member Units plus the City of Buellton, the City of Guadalupe, and the City of Santa Maria. The storage and conveyance of this water is subject to the availability of excess capacity in the Project facilities and when available, Reclamation will store and/or convey up to 13,750 af of SWP water per year for CCWA in and through the Project. SWP water under this contract is the first water to spill in the event the Lake surface elevation rises above the maximum storage elevation in flood events.

In 1953, Reclamation entered into a Recreation Contract with the Santa Barbara County Parks entitled "Agreement to Administer Recreation Area (Contract No. 14-06-200-600). The contract requires the County to develop, maintain and administer recreation according to a recreation plan, prepared by the County, and approved by the National Park Service and Reclamation. Funding for operations, maintenance and administrative costs at the Recreation Area are the responsibility of the County. The 50-year contract expired in January, 2003 and was extended to January 2005 to allow for time to complete a resource management plan and contract negotiations (DOI-26).

IV. ENDANGERED SPECIES ACT

A. Steelhead Listing

On August 18, 1997, the National Marine Fisheries Service (NMFS, now NOAA Fisheries), listed the Southern California steelhead (*Onchorhynchus mykiss*) Evolutionary Significant Unit (ESU)

as an endangered species under the Endangered Species Act (ESA). The steelhead inhabits the Santa Ynez River downstream of Bradbury Dam.

B. Biological Assessment and Biological Opinion

The Biological Assessment (BA) and the Biological Opinion (BO) were prepared pursuant to the Federal ESA which has its own specific set of Federal requirements. (See **DOI-12 and SWRCB Staff Exhibit by Reference, #11**) Because of the listing of steelhead pursuant to the ESA as described above, Reclamation prepared and submitted its initial BA to NMFS for Cachuma Project Operations and the Lower Santa Ynez River, on April 7, 1999. The BA outlines Reclamation's project description and proposed action for Cachuma Project Operations including conjunctive operations of water releases for downstream water rights, fish passage, the Hilton Creek Watering System, reservoir surcharge, and enhancement of fish habitat in the mainstem Santa Ynez River.

On September 11, 2000, NMFS issued a "*Non-Jeopardy*" Biological Opinion (**SWRCB Staff Exhibit by Reference, # 11**) that concludes Reclamation's proposed operation and maintenance of Bradbury Dam is not likely to jeopardize the continued existence of the steelhead. Among other features, the BO acknowledges, recognizes, and provides for a number of physical "fish-friendly" enhancements including but not limited to the Hilton Creek Watering System, and a 3 foot reservoir Surcharge (both of which are discussed further below), as well as an Adaptive Management Committee (AMC) to manage fishery passage, rearing, and management accounts as well as address real-time conditions and new information. The AMC consist of Reclamation, NMFS, Department of Fish and Game (DFG), Cachuma Conservation Release Board (CCRB), ID#1, and downstream water rights interests.

The BO identifies fifteen (15) Reasonable and Prudent Measures (RPMs) and a number of companion terms and conditions to implement the RPMs, that NMFS determined are necessary and appropriate to minimize and monitor incidental take of steelhead (See **SWRCB Staff Exhibit by Reference, #11**, page 71). RPMs: are required when the proposed action may result in the incidental taking of a listed species.

During the period between Reclamation's forwarding of the BA and NMFS issuance of the BO, exchanges of pertinent information regarding hydrologic modeling and various flows scenarios were reviewed and refined. The dialogue and communication that took place during this period was also indicative of the extraordinary cooperation and collaboration that was taking shape between the Member Units, Santa Ynez River Water Conservation District, the City of Lompoc, NMFS, and Reclamation.

C. Hilton Creek Watering System

During 1998-1999, Bradbury Dam was modified by Reclamation pursuant its Safety of Dams Act responsibilities to enhance its seismic safety. The seismic retrofit project resulted in 0.05 acres of aquatic habitat loss. As mitigation for this loss the permanent Hilton Creek Watering System was constructed.

Reclamation delivers water to Hilton Creek through this newly constructed watering system (inaugural ceremony December 16, 1999) based on the considerations outlined in the BO. The water supply line makes it possible to provide year round flows in lower Hilton Creek which would otherwise be an ephemeral stream. In general, water is released to maintain flows between 1.5 and 5 cfs in Hilton Creek, depending upon water year type, natural flow in Hilton Creek, reservoir storage,

and other factors such as the presence of spawning and/or rearing steelhead, and water quality (temperature and dissolved oxygen). In accordance with the BO, releases to Hilton Creek are managed by the Adaptive Management Committee (AMC) discussed further below.

D. Surcharge

As part of the implementation of the Biological Opinion, Reclamation proposes to surcharge the reservoir 3.0 feet above the current operational level. The purpose of the surcharge is to provide water for steelhead rearing support in the mainstem, increase steelhead migration opportunity and provide an adaptive management account (See **SWRCB Staff Exhibit by Reference, #11, BO, page 7**). Reclamation currently has the capability to surcharge the reservoir by 0.75 feet. If Reclamation is unable to achieve the 3.0 foot surcharge by 2005, Reclamation will be required to reinitiate consultation with NMFS (See **SWRCB Staff Exhibit by Reference, #11, pg. 6**)

The 3.0 foot surcharge will give Reclamation the capability of storing an additional 9200 acre-feet for steelhead purposes and is proposed to be phased in over a 5-year period (2000-2005) to allow for environmental compliance and construction considerations. In this regard COMB and Reclamation have jointly prepared a DEIR/DEIS in an effort to analyze the environmental effects of implementing the requirements of the BO and FMP. The document was released on July 24, 2003 and provided to the public for a 60-day comment period.

E. Fishery Memorandums of Understanding

Beginning in 1994 and again in 1996, Memorandums of Understanding for Cooperation in Research and Fish Maintenance were signed (MOU-CRFM)¹ (**CCRB Exhibit 12**) Through the

¹ The parties to the 1994 MOU included: Reclamation, the US Fish and Wildlife Service, the California Department

provisions of the MOU-CRFM, the parties agreed to provide for water releases into the Santa Ynez River of up to 2,000 af per year for the purpose of fishery studies, and to provide water for habitat, critical life stages, and/or passage of fish downstream.

As part of the MOU-CRFM, a technical advisory committee and an oversight committee were created and are referred to as the Santa Ynez River Technical Advisory Committee (SYRTAC) and the Consensus Committee (CC) respectively.

Meetings of the SYRTAC and the CC are typically held locally and conducted in open public forum format. Notices and agendas are sent to all interested parties prior to meetings.

The SYRTAC is composed of persons with special training or experience in fishery biology, engineering, hydrology, and water supply. The SYRTAC meetings have been historically chaired by the Department of Fish and Game. The SYRTAC collects, analyzes, and shares information related to the Santa Ynez River watershed fisheries, and makes recommendations for releases of water related to fisheries. SYRTAC was also tasked with preparing the Lower Santa Ynez River Fish Management Plan (FMP) dated October 2000. **(CCRB Exhibit 35)** The goal of the FMP is to identify, evaluate and implement management actions that will benefit fishery and aquatic based natural resources in the lower Santa Ynez River.

The CC reviews the work and recommendations of the SYRTAC and addresses policy issues. The CC is chaired by Reclamation.

Subsequent to the issuance of the BO, and effective December 2000, a "Memorandum of Understanding to Support Implementation of the National Marine Fisheries Service Biological Opinion and the Santa Ynez River Technical Advisory Committee Lower Santa Ynez River Fish

of Fish and Game, the Santa Ynez River Water Conservation District, Improvement District No. 1, Ynez River Water

Management Plan” (MOU-BO&FMP) was executed.² The MOU-BO&FMP is similar to the MOU-CRFM in form, but includes certain provisions of the BO for general coordination and implementation purposes.

V. SETTLEMENT AGREEMENT

A copy of the Settlement Agreement executed between the Cachuma Conservation Release Board (CCRB)³, Santa Ynez River Water Conservation District, Santa Ynez River Water Conservation District Improvement District No. 1, and the City of Lompoc, Relating to the Operation of the Cachuma Project,” dated December, 2002 (“Settlement Agreement”) was forwarded to the Board on February 20, 2003 by the CCRB. (CCRB Exhibit 220A) It is Reclamation’s position that the provisions of the Settlement Agreement are compatible with the continued operation and maintenance of Bradbury Dam and Cachuma Reservoir as generally described above. While Reclamation is not a signatory to the Settlement Agreement, Reclamation supports the Settlement Agreement, which resolves longstanding issues relative to the Lower Santa Ynez River, operations at Bradbury Dam and a number of the issues that have been identified by the Board in this hearing.

VI. SWRCB ENVIRONMENTAL IMPACT REPORT (SWRCB EIR)

Reclamation has provided comments to the Draft SWRCB EIR, and we wish to reiterate here

Conservation District, the Santa Barbara County Water Agency, and the Cachuma Conservation Release Board.

2 The parties to the 2000 MOU consist of: Santa Ynez River Water Conservation District, Improvement District No. 1, Cachuma Conservation Release Board, Santa Ynez River Water Conservation District, City of Lompoc, California Department of Fish and Game, US Bureau of Reclamation, US Fish and Wildlife Service, Santa Barbara County Flood Control and Water Conservation District and the Santa Barbara County Water Agency.

3 The CCRB is a joint powers agency consisting of the City of Santa Barbara, Montecito Water District, Goleta Water

that we recommend that the Board select alternative 3C as its preferred alternative. We find that after consideration of the benefits and impacts to public trust resources, our contractual obligations, and Cachuma Project purposes and operations, that Alternative 3C provides the best balance.

VII. SUMMARY

As displayed in my testimony and the testimony of others, there are a number of natural, physical, and contractual aspects and constraints that challenge Reclamation's prudent operation of the Cachuma Project on a daily basis.

We have consciously sought out input from the general public as well as that of experts and beneficiaries regarding the Cachuma Project and the resources it effects. Unanimous consent was not always possible with the differing views put forth, however, all perspectives were duly considered in formulating our decisions to move forward.

The benefits of the cooperation and collaboration displayed in the Consensus Committee, SYRTAC, Settlement Agreement, and ESA consultation amongst all of the participating parties cannot be overstated.

Through our participation and experience of the cooperation and collaboration noted above, Reclamation believes that the implementation of the measures under the BO, the Fish Management Plan, and the Settlement Agreement will provide for the protection of prior downstream water rights and public trust resources.

As such Reclamation requests that the Board adopt the Settlement Agreement for downstream water rights on the Santa Ynez River below Bradbury Dam, and approve the proposed

modifications to the terms and conditions of Permits 11308 and 11310 (DOI-10), while recognizing the benefits of the measures outlined in the BO as appropriate to address the public trust resource issues and for the protection of downstream water rights.