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

6 **I. INTRODUCTION**

7 I, Michael P. Jackson, declare as follows:

8 I am the Deputy Area Manager for the South Central California Area Office of the United
9 States Bureau of Reclamation ("Reclamation"), Mid Pacific Region. I have worked for Reclamation
10 since 1982. I received my Bachelor of Science degree in Civil Engineering from the University of
11 the Pacific located in Stockton, California, and began employment with Reclamation shortly after
12 graduation. I have held various positions with Reclamation in my career, including Hydraulic
13 Engineer; Chief, San Joaquin Planning Branch; Bay Delta Projects Officer; Mid-Pacific Regional
14 Liaison; and Reclamation Liaison to the Assistant Secretary for Water & Science. A true and correct
15 copy of my statement of qualifications is submitted contemporaneously herewith as **DOI-1a** and
16 incorporated herein by reference.

17 The statements made in this declaration are based upon information or facts of which I have
18 personal knowledge, or are based upon information which I believe to be true. If called as a witness,
19 I could and would testify competently to the statements contained in this declaration.

20 **II. PURPOSE OF TESTIMONY**

21 Reclamation is seeking to modify Permits 11308 and 11310 to change the place and purpose
22 of use as set forth in the permits. The purpose of this testimony is to outline and present the
23 background and operations of the Cachuma Project, as well as to describe the contractual
24 obligations and operational constraints on deliveries from the Cachuma Project. This testimony and
25 presentation will support that approval of the petitions for change in place and purpose of use will
26 not result in any changes in Cachuma Project operations and flows in the Santa Ynez River as
27 compared to the operations and flows that would exist if water from the Cachuma Project were
28 delivered only to areas within the current place of use.

 This testimony will also address the issue of Reclamation's compliance with Water Right

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2 Order 94-5 issued by the State Water Resources Control Board ("State Board") in 1994.
3 Reclamation has acted in good faith to comply with each condition set forth in the State Board's
4 order. This testimony will show that Reclamation is in compliance or has made a good faith effort
5 to comply with each of the conditions listed in Order 94-5. Therefore, the State Board should not
6 take any enforcement action against Reclamation.

7 **III. BACKGROUND OF THE CACHUMA PROJECT**

8 The Cachuma Project ("Project") in Santa Barbara, California consists of Lake Cachuma,
9 formed by Bradbury Dam located on the Santa Ynez River, and conveyance facilities including
10 Tecolote Tunnel and the South Coast Conduit. The Project was designed to provide a supplemental
11 water supply for irrigation and municipal and industrial purposes. Reclamation constructed the
12 Project, which was authorized in 1948. (See **DOI-1b**, incorporated herein by reference).
13 Construction began in 1950 and was completed in 1956. Principal features of the Project include
14 five storage dams which form reservoirs with a total capacity of about 191,600 acre-feet,
15 approximately 28 miles of pipelines, 7.5 miles of tunnels and over 100 miles of laterals.

16 **A. Facilities of the Project**

17 Bradbury Dam is located on the Santa Ynez River approximately 25 miles northwest of Santa
18 Barbara. It is a zoned earthfill structure, 279 feet high, has a crest length of 3,350 feet and contains
19 approximately 6.7 million cubic yards of material. The reservoir formed by the Bradbury Dam,
20 called Lake Cachuma, had an original capacity of 205,000 acre-feet but the capacity has been
21 reduced by siltation to approximately 190,400 acre-feet. The lake covers over 3,200 acres when full
22 and has a 42-mile shoreline. The dam has a concrete-lined spillway on the left abutment, which is
23 controlled by four 50 feet wide by 30 feet high radial gates, and has a capacity of approximately
24 160,000 cubic feet per second. The river outlet works, which consists of two 30-inch-diameter
25 hollow jet valves and one 10-inch-diameter butterfly valve, currently has a capacity of 150 cubic feet
26 per second.

27 In 1998-1999, Reclamation constructed a pipeline to supply water directly from the lake to
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2 Hilton Creek, a tributary to the Santa Ynez River approximately 200 feet downstream of the dam.
3 The pipeline provides a year-round source of water flow to Hilton creek that will assist fish survival
4 during the summer months until natural flow resumes in the winter. The Hilton Creek Pipeline
5 currently has a capacity of approximately 5 cubic feet per second. There are plans in effect to
6 increase the flow up to 10 cubic feet per second.

7 There is also a direct connection between the Central Coast Water Authority's (CCWA) Santa
8 Ynez Aqueduct Extension pipeline and the river outlet works which allows CCWA to pump state
9 water into Lake Cachuma for temporary storage and release down the Tecolote Tunnel for delivery
10 to the Santa Barbara area. This storage and conveyance of non-project water is allowed under
11 Contract Number 5-07-20-W1282. The system has the capacity to pump approximately 22 cubic
12 feet per second into the lake.

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

16 The South Coast Conduit, a high-pressure concrete pipeline, extends from the Tecolote
17 Tunnel outlet to the lower end of the of the Carpinteria service area. The pipeline is approximately
18 28 miles long and varies from 48 to 27 inches in diameter. There are four regulating reservoirs
19 located at strategic places along the conduit to equate the inflow to the instantaneous draft on the
20 conduit. These reservoirs proceeding downstream are, respectively, Glen Anne, located a short
21 distance from the outlet portal of the Tecolote Tunnel; Lauro, in the westerly edge of Santa Barbara
22 and about 10 miles downstream on the conduit; Ortega, north of Summerland and 18 miles
23 downstream; and Carpinteria located at the end of the conduit. The conduit passes through the
24 Sheffield Tunnel about 1.5 miles downstream from Lauro Reservoir. The tunnel is a 6 foot diameter,
25 horseshoe shaped tunnel with an approximate length of 6,000 feet. Lateral systems distribute water
26 from the conduit to crop lands of the Goleta, Montecito, and Carpinteria Water Districts, and to
27 municipal users in the city of Santa Barbara.

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

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

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

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

20 **IV. PETITION FOR CHANGE IN PLACE AND PURPOSE OF USE**

21 Reclamation seeks to modify the Place of Use and the Purpose of Use. This modification
22 will result in no change in the amount of water furnished to the Member Units pursuant to their water
23 service contract, nor will the modification result in a change in the amount of water released to
24 satisfy downstream obligations. In sum, this Petition will result in no change in either deliveries or
25 Project operations.

26 **A. Contractual Obligations of The Project**

27 The Cachuma Operation and Maintenance Board ("COMB"), represents five member units
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2 who are the Project beneficiaries: Carpinteria Valley Water District; Montecito Water District;
3 Goleta Water District; City of Santa Barbara; and Santa Ynez River Water Conservation District,
4 Improvement District #1 (collectively "Member Units").

5 COMB operates and maintains the Tecolote Tunnel and the South Coast Conduit on behalf
6 of Reclamation. The Bradbury Dam is staffed by Reclamation and water releases into the River are
7 the responsibility of Reclamation.

8 While the Cachuma Project was originally designed and authorized with a safe yield of
9 approximately 32,000 acre-feet per year, that amount has diminished over the many years due to
10 siltation in the reservoir to approximately 25,700 acre-feet per year. The safe yield is that amount
11 of water which can reasonably and beneficially be used each year by the Member Units with minimal
12 risk and still ensure water is available in drought years.

13 The Master contract (Contract No. I75r-1802R) between Santa Barbara County Water
14 Agency and Reclamation is a water service contract and allows for an average quantity of project
15 water to be delivered to the 5 Member Units of 25,714 acre-feet per year. (DOI-1c, incorporated
16 herein by reference). The Member Units submit an annual water schedule to Reclamation for review
17 and approval each year. That Master contract clearly states that the parties agree that the Cachuma
18 Project shall continue to be operated to provide for the protection of prior downstream rights holders
19 and public trust resources in accordance with a priority for Project Water Rights.

20 Before contract storage and delivery obligations to the Member Units are satisfied,
21 Reclamation uses Project water to satisfy releases required by Federal Law, State Law and Project
22 water rights as determined by the State Board.. Because downstream releases occur before
23 Reclamation's deliveries to the Member Units, downstream releases are not affected by contract
24 delivery obligations. DOI-1d, incorporated herein by reference shows deliveries to the Member
25 Units for the years 1958 to 1998. This table was compiled from data taken from the Annual Progress
26 Reports submitted to the State Board by Reclamation.

27 A Warren Act contract (Contract No. 5-07-20-W1282) between the Central Coast Water
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2 Authority (CCWA) and Reclamation allows for the storage and conveyance on non-project water
3 (e.g. State water) into Lake Cachuma. (DOI-1e, incorporated herein by reference). CCWA is
4 composed of the five Member Units plus the City of Buelton, the City of Guadalupe, and the City
5 of Santa Maria. The water storage and conveyance is subject to excess capacity available in the
6 Federal facilities. To the extent of excess capacity, CCWA has the right to store and/or convey up
7 to 13,750 acre-feet of non-project water per year in and through the Project. In order of priority, this
8 contract is secondary in nature to the Master contract for delivery of Project water and is the first
9 water to spill in an event when the Lake surface elevation is above the maximum storage elevation.

10 **B. Operations Of the Project**

11 Project Operations begin with the diversion and storage of Santa Ynez River water at Lake
12 Cachuma behind Bradbury Dam pursuant to Permits 11308 and 11310. Water is then diverted
13 through the Tecolote Tunnel to the south coast area via the South Coast Conduit. At that point the
14 water is delivered to the individual water users through distribution systems operated by the Member
15 Units. A small amount of water, an average of approximately 180 acre-feet annually, is diverted
16 directly from the lake for the County park facilities.

17 Historically water was also delivered to the Santa Ynez River Water Conservation District
18 - Improvement District No. 1 (SYRWCD ID#1), a Member Unit, through a pipeline connected
19 directly to the river outlet works. In 1995-1997, the Central Coast Water Authority (CCWA)
20 constructed the Santa Ynez Aqueduct Extension, bringing State Water Project ("SWP") water to the
21 south coast. The ID#1 pipeline was modified and became part of the Extension, allowing CCWA
22 to pump water into Lake Cachuma for release to the Santa Barbara area through the Tecolote Tunnel
23 and South Coast Conduit. With the completion of the Extension, the SYRWCD ID#1 began taking
24 deliveries of SWP water. SYRWCD ID#1's Contract for Cachuma Project water serves as a basis
25 for an Exchange Agreement with the other Member Units whereby SYRWCD ID#1's Cachuma
26 Project water supply is exchanged for a like amount of South Coast SWP water delivered via the
27 coastal Aqueduct by the SWP. It is thus entirely appropriate to consider SYRWCD ID#1 as a
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2 Member Unit. This exchange has not reduced the overall deliveries of Project water to the Member
3 Units under the Master Contract (**DOI-1c**), and thus does not reduce demand of the Member Units
4 from the Project.

5 Fish Releases are made through either or both the river outlet works and the Hilton Creek
6 Pipeline. Starting in the 1993 Water Year, releases to the Santa Ynez River were started to maintain
7 fish existing in the river below the dam and to accommodate and accomplish fishery studies. In
8 1994, a Memorandum of Understanding (MOU) for Cooperation in Research and Fish Maintenance
9 was signed. Through the provisions of the MOU, Reclamation, the Member Units, and other
10 interested parties agreed to provide for water releases up to 2,000 acre-feet per year for purposes of
11 fishery studies, as well as providing water for habitat, critical life stages, and/or passage of fish
12 downstream.

13 On August 18, 1997, the Southern California steelhead (*Onchorhynchus mykiss*) Evolutionary
14 Significant Unit was listed as an endangered species under the Endangered Species Act ("ESA") by
15 the National Marine Fisheries Service ("NMFS"). As a result of that listing and the requirements of
16 ESA, Reclamation entered into consultation with NMFS pursuant to section 7 of the ESA in regards
17 to Cachuma Project operations. A Biological Assessment describing Reclamation's actions and
18 assessing the effects of its action was prepared and submitted to NMFS on June 14, 1999. NMFS
19 issued a Biological Opinion on September 11, 2000. (**SWRCB Staff Exhibit 11.**) The Biological
20 Opinion concludes that the future Project operations proposed by Reclamation in the Biological
21 Assessment will not jeopardize the continued existence of the steelhead. Those operations include,
22 but are not limited to, certain additional target flow releases proposed by Reclamation to protect
23 steelhead spawning, rearing and migration. By law, these target flow releases constitute an
24 additional set of requirements affecting Project operations that must be observed if Reclamation is
25 to receive the benefits of an incidental take statement issued by NMFS. The requirements of the
26 Biological Opinion will be further addressed in Phase II of this hearing.

27 Water is also released to the Santa Ynez River through either or both the outlet works or the
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2 Hilton Creek Pipeline for downstream water rights in accordance with the revised operational
3 procedures as defined by Water Rights Order WR 73-37 (amended by Water Rights Orders WR
4 78-10, 88-2, and 89-18). The objective of these operational procedures is to promote the additional
5 conservation of the water resources of the Santa Ynez River. The procedures are based on
6 maintaining groundwater storage between Bradbury Dam and the Narrows near Lompoc at less than
7 full levels by only making releases from the dam when depleted storage exceeds the defined quantity
8 of 10,000 acre-feet, thus enhancing the capture of tributary surface runoff originating below the dam
9 and reducing runoff to the Pacific Ocean.

10 Pursuant to the Master Service Contract between Santa Barbara County Water Agency,
11 (representing the 5 Member Units), and Reclamation, Project water is stored and diverted for the
12 Project and delivered to the Member Units. Before this contractual obligation is satisfied,
13 Reclamation uses Project water to make releases required under Federal law and State law,
14 including Project water rights. These requirements are fulfilled first and foremost. The Petition for
15 Change in Place and Purpose of Use, if approved, will not change the quantity of deliveries to the
16 Member Units under their contract, nor will it change Project operations. For this reason, the
17 petition before this Board does not result in any reduction in river flows.

18 **I. COMPLIANCE WITH ORDER 94-5**

19 **A. Background**

20 Order WR 94-5, issued on December 1, 1994, required Reclamation to conduct studies and
21 investigations which had been previously required and not yet completed. This order mandated
22 Reclamation to comply with a series of conditions in regards to Reclamation's permits for the
23 Cachuma Project. Since Order WR 94-5 was issued, Reclamation has filed bi-annual reports on the
24 status of the order items in Condition 3. The requirement for those reports ended this year (2000).

25 In early December of 1995 (December 6, 1995) Reclamation and the Member Units met
26 with State Board staff to discuss what "process" and types of studies would be conducted in order
27 to comply with Order WR 94-5.

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2 On February 1 and March 4, 1996, Reclamation brought together interested parties to discuss
3 Order WR 94-5 requirements and compliance. Under the Master Contract (**DOI -1c**) between
4 Reclamation and the Santa Barbara County Water Agency, the Member Units are obligated to
5 conduct studies and prepare such reports as necessary to ensure that Reclamation is in compliance
6 with Reclamation's Water Right Permits for the Project.

7 **B. Compliance with Condition 3 of Order WR 94-5**

8 Reclamation complied with Condition 3(a) of Order WR 94-5 by submitting the Final
9 combined Environmental Impact Statement/Environmental Impact Report for contract renewal to
10 the State Board on December 12, 1995.

11 Reclamation complied with Condition 3(b) of Order WR 94-5 by submitting the
12 Compilation report to the State Board on September 10, 1996. In addition, the Synthesis Report
13 which summarizes the information that was collected from 1993 through 1996 on fishery resource
14 and conditions on the river was submitted to the State Board. Also, the Final Lower Santa Ynez
15 River Fish Management Plan has been prepared. (**DOI-1f**, incorporated herein by reference). This
16 document has had widespread public comment and been revised several times due to interested
17 parties providing valuable input and a mutual interest to ensure it did not conflict with the Biological
18 Opinion received from NMFS during the Section 7 (ESA) process.

19 Reclamation complied with Condition 3(c) of Order WR 94-5 by submitting the Santa Ynez
20 River Vegetation Monitoring Study to the State Board. The State Board acknowledged receipt of
21 the Study by letter dated July 26, 2000.

22 Condition 3(d) requires Reclamation to provide the State Board with information developed
23 and conclusions reached, if any, during negotiations between the Cachuma Water Authority and the
24 City of Lompoc. Reclamation has no direct knowledge of any information developed or conclusions
25 concerning the discussions between the Cachuma Member Units and the City of Lompoc.
26 Reclamation was not part of those meetings. We defer to those parties involved in that process to
27 acknowledge the progress made.

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2 Reclamation complied with Condition 3(e) of Order WR 94-5 by submitting annual progress
3 reports as required under Condition 6 of Permits 11308 and 11310. Those reports have been
4 submitted from 1958 through 1998. The reports detail operational summaries, including Lake
5 Cachuma surface elevations, daily inflow, weather data, water quality analyses of groundwater
6 downstream and at the reservoir outflow into the Santa Ynez River below the dam; separate tables
7 (Table 6) are included in those reports showing various elements analyzed including total dissolved
8 solids (TDS), and groundwater monitoring within the Santa Ynez River Basin.

9 In addition to the annual progress reports Reclamation participated in a water quality study.
10 An Oversight Committee was formed by the Member Units, the Santa Ynez River Water
11 Conservation District, Reclamation and the City of Lompoc. Although the Consultant, Dr. John
12 Bredehoeft, could not reach consensus agreement, which was the desired result, the study did result
13 in an alternative effort being initiated between the Member Units and the City of Lompoc to discuss
14 resolution of longstanding issues.

15 Further, the Draft Environmental Impact Report (EIR) required by the State Board in
16 Condition 4 of Order WR 94-5, will address the water quality element that will determine if there
17 is any evidence that operation of the Cachuma Project has resulted in ongoing water quality
18 degradation.

19 Condition 3(f) of Order WR 94-5 required Reclamation to produce any reports or other
20 studies ordered by the Board. To date, the State Board has not ordered any reports or studies
21 pursuant to this condition. Therefore, Reclamation is in compliance.

22 **C. Compliance with Condition 4 of Order WR 94-5**

23 Condition 4 of Order WR 94-5 required Reclamation to prepare a Draft EIR in connection
24 with the State Board's consideration of modifications to Reclamation's permits in order to protect
25 downstream water rights and public trust resources. The Draft EIR was to be delivered to the Board
26 by July 31, 2000. Reclamation has made a good faith effort to comply with this condition, however
27 the Draft EIR is not yet complete.

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2 In the Fall of 1998, Reclamation met with several downstream and south coast interested
3 parties including State Board staff to solicit comments and suggestions towards a project description
4 and alternatives that would accurately display a wide range of conditions. That consensus effort
5 resulted in what was eventually used for the Notice of Preparation, dated May 14, 1999.

6 In early 1999, as a result of meetings with water users, Reclamation retained the services of
7 Dr. John Gray of URS Greiner Woodward-Clyde to prepare the Draft EIR. During this same time
8 Reclamation had already initiated an extended section 7 consultation under ESA. The Notice of
9 Preparation defined 6 alternatives and tied them to the Biological Opinion, which Reclamation
10 expected to be forthcoming from the NMFS. Between June and December of 1999, background
11 work on the Draft EIR was being completed, but in January 2000, the consultant informed
12 Reclamation they were unable to begin any substantive work on the Draft EIR modeling without
13 a final Biological Opinion. Reclamation immediately informed State Board staff of the delay
14 expected in delivery of the Draft EIR.

15 During this same period, at the request of Reclamation, a copy of the Lompoc Groundwater
16 Model was sent to the State Board and to Stetson Engineers, Inc. to be used in the hydrology-water
17 quality evaluation. This was confirmed by letter dated April 5, 2000, from Donald B. Mooney
18 representing the City of Lompoc to Kathy Mrowka of State Board staff.

19 After receiving a letter from the State Board dated February 21, 2000, Reclamation met
20 directly with State Board staff to discuss the status of the Draft EIR and other items within the
21 Order. At this time Reclamation was instructed by State Board staff to refocus the analysis in the
22 Draft EIR and add new alternatives to the analysis. Additional alternatives were added for a total
23 of nine alternatives.

24 The Final Biological Opinion was transmitted to Reclamation from NMFS on September 8,
25 2000. As a result of significant changes between the Biological Assessment and the Final Biological
26 Opinion, additional time was needed to analyze the nine alternatives with new flow requirements
27 mandated by the final Biological Opinion. The Draft EIR will be transmitted to the State Board as
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2 soon as the additional analysis can be completed.

3 I recognize and am familiar with documents represented in exhibits DOI-1b, DOI-1c, DOI-
4 1d, DOI-1e, and DOI-1f, and the contents thereof. These documents are true and correct copies of
5 the original documents. These documents consist of correspondence, records and contracts which
6 were received or made on or about the dates specified therein, respectively. These documents are
7 kept in the course of the regularly conducted activity and administration of Reclamation.

8 **IV CONCLUSION**

9 Reclamation operates the Cachuma Project to first satisfy downstream releases for water
10 rights, fish and other state and federal mandated requirements. After meeting those requirements,
11 Reclamation satisfies the contractual obligations of the Member Units. Because the Member Units
12 will not receive increased deliveries as a result of the Petition for Change in Place and Purpose of
13 Use, Reclamation will not change its operations as a result of the State Board granting the Petition.
14 Further, Reclamation has complied or made a good faith effort to comply with each and every
15 condition set forth in Order WR 94-5. Therefore, no enforcement action is necessary or appropriate
16 at this time.