amount of habitat created given temperature, dissolved oxygen, and substrate conditions. The Board will reserve authority to reduce or modify the flow requirement if the results of the study demonstrate that the flows do not provide the anticipated benefits to the steelhead fishery, or if greater water supply impacts are discovered. Also, with oversight from the Executive Director, NMFS or CDFW can direct Reclamation to temporarily terminate or reduce the requirement to meet the increased flows to prevent any detrimental effects to the steelhead. Additionally, to maximize benefits to the fishery, an adaptive management approach allows for NMFS, CDFW, Reclamation, and the Member Units to modify the timing of the flows, provided that doing so does not cause any additional water supply impacts above those identified in the FEIR.

To improve the state of knowledge concerning the protection of the steelhead fishery, this order also requires Reclamation to specify one or more metrics that can be used to quantify what would constitute good condition of the fishery at the individual, population, and community levels. This order requires Reclamation to study the feasibility of additional measures that may be necessary to restore the fishery to good condition, including passage around Bradbury Dam, modified instream flows, and measures to address predators and other species with a potential to negatively affect steelhead. The Board will reserve authority to determine the adequacy of the studies and, after satisfactory completion of the studies, to determine whether any additional measures should be implemented consistent with the Public Trust Doctrine to restore steelhead to good condition. If greater habitat gains can be achieved through improvement projects that result in achieving good condition of the steelhead fishery, the Board may require implementation of these projects in lieu of increased flow requirements.

For the protection of downstream rights, this order amends terms 5 and 6 of Reclamation's Permits, as modified by Order WR 73-37 and amended by Order WR 89-18, in accordance with the technical amendments proposed by the parties to the Settlement Agreement, dated December 17, 2002, and agreed to by Reclamation. The technical amendments generally provide for:

1) An alternative measurement location for the "live-stream" determination at San Lucas Bridge (Highway 154) in light of fish water releases that are routinely made and present at that location and have been since 1993;

2) Implementation of the conjunctive operation of the BNA, with respect to determining the application of Curve A and Curve B in determining the BNA credits; and

3) Recognition of additional measurements to be carried out with respect to water flows and quality.

The Board recognizes that the parties may need to negotiate changes to the Settlement Agreement in light of the releases for steelhead required by this order, and will reserve authority to make any amendments to Reclamation's Permits that may be necessary based on any changes to the agreement.

Finally, this order grants Reclamation's 1983 petition to change the place and purpose of use authorized under its Permits. Accordingly, the Permits will be amended to include within the authorized place of use all lands within the Cachuma Member Units' service areas, and a net of 40,250 irrigable acres within a gross area of 205,376 acres, as shown on specified maps. The Permits will also be amended to authorize the following purposes of use: "Irrigation, Municipal, Domestic, Industrial, Salinity Control, Incidental Recreation, Stockwatering, and Fish and Wildlife Conservation."

ORDER

Permits 11308 and 11310 shall be replaced with amended permits that contain all current terms and conditions set forth in the original permits, the applicable terms and conditions adopted pursuant to subsequent decisions and orders, and the terms, conditions, and changes specified herein. In addition, the amended permits shall be updated to include current mandatory terms and conditions. Specific term and condition numbers and

corresponding references to those specific terms and conditions may be updated upon issuance of amended permits.

IT IS HEREBY ORDERED that the United States Bureau of Reclamation's[69] petition to change Permits 11308 and 11310 (Applications 11331 and 11332) is approved.

1. The authorized purpose of use under Permits 11308 and 11310 shall be:

   Irrigation, Municipal, Domestic, Industrial, Salinity Control, Incidental Recreation, Stockwatering, and Fish and Wildlife Conservation.

2. The authorized place of use under Permits 11308 and 11310 shall be:

   The Santa Ynez River including Lake Cachuma and tributaries (including Hilton Creek) for Fish and Wildlife Conservation. All lands included within existing boundaries (205,376 acres) including the areas of service within the political boundaries of the Cachuma Member Units: the Carpinteria Valley Water District, the City of Santa Barbara, the Goleta Water District, the Montecito Water District, and the Santa Ynez River Water Conservation District, Improvement District No. 1, and a net irrigable acres of 40,250 acres within a gross area of 205,376 acres, as shown on maps filed with the State Water Board. Recreational use at Cachuma Reservoir.

IT IS FURTHER ORDERED that Permits 11308 and 11310 shall be amended to reflect the modifications to existing conditions and the addition of new conditions required below, and amended permits shall be issued that are consistent with the current permit template used by the Division of Water Rights.

3. Permits 11308 and 11310 shall be amended to include mandatory permit terms A through Q. Mandatory permit term E shall replace existing permit terms 3 and 11,

[69] The term "right holder" in the following permit terms refers to the Permittee, the U.S. Bureau of Reclamation.

and mandatory permit term O shall replace existing permit term 4 of Permits 11308 and 11310.

4. Standard permit terms 5F and 5R shall replace existing permit terms 1 and 2 respectively of Permits 11308 and 11310.

5. For the protection of downstream rights, existing permit terms 5 and 6 of Permits 11308 and 11310, as modified by Order WR 73-37 and amended by Order WR 89-18, shall be amended in accordance with the technical amendments proposed by the parties to a settlement agreement dated December 17, 2002, and agreed to by right holder, and attached to and incorporated herein by reference (Appendix 2).

   All other sections, paragraphs or subparagraphs of existing permit terms 5 and 6 of Permits 11308 and 11310, as modified by Order WR 73-37 and amended by Order WR 89-18, not specifically amended by the December 17, 2002 agreement or this Order are intended to and shall remain in full force and effect.

6. Existing permit term 7 of Permits 11308 and 11310, as modified by Order WR 73-37 and amended by Order WR 89-18, shall be amended to read as follows:

   > The State Water Board reserves authority to make any amendments to Permits 11308 and 11310, as may be required concerning proper and adequate releases of water for downstream use, and recharge of groundwater, in satisfaction of downstream rights, based on any changes to the December 17, 2002 settlement agreement between the Cachuma Conservation Release Board; the Santa Ynez River Water Conservation District, Improvement District No. 1; the Santa Ynez River Water Conservation District; and the City of Lompoc, following notice and opportunity for hearing.

7. Existing Permit terms 9, 10, 12, and 13 of Permits 11308 and 11310, shall remain unchanged.

8. Right holder is on notice that when the State Water Board determines that any person is violating, or threatening to violate, any term or condition of a right, the State Water Board may issue an order to that person to cease and desist from that violation. (Wat. Code, § 1831.) Civil liability may be imposed administratively by the State Water Board pursuant to Wat. Code, § 1055, or may be imposed by the superior court. The Attorney General, upon the request of the board, shall petition the superior court to impose, assess, and recover those sums. (Wat. Code, § 1846.)

9. Right holder shall comply with the measuring and monitoring requirements as specified in the terms of this right or any reporting requirements by statute, order, policy, regulation, decision, judgment or probationary designation. The more stringent requirement shall control in each instance where there is a conflict or inconsistency between the requirements. Right holder shall comply with the measuring and monitoring requirements of chapter 2.8, title 23, California Code of Regulations.

10. Right holder shall measure the amount of water beneficially used under this right using devices and/or methods satisfactory to the Deputy Director.

    In order to demonstrate compliance with the beneficial use monitoring requirements of this right, right holder shall provide evidence that the devices and/or methods are functioning properly, in a manner satisfactory to the Deputy Director, within thirty days of first use of the device or method, with the reports required by chapter 2.7, title 23, California Code of Regulations, and whenever requested by the Division of Water Rights.

11. Right holder shall comply with the reporting requirements of chapter 2.7, title 23, California Code of Regulations. Right holder shall promptly submit any reports, data, or other information that may reasonably be required by the State Water Board, including but not limited to documentation of water diversion and beneficial use under this right.

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12. Urban water suppliers must comply with the Urban Water Management Planning Act (Wat. Code, § 10610 et seq.) An "urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. This term will be implemented in conjunction with term 34.

13. Agricultural water users and suppliers must comply with the Agricultural Water Management Planning Act (Act) (Water Code, § 10800 et seq.). Agricultural water users applying for a permit from the State Water Board are required to develop and implement water conservation plans in accordance with the Act. An "agricultural water supplier" means a supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. An agricultural water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers.

14. No water shall be diverted or used under this right for commercial and applicable personal medical use cannabis cultivation unless the water right holder is in compliance with all applicable conditions, including the numeric and narrative instream flow requirements, of the current version of the State Water Board's Cannabis Cultivation Policy – Principles and Guidelines for Cannabis Cultivation.

IT IS FURTHER ORDERED that for the protection of fish and other public trust resources in the Santa Ynez River and to prevent the waste and unreasonable use of water, Permits 11308 and 11310 are amended to include the following new conditions, as set forth below:

15. Except as otherwise provided in this term and in term 16 below, right holder shall operate and maintain the Cachuma Project and implement conservation measures including but not limited to those described in Revised Section 3 (Proposed Project) of the Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River, June 2000, and right holder shall comply with all of the Reasonable and Prudent Measures 5 and 7 through 13, set forth at page 68, and the Terms and Conditions, set forth at pages 70–78, in the National Marine Fisheries Service's (NMFS) Biological Opinion: U.S. Bureau of Reclamation

operation and maintenance of the Cachuma Project on the Lower Santa Ynez River in Santa Barbara County, California, September 2000 (2000 Biological Opinion). To prevent any conflicting requirements upon issuance of any new Biological Opinion, the State Water Board's Executive Director (Executive Director) may modify this term upon request of right holder after receiving the approval of NMFS. Any modification to this term shall be made in accordance with section 780 of title 23 of the California Code of Regulations.

a. For the protection of fish and other public trust resources in the Santa Ynez River below Bradbury Dam, right holder shall release or bypass water to maintain the following Mainstem Rearing instream flows in the Santa Ynez River, as set forth below, at all times.

Table 1 Flows
Mainstem Rearing Flows

Reservoir Spill[a] (af)	Lake Storage[b] (af)	Flow (cfs) Requirements at:		
		Highway 154	*Alisal Road*	*Stilling Basin & Long Pool*
≥ 20,000	NA	10	1.5[c]	-
< 20,000	≥ 120,000	5	1.5[d]	-
	≥ 30,000 and < 120,000	2.5	1.5[d]	-
	< 30,000	-	-	30 af/mo[e]

NA - not applicable
[a]Reservoir spill is calculated cumulatively over the course of the water year (FEIR, Vol. IV, Appendix F, Draft Technical Memorandum No. 5, p. 6), which begins October 1 (FEIR, Vol. IV, Appendix F, Draft Technical Memorandum No. 5, p. 8).
[b]Lake storage is measured on the first day of each month. (FEIR, Vol. IV, Appendix E, Technical Memorandum No. 1, p. 5.)
[c]The specified flow applies only when steelhead are present.
[d]The specified flow applies only if there was reservoir spill greater than or equal to 20,000 af in the prior water year and steelhead are present in the Alisal Reach.
[e]When there is less than 30,000 af of total water stored in the reservoir, regardless of origin, right holder shall provide periodic releases of 30 af per month to refresh the Stilling Basin and Long Pool directly downstream of the dam to provide for steelhead rearing in these areas. Less than 30 af per month may be released upon determination by the fishery agencies and the State Water Board that less water is necessary to refresh the Stilling Basin and Long Pool directly downstream of the dam for steelhead in these areas.

b. Notwithstanding the foregoing, right holder is not required to implement any of the tributary passage impediment and barrier fixes described in Revised Section 3 (Proposed Project) of the Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River, June 2000.

c. Right holder shall proceed with rescue efforts within a period necessary to prevent steelhead mortality following any flow interruption of the Hilton Creek Watering System. Right holder shall post all flow interruptions of the Hilton Creek Watering System and rescue efforts on a publicly accessible website.

16. Right holder shall release or bypass water to meet the Table 2 Flows, set forth below, at all times during Wet and Above Normal water year types.

a. For purposes of this term, water year types shall be classified in accordance with the following index:

Cachuma Reservoir Inflow Index for Water Year Classification

Water Year Classification (Oct. 1 – Sep. 30)	Index (Cachuma Reservoir Inflow) (af)
Wet	> 117,842
Above Normal	≤ 117,842 > 33,707
Below Normal	≤ 33,707 > 15,366
Dry	≤ 15,366 > 4,550
Critical	≤ 4,550

b. Table 2 Flows are triggered when the cumulative Cachuma inflow (beginning October 1 of each year) of 33,307 af is first reached during a water year. Cumulative Cachuma inflow starts at zero at the beginning of every water year.

Table 2 Flows
(Wet and Above Normal Water Year Types)

Minimum Flow Requirement*	Period of Flow	Purpose of Flow
48 cfs	02/15 to 04/14	Spawning
20 cfs	04/15 to 06/01	Incubation and Rearing
25 cfs	06/02 to 06/09	Emigration
Ramp to 10 cfs by 06/30		
10 cfs	06/30 to 10/01	Rearing and Resident Fish Maintenance
5 cfs	10/01 to 02/15	Resident Fish

*The above flows shall be maintained at both San Lucas and Alisal bridges. These flows may be met with both natural stream flow and releases from Bradbury Dam.

c. During any given water year, Table 2 Flows may be reduced or terminated for a period not to exceed the remainder of the water year if CDFW or NMFS determines that the flows are likely to harm the fishery. Right holder shall temporarily reduce or stop releases to meet the Table 2 Flows if and as directed by the Director of CDFW or the Assistant Regional Administrator for Protected Resources in the Southwest Region of the NMFS. Within three business days of receiving direction from CDFW or NMFS to temporarily reduce or stop releases to meet the Table 2 Flows, right holder shall notify the Executive Director and provide all relevant supporting information. The Executive Director may disapprove the direction to reduce or terminate the flows if the Executive Director disagrees with the determination that Table 2 Flows would harm the fishery, after which the Executive Director will confer with NMFS and CDFW. Right holder shall make available on a publicly accessible website the determination by CDFW and NMFS that flows will be modified, including information regarding the reason the flows are likely to harm the steelhead, any new

regimes that are implemented, and the expected duration of the modification. In exercising authority under this paragraph, the Executive Director shall not reduce any water releases other than releases to meet Table 2 Flow requirements.

d. Right holder shall implement a change to the schedule of the Table 2 Flows as directed by CDFW or NMFS, if CDFW or NMFS, right holder, and the Member Units have agreed to an accounting method that ensures that the change will not cause a greater water supply impact than the impact that would occur if water were released to meet the Table 2 Flows in accordance with the existing schedule. Within five business days of reaching an agreement that allows for the Table 2 Flow schedule to be changed, right holder shall notify and submit the agreement to the Executive Director, who may disapprove any changes to the schedule. Any change to the schedule of Table 2 Flows shall comply with the requirements of the California Environmental Quality Act Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387).

e. If CDFW or NMFS directs a change to the schedule of Table 2 Flows pursuant to paragraph (16b) above, but right holder and the Member Units do not agree to the change consistent with paragraph (16d), CDFW or NMFS may request the Executive Director to require the change, and the Executive Director may require right holder to implement the change, provided that the Executive Director determines that the change will not cause a greater water supply impact than the impact that would occur if water were released in order to meet the Table 2 Flows in accordance with the existing schedule.

f. Within one year of the adoption of this Order, right holder shall confer with the Member Units to analyze reducing the safe yield of the Cachuma Project to prevent the loss of beneficial uses of the project during severe shortages. In determining the project's safe yield, right holder and Member Units shall

consider the increased flow requirements (Table 2 Flows) in wet and above normal water years, past multi-year droughts, and the potential for more frequent and severe periods of drought in the future. Consideration shall also be given to revision of the assumptions used in prior determinations of the "operational yield" of the project. Within 18 months of the adoption of this Order, right holder shall advise the Executive Director in writing of any current or planned reduction to the Cachuma Project's safe yield.

17. For all draft and final plans, studies, and reports required by this Order, right holder shall consult with CDFW and NMFS. Consultation shall include, but need not be limited to, the following:

(1) Within 30-business days of adoption of this Order, right holder shall contact and schedule ongoing and regular consultation meetings with CDFW and NMFS. Right holder, NMFS, and CDFW shall develop and identify study and plan components during their consultation meetings.

(2) Upon completion of any study plan component, whether draft or final, right holder shall transmit the components to CDFW and NMFS.

(3) Right holder shall provide CDFW and NMFS with at least 30-business days to comment on the documents prior to submittal to the Deputy Director. This 30-business day comment period shall apply to all draft, final, or revised submissions to the Deputy Director.

(4) Right holder shall include any comments submitted by CDFW or NMFS in any submission to the Deputy Director, shall explain how the comments were addressed, and shall explain right holder's reasons for not incorporating changes based on comments from CDFW or NMFS, if applicable.

(5) In addition to the regular ongoing meetings, right holder shall hold an annual meeting with CDFW and NMFS during each year that studies described in this Order are being conducted. The annual meeting will be held in July, unless a different date is mutually agreed upon in writing. At the annual meeting, right

holder must present data collected in the previous year and report progress on each study identified in the approved study plan and compliance with this Order.

18. Within 90 days from the date of this Order, right holder shall submit to the Deputy Director for approval, a plan, describing the measures in place or that will be implemented to ensure compliance with terms 15 and 16. If the plan includes future measures, a schedule for implementation of those measures must also be provided. The Deputy Director may direct right holder to make any changes to the plan reasonably necessary to ensure compliance.

19. Right holder shall conduct a study that evaluates the effectiveness of the Table 2 Flows at protecting public trust resources as evaluated over five Wet or Above Normal water year types. Right holder shall complete, submit, and post a report on the results of the study within a year after the conclusion of the fifth Wet or Above Normal water year unless the Executive Director approves a time extension. This study shall be conducted in a manner that provides comparable data to the current monitoring data required by term 26. At a minimum the study must evaluate:

(1) The effects of Table 2 flows on steelhead in the river and quantification of the amount of additional habitat provided, including habitat below the Alisal Reach;

(2) The quality and suitability of the additional habitat, considering temperature, dissolved oxygen, and substrate;

(3) Any detrimental effects, demonstrated by clear, scientific evidence, to steelhead in the river caused by the additional flows, such as reduced cold water refugia; and

(4) Whether benefits to the steelhead fishery could be maximized through an alternative flow schedule with equivalent or reduced water supply impacts.

(5) The extent to which the Table 2 Flows can be conjunctively used to satisfy downstream water rights and whether any adjustments to the "above Narrows"

account or the "below Narrows" account are warranted to minimize the effects of release or bypass flow requirements on Cachuma Project yield. In performing this analysis, right holder shall confer with interested parties regarding any adjustments to the above Narrows account and/or the below Narrows account.

20. Right holder shall develop a plan for conducting the studies in term 24 and any other studies that may be necessary to determine the measures necessary to protect the public trust resources of the Santa Ynez River and keep the steelhead fishery in the Santa Ynez River in good condition at the individual, population, and community level. Submittal of the plan for approval by the Deputy Direction is due within 6 months of the date of this Order unless the Deputy Director provides for an extension of this timeframe. The study plan shall identify the proposed deadlines for completing: each of the individual studies, including the sequencing of the studies; draft reports of the findings of the studies for review and comment by CDFW and NMFS; and the final reports of the results. The study plan shall also include a description of the appropriate metrics to be used to evaluate to what extent a given measure will restore steelhead to good condition.

21. Right holder shall conduct the studies pursuant to the approved study plan described in term 20, including any changes directed by the Deputy Director, including phasing, refinement, or augmentation of studies. The Deputy Director may also require updates and revisions to the study plan on a periodic or as-needed basis as studies are completed or new information becomes available. To the extent possible, studies shall be conducted concurrently and in coordination with any other studies that right holder may be conducting or planning to conduct. Upon written agreement by CDFW and NMFS, the Deputy Director may determine that existing studies fulfill applicable study requirements of this condition.

22. After completing each study, right holder shall submit a report to the Deputy Director, CDFW, and NMFS that describes the study and its results and post the report on a publicly accessible website. Right holder shall also develop and submit

a final report within a year after completion that summarizes all of the findings of the above reports and identifies specific measures that could be implemented to achieve good condition of the steelhead population in the Santa Ynez River. Unless the Deputy Director approves a time extension, right holder shall submit the summary report one year after the final study report is submitted.

23. Right holder shall evaluate the following in each study required in term 24:

(1) The extent to which the measure could benefit steelhead and other public trust resources;

(2) The technical and regulatory feasibility of the measure;

(3) The costs of the measure;

(4) Any potential impacts of the measure, including potential impacts to water quality, fishery resources, water supplies; and

(5) Any other study-specific criteria indicated below.

24. Right holder shall, at a minimum, conduct the following studies to evaluate measures that may be necessary to keep the steelhead fishery in the Santa Ynez River below Bradbury Dam in good condition at the individual, population, and community level and shall be informed by current scientific information on southern California steelhead recovery, including NMFS' 2012 Final Southern California Steelhead Recovery Plan:

a. Study and evaluate options for providing steelhead passage of adults and smolts around Bradbury Dam including: fish ladders, locks, elevators, and trap-and-truck operations, including associated collection facilities. The study shall also include, but shall not be limited to, an evaluation of reservoir outlet works, collectors, transport methods, and upstream and downstream release sites. Unless the Deputy Director provides for a variation, the study shall conform to the Santa Ynez River Fish Passage Feasibility Analysis

submitted by NMFS (on February 16, 2004) and CDFW (on February 17, 2004) during this proceeding. Right holder shall complete and submit a report on the results of the study to the Deputy Director, CDFW, and NMFS within 24 months from the date of this Order.

b. Conduct an instream flow study to determine conditions necessary to keep the steelhead in the Santa Ynez River watershed in good condition at the individual, population, and community levels. This study shall include analyses of both flow and non-flow measures that could improve the quantity and quality of steelhead habitat. At a minimum, the study must:

(1) Evaluate the flow conditions necessary to protect each stage of the steelhead life cycle and maintain the abundance, productivity, genetic and life history diversity, and spatial structure of the population, including an evaluation of the needed frequency, duration, timing, and rate of change of flows for the protection of steelhead and other native species;

(2) Assess the flow conditions necessary to ensure hydrologic connectivity and opportunities for movement between the habitats needed by each stage of the steelhead life cycle, including tributary access, and appropriate channel morphology and sediment transfer that will provide sufficient habitat to keep steelhead in good condition;

(3) Assess potential instream or streamside habitat restoration measures and the potential effects on quantity and quality of steelhead habitat in relation to flow;

(4) Evaluate water quality issues that may impact steelhead including but not limited to elevated temperatures, low dissolved oxygen, and sediment transport and potential measures to address these issues;

(5) Evaluate operational changes to Bradbury Dam that could improve steelhead conditions; and

(6) Evaluate whether the timing of releases made pursuant to Water Rights Order 89-18 should be revised.

c. Study and evaluate the effects of predation, particularly by piscivorous (fish-eating) fish, and nonnative species on steelhead in the Santa Ynez River, and measures that could be implemented to reduce the impacts of those species on steelhead in the river. The study shall specifically evaluate the effects of flows, including but not limited to Table 2 Flows, on supporting habitat conditions that reduce predation and the proliferation of nonnative species, as well as reasonable measures to prevent the introduction or reintroduction of invasive species. In addition, the study shall determine the effects of beaver dams on passage opportunities and distribution of steelhead and measures that could be implemented to reduce any impacts on steelhead in the river from beavers.

25. Right holder shall use either a gauge or methodology satisfactory to CDFW and NMFS and approved by the Deputy Director to maintain a continuous record of the daily instream flows in the Santa Ynez River at Highway 154 and at Alisal Road, or other sites that the Deputy Director deems suitable, sufficient to document compliance with the terms of this permit. The Deputy Director may require revisions to the methodology or frequency of recording upon a showing of good cause and written agreement from CDFW and NMFS. Unless the Deputy Director approves a variation, right holder shall make instream flow records available daily on a publicly accessible website on as close to a real-time basis as feasible.

26. Right holder shall implement the monitoring program described in the 2000 Revised Biological Assessment with consideration of other existing monitoring programs including the California Coastal Salmonid Monitoring Plan. The Deputy Director may amend the monitoring requirements to require additional monitoring or refine existing requirements.

27. Right holder shall submit a report and all supporting data by December 31 of each year that documents right holder's compliance with all permit terms for the previous

water year ending September 30. To document compliance with term 15, right holder shall submit annually to the Deputy Director the document produced in accordance with paragraph (1) of the term and condition that implements Reasonable and Prudent Measure No. 11 of the 2000 Biological Opinion. These reports and all supporting data shall be submitted to the Division of Water Rights in a format designated by the Deputy Director and shall be made readily available on a publicly accessible website. The Deputy Director may amend reporting requirements to determine compliance with all permit terms.

28. The State Water Board reserves authority to modify the terms of this permit as set forth below to the extent necessary and appropriate to implement Water Code section 100 and the public trust doctrine:

    a. The Executive Director may adjust the Table 2 Flows required by term 16 of this permit.

    b. The State Water Board may require right holder to implement any measures to restore or improve fish passage, control predators and nonnative species, or to improve habitat that may be necessary to keep steelhead in good condition. Any subsequent determination concerning the flows or other measures necessary to protect public trust uses and keep fish in good condition should be made with the benefit of the study of the effects of the Table 2 Flows and the results of the studies required by term 24 and any other information available at the time, and shall be made in accordance with section 780 of title 23 of the California Code of Regulations. Right holder shall implement any changes to flow requirements or other required measures in accordance with any time schedule established by the State Water Board once right holder has obtained any necessary regulatory approvals.

    c. Upon a showing of good cause by right holder, NMFS, and CDFW, the Executive Director may authorize right holder to implement measures that can achieve and keep steelhead in the Santa Ynez River in good condition

instead of meeting some or all of the Table 2 Flows. Prior to implementation, right holder shall obtain NMFS's and CDFW's approvals of final project designs.

29. The State Water Board reserves continuing authority to modify this order for conformity with any future Biological Opinion that may be issued regarding the Santa Ynez River steelhead fishery or any modification to the 2000 Biological Opinion.

30. If right holder anticipates a violation of any of these terms or conditions or if a violation has occurred, right holder shall provide immediate written notification to the Deputy Director and shall make these notifications readily available on a publicly accessible website.

31. The Executive Director and Deputy Director shall comply with the California Environmental Quality Act Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387) when exercising delegated authority under this Order.

32. Nothing in this Order shall be construed to modify or authorize modification of United States Bureau of Reclamation's independent obligations under the federal Endangered Species Act (16 U.S.C. §§ 1531-1544).

IT IS FURTHER ORDERED that Permits 11308 and 11310 are amended to include the following new conditions, as set forth below:

33. Right holder shall implement an Oak Woodland Restoration Plan that will achieve a 2:1 replacement ratio of the oak trees 20 years after the first Cachuma surcharge event.

34. Right holder shall work diligently to revise its April 14, 1996 contract with Santa Barbara County Water Agency to the extent necessary to require the Member Units

(the City of Santa Barbara; Goleta Water District; Montecito Water District; Carpinteria Valley Water District; and the Santa Ynez River Water Conservation District, Improvement District No. 1) to implement the water demand management measures identified as part of the urban water shortage contingency analyses contained in their urban water management plans. To the extent authorized by law, right holder shall require the Member Units to implement the measures in accordance with the Member Units' urban water management plans, as they may be amended. Right holder shall submit annual status reports to the Deputy Director describing efforts to negotiate a new contract with Santa Barbara County Water Agency. In the event that right holder does not succeed in revising its contract with Santa Barbara County Water Agency in conformity with this term by December 31, 2020, the Board reserves continuing authority to amend Permits 11308 and 11310 (Applications 11331 and 11332) to achieve water use reductions comparable to the Member Units' water demand management measures and delegates that authority to the Deputy Director.

35. Right holder shall submit annual status reports to the Deputy Director describing efforts to make new water supplies and conserved water available to the Member Units. The report shall include, but need not be limited to, right holder's and the Member Units' activities. The report shall include, but need not be limited to, an update on the operational status and capacity of the City of Santa Barbara's desalination plant and the operational status of any other desalination, recycled water, transfers, demand management, reservoir surcharging, or other new sources of supply for the Member Units that may be proposed in the future. Nothing in this Order shall be construed as an approval or endorsement of any water supply project or source of supply. The Deputy Director may modify this term's water conservation reporting requirements for consistency with water conservation reporting requirements adopted pursuant to a regulation or informational order issued pursuant to section 10609.28 of the Water Code.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Board held on _____.

_____

Jeanine Townsend
Clerk to the Board

11.0 APPENDICES

APPENDIX 1 - FIGURES

Figure 1

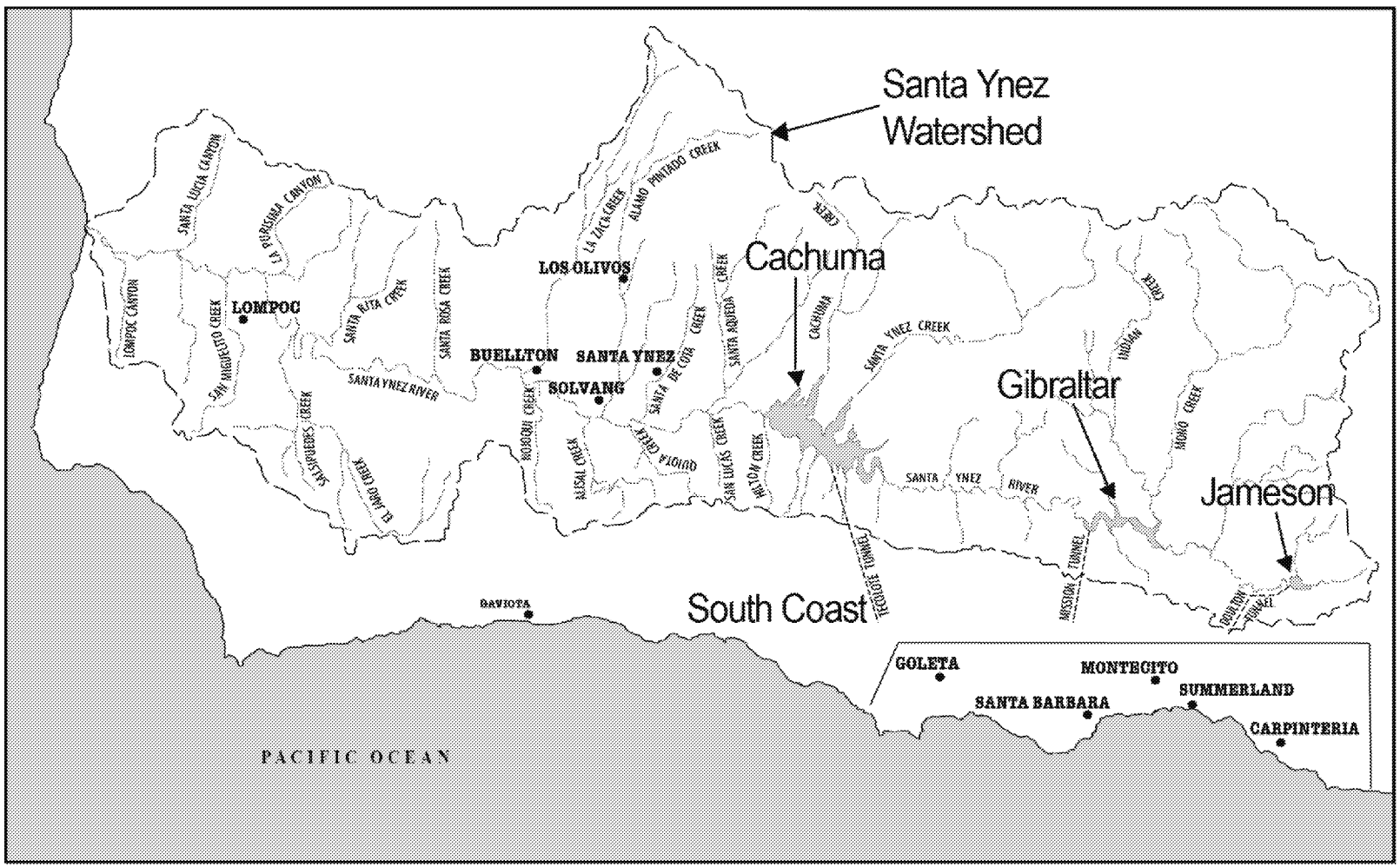


Figure 2

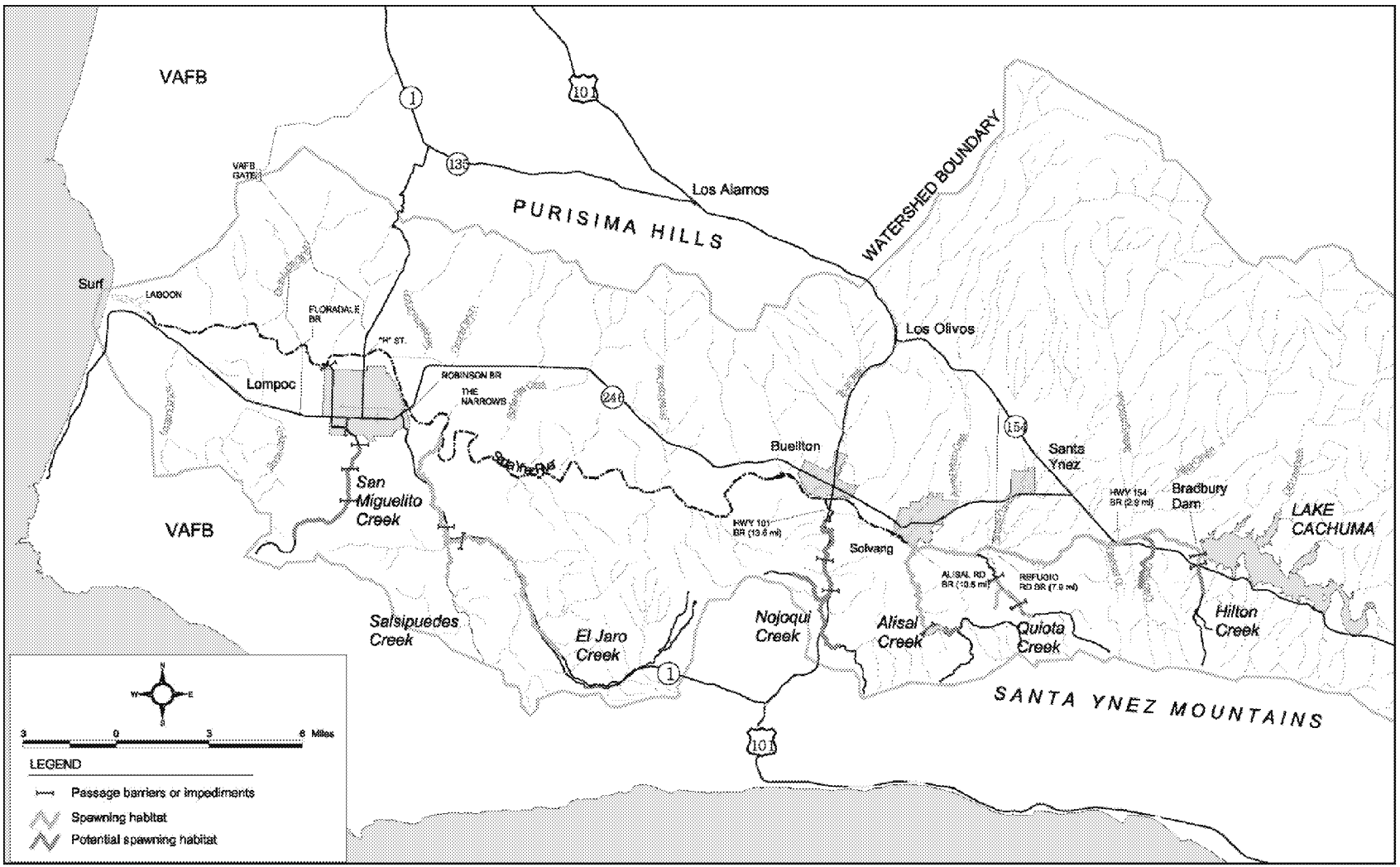

VAFB
VAFB GATE
Surf
LAGOON
FLORADALE BR
"H" ST.
Lompoc
ROBINSON BR
THE NARROWS
PURISIMA HILLS
Los Alamos
WATERSHED BOUNDARY
Los Olivos
Buellton
Santa Ynez
HWY 154 BR (2.9 mi)
Bradbury Dam
LAKE CACHUMA
San Miguelito Creek
VAFB
HWY 101 BR (13.6 mi)
Solvang
ALISAL RD BR (10.5 mi)
REFUGIO RD BR (7.9 mi)
Salsipuedes Creek
El Jaro Creek
Nojoqui Creek
Alisal Creek
Quiota Creek
Hilton Creek
SANTA YNEZ MOUNTAINS
N
W
E
S
3 0 3 6 Miles
LEGEND
Passage barriers or impediments
Spawning habitat
Potential spawning habitat

Figure 3

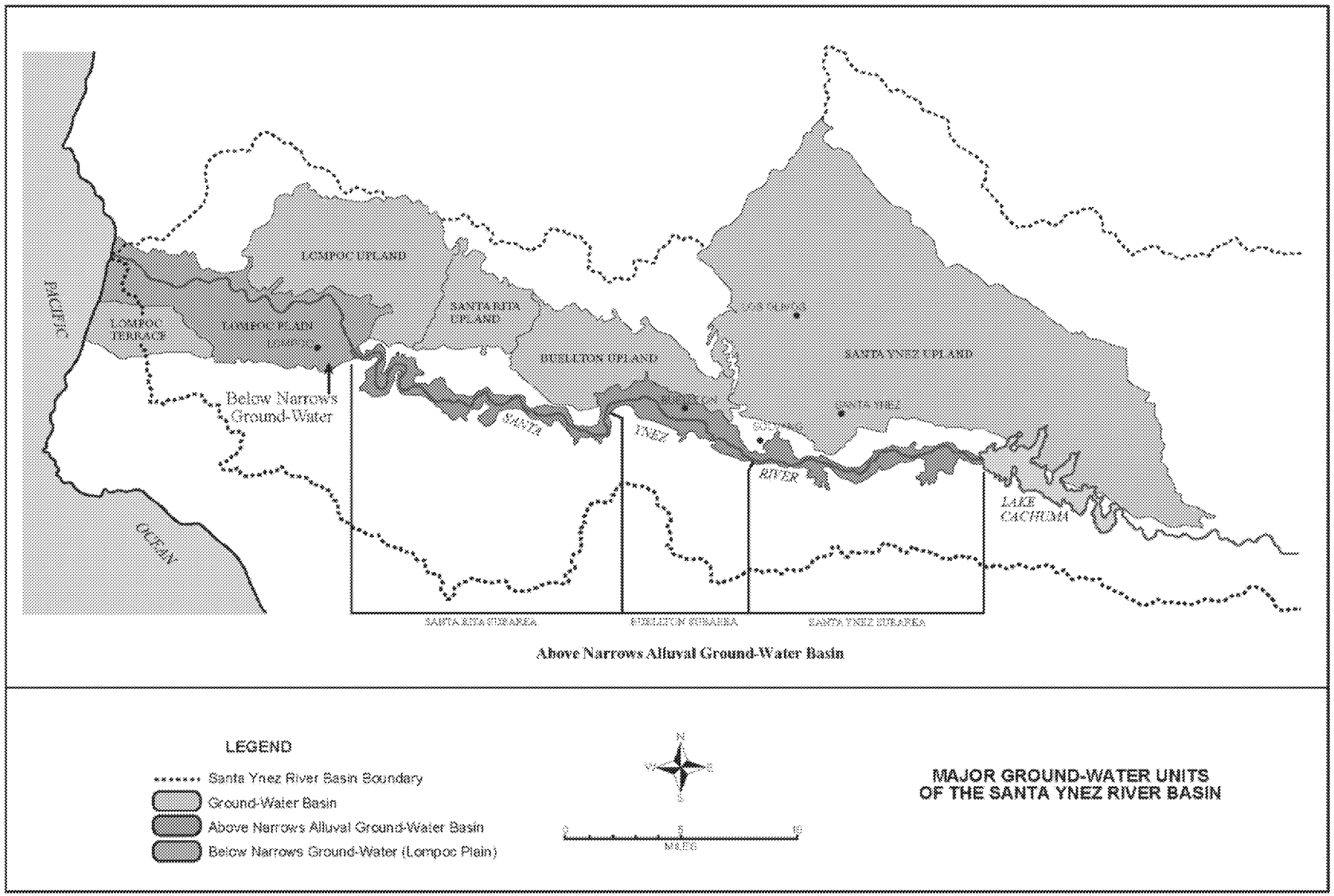
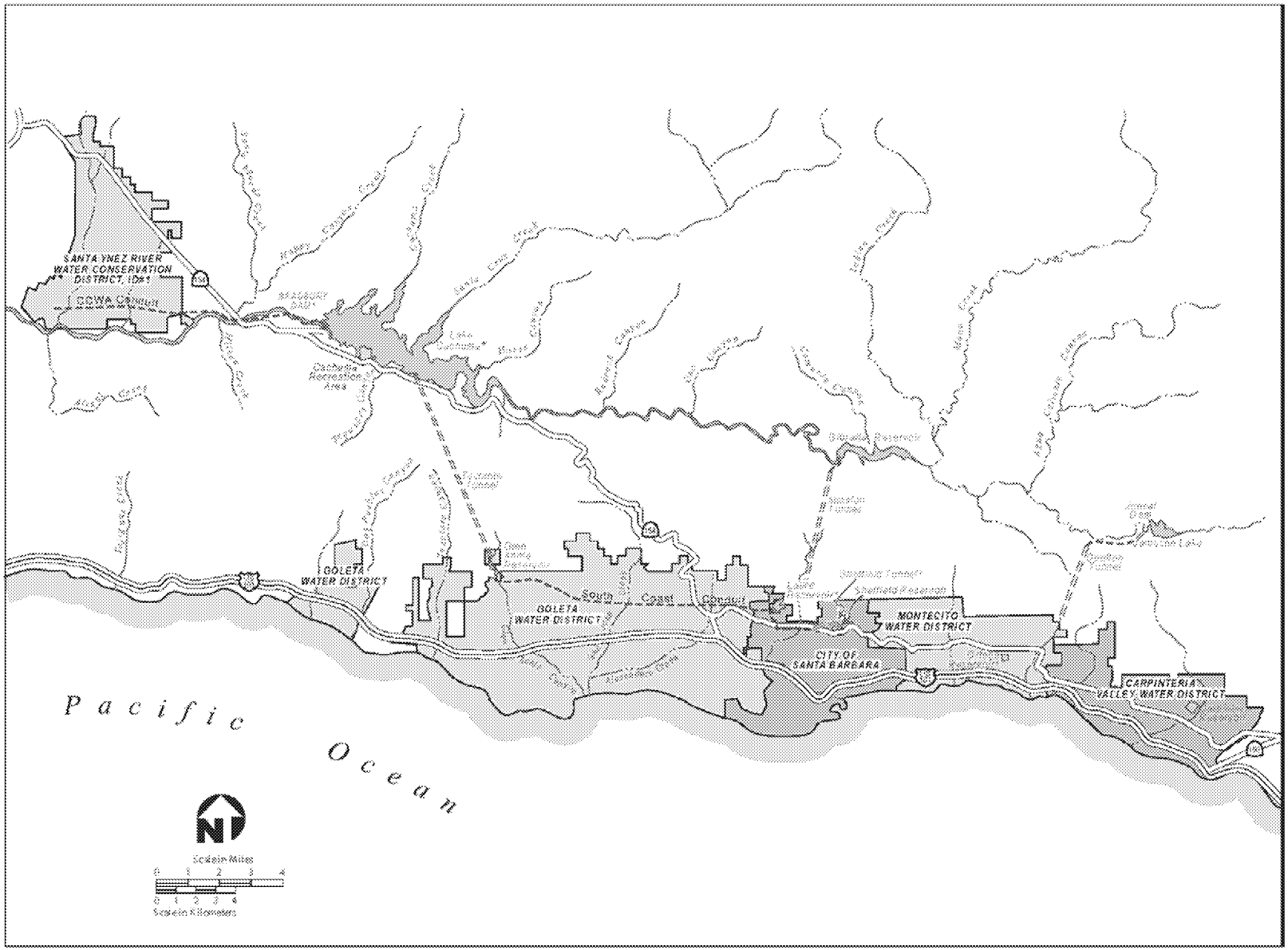

PACIFIC
OCEAN
LOMPOC UPLAND
LOMPOC TERRACE
LOMPOC PLAIN
SANTA RITA UPLAND
BURLUTON UPLAND
SANTA YNEZ UPLAND
Below Narrows Ground-Water
SANTA
YNEZ
RIVER
LAKE CACHUMA
SANTA RITA SUBAREA
BURLUTON SUBAREA
SANTA YNEZ SUBAREA
Above Narrows Alluvial Ground-Water Basin
LEGEND
Santa Ynez River Basin Boundary
Ground-Water Basin
Above Narrows Alluvial Ground-Water Basin
Below Narrows Ground-Water (Lompoc Plain)
N
MILES
MAJOR GROUND-WATER UNITS
OF THE SANTA YNEZ RIVER BASIN

Figure 4


SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, ID#1
SCWA Cachuma
GOLETA WATER DISTRICT
GOLETA WATER DISTRICT
South Coast Conduit
MONTECITO WATER DISTRICT
CITY OF SANTA BARBARA
CARPINTERIA VALLEY WATER DISTRICT
Pacific Ocean
Scale in Miles
Scale in Kilometers

APPENDIX 2 - SEPTEMBER 17, 2002 SETTLEMENT AGREEMENT

SETTLEMENT AGREEMENT BETWEEN CACHUMA CONSERVATION RELEASE BOARD, SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, SANTA YNEZ RIVER WATER CONSERVATION DISTRICT IMPROVEMENT DISTRICT NO. 1, AND THE CITY OF LOMPOC, RELATING TO OPERATION OF THE CACHUMA PROJECT

This Agreement is entered into this 17th day of December, 2002, by and between , **CACHUMA CONSERVATION RELEASE BOARD** ("**CCRB**"), a joint powers agency consisting of the City of Santa Barbara, Montecito Water District, Goleta Water District and Carpinteria Valley Water District ("**CCRB Members**"), **SANTA YNEZ RIVER WATER CONSERVATION DISTRICT,** a California water conservation district ("**Santa Ynez**"), **SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, IMPROVEMENT DISTRICT NO. 1,** an improvement district of Santa Ynez ("**ID#1**"), and the **CITY OF LOMPOC**, a general law city ("**Lompoc**").

EXPLANATORY RECITALS:

A. The United States Bureau of Reclamation ("USBR") has constructed and is operating the Cachuma Project as authorized by the Congress of the United States, including Lake Cachuma impounded behind Bradbury Dam, and operates the Cachuma Project pursuant to permits issued by the State Water Resources Control Board ("State Board") and, pursuant to permits and orders of the State Board, is required to, among other things, collect certain data, maintain essential records related to project operations, and to make releases below Bradbury Dam for the protection of downstream water rights; and

B. CCRB Members and ID#1 have contracted with USBR through the Santa Barbara County Water Agency for the yield from the Cachuma Project, and are collectively referred to as "Cachuma Member Units". CCRB is established by that certain "Joint Powers

Agreement Creating Cachuma Conservation-Release Board" dated February 11, 1974, for specific purposes, including to represent the CCRB Members in promoting their common objective to maximize for beneficial use the water supply made available from the Cachuma Project; and

C. Santa Ynez, among other things, acts to represent and protect holders of water rights downstream of Bradbury Dam so that the Cachuma Project does not interfere with downstream water rights nor adversely affect water quality of the Santa Ynez River; and

D. ID#1, located downstream of Bradbury Dam and within Santa Ynez, among other things, acts to help ensure sufficient water is released so as to protect its downstream water rights, and as a Member Unit of the Cachuma Project, seeks to maximize the yield of the Cachuma Project for beneficial use within its boundaries; and

E. Lompoc, located downstream of Bradbury Dam and within Santa Ynez, acts to, among other things, help ensure that sufficient water is released so that the Cachuma Project does not interfere with its downstream water rights nor adversely affect the quality of water recharged from the Santa Ynez River; and

F. In furtherance of Order WR 94-5, by Notice dated September 25, 2000, the State Board noticed hearings concerning "Hearing to Review the US Bureau of Reclamation Water Right Permits 11308 and 11310 (Applications 11331 and 11332) to Determine Whether any Modifications in Permit Terms and Conditions are Necessary to Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir) and to Consider Change Petitions for Water Rights Permits 11308 and 11310"; the first phase of which hearing concerning proposed Change in Place and Purpose of Use Petitions was conducted on November 6, 2000; and a second phase of said hearing is anticipated in the Spring of 2003 will consider whether changes in said Permit terms and conditions are necessary

to protect public trust resources and downstream water rights (said hearings herein being collectively referred to as "94-5 Hearings"); and

G. The parties to this Agreement along with others, including the California Department of Fish and Game and the United States Fish and Wildlife Service, have entered into a series of Memoranda of Understanding, the last effective December 1, 2000 ("Fish MOU"), in order to develop a consensus process to address public trust resource issues affected by the Cachuma Project. Further purposes of the Fish MOU are to implement the Lower Santa Ynez River Fish Management Plan ("FMP") and the Terms and Conditions of the United States National Marine Fisheries Service Biological Opinion ("NMFS BO") entitled "U. S. Bureau of Reclamation operation and maintenance of the Cachuma Project on the Santa Ynez River in Santa Barbara County, California", dated September 11, 2000 pursuant to Section 7 of the Endangered Species Act. Among other things, the parties to this Agreement intend by this Agreement to jointly advocate for the State Board to issue orders for the future operation of the Cachuma Project as provided at Paragraph 4 hereof; and

H. It is the desire of the parties to this Agreement to resolve actual and potential disputes which exist among them relative to the obligation of USBR to make releases from Bradbury Dam for protection of downstream water rights such that entering into Phase 2 of the 94-5 Hearings, the parties to this Agreement are in agreement that, subject to potential termination as provided at Paragraph 5 hereof, the downstream water rights holders are protected and that the State Board need not take any additional actions in protection of downstream water rights holders at this time; and

I. The parties to this Agreement, all of which have been involved in the consensus process leading to the Fish MOU to protect public trust resources, desire to coordinate the protection of public trust resources and downstream water right releases so as to provide for

protection of such public trust resources and maximize the beneficial use of water from the Santa Ynez River, all in a manner consistent with the FMP and the Terms and Conditions of the NMFS BO; and

J. In conjunction with the 94-5 Hearings, the State Board is expected to consider and certify an Environmental Impact Report which will consider the environmental effects of any changes in the terms and conditions of the Cachuma Project permits, including certain modified operations set forth in this Agreement.

EXECUTORY AGREEMENTS:

NOW, THEREFORE, in consideration of the above recitals and the mutual promises made herein, the parties to this Agreement agree as follows:

1. **Downstream Water Rights Releases**

1.1 **Support of WR 89-18.**

The parties to this Agreement agree that releases pursuant to State Board Order WR 73-37 as modified by WR 89-18 (herein collectively called "WR 89-18") and modified as provided in this Agreement will adequately protect downstream water rights and will not significantly adversely affect water quality otherwise available to downstream water right holders and collectively agree to support WR 89-18 and the modifications as provided in this Agreement before the State Board, as the appropriate mechanism for administering downstream water rights releases. The parties to this Agreement agree to advocate for, to be bound by, to comply with, and not to seek judicial challenge, of a State Board order to operate the Cachuma Project according to WR 89-18, modified as provided in this Agreement.

1.2 **Conjunctive Operation with Fish Releases.**

For purposes of operating downstream water rights releases in conjunction with releases required under the NMFS BO in a manner to reduce the impacts on

the Cachuma Project water supply, while meeting the target rearing flows required by the NMFS BO, which is an obligation of the Cachuma Project, Santa Ynez shall order downstream water rights releases pursuant to Condition 5 of WR 89-18 (modifying condition No. 5 of Permits 11308 and 11310) consistent with Exhibit "A" hereto.

1.3 **Conjunctive Operation of Below Narrows Account.**

In order to resolve a dispute which may exist between all or some of the parties to this Agreement as to whether and under what conditions "Curve B" may apply in lieu of "Curve A" insofar as determining Below Narrows Account ("BNA") credits as provided in Paragraph 2.2.1 of Condition 5 of WR 89-18, the parties to this Agreement agree that BNA credits shall be computed as set forth in Exhibit "B" hereto. This arrangement shall include, under circumstances described in Exhibit B, the availability of "Accumulated Drought Water Credits" from the BNA for the benefit of the Cachuma Member Units under conditions therein described.

1.4 **Technical Amendments to WR 89-18.**

In order to accommodate changed circumstances and in furtherance of implementation of paragraphs 1.2 and 1.3 of this Agreement, the parties to this Agreement shall jointly support the technical amendments set forth at Exhibit "C" hereto as modifications to be made to WR 89-18.

1.5 **Deliveries During Releases.**

The parties to this Agreement will, as provided in Exhibit D, make best efforts to maximize the delivery by the Central Coast Water Authority ("CCWA") of State Water Project (SWP) water with lower concentrations of total dissolved solids ("TDS") into the outlet works at Bradbury Dam during WR 89-18 water rights releases consistent with the NMFS BO. This will be accomplished through the commingling of SWP water with WR 89-18 water rights releases in

the outlet works of Bradbury Dam when downstream water rights releases are being made. Generally, SWP deliveries by CCWA are of lower TDS concentrations compared to water released from Lake Cachuma under WR 89-18. The objective of such commingling operations is to maximize the delivery of SWP Water to lower the TDS in the lower Santa Ynez River and at the Narrows. Such coordinated program shall be carried out as set forth in Exhibit "D" hereto.

1.6 **Subsequent Review of Conjunctive Operations.**

The conjunctive operation provisions of Paragraph 1.2, 1.3 and 1.5 will be reviewed and evaluated at the end of a ten (10) year period following this Agreement becoming effective and may thereafter be revised upon mutual agreement of Santa Ynez, ID #1, Lompoc and CCRB, with the concurrence of USBR and State Board when applicable. If a party requests a revision of this Agreement following such review, and cannot reach agreement with the other parties within 180 days of the request, the matter will then be submitted to a mediator mutually agreeable to the parties to this Agreement. If after ninety (90) days the mediation effort is unsuccessful or the parties cannot agree on a mediator, any party may then request that the State Board review the matter in the manner provided by law. In order to seek a revision, a party must demonstrate by substantial evidence that the objectives of Paragraph 1.2, 1.3 or 1.5 are not being met.

2. **Modified Winter Storm Operations.**

The parties to this Agreement support USBR's adoption and continued use of "Modified Winter Storm Operations" as described in USBR Technical Memorandum No. WR-8130-RA-TM-00-2, entitled "Risk Based Evaluation, Modified Storm Operations-Bradbury Dam", dated February, 2000 and the Santa Barbara County Water Agency report entitled "Report of Modified Storm Operations, Bradbury Dam, Cachuma Project, Santa Barbara County, California", dated December 29, 1998.

3. **Resolution of Litigation and Claims by City of Lompoc.**

3.1 Lompoc hereby waives and forever discharges USBR and the parties to this Agreement from all of its existing financial damage claims relative to impacts of the operation of the Cachuma Project upon Lompoc water rights and upon TDS of water quality in the Lompoc groundwater basin based upon: (a) alleged injury prior to the date of this Agreement, and (b) alleged injury after the date of this Agreement during such times as this Agreement is in effect and during such time as a matter related to Paragraph 1.5 has not been referred to the State Board pursuant to Paragraph 1.6.

3.2 Lompoc hereby withdraws its protest to the Cachuma Project Change in Place and Purpose of Use presented in connection with Phase 1 of the 94-5 hearings.

4. **Protection of Public Trust Resources.**

The parties to this Agreement will mutually support before the State Board in Phase 2 of the 94-5 Hearings the Terms and Conditions of the NMFS BO and the FMP as the preferred operational program for the Cachuma Project in order to address public trust resource issues.

5. **Effective Date and Termination.**

5.1 This Agreement shall be deemed effective upon the date first stated above, provided that Paragraphs 1.2, 1.3 and 1.4 shall not become effective until the State Board issues an order or adopts a decision amending the terms and conditions of the USBR's water right permits confirming that downstream water rights releases will continue to be made consistent with WR 89-18, as modified by the technical changes enumerated at Exhibit "C" hereto, without any material change.

5.2 This Agreement shall terminate and shall be of no further force and effect if (i) the State Board, following the completion of the hearing required by Order WR 94-5,

issues an order that does not require that downstream water rights releases continue to be made consistent with WR 89-18, as modified by this Agreement, without any material change, and (ii) within 90 days of finalizing any State Board order under (i), any party provides written notice to the other parties of invoking this Paragraph 5.2.

6. **Standard Provisions.**

6.1 **Notices.**

Notices may be given to the parties to this Agreement and interested entities by mailing written notice, with first class postage prepaid, as follows (except as a party may provide written notice to all of the parties to this Agreement of a change of address):

To: United States Bureau of Reclamation
Attention: Regional Water Rights Officer
2800 Cottage Way, Room E-2903, MP440
Sacramento, CA 95825

Cachuma Conservation Release Board
Attention: Manager
3301 Laurel Canyon Road
Santa Barbara, CA 93105

Santa Ynez River Water Conservation District
Attention: General Manager
P. O. Box 719
Santa Ynez, CA 93460-0719

Santa Ynez River Water Conservation District,
Improvement District No. 1
Attention: District Manager
P. O. Box 157
Santa Ynez, CA 93460

City of Lompoc
Attention: City Administrator
City Hall, 100 Civic Center Plaza
Lompoc, CA 93436

6.2 **Headings.**

The titles and headings of this Agreement are for purposes of convenience only, and shall be given no substantive meaning in interpreting this Agreement.

6.3 **Counterparts.**

This Agreement may be executed in counterparts and as so executed shall constitute one agreement which shall be binding on all parties to this Agreement notwithstanding that all parties to this Agreement are not signatory to the original or the same counterpart.

6.4 **California Law Applies.**

This Agreement shall be construed pursuant to the laws of the State of California.

CACHUMA CONSERVATION RELEASE BOARD

By: _____

APPROVED AS TO FORM

By: _____

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT

By: _____

APPROVED AS TO FORM

By: _____

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, IMPROVEMENT DISTRICT NO. 1

By: _____

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CACHUMA CONSERVATION RELEASE BOARD

By:_____

APPROVED AS TO FORM

By:_____

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT

By:_____

APPROVED AS TO FORM

By:_____

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CACHUMA CONSERVATION RELEASE BOARD

By:_____

APPROVED AS TO FORM

By:_____

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT

By:_____

APPROVED AS TO FORM

By:_____

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, IMPROVEMENT DISTRICT NO. 1

By:_____

APPROVED AS TO FORM

By: Gregory K. Wilkinson

CITY OF LOMPOC

By:_____

APPROVED AS TO FORM

By:_____

APPROVED AS TO FORM

By:_____

CITY OF LOMPOC

By:_____

APPROVED AS TO FORM

By:_____

Exhibit A

PROCEDURES FOR CONJUNCTIVE OPERATION WITH FISH RELEASES

The purpose of operating the downstream water right releases in conjunction with the fish water releases is to reduce the impacts on the Cachuma Project water supply while meeting the target rearing flows described by the United States National Marine Fisheries Service Biological Opinion ("NMFS BO".).

The downstream water right releases contributing to the conjunctive use operations consist of either releases from the Above Narrows Account or combined releases from the Above and Below Narrows Accounts. To assure that the downstream water right releases in the future (including with the Lake Cachuma surcharge) are similar to the historical practices, the following criteria are adopted:

1. Santa Ynez will cause downstream water right releases to be made that will also meet the target rearing flows in the mainstream of Santa Ynez River as required by the NMFS BO for an average of 65 days per year in years which are Designated for Water Right Releases, as described below in Paragraph 3.
2. The ten-year moving average of 65 days shall be the average of the most recent 10 years Designated for Water Right Releases. For the purpose of calculating the ten-year moving average, the initial year shall start in 1985.
3. For the purpose of the above calculations, all years are "Designated for Water Right Releases" except: (a) a year with a spill from Lake Cachuma exceeding 20,000 acre-feet; (b) a year immediately following the spill year with the spill amount exceeding 100,000 acre-feet; and (c) a year when there is less than 30,000 acre-feet of storage in Lake Cachuma.

4. To the extent water right releases are made in those years that are not Designated for Water Right Releases, then the number of days with water right releases shall be added to the next designated year.

5. In the event the ten-year moving average is calculated to be less than 65 days in a year when the storage in the Lake is less than 100,000 acre-feet (elevation 714.00 feet[1] m.s.l.), additional releases from the Above Narrows Account shall be made to meet the target rearing flows at the Hwy. 154 Bridge for the number of days necessary to raise the calculated ten-year average to 65 days. Such releases shall not be required when the storage in the Lake is more than 100,000 acre-feet (elevation 714.00 feet m.s.l.).

6. In a month when Lake Cachuma inflow is calculated by the USBR to be less than 25 acre-feet and no downstream water right releases are made in that month, releases up to 25 acre-feet from the Above Narrows Account shall be made in the following month to meet the target rearing flows required by the NMFS BO at the Hwy. 154 Bridge or Alisal Bridge, whichever is in effect. Such releases are included in the calculation of the ten-year moving average. Provisions of this paragraph do not apply when the storage in the Lake is less than 30,000 acre-feet.

7. Nothing in this Settlement Agreement or this Exhibit affects or diminishes the provision of Paragraph 1.6 of Condition 5 of SWRCB Order WR 73-37.

[1] Lake Cachuma bathymetric survey of year 2000

Exhibit B

PROCEDURES FOR CONJUNCTIVE OPERATION OF BELOW NARROWS ACCOUNT

1. With respect to calculation of Below Narrows Account (BNA) credits as provided at Paragraph 2.2 of Condition 5 in WR 89-18, BNA credits shall be computed using the Upper Curve (Curve A) at all times and the credits are accrued to the BNA. (Curve A (Upper Curve) and Curve B (Lower Curve) herein referred to are depicted in USBR Exhibit 1, Attachment E, dated December 1, 1988, referenced in said Paragraph 2.2.)

2. When the accumulated flow at the Narrows at the beginning of a month exceeds 50,000 acre-feet for that Water Year (October 1 through September 30), the use of the Lower Curve (Curve B) is triggered for the purpose herein provided. The difference in the credit amount between the Upper and Lower Curves will be calculated in that month and each subsequent month in that Water Year and is referred to as the "Upper Curve Water" ("UCW").

3. Cachuma Member Units shall accumulate a drought water credit equal to one-half of the UCW, except as provided in Paragraph 6. Such accumulated credits shall be called the Accumulated Drought Water Credit (ADWC) and shall not exceed a total of 3,200 acre-feet.

4. The ADWC shall be reduced proportionately when there is a spill reduction in the Below Narrows Account as provided in Paragraph 2.7 of Condition 5 in WR 89-18.

5. When the storage level in Lake Cachuma is less than 100,000 acre-feet (elevation 714.00 feet[1] m.s.l.), any BNA water in Lake Cachuma up to the ADWC shall be

held and made available to the Cachuma Member Units if and when they so notify USBR while the reservoir remains below the 100,000 acre-feet (elevation 714.00 feet m.s.l.) level for the purpose of reducing Project shortages. To the extent such BNA water is used to reduce Project shortages, the ADWC shall be reduced .

6. If the BNA water in the Lake is less than the ADWC when the storage level in Lake Cachuma is less than 100,000 acre-feet (elevation 714.00 feet m.s.l.), one-half of BNA credits created while the Lake remains below the 100,000 acre-feet (elevation 714.00[1] feet m.s.l.) level shall be held and made available to the Cachuma Member Units up to the ADWC and consistent with the provisions of Paragraph 5.

7. Upon the effective date of Paragraph 1.3 of the Settlement Agreement, an amount equal to 1,500 acre-feet of the BNA water shall be credited to the Cachuma Member Units as the initial ADWC. After the effective date of Paragraph 1.3 of the Settlement Agreement, and prior to the occurrence of the first spill from Lake Cachuma the initial ADWC shall be reduced to the extent UCW is accumulated in the ADWC pursuant to Paragraph 3. In any event, with the occurrence of such first spill after the effective date of Paragraph 1.3 of the Settlement Agreement, the amount remaining in the initial ADWC shall be reduced to zero.

8. The amount of deduction from the BNA for the last five years as set forth in Paragraph 2.2.1 of Condition 5 of WR 89-18 and Attachment F of USBR Exhibit 1 referenced in Paragraph 2.2.1 is deemed to be zero.

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[1] Lake Cachuma bathymetric survey of year 2000.

Exhibit C

TECHNICAL AMENDMENTS TO WR 89-18

Explanation of Technical Amendment No. 1

Since 1993, water has been released from Lake Cachuma for the purpose of studying and maintaining fish habitat in the upper part of the Santa Ynez River downstream of Bradbury Dam. As a result of such releases, a flow condition has been created in the Santa Ynez River at the San Lucas Bridge (Highway 154 bridge) and at other downstream locations. In consideration of Paragraph 1.4 of Condition 5 of SWRCB Order WR 89-18 and in consultation with Santa Ynez, the USBR moved the live stream observation in the Santa Ynez River at the San Lucas Bridge (Hwy. 154) to near the Hwy 154 crossing of San Lucas Creek (near Hwy. 154 crossing of the Santa Ynez River) in 1993. San Lucas Creek is the main tributary to the Santa Ynez River immediately upstream of the San Lucas Bridge.

As a result of fish water releases under the United States National Marine Fisheries Service Biological Opinion ("NMFS BO"), the parties have considered the proper application of Paragraph 1.4 of Condition 5 of SWRCB Order WR 89-18. The parties have agreed to the following amendments to WR 89-18:

Technical Amendment No. 1

(1.) Insert the following at the bottom of Paragraph 1.4 of Condition 5 of WR 89-18:

> "In addition, fish water released for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River which is in transit between Bradbury Dam and the Narrows shall not be considered to be surface flow of the Santa Ynez River. When such fish water releases are made and flow measured in San Lucas Creek at the Highway 154 crossing

is less than 0.3 cfs, the live stream in the Santa Ynez River at the San Lucas Bridge (river mile 45.7) is deemed to be non-existent."

"When fish water releases are made and there is a visible stream of water flowing on the surface of the Santa Ynez River bed at the San Lucas Bridge (river mile 45.7), at the Mission Bridge near Solvang (river mile 38), at U.S. Highway 101 Bridge near Buellton (river mile 34.31), at the Santa Rosa damsite (river mile 25.3) and at Robinson Bridge near Lompoc (river mile 12.9), the flow measured at the Narrows Gage is adjusted as provided in Attachment H to USBR Exhibit 1, dated December 1, 1988, entitled "Correlation of Flow at Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue" to meet the criteria for a live stream condition.

(2.) Add a third paragraph on Page 1 of said Attachment H to Exhibit 1 of the USBR to provide as follows:

"When fish water releases are made and there is a visible stream of water flowing on the surface of the Santa Ynez River bed at the San Lucas Bridge (river mile 45.7), at the Mission Bridge near Solvang (river mile 38), at U. S. Highway 101 Bridge near Buellton (river mile 34.31), at the Santa Rosa damsite (river mile 25.3) and at Robinson Bridge near Lompoc (river mile 12.9), the flow measured at the Narrows for the current day is reduced by: (i) an amount equal to one half of fish water released from Lake Cachuma during the same day or (ii) the amount of flow measured near the Mission

Bridge (Solvang) during the same day, whichever is less. If the adjusted measured flow at the Narrows for the current day is less than zero, it is deemed to be zero. The adjusted daily flow measured at the Narrows is used as the measured flow at the Narrows for the current day in the attached tabulation. The accumulated daily flows from October 1 through the preceding day measured at the Narrows and the accumulated daily flows for the preceding ten (10) days measured at the Narrows are not adjusted for the fish releases and they are based on measured flows at the Narrows. The adjustment for the fish releases provided in this paragraph is not applicable if there is a spill from Lake Cachuma during the current day."

(3.) Amend first sentence of item (p) under Condition 6 of WR 89-18 as follows:

"(p) A record of all daily flows and quality (as measured in EC/TDS) passing the Narrows as provided by the United States Geological Survey."

(4.) Establish a measuring station on San Lucas Creek by adding the following item under Condition 6 of WR 89-18:

"(q) A record of flow in San Lucas Creek at the Highway 154 crossing."

(5.) Provide daily flows of Santa Ynez River measured near the Mission Bridge (Solvang) by adding the following item under Condition 6 of WR 89-18:

"(r) A record of all daily flows and quality (as measured in EC/TDS) measured near the Mission Bridge (Solvang) as provided by United States Geological Survey."

Explanation For Technical Amendment No. 2

As described in Paragraph 1.3 of the Settlement Agreement and its Exhibit B, the Conjunctive Operation with the Below Narrows Account is intended to resolve any issue relating to when Curve A or B as described in Paragraph 2.2.1 of Condition 5 in WR 89-18 and Attachment F of USBR Exhibit 1 should be used and the quantity of BNA water to be credited to the Project once a "trigger" for the Lower Curve is established. It is noted that this compromise continues the use of the Upper Curve for purposes of establishing BNA credits, but under certain conditions sets aside a portion of the BNA credits for the Cachuma Member Units to utilize when most needed, that is during dry conditions.

Technical Amendment No. 2

(1) Delete Paragraph 2.2.1 of Condition 5 set forth in WR 89-18 and Attachment F of USBR Exhibit 1 and modify the second paragraph in Attachment E of said USBR Exhibit 1 to provide as follows: "Curve B will not be used for the purpose of calculating the BNA credits".

(2) Add as Paragraph 2.5.1 of Condition 5

> "(2.5.1) Notwithstanding Paragraph 2.5, BNA water in Lake Cachuma up to the Accumulated Drought Water Credit (ADWC) shall be made available to the Cachuma Member Units when and so long as the Lake Cachuma storage level remains below 100,000 acre-feet in accordance with the "Procedures for Conjunctive Operation of Below Narrows Account" depicted on USBR Exhibit _____, dated _____, 2003."

Explanation of Technical Amendment No. 3.

CCWA delivers SWP water to the South Coast through Lake Cachuma and Tecolote Tunnel. Consistent with the measurements performed for the SWP deliveries, the following amendments are provided under Condition 6 of WR 89-18.

Technical Amendment No. 3

(1) Amend item (d) under Condition 6 of WR 89-18 as follows:

"(d) Daily inflow to Lake Cachuma, including underground flows, by proper computations of tunnel diversions, reservoir releases, spills, Central Coast Water Authority (CCWA) deliveries into Lake Cachuma, and change in storage."

(2) Add item under Condition 6 of WR 89-18:

"(s) Continuous records of CCWA deliveries into Lake Cachuma

Exhibit D

PROCEDURES FOR MAXIMIZING DELIVERIES OF CCWA WATER TO LAKE CACHUMA DURING DOWNSTREAM WATER RIGHTS RELEASES

The following procedures will be undertaken:

1. On or about April 10 of each year, Santa Ynez shall provide to the USBR, CCRB, Lompoc and ID#1 a preliminary schedule estimating the number and duration of WR 89-18 water rights releases during the next twelve (12) months and indicating in which months anticipated releases will be made.

2. It is noted that SWP water is delivered to Lake Cachuma from the forebay of the Central Coast Water Authority (CCWA) Santa Ynez Pumping Plant. The pumping plant is equipped with five pumping units; only four units are required to pump the design flow of 22 cfs (5.5 cfs per pump) to Lake Cachuma and one unit is reserved as a standby pump. The present performance of the pumping units (about 7.5 cfs per pump) exceeds the design flow. Variations in the discharge rate from the pumping plant are accommodated through varying the number of pumps in operation.

   CCRB Members shall request deliveries through the CCWA to maximize their deliveries of SWP water into Lake Cachuma during those months when water rights releases are scheduled as provided in Paragraph 1 above. This will be accomplished in the following manner: During the periods when downstream water rights releases are made: (i) CCRB Members through CCWA shall request deliveries of an amount of SWP water to the forebay of the Santa Ynez Pumping Plant at flow rates sufficient to ensure that at least two pumping units at the Santa

Ynez Pumping Plant are capable of delivering water to Lake Cachuma; and (ii) ID #1 shall coordinate with CCWA while preserving its scheduled deliveries of SWP water and Cachuma exchange water so as to facilitate the operation of at least two pumping units at the Santa Ynez Pumping Plant, as provided at Subparagraph (i) above.

3. The delivery of CCWA water to Lake Cachuma during downstream water rights releases, as provided for in Paragraphs 1 and 2 above, shall be subject to the following conditions:

   A. In coordinating deliveries and water rights releases as provided for herein, CCRB Members and ID #1 shall not be required to take actions which are inconsistent with the annual quantities of SWP water and Cachuma exchange water which they otherwise would have ordered.

   B. To the extent there is a failure in the CCWA delivery system, including the SWP facility, which prevents delivery of SWP water to Lake Cachuma, the coordination of deliveries shall not occur during the affected period and will not be made up in later periods.

   C. The parties recognize that there is a limitation in the capacity of the CCWA pipeline to deliver SWP water to Lake Cachuma. To the extent the delivery capacity is increased in the future, such increase will enhance the deliveries of SWP water to the South Coast and at the same time should increase the amount of SWP water available for commingling when downstream water rights releases are made. In this regard, if the delivery capacity of the CCWA pipeline to the Santa Ynez Pumping Plant is

increased in the future, more than two pumping units should be available to be utilized during the WR 89-18 releases.

D. Nothing in this Settlement Agreement or this Exhibit is intended to be inconsistent with the CCWA Water Supply Agreements.

E. The parties recognize that blending restrictions imposed by the NMFS BO may limit the ability to commingle SWP water with downstream water rights releases.

4. The parties agree to periodically review operations under this Exhibit D and, if necessary, CCRB Members and ID#1 will make good faith operational adjustments to maximize SWP water deliveries to Lake Cachuma during WR 89-18 releases, consistent with the purposes of Section 1.5 of the Settlement Agreement and this Exhibit "D."

D R A F T

03/27/2019

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WR 2019-00XX

In the Matter of Permits 11308 and 11310 (Applications 11331 and 11332)
held by the

United States Bureau of Reclamation

for the Cachuma Project on the Santa Ynez River

SOURCE: Santa Ynez River

COUNTY: Santa Barbara

ORDER AMENDING PERMITS 11308 AND 11310
(APPLICATIONS 11331 AND 11332)

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CITING THE RECORD[a]

Citations to the hearing record are indicated as follows:

Citations to the Reporter's Transcript:

Citations to the Reporter's Transcripts are indicated by "R.T.", followed by the date of the transcript, followed by the beginning page and line number and the ending page and line number. A colon separates page and line numbers.

> For example, testimony from the November 12, 2003 hearing on transcript page 660, starting at line 19 and ending at line 21 would be cited as follows: (R.T., November 12, 2003, p. 660:19-660:21.)

Citations to Exhibits:

All citations in the evidentiary hearing record are designated by the name or abbreviation for the party that submitted the exhibit, followed by the exhibit number and the page number or other location of the cited information in the exhibit, if necessary.

> For example, U.S. Department of the Interior: Exhibit 1, page 1 would be cited as follows: (DOI-1, p. 1.)

Citations to 2011 Final Environmental Impact Report:

All citations to the 2011 Final Environmental Impact Report include the volume and page number. The citation may also include additional location information if necessary.

> For example, information from page 3.0-11 of Volume II would be cited as follows: (FEIR, Vol. II, p. 3.0-11.)

Citations to the Biological Assessment in FEIR, Vol. III, Appendix C, will be as follows:

1) Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River (1999 Biological Assessment) and,

2) Revised Section 3 (Proposed Project) of the Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River (2000 Revised Biological Assessment).

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[a] Citations to the hearing record are provided solely for ease of reference. Often, other supporting evidence exists in the record that is not specifically cited in the order. All transcripts and exhibits are available on the State Water Board's water right hearings web page, at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/cachuma/

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LIST OF ACRONYMS

ANA	Above Narrows Account
AMA	Adaptive Management Account
AMC	Adaptive Management Committee
af	acre-feet
afa	acre-feet per annum
BNA	Below Narrows Account
CESA	California Endangered Species Act
CalTrout	California Trout, Incorporated
CCRB	Cachuma Conservation Release Board
CCWA	Central California Water Authority
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
COMB	Cachuma Operations and Management Board
CPA	Cachuma Project Authority
CSPA	California Sportfishing Protection Alliance
CVWD	Carpinteria Valley Water District
CUWCC	California Urban Water Conservation Council
DPS	Distinct Population Segment
ESA	federal Endangered Species Act
EDC	Environmental Defense Center
GWD	Goleta Water District
IFIM	Instream Flow Incremental Methodology
Member Units	Cachuma Project Member Units
MOU	Memorandum of Understanding
MWD	Montecito Water District
NMFS	National Marine Fisheries Service
PHABSIM	Physical Habitat Simulation System
Reclamation	United States Bureau of Reclamation
SBCWA	Santa Barbara County Water Agency
Settlement Agreement	Cachuma Project Settlement Agreement
SWP	State Water Project
SYRHM	Santa Ynez River Hydrology Model
SYRTAC	Santa Ynez River Technical Advisory Committee
SYRWCD	Santa Ynez River Water Conservation District
SYRWCD, ID No. 1	Santa Ynez River Water Conservation District, Improvement District No. 1
TDS	Total Dissolved Solids
U.S. Forest Service	United States Forest Service
USFWS	United States Fish and Wildlife Service

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STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WR 2019-

In the Matter of Permits 11308 and 11310 (Applications 11331 and 11332)
held by the
United States Bureau of Reclamation

for the Cachuma Project on the Santa Ynez River

SOURCE: Santa Ynez River

COUNTY: Santa Barbara

ORDER AMENDING PERMITS 11308 AND 11310
(APPLICATIONS 11331 AND 11332)

BY THE BOARD:

1.0 INTRODUCTION

In this order, the State Water Resources Control Board (State Water Board or Board) amends the terms and conditions of the U.S. Bureau of Reclamation's (Reclamation) permits for the Cachuma Project (Permits 11308 and 11310 (Applications 11331 and 11332)) to protect public trust resources and downstream water rights on the Santa Ynez River below Bradbury Dam. The State Water Board also approves Reclamation's petition to change the authorized place of use and purposes of use for Permits 11308 and 11310.

The construction and operation of the Cachuma Project, including Bradbury Dam and Cachuma Reservoir, has resulted in a reduction of water available to downstream water right holders and public trust resources. Since the State Water Board issued Permits 11308 and 11310 (Permits) to Reclamation in 1958, the State Water Board has retained authority over the Permits to determine the requirements necessary to protect senior

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water rights downstream of Bradbury Dam and the public trust resources in the Santa Ynez River.

State Water Board Order WR 94-5 established a deadline of December 1, 2000, to commence a hearing on the protection of downstream water right holders. The State Water Board held a hearing on that issue and on the issue of the measures needed to protect public trust resources over eight days in 2000, 2003, and 2012.

The Santa Ynez River provides habitat for the Southern California Distinct Population Segment of steelhead trout (*Oncorhynchus mykiss*) (steelhead), which is listed as an endangered species under the federal Endangered Species Act (ESA). (16 U.S.C. §§ 1531-1544.) The Cachuma Project has adversely affected the steelhead fishery by blocking access to the majority of suitable spawning and rearing habitat upstream, and by modifying flows in the mainstem of the lower Santa Ynez River (mainstem) below Bradbury Dam to the point that the survival of the species is uncertain. (E.g., NOAA-12, p. 6.) Currently, Reclamation operates and maintains Bradbury Dam on the Santa Ynez River in accordance with a Biological Opinion issued by the National Marine Fisheries Service (NMFS) on September 11, 2000 (2000 Biological Opinion) pursuant to section 7 of the federal ESA. (16 U.S.C. § 1536.)

Even though Reclamation has operated and maintained Bradbury Dam in accordance with the 2000 Biological Opinion for more than a decade, the steelhead population in the Santa Ynez River remains at a critically low level. The hearing record supports the conclusion that the population is unlikely to be restored to a sustainable level unless the amount of suitable spawning and rearing habitat to which the steelhead have access is increased. The hearing record supports the conclusion that higher flows are likely to benefit steelhead by providing additional spawning and rearing habitat as well as increasing passage opportunities in the lower mainstem river. At the same time, the record supports the need for development of additional information and adaptive management of flows to maximize the benefits of those flows to steelhead and avoid potential impacts during implementation. Weighing the competing uses of water, the Board has found that it is necessary to protect and improve the critical condition of the

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remnant Santa Ynez River watershed steelhead population. Therefore, this order requires Reclamation to provide higher flows under an adaptive management process during wet and above normal years when the water supply impacts of such flows would be minimized (Alternative 5C from the State Water Board's 2011 Final Environmental Impact Report (FEIR).

Even though the higher flows will only be provided in wet and above normal water years these higher instream flow requirements may increase to some extent projected water supply shortages during critically dry periods for those who rely on Cachuma Project water. These shortages are in addition to those already caused by implementation of the 2000 Biological Opinion. (See section 8.1, Finding Regarding Water Supply Impact.) As a result, additional water conservation and increased reliance on alternative water supplies may be necessary to compensate for future shortages during critically dry periods.

In coordination with the California Department of Fish and Wildlife (CDFW) and NMFS, Reclamation will be required to study the effects of the increased flows on steelhead to verify the amount of additional habitat provided by the flows and determine whether a different release schedule would be more beneficial to the fishery. In the unlikely event the results of the study demonstrate that the flows do not provide benefit to the steelhead fishery or are likely to harm the fishery, this order reserves the Board's authority to reduce the required instream flows.

Although additional flows are necessary, the evidence in the record indicates that increasing flows will not be sufficient, without additional measures, to restore the steelhead fishery to good condition. Specifically, passage around Bradbury Dam, where the majority of the historic spawning and rearing habitat occurred and still persists, and other habitat restoration actions by other agencies and private and public interests to address the ecosystem as a whole will be necessary to solve this complex problem of restoring viable steelhead runs in the Santa Ynez River watershed. To improve the state of knowledge concerning the measures necessary to protect the steelhead fishery, this order also requires Reclamation to study the feasibility of additional measures that may