



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

---

## State Water Resources Control Board

October 12, 2016

### VIA ELECTRONIC EMAIL

TO: [CURRENT SERVICE LIST](#)

### **EXTENSION OF COMMENT DEADLINE ON THE DRAFT ORDER AMENDING THE BUREAU OF RECLAMATION'S WATER RIGHT PERMITS FOR THE CACHUMA PROJECT AND DRAFT AMENDED PERMITS 11308 AND 11310.**

On September 7, 2016, the State Water Resources Control Board (State Water Board) released a [Draft Order Amending the Bureau of Reclamation's Water Rights for the Cachuma Project \(Draft Order\)](#). The [cover letter](#) for the Draft Order set a deadline for written comments of Noon, October 25, 2016. Subsequently, the State Water Board received five requests to extend the comment period that in general indicate that the complexity of the hydrological and biological technical issues and the size of the supporting administrative record requires additional time to adequately prepare comments.

The State Water Board has reviewed the requests and is granting a 45-day extension of the comment deadline. In order to be fully considered, written comments on the Draft Order must be received by the State Water Board by **Noon, December 9, 2016**.

Also enclosed are the draft amended permits 11308 and 11310 described by the Draft Order, if the State Water Board adopts the order at a future Board meeting. Please review the terms and conditions of the Draft Order and draft permits carefully for accuracy with the evidentiary record. Written comments are to be addressed and submitted to:

Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
PO Box 100  
Sacramento, CA 95812-0100

You may also submit your comments to Ms. Townsend by fax at (916) 341-5620, by email at [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov), or by hand delivery to the following location:

Jeanine Townsend, Clerk to the Board  
Executive Office  
State Water Resources Control Board  
CalEPA Headquarters  
1001 "I" Street, 24th Floor  
Sacramento, CA 95814

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

Cachuma Project Hearing  
October 12, 2016

- 2 -

Couriers delivering comments must check in with lobby security and have them contact the Executive Office on the 24th floor at (916) 341-5600.

Please include the subject line, "**COMMENT LETTER - Cachuma Project Draft Order.**" Any faxed or emailed items must be followed by a mailed or delivered hard copy with an original signature.

Written comments must be served on the [Service List of Parties to Exchange Information](#) in this proceeding as indicated therein. Comments that do not include proof of service will not be reviewed until the State Water Board has notified the parties.

If you have non-controversial procedural questions, please contact Environmental Scientist Jane Farwell-Jensen at (916) 341-5349, or to [Jane.Farwell-Jensen@waterboards.ca.gov](mailto:Jane.Farwell-Jensen@waterboards.ca.gov).

Sincerely,

*ORIGINAL SIGNED BY*

Michael Buckman, Chief  
Hearings Unit

Enclosures: Cachuma Project Hearing Service List (Updated September 7, 2016)  
Draft Amended Permit 11308  
Draft Amended Permit 11310

Cachuma Project Evidentiary Hearings  
 Service List (updated 09/07/2016)

*(Based on 01/05/2004 list, updated 07/26/2007, updated 06/08/2010, updated 01/20/2011, updated 05/13/2011, updated 07/29/2011, updated 01/05/2012, updated 01/30/2012, updated 03/28/2012, updated 12/12/2013, updated 01/06/2014(corrected), updated 01/23/14, updated 03/13/204, updated 08/17/2016, update 09/07/16.)*

**The parties whose email addresses are listed below agreed to accept electronic service, pursuant to the rules specified in the hearing notice.**

<p>Cachuma Conservation Release Board          Mr. Kevin O'Brien          Downey Brand LLP          621 Capitol Mall, Floor 18          Sacramento, CA 95814  <a href="mailto:kobrien@downeybrand.com">kobrien@downeybrand.com</a>  <a href="mailto:bcougar@downeybrand.com">bcougar@downeybrand.com</a>   <i>updated 01/05/2012</i></p>	<p>City of Solvang          Mr. Christopher L. Campbell          Baker, Manock &amp; Jensen          5260 N. Palm Avenue, Suite 421          Fresno, CA 93704  <a href="mailto:ccampbell@bakermanock.com">ccampbell@bakermanock.com</a>   <i>updated 07/29/2011</i></p>
<p>Santa Ynez River Water Conservation District, Improvement District No. 1          Mr. Paeter Garcia          Best Best &amp; Krieger LLP          3390 University Avenue, 5<sup>th</sup> Floor          Riverside, CA 92501  <a href="mailto:Paeter.Garcia@BBKlaw.com">Paeter.Garcia@BBKlaw.com</a>   <i>updated 08/15/2014</i></p>	<p>City of Lompoc          Mr. Nicholas A. Jacobs          Somach, Simmons &amp; Dunn          500 Capitol Mall          Suite 1000          Sacramento CA 95814  <a href="mailto:njacobs@somachlaw.com">njacobs@somachlaw.com</a>   <i>updated 01/06/2014</i></p>
<p>Santa Ynez River Water Conservation District          Mr. Ernest A. Conant          Law Offices of Young Wooldridge          1800 – 30<sup>th</sup> Street, Fourth Floor          Bakersfield, CA 93301  <a href="mailto:econant@youngwooldridge.com">econant@youngwooldridge.com</a></p>	<p>California Trout, Inc.          Ms. Linda Krop          Ms. Maggie Hall          Environmental Defense Center          906 Garden Street          Santa Barbara, CA 93101  <a href="mailto:lkrop@environmentaldefensecenter.org">lkrop@environmentaldefensecenter.org</a>  <a href="mailto:mhall@environmentaldefensecenter.org">mhall@environmentaldefensecenter.org</a>   <i>updated 08/17/2016</i></p>
<p>County of Santa Barbara          Mr. Michael C. Ghizzoni, County Counsel          105 E. Anapamu Street          Santa Barbara, CA 93101  <a href="mailto:mghizzoni@co.sant-barbara.ca.us">mghizzoni@co.sant-barbara.ca.us</a>  <i>updated 08/12/16</i></p>	<p>U.S. Bureau of Reclamation          Ms. Amy Aufdemberg          2800 Cottage Way, Room E-1712          Sacramento, CA 95825  <a href="mailto:AMY.AUFDEMBERGE@soi.doi.gov">AMY.AUFDEMBERGE@soi.doi.gov</a>  <i>Updated 08/12/16</i></p>

Cachuma Project Evidentiary Hearings  
Service List (updated 09/07/2016)

*(Based on 01/05/2004 list, updated 07/26/2007, updated 06/08/2010, updated 01/20/2011, updated 05/13/2011, updated 07/29/2011, updated 01/05/2012, updated 01/30/2012, updated 03/28/2012, updated 12/12/2013, updated 01/06/2014(corrected), updated 01/23/14, updated 03/13/2014, updated 08/17/2016, update 09/07/16.)*

**The parties whose email addresses are listed below agreed to accept electronic service, pursuant to the rules specified in the hearing notice.**

California Department of Fish and Wildlife Ms. Nancee Murray Senior Staff Counsel 1416 Ninth Street, 12 <sup>th</sup> Floor Sacramento, CA 95814 <a href="mailto:Nancee.Murray@wildlife.ca.gov">Nancee.Murray@wildlife.ca.gov</a>  <i>updated 08/15/2016</i>	Bureau of Reclamation, Mid-Pacific Region Mr. Michael Jackson Area Manager South-Central California Area Office 1243 N Street Fresno, CA 93721-1813 <a href="mailto:mjackson@usbr.gov">mjackson@usbr.gov</a>
Montecito Water District Robert E. Donlan Ellison, Schneider & Harris L.L.P. 2600 Capitol Avenue, Suite 400 Sacramento, CA 95816 <a href="mailto:red@eslawfirm.com">red@eslawfirm.com</a>	Santa Barbara County CEO's Office Ms. Terri Maus-Nisich, Assistant CEO 105 E. Anapuma Street, 4 <sup>th</sup> Floor Santa Barbara, CA 93101 <a href="mailto:tmaus@co.santa-barbara.ca.us">tmaus@co.santa-barbara.ca.us</a>  <i>updated 09/07/2016</i>

**The parties listed below did not agree to accept electronic service, pursuant to the rules specified by this hearing notice.**

NOAA Office of General Counsel Southwest Region Mr. Dan Hytrek 501 West Ocean Blvd., Suite 4470 Long Beach, CA 90802-4213 <a href="mailto:Dan.Hytrek@noaa.gov">Dan.Hytrek@noaa.gov</a>  <i>updated 05/13/2011</i>	
--	--



STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

**RIGHT TO DIVERT AND USE WATER**

APPLICATION 11331

**DRAFT AMENDED** PERMIT 11308 LICENSE

Right Holder: The United States of America  
U.S. Bureau of Reclamation  
South Central California Area Office  
1243 N Street  
Fresno, CA 93721

The State Water Resources Control Board (State Water Board) authorizes the diversion and use of water by the right holder in accordance with the limitations and conditions herein SUBJECT TO PRIOR RIGHTS. The priority of this right dates from March 25, 1946. This right is issued in accordance with the State Water Board delegation of authority to the Deputy Director for Water Rights (Resolution 2012-0029) and the Deputy Director for Water Rights redelegation of authority dated July 6, 2012. This right supercedes any previously issued right on **Application 11331**.

The Deputy Director for Water Rights (Deputy Director) finds that: (a) the change will not operate to the injury of any lawful user of water; (b) good cause has been shown for the change; (c) the petition does not constitute the initiation of a new right; and (d) the State Water Resources Control Board (State Water Board) has made the required findings pursuant to the California Environmental Quality Act (CEQA) or the project is exempt from CEQA.

The State Water Board has complied with its independent obligation to consider the effect of the proposed change on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346, 658 P.2d 709].)

**Right holder is hereby granted a right to divert and use water as follows:**

1. Source of water: Santa Ynez River  
tributary to: the Pacific Ocean  
within the County of Santa Barbara

2. Location of Point of Diversion and Place of Storage

By California Coordinate System of 1983 in Zone 5	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian
<b><u>Bradbury Dam (Lake Cachuma)</u></b> (1) North 2,041,529.66 feet and East 5,965,386.74 feet	NW ¼ of SW ¼	19	T6N	R29W	SBB&M

3. Purpose of use	4. Place of use					
	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian	Acres
<b>Irrigation</b>	<b>All lands included within existing boundaries (205,376 gross acres)<sup>1</sup>, including the areas of service within the political boundaries of the Cachuma Member Units: the Carpinteria County 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 net irrigable acres of 40,250 acres within a gross area of 205,376 acres as shown on maps. Recreational use is at Cachuma Reservoir.</b>					
<b>Municipal</b>						
<b>Domestic</b>						
<b>Industrial</b>						
<b>Salinity Control</b>						
<b>Incidental Recreation</b>						
<b>Stockwatering</b>						

The following U.S. Bureau of Reclamation place of use maps, dated September 18, 1996, are filed with the State Water Board:

- GIS Map, Cachuma Project Overall, sheet 1 of 3, Map No. 368-208-899, Sept. 18, 1996.
- GIS Map, Cachuma Project, Enlarged View of Santa Ynez River Basin, sheet 2 of 3, Map No. 368-208-900, Sept. 18, 1996.
- GIS Map, Cachuma Project, Enlarged View of South Coast Region, sheet 3 of 3, Map No. 368-208-901, Sept. 18, 1996.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed **100 cubic feet per second** by direct diversion to be diverted from January 1 to December 31 of each year and **275,000 acre-feet** per year by storage to be collected from October 1 of each year to June 30 of the succeeding year.

(000005F)

Comment [A1]: Renumbered and updated Term 1

6. The total quantity of water collected to storage under this right and the right pursuant to Application 11332 shall not exceed **275,000 acre-feet**.

(000005R)

Comment [A2]: Renumbered Term 2

7. Construction work shall be completed on or before December 1, 1960 and complete application of the water to the authorized use shall be prosecuted with reasonable diligence and completed by December 31, 2000.

(000009)

Comment [A3]: Renumbered and updated Term 12 and Term 13.

8. Water of the Santa Ynez River shall be stored in and released from Lake Cachuma in such amounts and at such times and rates as (a) will be sufficient, together with inflow from downstream tributary sources, to supply downstream diversions of the surface flow under vested prior rights to the extent water would have been available for such diversions from unregulated flow, (b) will be sufficient, together with inflow from downstream tributary sources, to maintain percolation of water from the

Comment [A4]: Renumbered Term 5

NOTE: Terms 8 and 9 reflect Reclamation's proposed amendments consistent with those contained in Exhibit C of the 2002 Settlement Agreement. **The yellow heightened text** for permit terms 8 and 9 are the agreed upon changes made to "original" permit terms 5 and 6 shown on Reclamation's [Exhibit DQI-10 \(enclosure 1\)](#).

<sup>1</sup> Total "computer generated acreage" of the new place of use is specified by Bureau of Reclamation letter dated October 1, 1996, on file with the State Water Resources Control Board (Application 11308).

stream channel as such percolation would occur from unregulated flow, in order that operation of the project shall not reduce natural recharge of groundwater from the Santa Ynez River, and (c) will enhance percolation of tributary runoff below Bradbury Dam to promote water conservation, more specifically, as hereinafter set forth. Because studies and historical operation have shown that percolation rates are different above and below the Lompoc Narrows, the following provisions, to be complied with by permittee, are divided into two categories: (1) above the Narrows; and (2) below the Narrows.

8.1 Above the Narrows: An "above Narrows" account shall be established and amounts of water shall be credited to and released from said account as provided below in this section:

**Comment [A5]:** Renumbered Term 5(1)

a. The volume of dewatered storage in the groundwater basins above the Narrows shall be determined at the end of each calendar month. USBR Exhibit 1, dated, February 1, 2003, contains, in Attachment A thereto, a list of indicator wells in 23 storage units comprising these basins which shall be used for the determination and, in Attachment B thereto, a compilation of curves dated February 1, 2003, that relate dewatered storage to water level elevations in the indicator wells.

**Comment [A6]:** Renumbered and Amended Term 5(1.1)

Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

b. The operating dewatered storage (ODS) for the combined 23 storage units shall be 10,000 acre-feet of dewatered storage.

**Comment [A7]:** Renumbered Term 5(1.2)

c. All inflow to Lake Cachuma shall be computed on a daily basis and, except as otherwise specifically provided herein, shall be stored in the lake. Such computed Lake Cachuma inflow shall be deemed to be no less than 25 acre-feet per month.

**Comment [A8]:** Renumbered Term 5(1.3)

d. Each month, the inflow to Lake Cachuma stored that month during periods when a live stream did not actually exist in the Santa Ynez River shall be computed. All such stored inflow shall be credited monthly and accumulated in an 'above Narrows' account. At the end of each month, the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the 23 storage units at that time. (A 'live stream', as that term is used herein, shall be deemed to exist in the Santa Ynez River whenever there is a visible stream of water flowing on the surface of the 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], at Robinson Bridge near Lompoc [river mile 12.9] and the flow measured at the USGS gauge entitled 'Santa Ynez River at Narrows near Lompoc' [Narrows Gauge] meets the criteria for a live stream condition as shown on Attachment H to USBR Exhibit 1, dated February 1, 2003, entitled 'Correlation of Flow at Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue'.) In determining the existence or non-existence of a live stream, water released by permittee from the "above Narrows" account pursuant to paragraph (8.1e) of section (8.1) and from the "below Narrows" account pursuant to paragraph (8.2f) of section (8.2) which is in transit above the Narrows, shall not be considered to be surface flow of the Santa Ynez River.

**Comment [A9]:** Renumbered and Amended Term 5(1.4)

Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

In addition, water released for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River, hereinafter referred to as "fish water releases", which is in transit between Bradbury Dam and the Narrows, shall not be considered to be surface flow of the Santa Ynez River. When 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 February 1, 2003, entitled "Correlation of Flow at the Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue" to meet the criteria for a live stream condition.

- e. If, at any time, the total dewatered storage in the basins above the Narrows exceeds the ODS, releases of water in the "above Narrows" account shall be made at such times, amounts and rates of flow as are requested by the Santa Ynez River Water Conservation District (Santa Ynez), but the amount of such releases shall not exceed (i) the quantity required to raise the water levels to the ODS, or (ii) the quantity accumulated in the "above Narrows" account, whichever is smaller. The amounts so released shall be deducted from the "above Narrows" account. Comment [A10]: Renumbered Term 5(1.5)
- f. Notwithstanding paragraph (e) above, for the benefit of water users upstream from San Lucas Bridge, permittee may release water in any month up to the total computed inflow for the two previous months less previous releases of such two months inflow. Of the total amount so released for such users, only an amount not in excess of the two previous months' increase in the "above Narrows" account shall be deducted from that account. Comment [A11]: Renumbered Term 5(1.6)
- g. The "above Narrows" account shall not be reduced by Lake Cachuma evaporation. Comment [A12]: Renumbered Term 5(1.7)
- h. In the event of a spill from Lake Cachuma, water in the "above Narrows" account shall be deemed to be the first water spilled to the extent dewatered storage is reduced during the month spill occurs. Comment [A13]: Renumbered Term 5(1.8)
- i. The point of delivery of water in the "above Narrows" account shall be at Bradbury Dam. Comment [A14]: Renumbered Term 5(1.9)
- j. If it is determined by Santa Ynez that, as a result of the existence of the 10,000 acre foot "operating dewatered storage" provided for in paragraph (b) of this section, credits have been allocated to the "above Narrows" account based on inflow to Lake Cachuma, which, if released, would have percolated into the basin below the Narrows in the absence of such operating dewatered storage, and this condition has not otherwise been taken into account in allocating credits to the "below-Narrows" account, Santa Ynez may request the release of compensating amounts of "above Narrows" account waters in such a way that it percolates into the "below Narrows" basin. In that event, Santa Ynez shall inform the permittee in advance and the releases shall be deducted from the "above Narrows" account. Comment [A15]: Renumbered Term 5(1.10)  
Modified September 21, 1989 (WR 89-18)
- 8.2 Below the Narrows: A "below Narrows" account shall be established and amounts of water shall be credited and released from said account as provided below in this section: Comment [A16]: Renumbered Term 5(2)
  - a. As stated in paragraph (8.1c) above, all inflow to Lake Cachuma shall be stored in the Lake, except as otherwise specifically provided herein. An approximation of the flow at the Narrows that would have occurred in the absence of the Cachuma Project (hereinafter called "constructive flow") shall be computed monthly as follows (hereinafter, the month for which the computation is made is called the "computation month"):Comment [A17]: Renumbered Term 5(2.1)
    - a.1. For each computation month when a live stream did not exist at any time in the Santa Ynez River between San Lucas Bridge and the Narrows, the Cachuma inflow shall be either (i) increased by the amount by which the "above Narrows" account at the end of the previous computation month exceeded the "above Narrows" dewatered storage at the end of the computation month, or (ii) decreased by the amount by which such dewatered storage exceeded the previous month's "above Narrows" account. From the result shall be subtracted the computation month's releases and spills, if any. The result shall be the Comment [A18]: Renumbered Term 5(2.1.A)  
Modified September 21, 1989 (WR 89-18)



increment to be added to the measured flow at the Narrows to determine the constructive flow at the Narrows for the computation month. If that increment is negative, it shall be treated as zero.

- a.2. For each computation month when a live stream existed at any time in the Santa Ynez River between San Lucas Bridge and the Narrows, the Cachuma inflow shall be decreased by the computation month's releases and spills. The result shall be the increment to be added to the measured flow at the Narrows to determine the constructive flow at the Narrows for the computation month. **Comment [A19]:** Renumbered Term 5(2.1.B)  
Modified: September 21, 1989 (WR 89-18)
- a.3. The amount of the "below Narrows" account releases which reached the Narrows during a computation month shall be determined as follows: the Salsipuedes Creek contribution to flow at the Narrows during the computation month shall be subtracted from the measured flow at the Narrows for that month. If such measured flow at the Narrows minus such Salsipuedes Creek contribution equals or exceeds the quantity released from the "below Narrows" account that month, it shall be deemed that all of the "below Narrows" release reached the Narrows. If such measured flow at the Narrows minus such Salsipuedes Creek contribution is less than the "below Narrows" release, it shall be deemed that only the difference between such measured flow at the Narrows and such Salsipuedes Creek contribution reached the Narrows. **Comment [A20]:** Renumbered Term 5(2.1.C)
- a.4. Water may be released from Lake Cachuma and be in transit above the Narrows at the end of a month and, as a result, computations made as of that date may not accurately reflect pertinent facts. To compensate for such occurrences, appropriate adjustments shall be made to the calculations required by this order. **Comment [A21]:** Renumbered Term 5(2.1.D)
- b. A monthly computation shall be made of the amount of impairment of percolation to the Lompoc Basin due to the Cachuma Project. The amount of such percolation during the computation month shall be determined by means of the "Relationship Between Percolation from Santa Ynez River from Narrows through Floradale Avenue and Flow of Santa Ynez River at Narrows" correlation shown in USBR Exhibit 1, Attachment E, dated February 1, 2003, assuming (i) the measured flow at the Narrows and (ii) the constructive flow at the Narrows. The monthly impairment shall be equal to the difference between the two amounts thus determined. **Comment [A22]:** Renumbered Term 5(2.2)  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003
- c. (Eliminated) **Comment [A23]:** Renumbered Term 5(2.2.1)  
Modification requested February 1, 2003
- d. The amount of percolation impairment shall be credited to the "below Narrows" account. The volume of dewatered storage in the groundwater basin below the Narrows shall be determined at the end of each month. Each month the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the Lompoc Basin at that time. A list of indicator wells showing their "full" elevation in eight storage units in the Lompoc Basin is contained in USBR Exhibit 1, Attachment C, dated February 1, 2003. USBR Exhibit 1, Attachment D, dated February 1, 2003, is a compilation of curves that relate dewatered storage to water level elevations in the indicator wells. Said Attachments C and D shall be used to make the determination required by this paragraph (8.2d) of section (8.2). **Comment [A24]:** Renumbered Term 5(2.3)  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003
- e. The "below Narrows" account shall not be reduced by Lake Cachuma evaporation. **Comment [A25]:** Renumbered Term 5(2.4)
- f. Release of water in the "below Narrows" account shall be requested by Santa Ynez as soon after the credit is computed as is reasonably consistent with the goal of optimizing the percolation of a substantial amount of such water in the Lompoc Basin, and in such requests Santa Ynez shall specify the desired amounts and rates of flow of such releases, subject to the limitation described **Comment [A26]:** Renumbered Term 5(2.5)  
Modified September 21, 1989 (WR 89-18)

below. Optimal conditions for such releases include, but are not limited to, periods when a live stream exists at and above the Narrows and releases are being made of "above Narrows" account water. Permittee shall make the reasonably requested releases. The "below Narrows" account shall be reduced by the amount of water so released which reaches the Narrows, as determined pursuant to subparagraph (8.2a.3) of paragraph (8.2) of this section (8). The amount of water so released which does not reach the Narrows shall be deducted from the "above Narrows" account. The "above Narrows" account may have a negative balance as a result of releases of water from the "below Narrows" account. In the event of a spill from Lake Cachuma, any such negative balance shall be adjusted to zero. To the extent a negative balance exists in the "above Narrows" account, all inflow to Lake Cachuma shall be credited to that account. For any month the requests for releases of water in the "below Narrows" account shall not exceed the lesser of (i) the "below Narrows" account at the end of the previous month, or (ii) the algebraic sum of the "below Narrows" account at the end of the previous month plus the "above Narrows" account at the end of the previous month plus 2,000 acre-feet.

f.1. Notwithstanding Paragraph (f), "below Narrows" account 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 Attachment F of USBR Exhibit 1, dated February 1, 2003.

Comment [A27]: Renumbered Term 5(2.5.1)

Modification requested February 1, 2003

g. The point of delivery of waters stored in the "below Narrows" account shall be at Bradbury Dam.

Comment [A28]: Renumbered Term 5(2.6)

h. As provided in paragraph (8.1h) of section (8) above, in the event of a spill from Lake Cachuma, water in the "above Narrows" account shall be deemed to be the first water spilled to the extent dewatered storage is reduced during the month spill occurs. If spills reaching the Narrows are less than the "below Narrows" account credits, additional spill shall be deemed to be water in the "below Narrows" account to the extent dewatered storage below the Narrows is reduced, prorated according to the relationship that spills reaching the Narrows bear to the measured flows at the Narrows during the month spill occurs. Spills reaching the Narrows shall be determined by deducting the decrease in "above Narrows" dewatered storage from the spills measured at the dam. If the spills reaching the Narrows are greater than the "below Narrows" account credits, additional spill shall be deemed to be water in the "below Narrows" account only to the extent dewatered storage below the Narrows is reduced, prorated according to the relationship that the "below Narrows" account credits bear to the measured flows at the Narrows during the month spill occurs.

Comment [A29]: Renumbered Term 5(2.7)

Modified September 21, 1989 (WR 89-18)

9. Until further order of the Board, permittee shall make or cause to be made suitable field investigations, measurements, and studies, and shall install and maintain necessary measuring facilities, to determine the amount, timing and rate of releases of water into the natural channel of the Santa Ynez River below Bradbury Dam that are required of permittee in order to fully comply with the provision of Condition No. 8 in this permit, and to accurately measure all flows at the Narrows. Permittee shall provide the necessary measuring devices and shall submit to the Board with the annual progress reports, or at such other times as the Board may require, a report of such investigations, measurements and studies and the results thereof, including but not limited to the following:

Comment [A30]: Renumbered Term 6.

Modified September 21, 1989 (WR 89-18)

- a. A continuous record of Lake Cachuma water surface elevations.
- b. A continuous record of precipitation near Bradbury Dam.
- c. Daily evaporation, wind movement, precipitation, and temperature near

Bradbury Dam.

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.

**Comment [A31]:**  
Modification requested February 1, 2013

e. Continuous records of outflow from Lake Cachuma, including flows through river outlets at Bradbury Dam, inflows and outflows through Tecolote Tunnel, and overflows at Bradbury Dam spillway. Instruments suitable for accurate measurement of small outflows shall be installed.

f. Continuing groundwater studies below Bradbury Dam in the Santa Ynez Basin, with monthly observation of representative wells influenced by Santa Ynez River flows at locations shown on USBR Exhibit 1, Attachment G, dated February 1, 2003.

**Comment [A32]:**  
Modification requested February 1, 2013

g. Semiannual water quality analyses of surface and groundwater downstream from Bradbury Dam at locations as shown on USBR Exhibit 1, Attachment G, dated February 1, 2003.

**Comment [A33]:**  
Modification requested February 1, 2013

h. Permittee and the California Department of Fish and Wildlife (CDFW) shall develop and undertake a study plan and annual monitoring program to determine the extent and condition of the riparian vegetation in and along the margins of the Santa Ynez River below Bradbury Dam. Timing, methodology, and specific criteria to measure impacts to riparian vegetation will be part of the plan and program. A plan agreed to by the permittee and CDFW shall be submitted to the Deputy Director within one year of adoption of this order. This program shall be in place for five years at which time the permittee and CDFW shall report to the Board the feasibility of continuing such a program. An annual written report shall be prepared by permittee and CDFW and submitted to the Board. The Board retains jurisdiction to adopt appropriate mitigation measures, in the event adverse impacts are caused to the riparian vegetation by release schedules or procedures contained within this order.

**Comment [A34]:**  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

*(Note: The "Santa Ynez River Vegetation Monitoring Study, Santa Barbara County, California, Final Phase 1 Report", dated April 2000, was forwarded by the Bureau of Reclamation, to the State Water Resources Control Board and reviewed by Board staff. By letter dated July 26, 2000, the Deputy Director, accepted the April 2000 report as meeting the requirement of Condition 3(c) of Order WR 94-5.)*

i. A record on monthly quantities of dewatered storage downstream from Bradbury Dam and of monthly quantities shown in the "above Narrows" and the "below Narrows" accounts, as described in Condition No. 8 of this permit.

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

**Comment [A35]:**  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

k. A record of flow in San Lucas Creek at the Highway 154 crossing.

**Comment [A36]:**  
Modification requested February 1, 2003

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

**Comment [A37]:**  
Modification requested February 1, 2003

m. Continuous records of CCWA deliveries into Lake Cachuma.

**Comment [A38]:**  
Modification requested February 1, 2003

Permittee shall make its records of such investigations and measurements available for inspection by the Board and shall allow authorized representatives of the Board, Santa Barbara County Water Agency and member units, the Santa Ynez River Water Conservation District, City

of Lompoc, and United States military installation at Vandenberg Air Force Base, reasonable access to its project works and properties for the purpose of gathering information and data.

10. 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.

**Comment [A39]:** Renumbered Term 7  
Modification requested February 1, 2003  
Requested modification amended pursuant to 2016 draft order.

11. The right to divert and store water, and apply said water to beneficial use as provided in the permits is granted to the United States as trustee for the benefit of the public agencies of the State together with the owners of land and water users within such public agencies as shall be supplied with the water appropriated under the permits.

**Comment [A40]:** Renumbered Term 9

12. Subject to compliance by the public agencies concerned with any and all present and future valid contractual obligations with the United States, such public agencies, on behalf of their landowners and other water users, shall, consistent with other terms of the permits, have the permanent right to the use of all water appropriated and beneficially used hereunder, which right shall be appurtenant to the land to which said water shall be applied, subject to continued beneficial use and the right to change the point of diversion, place of use and purpose of use, as provided in Chapter 10, Part 2 of Division 2 of the Water Code of the State of California, and subject to the right to dispose of a temporary surplus.

**Comment [A41]:** Renumbered Term 10

13. Except as otherwise provided in this term and in term 15, below, the right holder shall operate and maintain the Cachuma Project and implement conservation measures in accordance with the description of the proposed action 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, set forth at pages 67 – 68, and the Terms and Conditions, set forth at pages 68 – 78, in the National Marine Fisheries Service's 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).

**Comment [A42]:** New Term

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

NA - not applicable

<sup>a</sup>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).

<sup>b</sup>Lake storage is measured on the first day of each month. (FEIR, Vol. IV, Appendix E, Technical Memorandum No. 1, p. 5.)

<sup>c</sup>The specified flow applies only when steelhead are present.

<sup>d</sup>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.

<sup>e</sup>When there is less than 30,000 af of storage in the reservoir, right holder shall provide periodic releases of 30 af per month as determined by the fishery agencies and the State Water Board 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 the revised project description
- c. The State Water Board reserves authority to modify this term based on any modification to the 2000 Biological Opinion. Any modification to this term shall be made in accordance with section 780 of title 23 of the California Code of Regulations.

14. The right holder shall release or bypass water to meet flows the Table 2 Flows, set forth below, at all times during Wet and Above Normal Water-Year types

Comment [A43]: New Term

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.

- 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. During any given water year, the Table 2 Flows may be reduced or terminated for a period not to exceed the remainder of the water year if the CDFW or the National Marine Fisheries Service (NMFS) determines that the flows are likely to harm the fishery. The 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 State Water Board's Executive Director (Executive Director), who may disapprove the direction to reduce or terminate the flows if the Executive Director disagrees with the determination that the flows would harm the fishery.
- c. The Executive Director may terminate the requirement to meet the Table 2 Flows, or may allow a reduction in the flows required, if CDFW, NMFS, right holder, or Member Units demonstrate to the Executive Director's satisfaction that the flows will not benefit the fishery or are likely to harm the fishery.
- d. The 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 in order to meet the Table 2 Flows in accordance with the existing schedule. Within five business days of reaching an agreement that allows for the flow schedule to be changed, the right holder shall notify and submit the agreement to the Executive Director, who may disapprove any changes to the schedule.
- e. If CDFW or NMFS proposes a change to the schedule of Table 2 Flows, but right holder and the Member Units do not agree to the change consistent with term [insert permit term number corresponding to term 9(d)], 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. Right holder shall confer with the Member Units to reduce the safe yield of the Cachuma Project in light of the increased flow requirements (Table 2 Flows) in wet and above normal water years to prevent the loss of beneficial uses of the project during severe shortages. In determining the project's safe yield, the right holder and Member Units shall also consider the current severe multi-year drought 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.

- 15. Within 90 days from the date of this order, right holder must submit to the Deputy Director for approval, a plan that describes the measures in place or those it will implement that will ensure compliance with terms 13 and 14. If the plan includes future measures, a schedule for implementation of those measures must also be provided. The Deputy Director may direct the right holder to make any changes to the plan reasonably necessary to ensure compliance.

Comment [A44]: New Term

- 16. To determine the measures necessary to protect the public trust resources of the Santa Ynez River, the right holder shall conduct the following studies in consultation with CDFW and NMFS.

Comment [A45]: New Term

- a. The right holder shall conduct a study on the Table 2 Flows that shall include, but not be limited to: 1) analysis of the effects of those flows on steelhead in the river and verification of the amount of additional habitat provided, including habitat below the Alisal Reach; 2) an assessment of the quality of the additional habitat, taking into account temperature, dissolved oxygen, and substrate; 3) any detrimental effects to steelhead in the river caused by the additional flows, such as increased temperature; and 4) whether benefits to the steelhead fishery could be maximized through an alternative flow schedule with equivalent or reduced water supply impacts. The study shall be conducted in a similar manner as the requirements in Revised Section 3 (Proposed Project) of the Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River, June 2000, sections 3.4.2.2, 3.4.4.1 and 3.4.4.2. Right holder shall evaluate the results of the Table 2 Flows over five Wet or Above Normal Water Year Types. In addition to analyzing the effects of the Table 2 Flows on steelhead in the river, right holder shall analyze 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 in order to minimize the effects of release or bypass flow requirements on Cachuma Project yield. Right holder shall complete and submit a report on the results of the study to the Deputy Director, CDFW, and NMFS. The report shall be submitted within a year after the conclusion of the fifth Wet or Above Normal water year unless right holder shows good cause for and the Executive Director approves a time extension.
- b. In addition to the Table 2 Flows, right holder shall study any other 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. For each measure studied, right holder shall evaluate: 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, or water supplies; and 5) any other study-specific criteria indicated below. After completing each study, right holder shall submit a report to the Deputy Director, CDFW, and NMFS that describes the study and its results. At a minimum, right holder shall conduct the studies described below on passage, instream flow, invasive species, and stream and streamside habitat restoration and habitat improvements.

(b1.) The passage study shall evaluate a variety of options for providing passage of steelhead upstream and downstream of Bradbury Dam, including: fish ladders, locks,

elevators, and trap-and-truck operations, including associated collection facilities. Provisions for both adults and smolts must be evaluated. The study shall also include, but shall not be limited to, an evaluation of reservoir outlet works, collectors, transport methods and downstream release sites. Unless there is good cause shown for not doing so, the study shall conform to the Santa Ynez River Fish Passage Feasibility Analysis submitted on February 16, 2004 by NMFS and on February 17, 2004 by CDFW during the proceeding to consider modifications to these permits. Based on the significant potential benefit of providing passage around Bradbury Dam, it may be possible to defer the remaining studies pending completion of the passage study. If passage is feasible and likely to achieve good condition of the steelhead fishery, the remaining study requirements may continue to be deferred pending implementation of measures that provide passage around Bradbury Dam and monitoring to determine whether good condition of the fishery is likely to be achieved.

(b2.) Right holder shall develop and conduct an Instream Flow Incremental Methodology (IFIM) or comparable study to determine flows necessary to keep the Santa Ynez River steelhead fishery in good condition at the individual, population and community level. The study must evaluate channel morphology and water quality issues, including but not limited to sediment, temperature, and dissolved oxygen.

(b3.) Right holder shall conduct a study that evaluates the magnitude of the effect of invasive species, particularly piscivorous fish, 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. 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 the impacts on steelhead in the river. For each measure studied, right holder shall evaluate the extent to which the measure could reduce the impact on steelhead.

(b4.) Right holder shall conduct a study that evaluates stream and streamside habitat restoration and habitat improvements that could be completed to improve steelhead conditions in the lower Santa Ynez River watershed in addition to, or in lieu of, the Table 2 Flows, including but not limited to fixing impediments and barriers to passage or providing passage upstream and downstream of Bradbury Dam.

- c. Right holder shall prepare a study plan for the studies described above and any other studies that may be necessary to determine the measures necessary to keep fish in good condition below Bradbury Dam. For all of the studies except the study on the Table 2 Flows, the study plan must include: 1) the sequence in which the right holder proposes to complete the studies; 2) the proposed deadlines for completing each of the individual studies; 3) a description, subject to the Board's review and approval, of the appropriate metric or metrics to be used to evaluate to what extent a given measure will restore steelhead to good condition at the population and community levels; and 4) the proposed deadlines for submitting the completed reports to the Deputy Director that describe the studies and their results. 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. Right holder shall consult with CDFW and NMFS regarding the development and scope of the study plan as well as each individual study. Within 180 days from the date of this order, right holder shall submit a study plan to the Deputy Director for the Deputy Director's review and approval. The Deputy Director may direct the right holder to make any changes to the study plan necessary to ensure a timely and meaningful evaluation of the measures necessary to protect public trust resources in the Santa Ynez River. In addition, the Deputy Director may require the right holder to conduct the studies in phases, or to refine or



augment the studies based on the results of an earlier phase. Right holder shall make any changes to the study plan that the Deputy Director requires within the period that the Deputy Director specifies and shall conduct and report on the studies in accordance with the approved study plan. The Deputy Director may require updates and revisions to the study plan as studies are completed and new information is available. Right holder shall make any changes to the study plan that the Deputy Director requires within the period that the Deputy Director specifies and shall conduct and report on the studies in accordance with the approved study plan. The Deputy Director may require updates and revisions to the study plan as studies are completed and new information is available.

17. Right holder shall: 1) 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 continuous record of the daily instream flows shall be made readily available on a publicly accessible website. 2) Implement the monitoring program described in the revised Biological Assessment (2000) to evaluate steelhead and their habitat within the lower Santa Ynez River. The monitoring program shall be implemented regardless of which flow requirements are in effect. The Deputy Director may amend the monitoring requirements to require additional monitoring or refine existing requirements.

Comment [A46]: New Term

18. Right holder shall submit a report by December 31 of each year that verifies or describes the status of right holder's compliance with all permit terms for the previous water year ending September 30. In order to document compliance with term 13, 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 shall be submitted to the Division of Water Rights in a format designated by the Deputy Director for Water Rights. The Deputy Director may require additional reporting in order to determine compliance with all permit terms.

Comment [A47]: New Term

19. The State Water Board reserves authority to increase, decrease, or terminate the flows required by terms 13 and 14 of this permit consistent with Water Code section 100 and the Public Trust Doctrine. Any subsequent determination concerning the flows necessary to protect public trust uses should be made with the benefit of both the study of the effects of the Table 2 Flows, the results of the IFIM study required by term 16 of this permit, 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.

Comment [A48]: New term

20. 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.

Comment [A49]: New Term

- a. The State Water Board may increase, decrease, or terminate the flows required by terms 13 and 14 of this permit. In addition, the State Water Board may require right holder to implement any measures to restore or improve fish passage, control invasive species, or 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 16 of this permit, 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.
- b. If the right holder, NMFS and CDFW agree and can demonstrate to the Executive Director's satisfaction that measures to restore or improve fish passage, control invasive species, or

improve habitat identified in the studies required by term 16 can and will be implemented that provide equivalent or better protection than the Table 2 Flows to keep steelhead in the Santa Ynez River in good condition, the Executive Director may authorize the right holder to implement the measures instead of meeting some or all of the Table 2 Flows. Prior to implementation, the right holder shall obtain NMFS's and CDFW's approvals of final project designs.

21. If right holder anticipates a violation of any of these terms or conditions or a violation has occurred, right holder shall provide immediate written notification to the Deputy Director.

Comment [A50]: New Term

22. 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.

Comment [A51]: New Term

23. Right holder shall revise its February 8, 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. 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.

Comment [A52]: New term

---

**THIS RIGHT IS ALSO SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:**

A. Right holder is on notice that: (1) failure to timely commence or complete construction work or beneficial use of water with due diligence, (2) cessation or partial cessation of beneficial use of water, or (3) failure to observe any of the terms or conditions of this right, may be cause for the State Water Board to consider revocation (including partial revocation) of this right. (Cal. Code Regs., tit. 23, § 850.)  
(0000016)

B. 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.)  
(0000017)

C. Right holder is not authorized to make any modifications to the location of diversion facilities, place of use or purposes of use, or make other changes to the project that do not conform with the terms and conditions of this right, prior to submitting a change petition and obtaining approval of the State Water Board.  
(0000018)

D. Once the time to develop beneficial use of water ends under this permit, right holder is not authorized to increase diversions beyond the maximum annual amount diverted or used during the authorized development schedule prior to submitting a time extension petition and obtaining approval of the State Water Board.  
(0000019)

E. Only the amount of water applied to beneficial use during the authorized diversion season, as determined by the State Water Board, shall be considered when issuing a license. (Wat. Code, § 1610.)  
(0000006)

Comment [A53]: Renumbered Term 3 and Term 11

- F. Right holder shall maintain records of the amount of water diverted and used under this right to enable the State Water Board to determine the amount of water that has been applied to beneficial use. (0000015)
- G. 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 use under this right and documentation of compliance with the terms and conditions of this right. (0000010)
- H. No water shall be diverted under this right unless right holder is operating in accordance with a compliance plan, satisfactory to the Deputy Director for Water Rights. Said compliance plan shall specify how right holder will comply with the terms and conditions of this right. Right holder shall comply with all reporting requirements in accordance with the schedule contained in the compliance plan. (0000070)
- I. Right holder shall grant, or secure authorization through right holder's right of access to property owned by another party, the staff of the State Water Board, and any other authorized representatives of the State Water Board the following:
1. Entry upon property where water is being diverted, stored or used under a right issued by the State Water Board or where monitoring, samples and/or records must be collected under the conditions of this right;
  2. Access to copy any records at reasonable times that are kept under the terms and conditions of a right or other order issued by State Water Board;
  3. Access to inspect at reasonable times any project covered by a right issued by the State Water Board, equipment (including monitoring and control equipment), practices, or operations regulated by or required under this right; and,
  4. Access to photograph, sample, measure, and monitor at reasonable times for the purpose of ensuring compliance with a right or other order issued by State Water Board, or as otherwise authorized by the Water Code. (0000011)
- J. This right shall not be construed as conferring right of access to any lands or facilities not owned by right holder. (0000022)
- K. All rights are issued subject to available flows. Inasmuch as the source contains treated wastewater, imported water from another stream system, or return flow from other projects, there is no guarantee that such supply will continue. (0000025)
- L. This right does not authorize diversion of water dedicated by other right holders under a senior right for purposes of preserving or enhancing wetlands, habitat, fish and wildlife resources, or recreation in, or on, the water. (Wat. Code, § 1707.) The Division of Water Rights maintains information about these dedications. It is right holders' responsibility to be aware of any dedications that may preclude diversion under this right. (0000212)

- M. No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and is in compliance with all necessary permits or other approvals required by other agencies. If an amended right is issued, no new facilities shall be utilized, nor shall the amount of water diverted or used increase beyond the maximum amount diverted or used during the previously authorized development schedule, unless right holder has obtained and is in compliance with all necessary requirements, including but not limited to the permits and approvals listed in this term.

If construction or rehabilitation work is required for the diversion works covered by this right, right holder shall prepare and submit to the Division of Water Rights a list of, or provide information that shows proof of attempts to solicit information regarding the need for, permits or approvals that may be required for the project. At a minimum, right holder shall provide a list or other information pertaining to whether any of the following permits or approvals are required: (1) lake or streambed alteration agreement with the Department of Fish and Wildlife (Fish & G. Code, § 1600 et seq.); (2) Department of Water Resources, Division of Safety of Dams approval (Wat. Code, § 6002); (3) Regional Water Quality Control Board Waste Discharge Requirements (Wat. Code, § 13260 et seq.); (4) U.S. Army Corps of Engineers Clean Water Act section 404 permit (33 U.S.C. § 1344); and (5) local grading permits.

Right holder shall, within 30 days of issuance of any permits, approvals or waivers, transmit copies to the Division of Water Rights.

(0000203)

- N. 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.

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, supplying more than 50,000 acre-feet of water annually for agricultural purposes. 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.

(0000029D)

- O. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this right, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

Comment [A54]: Renumbered Term 4

The continuing authority of the State Water Board may be exercised by imposing specific requirements over and above those contained in this right with a view to eliminating waste of water and to meeting the reasonable water requirements of right holder without unreasonable draft on the source. Right holder may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this right and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and

opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Board also may be exercised by imposing further limitations on the diversion and use of water by right holder in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution, article X, section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

(0000012)

- P. The quantity of water diverted under this right is subject to modification by the State Water Board if, after notice to right holder and an opportunity for hearing, the State Water Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(0000013)

- Q. This right does not authorize any act which results in the taking of a candidate, threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, § 2050 et seq.) or the federal Endangered Species Act (16 U.S.C. § 1531 et seq.). If a "take" will result from any act authorized under this right, right holder shall obtain any required authorization for an incidental take prior to construction or operation of the project. Right holder shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this right.

(0000014)

---

*This right is issued and right holder takes it subject to the following provisions of the Water Code:*

*Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer .*

*Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).*

STATE WATER RESOURCES CONTROL BOARD

Application 11331  
Page 18 of 32

DRAFT AMENDED PERMIT 11308

License \_\_\_\_\_

*Les Grober, Deputy Director  
Division of Water Rights*

Dated:

**CACHUMA PROJECT**  
**Santa Barbara County, California**

**Pertaining to the Review of SWRCB**  
**Order WR 73-37, as amended by**  
**WR 89-18**

**Revised**  
**USBR Exhibit 1**  
**February 1, 2003**

**Bureau of Reclamation**  
**Mid-Pacific Region**  
**Sacramento, California**

**Groundwater And Percolation Data For Use In  
Determining Downstream Releases**

**Santa Ynez River- Cachuma Project  
Santa Barbara County, California**

**Table of Contents**

Attachment A - Indicator Wells Above Narrows

Attachment B - Storage Capacity Curves for Indicator Wells Above Narrows

Attachment C - Indicator Wells Below Narrows

Attachment D - Storage Capacity Curves for Indicator Wells Below Narrows

Attachment E - Relationship Between Percolation from Santa Ynez River from Narrows  
through Floradale Avenue and Flow of Santa Ynez River at Narrows

Attachment F – Procedures For Conjunctive Operation of Below Narrows Account

Attachment G - Map, "Ground Water Observation Wells and Stream Gaging  
Stations"

Attachment H - Correlation of Flow at Narrows to Live Stream Conditions Between the  
Narrows and Floradale Avenue



**ATTACHMENT A  
INDICATOR WELLS ABOVE NARROWS**

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION
1	6N/34W-2A6	129.9	92
2	6N/34W-1G2	110.7	105 (110) 2/
2	6N/33W-7E3	130.9	115
3	6N/33W-6D4	140.9	137
4	6N/33W-6K2	187.0	142
5	6N/33W-8E4	174.8	153
6	6N/33W-8J2	200.5	164
7	6N/33W-16B1	214.7	166
8	6N/33W-11M1	203.8	196
9	6N/33W-12L1	223.6	209
10	6N/32W-18C2	233.2	226
11	6N/32W-8N4	246.0	236
12	6N/32W-17J2	256.0	248
13	6N/32W-16G4	277.3	263
14	6N/32W-9G1	305.0	273
15	6N32W-13G2	317.4	310 (300) 2/
15	6N/32W-11D1	298.0	290
16	6N/31 W-17D1	340.6	332
17	6N/31 W-17R1	364.3	348
18	3/		
19	4/		
20	6N/31W-22F1	400.0	392
21	6N/31W-24K2	426.0	420
22	6N/30W-29E1	465.0	452
23	6N/30W-21E1	490.7	475 (471) 2/
23	6N/30W-20H2	476.4	468
24	6N/30W-22C2	502.9 1/	506
25	6N/30W-24E5	550.3	541

1/ Well destroyed - to be replaced.

2/ Average elevation of two wells to determine dewatered storage.

3/ Combined with Node 17.

4/ Combined with Node 20.

## **ATTACHMENT B**

# **STORAGE CAPACITY CURVES FOR INDICATOR WELLS ABOVE NARROWS**

*THIS PAGE INTENTIONALLY LEFT BLANK*

*(INSERT 23 PDF CHARTS HERE)*

**ATTACHMENT C**  
**INDICATOR WELLS BELOW NARROWS**

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION
A	7N/34W-22M6	100.0	73
B	7N/34W-26B4	108.4	78
C	7N/34 W-27F9	97.4	72
D	7N/34W-26Q5	111.3	83
E	7N/34 W-25F3	133.4	81
F	6N/34W-4G4	97.5	70
G	7N/34W-34R1	112.0	78
H	7N/34W-35K9	101.0	89

\* The full basin ground-water surface elevations for below Narrows are considered as the piezometric surface of the deep water body as of April 1941.

**ATTACHMENT D**

**STORAGE CAPACITY CURVES**  
**FOR**  
**INDICATOR WELLS**

**BELOW NARROWS**

THIS PAGE INTENTIONALLY LEFT BLANK

(INSERT 8 PDF CHARTS HERE)

Attachment E  
Relationship Between Percolation from Santa Ynez River from  
Narrows through Floradale Avenue and Flow of Santa Ynez  
River at Narrows

## ATTACHMENT F

### 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' m.s.l.), any BNA water in Lake Cachuma up to the ADWC shall be held and made available to the Member Units if and when they so notify USBR while the reservoir remains below the 100,000 acre-feet (elevation 714.00<sup>2</sup> foot 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' feet m.s.l.) level shall be held and made available to the Member Units up to the ADWC and consistent with the provisions of Paragraph 5.

Attachment F, Page 1 of 2  
Revised USBR Exhibit 1  
February 1, 2003

---

<sup>2</sup> Lake Cachuma Bathymetric survey of year 2000



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 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.

ATTACHMENT G

USBR Map of the  
"Ground Water Observation Wells  
and Stream Gaging Stations" Water Year 2002

A copy of this map will be provided by USBR upon request

ATTACHMENT H

Correlation of Flow at the Narrows to Live Stream Conditions Between the  
Narrows and Floradale Avenue

The Santa Ynez River flow measured at the USGS gage at the Narrows is utilized to determine whether a live stream condition should exist between the Narrows and Floradale Avenue. A live stream between the Narrows and Floradale Avenue means that there would have been a continuous surface flow from the Narrows through Floradale Avenue with no less than three cfs flowing at V Street (formerly 13th street), which is considered to be the equivalent to one cfs flow at Floradale Avenue.

The measured flows at the Narrows is averaged over 24 hours representing the daily flow. The correlation of the measured flow at the Narrows to the live stream condition between the Narrows and Floradale Avenue for each day is set forth in the attached tabulation. The criteria for determination of existence or non-existence of the live stream condition in Santa Ynez River between the Narrows and Floradale Avenue for each day are based on: (1) the daily flow measured at the Narrows; (2) the accumulated daily flows from October 1 through the preceding day measured at the Narrows; and (3) the accumulated daily flows for the preceding ten (10) days measured at the Narrows.

When water releases are made for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River ("fish water releases") 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 water releases and they are based on measured flows at the Narrows. The adjustment for the fish water releases provided in this paragraph is not applicable if there is a spill from Lake Cachuma during the current day.

**Criteria for Determination of live Stream Condition  
in the Santa Ynez River Between the Narrows and Floradale Avenue**

Measured flow at the Narrows for current day is:	Accumulated daily flows at the Narrows from October 1 through preceding day is:	Accumulated daily flows at the Narrows for preceding ten (10) days is:	Condition of Santa Ynez River between the Narrows and Floradale Avenue for current day is:
15 cfs or less	not applicable	not applicable	no live stream
between 15 and 20 cfs	2,000 cfs or less	not applicable	no live stream
between 20 and 50 cfs	2,000 cfs or less	200 cfs or less	no live stream
between 20 and 50 cfs	2,000 cfs or less	in excess of 200 cfs	live stream
between 15 and 50 cfs	in excess of 2000 cfs	not applicable	live stream
in excess of 50 cfs	not applicable	not applicable	live stream



STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

**RIGHT TO DIVERT AND USE WATER**

APPLICATION 11332

**DRAFT AMENDED** PERMIT 11310 LICENSE

Right Holder: The United States of America  
U.S. Bureau of Reclamation  
South Central California Area Office  
1243 N Street  
Fresno, CA 93721

The State Water Resources Control Board (State Water Board) authorizes the diversion and use of water by the right holder in accordance with the limitations and conditions herein SUBJECT TO PRIOR RIGHTS. The priority of this right dates from March 25, 1946. This right is issued in accordance with the State Water Board delegation of authority to the Deputy Director for Water Rights (Resolution 2012-0029) and the Deputy Director for Water Rights redelegation of authority dated July 6, 2012. This right supercedes any previously issued right on **Application 11332**.

The Deputy Director for Water Rights (Deputy Director) finds that: (a) the change will not operate to the injury of any lawful user of water; (b) good cause has been shown for the change; (c) the petition does not constitute the initiation of a new right; and (d) the State Water Resources Control Board (State Water Board) has made the required findings pursuant to the California Environmental Quality Act (CEQA) or the project is exempt from CEQA.

The State Water Board has complied with its independent obligation to consider the effect of the proposed change on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346, 658 P.2d 709].)

**Right holder is hereby granted a right to divert and use water as follows:**

1. Source of water: Santa Ynez River  
tributary to: the Pacific Ocean  
within the County of Santa Barbara

2. Location of Point of Diversion and Place of Storage

By California Coordinate System of 1983 in Zone 5	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian
<b><u>Bradbury Dam (Lake Cachuma)</u></b> (1) North 2,041,529.66 feet and East 5,965,386.74 feet	NW ¼ of SW ¼	19	T6N	R29W	SBB&M

3. Purpose of use	4. Place of use					
	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian	Acres
<b>Irrigation</b>	<b>All lands included within existing boundaries (205,376 gross acres)<sup>1</sup>, including the areas of service within the political boundaries of the Cachuma Member Units: the Carpinteria County 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 net irrigable acres of 40,250 acres within a gross area of 205,376 acres as shown on maps. Recreational use is at Cachuma Reservoir.</b>					
<b>Municipal</b>						
<b>Domestic</b>						
<b>Industrial</b>						
<b>Salinity Control</b>						
<b>Incidental Recreation</b>						
<b>Stockwatering</b>						

The following U.S. Bureau of Reclamation place of use maps, dated September 18, 1996, are filed with the State Water Board:

- GIS Map, Cachuma Project Overall, sheet 1 of 3, Map No. 368-208-899, Sept. 18, 1996
- GIS Map, Cachuma Project, Enlarged View of Santa Ynez River Basin, sheet 2 of 3, Map No. 368-208-900, Sept. 18, 1996.
- GIS Map, Cachuma Project, Enlarged View of South Coast Region, sheet 3 of 3, Map No. 368-208-901, Sept. 18, 1996.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed **50 cubic feet per second** by direct diversion to be diverted from January 1 to December 31 of each year and **275,000 acre-feet** per year by storage to be collected from October 1 of each year to June 30 of the succeeding year.

(000005A)

Comment [A1]: Renumbered Original Term 1

6. The total quantity of water collected to storage under this right and the right pursuant to Application 11331 shall not exceed **275,000 acre-feet**.

(000005R)

Comment [A2]: Renumbered Original Term 2

7. Construction work shall be completed on or before December 1, 1960 and complete application of the water to the authorized use shall be prosecuted with reasonable diligence and completed by December 31, 2000.

(000009)

Comment [A3]: Renumbered and updated Term 12 and Term 13.

8. Water of the Santa Ynez River shall be stored in and released from Lake Cachuma in such amounts and at such times and rates as (a) will be sufficient, together with inflow from downstream tributary sources, to supply downstream diversions of the surface flow under vested prior rights to the extent water would have been available for such diversions from unregulated flow, (b) will be sufficient, together with inflow from downstream tributary sources, to maintain percolation of water from the

Comment [A4]: Renumbered Term 5

NOTE: Terms 8 and 9 reflect Reclamation's proposed amendments consistent with those contained in Exhibit C of the 2002 Settlement Agreement. **The yellow heightened text** for permit terms 8 and 9 are the agreed upon changes made to "original" permit terms 5 and 6 shown on Reclamation's [Exhibit DQI-10 \(enclosure 1\)](#).

<sup>1</sup> Total "computer generated acreage" of the new place of use is specified by Bureau of Reclamation letter dated October 1, 1996, on file with the State Water Resources Control Board (Application 11308).

stream channel as such percolation would occur from unregulated flow, in order that operation of the project shall not reduce natural recharge of groundwater from the Santa Ynez River, and (c) will enhance percolation of tributary runoff below Bradbury Dam to promote water conservation, more specifically, as hereinafter set forth. Because studies and historical operation have shown that percolation rates are different above and below the Lompoc Narrows, the following provisions, to be complied with by permittee, are divided into two categories: (1) above the Narrows; and (2) below the Narrows.

8.1 Above the Narrows: An "above Narrows" account shall be established and amounts of water shall be credited to and released from said account as provided below in this section:

**Comment [A5]:** Renumbered Term 5(1)

a. The volume of dewatered storage in the groundwater basins above the Narrows shall be determined at the end of each calendar month. USBR Exhibit 1, dated, February 1, 2003, contains, in Attachment A thereto, a list of indicator wells in 23 storage units comprising these basins which shall be used for the determination and, in Attachment B thereto, a compilation of curves dated February 1, 2003, that relate dewatered storage to water level elevations in the indicator wells.

**Comment [A6]:** Renumbered and Amended Term 5(1.1)

Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

b. The operating dewatered storage (ODS) for the combined 23 storage units shall be 10,000 acre-feet of dewatered storage.

**Comment [A7]:** Renumbered Term 5(1.2)

c. All inflow to Lake Cachuma shall be computed on a daily basis and, except as otherwise specifically provided herein, shall be stored in the lake. Such computed Lake Cachuma inflow shall be deemed to be no less than 25 acre-feet per month.

**Comment [A8]:** Renumbered Term 5(1.3)

d. Each month, the inflow to Lake Cachuma stored that month during periods when a live stream did not actually exist in the Santa Ynez River shall be computed. All such stored inflow shall be credited monthly and accumulated in an 'above Narrows' account. At the end of each month, the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the 23 storage units at that time. (A 'live stream', as that term is used herein, shall be deemed to exist in the Santa Ynez River whenever there is a visible stream of water flowing on the surface of the 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], at Robinson Bridge near Lompoc [river mile 12.9] and the flow measured at the USGS gauge entitled 'Santa Ynez River at Narrows near Lompoc' [Narrows Gauge] meets the criteria for a live stream condition as shown on Attachment H to USBR Exhibit 1, dated February 1, 2003, entitled 'Correlation of Flow at Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue'.) In determining the existence or non-existence of a live stream, water released by permittee from the "above Narrows" account pursuant to paragraph (8.1e) of section (8.1) and from the "below Narrows" account pursuant to paragraph (8.2f) of section (8.2) which is in transit above the Narrows, shall not be considered to be surface flow of the Santa Ynez River.

**Comment [A9]:** Renumbered and Amended Term 5(1.4)

Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

In addition, water released for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River, hereinafter referred to as "fish water releases", which is in transit between Bradbury Dam and the Narrows, shall not be considered to be surface flow of the Santa Ynez River. When 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 February 1, 2003, entitled "Correlation of Flow at the Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue" to meet the criteria for a live stream condition.

e. If, at any time, the total dewatered storage in the basins above the Narrows exceeds the ODS, releases of water in the "above Narrows" account shall be made at such times, amounts and rates of flow as are requested by the Santa Ynez River Water Conservation District (Santa Ynez), but the amount of such releases shall not exceed (i) the quantity required to raise the water levels to the ODS, or (ii) the quantity accumulated in the "above Narrows" account, whichever is smaller. The amounts so released shall be deducted from the "above Narrows" account.

Comment [A10]: Renumbered Term 5(1.5)

f. Notwithstanding paragraph (e) above, for the benefit of water users upstream from San Lucas Bridge, permittee may release water in any month up to the total computed inflow for the two previous months less previous releases of such two months inflow. Of the total amount so released for such users, only an amount not in excess of the two previous months' increase in the "above Narrows" account shall be deducted from that account.

Comment [A11]: Renumbered Term 5(1.6)

g. The "above Narrows" account shall not be reduced by Lake Cachuma evaporation.

Comment [A12]: Renumbered Term 5(1.7)

h. In the event of a spill from Lake Cachuma, water in the "above Narrows" account shall be deemed to be the first water spilled to the extent dewatered storage is reduced during the month spill occurs.

Comment [A13]: Renumbered Term 5(1.8)

i. The point of delivery of water in the "above Narrows" account shall be at Bradbury Dam.

Comment [A14]: Renumbered Term 5(1.9)

j. If it is determined by Santa Ynez that, as a result of the existence of the 10,000 acre foot "operating dewatered storage" provided for in paragraph (b) of this section, credits have been allocated to the "above Narrows" account based on inflow to Lake Cachuma, which, if released, would have percolated into the basin below the Narrows in the absence of such operating dewatered storage, and this condition has not otherwise been taken into account in allocating credits to the "below-Narrows" account, Santa Ynez may request the release of compensating amounts of "above Narrows" account waters in such a way that it percolates into the "below Narrows" basin. In that event, Santa Ynez shall inform the permittee in advance and the releases shall be deducted from the "above Narrows" account.

Comment [A15]: Renumbered Term 5(1.10)  
Modified September 21, 1989 (WR 89-18)

8.2 Below the Narrows: A "below Narrows" account shall be established and amounts of water shall be credited and released from said account as provided below in this section:

Comment [A16]: Renumbered Term 5(2)

a. As stated in paragraph (8.1c) above, all inflow to Lake Cachuma shall be stored in the Lake, except as otherwise specifically provided herein. An approximation of the flow at the Narrows that would have occurred in the absence of the Cachuma Project (hereinafter called "constructive flow") shall be computed monthly as follows (hereinafter, the month for which the computation is made is called the "computation month"):

Comment [A17]: Renumbered Term 5(2.1)

a.1. For each computation month when a live stream did not exist at any time in the Santa Ynez River between San Lucas Bridge and the Narrows, the Cachuma inflow shall be either (i) increased by the amount by which the "above Narrows" account at the end of the previous computation month exceeded the "above Narrows" dewatered storage at the end of the computation month, or (ii) decreased by the amount by which such dewatered storage exceeded the previous month's "above Narrows" account. From the result shall be subtracted the computation month's releases and spills, if any. The result shall be the

Comment [A18]: Renumbered Term 5(2.1.A)  
Modified September 21, 1989 (WR 89-18)



increment to be added to the measured flow at the Narrows to determine the constructive flow at the Narrows for the computation month. If that increment is negative, it shall be treated as zero.

- a.2 For each computation month when a live stream existed at any time in the Santa Ynez River between San Lucas Bridge and the Narrows, the Cachuma inflow shall be decreased by the computation month's releases and spills. The result shall be the increment to be added to the measured flow at the Narrows to determine the constructive flow at the Narrows for the computation month. **Comment [A19]:** Renumbered Term 5(2.1.B)  
Modified: September 21, 1989 (WR 89-18)
- a.3 The amount of the "below Narrows" account releases which reached the Narrows during a computation month shall be determined as follows: the Salsipuedes Creek contribution to flow at the Narrows during the computation month shall be subtracted from the measured flow at the Narrows for that month. If such measured flow at the Narrows minus such Salsipuedes Creek contribution equals or exceeds the quantity released from the "below Narrows" account that month, it shall be deemed that all of the "below Narrows" release reached the Narrows. If such measured flow at the Narrows minus such Salsipuedes Creek contribution is less than the "below Narrows" release, it shall be deemed that only the difference between such measured flow at the Narrows and such Salsipuedes Creek contribution reached the Narrows. **Comment [A20]:** Renumbered Term 5(2.1.C)
- a.4. Water may be released from Lake Cachuma and be in transit above the Narrows at the end of a month and, as a result, computations made as of that date may not accurately reflect pertinent facts. To compensate for such occurrences, appropriate adjustments shall be made to the calculations required by this order. **Comment [A21]:** Renumbered Term 5(2.1.D)
- b. A monthly computation shall be made of the amount of impairment of percolation to the Lompoc Basin due to the Cachuma Project. The amount of such percolation during the computation month shall be determined by means of the "Relationship Between Percolation from Santa Ynez River from Narrows through Floradale Avenue and Flow of Santa Ynez River at Narrows" correlation shown in USBR Exhibit 1, Attachment E, dated February 1, 2003, assuming (i) the measured flow at the Narrows and (ii) the constructive flow at the Narrows. The monthly impairment shall be equal to the difference between the two amounts thus determined. **Comment [A22]:** Renumbered Term 5(2.2)  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003
- c. (Eliminated) **Comment [A23]:** Renumbered Term 5(2.2.1)  
Modification requested February 1, 2003
- d. The amount of percolation impairment shall be credited to the "below Narrows" account. The volume of dewatered storage in the groundwater basin below the Narrows shall be determined at the end of each month. Each month the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the Lompoc Basin at that time. A list of indicator wells showing their "full" elevation in eight storage units in the Lompoc Basin is contained in USBR Exhibit 1, Attachment C, dated February 1, 2003. USBR Exhibit 1, Attachment D, dated February 1, 2003, is a compilation of curves that relate dewatered storage to water level elevations in the indicator wells. Said Attachments C and D shall be used to make the determination required by this paragraph (8.2d) of section (8.2). **Comment [A24]:** Renumbered Term 5(2.3)  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003
- e. The "below Narrows" account shall not be reduced by Lake Cachuma evaporation. **Comment [A25]:** Renumbered Term 5(2.4)
- f. Release of water in the "below Narrows" account shall be requested by Santa Ynez as soon after the credit is computed as is reasonably consistent with the goal of optimizing the percolation of a substantial amount of such water in the Lompoc Basin, and in such requests Santa Ynez shall specify the desired amounts and rates of flow of such releases, subject to the limitation described **Comment [A26]:** Renumbered Term 5(2.5)  
Modified September 21, 1989 (WR 89-18)

below. Optimal conditions for such releases include, but are not limited to, periods when a live stream exists at and above the Narrows and releases are being made of "above Narrows" account water. Permittee shall make the reasonably requested releases. The "below Narrows" account shall be reduced by the amount of water so released which reaches the Narrows, as determined pursuant to subparagraph (8.2a.3) of paragraph (8.2) of this section (8). The amount of water so released which does not reach the Narrows shall be deducted from the "above Narrows" account. The "above Narrows" account may have a negative balance as a result of releases of water from the "below Narrows" account. In the event of a spill from Lake Cachuma, any such negative balance shall be adjusted to zero. To the extent a negative balance exists in the "above Narrows" account, all inflow to Lake Cachuma shall be credited to that account. For any month the requests for releases of water in the "below Narrows" account shall not exceed the lesser of (i) the "below Narrows" account at the end of the previous month, or (ii) the algebraic sum of the "below Narrows" account at the end of the previous month plus the "above Narrows" account at the end of the previous month plus 2,000 acre-feet.

f.1. Notwithstanding Paragraph (f), "below Narrows" account 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 Attachment F of USBR Exhibit 1, dated February 1, 2003.

Comment [A27]: Renumbered Term 5(2.5.1)

Modification requested February 1, 2003

g. The point of delivery of waters stored in the "below Narrows" account shall be at Bradbury Dam.

Comment [A28]: Renumbered Term 5(2.6)

h. As provided in paragraph (8.1h) of section (8) above, in the event of a spill from Lake Cachuma, water in the "above Narrows" account shall be deemed to be the first water spilled to the extent dewatered storage is reduced during the month spill occurs. If spills reaching the Narrows are less than the "below Narrows" account credits, additional spill shall be deemed to be water in the "below Narrows" account to the extent dewatered storage below the Narrows is reduced, prorated according to the relationship that spills reaching the Narrows bear to the measured flows at the Narrows during the month spill occurs. Spills reaching the Narrows shall be determined by deducting the decrease in "above Narrows" dewatered storage from the spills measured at the dam. If the spills reaching the Narrows are greater than the "below Narrows" account credits, additional spill shall be deemed to be water in the "below Narrows" account only to the extent dewatered storage below the Narrows is reduced, prorated according to the relationship that the "below Narrows" account credits bear to the measured flows at the Narrows during the month spill occurs.

Comment [A29]: Renumbered Term 5(2.7)

Modified September 21, 1989 (WR 89-18)

9. Until further order of the Board, permittee shall make or cause to be made suitable field investigations, measurements, and studies, and shall install and maintain necessary measuring facilities, to determine the amount, timing and rate of releases of water into the natural channel of the Santa Ynez River below Bradbury Dam that are required of permittee in order to fully comply with the provision of Condition No. 8 in this permit, and to accurately measure all flows at the Narrows. Permittee shall provide the necessary measuring devices and shall submit to the Board with the annual progress reports, or at such other times as the Board may require, a report of such investigations, measurements and studies and the results thereof, including but not limited to the following:

Comment [A30]: Renumbered Term 6.

Modified September 21, 1989 (WR 89-18)

- a. A continuous record of Lake Cachuma water surface elevations.
- b. A continuous record of precipitation near Bradbury Dam.
- c. Daily evaporation, wind movement, precipitation, and temperature near

Bradbury Dam.

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.

**Comment [A31]:**  
Modification requested February 1, 2013

e. Continuous records of outflow from Lake Cachuma, including flows through river outlets at Bradbury Dam, inflows and outflows through Tecolote Tunnel, and overflows at Bradbury Dam spillway. Instruments suitable for accurate measurement of small outflows shall be installed.

f. Continuing groundwater studies below Bradbury Dam in the Santa Ynez Basin, with monthly observation of representative wells influenced by Santa Ynez River flows at locations shown on USBR Exhibit 1, Attachment G, dated February 1, 2003.

**Comment [A32]:**  
Modification requested February 1, 2013

g. Semiannual water quality analyses of surface and groundwater downstream from Bradbury Dam at locations as shown on USBR Exhibit 1, Attachment G, dated February 1, 2003.

**Comment [A33]:**  
Modification requested February 1, 2013

h. Permittee and the California Department of Fish and Wildlife (CDFW) shall develop and undertake a study plan and annual monitoring program to determine the extent and condition of the riparian vegetation in and along the margins of the Santa Ynez River below Bradbury Dam. Timing, methodology, and specific criteria to measure impacts to riparian vegetation will be part of the plan and program. A plan agreed to by the permittee and CDFW shall be submitted to the Deputy Director within one year of adoption of this order. This program shall be in place for five years at which time the permittee and CDFW shall report to the Board the feasibility of continuing such a program. An annual written report shall be prepared by permittee and CDFW and submitted to the Board. The Board retains jurisdiction to adopt appropriate mitigation measures, in the event adverse impacts are caused to the riparian vegetation by release schedules or procedures contained within this order.

**Comment [A34]:**  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

*(Note: The "Santa Ynez River Vegetation Monitoring Study, Santa Barbara County, California, Final Phase 1 Report", dated April 2000, was forwarded by the Bureau of Reclamation, to the State Water Resources Control Board and reviewed by Board staff. By letter dated July 26, 2000, the Deputy Director, accepted the April 2000 report as meeting the requirement of Condition 3(c) of Order WR 94-5.)*

i. A record on monthly quantities of dewatered storage downstream from Bradbury Dam and of monthly quantities shown in the "above Narrows" and the "below Narrows" accounts, as described in Condition No. 8 of this permit.

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

**Comment [A35]:**  
Modified September 21, 1989 (WR 89-18)  
Modification requested February 1, 2003

k. A record of flow in San Lucas Creek at the Highway 154 crossing.

**Comment [A36]:**  
Modification requested February 1, 2003

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

**Comment [A37]:**  
Modification requested February 1, 2003

m. Continuous records of CCWA deliveries into Lake Cachuma.

**Comment [A38]:**  
Modification requested February 1, 2003

Permittee shall make its records of such investigations and measurements available for inspection by the Board and shall allow authorized representatives of the Board, Santa Barbara County Water Agency and member units, the Santa Ynez River Water Conservation District, City

of Lompoc, and United States military installation at Vandenberg Air Force Base, reasonable access to its project works and properties for the purpose of gathering information and data.

10. 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

**Comment [A39]:** Renumbered Term 7  
Modification requested February 1, 2003  
Requested modification amended pursuant to 2016 draft order.

11. The right to divert and store water, and apply said water to beneficial use as provided in the permits is granted to the United States as trustee for the benefit of the public agencies of the State together with the owners of land and water users within such public agencies as shall be supplied with the water appropriated under the permits.

**Comment [A40]:** Renumbered Term 9

12. Subject to compliance by the public agencies concerned with any and all present and future valid contractual obligations with the United States, such public agencies, on behalf of their landowners and other water users, shall, consistent with other terms of the permits, have the permanent right to the use of all water appropriated and beneficially used hereunder, which right shall be appurtenant to the land to which said water shall be applied, subject to continued beneficial use and the right to change the point of diversion, place of use and purpose of use, as provided in Chapter 10, Part 2 of Division 2 of the Water Code of the State of California, and subject to the right to dispose of a temporary surplus.

**Comment [A41]:** Renumbered Term 10

13. Except as otherwise provided in this term and in term 15, below, the right holder shall operate and maintain the Cachuma Project and implement conservation measures in accordance with the description of the proposed action 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, set forth at pages 67 – 68, and the Terms and Conditions, set forth at pages 68 – 78, in the National Marine Fisheries Service's 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).

**Comment [A42]:** New Term

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

NA - not applicable

<sup>a</sup>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).

<sup>b</sup>Lake storage is measured on the first day of each month. (FEIR, Vol. IV, Appendix E, Technical Memorandum No. 1, p. 5.)

<sup>c</sup>The specified flow applies only when steelhead are present.

<sup>d</sup>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.

<sup>e</sup>When there is less than 30,000 af of storage in the reservoir, right holder shall provide periodic releases of 30 af per month as determined by the fishery agencies and the State Water Board 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 the revised project description
- c. The State Water Board reserves authority to modify this term based on any modification to the 2000 Biological Opinion. Any modification to this term shall be made in accordance with section 780 of title 23 of the California Code of Regulations.

14. The right holder shall release or bypass water to meet flows the Table 2 Flows, set forth below, at all times during Wet and Above Normal Water-Year types

Comment [A43]: New Term

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.

- 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. During any given water year, the Table 2 Flows may be reduced or terminated for a period not to exceed the remainder of the water year if the CDFW or the National Marine Fisheries Service (NMFS) determines that the flows are likely to harm the fishery. The 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 State Water Board's Executive Director (Executive Director), who may disapprove the direction to reduce or terminate the flows if the Executive Director disagrees with the determination that the flows would harm the fishery.
- c. The Executive Director may terminate the requirement to meet the Table 2 Flows, or may allow a reduction in the flows required, if CDFW, NMFS, right holder, or Member Units demonstrate to the Executive Director's satisfaction that the flows will not benefit the fishery or are likely to harm the fishery.
- d. The 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 in order to meet the Table 2 Flows in accordance with the existing schedule. Within five business days of reaching an agreement that allows for the flow schedule to be changed, the right holder shall notify and submit the agreement to the Executive Director, who may disapprove any changes to the schedule.
- e. If CDFW or NMFS proposes a change to the schedule of Table 2 Flows, but right holder and the Member Units do not agree to the change consistent with term [insert permit term number corresponding to term 9(d)], 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. Right holder shall confer with the Member Units to reduce the safe yield of the Cachuma Project in light of the increased flow requirements (Table 2 Flows) in wet and above normal water years to prevent the loss of beneficial uses of the project during severe shortages. In determining the project's safe yield, the right holder and Member Units shall also consider the current severe multi-year drought 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.

- 15. Within 90 days from the date of this order, right holder must submit to the Deputy Director for approval, a plan that describes the measures in place or those it will implement that will ensure compliance with terms 13 and 14. If the plan includes future measures, a schedule for implementation of those measures must also be provided. The Deputy Director may direct the right holder to make any changes to the plan reasonably necessary to ensure compliance.

Comment [A44]: New Term

- 16. To determine the measures necessary to protect the public trust resources of the Santa Ynez River, the right holder shall conduct the following studies in consultation with CDFW and NMFS.

Comment [A45]: New Term

- a. The right holder shall conduct a study on the Table 2 Flows that shall include, but not be limited to: 1) analysis of the effects of those flows on steelhead in the river and verification of the amount of additional habitat provided, including habitat below the Alisal Reach; 2) an assessment of the quality of the additional habitat, taking into account temperature, dissolved oxygen, and substrate; 3) any detrimental effects to steelhead in the river caused by the additional flows, such as increased temperature; and 4) whether benefits to the steelhead fishery could be maximized through an alternative flow schedule with equivalent or reduced water supply impacts. The study shall be conducted in a similar manner as the requirements in Revised Section 3 (Proposed Project) of the Biological Assessment for Cachuma Project Operations and the Lower Santa Ynez River, June 2000, sections 3.4.2.2, 3.4.4.1 and 3.4.4.2. Right holder shall evaluate the results of the Table 2 Flows over five Wet or Above Normal Water Year Types. In addition to analyzing the effects of the Table 2 Flows on steelhead in the river, right holder shall analyze 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 in order to minimize the effects of release or bypass flow requirements on Cachuma Project yield. Right holder shall complete and submit a report on the results of the study to the Deputy Director, CDFW, and NMFS. The report shall be submitted within a year after the conclusion of the fifth Wet or Above Normal water year unless right holder shows good cause for and the Executive Director approves a time extension.
- b. In addition to the Table 2 Flows, right holder shall study any other 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. For each measure studied, right holder shall evaluate: 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, or water supplies; and 5) any other study-specific criteria indicated below. After completing each study, right holder shall submit a report to the Deputy Director, CDFW, and NMFS that describes the study and its results. At a minimum, right holder shall conduct the studies described below on passage, instream flow, invasive species, and stream and streamside habitat restoration and habitat improvements.

(b1.) The passage study shall evaluate a variety of options for providing passage of steelhead upstream and downstream of Bradbury Dam, including: fish ladders, locks, elevators, and trap-and-truck operations, including associated collection facilities.

Provisions for both adults and smolts must be evaluated. The study shall also include, but shall not be limited to, an evaluation of reservoir outlet works, collectors, transport methods and downstream release sites. Unless there is good cause shown for not doing so, the study shall conform to the Santa Ynez River Fish Passage Feasibility Analysis submitted on February 16, 2004 by NMFS and on February 17, 2004 by CDFW during the proceeding to consider modifications to these permits. Based on the significant potential benefit of providing passage around Bradbury Dam, it may be possible to defer the remaining studies pending completion of the passage study. If passage is feasible and likely to achieve good condition of the steelhead fishery, the remaining study requirements may continue to be deferred pending implementation of measures that provide passage around Bradbury Dam and monitoring to determine whether good condition of the fishery is likely to be achieved.

(b2.) Right holder shall develop and conduct an Instream Flow Incremental Methodology (IFIM) or comparable study to determine flows necessary to keep the Santa Ynez River steelhead fishery in good condition at the individual, population and community level. The study must evaluate channel morphology and water quality issues, including but not limited to sediment, temperature, and dissolved oxygen.

(b3.) Right holder shall conduct a study that evaluates the magnitude of the effect of invasive species, particularly piscivorous fish, 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. 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 the impacts on steelhead in the river. For each measure studied, right holder shall evaluate the extent to which the measure could reduce the impact on steelhead.

(b4.) Right holder shall conduct a study that evaluates stream and streamside habitat restoration and habitat improvements that could be completed to improve steelhead conditions in the lower Santa Ynez River watershed in addition to, or in lieu of, the Table 2 Flows, including but not limited to fixing impediments and barriers to passage or providing passage upstream and downstream of Bradbury Dam.

- c. Right holder shall prepare a study plan for the studies described above and any other studies that may be necessary to determine the measures necessary to keep fish in good condition below Bradbury Dam. For all of the studies except the study on the Table 2 Flows, the study plan must include: 1) the sequence in which the right holder proposes to complete the studies; 2) the proposed deadlines for completing each of the individual studies; 3) a description, subject to the Board's review and approval, of the appropriate metric or metrics to be used to evaluate to what extent a given measure will restore steelhead to good condition at the population and community levels; and 4) the proposed deadlines for submitting the completed reports to the Deputy Director that describe the studies and their results. 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. Right holder shall consult with CDFW and NMFS regarding the development and scope of the study plan as well as each individual study. Within 180 days from the date of this order, right holder shall submit a study plan to the Deputy Director for the Deputy Director's review and approval. The Deputy Director may direct the right holder to make any changes to the study plan necessary to ensure a timely and meaningful evaluation of the measures necessary to protect public trust resources in the Santa Ynez River. In addition, the Deputy Director may require the right holder to conduct the studies in phases, or to refine or augment the studies based on the results of an earlier phase. Right holder shall make any



changes to the study plan that the Deputy Director requires within the period that the Deputy Director specifies and shall conduct and report on the studies in accordance with the approved study plan. The Deputy Director may require updates and revisions to the study plan as studies are completed and new information is available. Right holder shall make any changes to the study plan that the Deputy Director requires within the period that the Deputy Director specifies and shall conduct and report on the studies in accordance with the approved study plan. The Deputy Director may require updates and revisions to the study plan as studies are completed and new information is available.

17. Right holder shall: 1) 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 continuous record of the daily instream flows shall be made readily available on a publicly accessible website. 2) Implement the monitoring program described in the revised Biological Assessment (2000) to evaluate steelhead and their habitat within the lower Santa Ynez River. The monitoring program shall be implemented regardless of which flow requirements are in effect. The Deputy Director may amend the monitoring requirements to require additional monitoring or refine existing requirements.

Comment [A46]: New Term

18. Right holder shall submit a report by December 31 of each year that verifies or describes the status of right holder's compliance with all permit terms for the previous water year ending September 30. In order to document compliance with term 13, 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 shall be submitted to the Division of Water Rights in a format designated by the Deputy Director for Water Rights. The Deputy Director may require additional reporting in order to determine compliance with all permit terms.

Comment [A47]: New Term

19. The State Water Board reserves authority to increase, decrease, or terminate the flows required by terms 13 and 14 of this permit consistent with Water Code section 100 and the Public Trust Doctrine. Any subsequent determination concerning the flows necessary to protect public trust uses should be made with the benefit of both the study of the effects of the Table 2 Flows, the results of the IFIM study required by term 16 of this permit, 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.

Comment [A48]: New term

20. 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.

Comment [A49]: New Term

- a. The State Water Board may increase, decrease, or terminate the flows required by terms 13 and 14 of this permit. In addition, the State Water Board may require right holder to implement any measures to restore or improve fish passage, control invasive species, or 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 16 of this permit, 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.
- b. If the right holder, NMFS and CDFW agree and can demonstrate to the Executive Director's satisfaction that measures to restore or improve fish passage, control invasive species, or improve habitat identified in the studies required by term 16 can and will be implemented that

provide equivalent or better protection than the Table 2 Flows to keep steelhead in the Santa Ynez River in good condition, the Executive Director may authorize the right holder to implement the measures instead of meeting some or all of the Table 2 Flows. Prior to implementation, the right holder shall obtain NMFS's and CDFW's approvals of final project designs.

21. If right holder anticipates a violation of any of these terms or conditions or a violation has occurred, right holder shall provide immediate written notification to the Deputy Director.

Comment [A50]: New Term

22. 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.

Comment [A51]: New Term

23. Right holder shall revise its February 8, 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. 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.

Comment [A52]: New term

---

**THIS RIGHT IS ALSO SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:**

A. Right holder is on notice that: (1) failure to timely commence or complete construction work or beneficial use of water with due diligence, (2) cessation or partial cessation of beneficial use of water, or (3) failure to observe any of the terms or conditions of this right, may be cause for the State Water Board to consider revocation (including partial revocation) of this right. (Cal. Code Regs., tit. 23, § 850.)

(0000016)

B. 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.)

(0000017)

C. Right holder is not authorized to make any modifications to the location of diversion facilities, place of use or purposes of use, or make other changes to the project that do not conform with the terms and conditions of this right, prior to submitting a change petition and obtaining approval of the State Water Board.

(0000018)

D. Once the time to develop beneficial use of water ends under this permit, right holder is not authorized to increase diversions beyond the maximum annual amount diverted or used during the authorized development schedule prior to submitting a time extension petition and obtaining approval of the State Water Board.

(0000019)

E. Only the amount of water applied to beneficial use during the authorized diversion season, as determined by the State Water Board, shall be considered when issuing a license. (Wat. Code, § 1610.)

(0000006)

Comment [A53]: Renumbered Term 3 and Term 11

- F. Right holder shall maintain records of the amount of water diverted and used under this right to enable the State Water Board to determine the amount of water that has been applied to beneficial use. (0000015)
- G. 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 use under this right and documentation of compliance with the terms and conditions of this right. (0000010)
- H. No water shall be diverted under this right unless right holder is operating in accordance with a compliance plan, satisfactory to the Deputy Director for Water Rights. Said compliance plan shall specify how right holder will comply with the terms and conditions of this right. Right holder shall comply with all reporting requirements in accordance with the schedule contained in the compliance plan. (0000070)
- I. Right holder shall grant, or secure authorization through right holder's right of access to property owned by another party, the staff of the State Water Board, and any other authorized representatives of the State Water Board the following:
1. Entry upon property where water is being diverted, stored or used under a right issued by the State Water Board or where monitoring, samples and/or records must be collected under the conditions of this right;
  2. Access to copy any records at reasonable times that are kept under the terms and conditions of a right or other order issued by State Water Board;
  3. Access to inspect at reasonable times any project covered by a right issued by the State Water Board, equipment (including monitoring and control equipment), practices, or operations regulated by or required under this right; and,
  4. Access to photograph, sample, measure, and monitor at reasonable times for the purpose of ensuring compliance with a right or other order issued by State Water Board, or as otherwise authorized by the Water Code. (0000011)
- J. This right shall not be construed as conferring right of access to any lands or facilities not owned by right holder. (0000022)
- K. All rights are issued subject to available flows. Inasmuch as the source contains treated wastewater, imported water from another stream system, or return flow from other projects, there is no guarantee that such supply will continue. (0000025)
- L. This right does not authorize diversion of water dedicated by other right holders under a senior right for purposes of preserving or enhancing wetlands, habitat, fish and wildlife resources, or recreation in, or on, the water. (Wat. Code, § 1707.) The Division of Water Rights maintains information about these dedications. It is right holders' responsibility to be aware of any dedications that may preclude diversion under this right.

(0000212)

- M. No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and is in compliance with all necessary permits or other approvals required by other agencies. If an amended right is issued, no new facilities shall be utilized, nor shall the amount of water diverted or used increase beyond the maximum amount diverted or used during the previously authorized development schedule, unless right holder has obtained and is in compliance with all necessary requirements, including but not limited to the permits and approvals listed in this term.

If construction or rehabilitation work is required for the diversion works covered by this right, right holder shall prepare and submit to the Division of Water Rights a list of, or provide information that shows proof of attempts to solicit information regarding the need for, permits or approvals that may be required for the project. At a minimum, right holder shall provide a list or other information pertaining to whether any of the following permits or approvals are required: (1) lake or streambed alteration agreement with the Department of Fish and Wildlife (Fish & G. Code, § 1600 et seq.); (2) Department of Water Resources, Division of Safety of Dams approval (Wat. Code, § 6002); (3) Regional Water Quality Control Board Waste Discharge Requirements (Wat. Code, § 13260 et seq.); (4) U.S. Army Corps of Engineers Clean Water Act section 404 permit (33 U.S.C. § 1344); and (5) local grading permits.

Right holder shall, within 30 days of issuance of any permits, approvals or waivers, transmit copies to the Division of Water Rights.

(0000203)

- N. 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.

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, supplying more than 50,000 acre-feet of water annually for agricultural purposes. 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.

(000029D)

- O. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine all rights and privileges under this right, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

Comment [A54]: Renumbered Term 4

The continuing authority of the State Water Board may be exercised by imposing specific requirements over and above those contained in this right with a view to eliminating waste of water and to meeting the reasonable water requirements of right holder without unreasonable draft on the source. Right holder may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from

water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this right and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Board also may be exercised by imposing further limitations on the diversion and use of water by right holder in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution, article X, section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

(0000012)

P. The quantity of water diverted under this right is subject to modification by the State Water Board if, after notice to right holder and an opportunity for hearing, the State Water Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(0000013)

Q. This right does not authorize any act which results in the taking of a candidate, threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, § 2050 et seq.) or the federal Endangered Species Act (16 U.S.C. § 1531 et seq.). If a "take" will result from any act authorized under this right, right holder shall obtain any required authorization for an incidental take prior to construction or operation of the project. Right holder shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this right.

(0000014)

---

*This right is issued and right holder takes it subject to the following provisions of the Water Code:*

*Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer .*

*Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).*

STATE WATER RESOURCES CONTROL BOARD

Application 11332  
Page 18 of 32

DRAFT AMENDED PERMIT 11310

License \_\_\_\_\_

*Les Grober, Deputy Director  
Division of Water Rights*

Dated:

**CACHUMA PROJECT**  
**Santa Barbara County, California**

**Pertaining to the Review of SWRCB  
Order WR 73-37, as amended by  
WR 89-18**

**Revised  
USBR Exhibit 1  
February 1, 2003**

**Bureau of Reclamation  
Mid-Pacific Region  
Sacramento, California**

**Groundwater And Percolation Data For Use In  
Determining Downstream Releases**

**Santa Ynez River- Cachuma Project  
Santa Barbara County, California**

**Table of Contents**

Attachment A - Indicator Wells Above Narrows

Attachment B - Storage Capacity Curves for Indicator Wells Above Narrows

Attachment C - Indicator Wells Below Narrows

Attachment D - Storage Capacity Curves for Indicator Wells Below Narrows

Attachment E - Relationship Between Percolation from Santa Ynez River from Narrows through Floradale Avenue and Flow of Santa Ynez River at Narrows

Attachment F – Procedures For Conjunctive Operation of Below Narrows Account

Attachment G - Map, "Ground Water Observation Wells and Stream Gaging Stations"

Attachment H - Correlation of Flow at Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue



**ATTACHMENT A  
INDICATOR WELLS ABOVE NARROWS**

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION
1	6N/34W-2A6	129.9	92
2	6N/34W-1G2	110.7	105 (110) 2/
2	6N/33W-7E3	130.9	115
3	6N/33W-6D4	140.9	137
4	6N/33W-6K2	187.0	142
5	6N/33W-8E4	174.8	153
6	6N/33W-8J2	200.5	164
7	6N/33W-16B1	214.7	166
8	6N/33W-11M1	203.8	196
9	6N/33W-12L1	223.6	209
10	6N/32W-18C2	233.2	226
11	6N/32W-8N4	246.0	236
12	6N/32W-17J2	256.0	248
13	6N/32W-16G4	277.3	263
14	6N/32W-9G1	305.0	273
15	6N32W-13G2	317.4	310 (300) 2/
15	6N/32W-11D1	298.0	290
16	6N/31 W-17D1	340.6	332
17	6N/31 W-17R1	364.3	348
18	3/		
19	4/		
20	6N/31W-22F1	400.0	392
21	6N/31W-24K2	426.0	420
22	6N/30W-29E1	465.0	452
23	6N/30W-21E1	490.7	475 (471) 2/
23	6N/30W-20H2	476.4	468
24	6N/30W-22C2	502.9 1/	506
25	6N/30W-24E5	550.3	541

1/ Well destroyed - to be replaced.

2/ Average elevation of two wells to determine dewatered storage.

3/ Combined with Node 17.

4/ Combined with Node 20.

## **ATTACHMENT B**

# **STORAGE CAPACITY CURVES FOR INDICATOR WELLS ABOVE NARROWS**

*THIS PAGE INTENTIONALLY LEFT BLANK*

*(INSERT 23 PDF CHARTS HERE)*

**ATTACHMENT C**  
**INDICATOR WELLS BELOW NARROWS**

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION
A	7N/34W-22M6	100.0	73
B	7N/34W-26B4	108.4	78
C	7N/34 W-27F9	97.4	72
D	7N/34W-26Q5	111.3	83
E	7N/34 W-25F3	133.4	81
F	6N/34W-4G4	97.5	70
G	7N/34W-34R1	112.0	78
H	7N/34W-35K9	101.0	89

\* The full basin ground-water surface elevations for below Narrows are considered as the piezometric surface of the deep water body as of April 1941.

**ATTACHMENT D**

**STORAGE CAPACITY CURVES  
FOR  
INDICATOR WELLS**

**BELOW NARROWS**

THIS PAGE INTENTIONALLY LEFT BLANK

(INSERT 8 PDF CHARTS HERE)

Attachment E  
Relationship Between Percolation from Santa Ynez River from  
Narrows through Floradale Avenue and Flow of Santa Ynez  
River at Narrows

## ATTACHMENT F

### 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' m.s.l.), any BNA water in Lake Cachuma up to the ADWC shall be held and made available to the Member Units if and when they so notify USBR while the reservoir remains below the 100,000 acre-feet (elevation 714.00<sup>2</sup> foot 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' feet m.s.l.) level shall be held and made available to the Member Units up to the ADWC and consistent with the provisions of Paragraph 5.

Attachment F, Page 1 of 2  
Revised USBR Exhibit 1  
February 1, 2003

---

<sup>2</sup> Lake Cachuma Bathymetric survey of year 2000



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 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.

ATTACHMENT G

USBR Map of the  
"Ground Water Observation Wells  
and Stream Gaging Stations" Water Year 2002

A copy of this map will be provided by USBR upon request

Attachment G  
Revised USBR Exhibit 1  
February 1, 2003

ATTACHMENT H

#### ATTACHMENT H

##### Correlation of Flow at the Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue

The Santa Ynez River flow measured at the USGS gage at the Narrows is utilized to determine whether a live stream condition should exist between the Narrows and Floradale Avenue. A live stream between the Narrows and Floradale Avenue means that there would have been a continuous surface flow from the Narrows through Floradale Avenue with no less than three cfs flowing at V Street (formerly 13th street), which is considered to be the equivalent to one cfs flow at Floradale Avenue.

The measured flows at the Narrows is averaged over 24 hours representing the daily flow. The correlation of the measured flow at the Narrows to the live stream condition between the Narrows and Floradale Avenue for each day is set forth in the attached tabulation. The criteria for determination of existence or non-existence of the live stream condition in Santa Ynez River between the Narrows and Floradale Avenue for each day are based on: (1) the daily flow measured at the Narrows; (2) the accumulated daily flows from October 1 through the preceding day measured at the Narrows; and (3) the accumulated daily flows for the preceding ten (10) days measured at the Narrows.

When water releases are made for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River ("fish water releases") 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 water releases and they are based on measured flows at the Narrows. The adjustment for the fish water releases provided in this paragraph is not applicable if there is a spill from Lake Cachuma during the current day.

**Criteria for Determination of live Stream Condition  
in the Santa Ynez River Between the Narrows and Floradale Avenue**

Measured flow at the Narrows for current day is:	Accumulated daily flows at the Narrows from October 1 through preceding day is:	Accumulated daily flows at the Narrows for preceding ten (10) days is:	Condition of Santa Ynez River between the Narrows and Floradale Avenue for current day is:
15 cfs or less	not applicable	not applicable	no live stream
between 15 and 20 cfs	2,000 cfs or less	not applicable	no live stream
between 20 and 50 cfs	2,000 cfs or less	200 cfs or less	no live stream
between 20 and 50 cfs	2,000 cfs or less	in excess of 200 cfs	live stream
between 15 and 50 cfs	in excess of 2000 cfs	not applicable	live stream
in excess of 50 cfs	not applicable	not applicable	live stream