MEMBER UNITS EXHIBIT NUMBER 2

PETITION TO CHANGE CACHUMA PROJECT WATER RIGHT PERMITS
CHANGE IN AUTHORIZED PURPOSE AND PLACE OF USE

Written Testimony of Kate Rees
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Santa Ynez River Water Conservation District, Improvement District No. 1

Summary

The Bureau of Reclamation operates the Cachuma Project as an integrated project. The requested change in the purpose of use is to consolidate the purposes of the two water right permits to make them consistent and uniform with one another. This is an administrative conforming action that will not result in any change to Project operations, nor will it increase the amount of water that can be diverted from the Cachuma Project.

The proposed change in the authorized place of use for the Cachuma Project is to make the existing place of use boundary coincident with the Cachuma Project Member Units' water service area boundaries. This is consistent with the intent of the original water right applications filed by the Bureau of Reclamation for the Cachuma Project.

Cachuma Project water has been fully beneficially used within the existing place of use for more than 25 years, and will continue to be fully utilized. The Cachuma Project has a finite delivery capability due to operational limits of the reservoir. Although the Member Units are entitled by contract to the total available supply, the operational yield is now recognized by Reclamation and the Member Units to be approximately 25,700 acre feet per year, which is considerably lower than the original contractual entitlement of about 32,000 acre feet per year. The requested change in place of use is not associated with, and will not create, an increase in yield from the Cachuma Project.

The Cachuma Project provides only about 65% of the total water supply of the Member Units, and is not sufficient to meet demand even within the existing place of use. Because Project yield is fully subscribed within the existing place of use, incorporating the added area into the permitted place of use merely results in the same amount of Cachuma Project water being applied to a larger area without any increase in Cachuma Project water demand or decrease in the water available for downstream flows. By the same token, disapproval of the change petition would not result in a demand reduction, particularly because Cachuma Project water is one of the cheapest sources of supply available to the Member Units and must be paid for whether it is used or not.

The Cachuma Project Master Contract subordinates itself to Orders WR 89-18 and WR 94-5. Thus the amount of Cachuma Project water available for diversion to the Member Units is the net amount available after reserving, as credits in Lake Cachuma, the amount of water required to protect public trust resources and downstream interests, as determined by those orders. Granting the change petitions before the Board will have no bearing on the quantity, quality, or timing of water released from the reservoir.

The issue of applying Cachuma Project water on lands outside the existing place of use came about because all of the Member Units have integrated distribution systems that commingle Cachuma Project water with their other separate water sources, although there are a few acres within the water service area where Cachuma Project water has never been applied because the difference in elevation makes it impossible to do so at the present time. Part of the integrated delivery system includes the Goleta West and Solvang-Santa Ynez Conduits, which were part of the original design for the Cachuma Project, evidencing the intent to serve water to lands presently excluded from the place of use. This is also true for the area outside the City of Santa Barbara's authorized place of use, which has been part of the City's water service area since the 1910s and 1920s.

It is not possible to segregate Cachuma Project water and direct its application exclusively to the consumers within the existing place of use. Nor it is reasonable or even possible to construct the separate delivery system for service outside the place of use that would be required if the petition is denied. Approval of the change petitions will not increase water diversions from the Santa Ynez River or cause an increase in demand within the Member Units' water service areas. Therefore, it will have no effect on Cachuma Project operations. Approval of the change petitions is the appropriate administrative method to conform the permitted place of use to the *de facto* place of use.

Petition to Consolidate the Purpose and Place of Use for Permits 11308 and 11310

Purpose and Intent

The Bureau of Reclamation (Reclamation) has filed a petition with the State Water Resources Control Board (SWRCB) requesting changes to the originally authorized purpose and place of use (existing place of use) under Water Right Permits 11308 and 11310. Reclamation holds these water right permits on behalf of the Cachuma Project Member Units (Member Units), which include Carpinteria Valley Water District (CVWD), Montecito Water District (MWD), the City of Santa Barbara (City), Goleta Water District (GWD), and Santa Ynez River Water Conservation District, Improvement District No. 1 (ID No. 1).

In the late 1940's when Reclamation filed the applications for water rights for the Cachuma Project, it stated that Cachuma Project Water would be used within a place of use coincident with the then existing water service boundaries of the Member Units. The authorized place of use for application of Cachuma Project water was established under the original permits in 1958, however, contrary to the original intent, the existing place of use boundary does not accurately represent the current boundaries of the Member Units' service areas. Information about the Member Units' water service areas and their individual annexations is detailed in Appendix A.

The petition to change the purpose and place of use arises only because the Member Units have distribution systems in which Cachuma Project water is commingled with other sources of water. The Member Units have not constructed separate delivery systems for their other sources of supply, or for annexed lands, nor do they believe such an action would be reasonable or even possible. Consequently, it is not possible to segregate Cachuma Project water from non-Cachuma Project water, although there are a few acres in CVWD and MWD where the difference in head (elevation) makes it impossible at the present time to deliver Cachuma Project water, even though integrated distribution systems are used to deliver water to these areas.[1]

Part of the integrated delivery system for the Cachuma Project includes the Goleta West Conduit and Solvang-Santa Ynez Conduit, which were part of the original design for the Cachuma Project. It is unclear why the land these conduits serve was not included in Reclamation's original place of use. Both conduits were constructed in the early 1960s, with the intent to serve water to these lands. It also appears that an oversight was made in establishing the original place of use boundary for the City of Santa Barbara. The lands outside the place of use for the City are also outside the city limits; however, the City has provided water service to these areas since the 1910s and 1920s. The land was most likely excluded from the original place of use because the city limits of Santa Barbara are not coincident with the City's water service area. This further illustrates the integrated nature of the Member Units' water service systems and the non-substantive nature of the change petition. Approval of the petition is the appropriate administrative action to rectify this

[1] No Cachuma Project water has ever been applied to a portion of the area outside the place of use for CVWD and all of the added area for MWD, although both districts are currently designing pumping plants to enable provision of commingled water supplies, including Cachuma Project water and SWP water, to these relatively few acres in the near future.

oversight and to avoid development of expensive, redundant systems that would serve no practical purpose.

The purpose of the proposed change in place of use is to conform the Cachuma Project place of use boundary to the Member Units' service area boundaries so that they may allocate their water supplies over the entire service area in the most efficient manner possible. Thus, the change in place of use has an administrative effect only, not an effect upon Cachuma Project operations. It will simply result in the existing Cachuma Project entitlement continuing to be applied within the existing water service areas of the Member Units. It will not result in an increase in the diversion of water from the Santa Ynez River, nor will it result in a change in the amount of water in storage or in the frequency of spills from Cachuma Reservoir.

Cachuma Project Yield Is Put to Full Beneficial Use Within Existing Place of Use

Project Yield is a Fixed Amount

The volume of water that can be developed from the Cachuma Project is a finite fixed amount that has been fully used within the existing place of use for many years. The original contractual entitlement for the Cachuma Project was 32,000 acre feet per year based on the initial estimates of the Project's safe yield. The planning studies that supported the original Cachuma Project contract, however, were performed using a Lake Cachuma storage capacity of 205,000 acre feet and a hydrologic study period that did not include the 1946-51 drought. Incorporating this drought into the study period resulted in Reclamation lowering safe yield to about 27,800 acre feet per year. In addition, silt surveys performed in the late 1980s during the most recent drought indicated that Lake Cachuma lost about 15,000 acre feet of active storage, further reducing the capacity of the reservoir to 190,049 acre feet and Project safe yield to about 24,800 acre feet per year. Another capacity survey recently completed in September 2000 showed that the capacity of Lake Cachuma has been further reduced to 188,032 acre feet of storage due to siltation since 1989.

Contractual Entitlement

The Cachuma Project Master Contract was signed in 1949 and went into effect in 1955, the year in which the initial delivery was made. The Renewal Master Contract was signed in 1996, retroactive to May 1995. The 40-year term of the original contract was divided into seven periods of five–year intervals for the purpose of gradually increasing Project entitlement to meet the Member Units demand requirements over time. The entitlement is analogous to operational yield, and represents the maximum amount of Cachuma Project water the Member Units could request for that period, unless surplus water was declared available by Reclamation.

Total Cachuma Project entitlement was determined by the Master Contract with Reclamation to be 11,500 acre feet per year for the first period. It then increased each period until reaching a maximum entitlement of 32,000 acre feet per year for the seventh period, although as discussed above, this amount was never a realistic operational yield. In 1992, at the end of a prolonged and severe drought, Reclamation and the Member Units agreed on an operational yield of

approximately 25,700 acre feet per year[2] to avoid taking greater deficiencies during dry years. However, the Master Contract renewed in 1995 identified the Member Units' maximum entitlement to be the "Available Supply,"[3] which is the maximum quantity of Project water that Reclamation is authorized to make available to the Member Units during each water year. The operational yield is determined by the Member Units, but actual water deliveries are adjusted upward or downward based on the Available Supply. Factors that influence Available Supply are WR 89-18 riparian credits stored in the reservoir, the amount of surplus spill water available to the Member Units, carry-over Project water, and the impact of drought periods.

Prior to 1992, the Member Units met annually to determine how much water they would order for the coming water year. Since the beginning of the third period (1970) they generally ordered the full period entitlement. During the drought period of 1989-92, the Member Units and Reclamation adjusted (reduced) the entitlement to prolong supplies assuming no or minimal runoff additions during the rainy season. The full entitlement of 25,714 acre feet per year was resumed in 1992.

The Cachuma Project's full entitlement has been used consistently by the Member Units since 1970. Historical operational data show that average demand for Cachuma Project water has exceeded the contractual entitlement (operational yield) each period except during severe drought. Even accounting for demand reduction due to drought, the long-term average annual water demand from 1970 through 1999 is 27,574 acre feet per year (Table 1)

Table 1. Cachuma Project Water - Long-Term Average Annual Demand from 1970 through 1999.

Years	**Average Historical Water Demand**
1970 through 1999	27,574 acre feet per year

Source: Bureau of Reclamation Historical Operational Data from Annual Progress Reports, 1958-1999.

[2] The safe yield of a project can be defined as the average amount of water a project can be expected to deliver over a sustained hydrologic period that contains representative wet and dry periods. This differs somewhat from operational yield, which is the amount of water that can be delivered in all years with acceptable shortages in critically dry years while not violating minimum project carryover storage in the worst drought of the period. The operational yield of the Cachuma Project is currently estimated based on the following assumptions: a Lake Cachuma capacity of 190,409 acre-feet, a minimum pool of 12,000 acre feet, and a maximum allowable shortage of 20% in any single year with shortages beginning when the lake storage reaches 100,000 acre feet. The 20% deficiency criterion is considered to be an acceptable level of shortage by the Member Units after their experience in the 1986-91 drought when deliveries as high as about 30,000 acre feet in water year 1986 (5/15/86-5/14/87) resulted in a reduced supply of about 16,600 to 17,000 acre feet between 1990-92, or a shortage of about 45%.

[3] The Cachuma Project Renewal Master Contract, 1995, specifies that "Available Supply" shall mean the maximum quantity of project water the contracting officer is authorized by Federal law, State law, and the project water rights to make available to the Cachuma Member Units during each water year pursuant to this contract.

Further, as depicted on Table 2 below, the Cachuma Project provides only about 65% of the total water supply of the Member Units. Changing the authorized place of use boundary to be coincident with the aggregate member Unit service area boundary will, therefore, not cause an increase in Cachuma project water demand.

No Changes in Demand as a Result of Change Petition

As discussed above, water diversions will not increase as a result of approval of the change petitions because the Cachuma Project yield is fully subscribed, the petitions do not increase the diversions from the Project, and the Member Units' water entitlements are limited by contract. By the same token, denial of the change petition would not result in demand reduction within the added area, nor result in increased spills and releases from the reservoir that would provide added recharge of the Lompoc Plain Groundwater Basin.

The amount of water appropriated today is approximately the same as it was 30 years ago. The requested change in place of use is not associated with an increase in yield from the Cachuma Project. The total yield of the Cachuma Project has been available to the Member Units and beneficially utilized within their service areas for over 25 years, and will continue to be fully utilized. Even with their Cachuma Project entitlements, the Member Units have had to rely on other sources of water to meet demand.

As stated earlier, the Cachuma Project provides only about 65% of the total water supplies for the Member Units. Because demand far exceeds available Cachuma Project supply, there would be no reduction in demand resulting in surplus Cachuma Project water, in the event the change petitions are denied. Consequently, neither approval nor denial of the petitions will affect the amount of water in storage or the frequency of spills from the reservoir, and the change petition is merely a *de facto* consolidation.

Demand within the existing place of use exceeds Cachuma Project yield. This can be shown by subtracting the demand in the area outside the place of use from the demand within the Member Units' total water service area, and then comparing this amount to the amount of Cachuma Project water available. Tables 2, 3 and 4 shown below present actual Cachuma Project water use, and summarize actual demand for representative years within the total water service area, the area outside the place of use, and the area within the existing place of use. More detailed calculations for the demand amounts presented below can be found in Appendix B.

Demand Within the Total Water Service Area

Total Cachuma Project water use/demand within the Member Units' water service area is shown in Table 2 for a number of representative years. The current operational yield is approximately 25,700 acre feet. By comparison, total water demand within the aggregate water service area averaged 36,520 acre feet per year for the five year period between 1992 and 1996. In 1999, the total demand for the Member Units' entire water service area was 40,656 acre feet, illustrating the need for non-Cachuma Project water to meet demand.

Table 2. Cachuma Project Water Usage Compared to Total Demand for Aggregate Member Unit Water Service Area from 1992 to 1996 and for 1999.

Year	Cachuma Project Water Usage*	Total Water Service Area Demand**	Non-Cachuma Project Water Needed for Total Water Service Area
1992	20,960 acre feet	31,307 acre feet	10,347 acre feet
1993	26,518 acre feet	36,929 acre feet	10,411 acre feet
1994	26,577 acre feet	36,953 acre feet	10,376 acre feet
1995	26,024 acre feet	37,479 acre feet	11,455 acre feet
1996	28,870 acre feet	39,926 acre feet	11,056 acre feet
1999	28,732 acre feet	40,656 acre feet	11,924 acre feet

* Bureau of Reclamation Historical Operational Data from Annual Progress Reports, 1958-1999.
** 1992-1996 total demand amounts are actual water deliveries reported in Central Coast Water Authority 1996 Bond Financing Report. 1999 total demand amount is actual water use reported in Member Units' service records.

Demand Outside the Place of Use

Water demand can be measured by water actually delivered. Demand totals outside the place of use were tabulated by district staff from individual water service records for a representative normal demand year. A more detailed explanation of the demand calculations that support Tables 3 and 4 can be found in Appendix B.

Table 3. Demand Outside the Place of Use for a Representative Demand Year.

Member Units	Demand Outside the Place of Use
CVWD	54 acre feet
MWD	21 acre feet
City of Santa Barbara	491 acre feet
GWD	2,037 acre feet
ID No. 1	4,824 acre feet
Total Demand	7,427 acre feet

Demand Within Existing Place of Use

Demand within the existing place of use was calculated by subtracting the total demand outside the place of use from the total demand within the Member Units' entire water service area (Table 4). Doing so yields a total demand within the existing place of use of 33,329 acre feet. It is evident that total demand within the existing place of use substantially exceeds the approximate 25,700 acre feet of water per year available from the Cachuma Project. Indeed, it does so by more than 7,500 acre feet.

In short, approving the requested change in place of use petition will not result in lesser use or reduced demand of Cachuma Project water, particularly because Cachuma Project water is one of the cheapest sources of supply available to the Member Units and must be paid for whether it is used or not.

Table 4. Demand Within Existing Place of Use for a Representative Demand Year Compared to Cachuma Project Yield.

Total Demand in Aggregate Water Service Area (1999)	**Total Demand Outside Place of Use**	**Total Demand Within Existing Place of Use**	**Cachuma Project Operational Yield**	**Addl. Non-Cachuma Water Needed Within Existing Place of Use**
40,656 acre feet	7,427 acre feet	33,229 acre feet	25,714 acre feet	7,515 acre ft

No Change in Project Operations and No Injury to Prior Rights

The Member Units contract for a maximum entitlement of water from the Cachuma Project, and no additional or greater amount of water would be made available as a result of a change in the authorized place of use. Because Cachuma Project yield is fully subscribed within the existing place of use, expansion of the place of use to be coincident with the Member Units' water service areas merely results in the same amount of Cachuma Project water being available for a larger area without any effect on the water available for downstream flows, and achieves a *de facto* consolidation for the Member Units' integrated water system.

Controlled releases from Bradbury Dam are entirely the product of the water right operating regimen established by SWRCB Orders WR 89-18 and WR 94-5, and the Biological Opinion recently issued by the National Marine Fisheries Service for Reclamation's operation and maintenance of Bradbury Dam. After satisfying these state water right and federal release requirements, the Cachuma Project diversions from the Santa Ynez River average about 25,700 acre feet per year.

The Cachuma Project Master Contract is subordinate to Orders WR 89-18 and WR 94-5, thus the available supply of Cachuma Project water available for diversion to the Member Units is the net amount available after calculating and reserving, as credits in Lake Cachuma, the amount of water required to protect public trust resources and downstream interests as determined by those orders. Because the Cachuma Project's entire yield is put to beneficial use within the existing place of use, granting the change petitions before the Board will have no bearing on the quantity, timing, or flow rate at which water will be released downstream pursuant to SWRCB orders and the Biological Opinion.

APPENDIX A

Annexations Since Permitted Place of Use was Established

The Member Units have legally annexed land over time into their water service areas. The annexations for CVWD, MWD, GWD, and ID No. 1 were approved by the Member Units' governing boards, the Local Agency Formation Commission (LAFCO) when required, and the Santa Barbara County Board of Supervisors, if appropriate. For the City of Santa Barbara, the area outside the existing place of use is not within the city limits and has never been annexed, but it has been part of the City's water service area since the early 1900s.

Information about the Member Units' water service areas and their individual annexations is detailed below. The total number of acres for the area outside the existing place of use was calculated by Reclamation's Geographic Information System (GIS), which utilized water service area maps provided to Reclamation by each of the Member Units. Because the annexations often provided estimated number of acres, or sometimes did not even include the number of acres to be added, there is some discrepancy between the GIS area calculations and the annexed number of acres shown below. The GIS calculation should be considered as the more accurate measurement of the area to be added to the existing place of use. Acreages shown for the annexations are from annexation records, and are rounded to the nearest whole acre.

Carpinteria Valley Water District

CVWD was incorporated in 1941. The District boundaries currently encompass about 8,912 acres with 3,486 acres used for agriculture, 3,029 acres developed for municipal and industrial uses, and 2,397 undeveloped acres. Cachuma Project water represents about 70% of the District's water supply, and groundwater provides the remaining 30%. About two-thirds of the entire Carpinteria Valley relies on the local groundwater basin for water, which includes pumping by CVWD and by privately owned groundwater wells. State Water Project (SWP) water supplements these supplies.

The Carpinteria Valley was historically developed as an agricultural area. By 1938, it contained about 5,100 acres of arable land, of which 800 acres were not considered irrigable, so that the potential irrigable area in this valley was 4,300 acres. Of this total, 3,300 acres were already being irrigated from local groundwater wells, leaving only 1,000 acres not irrigated at this time, although artesian wells had existed since 1890 and some diversions were made from the creeks which drain the south slope of the mountains. Irrigation agriculture was primarily devoted to citrus crops, especially lemons and avocados, but other irrigated crops included vegetables, flower seeds, and walnuts. The foothill and mountain grazing area that could not be readily cultivated was dry farmed.

Approximately 518 acres are outside the existing place of use, and have been annexed to CVWD since the District was formed in 1941. A de-annexation of 293 acres also occurred in 1994. All of the land in this area has historically had access to groundwater, and is currently irrigated primarily from private wells. The annexed area outside the existing place of use can be divided into an upper portion and a lower portion in terms of water service provided by CVWD.

Annexations - Upper Portion

Cachuma Project water cannot currently be pumped to the upper portion of the annexed area because there is too great a difference in head (elevation). Therefore, no Cachuma Project water has ever been applied to these parcels. However, the District is currently designing a pumping plant to enable provision of commingled water supplies, including Cachuma Project water and SWP water to this area in the near future. The upper portion is uninhabited, and the purpose of the annexation was for agricultural (avocado) development. At the present time, all irrigation relies on groundwater.

Blau	CVWD Resolution #273	7/15/66	350 acres

Annexations - Lower Portion

CVWD currently serves water to the lower portion of the annexed area, however these properties also have their own groundwater wells so they are not normally dependent on water from the District. These properties are also planted with avocado trees. Only one M&I account lies within this area, which is a residential school.

Abbott	CVWD Resolution #115	12/30/54	30 acres
Tuckerman	CVWD Resolution #148	10/10/56	106 acres
SPRR	CVWD Resolution #149	10/10/56	1 acre
Borgatello	CVWD Resolution #368	10/23/73	39 acres

Montecito Water District

MWD was incorporated in 1921 and includes the communities of Montecito and Summerland. The District boundaries currently encompass a total of about 9,835 acres. 6,883 acres are developed as residential and commercial properties, and about 1,209 acres are used for agriculture. The balance of the District comprises undeveloped land. The District currently obtains approximately 43% if its water supplies from the Cachuma Project, 54% from Jameson Reservoir, Fox and Alder Creeks, and Doulton Tunnel, and pumps about 3% of its supply from the local groundwater basin. SWP water supplements these supplies.

Montecito is considered to be a semi-rural residential area primarily composed of single-family homes on one-acre or larger lots. The area between U.S. Highway 101 and the beach is developed at a higher residential density than the area north of Highway 101. Both areas are heavily landscaped with large stands of native oak and specimen trees of many other species. Agricultural production is generally limited to avocados and citrus on undeveloped parcels located at the northern and eastern boundaries of the District. The developed areas of Montecito are primarily on the flatlands while the steep foothills are less developed.

Approximately 555 acres are outside the existing place of use, and have been annexed to MWD since the District was formed. The entire annexed area has long been provided water from other water supplies, primarily surface water from Jameson Reservoir, which was completed in 1930, delivered to the District's distribution system through Doulton Tunnel. Doulton Tunnel also contributes substantial infiltration water to District water supplies that are provided to this area. Some small amount of agricultural land was recently annexed, but this land is served by private

groundwater wells. Cachuma Project water cannot currently be pumped to the annexed area because there is too great a difference in head (elevation). Therefore, no Cachuma Project water has ever been applied within the area outside the existing place of use. However, the District is currently designing a pumping plant to enable deliveries of commingled water supplies, including Cachuma Project water and SWP water, some time in the near future.

Acreages shown are for lands annexed that are outside the existing place of use. The Miller annexation was a total of 297 acres, however, only 40 acres were outside the existing place of use.

Annexations

	MWD Ordinance #37	1/11/60	120 acres
Stegall, et al.	MWD Resolution #181	11/17/69	280 acres
Slovak/Bondi	LAFCO Resolution #94-9	5/5/94	40 acres
Miller	LAFCO Resolution #94-10	6/9/94	40 acres (portion outside)
Knoll	LAFCO Resolution #94-11	6/9/94	40 acres

Goleta Water District

GWD was formed in 1944. The District boundaries currently encompass an area of approximately 32,000 acres of which about 4,000 acres are agricultural, 5,760 acres residential, 640 acres commercial, and 21,600 acres are undeveloped open space. The District currently obtains approximately 65% of its water supplies from the Cachuma Project. The District has rights to local groundwater that may provide approximately 20% of its current demand. The District operates a recycled water facility that currently delivers reclaimed water primarily to the University of California, Santa Barbara, golf courses, schools, and parks. The District holds entitlements and rights to capacity in the State Water Project to provide delivery of approximately 4,500 AFY.

Approximately 8,262 acres are outside the existing place of use, and have been annexed to GWD since the District was formed. An additional annexation of approximately 2,400 acres was made in 1970 but the acreage was de-annexed in the early 1980's. The annexed area outside the existing place of use is located within GWD's District 1 to the north and District 2 to the west.

Annexations - District 1 - Goleta North

Historically throughout Goleta Valley, water used for irrigation was obtained from groundwater pumping from wells, although some tracts were irrigated by diversion of small surface streams. Irrigated land in the Goleta North area occurred along several creeks where surface water could be diverted for crop production or riparian groundwater drawn through shallow wells.

Within the annexed area, some agricultural production occurs in the foothills and in the stream valleys, which are very steep and border U.S. Forest Service lands. According to GWD staff who has been with the District for more than 30 years, this area added very little cultivated acreage compared to what was already under cultivation prior to construction of the Cachuma Project.

The District provides domestic service to about five residences within the area annexed to District 1; however, these properties also have their own wells that can be switched on as needed and used as a primary source of water or as backup systems. The small amount of District water, when

provided, is typically blended with groundwater. All irrigation water is drawn by the property owners from their individual wells.

Hove	GWD Ordinance #2	5/25/54	160 acres
Smith	GWD Ordinance #2	5/25/54	72 acres
Eherenborg	GWD Ordinance #3	11/27/55	6 acres
Marciando	GWD Ordinance #4	3/31/55	660 acres
Pierce	GWD Ordinance #5	5/31/56	169 acres
Smith	GWD Ordinance #6	5/31/56	40 acres
Parker et al.	GWD Ordinance #8	11/15/56	15 acres
Scudelari	GWD Ordinance #9	11/29/56	231 acres
Sharkey	GWD Ordinance #12	5/21/59	278 acres
So Cal Edison	GWD Ordinance #14	9/13/62	15 acres
Pierce	GWD Ordinance #15	9/13/63	252 acres

Annexations - District 2 - Goleta West

Land outside the existing place of use in the Goleta West area was annexed shortly after the completion of the Goleta West Conduit, and with the exception of an 84 acre parcel. This area comprises a mix of residential, urban agriculture, and agricultural water usage. Rancho Embarcadero, a residential community made up of 1 acre parcels, was developed in the late 1950's. Approvals for this development followed accepted County permitting procedures and requirements in place at that time. Rancho Embarcadero is served M&I water through the District's distribution system, not directly off the Goleta West Conduit, so Cachuma Project water is commingled with the District's other water supplies.

Historically, most of the water used for irrigation was obtained from groundwater pumping from wells, although some tracts were irrigated by diversion of small surface streams. Groundwater wells supplied water to the Goleta Valley as early as 1918, as evidenced by records of groundwater levels from 32 wells covering from 6 to 20 years of operation, the average being about 13 years. In the case of the Goleta West area, it was estimated that 1,000 acre feet could be developed from local groundwater supplies.

By 1938, irrigation agriculture was already developed to a high degree, and much of the land was cultivated in citriculture, primarily lemons and avocados, as well as walnut groves, vegetables, and other high value crops. Much of the arable land, which was without a water supply was being dry-farmed with beans as the most important crop. A land use survey made by Reclamation in 1955 showed approximately 1,300 acres were irrigated, 3,600 acres dry farmed, 1,800 acres left idle, and the remainder in its native state. Most of the irrigated lands were limited to areas along streambeds where groundwater was available.

The Goleta West Conduit carried Cachuma Project water to a portion of the Goleta West service area, but the remaining portion was served from the District's distribution system, which commingled Cachuma Project water and groundwater. The availability of Cachuma Project water did not cause a change in land use or conversion of native land to cultivated land. As mentioned above, 3,600 acres of arable land were already being dry farmed. Rather, the Cachuma Project gave farming in the Goleta West area access to a more reliable water supply.

It is unclear as to why this area was not included in Reclamation's original authorized place of use, because the Goleta West Conduit was part of the original design for the Cachuma Project, obviously with the intent to serve water to this area. It was constructed in the early 1960's so water has been provided to this area for more than 30 years. About 50 agricultural/urban accounts are served water from either the GWD distribution system or directly off the Goleta West Conduit, which carries Cachuma Project water exclusively. GWD staff maintains that agricultural production has remained constant since the construction of the Goleta West Conduit and may have actually been reduced somewhat due to improved irrigation practices.

Edwards et al.	GWD Ordinance #10 & #11	5/23/57	6,303 acres
Anderson	GWD Ordinance #13	6/23/60	33 acres
Cavalletto	GWD Resolution #699	8/3/72	84 acres

Dos Pueblos Golf Links Annexation - Change in Place of Use Petition

On February 17, 1999, Reclamation filed a change in place of use petition to add 130 acres of the Dos Pueblos Golf Links (DPGL) Project site to the authorized place of use. The golf course project covers approximately 208 acres, including 78 acres that are a subject of the 1983 and 1995 change petitions (discussed above). Those 78 acres have been within the Goleta Water District water service area and served water for an oil and gas facility for over 30 years. As part of the DPGL Project, the oil and gas facility has now been abandoned. The DPGL Project is thoroughly described in the EIR and the Addendum to the Final EIR, which is designated in the SWRCB's Hearing Notice as Staff Exhibit No. 4. That document should be referred to for a thorough description of the DPGL Project, including findings on the proposed change in place of use.

The annexation of the DPGL Project site into the Goleta Water District service area approved by the Local Agency Formation Commission (LAFCO) in September 1998 was the first annexation into the Goleta Water District service area in 26 years. In December 1972, the District declared a moratorium on new water service connections as a result of a chronic water shortage, pursuant to provisions of the Water Code. The moratorium ordinances precluded new annexations to the District. The moratorium on new connections remained in place until 1997 when the District's water supply was supplemented by the State Water Project.

As fully described in the EIR Addendum, almost all of the water demand for the DPGL Project will come from a relatively new Goleta Water District recycled water facility. Only about 5 acre feet per year of potable water will be delivered to the DPGL Project primarily for the clubhouse and other related domestic uses. That potable water supply is based on the District's entitlement to SWP water.

Because the Goleta Water District commingles its potable water sources at its main treatment plant, Cachuma Project water could be commingled with its other water sources and delivered to the DPGL Project site. Therefore, the District was advised that it must have the DPGL Project site included within the Cachuma Project authorized place of use.

Although the DPGL Project was approved by the County of Santa Barbara in 1993 and by the California Coastal Commission in 1995, and water service was approved by the Goleta Water District and the annexation approved by LAFCO in 1998, construction of the golf course has been delayed as a result of the discovery of red-legged frogs in a creek bordering the property. The property owner is now engaged in the process to develop and gain approval of a Habitat Conservation Plan with the U.S. Fish and Wildlife Service (FWS) for protection of red-legged frogs. A draft Habitat Conservation Plan, draft Environmental Assessment, and draft Implementing Agreement have been prepared and are currently under review by the FWS. The property owner anticipates the conclusion of that process in Spring 2001.

Santa Ynez River Water Conservation District, Improvement District No. 1

The Santa Ynez River Water Conservation District (SYRWCD) was formed in 1939 pursuant to the Water Conservation Act of 1929. The original Cachuma Project place of use boundary established in 1949 follows, in part, the SYRWCD boundaries.

ID No.1 was organized and created in 1960 and encompasses an area of approximately 10,850 acres which is within the SYRWCD boundaries. The purpose of ID No.1 is to supply water derived and conserved from streams tributary to the Santa Ynez River, groundwater supply, and the Cachuma Project.

The ID No. 1 service area includes the unincorporated communities of Santa Ynez, Los Olivos, and Ballard, and the City of Solvang. Approximately 5,000 acres are residential, 150 acres are commercial, 400 acres are used for parks, schools and cemeteries, 2,600 acres are agricultural, and 2,700 acres are either used for grazing or are unused or undeveloped. The District currently has four sources of water supply: groundwater pumped from the Santa Ynez Uplands Groundwater Basin, the District's rights to underflow of the Santa Ynez River, water from the Cachuma Project, and SWP water. The District obtains approximately 38% of its water supplies from the Santa Ynez Uplands Groundwater Basin, 30% from the Santa Ynez River, 24% from the Cachuma Project, and 8% from the State Water Project, which was made available in the fall of 1997.

Currently, 6,491 acres are outside the existing place of use, and have been annexed to ID No. 1's water service area since the District was formed in 1960. This includes Cachuma County Park, which was annexed to ID No. 1 when the SYRWCD annexed the Cachuma Recreation Area in 1983. Because ID No. 1 is within the boundaries of the SYRWCD, ID No. 1 does not approve land annexations. They are first approved by the SYRWCD and then annexed to ID No. 1's water service area by resolution.

ID No. 1 is divided into three zones. Primarily, Zone 1 was included within the District boundaries established pursuant to Resolution 103 adopted in 1959 as well as within the original place of use boundary. Most of Zone 2 and a portion of Zone 3 also lie within the original District boundaries that were annexed to the SYRWCD to form ID No. 1 essentially with its current service area boundary. The SYRWCD formed ID No. 1 in 1960, but ID No. 1's Board of Trustees was not established until about 1967. These original annexations and all subsequent annexations, including the Cachuma County Park within the Cachuma Recreation Area, were approved by the SYRWCD's Board of Directors, not by ID No. 1's Board of Trustees. The annexed areas then became part of ID No. 1's water service area.

Until November 1997, water from the Cachuma Project was delivered to ID No. 1 through the Bradbury Dam outlet works into the Solvang-Santa Ynez Conduit, a pipeline that terminates in Solvang. The Solvang-Santa Ynez Conduit was conceived as part of the original design for the Cachuma Project. It was constructed in the early 1960's, and water has been provided to ID No. 1's water service area for more than 30 years

Once ID No. 1 was formed and the Solvang-Santa Ynez Conduit completed, Cachuma Project water was served to only a portion of the annexed area. Cachuma Project water was used primarily in the District's Zone 1 and a portion of Zone 2, which was within the original place of use. Zone 2 has historically been provided water primarily from District groundwater wells and from the Cachuma Project, as a secondary source, if available. For Zone 3, ID No. 1 developed groundwater wells to serve this area after the land was annexed. Prior to annexation, property owners in this zone accessed the groundwater basin through numerous private, small, shallow wells. The District wells were drilled deeper so that District pumping would not affect the shallow groundwater pumpers. Over time, most people hooked up with ID No. 1 rather than maintain their own wells, but the land was already developed prior to Cachuma Project water being made available. Cachuma Project water has never been part of the regular water supply for Zone 3, however, the District does provide Cachuma Project water to Zone 3 to meet peak demand and for emergency purposes.

Annexations

The resolutions referenced below did not include the number of acres for each annexation. The estimated acreage for Zones 2 and 3 was derived from a 1966 Land Classification Map by adding the number of acres per parcel for each zone. It was necessary to estimate a small number of parcels where the number of acres was not shown. The acreage for Alisal Ranch Golf Course and Cachuma County Park were provided by personnel from each facility.

Zone 2				
	Original District	SYRWCD Res. #100	Annex. #1958-1	3/3/59
	Original District	SYRWCD Res. #103	Annex. #1958-1	3/3/59
				3,573 acres
Zone 3				
	Los Olivos Area	SYRWCD Res. #263	Annex. #1962-1	9/19/62
	Los Olivos Area	SYRWCD Res. #280	Annex. #1963-2	10/3/63
	Refugio Road Area	SYRWCD Res. #317	Annex. #1965-1	1/6/66
	Refugio Road Area	SYRWCD Res. #319	Annex. #1965-1	1/6/66
	S.M.I.D.	SYRWCD Res. #318	Annex. #1965-4	2/3/66
	S.M.I.D.	SYRWCD Res. #320	Annex. #1965-4	2/3/66
	Stewart	SYRWCD Res. #426	Annex. #1981-1	9/30/81
				2,245 acres
Other				
	Alisal Ranch River Golf Course	SYRWCD Res. #370	Annex. #1972-1	7/27/72
				170 acres

Cachuma County Park	SYRWCD Res. #442 LAFCO Res. #83-643	3/1/83	300 acres

City Of Santa Barbara

The City of Santa Barbara was incorporated in 1850. The first water system in what is now the City supplied water to the Santa Barbara Mission, which was established in 1786. The water system was built in 1802 by the construction of a dam across Mission Creek. An aqueduct system was built from the dam to a point just north of the Mission where a 500,000 gallon reservoir was constructed. This reservoir is still in service and is one of twelve reservoirs now serving the City's water system. The first municipally owned water supply for Santa Barbara was provided through the completion of the Cold Springs Tunnel in 1900. In 1912, the City purchased the Santa Barbara Water Company holdings, which included reservoir sites on the Santa Ynez River. Gibraltar Dam was completed in 1920. This points out the long history of water provision to the City of Santa Barbara's service area.

The City encompasses an area of approximately 12,000 acres of which approximately 9,000 acres are developed as residential, commercial, industrial, institutional, vacant land, and transportation corridors. The land within the City's boundaries is almost completely developed. The City has historically obtained 35% of its water supplies from Gibraltar Reservoir and upstream diversions, 53% from the Cachuma Project, and 12% from local groundwater basins. Almost all deliveries are for M&I uses in the City. Agricultural demands are estimated at about 70 to 100 acre feet per year, however, the City has no agricultural connections.

The 1,528 acres outside the existing place of use primarily encompass the Mission Canyon area north of the City of Santa Barbara. Although Mission Canyon is within the City's water service area, it is not within the City of Santa Barbara's city limits. The area remains within the County of Santa Barbara and has not been annexed to the City. The area is provided with M&I water from the City of Santa Barbara.

The Mission Canyon area is a rural residential area with low-density housing and open, undeveloped land. Lauro Reservoir, a Cachuma Project regulating reservoir for the South Coast Conduit, is not within the existing place of use. There is no commercial agriculture in Mission Canyon, although a few properties do have some small acreage in private avocado and citrus production. The City does not provide agricultural water to these lands.

Mission Canyon has been developed as a rural residential area since the early 1900s. The majority of urban development occurred primarily in the lower canyon. The upper portion at higher elevations possesses a steep topography not suitable for cultivation, and although there was some arable land, it was not utilized for irrigated agriculture. Properties in the Mission Canyon area began receiving water from the City in the 1910s and 1920s. By the 1930s, the entire area outside the existing place of use boundary was provided water through water agreements with the City, usually in exchange for easements for water mains.

Another smaller residential area near Barker Pass is also outside the existing place of use and the city limits, but is within the City's water service area. The City has been supplying water to this area since the 1920s as well.

Because the City has provided water service to the areas outside the existing place of use long before the construction of the Cachuma Project, it appears that an oversight was made in establishing the original place of use boundary. This oversight was most likely due to the fact that the Santa Barbara city limits are not coincident with its water service area.

APPENDIX B

Demand Calculations For Area Outside the Place of Use

The Cachuma Project provides only about 65% of the total water supply of the Member Units, and is not sufficient to meet demand even within the existing authorized place of use. Because Cachuma Project yield is already fully subscribed within the existing permitted area, it is necessary for the Member Units to use non-Cachuma Project water sources to make up deficiencies within the existing place of use and to meet demand in the added area.

To provide a more accurate accounting of the water demand within the existing place of use, each of the Member Units provided actual water deliveries taken from water service account records, for a representative normal demand year. That information is provided below.

Carpinteria Valley Water District

The portion of CVWD's service area outside the existing place of use comprises six parcels; however, the district is currently only able to serve Cachuma Project water to three of the parcels located in the lower portion of its annexed area. The properties within this area also have their own wells so they are not normally dependent on water from the District. There is only one M&I service within the added area; the rest of the land is under agricultural production and is planted with avocado trees.

The average per capita M&I use within the CVWD is 117 gal/day or 0.13 acre feet per year. The one M&I account that lies outside the existing place of use is a residential school with about 200 students, so M&I usage is minimal. Actual water deliveries for both agricultural and M&I services outside the place of use were 23,430 hcf or 53.8 acre feet for 1999, which was a representative year in terms of demand for the District. The total demand within CVWD's water service area for the same year was 4,617 acre feet. Therefore, the demand within the existing place of use was 4,563 acre feet. The District's Cachuma Project water entitlement is only 2,813 acre feet per year, so the District must use non-Cachuma Project water sources for about 40% of the demand within the existing place of use.

CVWD Water Demand – 1999

Total Demand in Water Service Area	Demand Outside Place of Use	Demand Within Existing Place of Use	Cachuma Project Entitlement
4,617 acre feet	54 acre feet	4,563 acre feet	2,813 acre feet

Montecito Water District

MWD is unable to serve Cachuma Project water to the area outside the place of use at the present time. Within the added area, there are three agricultural accounts, where avocado production has been developed. The rest of the agricultural properties are not served by the District because the property owners use their own groundwater wells. There are also 17 domestic services within the area outside the existing place of use.

1999 was identified as a representative water year in terms of demand for the District. Actual water usage for the agricultural accounts was 4,079 hcf or 9.3 acre feet. MWD water service records show that per capita M&I use within the District is 247 gal/day, or 0.27 acre feet per year. Exterior water use is higher in Montecito due to larger lot sizes. Actual water deliveries for the domestic services were 5,016 hcf or 11.5 acre feet. Therefore, the total water use outside the place of use for 1999 was 21 acre feet. The total demand within MWD's water service area for the same year was 5,341 acre feet. Therefore, the demand within the existing place of use was 5,320 acre feet. The District's Cachuma Project water entitlement is only 2,651 acre feet per year, so the district must use non-Cachuma Project water sources for about 50% of the demand within the existing place of use.

MWD Water Demand – 1999

Total Demand in Water Service Area	Demand Outside Place of Use	Demand Within Existing Place of Use	Cachuma Project Entitlement
5,341 acre feet	21 acre feet	5,320 acre feet	2,651 acre feet

City of Santa Barbara

There are 1,192 domestic services within the Mission Canyon and Barker Pass areas outside the existing place of use. There are no agricultural services. The current average per capita M&I use within the City is 120 gal/day, or 0.13 acre feet per year. The water usage in the area outside the existing place of use for 1999, a representative year in terms of water demand for the City, was 213,869 hcf or 491 acre feet. The City's total *potable* water sales for their entire service area for the same period were 5,404,356 hcf, or 12,407 acre feet. Therefore, the demand within the existing place of use was 11,916 acre feet. The City's Cachuma Project water entitlement is only 8,277 acre feet per year, so the City must use non-Cachuma Project water sources for almost 30% of the demand within the existing place of use.

Please note that total water consumption is based on metered sales as measured by retail meters. There is a difference between metered sales and production, in that that total sales is always less than total production due to losses in the distribution system and meter error. To convert metered sales value to an approximately equivalent amount of production, it is necessary to multiply the metered sales value by 1.12, which reflects the City's metered sales ratio of 89.5% for the period. Therefore, actual total water usage is higher than what is reflected in the table below.

City of Santa Barbara Water Demand – 1999

Total Demand in Water Service Area	Demand Outside Place of Use	Demand Within Existing Place of Use	Cachuma Project Entitlement
12,407 acre feet	491 acre feet	11,916 acre feet	8,277 acre feet

Goleta Water District
Land outside the existing place of use in the Goleta North area has been annexed to the GWD, but the properties also have their own groundwater wells. The District provides domestic service only to about five residences, and has never provided irrigation water to this area. In the Goleta West area, there are many types of services including agricultural, rural residential, and residential. A portion of this area receives Cachuma Project water exclusively via the Goleta West conduit; however, the most densely populated residential area receives water from the District's distribution system, which commingles all water supplies.

Using 1999 as a representative water year in terms of demand for the District, water deliveries for the services in the area outside the place of use totaled approximately 2,037 acre feet. This total was tabulated from actual water service records, with the exception of a dense housing tract of about 1,650 services, where a statistical sampling (at a 95% confidence interval) was taken to determine the average water use per household. This total was then added to the actual water deliveries for all other services to give a statistically valid total water demand within the area outside the place of use.

The total demand within GWD's water service area for the same year was 12,641 acre feet. Therefore, the demand within the existing place of use was 10,604 acre feet. GWD's Cachuma Project water entitlement is 9,321 acre feet per year, so the District must use non-Cachuma Project water sources to make up deficiencies within the existing place of use, and to meet demand in the added area.

GWD Water Demand – 1999

Total Demand in Water Service Area	Demand Outside Place of Use	Demand Within Existing Place of Use	Cachuma Project Entitlement
12,641 acre feet	2,037 acre feet	10,604 acre feet	9,321 acre feet

Santa Ynez River Water Conservation District, Improvement No. 1
ID No. 1 has residential, rural residential-limited agricultural, and agricultural accounts. Cachuma Project water has primarily been delivered to Zone 1 and a portion of Zone 2. ID No.1 developed groundwater wells to serve Zone 3 after the land was annexed, so Cachuma Project water has never been part of the regular water supply to that area. It is supplied, as needed, for emergency deliveries and to meet peak demand during the summer. The current average per capita residential use within the District's water service area is approximately 294 gal/day or 0.32 acre feet per year. Exterior water use is greater in ID No. 1 where there are large lots and warmer summer months.

ID No. 1 identified 1988 as a representative demand year, not in a wet cycle. Actual metered water sales for 1988 for water services within the existing place of use totaled 3,033 acre feet. These properties are either entirely or partially within the existing place of use as identified on Reclamation's GIS map.

Total demand within the District's entire water service area for the same year was 7,857 acre feet. Therefore, demand in the area outside the place of use was 4,824 acre feet. ID No. 1's Cachuma Project water entitlement is 2,651 acre feet per year, so the District must use non-Cachuma Project water sources to make up deficiencies within the existing place of use and to meet demand in the added area.

ID No. 1 Water Demand – 1988

Total Demand in Water Service Area	Demand Outside Place of Use	Demand Within Existing Place of Use	Cachuma Project Entitlement
7,857 acre feet	4,824 acre feet	3,033 acre feet	2,651 acre feet

APPENDIX C

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RECORDS REVIEWED:

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Annexation Records - Santa Barbara County Surveyor's Office
Water Service District Boundary Maps - Cachuma Project Member Units
Water Service District Account Records - Cachuma Project Member Units

INDIVIDUALS INTERVIEWED:

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Norm Cota, Engineer, Carpinteria Valley Water District
Chuck Evans, General Manager, Montecito Water District
Evalyn Kerman, Business Manager, Montecito Water District
Jerry Paley, Financial/Computer Specialist, Montecito Water District
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