CHAPTER 1
ADMINISTRATIVE INFORMATION

1.1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

The Fox Canyon Groundwater Management Agency (FCGMA), acting as the Groundwater Sustainability Agency (GSA) for the portions of the Pleasant Valley Basin (PVB) within its jurisdictional boundaries, has developed this Groundwater Sustainability Plan (GSP) in compliance with the 2014 Sustainable Groundwater Management Act (SGMA) (California Water Code, Section 10720 et seq.). This GSP has been developed to apply to the entirety of the PVB, including those portions of the PVB that lie outside FCGMA's jurisdictional boundary, primarily consisting of fringe areas of the PVB. The County of Ventura (County) and the Camrosa Water District (CWD) have each elected to act as the GSA for portions of the PVB not within FCGMA's jurisdiction. The County and CWD will rely on this GSP and coordinate with FCGMA as necessary to ensure that the PVB is sustainably managed in its entirety, in accordance with SGMA.

SGMA defines sustainable groundwater management as the "management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results." "Undesirable results" are defined in SGMA and are summarized here as any of the following effects caused by groundwater conditions occurring throughout the basin[1]:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply
- Significant and unreasonable reduction of groundwater storage
- Significant and unreasonable seawater intrusion
- Significant and unreasonable degraded water quality
- Significant and unreasonable land subsidence
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

As described in Chapter 2, Basin Setting, of this GSP, undesirable results within the PVB have occurred historically with respect to chronic declines in groundwater level and significant and unreasonable reduction of groundwater storage. Although direct seawater intrusion has not occurred historically, and is unlikely to occur in the future in the PVB, groundwater production from the western part of the PVB influences groundwater elevations in the Oxnard Subbasin to the west. This influence has the potential to exacerbate seawater intrusion in the Oxnard Subbasin. Portions of the PVB are experiencing, or are under threat of experiencing, degraded water quality.

[1] As defined in SGMA, "basin" means a groundwater basin or subbasin identified and defined in Bulletin 118 or as modified pursuant to California Water Code, Section 10720 et seq. (Basin Boundaries).

Land subsidence has occurred historically in the PVB and has the potential to occur in the future if groundwater conditions are not managed sustainably. Depletions of interconnected surface water may have occurred historically in the PVB, although there is little data in the vicinity of the primary surface water courses in the PVB to document historical or current interactions between surface water and groundwater (see Section 1.3.2, Geography; Section 2.2.1, Geology; and Section 2.3.7, Groundwater-Dependent Ecosystems).

The purpose of this GSP is to define the conditions under which the groundwater resources of the PVB, which support agricultural, municipal and industrial (M&I), and environmental uses, will be managed sustainably in the future. The adoption of this GSP represents the first step in achieving groundwater sustainability within the PVB by 2040 as required by SGMA. Over the next 20 years, data will continue to be gathered and used to refine the estimated sustainable yield and potential paths for achieving sustainability set forth in the following chapters. As the understanding of the PVB improves, this GSP will be updated to reflect the new understanding of the PVB. This GSP outlines a plan for annual reporting and periodic (5-year) evaluations (Chapter 1); characterizes groundwater conditions, trends, and the cumulative impacts of groundwater pumping for each of the SGMA-defined sustainability indicators (Chapter 2); establishes minimum thresholds, measurable objectives and interim milestones by which sustainability can be measured and tracked (Chapter 3, Sustainable Management Criteria); outlines the monitoring network used to support and document progress toward sustainability (Chapter 4, Monitoring Networks); and identifies projects and management actions to be implemented by the GSA and/or stakeholders to minimize undesirable results (Chapter 5, Projects and Management Actions). This GSP documents a viable path, determined by the GSA in collaboration with stakeholders, and informed by the best available information, to achieving the sustainability goal within the PVB.

1.2 AGENCY INFORMATION

1.2.1 Agency Name

Fox Canyon Groundwater Management Agency (FCGMA or Agency)

1.2.2 Agency Address

Mailing Address:

Fox Canyon Groundwater Management Agency
800 South Victoria Avenue
Ventura, California 93009-1610

Office Location:

Ventura County Government Center
Hall of Administration
800 South Victoria Avenue
Ventura, California 93009

1.2.3 Organization and Management Structure

FCGMA is governed by five Board of Directors (Board) members who represent the (1) County of Ventura (County), (2) the United Water Conservation District (UWCD), (3) seven mutual water companies and water districts within the Agency (Alta Mutual Water Company, Pleasant Valley County Water District (PVCWD), Berylwood Mutual Water Company, Calleguas Municipal Water District (CMWD), CWD, Zone Mutual Water Company, and Del Norte Mutual Water Company), (4) the five incorporated cities within the Agency (Ventura, Oxnard, Camarillo, Port Hueneme, and Moorpark), and (5) the farmers (FCGMA 2019a). Four of these Board members, representing the County, UWCD, the mutual water companies and water districts, and the incorporated cities, are appointed by their respective organizations or groups. The representative for the farmers is appointed by the other four seated Board members from a list of candidates jointly supplied by the Ventura County Farm Bureau and the Ventura County Agricultural Association. An alternate Board member is selected by each appointing agency or group in the same manner as the regular member and acts in place of the regular member in case of absence or inability to act.

All members and alternates serve for a 2-year term of office, or until the member or alternate is no longer an eligible official of the member agency. All Board members and alternates serve on a volunteer basis and no compensation is provided for attendance at FCGMA meetings or events. Information regarding current FCGMA Board representatives can be found on the Agency's website (FCGMA 2019b).

Extractors in portions of the PVB within FCGMA jurisdictional boundaries will be subject to FCGMA's groundwater management actions under this GSP. These actions are administered by the Agency Executive Officer, who is appointed by the FCGMA Board. The Agency Executive Officer and other FCGMA staff are provided by the County of Ventura Public Works Agency pursuant to a contract with the County of Ventura (FCGMA 2019a).

1.2.4 Plan Manager

Executive Officer of FCGMA, Jeff Pratt, PE

Mailing Address:

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800 South Victoria Avenue
Ventura, California 93009-1610

Phone: 805.654.2073

Email: Jeff.Pratt@ventura.org

1.2.5 Legal Authority

FCGMA is an independent special district formed by the California Legislature in 1982 to manage and protect the aquifers within its jurisdiction for the common benefit of the public and all agricultural, domestic, and M&I users (FCGMA et al. 2007). FCGMA's jurisdiction was established as the area overlying the Fox Canyon Aquifer (FCA) and includes portions of the Oxnard Subbasin and the Las Posas Valley Basin (LPVB), the PVB, and the Arroyo Santa Rosa Valley Basin (ASRVB). FCGMA may adopt ordinances for the purpose of regulating, conserving, managing, and controlling the use and extraction of groundwater within its territory (FCGMA Act, Section 403).

The FCGMA Act prohibits the Agency from engaging in water supply activities normally and historically undertaken by its member agencies. Nonetheless, FCGMA may exercise the water supply powers and authorities authorized under SGMA provided the Board makes a finding that FCGMA is otherwise unable to sustainably manage the basin. The full text of the FCGMA Act, Assembly Bill 2995, as well as amendments and additional legislation, can be accessed on the Agency's website (FCGMA 2019c). FCGMA is identified in SGMA as an agency created by statute to manage groundwater that is the exclusive groundwater sustainability agency within its territory with powers to comply with SGMA (SGMA, Section 10723[c][1][D]). FCGMA notified the California Department of Water Resources (DWR) of its intent to undertake sustainable groundwater management under SGMA on January 26, 2015 (Appendix A).

1.2.6 Groundwater Sustainability Plan Implementation and Cost Estimate

This GSP will be implemented by FCGMA in coordination with the other GSAs in the PVB. The following sections provide a discussion of the standards for and costs associated with GSP implementation including annual reporting, periodic updates, monitoring protocols, and projects and management actions. Potential funding sources and mechanisms are presented along with a

tentative schedule for implementing the GSP's primary components. In addition, annual reporting and 5-year evaluation procedures for the PVB are described.

1.2.6.1 Standards for Plan Implementation

Annual Reporting

The GSA shall submit an annual report to DWR by April 1 of each year following the adoption of the GSP. The annual report shall include the following components for the preceding water year (23 CCR, Section 356.2):

- General information, including an executive summary and a location map depicting the basin covered by the report
- A detailed description and graphical representation of
    - Groundwater elevation data from wells identified in the monitoring network
    - Groundwater extraction for the preceding water year
    - Change in groundwater in storage
    - Surface water supply used or available for use
    - Total water use
- A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report

The description and graphical representation of groundwater elevations will include groundwater elevation contour maps for each principal aquifer in the PVB illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions. Additionally, hydrographs of groundwater elevations and water year type, using historical data to the greatest extent available, including from January 1, 2015, to the current reporting year, will be included in the annual report. As described in Section 1.2.6.2, GSP Implementation Budget, under "Data Collection, Validation, and Analysis," relevant data collected by entities within the PVB are regularly provided to FCGMA and will be used to prepare the annual reports submitted to DWR.

The description and graphical representation of change in groundwater storage will include a graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the Basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

Five-Year Evaluation

FCGMA will evaluate the GSP at least every 5 years. This 5-year evaluation will be provided as a written assessment to DWR. The assessment shall describe whether the Plan implementation, including implementation of projects and management actions, are meeting the sustainability goal in the Basin. The evaluation will include the following:

- A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones, and minimum thresholds
- A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions
- Revisions, if any, to the basin setting, management areas, or the identification of undesirable results and the setting of minimum thresholds and measurable objectives
- An evaluation of the basin setting in light of significant new information or changes in water use, and an explanation of any significant changes
- A description of the monitoring network within the basin, including whether data gaps exist, or any areas within the basin are represented by data that does not satisfy the requirements of the GSP Regulations (23 CCR, Sections 352.4 and 354.34[c])
- A description of significant new information that has been made available since GSP adoption, amendment, or the last 5-year assessment
- A description of relevant actions taken by the Agency, including a summary of regulations or ordinances related to the GSP
- Information describing any enforcement or legal actions taken by the Agency in furtherance of the sustainability goal for the basin
- A description of completed or proposed GSP amendments
- A summary of coordination that occurred between FCGMA and other agencies, if appropriate, in the Basin, as well as between FCGMA and other agencies in hydrologically connected basins

1.2.6.2 GSP Implementation Budget

The primary costs associated with implementing the GSP are anticipated to be connected with:

- Data collection, validation, and analysis
- Ongoing data gap analysis and assessments of priorities for filling data gaps
    - Filling of data gaps
    - Operations and maintenance

- Annual report preparation and preparation of the 5-year GSP evaluation
- Regional studies for basin optimization, groundwater modeling
- Management, administration, and other costs

Data Collection, Validation, and Analysis

FCGMA has historically obtained data from the Ventura County Watershed Protection District (VCWPD) to monitor streamflow, precipitation, groundwater elevation, and groundwater quality throughout the PVB. Besides VCWPD, entities that monitor groundwater level and groundwater quality in the PVB include UWCD, the City of Camarillo, PVCWD, and small mutual water companies. Relevant data collected by these entities are regularly provided to VCWPD, and the data are shared with FCGMA for use in the FCGMA annual groundwater reports. This process will continue, but analysis will now include comparison of collected data against sustainable management criteria established by this GSP.

The majority of water level and water quality data in the PVB are generated by VCWPD and UWCD. To date, this data sharing has not required expenditures from FCGMA because FCGMA did not control the location or timing of data and sample collection. The existing monitoring schedules and locations are discussed in Chapter 4, Monitoring Networks. It is anticipated that as long as the existing schedules are maintained, the VCWPD will continue to host the data for the PVB and FCGMA will be able to use the data for annual monitoring reports and the 5-year GSP evaluations. However, to the degree that monitoring schedules and locations will change, a cost-sharing agreement will be developed between VCWPD and FCGMA.

Data Gap Analysis and Priorities

During the initial 5-year period after the GSP is adopted, FCGMA will explore options for filling data gaps identified in this GSP. The primary data gaps identified in the historical data are spatial and temporal gaps in groundwater elevation and groundwater quality measurements. In order to assess the priorities for filling these gaps, FCGMA plans to review options and potential costs associated with those options to direct funding toward the solutions that are needed most. One option that will be investigated would include adding pressure-transducers to existing agricultural wells in the monitoring network. These transducers would record water levels at regular intervals (e.g., hourly) to determine static, or recovered, water levels. The cost for purchasing and installing transducers in agricultural wells must be assessed and incorporated into the cost of GSP implementation. As instrumentation is added to the monitoring network, the annual cost of operations and maintenance will also be factored in to the budget for GSP implementation.

In addition to assessing the need for new instrumentation, the analysis of data gaps and priorities will review the potential cost and need to substitute existing agricultural wells in the monitoring network with dedicated monitoring wells, or install monitoring wells in key areas where there are no appropriate wells to monitor. While monitoring wells are often preferred to agricultural wells, for the time being, the agricultural well data provide a link to historical data. This link is critical in assessing progress toward sustainability. Therefore, the data gap analysis and priorities assessment will review which agricultural wells may need to be substituted and which wells should be retained for ongoing historical comparison.

Annual Report Preparation and Preparation of the 5-Year Evaluation

Details of the information that will be included in the annual reports are presented in Section 1.2.6.1, Standards for Plan Implementation. It is currently anticipated that the annual reports will be produced by FCGMA staff and the costs associated with these reports will be incorporated in the annual operating budget of FCGMA.

Every fifth year of GSP implementation and whenever the GSP is amended, the GSA is required to prepare and submit an Agency Evaluation and Assessment Report to DWR together with the annual report for that year. The tasks associated with preparing this report include updating the water budget, updating the groundwater model, and reassessing the sustainable yield, minimum thresholds, and measurable objectives (see Section 1.2.6.1). Additionally, the evaluation will provide an assessment of the pumping allocations. It is currently anticipated that the 5-year evaluation reports will be produced by FCGMA staff with the assistance of consultants and that the costs associated with these reports will be incorporated in the annual operating budget of FCGMA.

Basin Optimization Studies, Groundwater Modeling, and Project Feasibility

During the initial 5-year period after the GSP is adopted, FCGMA will explore opportunities to optimize basin management. The work required to assess these opportunities includes implementing and supporting regional studies and groundwater modeling efforts that assess how to maximize the sustainable yield of the PVB and the adjoining Oxnard Subbasin. These studies are anticipated to include more detailed feasibility studies of projects that were proposed and modeled for this GSP, as well as an investigation of how the projects will be implemented, the costs associated with project implementation, and potential cost-sharing agreements for these projects. Current anticipated costs for implementing projects in the PVB that were analyzed as part of this GSP are presented in Table 1-1.

In addition, it is anticipated that basin optimization studies will be undertaken in the initial 5-year period after the GSP is adopted to assess projects that were not included in this GSP. This assessment is expected to include an investigation of how adjustments to the location of groundwater production will maximize the sustainable yield of the combined aquifer systems of the PVB, the Oxnard Subbasin, and the West Las Posas Management Area. Basin optimization

investigations are inherently tied to groundwater modeling, which would be conducted to provide the estimated sustainable yield for all scenarios analyzed. It should be noted that Chapter 5 of this GSP includes projects that were far enough along in development and/or implementation that meaningful information could be included about their potential to improve sustainable management of the Subbasin. Additional projects may be implemented within the next 20 years to, for example, minimize the need for pumping reductions. This GSP does not preclude future projects and/or existing projects that are too early in the stage of development to be included in Chapter 5 from being investigated or undergoing feasibility analysis in the coming years. Relevant information about new projects and/or updates to existing projects described in Chapter 5 will be provided in annual reports and 5-year evaluations.

Lastly, as part of the project feasibility analyses, FCGMA anticipates evaluating potential revenue streams for implementing the projects required to optimize basin management. This analysis will include a review of the potential for implementing basin replenishment fees and the costs associated with proposing and passing such fees.

Cost Estimate

The estimated total GSP implementation costs are presented in Table 1-2. The starting cost for operations and monitoring is estimated to be $1 million for 2020. Costs were increased annually, using a 2.8% inflation rate, from 2020 to 2040 (see Table 1-2). The annual reviews to DWR are anticipated to be included as part of the operations and monitoring costs for FCGMA. The management, administration, and other costs for 2020 are based on the 2019–2020 fiscal year budget, in which these costs are estimated to be $1,455,000.

The 5-year evaluation costs, are anticipated to cover the professional specialty services to evaluate and assess the GSP, and perform the additional work necessary to fill data gaps and analyze projects and management actions for the PVB, as well as for the Oxnard Subbasin and the LPVB. FCGMA is the GSA for these three basins along with the coordinating GSAs and will be responsible for evaluating the GSP for each basin every 5 years. Initial costs for the 5-year evaluation were estimated to be $100,000 per basin, with 2.8% inflation between 2020 and 2024. Costs for 2025 through 2029 were estimated to be $100,000 if the work were performed in 2020, but include 2.8% annual inflation between 2020 and 2025. Costs between 2030 and 2033 were calculated from the 2.8% annual inflation on $50,000. Subsequent years were calculated either based on 2.8% inflation on $100,000, or 2.8% inflation on $50,000, depending on whether the year included preparation of a physical report for DWR.

Finally, the estimated implementation costs include a 10% contingency on the total operating and monitoring costs, management administration and other costs, and the 5-year evaluation.

1.2.6.3 Funding Sources

FCGMA funds its basic operations using groundwater extraction charges. Surcharges for extractions in excess of an allocation may also be used in carrying out FCGMA's groundwater management functions. FCGMA collects a groundwater extraction fee of $6 per acre-foot and imposes a surcharge of up to $1,961 for excess extractions. Together, these pump fees have generated more than $1 million in operating revenues each fiscal year (ending in June) between 2013 and 2016.

Under SGMA, FCGMA gained additional authority to impose regulatory fees and currently collects a sustainability of fee of $11 per acre-foot in addition to its groundwater extraction fee. The sustainability fee is projected to generate additional annual revenue of $1,375,000. The sustainability fee will increase to $14 per acre-foot in 2020 and generate an additional $375,000 in annual revenue. Upon adoption of this GSP, FCGMA will have authority to impose replenishment fees and to also fund projects and management actions that can influence groundwater supply. Projects to achieve sustainability are anticipated to require funding beyond that generated by the existing extraction and sustainability fees. FCGMA anticipates working with other agencies and stakeholders to understand how individual projects will impact stakeholders and identify the most appropriate funding sources for these projects.

1.3 DESCRIPTION OF PLAN AREA

1.3.1 Description

The PVB (DWR Groundwater Basin 4-006) is bounded to the north by the Camarillo Hills and the Somis Gap, to the east by the ASRVB (DWR Groundwater Basin 4-007) and Conejo Mountain, to the southeast by the Santa Monica Mountains, and to the west and southwest by the Oxnard Subbasin of the Santa Clara River Valley Groundwater Basin (DWR Groundwater Basin 4-04.02; Figure 1-1, Vicinity Map for the Pleasant Valley Basin). The PVB ranges in elevation from approximately 30 to 680 feet above mean sea level.

On the west and southwest, the PVB is in hydrogeologic communication with the Oxnard Subbasin. The boundary between the PVB and Oxnard Subbasin is defined by a facies change between the predominantly coarser-grained sand and gravel deposits that compose the Upper Aquifer System in the Oxnard Subbasin and the finer-grained clay and silt-rich deposits of the Upper Aquifer System in the PVB. To the north, in the Camarillo Hills area, the Springville Fault Zone is believed to form a groundwater flow barrier at depth between the aquifers in the LPVB and the PVB, based on historical hydraulic head differences of up to 60 feet across the fault zone (DWR 1975). However, shallow alluvial deposits in the vicinity of Arroyo Las Posas and the Somis Gap are in hydraulic communication with the LPVB (CMWD 2017).

The eastern boundary of the PVB is formed by a constriction in Arroyo Santa Rosa (SWRCB 1956; DWR 2003).

The southern boundary of the PVB is delineated by the contact between the alluvial deposits and surface exposures of bedrock in the Santa Monica Mountains (DWR 2003).

In this report, to distinguish between features on the land surface and in the subsurface, the term "Pleasant Valley" will be used to refer to the geographic area overlying the PVB.

Administrative Boundaries

Multiple boundaries have been used to define or manage the PVB (Figure 1-2, Administrative Boundaries for the Pleasant Valley Basin), including the following:

1. The boundary of the PVB currently used by DWR (as amended in the 2016 Basin Boundary Modification)
2. The jurisdictional boundary of FCGMA
3. The boundary of the PVB historically used by FCGMA
4. The boundary of the PVB historically used by VCWPD

In 2019, DWR finalized its latest Basin Boundary Modification process, in which the boundaries of the PVB remained the same as those defined in the 2016 Basin Boundary Modification (DWR 2019).

The boundary of the PVB currently used by DWR extends beyond FCGMA jurisdiction to the southeast (Figure 1-2). The jurisdictional boundary of FCGMA was established based on a vertical projection of the FCA, as provided by the FCGMA Act in 1982 (Figure 1-1). As a result, the FCGMA jurisdictional boundary in the PVB follows the northeast–southwest trace of the Bailey Fault through Pleasant Valley. The FCA is absent in the subsurface to the south and east of this fault. Conversely, DWR's PVB boundary is based on the surface extent of alluvium in Pleasant Valley, and the location of geologic structures and facies changes that impede flow between the PVB and neighboring groundwater basins (DWR 2003). Consequently, the DWR PVB boundary extends beyond FCGMA jurisdiction to the southeast, and approximately 8.5 square miles, or roughly 25%, of the DWR PVB area lies outside FCGMA jurisdiction (Figures 1-1 and 1-2).

The majority of the area southeast of the Bailey Fault in the PVB lies within the jurisdiction of CWD. CWD is the GSA for the Camrosa Water District–Pleasant Valley, which covers the portion of CWD's service area that lies within the PVB and outside of FCGMA jurisdiction (CWD 2017; Figure 1-2). The remaining area southeast of the Bailey Fault lies within the jurisdiction of the County of Ventura (County). The County is the GSA for the Pleasant Valley Basin Outlying Areas (County of Ventura 2017; Figure 1-2). The PVB boundary historically used by FCGMA is similar

to the PVB boundary defined by DWR, though the two extents are not identical (Figure 1-2). The main discrepancy between these two extents is in the southwestern corner, along the boundary between the PVB and the Oxnard Subbasin. In this area, the DWR PVB boundary is farther east than the FCGMA PVB boundary. Therefore, the eastern area of the DWR Oxnard Subbasin adjacent to the PVB was historically considered by FCGMA to be part of the PVB (Figure 1-2).

Table 1-3 provides a summary of the areal extent of GSAs within the PVB and the percentage of each GSA that is overlapped by the PVB. The Pleasant Valley Basin Outlying Areas GSA represents the portion of the PVB within the boundaries of the PVB historically used by VCWPD, and the Camrosa Water District–Pleasant Valley GSA represents the portion of the PVB within the jurisdiction of CWD. Although both CWD and VCWPD manage larger areas, they have delineated their GSAs according to DWR basin boundaries, and thus are contained by the PVB.

Land Ownership and Jurisdiction

Land within the PVB is under a variety of municipal, state, and County jurisdictions. The City of Camarillo is nearly entirely encompassed by the northern part of the PVB and makes up 52.5% of the land area. Land under County jurisdiction outside the incorporated city composes 44.7% of the PVB's land area. There is no federal land ownership within the PVB. Land owned by the Pleasant Valley Recreation and Park District and the County of Ventura is used for open space or parks. The majority of land owned by California State University, Channel Islands, occurs within the PVB, and occupies 1.7% of the land area. A summary of land ownership and jurisdiction is provided in Table 1-4.

1.3.2 Geography

1.3.2.1 Surface Water and Drainage Features

The dominant surface water bodies in Pleasant Valley are the Arroyo Las Posas, Calleguas Creek, and Conejo Creek, which drain watersheds that extend beyond the boundaries of the PVB. The western portion of the City of Camarillo contains lined drains that flow to the west and discharge to Revolon Slough in the Oxnard Plain (Figure 1-3, Pleasant Valley Basin Weather Station and Stream Gauge Locations).

Arroyo Las Posas enters Pleasant Valley through the Somis Gap, between the Camarillo Hills and the Las Posas Hills, and flows to the south and the southwest. At the confluence of the Arroyo Las Posas and an unnamed stream southwest of Saint John's Seminary, Arroyo Las Posas becomes Calleguas Creek (Figure 1-1). Calleguas Creek exits Pleasant Valley to the west of California State University Channel Islands and crosses the southern portion of the Oxnard Plain before flowing into the Pacific Ocean near Point Mugu (Figure 1-1).

Conejo Creek enters Pleasant Valley from the ASRVB to the east and flows generally to the southwest along the southeastern border of the PVB, passing the base of Conejo Mountain and the foothills of the Santa Monica Mountains, until it joins Calleguas Creek.

Characterization of Flow

Streamflow records for one inactive and four active streamflow gauging stations (Figure 1-3; Table 1-5) were used to characterize flow in upstream Calleguas Creek (Stations 806 and 806A), in Conejo Creek (800 and 800A), and in downstream Calleguas Creek (Station 805).

Within Pleasant Valley, Calleguas Creek upstream of Conejo Creek (i.e., at Station 806) is dry in dry weather (VCWPD 2009). Dry-weather flow is observed in Conejo Creek and in Calleguas Creek downstream of the confluence with Conejo Creek. The primary sources of dry-weather flow to Conejo Creek are two wastewater treatment plants (WWTPs): the Hill Canyon WWTP, operated by the City of Thousand Oaks, which discharges to Arroyo Conejo, a tributary of Conejo Creek; and the Camarillo Sanitary District WWTP, operated by the City of Camarillo, which discharges directly to Conejo Creek. Irrigation water from agriculture and/or landscaping may also serve as a source of flow in both channels during some parts of the year. The complete record and the monthly minimum of average daily flows at these three stations are presented on Figure 1-4, Average Daily Flows (ADF) and Monthly Minimum ADF in Pleasant Valley Surface Waters.

In Calleguas Creek upstream of the Conejo Creek confluence, the available stream flow record within the PVB extends from 1968 to 2014, at Stations 806 and 806A. Station 806A is now operated as a Peak Only (Event) Site, but previously was operated as a Recording Stream Gauge. Peak flow typically occurs between November and April of any given water year and baseflow generally falls to 0 cubic feet per second (cfs) between May and September.[2] The highest gauged flow was 7,080 cfs in January 2005 (Figure 1-4[A]).

In Conejo Creek, the available streamflow record within Pleasant Valley extends from 1971 to 2013 at Stations 800 and 800A. Peak flow typically occurs between December and March of any given water year, and flow has consistently been present in the channel flows during dry weather since the record began. The highest gauged flow was 3,980 cfs in March 1983 (Figure 1-4[B]).

In Calleguas Creek downstream of the Conejo Creek confluence, the available streamflow record within Pleasant Valley extends from 1968 to 2014 at Station 805. Peak flow typically occurs between December and March of any given water year. Between July and September, baseflow tends to be between 5 and 13 cfs. The highest gauged flow was 9,686 cfs in March 1983 (Figure 1-4[C]).

[2] The water year runs from October 1 through September 30 of the following calendar year. For example, the 2015 water year began October 1, 2014, and ended September 30, 2015.

To qualitatively assess changes in baseflow, all streamflow gauges were assigned a minimum average daily flow for each month of the record (Figures 1-4[D] through 1-4[F]). In Conejo Creek and in Calleguas Creek downstream of the confluence with Conejo Creek, the minimum monthly flow recorded at the stream gauge is lower in the past 5–10 years than it was from 1980 to 2005, corresponding in some years with low rainfall associated with the recent drought. Other factors contributing to the decline in base flow include the relocation of Station 800A to downstream of the Conejo Creek Diversion structure and CWD began diverting from Conejo Creek beginning in 2002.

1.3.2.2 Current, Historical, and Projected Climate

Current Climate

The climate of Pleasant Valley is typical of coastal Southern California, with average daily temperatures ranging generally from 43°F to 80°F in summer and from 41°F to 74°F in winter, as measured at the weather station in Camarillo operated by the California Irrigation Management Information System (CIMIS; CIMIS 2016; NOAA 2010). Typically, approximately 85% of precipitation in the Ventura County region falls between November and April (Hanson et al. 2003).

Records of rainfall were collected from VCWPD weather stations located within the boundary of Pleasant Valley (seven active and five inactive; Figure 1-3, Figure 1-5 [Pleasant Valley Annual Precipitation], and Table 1-6). Annual precipitation varies from gauge to gauge (Figure 1-5 and Table 1-6).

Evapotranspiration (ET) is measured at CIMIS Station 152, located on the Leisure Village Golf Course. The monthly average ET calculated using the Penman–Monteith equation at Station 152 ranges from 2.07 inches in December to 5.70 inches in July. This monthly average was calculated for data collected between 2001 and 2015. The average total annual ET is 46.86 inches.

Historical Climate Trends

In order to characterize rainfall variability in Pleasant Valley over the past century, two stations whose combined records cover the entire period were selected: Stations 003 and 219A (Note: only preliminary data was available for water years 2014–2016 for Station 219A). Station 219A (Camarillo–Hauser) is located approximately 3.8 miles northeast of Station 003 (Camarillo–Springville Ranch; Figure 1-3). Precipitation records can vary based on several factors, including geographic location, the type of gauge used to measure precipitation, and the physical characteristics of the area surrounding a measurement site. Therefore, in order to examine how rainfall recorded at these two stations compared to the other stations, correlation coefficients (R) were calculated for the period of time in which the station records overlap. Using the entire record (including preliminary data for 2014–2016 in the record of Station 219A), correlation coefficients calculated for all pairwise combinations of stations that include Stations 003 and 219A exceed 0.97.

The variability in the records of precipitation measured at Stations 003 and 219A is similar to that measured at the other precipitation stations, indicating that records from these two stations can be used to characterize the precipitation trends in Pleasant Valley over the 113-year period from 1903–2016 (Figure 1-5).

The long-term trend record was based on the record from Station 003 for the period from 1903–1992. After 1992, no data are available for Station 003. Therefore, from 1992–2016, the annual precipitation value recorded at Station 219A was used to predict precipitation at Station 003, based on a linear regression of the annual precipitation values in the 20 years of overlap (1973–1992) of the records for Stations 003 and 219A (see formula below).

$$\textit{Station 003 (inches)} = 0.9709 * \textit{Station 219A (inches)} - 0.5973 \qquad (R^2 = 0.9798)$$

The root-mean-squared error (RMSE) between the observed annual precipitation at Station 003 and the predicted precipitation using Station 219A was 1.1 inches per year. The bias was −0.00032 inches.

Based on the long-term (1902 to 2013) record of measured and calculated precipitation at Station 003, the mean annual precipitation in western Pleasant Valley is 12.9 inches (Figure 1-6, Long-Term Precipitation Trends in Pleasant Valley). For each water year in the record, the total annual precipitation was compared to the long-term mean annual precipitation in order to calculate the cumulative departure from mean precipitation (Figure 1-6). Historical drought periods were defined as a falling limb on the cumulative departure from the mean curve (Figure 1-6). Based on the historical record, a drought in Pleasant Valley can be defined as a period of years in which the area experiences no more than one consecutive year of above-average precipitation and at least 18 inches of cumulative precipitation deficit (see Table 1-7 and Figure 1-6).

The century-long precipitation record demonstrates that drought cycles have frequently impacted Pleasant Valley. The average drought duration in the past century was 7.6 years, and the average cumulative rainfall deficit during the droughts was −27.3 inches. The duration of periods of average or above-average rainfall was rarely more than 10 years. Consequently, planning for drought cycles in the coming decades will be an integral component of water resources management.

Projected Climate

The literature review conducted in support of the U.S. Bureau of Reclamation's Los Angeles Basin Stormwater Conservation Study Task 3.1 Report found that the following changes are anticipated in Southern California due to global climate change (Bureau of Reclamation 2013):

- Increased temperature (1°C to 3°C)
- Increased evaporation rate

- Decrease in annual precipitation (2% to 5%)
- Increase in extreme precipitation events

Future climate conditions were modeled in the PVB using climate change factors provided by DWR. The impacts to the future water budget are discussed in more detail in Chapter 2, Basin Setting.

1.3.2.3 Historical, Current, and Projected Land Use

Historical land uses within Pleasant Valley were determined based on review of data from the Southern California Association of Governments (SCAG), which has mapped over 105 land use categories to a minimum 2-acre resolution for the years 1990, 1993, 2001, and 2005 (SCAG 2005). Current land uses within Pleasant Valley were determined based on review of the General Plan land use map for Ventura County, shown on Figure 1-7, Land and Water Use (VCPD 2015). Existing land use patterns and trends are expected to continue, and are described based on information and maps contained in General Plan documents.

Pleasant Valley consists of unincorporated areas of Ventura County and the City of Camarillo, in approximately equal parts. Approximately 14% of the area of the City of Camarillo extends into Las Posas Valley (the Sterling Hills and Spanish Hills golf clubs and estates), and about 1% of the City of Camarillo is in the Oxnard Plain (the western portion of the Camarillo Airport; Figure 1-1). Agricultural land use covers approximately 40% of the land area within Pleasant Valley and is dominated by row crops, with a small portion dedicated to nurseries and orchards (DBS&A 2017). Urban and residential land uses in the basin are concentrated in the City of Camarillo. The only concentration of residences outside incorporated boundaries consists of student housing at California State University, Channel Islands, as well as a portion of Camarillo Heights. Open space (i.e., *not* consisting of agricultural or urban uses) is limited to the Calleguas Creek and Conejo Creek corridors, as well as undeveloped land around California State University, Channel Islands and the steeper terrain on the valley edges. Table 1-8 shows the County General Plan land uses within Pleasant Valley, tabulated by area and percentage.

The land use pattern within the City of Camarillo is a concentration of industrial and commercial land uses along the Highway 101 corridor, around the Camarillo Airport, and southeast of Lewis Canyon Road/CA Highway 34. Commercial areas also consist of the business district along Ventura Boulevard; and community shopping centers along Carmen Drive, Las Posas Road, Mission Oaks Boulevard, and Arneill Road. In all other locations within the City, land use consists of residential and municipal uses (e.g., schools, parks, and public services). Residential uses are for the most part low-density single family homes, but increase in density near the commercial and industrial areas and major thoroughfares. Building heights generally do not exceed 3–4 stories. The land area within the City of Camarillo is occupied by residential (54%), commercial (5%), industrial (9%), conservation (15%) and public (16%) uses (City of Camarillo 2016a). According to the City's 2015 annual report, there were

349 residential units completed (there is an annual limit of 400 units), five new commercial projects totaling nearly 20,000 square feet completed, nine previously approved but not completed commercial projects totaling of 85,159 square feet, and 13 industrial projects approved for a total floor area of 745,182 square feet (City of Camarillo 2016a).

In the future, agricultural preservation and open space land use policies are expected to limit the rate and reach of "greenfield" development and direct growth through infill development and zoning policies that allow higher-density and mixed-use development (VCPD 2015). Furthermore, the Urban Restriction Boundary around the City promotes the formation and continuation of a cohesive community by defining boundaries and helping to prevent urban sprawl. The purpose of this Urban Restriction Boundary is to ensure that the purposes and principles set forth in the Camarillo General Plan relating to Land Use (Chapter IV) and Open Space and Conservation (Chapter IX) are inviolable against transitory short-term political decisions and that agricultural, watershed and open space lands are not prematurely or unnecessarily converted to other non-agricultural or non-open space uses without public debate and a vote of the people (City of Camarillo 2004).

For unincorporated areas within Pleasant Valley, the Ventura County General Plan Environmental Impact Report (EIR) identifies the widening of roads as potential growth-inducing effect of the General Plan land uses and policies, as well as policies that allow for the creation of substandard-sized parcels for farmworker housing complexes and an increase in allowable building coverage for farmworker housing complexes in Agricultural and Open Space designations (VCPD 2005). However, given that unincorporated areas are nearly entirely used for agricultural purposes, little change is expected to occur in the future, except perhaps in the type of crops grown. Demographics and population growth within the Pleasant Valley Basin are addressed in Section 1.3.2.4, Historical, Current, and Projected Demographics.

1.3.2.4 Historical, Current, and Projected Demographics

There are several sources of population data for Pleasant Valley, most of which are derived from decennial census counts, the last of which occurred in 2010. Sources of population information are as follows:

- **U.S. Census Bureau.** The U.S. Census Bureau conducts a census count every 10 years. Census data is gathered by tracts, blocks, and census-designated places. Census tracts were intersected with the PVB boundary to determine the population within the Basin for 2010. Census tracts that intersected the boundaries of the PVB were area-weighted to determine the population that falls within the Basin.
- **City and County General Plans.** The City of Camarillo and the County of Ventura gather data on development, growth, and land use patterns and make population estimates in

conjunction with census data. The cities' general plans and websites were reviewed for historical and current population data.

- **Southern California Association of Governments.** SCAG is the nation's largest metropolitan planning organization, representing 6 counties, 191 cities, and more than 18 million residents. SCAG produces demographics data and growth forecasts for the entire Southern California region.

At a County-wide level, population growth is skewed toward incorporated cities (such as Camarillo). The population distribution within Ventura County is the result of a 1969 County–City agreement, called the Guidelines for Orderly Development, which directs urban-level development to incorporated cities in Ventura County (VCPD 2015). That agreement limits urban-level development and services in unincorporated areas. The total increase in population in unincorporated areas in Ventura County was only 1.9% from 2000 to 2010, whereas population in the cities increased at a much higher rate, closer to 10.4%, over the same period.

Table 1-9 shows the past, current, and projected population for Ventura County, the City of Camarillo, and Pleasant Valley. The population of Pleasant Valley is estimated to have been 58,899 in 2010, based on census data. It should be noted that the methodology for calculating the population in Pleasant Valley is likely to have resulted in an underestimate. This is because a significant number of census tracts crossed the boundary of the Basin, and these were area-weighted to determine a population. Review of aerial photographs indicates that for most of the area-weighted census tracts, the population appears to reside within the Basin. The current population of the City of Camarillo is estimated to be 66,300 residents, with an average household size of 2.67 (SCAG 2016). The population of unincorporated areas in Pleasant Valley is therefore a small/negligible portion of the total population of the Basin.

1.4 EXISTING MONITORING AND MANAGEMENT PLANS

Over the past few decades, multiple agencies have implemented programs to monitor and manage water within the PVB. Local and state agencies have worked together and with basin stakeholders to develop management strategies and monitoring programs. Table 1-10, Pleasant Valley Basin Existing Water Resources Monitoring Programs, and Table 1-11, Pleasant Valley Basin Existing Water Resources Management Projects, Programs, and Strategies, summarize the monitoring and management programs, projects, and strategies that are currently in effect.

1.4.1 Monitoring and Management Programs

Table 1-10 provides a summary of existing monitoring programs. It is subdivided into monitoring programs that are primarily for surface water and those primarily for groundwater.

Table 1-11 provides a summary of existing management programs, projects, and strategies. It is similarly subdivided into projects that address primarily surface and those that address primarily groundwater. It also contains a third category, "other," for projects that address both surface and groundwater or an additional parameter.

For information regarding coordination between the GSP implementation activities and existing monitoring and management programs and projects, see Chapter 4 and Chapter 5. For more information on the water budget and how surface water and groundwater have historically been used in the PVB, see Chapter 2.

Table 1-11 indicates whether each project and program is associated with conjunctive use. As used herein, "conjunctive use" applies to programs, projects, and strategies that meet the 2003 Bulletin 118 definition of the term: "Conjunctive management in its broadest definition is the coordinated and combined use of surface water and groundwater to increase the overall water supply of a region and improve the reliability of that supply" (DWR 2003). For example, PVCWD uses surface water diverted from the Santa Clara River and Conejo Creek to supplement agricultural irrigation from groundwater wells. Use of surface water for agricultural purposes reduces the volume of groundwater pumped from the PVB (UWCD 2014). For a description of some of the most important projects and programs, see Section 1.5, Existing Conjunctive Use Programs.

Due to the overlapping jurisdictions of the agencies that manage groundwater resources, there are many programs that occur within the basin or benefit multiple basins. Therefore, Tables 1-10 and 1-11 include a column ("Multi-Basin Program") that lists the basins in which the programs are conducted or those that benefit from each program.

1.4.2 Operational Flexibility Limitations

Existing water monitoring and management activities are described in Tables 1-10 and 1-11. Some of these have been developed, in part, to increase the operational flexibility within the PVB and within FCGMA's jurisdiction as a whole. As the agency responsible for groundwater management in most or part of the four groundwater basins within its jurisdiction, FCGMA fosters operational flexibility through groundwater monitoring requirements, project oversight, and the collection of fees. Because the basins are all interconnected to some extent, either physically or through water sources, the opportunity for operational flexibility exists and has been used by the FCGMA and local water agencies. Examples of projects that have increased operational flexibility within the PVB include the Pleasant Valley Pipeline and the Conejo Creek Diversion, which allow for agricultural use of surface water during wetter than average periods, when flow is available for diversion (Table 1-11). Consequently, groundwater elevations recover and there is additional groundwater in storage available for use during periods of drought.

Despite the coordination of projects and programs within the PVB, limits to operational flexibility remain. These limits include constraints imposed by interaction with other regulatory programs, including the Recycled Water Policy (2009, amended 2013) that was adopted by the State Water Resources Control Board, Section 303(d) of the federal Clean Water Act, and the federal Endangered Species Act. The Recycled Water Policy intends to encourage the safe use of recycled water by recognizing its benefits, establishing statewide recycled water goals and targets, clarifying regulatory agency roles and permitting approaches for various types of recycled water projects, and establishing an approach to avoid or minimize potential adverse consequences (e.g., excessive salts, nutrients, and/or constituents of emerging concern). For example, the policy requires that local water and wastewater entities prepare Salt and Nutrient Management Plans for the groundwater basin in which they operate. The Salt and Nutrient Management Plan for the Oxnard Plain and Pleasant Valley Basins has been submitted to the Los Angeles Regional Water Quality Control Board, but has not yet been accepted (City of Oxnard 2016b).

Water quality in the Calleguas Creek Watershed, which includes parts of the PVB, is currently listed as impaired by pollutants including nutrients, sulfates, total dissolved solids, and boron (State of California 2006). Six total maximum daily loads (TMDLs) have been implemented in the Calleguas Creek Watershed to restore the impaired watersheds (RWQCB 2016). These TMDLs impact operational flexibility by identifying the maximum amount of pollutant that Calleguas Creek and its tributaries can receive and still meet water quality standards. Reductions in pollutant load are accomplished through both water-quality-based discharge limits for point sources and through local, state, and federal programs for non-point sources.

UWCD has prepared a Draft Multiple Species Habitat Conservation Plan as part of its application for incidental take permits under Section 10(a)(1)(B) of the Endangered Species Act (UWCD 2016). The Draft Multiple Species Habitat Conservation Plan specifies conditions under which flow diversions from the Santa Clara River would be allowed. The diverted flow at the Freeman Diversion is delivered to the PVB via the Pleasant Valley Pipeline and is provided in lieu of groundwater production in PVB. The operational flexibility provided by this project is constrained by habitat requirements for the federally endangered Southern California steelhead trout (*Oncorhynchus mykiss*) in the Santa Clara River. Climate fluctuations and future climate may also impact the quantity of water diverted from the Santa Clara River. Currently, the project permit limits access to flows. Water diversion is primarily during large storm events.

The Pleasant Valley Pipeline is subject to both demand and capacity limitations. Although there are some facilities and projects allowing for the extraction, treatment, and use of brackish groundwater (see "Groundwater Supply Policy" in Table 1-11, under Existing Groundwater Management Programs), areas of shallow and brackish groundwater in the northern PVB will be utilized by Camarillo's North Pleasant Valley Desalter. Additionally, parts of the PVB depend on imported water from the State Water Project (SWP). Such supplies have been, and may

continue to be, limited by climate, infrastructure, and increased commitment for environmental and supply purposes (see Section 1.6.2, Urban Water Management Plans).

1.5 EXISTING CONJUNCTIVE USE PROGRAMS

Due to the history of interagency collaboration on groundwater management within FCGMA jurisdiction and Pleasant Valley, multiple conjunctive-use programs are currently operational. These are identified and described in Table 1-11, as introduced in Section 1.4, Existing Monitoring and Management Plans. Some of the most important of these projects and programs are described in this section.

UWCD Freeman Diversion Project. The predecessor to the UWCD Freeman Diversion Project was constructed in 1927 as a series of earthen levees that diverted water from the Santa Clara River, which were washed out and replaced after large flows. The current project, constructed in 1991, is a significant component of water supply within the PVB and the Oxnard Subbasin, with diversions averaging more than 62,000 acre-feet per year (AFY). Since 1985, deliveries from the project, including direct and groundwater pumped from the Saticoy Wells, have averaged about 9,200 AFY. Water from the project is delivered to the PVB and the Oxnard Subbasin through the Pumping Trough Pipeline and Pleasant Valley Pipeline, which supply water for non-potable applications (see Table 2-8, Other Pleasant Valley Basin Imported Water).

The Freeman Diversion Project is one of the important water supply/management projects for the PVB and FCGMA's jurisdiction as a whole. It provides a critical source of recharge to the Basin and offsets groundwater pumping by providing an alternative supply. Of consequence to the future of groundwater sustainability within the Basin is the potential for significant limitation of Freeman Diversion Project diversions due to the Multiple Species Habitat Conservation Plan now under development (UWCD 2016).

SWP deliveries are supplied by the CMWD to various retail water agencies within the PVB, including the City of Camarillo. All of these are potable and are used to fill M&I demand (see Table 1-10). In addition, up to 5,000 AFY of the Ventura County SWP allocation may be delivered to Lake Piru and later released for percolation or diversion at the Freeman Diversion Project. Note that CMWD is a member agency of Metropolitan Water District of Southern California (MWD), which supplies water from a number of sources, including the Colorado River.

Conejo Creek Diversion Project. The Conejo Creek Diversion Project was implemented in 2002 by CWD. Recycled water discharged to Conejo Creek from the Thousand Oaks Hill Canyon WWTP, urban runoff, and natural flows are diverted from Conejo Creek near Highway 101 (Figure 2-35, Pleasant Valley Basin Stream Gauges and Water Infrastructure). This non-potable water is used in the PVB, LPVB, and ASRVB for agricultural and municipal irrigation and offsets groundwater pumping in those basins. Diversions from the project are tracked and the volume of

water diverted is reported to FCGMA. Water not used by CWD is delivered to PVCWD and water produced from this project is subject to one-to-one credits from FCGMA. Flows from the Hill Canyon WWTP have decreased in response to conservation programs and are expected to decrease further in the future, thus reducing the potential yield of the project. Diversions of surface water on Conejo Creek prior to 2002 were estimated to average 2,450 AFY from 1985 to 2002 (see Chapter 2 of the GSP). Although diversions also occurred prior to 1985, the volume of water diverted before 1985 is not known. By Resolution 2014-01, FCGMA approved the Conejo Creek Water Pumping Program involving CWD and PVCWD using the Conejo Creek Diversion.

Fox Canyon Groundwater Management Agency Programs. FCGMA has been charged with groundwater management for decades and now implements several programs that encourage efficient use of groundwater, new water sources, and brackish groundwater. Most programs apply to the entire FCGMA jurisdiction, but some management programs apply to specific areas. In addition to programs and ordinances that require reporting and fees for groundwater use, FCGMA implements a groundwater storage credit program that provides groundwater credits equal to the amount of water that was used in lieu of pumping groundwater and could have been used for groundwater recharge (spreading or injection).

FCGMA approved an ordinance to establish an allocation system for the Oxnard Subbasin and PVB on October 23, 2019. The purpose of this ordinance is to facilitate adoption and implementation of the GSP and to ensure that the Oxnard Subbasin and PVB are operated within their sustainable yields. It is not the purpose of the ordinance to determine or alter water right entitlements, including those that may be asserted pursuant to California Water Code Sections 1005.1, 1005.2, or 1005.4. A copy of this ordinance is included in Appendix A.

1.6 LAND USE ELEMENTS OR TOPIC CATEGORIES OF APPLICABLE GENERAL PLANS

SGMA requires that the GSP include a description of the consideration given to the applicable county and city general plans and the various adopted water-resources related plans and programs and an assessment of how the GSP may affect those plans (California Water Code, Section 10727.2[g]). In addition to these elements, the GSP may include processes to review land use plans and efforts to coordinate with land use planning agencies to assess activities that potentially create risks to groundwater quality or quantity (California Water Code, Section 10727.2[g]). Land use plans contain provisions that affect water use and sustainability within FCGMA jurisdiction. DWR requires that the GSP include a summary of these plans and a description of: how these plans may change water demands or affect FCGMA's ability to achieve sustainability and how the GSP addresses these potential effects, and how the GSP may affect the water supply assumptions made in these plans (DWR 2016b, Section 354.8[f]).

California state law requires that cities and counties prepare and adopt a "comprehensive long-term general plan for the physical development of the county or city…" and that "elements and parts [of the plan] comprise an integrated, internally consistent and compatible statement of policies for the adopting agency" (California Government Code, Sections 65300 and 65300.5). Among the required elements of the plan is the conservation, development, and utilization of water developed in coordination with groundwater agencies such as FCGMA (California Government Code, Section 65302[d][1]). For more than three decades, FCGMA has participated in the management of groundwater within its jurisdiction. Such management includes oversight of many aspects of groundwater production and use, as well as coordination with other entities responsible for water supply and land use issues. Because of these long-term relationships, many of the plans described in this section are consistent with the goal of sustainable groundwater management over the planning and implementation horizon.

The following sections contain a description of the land use and water management plans that are applicable to the PVB and a discussion of the consideration given to the land use plans and an assessment of how the GSP may affect those plans. The plans included were selected as the plans with the most salient information relating to sustainable management. However, this is not intended to be a comprehensive list. Other plans that include information pertinent to water management in the PVB are the MWD UWMP and the Calleguas Creek Watershed Management Plan (MWD 2016; CMWD 2004).

1.6.1 General Plans

General plans are considered applicable to the GSP if they have the potential to direct urban growth, zoning changes, or redevelopment anywhere within the PVB. General Plans applicable to the PVB are the Ventura County General Plan and the City of Camarillo General Plan.

FCGMA staff has participated on the Ventura County General Plan Update Water Element Focus Group and continues to work with Ventura County planning staff to ensure that the GSP and the General Plan Update are mutually consistent. Furthermore, the FCGMA Board includes a representative for both the County and all the incorporated cities within FCGMA's jurisdiction, ensuring representation and coordination between the GSA, the County, and the incorporated cities.

Based on the timing of the adoption of the General Plan Update and the GSP, the GSA will be subject to the following California Government Code sections pertaining specifically to the coordination of planning and SGMA-related documents:

- California Government Code, Section 65350.5 – requires that the planning agency review and consider GSPs prior to General Plan adoption.

- California Government Code, Section 65352 – requires that prior to adoption of a General Plan Update, the legislative body must refer the plan to the GSA for review.
- California Government Code, Section 65352.5 – requires that the GSA provide the current version of the GSP to planning agencies preparing to update or adopt the General Plan.

All existing general plans and future updates undergo an analysis of environmental impacts under the California Environmental Quality Act (CEQA). In addition, all discretionary projects proposed within the PVB under municipal, County, and/or state jurisdiction are required to comply with CEQA. In 2019, the Governor's Office of Planning and Research released an update to the CEQA Guidelines that included a new requirement to analyze projects for their compliance with adopted GSPs. Specifically, the applicable significance criteria include the following:

- Would the program or project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- Would the program or project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Therefore, to the extent general plans allow growth that could have an impact on groundwater supply, such projects would be evaluated for their consistency with adopted GSPs and for whether they adversely impact the sustainable management of the PVB. Under CEQA, potentially significant impacts identified must be avoided or substantially minimized unless significant impacts are unavoidable, in which case the lead agency must adopt a statement of overriding considerations.

Ventura County General Plan

Plan Description

The Ventura County General Plan (VCPD 2015) applies to the county as a whole and includes area-specific plans for distinct unincorporated areas. The County General Plan was last amended in October 2015. However, the County Planning Department is now undertaking a comprehensive update of the plan, thereby providing an immediate opportunity for coordination between FCGMA (as the GSA) and the County Planning Department, as required by SGMA.

The comprehensive update of the County General Plan is due to be completed by mid-2020 and will have a planning horizon of 20 years.

How the Plan May Affect Sustainable Water Management

Because General Plans and the associated elements define long-term policy related to community growth, development, and land use, General Plans are integral to the implementation of sustainable

water management. The County General Plan is in the process of undergoing a comprehensive update, which provides the opportunity for consistency in regard to the relevant areas of the General Plan and GSP. Areas where FCGMA will coordinate with the County include the following:

- The compatibility of County land use with the goals and requirements of SGMA and groundwater sustainability. This includes county programs and policies for the protection or re-designation of urban, agriculture, and open space for the purpose of reducing or adjusting groundwater use, recharge, or groundwater quality.
- The consistency of discretionary development as it pertains to the FCGMA basins' water resources.
- The development of thresholds by the County for development within available water supply limits as determined by the GSPs for the FCGMA basins.
- Coordinated water-related monitoring programs within the FCGMA basins.
- The inclusion of land subsidence, drought, and point-source pollution as "hazards," as identified in the County General Plan.
- The coordination of goals, policies, and programs of the Water Resources section of the General Plan, which pertain to groundwater overdraft, environmental uses of surface water, groundwater and surface water quality, and demand management and reuse. The programs of the Water Resources section specifically address the coordination of water agencies and County support of FCGMA plans.
- The coordination of capital projects or programs proposed as part of the GSP to achieve sustainability within the FCGMA basins.
- The regulatory authority of the GSA as it relates to that of the County.

How the GSP May Impact the Water Supply Assumptions of the General Plan

Sections 1.3.1 through 1.3.3 of the General Plan describe the goals, policies, and programs that apply to water resources. The goals outlined in Section 1.3.1 of the General Plan include monitoring water supply and quality, maintaining or restoring water quality and supply, balancing supply and demand, protecting aquifer recharge areas, and protecting wetlands. The GSP includes specific provisions for each of these: the monitoring of water resources (Chapter 4), the definition and maintenance of groundwater-dependent ecosystems (wetlands), definition of sustainability as it pertains to water resources (Chapter 3), and projects and management actions by which these goals will be attained (Chapter 5). The General Plan also has a resource appendix that describes in general terms the groundwater resources in Ventura County. The next time the general plan is updated, the information in the GSP will be used to provide information relevant to the groundwater resources appendix.

The General Plan policies listed in Section 1.3.2 (VCPD 2015) include provisions and requirements for discretionary development. Some of the projects and management actions of the GSP will likely constitute discretionary development and therefore require consistency with General Plan or demonstration of "overriding considerations." The GSAs within the PVB will encourage municipalities to consider the GSP in the implementation of each of their general plans and to incorporate groundwater management criteria, where applicable and relevant, from the GSP into future general plan updates. General Plan Section 1.3.3 lists specific programs that County divisions will support in the application of the General Plan. Programs (management actions) implemented by FCGMA as part of the GSP may be added to those supported by the General Plan.

The 1998 Save Open Space and Agricultural Resources (SOAR) ordinance generally requires an approval by the electorate for any General Plan Amendment changes in land use designations for agricultural, rural, or open-space-designated lands. This and similar ordinances are in effect for much of the FCGMA area, including the Cities of Camarillo, Oxnard, and Ventura and unincorporated County areas, through at least 2050 (VCPD 2015). Should implementation of the GSP result in the conversion of agricultural, rural, or open space lands to other uses, either to accommodate GSP projects or as a result of management actions that reduce water demand, a vote of the electorate would be required.

City of Camarillo General Plan

Plan Description

The City of Camarillo General Plan (Camarillo General Plan; City of Camarillo 2016a) applies to the area within the City limits, and was last updated in 2003. Development within the City of Camarillo is constrained by the Camarillo Urban Restriction Boundary, which was established by the Camarillo SOAR Ordinance in 1998 to promote urban density and conservation of open space and agricultural lands.

How the Plan May Affect Sustainable Water Management

Land use changes and development within the City of Camarillo may affect sustainable water management within the PVB. However, provisions to consult other agencies on water policy are included in the Camarillo General Plan. Specifically, coordination between the City of Camarillo and all other water agencies on issues regarding water resources and consequent policies is prescribed within the Open Space element of the General Plan. The General Plan further specifies that "City, county and state laws which specifically address watershed, groundwater sources, freshwater treatment, storage and distribution system, and wastewater collection and treatment system, as well as contamination of groundwater and landslides thereof will be strictly enforced and adhered to."

How the GSP May Impact the Water Supply Assumptions of the General Plan

The City amended its General Plan in 1998 by adopting the SOAR Ordinance. The ordinance created the Camarillo Urban Restriction Boundary and requires approval by the electorate for development projects outside of the urban limits and within the Camarillo Sphere of Influence. Similar ordinances are in effect for much of the FCGMA area, including Oxnard and unincorporated County areas, through at least 2050 (VCPD 2015). Should implementation of the GSP result in the conversion of agricultural, rural, or open space lands to other uses, either to accommodate GSP projects or as a result of management actions that reduce water demand, a vote of the electorate would be required.

It is not the role of a general plan to make water supply assumptions, but to take into consideration existing and anticipated water supply conditions in planning for growth; this includes FCGMA's water supply allocations, as incorporated into the 5-year UWMPs. General plan policies for all jurisdictions include provisions to maximize water conservation for both indoor use and outdoor irrigation/landscaping. Furthermore, the areas zoned for development are generally already built out, so growth, where it occurs, is likely to consist of redevelopment projects or small areas of new development. As all new development is subject to supply mitigation, which includes installing dual plumbing and the use of nonpotable water where feasible, any offset of or increase in the volume of water used on the land being developed or redeveloped is mitigated; land conversion and changes in land use planning are not anticipated to adversely affect implementation of the GSP. Furthermore, City and County officials make up part of the FCGMA Board, and like the SGMA process, both UWMPs and general plans are living documents subject to periodic updates and reviews.

1.6.2 Urban Water Management Plans

The Urban Water Management Planning Act of 1983 requires urban water suppliers to report on water sources, deliveries, demand, and efficiency, as well as performing water shortage contingency planning. Such plans are to be updated every 5 years (in years ending in 0 and 5) and submitted to DWR. The Urban Water Management Planning Act applies to both urban retail suppliers that provide potable municipal water to more than 3,000 end users or 3,000 AFY and to urban wholesale water suppliers that provide more than 3,000 AFY at wholesale (DWR 2016a). The applicable codes have been modified multiple times to include various provisions for water-related reporting. Within UWMPs, urban water suppliers must:

- Assess the reliability of water sources over a 20-year planning time frame.
- Describe demand management measures and water shortage contingency plans.
- Report progress toward meeting a targeted 20% reduction in per-capita (per-person) urban water consumption by the year 2020.
- Discuss the use and planned use of recycled water.

The information, collected from the submitted UWMPs, is useful for local, regional, and statewide water planning. Besides annual review of the GSP, the 5-year evaluation interval required for GSPs under SGMA works well with the equivalent review interval for UWMPs, ensuring that information on water supply, groundwater in particular, is updated appropriately. Water suppliers that operate groundwater wells within the jurisdiction of FCGMA and the other GSAs (County and CWD) in the Subbasin will update their water supply projections in accordance with the allocation of groundwater production available. Groundwater supply assumptions made by urban water suppliers in their 2015 UWMPs will be superseded by the groundwater allocation reduction management actions discussed in Chapter 5 of this GSP.

Calleguas Municipal Water District UWMP

Description/Summary of Agency and Plan

CMWD is an independent special district and a wholesale water provider, the service area of which includes significant parts of each of the basins within the FCGMA area (Figure 1-7; FCGMA et al. 2007). Within Pleasant Valley, CMWD supplies eight water purveyors: Zone Mutual Water Company (MWC), Pleasant Valley MWC, Crestview MWC, City of Camarillo, Oxnard Union High School District, Ventura County Waterworks District No. 19, CWD, and Arroyo Las Posas MWC (Figure 1-7). CMWD has been a member agency of MWD since 1960, and provides wholesale water to 19 retail water purveyors, including several of the major cities within the FCGMA boundary. CMWD supplies water mainly for M&I uses. Most of the water supplied by CMWD is SWP water purchased from MWD. Storage facilities available to CMWD include a surface water reservoir (Lake Bard) in Thousand Oaks and underground storage via the LPVB Aquifer Storage and Recovery Project (see Table 1-11).

CMWD does not operate any wastewater treatment facilities but supports the use of recycled water through the ownership and operation of recycled water pipelines and other facilities.[3] The Salinity Management Pipeline transfers salty water away from surface waters in the southwestern Ventura County region to other beneficial uses or to the Pacific Ocean (Table 1-11). CMWD actively conducts water conservation programs. Such programs include rebate/incentive programs school programs, social media campaigns, and workshops.

The UWMP, adopted June 15, 2016, has a planning horizon of 25 years. The production of the UWMP involved coordination with, and obtaining information from, numerous water suppliers and management agencies, including CWD; the Cities of Camarillo, Oxnard, Port Hueneme, and Moorpark; Ventura County Waterworks District No. 1 and No. 19; and FCGMA, MWD, and UWCD. CMWD notified the appropriate agencies and the public of the production of the UWMP, conducted a public hearing, and incorporated public comments prior to adopting the plan.

[3] CMWD's use of recycled water takes place outside the FCGMA area.

Coordination with SGMA and Other Agencies

The UWMP contains a section describing FCGMA and the programs that it implements. The SGMA legislation and GSP requirements are also described, including FCGMA's role as the GSA and in preparing the GSPs (CMWD 2017, Section 6-2).

In January of 2016, the CMWD Board of Directors adopted a strategic plan, one of the provisions of which is to, "Work with FCGMA, United Water Conservation District, agricultural pumpers, purveyors, and other groundwater interests to encourage, support, and facilitate the development and implementation of groundwater sustainability plans within the service area that increase certainty in groundwater management and promote conjunctive use operations" (CMWD 2017, p. 7-13).

How the Plan May Change Water Demands within the Basin

The UWMP incorporates and reflects water demand and sustainability issues that must be addressed under SGMA. Implementation of this GSP will require continued coordination between the many agencies and stakeholders within the PVB and periodic adjustment of assumptions regarding climate, population, land use, environmental requirements, and other factors impacting water demand. The CMWD UWMP recognizes those factors and provides for adaptation where necessary.

Such adaptation includes support of Senate Bill X7-7 goals for conservation, an extensive demand management program, participation in capital projects that provide for conjunctive use on a regional scale, and the goal of reducing imported water.

How the Plan may Affect Sustainable Groundwater Management within the Basin

For the reasons noted previously, the CMWD UWMP fosters the goals of sustainable management within the PVB. Both CMWD and MWD (which provides SWP water to CMWD) are pursuing remedies to improve the reliability of water supplies within their respective services areas. UWMP strategies to remediate reliability issues of water supplies include pursuing demand management programs and local water supply projects such as increased use of recycled and brackish groundwater. In regard to SWP supply reliability, MWD and CMWD support DWR in projects and strategies to increase reliability from the Sacramento/San Joaquin Delta. These programs include California WaterFix and California EcoRestore (CMWD 2017, p. 7-2).

In terms of projects related to water quality, the CMWD plan provides a benefit to the region by introducing imported supplies that are in many cases of better quality than those obtained locally. CMWD constructed, and plans to expand, the Salinity Management Pipeline, which will foster the development of additional water treatment and desalination projects and provide

a means to convey brine away from surface waters within the southwestern Ventura County area to other beneficial uses or to the Pacific Ocean (Table 1-11).

How the GSP May Impact the Assumptions of the UWMP

The UWMP presents strategies for preparing for SWP reliability challenges, climate variability, and emergency shortages. For planning purposes, the UWMP considers demand to be the total demand within the service area after accounting for local supplies. The GSP anticipates groundwater extraction reductions below historical average for M&I and agricultural uses without contribution from water supply projects. The UWMP assumes an increase in imported normal year demand of 5% between 2020 and 2040. Therefore, the UWMP may underestimate the demand upon which supply calculations are made. The UWMP assumes future water projects and demand management measures in water demand and reliability calculations. Those assumptions may be modified by those projects and management actions included in the GSP.

City of Camarillo UWMP

Description/Summary of Agency and Plan

The City of Camarillo lies primarily within the PVB and also overlies small parts of the LPVB and the Oxnard Subbasin. The City of Camarillo Water Division serves as a retail water agency that supplies water for urban, M&I, and agricultural uses.

Wastewater from within the City's treatment area is collected and treated at the Camarillo WWTP by the Camarillo Sanitary District. The recycled water is treated to tertiary standards and delivered for irrigation of agriculture and landscaping or discharged to Conejo Creek. The City anticipates that future delivery projects will allow for additional use of recycled water and provide opportunities for water transfers and industrial uses (City of Camarillo 2016b).

The City of Camarillo Water Division supplies potable water from two sources. Imported water is supplied to the City's water service area by CMWD, a member agency of MWD. This supply is normally SWP water but may also include some water from the Colorado River Aqueduct (limited to a maximum of approximately 30% of the City supply based on delivery capacity). The other source of potable water is groundwater extracted from the PVB. Since the year 2000, the proportion of groundwater to imported water has averaged about 40%–60%, but the proportion of these sources varies with climate, water quality, and other factors.

Groundwater quality in the City's north basin wells has worsened since approximately 1990, likely due to poor-quality recharge water from Arroyo Las Posas (City of Camarillo 2016b, p. 6-4). Therefore, the groundwater from these wells has been blended with imported water to meet water quality standards. The City started construction in Fall 2019 of a groundwater desalter that is to

treat brackish groundwater extracted from the northern part of the PVB. Because the City obtained approval in Fall 2019 for the project, the UWMP does not include the potential water supply in future supply calculations (City of Camarillo 2016b, p. 6-2).

The City of Camarillo has an inclusive demand management program consisting of prohibitions on water waste, metering of all water connections, a conservation-oriented price structure, and various education and outreach programs. The City also offers water audits to residential and business customers and a water retrofit program.

Coordination with SGMA and Other Agencies

As a PVB pumper, the City of Camarillo Water Division is subject to the FCGMA ordinances and allocation system. As such, the City has a groundwater allocation in accordance with Emergency Ordinance E (Table 1-11). The City of Camarillo will need to obtain approval for any future groundwater-related projects from FCGMA. The Camarillo UWMP includes a section on the SGMA and the coordination responsibility of FCGMA.

The final UWMP was adopted by the Camarillo City Council on October 12, 2016. Agencies that were notified and/or coordinated with in the preparation of the UWMP include CMWD, Camarillo Sanitary District, and the Ventura County Public Works Agency. A public hearing was conducted September 28, 2016.

How the Plan May Change Water Demands within the Basin

The Camarillo UWMP, as required by law, presents a plan to achieve a 20% demand reduction by the year 2020 from a stipulated baseline. This GSP presents Basin-wide allocation scenarios that may impact the groundwater supply availability under SGMA and the GSP.

How the Plan May Affect Sustainable Groundwater Management within the Basin

The City of Camarillo lies within the jurisdiction of FCGMA and is subject to the provisions of the GSP. It is not expected that the UWMP will hinder sustainable management within the PVB as long as water supplies and demand management efforts are coordinated with those of the GSP. It should be noted that the Camarillo UWMP assumes that the FCGMA allocation associated with Emergency Ordinance E will remain in effect through the planning horizon.

How the GSP May Impact the Assumptions of the UWMP

The implementation of a new allocation system in response to GSP provisions may require adjustment of the pumping scenarios discussed in the UWMP in order to not adversely impact groundwater management within the Basin. The UWMP assesses water supply reliability using the minimum historical consecutive 3-year period. The GSP determines drought periods

differently and may result in different assumptions about water supply reliability for planning purposes. In addition, water reliability calculations in the UWMP are based on the FCGMA Emergency Ordinance E Temporary Extraction Allocation, which is going to change with the adoption of an allocation plan as part of the GSP process.

Camrosa Water District UWMP

Description/Summary of Agency and Plan

CWD is an independent special district and a retail water supplier created in 1962. Its service area includes all of the ASRVB, the east part of the PVB, a small portion of the southeast LPVB, and a small portion of the Oxnard Subbasin. CWD serves water for M&I and agricultural use throughout its service area. It also extends to the east of FCGMA jurisdiction and encompasses parts of the Cities of Camarillo and Thousand Oaks. A discontinuous portion of CWD includes the California State University, Channel Islands (Figure 1-1 and Figure 1-8 [Ventura County Water Purveyors]).

CWD supplies imported water from CMWD, an MWD member agency. The majority of this water is obtained from the SWP, but a small amount has been supplied from the Colorado River as drought conditions necessitate (CWD 2015). About 60% of CWD's potable supply comes from imported water, although CWD has plans to reduce its dependence on imported water over time.

Groundwater makes up about 40% of CWD's potable supply. CWD extracts groundwater from the PVB and ASRVB within FCGMA jurisdiction, as well as from the Tierra Rejada Basin, which lies outside the jurisdiction of FCGMA. Groundwater extracted from the ASRVB is also withdrawn east of the Bailey Fault, outside of FCGMA jurisdiction. Due to water quality requirements, CWD blends groundwater with imported water.

CWD's other supply sources include recycled water from the Camrosa Water Reclamation Facility, which collects and treats wastewater from part of the City of Camarillo to a tertiary level for distribution to agriculture and other users through a dedicated recycled water distribution system; treated water from the Round Mountain Water Treatment Plant (constructed in 2014), which treats water extracted from sediments east of the Bailey Fault (Figure 2-2, Geology of the Pleasant Valley Basin); diverted surface water from the Conejo Creek Project, which includes surface runoff and wastewater discharged from the City of Thousand Oaks Hill Canyon WWTP and is used for agricultural and landscape irrigation. Water from the Conejo Creek Project that is in excess of CWD's needs is delivered to PVCWD.

The CWD UWMP was adopted by the Board of Directors on June 9, 2016, and has a planning horizon of 20 years. CWD has an active public outreach and education program, the components of which include a dedicated website, newsletter, speaker's bureau, bill inserts, demonstration

garden, and school tours of District facilities. Some of these activities are co-funded or coordinated with MWD, CMWD, and the City of Camarillo.

Coordination with SGMA and Other Agencies

CWD is an active participant in FCGMA and in the production of the GSP. The UWMP describes FCGMA and the programs that it implements. The SGMA legislation and GSP requirements are also described, including FCGMA's role as the GSA and in preparing the GSPs (CWD 2015, p. 6-2). Because only part of CWD's jurisdiction is within FCGMA, the management actions and plans of each will need to be coordinated. Currently, there is significant coordination of this kind due to intersecting interests and collaborative projects such as the Conejo Creek Diversion Project and the Camrosa Water Reclamation Facility.

The production of the CWD UWMP was coordinated with numerous water suppliers and management agencies including CMWD, the Cities of Camarillo and Thousand Oaks, California State University Channel Islands, the County of Ventura, PVCWD, and the Ventura Local Agency Formation Commission. CWD notified and solicited public input prior to the adopting the plan (CWD 2015).

How the Plan May Change Water Demands within the Basin

The CWD service area overlies FCGMA jurisdiction in the west part of the ASRVB, the southern and eastern part of the PVB, and the southern part of the LPVB (Figure 1-8). These portions are subject to the FCGMA ordinances and groundwater management activities described in Table 1-11. Future water projects discussed in the CWD UWMP include increased groundwater recharge, increased use of recycled water, and increased stormwater capture, all of which would foster the goal of sustainability and are consistent with management described in the GSP. To the extent that there is significant coordination of water issues between CWD and FCGMA and participation of CWD representatives in FCGMA planning, it is expected that the plan will not negatively impact water demand within the Basin.

How the Plan may Affect Sustainable Groundwater Management within the Basin

As described herein, the CWD UWMP fosters the goals of sustainable management within the PVB. CWD goals, policies, and projects are consistent, and coordinated, with those of FCGMA. For example, CWD has instituted a policy requiring all new development to install dual plumbing for the use of non-potable water where possible. CWD was a full participant in the preparation of the GSP. CWD's reliance on imported water supplies presents a potential obstacle to long-term sustainability if shortages in imported water are expected to be offset by additional groundwater consumption.

How the GSP May Impact the Assumptions of the UWMP

Only the northwestern portion of CWD is located within FCGMA jurisdiction and within the northeastern portion of the PVB. CWD plans to expand pumping capacity within the PVB. To the extent that it anticipates a modification of FCGMA groundwater extraction allocation, the GSP may impact the water available to CWD from the PVB.

1.6.3 Additional Plan Summaries

Calleguas Creek Watershed Management Plan

The Calleguas Creek Watershed Management Plan is designed to "facilitate comprehensive natural resource management, protection and enhancement" in the Calleguas Creek Watershed, which covers an area of approximately 341 square miles, which includes all of the PVB (CMWD 2004). Among the highest priority action recommendations in the Calleguas Creek Watershed Management Plan is removing the water quality impairment to restore beneficial uses of surface water and reclaim valuable groundwater resources (CMWD 2004).

Metropolitan Water District UWMP

MWD is a public agency that delivers water from the Colorado River and the SWP to its member agencies (MWD 2016). The member agencies of MWD include 14 cities, 11 municipal water districts, and 1 county water agency (MWD 2016). MWD supplies imported water to CMWD, and MWD does not directly pump groundwater in the Pleasant Valley Basin.

1.7 WELL PERMITTING POLICIES AND PROCEDURES

The two well permitting agencies within the PVB are FCGMA and the Ventura County Public Works Agency. The FCGMA well permit requirements pertain to the entirety of FCGMA's jurisdiction. The Ventura County ordinances do not preclude or supplant any other agency requirements.

1.7.1 FCGMA

Since its inception, FCGMA has implemented multiple ordinances and policies related to well permitting and the extraction and use of groundwater. A complete list of historical policies and ordinances is kept and updated on the FCGMA website (FCGMA 2019c). Those currently pertaining to well permits are described here.

Emergency Ordinance E, adopted April 11, 2014, in response to severe drought, declining water levels, and seawater intrusion, prohibits the issuance of permits for new groundwater wells associated with new or increased groundwater use, and changed groundwater extraction allocations for M&I and agricultural users (FCGMA 2014). In addition, the ordinance temporarily

suspends the acquisition and use of conservation credits, and thus removed the ability to use accrued credits to avoid paying extraction surcharges.

Emergency Ordinance E temporarily replaced the then-in-use allocation systems (Historical Allocation and Baseline Allocation) for M&I well operators with a Temporary Extraction Allocation that uses average annual extractions from the base period 2003 to 2012. The ordinance sets a series of allocation reductions from the base amount to take effect beginning July 1, 2014, with a 10% reduction. The ordinance requires an additional 5% reduction every 6 months through January 2016, resulting in a total of 20% reduction.

Emergency Ordinance E requires all agricultural well operators to apply for a 25% reduced Efficiency Allocation. An Efficiency Allocation is based on a well operator demonstrating that water used for agriculturally developed land is at least 80% efficient (FCGMA 2011, Resolution No. 2011-04). Emergency Ordinance E also contains provisions for the FCGMA Board to undertake additional adjustments to irrigation allowances by resolution.

Under Emergency Ordinance E, accounts that are solely associated with domestic wells operate well(s) using a 25% reduced Historical Allocation (also known as an Adjusted Historical Allocation) and/or a Baseline Allocation. A Historical Allocation is an average of annual extractions from the base period 1985 to 1989. A Baseline Allocation is associated with a parcel and based on new development after the close of the Historical Allocation base period.

Since 1983, FCGMA ordinances have required registration of wells, reporting of extractions, and payment of pumping fees. Currently, the FCGMA Ordinance Code continues these requirements. Additionally, the Ordinance Code (Chapter 2) requires that permits be obtained from FCGMA for new wells prior to construction. For wells to be installed within the FCGMA area, the applicant must subsequently obtain a permit from the Ventura County Public Works Agency. FCGMA Ordinance Code requires the installation and maintenance of flow meters, providing proof of flowmeter accuracy, and reporting of all extractions semi-annually (Table 1-11). In 2018, FCGMA adopted an ordinance that will require all wells within the Agency to be equipped with advanced metering infrastructure telemetry by October 1, 2020.

1.7.2 Ventura County

The ordinances relating to groundwater wells in Ventura County are contained in Ventura County Ordinances, Division 4, Chapter 8, Water, Article 1 – Groundwater Conservation, Sections 4811–4828 (County of Ventura 2016). These ordinances regulate the construction, maintenance, operation, modification, and destruction of groundwater wells. Ventura County requires well permits for any construction, modification, replacement, repair, or destruction of wells. Permit requirements include "information as the Agency may deem necessary in order to determine whether underground waters will be protected" (County of Ventura 2016, Chapter 8, 4813, C8).

Ventura County requires that a well permit application from FCGMA be completed and authorized prior to consideration for a Ventura County permit. Ventura County well construction or destruction activity standards are required to comply with the DWR Well Standards Bulletins Nos. 74-81 and 74-90. New water wells must be equipped with a flow meter and calibrated every 3 years; however, de minimis extractors (those producing less than 2 AFY) are exempt from this requirement. Completion logs are required for all wells and geophysical logs are required where necessary to prevent cross contamination of pumping zones.

Section 4826 pertains to the Aquifer Protection Program, the purpose of which is to require destruction or repair of wells that are causing groundwater pollution. The provision requires annual reporting of water extractions, time of operation, static water levels, and pump test data if available. Based on these data, all wells are classified in regard to location and operational condition.

Due to pervasive drought conditions, as of October 28, 2014, Section 4826.1 prohibited the construction of new wells within the unincorporated area of Ventura County except under specific circumstances. With the initiation of SGMA, the ordinance was modified to include only basins designated as high or medium priority by DWR, which includes the PVB.

1.8 NOTIFICATION AND COMMUNICATION

1.8.1 Notification and Communication Summary

Notification and communication regarding the development of the PVB GSP takes place in the following four key phases:

1. Initial Notification
2. GSP Development
3. Draft GSP Review and Comment
4. GSP Implementation

The Initial Notification was completed with the FCGMA submittal of the Notice of Intent on February 24, 2017, to the California DWR to develop a GSP for the PVB. The GSP Development phase included extensive outreach and engagement with the stakeholders, including beneficial users, as described in more detail in Section 1.8.3, Public Meetings Summary, and Section 1.8.6, Communication.

The Draft GSP Review and Comment phase will include the formal public comment period for the Draft GSP and response to comments, as discussed in Section 1.8.4, Summary of Comments and Responses. The GSP Implementation notification and communication period will begin once FCGMA submits the final GSP to DWR and will include engagement with the public and

beneficial users regarding the progress of monitoring and reporting updates on the GSP to DWR, establishment of fees, and the development and implementation of management strategies, including projects as needed.

1.8.2 Summary of Beneficial Uses and Users

Beneficial uses of groundwater from the Basin include agricultural, M&I, urban, and environmental uses. As discussed in Section 1.3.2.3, Historical, Current, and Projected Land Use, land use in Pleasant Valley includes most of the City of Camarillo and agricultural land uses. Agricultural land covers approximately 40% of the Pleasant Valley, including beans, beets, strawberries, other corps, and some nurseries and orchards. Of the groundwater produced from the older alluvium and LAS, approximately 88% is used for agriculture and the remaining 12% is used for M&I and urban use. Environmental uses of groundwater are not well characterized in PVB. Willow/mulefat riparian scrub and Arundo vegetation communities are found along the banks of Conejo Creek, and Calleguas Creek, lower Arroyo Las Posas and Conejo Creek include reaches of natural channel with riparian woodland/wetland habitat (see Section 2.3.7). These communities are likely supported by percolating surface water rather than groundwater in the PVB.

Beneficial users of groundwater and property interests potentially affected by the use of groundwater are described in the following paragraphs.

Surface Water. The primary surface water suppliers within the PVB are UWCD and CWD, which both operate conjunctive-use programs. Consultation with UWCD and CWD staff has occurred formally and informally throughout the development of the GSP, including participation in public meetings and the Technical Advisory Group (TAG). UWCD has also contributed data from their monitoring programs. There are also environmental uses of surface water, as discussed in this section under Environmental Users. Identified surface water users in the PVB have been added to the interested parties list that is sent monthly electronic newsletters and meeting notices regarding the status of the GSP.

Municipal Well Operators, Public and Private Water Purveyors: All of the purveyors in the PVB, including all municipal well operators, are supplied water by either UWCD or CMWD. Both of these wholesale water districts have been an integral part of the GSP development. Staff from both UWCD and CMWD have provided groundwater monitoring data, participated in public meetings, and regularly collaborate with FCGMA staff. CMWD is an independent special district and a wholesale water provider that supplies eight water purveyors in Pleasant Valley: Zone MWC, Pleasant Valley MWC, Crestview MWC, City of Camarillo, Oxnard Union High School District, Ventura County Waterworks District No. 19, CWD, and Arroyo Las Posas (Figure 1-8). CMWD supplies water for mainly M&I uses. UWCD serves five water purveyors within Pleasant Valley. The City of Camarillo also has direct representation on the FCGMA Board and TAG by the

representative appointed to serve on behalf of the five incorporated cities within FCGMA jurisdiction. Some of the smaller water districts and mutuals have also participated in FCGMA public meetings and provided comments throughout the development of the GSP.

Agricultural Users. Agricultural users have been identified as key stakeholders since the creation of FCGMA in 1982 and have direct representation through one of five members on the FCGMA Board. The primary crops grown in Pleasant Valley are cropland, orchards, and vineyards. Agricultural user interests are represented within Pleasant Valley by the Ventura County Agricultural Commissioner, the Ventura County Farm Bureau, individual pumpers, and groups of pumpers that have organized to advocate for their interests during the GSP development process. FCGMA maintains a database of well owners, including agricultural well owners. Email addresses within the database have been added to the list of interested parties who receive electronic newsletters regarding the status and development of the PVB GSP.

Domestic Users. The majority of domestic groundwater users in the PVB are supplied water by a city, special district, or mutual water company. FCGMA maintains a database of well owners, including domestic well owners. Email addresses within the database have been added to the list of interested parties who receive electronic newsletters regarding the status and development of the PVB GSP.

Local Land Use Planning Agencies. FCGMA staff has reached out to all local land use planning agencies with jurisdiction over Pleasant Valley, including the County of Ventura and the City of Camarillo. The County of Ventura holds one of five seats on the FCGMA Board. The FCGMA Board also has a member appointed to represent the five incorporated cities, including the City of Camarillo. As discussed in Section 1.6, Land Use Elements or Topic Categories of Applicable General Plans, FCGMA has established working relationships with the land use planning agencies. FCGMA staff has participated on the Ventura County General Plan Update Water Element Focus Group and continues to work with Ventura County planning staff to ensure that the GSP and General Plan Update are consistent.

Environmental Users. Environmental uses of groundwater are not well characterized in PVB. Calleguas Creek, lower Arroyo Las Posas and Conejo Creek include reaches of natural channel with riparian woodland/ wetland habitat, but it is unclear whether this habitat is supported by groundwater or percolating surface water (see Section 2.3.7). FCGMA has taken steps to incorporate the interests of environmental users in the development of the GSP through appointing an environmental representative on the TAG. The TAG held a special meeting focusing on potential groundwater-dependent ecosystems and accepted comments from the public on the potential impacts to surface water bodies. There are several non-governmental organizations with missions associated with environmental water uses on the list of interested parties that receives electronic newsletters regarding the status and development of the PVB GSP.

California Native American Tribes. According to the U.S. Bureau of Indian Affairs California Tribal Homelands and Trust Land Map, updated in 2011 and available from the DWR website, the entire PVB is within the Chumash Tribal/Cultural area. There are not currently any federally recognized tribes, Indian land currently or historically held in trust by the U.S. government, or smaller Reservation or Rancheria areas in the PVB. FCGMA recognizes that the Chumash culture and associated cultural resources are important in Ventura County. Several active local groups and individuals representing the interests of tribal communities in Ventura County have been added to the list of interested parties, including representatives from the Barbareno/Ventureno Band of Mission Indians (Chumash) and the Wishtoyo Chumash Foundation. FCGMA has reached out to the DWR Southern Region Office Tribal Liaison, Jennifer Wong, and added her to the list of interested parties. The San Gabriel Band of Mission Indians has also shown an interest in the groundwater sustainability planning process and has been added to the list of interested parties.

Disadvantaged Communities. The only Disadvantaged Communities shown on the DWR mapping tool (DWR 2017) within the PVB is within the City of Camarillo and is represented by the City as discussed earlier in this section.

1.8.3 Public Meetings Summary

FCGMA has been discussing the development of a GSP since March 2015. Table 1-12 lists FCGMA public meetings in which participants discussed or took action on the PVB GSP.

1.8.4 Summary of Comments and Responses

The FCGMA Board approved release of a Preliminary Draft GSP in January 2018, with a 90-day comment period. An evening public workshop was held on February 8, 2018, to present the Preliminary Draft GSP, answer questions, and solicit comments. Formal comments were accepted in writing only. The comments were submitted in person at the public workshop and electronically via email to fcgma-gsp@ventura.org. A total of 32 comment letters were received by FCGMA on all three GSPs. A summary of the comments was presented to the FCGMA Board at the May 23, 2018, meeting. In consideration of these comments, FCGMA completed an independent peer review of the numerical groundwater models, completed additional analysis for the water quality approach, and extended the timeline for completion of the GSP. Comments on the Preliminary Draft GSP and direction from the FCGMA Board after consideration of public comments have been incorporated into the Draft GSP.

Before completing the Draft GSP, additional information was made available to the public to enhance understanding of the technical information and processes used for the development of the Draft GSP. The following documents were posted on the FCGMA website, discussed in public FCGMA meetings, and sent to the list of interested parties in electronic newsletters:

- Minimum Thresholds and Measurable Objectives Data, March 2019

- Peer Review of the United Water Conservation District and Calleguas Municipal Water District Models for the Oxnard Subbasin, Pleasant Valley Basin, and Las Posas Valley Basin, March 2019
- Approach for GSP Modeling of Future Conditions in the Oxnard Subbasin, Pleasant Valley Basin and Las Posas Valley Basin, January 2019
- Minimum Thresholds and Measurable Objectives in the Las Posas Valley Basin, Oxnard Subbasin, and Pleasant Valley Basin, January 2019
- Assessing the Sustainable Yield of the Oxnard Subbasin, Pleasant Valley Basin, and Las Posas Valley Basin, January 2019

A public workshop was held on March 15, 2019, to discuss the estimated sustainable yield, minimum thresholds, and measurable objectives proposed for the Draft GSP. Comments received at the public workshop were incorporated into the Draft GSP. The Draft GSP was approved by the FCGMA Board and released for a 60-day public comment period on July 29, 2019, during which time FCGMA solicited formal comments on the Draft GSP.

Before completing this Final GSP, the public comments received on the Draft GSP were reviewed and where appropriate incorporated into this Final GSP. Public comments on the Draft GSP are included in Appendix A.

1.8.5 Summary of Initial Information on Relationships between State and Federal Regulatory Agencies

FCGMA has not entered into any formal agreements with the federal government regarding preparation or administration of this GSP or groundwater management pursuant to SGMA, Section 10720.3(c). There are no federally recognized Indian tribes within the PVB boundaries.

FCGMA recognizes the need for both formal and informal consultation with state and federal regulatory agencies throughout the implementation of the GSP. FCGMA received a formal request from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) on October 11, 2016, to be added to the list of interested parties for the development of the GSP. FCGMA has added NMFS to the list of interested parties, as well as the following state and federal regulatory agencies:

- Los Angeles Regional Water Quality Control Board
- U.S. Fish and Wildlife Service
- California Department of Fish and Wildlife
- California Department of Water Resources

1.8.6 Communication

A public outreach and engagement plan (Appendix B to this GSP) was developed for all of the GSPs that FCGMA is developing. The purpose of the plan is to create a common understanding and transparency throughout the groundwater sustainability planning process, including fulfilling the requirements of SGMA, as described in DWR 2016b, Section 354.10.d. The plan discusses the FCGMA decision-making process; identifies opportunities for public engagement and provides a discussion of how public input and response will be used; describes how FCGMA encourages the active involvement of diverse social, cultural, and economic elements of the population within the PVB; and describes the method FCGMA shall follow to inform the public about progress implementing the plan, including the status of projects and actions.

FCGMA has provided ongoing and innovative opportunities for stakeholders to engage in the GSP development process. FCGMA has provided regular updates to interested parties through monthly electronic newsletters highlighting monthly progress on the GSP development, upcoming meetings, and opportunities for engagement. Monthly updates and opportunities for public comment were provided at FCGMA Regular Board Meetings, FCGMA Special Board Meetings, and TAG Meetings. Meeting agendas and minutes, as well as video recordings of all FCGMA Board Meetings and Workshops, were made available on the FCGMA website. Additional technical information about the GSP development was made available on the FCGMA website, including the Preliminary Draft GSP, Technical Memoranda, and TAG Meeting Materials. The Preliminary Draft GSP was available online for more than 120 days, including an official 90-day public comment period. FCGMA encouraged active participation from stakeholders through four public workshops (November 15, 2016; September 20, 2017; February 8, 2019; and March 15, 2019), a survey for input on sustainability indicators, and a public call for project ideas for incorporation into the GSP.

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Table 1-1
Estimate of Project Cost and Water Supply for First 5 Years

Proposed Project	Estimated Annual Costs	Estimated Acre-Feet of Water	Estimated Cost per Acre-Foot
Temporary Land Fallowing	$4,332,772	2,410	$1,800
Total	**$4,332,772**	**2,410**	**$1,800**

Table 1-2
Groundwater Sustainability Plan Estimated Implementation Cost through 2040

Fiscal Year	Operations and Monitoring Costs	Management, Administration and Other Costs	5-Year GSP Evaluation[a]	10% Contingency	Total[b]
2020	$1,000,000	$1,455,000	$300,000	$275,500	$3,030,500
2021	$1,028,000	$1,495,740	$308,400	$283,214	$3,115,354
2022	$1,056,784	$1,537,621	$317,035	$291,144	$3,202,584
2023	$1,086,374	$1,580,674	$325,912	$299,296	$3,292,256
2024	$1,116,792	$1,624,933	$335,038	$307,676	$3,384,439
2025	$1,148,063	$1,670,431	$114,806	$293,330	$3,226,630
2026	$1,180,208	$1,717,203	$118,021	$301,543	$3,316,976
2027	$1,213,254	$1,765,285	$121,325	$309,986	$3,409,851
2028	$1,247,225	$1,814,713	$124,723	$318,666	$3,505,327
2029	$1,282,148	$1,865,525	$128,215	$327,589	$3,603,476
2030	$1,318,048	$1,917,759	$65,902	$330,171	$3,631,881
2031	$1,354,953	$1,971,457	$67,748	$339,416	$3,733,573
2032	$1,392,892	$2,026,658	$69,645	$348,919	$3,838,113
2033	$1,431,893	$2,083,404	$71,595	$358,689	$3,945,581
2034	$1,471,986	$2,141,739	$147,199	$376,092	$4,137,016
2035	$1,513,201	$2,201,708	$75,660	$379,057	$4,169,626
2036	$1,555,571	$2,263,356	$77,779	$389,671	$4,286,376
2037	$1,599,127	$2,326,730	$79,956	$400,581	$4,406,394
2038	$1,643,903	$2,391,878	$82,195	$411,798	$4,529,773
2039	$1,689,932	$2,458,851	$168,993	$431,778	$4,749,553
2040	$1,737,250	$2,527,699	$86,862	$435,181	$4,786,992
Total[b]	**$28,067,603**	**$40,838,363**	**$3,187,009**	**$7,209,297**	**$79,302,272**

Notes: GSP = Groundwater Sustainability Plan.
Costs are in 2020 dollars.

[a] The 5-year update costs include costs for the PVB, as well as the Oxnard Subbasin and LPVB, for which FCGMA is the GSA.

[b] Amounts may not sum precisely due to rounding.

Table 1-3
Groundwater Sustainability Agencies in the Pleasant Valley Basin

GSA Name	Total Area of GSA (acres)	% of GSA Area within the PVB	Acres within the PVB	% of the PVB
Fox Canyon Groundwater Management Area	117,280	12.3%	14,477	73.0%
Camrosa Water District–Pleasant Valley Basin	3,880	95.6%	3,708	18.7%
Pleasant Valley Basin Outlying Areas	1,642	100%	1,642	8.3%
		Total	**19,827 (out of 19,840)**	**100%**

Notes: GSA = Groundwater Sustainability Agency; PVB = Pleasant Valley Basin.

Table 1-4
Summary of Land Ownership in the Pleasant Valley Basin

Ownership	Jurisdiction	Description	Acres within the PVB (% of Total)
Private[a]			
Private	County of Ventura	Privately owned land under County jurisdiction, largely agriculture and open space	8,859 (44.7%)
Private	City of Camarillo		10,411 (52.5%)
		Subtotal (private land)[a]	*19,270 (97.1%)*
Public			
Special District	Pleasant Valley Recreation and Park District	Parks	222 (1.1%)
County	County of Ventura	Camarillo Oak Grove County Park and other holdings	19 (0.1%)
State	California State University	CSU Channel Islands	329 (1.7%)
		Subtotal (public land)	*570 (2.9%)*
		Total	**19,840 (100%)**

Notes: CSU = California State University; PVB = Pleasant Valley Basin.

[a] This may include small land areas that are publicly owned for utility, civic, and/or public educational uses.

Table 1-5
Pleasant Valley Stream Gauge Information

Station Number	Station Name	Record Start	Record End	Active?	Latitude	Longitude	Elevation (ft msl)	Gauge Type
800	Conejo Creek above Hwy 101	1971	2011	No	34.23653	−118.965	145	Recording Stream Gauge
800A	Conejo Creek at Ridge View Street	2009	N/A	Yes	34.20583	−118.999	105	Recording Stream Gauge

Table 1-5
Pleasant Valley Stream Gauge Information

Station Number	Station Name	Record Start	Record End	Active?	Latitude	Longitude	Elevation (ft msl)	Gauge Type
805	Calleguas Creek at California State University Channel Islands	1968	N/A	Yes	34.17903	−119.04	58	Recording Stream Gauge
806	Calleguas Creek above Hwy 101	1968	1997	No	34.22111	−119.014	160	Recording Stream Gauge
806A	Calleguas Creek at Hwy 101	1997	N/A	Yes	34.21537	−119.016	152	Peak Only (Event) Gauge

Source: VCWPD 2016b.
Note: ft msl = feet above mean sea level; N/A = not applicable, because gauge is active.

Table 1-6
Pleasant Valley Precipitation Station Information

Station Number	Station Name	Record Start	Record End	Active?	Latitude	Longitude	Elevation (ft amsl)	Station Type	Mean Annual Rainfall (in.) for Period of Record
003	Camarillo–Springville Ranch	1902	1992	No	34.204722	−119.067778	73	Standard Precipitation	13.1
194	Camarillo–Adohr	1955	1998	No	34.204722	−119.0125	130	Standard Precipitation	13.4
194A	Camarillo–Adohr (Sanitation Plant)	1998	2016	Yes	34.196769	−119.00241	110	Recording Precipitation Gauge	10.7
219	Camarillo–Hauser	1964	1972	No	34.227778	−119.026389	172	Standard Precipitation	13.3
219A	Camarillo–Hauser	1972	2013[a]	Yes	34.237126	−119.027131	192	Standard Precipitation	14.3
259	Camarillo–PVWD	1981	2016	Yes	34.213014	−119.069475	80	Recording Precipitation Gauge	13.4
152	Camarillo–Leisure Village	1984	2004	No	34.219111	−118.990917	115	Standard Precipitation	12.0
152A	Camarillo–Leisure Village CIMIS 152	2004	2016	Yes	34.219553	−118.992344	115	CIMIS Site	13.6
500	Santa Rosa Valley–Conejo (Type B)	2003	2008	No	34.236528	−118.963639	145	Non-Standard Recorder	11.4
500A	Camrosa Water District	2009	2016	Yes	34.238726	−118.967411	200	Recording Precipitation Gauge	7.1
505	Camarillo–CSUCI (Type B)	2003	2016	Yes	34.179028	−119.039528	58	Non-Standard Recorder	9.8
512	Camarillo–Upland (Type B)	2012	2015	Yes	34.239469	−119.007585	200	Non-Standard Recorder	4.1

Source: VCWPD 2016b.
Notes: CIMIS = California Irrigation Management Information System; CSUCI = California State University Channel Islands; ft amsl = feet above mean sea level; in. = inches; PVWD = Pleasant Valley Water District.
[a] Only preliminary data was available for water years 2014–2016 for Station 219A.

Table 1-7
Drought Periods in Pleasant Valley

Drought Period	Duration (years)	Cumulative Deficit
1918–1934	16	−36.3
1944–1951	7	−31.4
1958–1964	6	−26.3
1969–1977	8	−18.3
1986–1991	5	−26.2
1998–2004	6	−18.4
2011–2016	5	−34.0

Table 1-8
Past and Present Land Use within Pleasant Valley, 1990–2015

Land Use Category	1990		1993		2001		2005		2015	
	Acres	*%*	*Acres*	*%*	*Acres*	*%*	*Acres*	*%*	*Acres*	*%*
Agriculture										
Orchards and Vineyards	1,485	7%	1,432	7%	1,641	8%	1,293	7%	—	—
Cropland and Improved Pasture Land	7,930	40%	7,893	40%	7,105	36%	6,787	34%	—	—
Nurseries	37	0%	37	0%	164	1%	334	2%	—	—
Horse Ranches	0	0%	0	0%	4	0%	8	0%	—	—
Other Agriculture	73	0%	81	0%	86	0%	82	0%	—	—
Dairy And Intensive Livestock, and Associated Facilities	4	0%	4	0%	0	0%	0	0%	—	—
Total	**9,530**	**48%**	**9,448**	**48%**	**9,000**	**45%**	**8,503**	**43%**	**7,390**	**37%**
Vacant/Open Space										
Open Space	2,598	13%	2,627	13%	2,025	10%	1,941	10%	—	—
Water	57	0%	57	0%	67	0%	67	0%	—	—
Total	**2,656**	**13%**	**2,684**	**14%**	**2,092**	**11%**	**2,008**	**10%**	**1,251**	**6%**
Urban/Built-Up										
Residential	4,438	22%	4,561	23%	4,961	25%	5,384	27%	—	—
Mixed Commercial and Industrial	527	3%	402	2%	675	3%	708	4%	—	—
Commercial and Services	967	5%	989	5%	1,202	6%	1,319	7%	—	—
Industrial	608	3%	638	3%	759	4%	762	4%	—	—
Transportation, Communication, and Utilities	1,116	6%	1,120	6%	1,151	6%	1,156	6%	—	—
Total	**7,656**	**39%**	**7,709**	**39%**	**8,749**	**44%**	**9,330**	**47%**	**11,197**	**56%**

Sources: SCAG 2005 (for 1990–2005); VCPD 2015 (for 2015).
Notes: Acres and percentages are rounded to the nearest whole number. The land use data for 2015 is based on the Ventura County General Plan land use map, which has a lower geographic resolution and uses fewer land use categories than data provided by SCAG for prior years.

Table 1-9
Past, Current, and Projected Population for Ventura County, the City of Camarillo, and Pleasant Valley

Population	1990	2000	2010	2012	2015	2040
Ventura County	669,016	756,902	825,378	833,000	853,188	965,210
City of Camarillo	52,303	57,077	65,201	66,300	—	79,900
Pleasant Valley	—	—	58,205	—	—	—

Sources: SCAG 2016 (for Ventura County 1990–2040 and City of Camarillo 2010–2040); City of Camarillo 2004 (for City of Camarillo 1990 and 2000); U.S. Census Bureau 2016 (for Pleasant Valley 2010).
Note: — = not available or unknown.

Table 1-10
Pleasant Valley Basin Existing Water Resources Monitoring Programs

Program	Program Agency	Program Description	Parameter	Multi-Basin Program	Source	Link
Existing Surface Water Monitoring Programs						
Ventura County Precipitation Monitoring	VCWPD	Collection of "real-time" and historical data from a network of precipitation gauges throughout Ventura County (approximately 8 within the PVB). Data is available on the web along with some statistical reports. Gauge data is available in various time increments depending on gauge type.	Precipitation	PVB, LPVB, ASRVB, and Oxnard Subbasin	VCWPD. 2016. Ventura County Watershed Protection District, Hydrology Section Website. Accessed September 15, 2016.	http://vcwatershed.net/hydrodata/gmap.php?param=rain
CIMIS	California Department of Water Resources	CIMIS manages a network of over 145 automated weather stations in California.	Temperature, Precipitation, Evapotranspiration	PVB, LPVB	CIMIS. 2018. CIMIS Data Website. Accessed January 15, 2018.	http://www.cimis.water.ca.gov
Ventura County Stormwater Quality Monitoring Program	VCWPD, Camarillo, Moorpark, Oxnard, Port Hueneme and others	Program meets the requirements of the Ventura County Stormwater Permits. Includes water quality sampling, watershed assessments, business inspections, and pollution prevention programs.	Surface Water Quality	PVB, LPVB, ASRVB, and Oxnard Subbasin	Ventura Countywide Stormwater Quality Management Program Website, Accessed September 15, 2016.	
Ventura County Stream Gauging Program	U.S. Geological Survey, United Water Conservation District	Approximately 64 stream locations are monitored county wide. Available data includes average daily flow, event hydrographs, and peak flows.	Stream Flow	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013. UWCD Open-File Report 2014-12 (p. 31).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf
Surface Water Quality Monitoring Program	UWCD	Monitoring of surface water quality at variable intervals. Parameters monitored include general minerals, temperature, and pH. Data is used to confirm water quality is acceptable for groundwater recharge and agricultural irrigation.	Stream Flow	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013. UWCD Open-File Report 2014-12 (p. 31).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf
Surface Water Quality Monitoring Program	Ventura County Agricultural Irrigated Lands Group	Monitoring of surface water quality at variable intervals.	Surface Water Quality	PVB, LPVB, and Oxnard Subbasin	Ventura County Agricultural Irrigated Lands Group Website	http://www.farmbureauvc.com/issues/water-issues/water-quality/
Calleguas Creek Watershed TMDL Compliance Monitoring Program	Calleguas Creek Watershed (Stakeholders)	Nitrogen, OC pesticides, toxicity, metals, and salts.	Surface Water Quality	PVB, LPVB	Seventh Year Annual Monitoring Report	https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/caltrans/monitoring_results/mrr_apxg_calleguas_monit_rpt2015.pdf
Existing Groundwater Monitoring Programs						
California Aquifer Storage Elevation Statewide Groundwater Elevation Monitoring (CASGEM)	DWR Program implemented by VCWPD	DWR mandated program (SBX7-6) to track seasonal and long term groundwater elevation trends.	Groundwater Elevation	PVB, LPVB, ASRVB, and Oxnard Subbasin	DWR. 2016. "California Statewide Groundwater Elevation Monitoring (CASGEM) Program." Accessed September 15, 2016.	http://www.water.ca.gov/groundwater/casgem/

Table 1-10
Pleasant Valley Basin Existing Water Resources Monitoring Programs

Program	Program Agency	Program Description	Parameter	Multi-Basin Program	Source	Link
Ventura County Groundwater Elevation Monitoring Program	VCWPD	Quarterly measurement of approximately 200 groundwater well elevations (approximately 16 within the PVB) throughout Ventura County by District staff.	Groundwater Elevation	PVB, LPVB, ASRVB, and Oxnard Subbasin	VCWPD. 2015. 2014 Annual Report of Groundwater Conditions (p. 12).	http://pwaportal.ventura.org/WPD/docs/Groundwater-Resources/2014%20Annual%20Report-Web.pdf
Groundwater Ambient Monitoring and Assessment Program (GAMA)	State Water Resources Control Board	State Water Resources Control Board Program implemented in 2000 (modified by AB 599 in 2001) to monitor and assess groundwater basins throughout the state.	Groundwater Quality	PVB, LPVB, ASRVB, and Oxnard Subbasin	California State Water Resources Control Board. 2016. GAMA – Groundwater Ambient Monitoring and Assessment Program website. Accessed September 22, 2016.	http://www.swrcb.ca.gov/gama/
Ventura County Groundwater Quality Monitoring Program	VCWPD	Approximately 150 wells sampled throughout the County (approximately 14 in the PVB) and analyzed for general minerals and other constituents.	Groundwater Quality	PVB, LPVB, ASRVB, and Oxnard Subbasin	VCWPD. 2015. 2014 Annual Report of Groundwater Conditions (p. 12).	http://pwaportal.ventura.org/WPD/docs/Groundwater-Resources/2014%20Annual%20Report-Web.pdf
UWCD Groundwater Quality Monitoring Program	UWCD	Measurement of groundwater quality within UWCD boundaries to comply with state standards for aesthetics and safety, monitor saltwater intrusion and saline migration, and track changes to water quality. Approximately four wells are sampled in the PVB.	Groundwater Quality	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013, UWCD Open-File Report 2014-12 (p. 26).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf
FCGMA Groundwater Extraction Reporting Program (1985)	FCGMA	Since 1985, well operators are required to report their groundwater extractions twice per year using FCGMA approved forms. Requirements include periodic verification of flowmeter accuracy.	Groundwater	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007. Calendar Year 2014 Annual Report (p. 11).	http://www.fcgma.org/public-documents/reports
Basin Management Objectives Monitoring	FCGMA	The FCGMA has established a set of Basin Management Objectives that pertain to the overall health of the groundwater basins including water levels and water quality. Each year, FCGMA publishes a report tracking the progress toward meeting the objectives.	Groundwater Conditions	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. iii).	http://www.fcgma.org/component/content/article/20-public-documents/plans/95-groundwater-management-plan

Notes: ASRVB = Arroyo Santa Rosa Valley Basin; CIMIS = California Irrigation Management Information System; CMWD = Calleguas Municipal Water District; DWR = California Department of Water Resources; FCGMA = Fox Canyon Groundwater Management Agency; LPVB = Las Posas Valley Basin; OC = organochlorine; PVB = Pleasant Valley Basin; TMDL = total maximum daily load; UWCD = United Water Conservation District; VCWPD = Ventura County Water Protection District.

Table 1-11
Pleasant Valley Basin Existing Water Resources Management Projects, Programs, and Strategies

Program	Program Agency	Program Description	Parameters	Conjunctive Use Program?	Multi-Basin Program	Source	Link
Existing Surface Water Management Programs							
Camarillo Water Reclamation Plant (1955)	Camarillo Sanitary District	Located in the southeast part of the City, the Camarillo Water Reclamation Plant collects and treats wastewater to a tertiary level and provides it for agricultural use. Treated water that is not used is released to Conejo Creek.	Surface Water Reuse	Yes	PVB	City of Camarillo. 2016b. 2015 UWMP for the City of Camarillo. Final Draft. Prepared by Water Systems Consulting Inc. August 2016.	http://www.cityofcamarillo.org/docs/Camarillo%202015%20Final%20Draft%20UWMP.pdf
Camrosa Water Reclamation Facility (1997)	CWD	Reclaimed water from within CWD is tertiary treated and distributed for use in agriculture and public landscaping.	Surface Water	No	PVB and LPVB	Camrosa Water District. 2015. 2015 UWMP.	https://www.camrosa.com/documents/2015UWMP/CWD2015_UWMP_DRAFT.pdf
Pleasant Valley Delivery System	UWCD	Water diverted from Santa Clara River is provided to PVCWD via a pipeline that terminates at the Pleasant Valley Reservoir. This water is supplied to agricultural users and offsets the need for groundwater pumping.		Yes	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013. UWCD Open-File Report 2014-12 (p. 8).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf
Conejo Creek Diversion (2000)	CWD, City of TO, PVCWD	Natural flow and recycled water from upstream treatment plants are diverted from Conejo Creek and replaces pumping in the PVB. Water used for agricultural irrigation and landscaping.	Surface Water	Yes	PVB, LPVB, and ASRVB	CWD. 2015. 2015 UWMP (p. 3-4). FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. 17).	https://www.camrosa.com/documents/2015UWMP/CWD2015_UWMP_DRAFT.pdf http://www.fcgma.org/component/content/article/20-public-documents/plans/95-groundwater-management-plan
Round Mountain Water Treatment Plant	Camrosa Water District	Brackish water is produced east of Bailey Fault, treated in the brackish water desalination facility, and provided to the Cal State University Channel Islands.	Groundwater	No	PVB, Oxnard Subbasin, and ASRVB	CWD. 2015. 2015 UWMP (p. 20).	https://www.camrosa.com/documents/2015UWMP/CWD2015_UWMP_DRAFT.pdf
SWP Importation	DWR, Ventura County, UWCD	Purchase of up to 5,000 AFY of Ventura County's 20,000 AFY SWP allocation for release and percolation from Lake Piru, the Freeman Diversion, and surface deliveries to Pleasant Valley through the Pumping Trough Pipeline. The water reaching the Freeman Diversion is considered a "foreign water supply" and credited to UWCD.	Supplemental Water	Yes	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013. UWCD Open-File Report 2014-12 (p. 36). FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. 50).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf
Importation of Metropolitan Water District water	CMWD	Import and deliver water from wholesaler Metropolitan Water District. Water purchased by water retailers such as the City of Camarillo to supplement water supply instead of pumping groundwater.	Supplemental Water	Yes	PVB, LPVB, and Oxnard Subbasin	CMWD. 2015. UWMP – Final, p. 1-1, 4-1, 4-2 (Figure 4-1), 6-1, 6-13.	http://www.mwdh2o.com/Who%20We%20Are%20%20Fact%20Sheets/Member%20Agency%20Map.pdf http://www.mwdh2o.com/WhoWeAre/Member-Agencies/Pages/default.aspx http://www.mwdh2o.com/WhoWeAre/History/Pages/default.aspx http://www.calleguas.com/images/docs-documents-reports/cmwdfinal2015uwmp.pdf
Salt TMDL	Los Angeles Regional Water Quality Control Board	Salt TMDL developed for the Calleguas Creek Watershed.	Surface Water Quality	No	PVB and LPVB	LPUG. 2012. Final Draft V.1 (8/17/2012) Las Posas Basin-Specific Groundwater Management Plan (p. 12).	http://www.calleguas.com/images/docs-water-resources-and-quality/drafts-for-discussion/LP_BSGMP_Final_Draft_V1_081712_Text_Tables.pdf
Existing Groundwater Management Programs							
FCGMA Groundwater In-Lieu Credit Program	FCGMA	This is a program by which credits are issued to the deliverer in equal amounts to the amount of delivered "newly available"/imported water from outside the County, recycled water, or diverted surface water that would otherwise be wasted to the ocean. Delivered water to be used in lieu of pumping.	Groundwater	Yes	PVB, LPVB, and ASRVB	FCGMA. 2015. Calendar Year 2014 Annual Report (p. 23).	http://www.fcgma.org/public-documents/reports

Table 1-11
Pleasant Valley Basin Existing Water Resources Management Projects, Programs, and Strategies

Program	Program Agency	Program Description	Parameters	Conjunctive Use Program?	Multi-Basin Program	Source	Link
Salinity Management Pipeline	CMWD	A brine disposal pipeline that collects brine generated by desalting facilities in the LPVB, PVB, and Oxnard Subbasin and conveys it to an ocean outfall for disposal. Future construction of the pipeline is expected to serve additional facilities, including those in the PVB, LPVB, and ASRVB.	Groundwater	Yes	Oxnard Subbasin, PVB, LPVB, and ASRVB	CMWD. 2015. UWMP – Final, p. 6-1.	http://www.calleguas.com/images/docs-documents-reports/cmwdfinal2015uwmp.pdf
Groundwater Supply Policy (Formerly Brackish Groundwater Policy)	FCGMA	The FCGMA Board of Directors, adopted Resolution No. 2016-05, a policy for evaluating and authorizing proposals for groundwater supply projects. It allows for consideration of development of brackish groundwater for supply projects subject to monitoring requirements and other constraints and restrictions including compliance with SGMA.	Groundwater	Yes	PVB, LPVB, and ASRVB	FCGMA. Draft Brackish Groundwater Project Pumping Policy.	http://www.fcgma.org/images/phocadownload/groundwater%20supply%20project%20policy%20.pdf http://www.fcgma.org/component/content/article/8-main/1-home
FCGMA Irrigation Allocation Program	FCGMA	Requirement for agricultural irrigation efficiency as compared to FCGMA calculations for required irrigation for specific crop types with consideration of weather conditions.	Groundwater Extractions	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA. 2015. Calendar Year 2014 Annual Report (p. 10).	http://www.fcgma.org/public-documents/reports
FCGMA M&I Allocation Program	FCGMA	The current M&I allocation program, also known as a TEA, was implemented with the passage of Ordinance E in 2014. It was implemented for M&I users, replacing HA and BA.	Groundwater	Yes	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA. 2015. Calendar Year 2014 Annual Report (p. 10).	http://www.fcgma.org/public-documents/reports
FCGMA Groundwater Extraction Reporting Program	FCGMA	Well operators are required to report their groundwater extractions twice per year using FCGMA approved forms or entered "online" at https://www.fcgmaonline.org	Groundwater	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA. 2015. Calendar Year 2014 Annual Report (p. 11).	http://www.fcgma.org/public-documents/reports
Extraction Fee Program	FCGMA	Groundwater extractors are assessed fees per AF of extraction. Fees have been used by the FCGMA to finance its management activities since its enabling legislation in 1983.	Groundwater	No	PVB, LPVB, and ASRVB	Assembly Bill no. 2995, Article 9.	http://www.fcgma.org/fcgma.old/publicdocuments/ordinances/ordinanceAB-2995.pdf
Extraction Surcharge Program	FCGMA	Surcharges are imposed on well operators for groundwater extractions in excess of annual allocation amounts.	Groundwater	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. 45).	http://www.fcgma.org/component/content/article/20-public-documents/plans/95-groundwater-management-plan
Groundwater Extraction Limitation Program	FCGMA	FCGMA has implemented a program of reduced allocations.	Groundwater	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. 45).	http://www.fcgma.org/component/content/article/20-public-documents/plans/95-groundwater-management-plan
Other Programs							
Integrated Regional Water Management Program	Watersheds Coalition of Ventura County	Initiated with Proposition 50 in 2006, the program provides competitive grant funds for projects and studies in accordance with a comprehensive Integrated Regional Water Management Plan.	Groundwater, Surface Water	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	Ventura County Watersheds Coalition. 2016. Watersheds Coalition of Ventura County. Accessed September 15, 2016.	http://www.ventura.org/wcvc/IRWMP/2014IRWMP.htm
FCGMA Irrigation Allocation Program	FCGMA	The current form of this program was implemented with the passage of Emergency Ordinance E in 2014. One or more allocation methods (HA, BA, and TEA) was implemented for agricultural, M&I, and domestic users.	Groundwater, Surface Water	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA. 2015. Calendar Year 2014 Annual Report. Prepared by FCGMA staff (p. 10).	http://www.fcgma.org/public-documents/reports
The Freeman Diversion (1991)	UWCD	Diversion of Santa Clara River flood flows to Saticoy, El Rio, and Noble Basins for groundwater recharge and surface deliveries through the PTP and PVP. The Freeman Diversion allows for surface water supply in place of groundwater pumping, thus reducing the risk of seawater intrusion.		Yes	PVB and Oxnard Subbasin	UWCD. 2014. Groundwater and Surface Water Conditions Report – 2013. UWCD Open-File Report 2014-12 (p. 39).	http://www.unitedwater.org/images/stories/reports/GW-Conditions-Reports/2013%20GW%20and%20SW%20Conditions%20Report%20(UWCD%202014)%20FINAL.pdf

Table 1-11
Pleasant Valley Basin Existing Water Resources Management Projects, Programs, and Strategies

Program	Program Agency	Program Description	Parameters	Conjunctive Use Program?	Multi-Basin Program	Source	Link
FCGMA extraction reporting requirements	FCGMA	Since 1985, FCGMA has collected extraction records from well operators on a semi-annual basis. Requirements include periodic calibration of meters.	Groundwater	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	FCGMA, UWCD, CMWD. 2007.2007 Update to the Fox Canyon Groundwater Management Agency Management Plan. May 2007 (p. 50).	http://www.fcgma.org/component/content/article/20-public-documents/plans/95-groundwater-management-plan
Water Conservation Programs	Ventura County, Cities, and Water Districts	There are numerous conservation programs conducted by cities, Ventura County, and other entities within FCGMA jurisdiction that provide education, incentives, and regulations to encourage water savings from both the M&I and agricultural sectors. The exact configuration of these programs change with climate and local and state requirements. Within the PVB, the City of Camarillo has a comprehensive plan for Demand Management measures listed in the Draft 2015 UWMP.	Surface Water, Groundwater	No	PVB, LPVB, ASRVB, and Oxnard Subbasin	City of Camarillo. 2016b. 2015 UWMP for the City of Camarillo. Final. Prepared by Water Systems Consulting Inc. August 2016.	http://www.cityofcamarillo.org/docs/Camarillo%202015%20Final%20Draft%20UWMP.pdf

Notes: AF = acre-foot; AFY = acre-feet per year; AHA = Adjusted Historical Allocation; ASR = Aquifer Storage and Recovery; ASRVB = Arroyo Santa Rosa Valley Basin; BA = Baseline Allocation; City of TO = City of Thousand Oaks; CMWD = Calleguas Municipal Water District; CWD = Camrosa Water District; DWR = California Department of Water Resources; ELPMA = East Las Posas Management Area; HA = Historical Allocation; LPVB = Las Posas Valley Basin; M&I = municipal and industrial; PTP = Pumping Trough Pipeline; PVB = Pleasant Valley Basin; PVP = Pleasant Valley Pipeline; PVCWD = Pleasant Valley County Water District; SGMA = Sustainable Groundwater Management Act; SWP = State Water Project; TEA = Temporary Extraction Allocation; TMDL = Total Maximum Daily Load; UWCD = United Water Conservation District; UWMP = Urban Water Management Plan.

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Table 1-12
FCGMA Public Meetings on Pleasant Valley Basin GSP

Meeting	Date
FCGMA Special Board Meeting	November 8, 2019
TAG Meeting	October 31, 2019
FCGMA Regular Board Meeting	August 28, 2019
GSP Work Shops	August 21,22, 2019
TAG Meeting	August 1, 2019
FCGMA Regular Board Meeting	July 24, 2019
FCGMA Regular Board Meeting	June 26, 2019
FCGMA Special Board Meeting	May 22, 2019
TAG Meeting	May 5, 2019
FCGMA Regular Board Meeting	April 24, 2019
FCGMA GSP Public Workshop No. 4	March 15, 2019
FCGMA Special Board Meeting	March 15, 2019
FCGMA Regular Board Meeting	February 27, 2019
Special TAG Meeting	February 19, 2019
FCGMA Special Board Meeting	February 8, 2019
Special TAG Meeting	February 6, 2019
FCGMA Regular Board Meeting	January 23, 2019
Special TAG Meeting	January 17, 2019
TAG Meeting	December 6, 2018
FCGMA Regular Board Meeting	December 5, 2018
FCGMA Special Board Meeting	November 20, 2018
TAG Meeting	November 1, 2018
FCGMA Regular Board Meeting	October 24, 2018
FCGMA Special Board Meeting	October 12, 2018
TAG Meeting	October 4, 2018
FCGMA Regular Board Meeting	September 26, 2018
FCGMA Special Board Meeting	September 14,2018
TAG Meeting	September 6, 2018
FCGMA Special Board Meeting	August 29, 2018
FCGMA Special Board Meeting Oxnard and Pleasant Valley Pumping Allocation Workshop	July 25, 2018
FCGMA Regular Board Meeting	July 25, 2018
TAG Meeting	July 5, 2018
FCGMA Special Board Meeting	June 20, 2018
Special TAG Meeting	June 19, 2018
TAG Meeting	June 14, 2018
FCGMA Regular Board Meeting	May 23, 2018
TAG Meeting	May 3, 2018
FCGMA Regular Board Meeting	April 25, 2018
TAG Meeting	April 5, 2018
FCGMA Regular Board Meeting	March 28, 2018

Table 1-12
FCGMA Public Meetings on Pleasant Valley Basin GSP

Meeting	Date
FCGMA Special Board Meeting	March 9, 2018
TAG Meeting	March 1, 2018
FCGMA Regular Board Meeting	February 28,2018
FCGMA Special Board Meeting	February 26, 2018
FCGMA GSP Public Workshop No. 3	February 8, 2018
TAG Meeting	February 1, 2018
Special TAG Meeting	January 30, 2018
FCGMA Regular Board Meeting	January 24, 2018
TAG Meeting	January 4, 2018
FCGMA Special Board Meeting	January 3, 2018
Special TAG Meeting	December 14, 2018
FCGMA Special Board Meeting	November 13, 2017
TAG Meeting	November 2, 2017
TAG Meeting	October 6, 2017
FCGMA Special Board Meeting	October 13, 2017
FCGMA Regular Board Meeting	October 25, 2017
FCGMA Regular Board Meeting	September 27, 2017
FCGMA GSP Public Stakeholder Workshop No. 2A – Oxnard and Pleasant Valley	September 20, 2017
FCGMA Operations Committee Meeting	September 14, 2017
TAG Meeting	September 7, 2017
FCGMA Special Board Meeting	August 11, 2017
FCGMA Operations Committee Meeting	August 10, 2017
TAG Meeting	August 3, 2017
Special TAG Meeting – Sustainability Objective Concepts	July 27, 2017
FCGMA Regular Board Meeting	July 26, 2017
FCGMA Fiscal Committee Budget Workshop	July 25, 2017
Water Market Pilot Program Ad Hoc Committee Meeting	July 24, 2017
FCGMA Board Executive Committee Meeting	July 12, 2017
TAG Meeting	July 6, 2017
Special TAG Meeting – Groundwater-Dependent Ecosystems	June 29, 2017
FCGMA Regular Board Meeting	June 28, 2017
FCGMA Board Executive Committee Meeting	June 15, 2017
TAG Meeting	June 1, 2017
FCGMA Regular Board Meeting	May 24, 2017
TAG Meeting	May 4, 2017
Special TAG Meeting – Groundwater Models	April 27, 2017
FCGMA Regular Board Meeting	April 26, 2017
Special TAG Meeting	March 24, 2017
Special TAG Meeting – Groundwater Models	March 24, 2017
FCGMA Regular Board Meeting	March 22, 2017

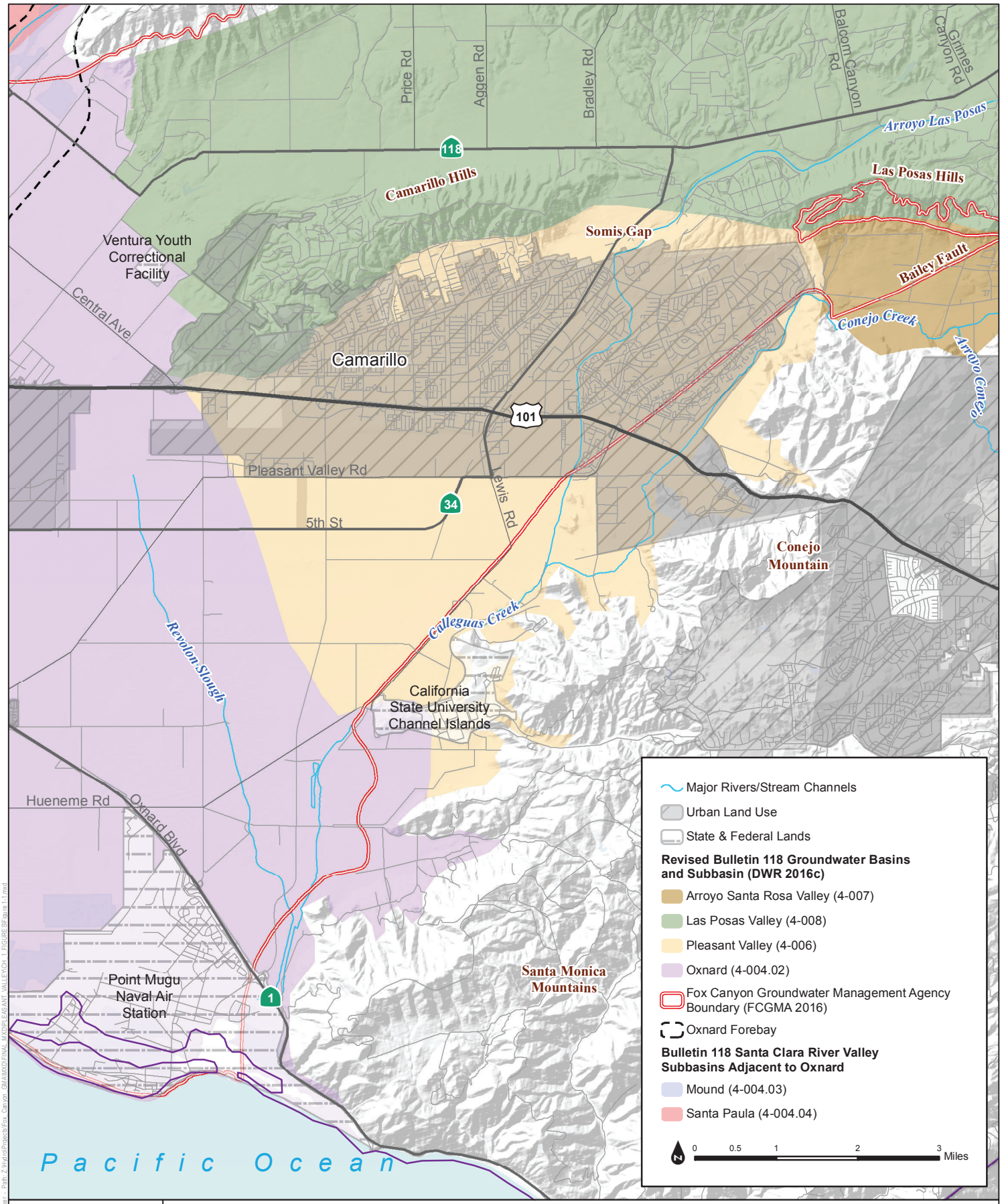
Table 1-12
FCGMA Public Meetings on Pleasant Valley Basin GSP

Meeting	Date
TAG Meeting	March 3, 2017
FCGMA Regular Board Meeting	February 22, 2017
TAG Meeting	February 2, 2017
FCGMA Regular Board Meeting	January 25, 2017
TAG Meeting	December 16, 2016
FCGMA Regular Board Meeting	December 9, 2016
TAG Meeting	November 18, 2016
FCGMA GSP Public Workshop No. 1	November 15, 2016
FCGMA Regular Board Meeting	October 26, 2016
TAG Meeting	October 7, 2016
FCGMA Executive Committee	October 3, 2016
FCGMA Regular Board Meeting	September 28, 2016
TAG Meeting	August 26, 2016
TAG Meeting	July 29, 2016
FCGMA Regular Board Meeting	July 20, 2016
FCGMA Regular Board Meeting	June 22, 2016
TAG Meeting	May 27, 2016
FCGMA Regular Board Meeting	May 25, 2016
FCGMA Special Board Meeting	May 13, 2016
TAG Meeting	April 29, 2016
FCGMA Regular Board Meeting	April 27, 2017
TAG Meeting	March 25, 2016
FCGMA Regular Board Meeting	March 23, 2016
FCGMA Special Board Meeting	March 11, 2016
TAG Meeting	February 26, 2016
TAG Meeting	January 29, 2016
FCGMA Regular Board Meeting	January 27, 2016
TAG Meeting	December 18, 2015
FCGMA Regular Board Meeting	December 11, 2015
TAG Meeting	November 20, 2015
FCGMA Special Board Meeting	November 13, 2015
TAG Meeting	October 30, 2015
FCGMA Regular Board Meeting	October 28, 2015
TAG Meeting	September 25, 2015
FCGMA Regular Board Meeting	September 23, 2015
TAG Meeting	August 28, 2015
FCGMA Special Board Meeting	August 13, 2015
TAG Meeting	July 30, 2015
FCGMA Regular Board Meeting	July 22, 2015
FCGMA Regular Board Meeting	June 24, 2015

Table 1-12
FCGMA Public Meetings on Pleasant Valley Basin GSP

Meeting	Date
FCGMA Regular Board Meeting	May 27, 2015
FCGMA Regular Board Meeting	April 22, 2015
FCGMA Regular Board Meeting	March 25, 2015

Notes: FCGMA = Fox Canyon Groundwater Management Agency; GSP = Groundwater Sustainability Plan; TAG = Technical Advisory Group.



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SOURCE: DWR; Ventura County; FCGMA

FIGURE 1-1

Vicinity Map for the Pleasant Valley Basin

Groundwater Sustainability Plan for the Pleasant Valley Basin

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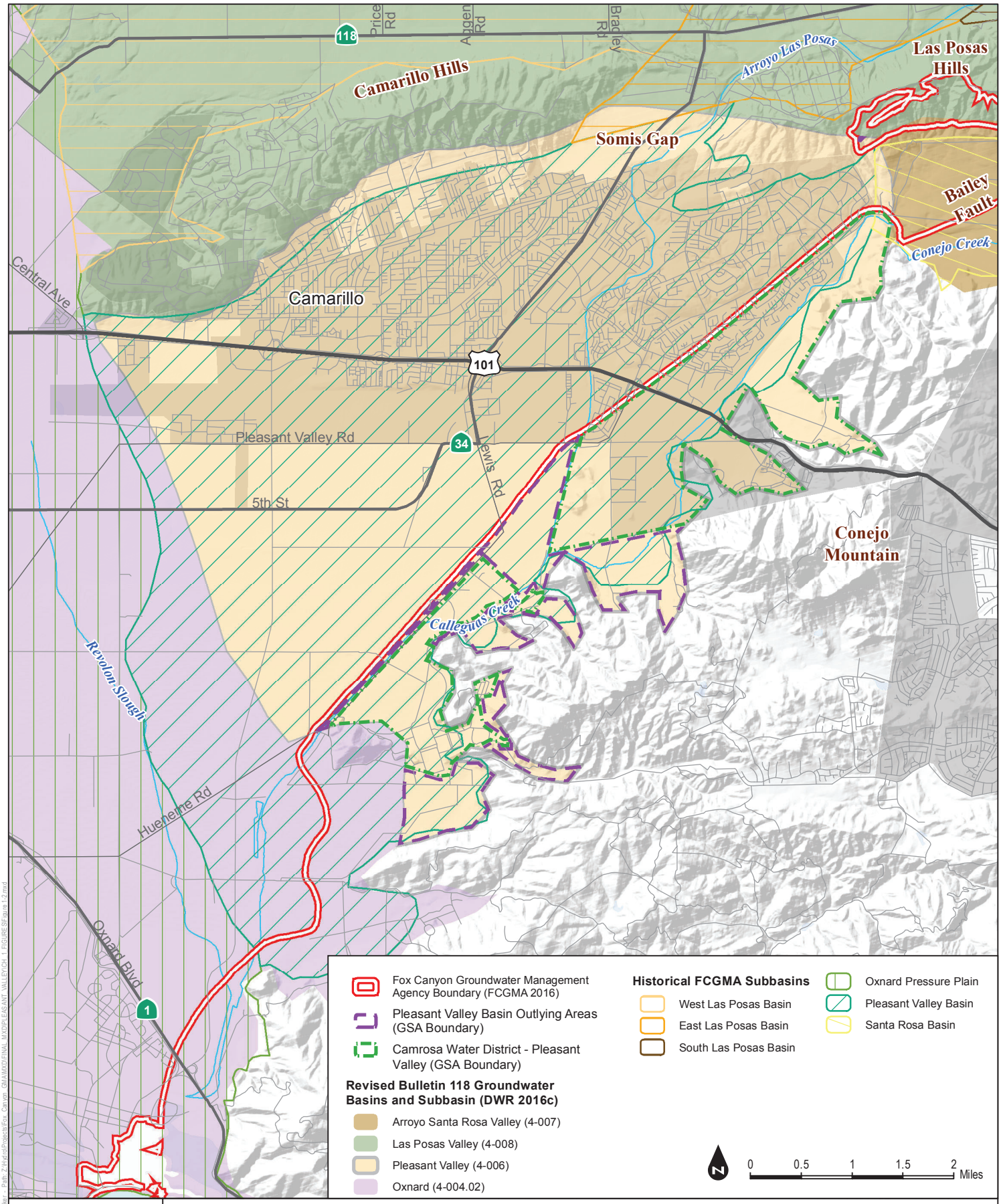

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SOURCE: DWR; Santa Barbara County; FCGMA

FIGURE 1-2

Administrative Boundaries for the Pleasant Valley Basin

Groundwater Sustainability Plan for the Pleasant Valley Basin

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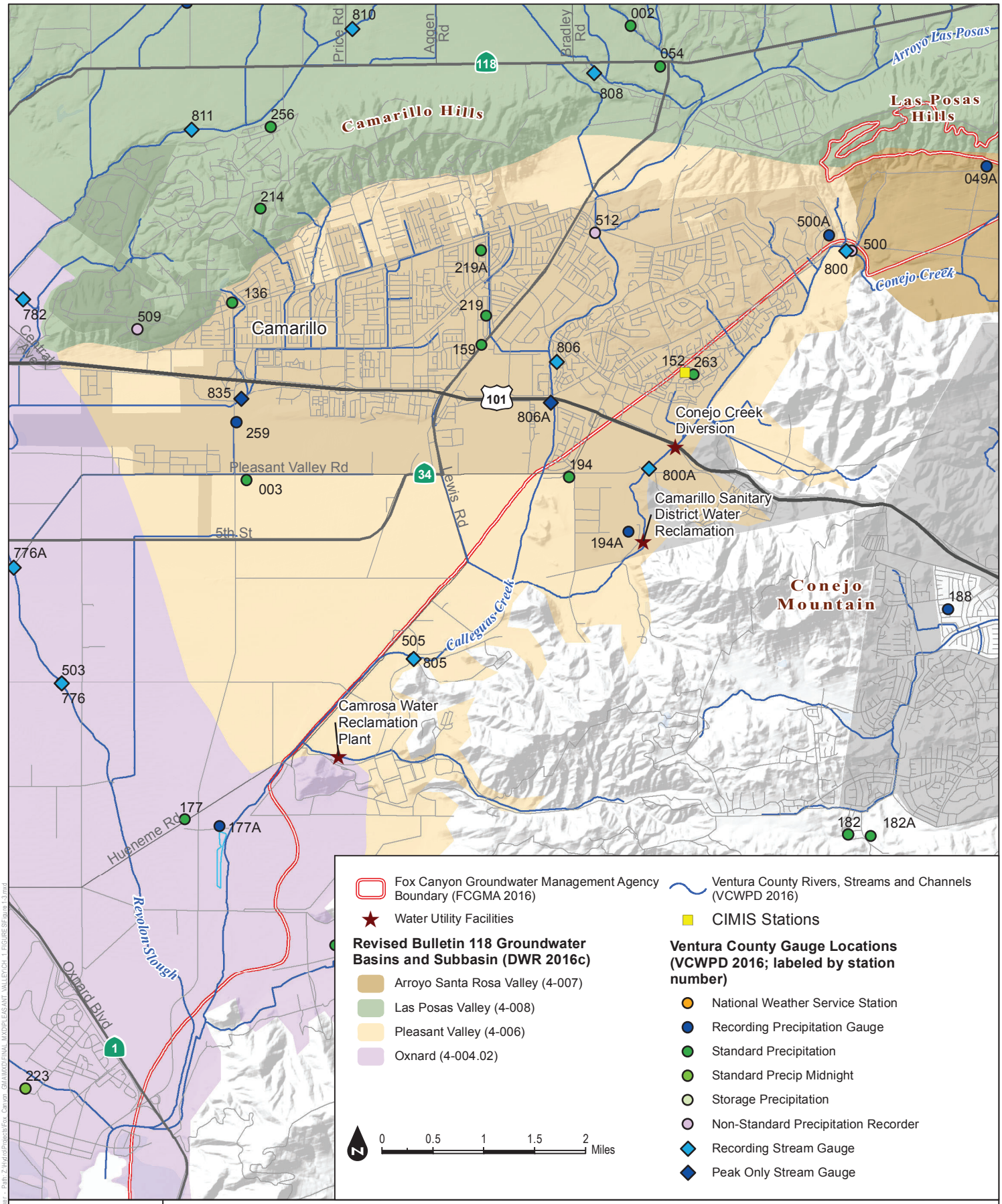

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SOURCE: DWR; Santa Barbara County; VCWPD

FIGURE 1-3

Pleasant Valley Basin Weather Station and Stream Gauge Locations

Groundwater Sustainability Plan for the Pleasant Valley Basin

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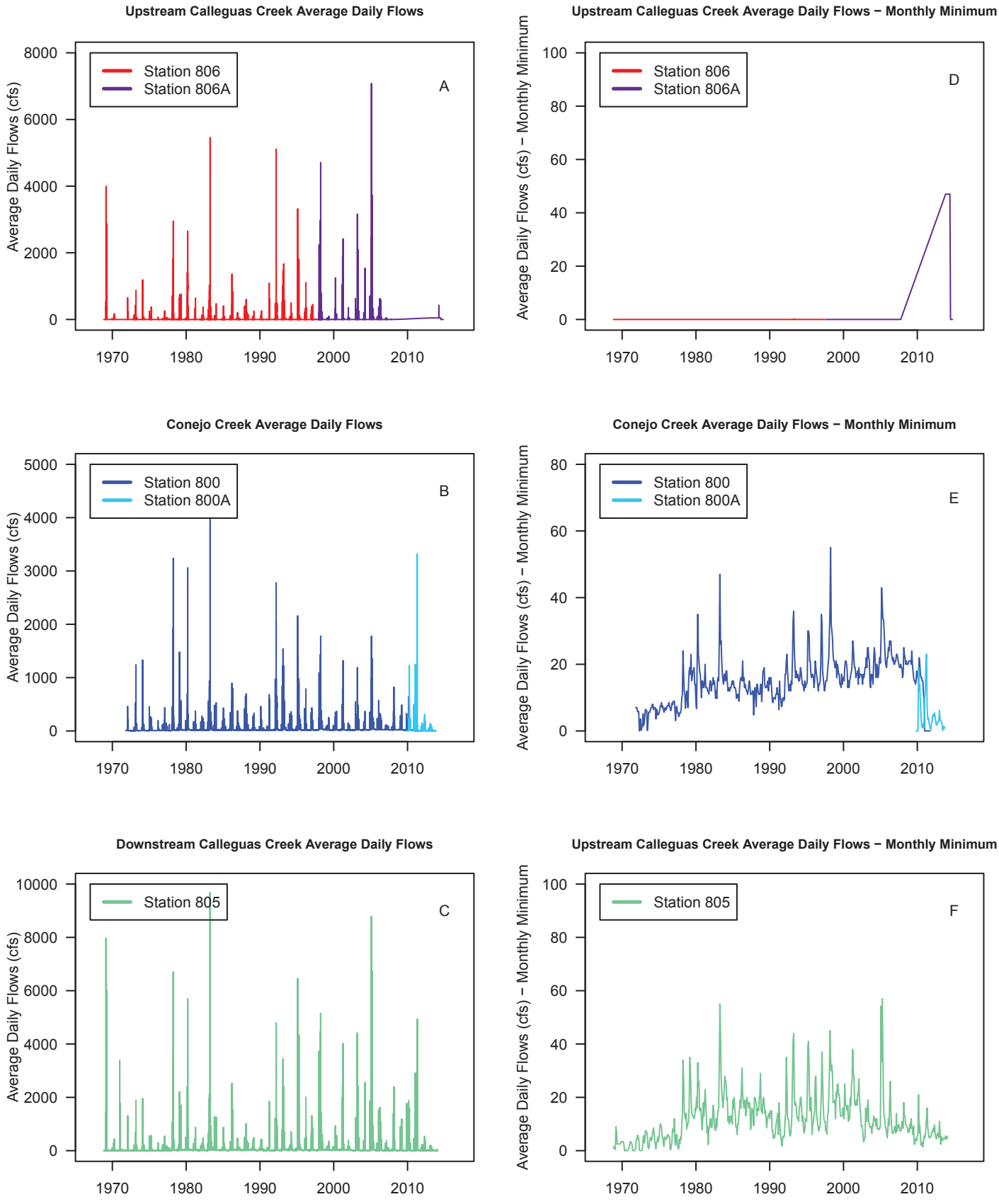

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SOURCE: Ventura County Watershed Protection District

FIGURE 1-4

Average Daily Flows (ADF) and Monthly Minimum ADF in Pleasant Valley Surface Waters

Groundwater Sustainability Plan for the Pleasant Valley Basin

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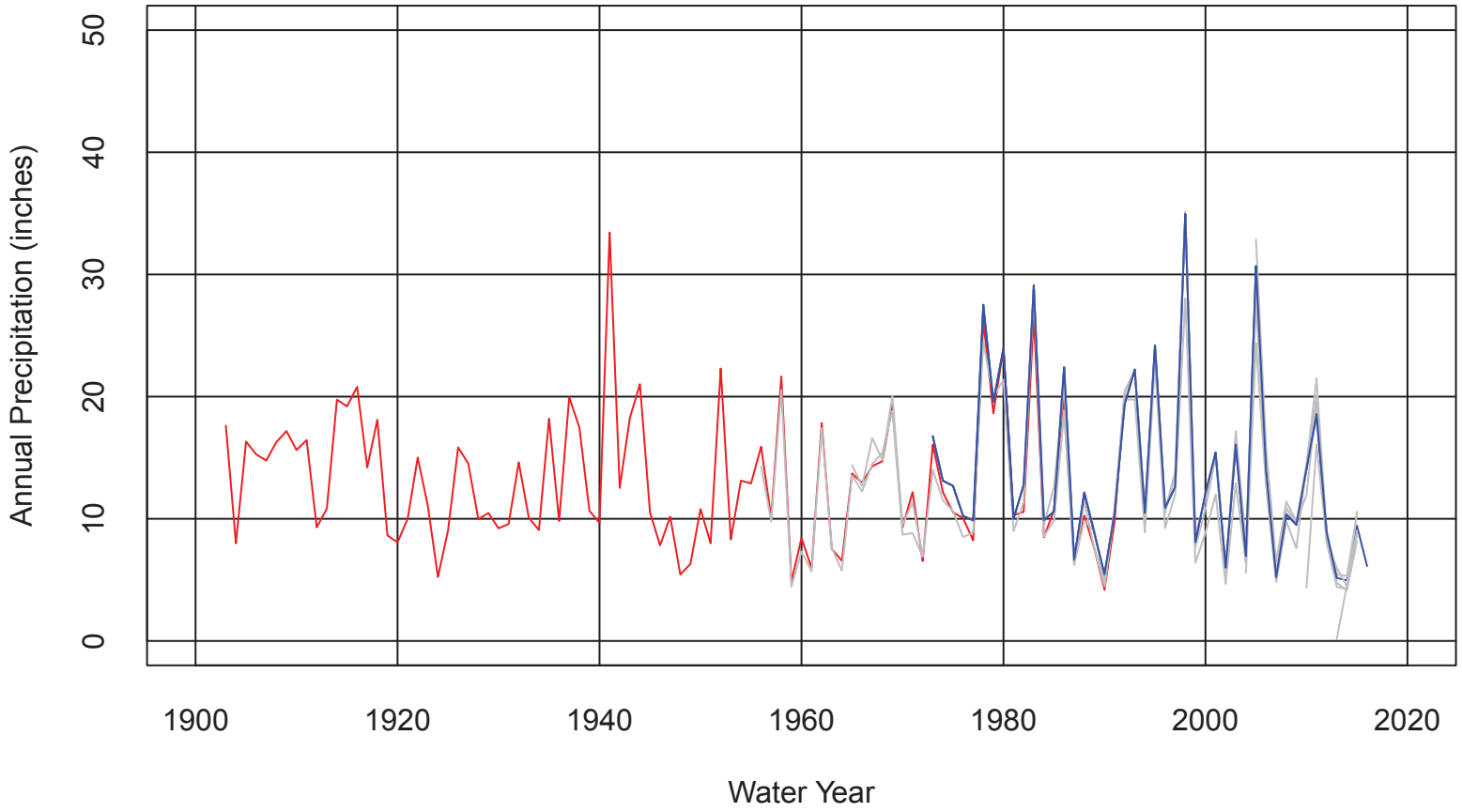
Pleasant Valley Annual Precipitation



Note: Annual precipitation values recorded at rain gauges within Pleasant Valley are shown. The majority of the precipitation records are depicted as gray lines. The two gauges used to create a long-term precipitation record, Stations 3 (Camarillo-Springville Ranch) and 219A (Camarillo-Hauser), are displayed in red and blue, respectively.

SOURCE: Ventura County Watershed Protection District

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FIGURE 1-5
Pleasant Valley Annual Precipitation

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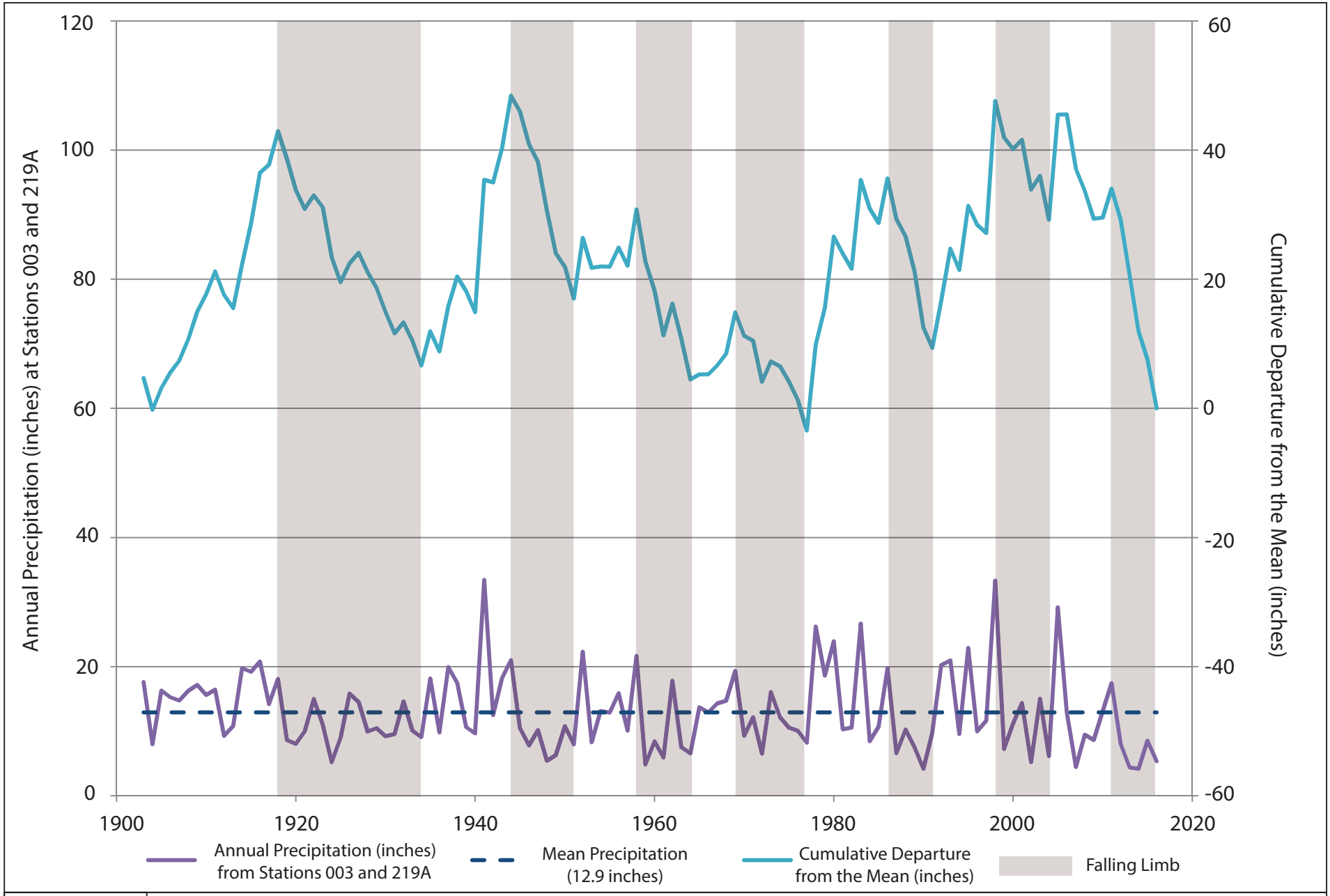

SOURCE: Ventura County Watershed Protection District

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FIGURE 1-6

Long-Term Precipitation Trends in Pleasant Valley

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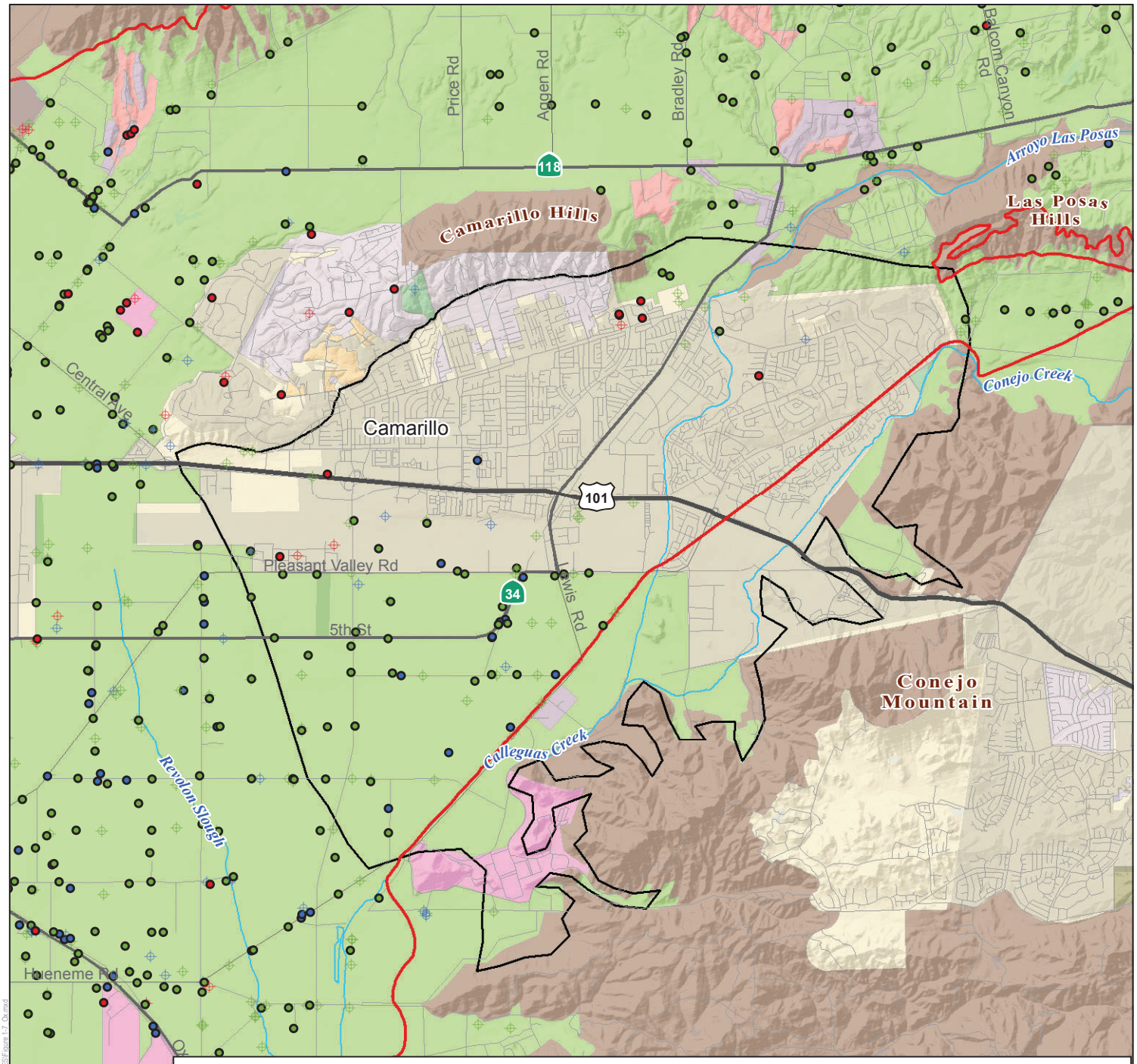

SOURCE: DWR; Ventura County; FCGMA

FIGURE 1-7

Land And Water Use

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Groundwater Sustainability Plan for the Pleasant Valley Basin

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Ventura County Water Purveyors

CALLEGUAS WHOLESALE DISTRICT	
SUPPLIER	WATER COMPANY
Calleguas (CAL-001)	ACADEMY MWC
Calleguas (CAL-002)	ARROYO LAS POSAS MWC
Calleguas (CAL-003)	BALCOLM BYBY MWA
Calleguas (CAL-004)	BERYLWOOD HEIGHTS MWC
Calleguas (CAL-006)	BRANDEIS-BARDIN MWC
Calleguas (CAL-006)	CONEJO TRAILER PARK
Calleguas (CAL-007)	CALIFORNIA WATER SERVICE COMPANY
Calleguas (CAL-008)	CALIFORNIA-AMERICAN WATER COMPANY
Calleguas (CAL-009)	CALLEGUAS MWD
Calleguas (CAL-011)	CAMROSA WATER DISTRICT
Calleguas (CAL-012)	CITY OF CAMARILLO
Calleguas (CAL-013)	CITY OF OXNARD
Calleguas (CAL-014)	CITY OF THOUSAND OAKS
Calleguas (CAL-015)	CRESTVIEW MWC
Calleguas (CAL-016)	DEL NORTE MWC
Calleguas (CAL-017)	EPWORTH MWC
Calleguas (CAL-018)	FOSFIELD RIDING CLUB
Calleguas (CAL-020)	FULLER FALLS MWC
Calleguas (CAL-022)	SUNSHINE RANCH
Calleguas (CAL-023)	LA LOMA RANCH MWC
Calleguas (CAL-024)	LAKE SHERWOOD CSD
Calleguas (CAL-025)	LAS LOMAS WATER SYSTEM
Calleguas (CAL-026)	MESA WATER COMPANY
Calleguas (CAL-027)	OAK PARK WATER SERVICE
Calleguas (CAL-028)	OXNARD UNION HIGH SCHOOL DISTRICT
Calleguas (CAL-029)	PLEASANT VALLEY MWC
Calleguas (CAL-030)	RANCHO CANADA WATER COMPANY
Calleguas (CAL-031)	TOM GRETHER FARMS, Inc
Calleguas (CAL-032)	GOLDEN STATE WATER CO - Simi Valley
Calleguas (CAL-036)	THERMIC MWC
Calleguas (CAL-038)	VENTURA COUNTY WATERWORKS DISTRICT NO. 1
Calleguas (CAL-039)	VENTURA COUNTY WATERWORKS DISTRICT NO. 8
Calleguas (CAL-040)	VENTURA COUNTY WATERWORKS DISTRICT NO 17
Calleguas (CAL-041)	VENTURA COUNTY WATERWORKS DISTRICT NO 19
Calleguas (CAL-042)	WATERS ROAD USERS GROUP
Calleguas (CAL-044)	ZONE MWC
Calleguas (CAL-179)	BUTLER RANCH MWC
Calleguas (CAL-190)	BALCOM CANYON WATER WELL
Calleguas (CAL-195)	EL CAMPECON RANCH
Calleguas (CAL-196)	COMMANCHA RANCH

CASITAS WHOLESALE DISTRICT	
SUPPLIER	WATER COMPANY
Casitas (CAS-046)	CASITAS MWD
Casitas (CAS-047)	CASITAS MWC
Casitas (CAS-048)	CITY OF SAN BUENAVENTURA
Casitas (CAS-049)	DENNISON PARK WATER SYSTEM
Casitas (CAS-051)	GRIDLEY ROAD WATER GROUP*
Casitas (CAS-052)	HERMITAGE MWC
Casitas (CAS-053)	HIBOTONIA INSTITUTE OF THEOSOPHY
Casitas (CAS-054)	MEINERS OAKS CWD
Casitas (CAS-056)	NORTH FORK SPRINGS MWC
Casitas (CAS-057)	OJAI
Casitas (CAS-058)	OLD CREEK ROAD MWC
Casitas (CAS-059)	OVIATT WATER ASSOCIATION
Casitas (CAS-060)	RANCHO del CIELO MWC
Casitas (CAS-061)	RANCHO MATILIJA MWC
Casitas (CAS-062)	RINCON WATER AND ROADWORKS
Casitas (CAS-063)	Ojai WATER CONSERVATION DISTRICT
Casitas (CAS-064)	SENIOR CANYON MWC
Casitas (CAS-065)	SHERFF'S HONOR FARM
Casitas (CAS-066)	SIETE ROBLES MWC
Casitas (CAS-067)	SISAR MWC
Casitas (CAS-068)	GOLDEN STATE WATER CO - Ojai
Casitas (CAS-069)	SULPHUR MOUNTAIN ROAD WATER ASSOCIATION
Casitas (CAS-070)	TICO MWC
Casitas (CAS-071)	TRES CONDADOS
Casitas (CAS-072)	VENTURA RIVER COUNTY WATER DISTRICT
Casitas (CAS-073)	VILLANOVA ROAD WATER WELL ASSOCIATION

UNITED WHOLESALE DISTRICT	
SUPPLIER	WATER COMPANY
United (U-074)	ALISO MWC
United (U-075)	ALTA MWC
United (U-076)	BEEDY STREET WELL
United (U-079)	BROWNSTONE MWC
United (U-083)	CAMARILLO AIRPORT UTILITY ENTERPRISE
United (U-091)	CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT
United (U-092)	CITY OF FILLMORE
United (U-093)	CITY OF PORT HUENEME
United (U-094)	CLOVERDALE MWC
United (U-098)	COMMUNITY MWC
United (U-097)	CYPRESS MWC
United (U-098)	SUNSHINE TRAILER PARK
United (U-099)	DEMPSEY ROAD MWC
United (U-091)	SEACOAST COOLING
United (U-092)	ELKINS RANCH COMPANY
United (U-093)	EVERGREEN TRAILER PARK
United (U-094)	FARMER'S IRRIGATION COMPANY
United (U-095)	FILLMORE IRRIGATION COMPANY
United (U-096)	FILLMORE WEST MOBILE HOME PARK
United (U-097)	GARDEN ACRES MWC
United (U-099)	GLENVIEW MOBILE HOME PARK
United (U-101)	GOODENOUGH MWC
United (U-102)	HALWOOD, INC
United (U-103)	OB SOUTH
United (U-104)	PORRETTA STOCK FARM
United (U-106)	LAKE PIRU RECREATION AREA
United (U-107)	LIMONEIRA ASSOCIATES
United (U-108)	LINDA VISTA JUNIOR ACADEMY
United (U-109)	MEDLE ROAD MWC
United (U-110)	MONTALVO MWC
United (U-111)	NAVALAR MOBILEHOME COURT
United (U-112)	NYELAND ACRES MWC
United (U-113)	OCEAN VIEW MWC
United (U-114)	OCEAN VIEW SCHOOL DISTRICT (LAGUNA VISTA SCHOOL)
United (U-115)	OXNARD LEMON MWC
United (U-116)	PLEASANT VALLEY CWD
United (U-121)	RIO MANOR MWC
United (U-122)	RIO PLAZA WATER COMPANY
United (U-123)	RIO REALRIO DEL VALLE SCHOOLS
United (U-126)	SAN CAYETANO MWC
United (U-127)	CITY OF SANTA PAULA
United (U-128)	SAVIERS ROAD MWC
United (U-130)	SILVER WHEEL RANCH MOBILE HOME PARK
United (U-131)	SOUTH MOUNTAIN MWC
United (U-132)	SOUTHSIDE IMPROVEMENT CO
United (U-133)	STORKE MWC
United (U-134)	STRICKLAND MWC
United (U-135)	TEAGUE-McNEVETT CO- LIMONEIRA
United (U-136)	THERMAL BELT MWC
United (U-137)	THOMAS AQUINAS COLLEGE
United (U-138)	TIMBER CANYON MWC
United (U-139)	TOBACK RANCH MWC
United (U-140)	U.S.N.A.S. - Point Mugu
United (U-141)	U.S.N.C.B.C. - Port Hueneme
United (U-142)	UNITED WCD
United (U-144)	VENTURA COUNTY WATERWORKS DISTRICT NO 16
United (U-145)	G.P. RESOURCES
United (U-146)	VENTURA SCHOOL
United (U-147)	VINEYARD AVENUE ACRES MWC
United (U-148)	THE MUTUAL WATER COMPANY OF VINEYARD AVENUE ESTATES
United (U-149)	VINEYARD MWC
United (U-150)	WARRING WATER SERVICE
United (U-151)	PIRU MWC
United (U-153)	VENTURA COUNTY PROPERTY ADMINISTRATOR
United (U-154)	VENTURA COUNTY DEPT. of AIRPORTS
United (U-195)	HARDSCRABBLE MWC
United (U-196)	SESPE AGRICULTURAL WATER
United (U-197)	GUADALASCA MWC
United (U-199)	SANTA CLARA HIGH SCHOOL
United (U-152)	CITRUS MWC
United (U-200)	LLOYD-BUTLER MWC
United (U-201)	OSWARD MWC
United (U-202)	RANCHO SESPE WORKERS IMPROVEMENT ASSOCIATION
United (U-203)	TOLAND ROAD WATER SYSTEM
United (U-204)	THORNHILL MWC
United (U-206)	SANTA CLARA RESOURCES
United (U-208)	HOVMELING'S NURSERY
United (U-207)	RYGAARD FLOWERS
United (U-208)	SATICOY COUNTRY CLUB
United (U-209)	VUJOVICH RANCH
United (U-210)	BOUQUET MULTIMEDIA

SUPPLIERS WITHOUT WHOLESALE DISTRICT	
SUPPLIER	WATER COMPANY
None (W-152)	ANTELOPE VALLEY - EAST KERN WATER AGENCY
None (W-153)	WILDWIE BLVD TEMPLE CAMPS & CONFERENCE CENTER
None (W-154)	CAMP SCHEIDECK LODGE
None (W-155)	CAMP THREE FALLS - BSA
None (W-156)	CASTAC LAKE WATER AGENCY
None (W-157)	CHANNEL ISLANDS NATIONAL MONUMENT
None (W-158)	CHUCHUPATE CAMPGROUND
None (W-159)	CHUCHUPATE RANGER STATION
None (W-162)	COMPTON HUNTING and FISHING CLUB
None (W-163)	HIDDEN VALLEY MWD
None (W-164)	LAZY J RANCH
None (W-166)	CIRCLE J RANCH
None (W-168)	NEW CAMP BARTLETT
None (W-170)	OZENA RANGER STATION
None (W-171)	PINE MOUNTAIN INN
None (W-174)	SWEETWATER SPRING RANCH
None (W-178)	VERBA BUENA WATER COMPANY
None (W-182)	U.S. NAVY - San Nicolas Island
None (W-188)	POINT MUGU STATE PARK
None (W-193)	LAKE OF THE WOODS MWC
None (W-194)	OZENA VALLEY SPORTSMANS CLUB

DWR Bulletin 118 Groundwater Basins

1. Las Posas Valley
2. Arroyo Santa Rosa Valley
3. Pleasant Valley
4. Santa Clara River Valley - Santa Paula
5. Santa Clara River Valley - Mound
6. Santa Clara River Valley - Oxnard

Pacific Ocean

N W E S

San Nicolas Island Inset

W-182

Northern Ventura County Inset

Inventory of Public & Private Water Purveyors In Ventura County
Figure 3.0

Plate 1

Ventura County Watershed Protection District
Water & Environmental Resources Division
Groundwater Section
800 South Victoria Ave.
Ventura, CA 93009-1600
Ph: (805) 654-2096
Fx: (805) 677-8762

Created: Feb 2006
By: JPD

Legend

DWR Bull. 118 GW Basins; FoxCynGMA-bdy; Roads; Calleguas MWD; Casitas MWD; UWCD; Water Bodies; County Boundary

1:87,500
1 inch equals 3 miles
0 1.5 3 6 Miles

DISCLAIMER: The information contained herein was created by the Ventura County Watershed Protection District solely for its own use. The VCWPD assumes no liability for damages incurred directly or indirectly as a result of errors, omissions or discrepancies.

SOURCE: Ventura County Watershed Protection District;
FCGMA , UWCD, and CMWD. 2007. "2007 Update to the Groundwater Management Agency Groundwater Management Plan." May 2007. Plate 1.

DUDEK

FIGURE 1-8
Ventura County Water Purveyors

Z:\Projects\

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